UNIVERSITY OF CAMBRIDGE

CONSERVATION RESEARCH INSTITUTE

1st UCCRI Graduate Conference

Inter-disciplinarity in Conservation Research

1st to 2nd September 2014

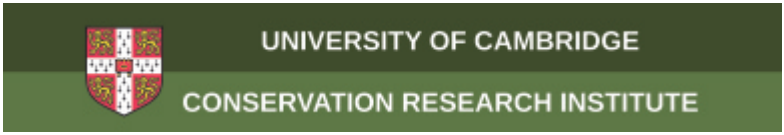
Sainsbury Laboratory, CB2 1LR, Cambridge

Abstracts

https://research-institute.conservation.cam.ac.uk/conference

Contents

About the University of Cambridge Conservation Research Institute



The University of Cambridge Conservation Research Institute (UCCRI) was established in October 2013 to promote and foster inter-disciplinary research on biodiversity conservation and the social context within which humans engage with nature. The Institute builds on a considerable legacy of distinguished scholarship in Cambridge, which has contributed to our understanding of the dynamics of life on earth, as well as how society interacts with, and shapes the world that we inhabit.

UCCRI's work is defined by two major themes: **inter-disciplinarity** and the **conservation of biodiversity**.

There is widespread recognition of the importance of working across disciplinary boundaries to address major intellectual and societal issues of our time. By pursuing common agendas from a variety of intellectual starting points UCCRI hopes to create possibilities for meaningful conversations and significant advances in knowledge. Our first Graduate Conference on Inter-disciplinarity in Conservation Research is a great place to begin.

UCCRI comprises the Founding Director, Dr Bhaskar Vira, and the Research Programme Administrator, Alison Harvey, who work together to establish and raise awareness of the UCCRI across the University.

The first UCCRI graduate conference

The Interdisciplinary Conservation Research Group is pleased to announce its first Conference on "Inter-disciplinarity in Conservation Research". For the first time the conference will gather graduate students from the University of Cambridge working on conservation research across disciplines. It will be a place for open conversation about key research questions, to share knowledge and experiences about methods and fieldwork, and to explore the epistemological and ontological debates in disciplines like conservation biology, economics, development studies, social anthropology, law, human geography, sociology, and politics. The students will be assisted in their discussions by senior researchers and conservation practitioners will conduct practical exercises.

The Conference has four main aims:

1. Share experiences in conservation research across various disciplines.
2. Learn how to conduct interdisciplinary research through practical exercises.
3. Facilitate collaborative research across departments of the University.
4. Strengthen the bonds between researchers and conservation practitioners .

The conference is organized with the support of: Economic and Social Research Council and University of Cambridge Conservation Research Institute. The main partners are: Royal Society for Protection of Birds, BirdLife International, Fauna and Flora International and TRAFFIC, the wildlife trade monitoring network.

The Interdisciplinary Graduate Conservation Research Group

There are informal links between the Cambridge graduate community, working on topics related to biodiversity conservation, in various departments of the University. These students have a loose network, which includes conversations about methods, as well as epistemological and ontological debates about the range of social and natural science disciplines that are relevant to an understanding of biodiversity conservation and its context. To address the gap and formalise these conversations, an Inter-disciplinary Conservation Research Graduate Group was set up in November 2013 with the support of University of Cambridge Conservation Research Institute (UCCRI).

The main objective is to offer students the chance to introduce their work, discuss and seek assistance and/or support in their research within an informal setting. The group also aims to support its members by providing trainings on methods that address the complexity of interdisciplinarity in conservation research.

Iguazu, A. Zabala

The group hosts regular informal seminars during term time and schedules training sessions in relation to research methods and techniques. Recent courses included digital media training and a statistical R-course for graduate students.

The group has currently 25 active members from 5 departments: Geography, Zoology, Land Economy, Plant Sciences and Social Anthropology. In order to represent the interests of all the departments the group seeks to have a steering committee formed by PhD and Post-doc students from different departments.

The activities of the group are promoted via e-mail, the forum, posters and the following web page:
http://research-institute.conservation.cam.ac.uk/pas

If you want to take part, please contact one of the following members:
Dr Eszter Kovacs ek334@cam.ac.uk
Anca Serban as2344@cam.ac.uk
Aiora Zabala az296@cam.ac.uk

A registration form will be available to complete during the conference, please refer to one of the organising members.

Invited academic speakers

Professor Katharine Homewood

Katharine Homewood is Professor of Human Ecology in the Department of Anthropology at the University College London, where she convenes the Human Ecology Research Group. Her background is in Zoology and Anthropology and her research combines social and natural sciences approaches to investigate interactions between biodiversity conservation and development.

She particularly addresses the impacts of conservation policies and management on local people's land use, livelihoods, and welfare, as well as the implications of changing land use for ecosystems and biodiversity. Although her work focuses on pastoralist communities in East African drylands, it extends across a wide range of ecosystems and regions.

Her latest publication is in *Conservation Biology* on '**Accounting for the impact of conservation on human well-being**'. Two of her current research projects are '**Biodiversity, Ecosystem Services, Social Sustainability and Tipping Points in East African Drylands**' (BEST), and '**Measuring complex outcomes of environment and development interventions**'.

Dr Julia Jones

Julia Jones is Senior Lecturer in Conservation Biology at Bangor University, and course director of the BSc Environmental Conservation and the BSc Applied Terrestrial and Marine Ecology. Her background is in Zoology.

Her research looks at how people interact with natural resources and how incentives can be best designed to maintain ecosystem services; for example the growing field of Payment for Ecosystem Services (PES) and how schemes such as REDD+ can effectively deliver global environmental benefits while also having a positive impact on local livlihoods. She also has a strong interest in the design of robust conservation monitoring using different types of data, and in analysing the evidence underpinning environmental policies and decisions.

She leads the P4GES project on payments for ecosystem services and poverty alleviation. She has co-authored, among many others, '**The sleeping policeman: understanding issues of enforcement and compliance in conservation**' in *Animal Conservation*, and '**The role of fairness and benefit distribution in community-based Payment for Environmental Services interventions**' in *Ecological Economics*.

Invited NGO speakers and workshop case studies

Lenke Balint

RSPB, www.rspb.org.uk

The RSPB works for the conservation of biodiversity, especially wild birds and their habitats. Lenke Balint is Partner Development Officer for South East Europe at RSPB. She finished the MPhil in Conservation Leadership at Cambridge in 2012.

Pippa Howard

Fauna & Flora International, www.fauna-flora.org

FFI's mission is to conserve threatened species and ecosystems worldwide, with over 140 projects in over 40 countries, mostly in the developing world. Pippa Howard is Director of Business & Biodiversity at FFI since 2007 and was previously Programme Manager at the Cambridge Programme for Sustain-ability Leadership.


Iguazu, A. Zabala

Thomasina Oldfield

TRAFFIC, www.traffic.org

TRAFFIC investigates wildlife trade trends, supports governmental actions, advices the private sector and develops insight into consumer attitudes. It has a network of offices and personnel deployed in key wildlife trading areas of the world in 30 countries. Thomasina Oldfield is Science, Research and Analysis Coordinator at Traffic.

Samir Whitaker

BirdLife, www.birdlife.org

BirdLife the largest global partnership working on bird conservation, with 120 independent organisations worldwide. Samir Whitaker is Programme Manager of the Rio Tinto - BirdLife International Partnership. He finished the MPhil in Conservation Leadership in 2011 and has previously worked in conservation, primarily in India.

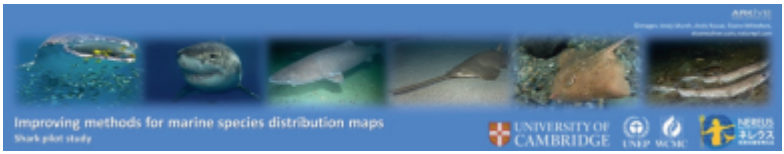
Students' sessions

Session A: Knowledge production for policy and the science-policy gap

Improving range map methods for marine fish species: addressing issues of errors, bias, and dispersal

Jan Laurens Geffert *jlg57@cam.ac.uk*

Department of **Geography** and United Nations Environment Program – World Conservation Monitoring Centre (UNEP-WCMC)



Species distribution models (SDMs) have long been popular in the terrestrial realm and are increasingly applied to marine species. On large spatial scales, presence only models using “big data” from GBIF and OBIS are amongst the most widely used approaches. These presence only data however often contain erroneous records and are highly biased, both spatially and environmentally. Most records stem from the coast, the continental shelves and the northern hemisphere. Furthermore, the models generate maps of suitable habitat without taking dispersal limitations into account. The talk will outline how these issues are addressed by cleaning species occurrence records, correcting for sampling bias, and including expert knowledge in the models, in order to upscale the approach to a large number of commercial fish species. Examples illustrating these steps will be presented.

This work is part of the Nereus Program; an international and interdisciplinary collaboration funded by the Nippon Foundation to develop scenarios of the future ocean, and is carried out in close collaboration with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP WCMC) Marine Programme. The resulting maps will be used as input for spatial planning and as a baseline for scenario development.

Barriers and solutions towards using evidence in conservation management

Jessica C Walsh[1] *j.walsh@zoo.cam.ac.uk*
and Lynn V Dicks[1], Christopher M Raymond[2], William J Sutherland[1]
[1] Department of **Zoology**
[2] University of South Australia, School of Natural and Built Environments, Adelaide, Australia

Evidence-based conservation seeks to improve the effectiveness, efficiency and transparency of conservation management decisions by bridging the gap between scientific research and conservation practice. However, management decisions are often based on past experience and anecdotal information while scientific evidence is rarely applied systematically to practical situations. While reasons for the conservation science-implementation gap appear to be well known, a thorough and complete inventory of these barriers and their possible solutions does not exist. In addition, very little is known about the relative importance of each barrier and the effectiveness of proposed solutions to overcome these hindering factors. In this study, we collated a list of barriers and solutions to implementing evidence-based practice from the environmental and medical literature, and assessed the importance of these factors for conservation practitioners from government and non-government organisations in the United Kingdom and South Africa. We found that the use of scientific evidence is influenced by a complex array of factors, several of which have not previously been identified in the literature. One of these novel barriers was the disparity between the practitioners' definitions

and understandings of 'evidence' and 'evidence-based conservation' compared with those held by the academic community. Moreover, many practitioners said they were using evidence-based practice, though on closer inspection they were using science in an ad hoc manner and were not following the principles of evidence-based conservation described in the literature. Future priorities for implementing evidence-based conservation are to evaluate which solutions have the highest potential of improving the uptake of science in practice, to increase practitioners' awareness about the principles of evidence-based conservation and develop guidelines on how organisations and individuals can move towards evidence-informed decisions. While evidence-based conservation has the potential to improve conservation outcomes, more work is required to effectively bridge the science-implementation gap.

Expertise in science and policy for the global governance of biodiversity and ecosystem services

Jasper Montana *jm915@cam.ac.uk*
Department of **Geography**

The construction of 'plausible futures' for use in environmental models and scenario analysis is an important tool in promoting collective action around issues of environmental degradation and human wellbeing. Modelling and scenario analysis, which incorporate knowledge from both science and policy, are regarded to be key to the coordinated global response to ozone depletion and have resulted in a range of influential work on climate change and land use. In the governance of biodiversity, modelling and scenario analysis are much more in their infancy, but are likely to offer important reference points for national governments to create collective understan-dings of environmental problems. These policy support tools provide insight into the possible outcomes of policy options and reveal some of the uncertainties associated with these decisions. Models of biodiversity at the local, regional and global scale are already being produced and they are likely to form an important part of the biodiversity assessment work of the recently established Intergovernmental Platform on Biodiversity and Ecosystem Services. This paper will examine some of the potential benefits of using models and scenarios for the incorporation of biodiversity knowledge into policy making and reflect on the lessons that might be learnt from their use in climate change and ozone research. Analysed within the framework of Science and Technology Studies, this paper will look at 'plausible futures' through the lens of the Sociology of Expectations to understand how scenarios and modelling might construct and direct novel futures for global action.

Session B: Human-nature relationships and narratives

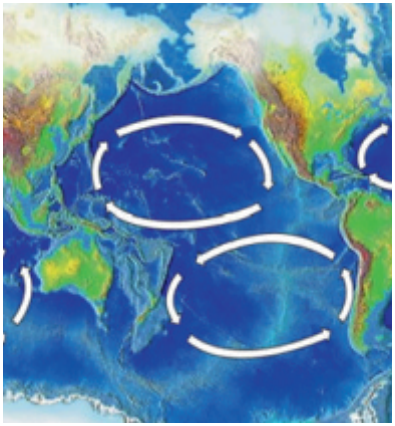
Locating plastic islands: the problems and politics of the great pacific garbage patch

Daniel Simpson *ds660@cam.ac.uk*
Department of **History and Philosophy of Science**

The recent introduction of a mandatory five pence charge for plastic bags in England underlined the way in which research on the conservation of marine ecosystems can translate into the political sphere. In particular, the spectre of plastic islands, or the 'Great Pacific Garbage Patch', has done much to stimulate international efforts to reduce the marine accumulation of single-use disposable plastic packaging waste. Some have heralded this as a significant coup for marine biodiversity conservation, and for the environ-mental movement in general, but is all really as it seems? In this paper, I introduce some perspectives from social and political histories of the environment, as well as from the history of science, in order to question the reality of the garbage patch, and the rationality of our response toward it.

I emphasise the uncertainty of scientific knowledge about the garbage patch, and show that popular claims about plastic 'islands' in particular are false. Far from being a visible phenomenon, within which discrete objects can be identified, the marine garbage patch is instead the aggregate of a mass accumulation of microscopic plastic fragments, or 'chips', which can often be surveyed only through such means as plankton trawl nets. The manner in which contemporary social and political debate nevertheless persists to invest in the idea of visible islands, and their formation as a result of peculiarly consumer waste, therefore demands

interdisciplinary investigation - particularly because it is from here that policy initiatives such as the plastic bag charge arise. Stories about turtles ingesting supermarket carrier bags, and resultant scientific surveys, are for instance a typical example of the nature and effects of the issue's mediation in the 'popular' sphere.



My paper investigates the tensions inherent in representations of and responses to the garbage patch by contextualising their initial discovery, by Captain Charles Moore in 1997, in the midst of a then growing social backlash against plastic packaging. I show how technocratic crises over waste disposal and the reintroduction of recycling in the period after 1970 stimulated a long-lasting anxiety about the anthropogenic production of synthetic, non-degradable materials, and I explore how this obvious abstraction from supposedly circular, 'natural' processes of waste reclamation questioned the legitimacy of contemporary capitalist societies. I find that the tremendous importance of plastic as a manufacturing and supermarket infrastructure, at the time, retarded efforts to replace single-use plastic packaging with an environmentally-friendly surrogate. I argue that the way the issue has been handled is therefore enormously important for modern conservation research and debate. The introduction of a five pence charge for plastic bags can be said to represent a disavowal of the true problem of marine plastic accumulation; political and industrial approaches to the issue are consumer-centric and largely symbolic, and in many ways elucidate the function of some conservationist movements as a means to inhibit large-scale and more inconvenient responses to topics such as plastic, waste, and marine environmental pollution.

Counting sheep but excepting camels: conservation and sociality in China's Gobi Desert

Thomas White *trew2@cam.ac.uk*

Department of **Social Anthropology**

Drawing on 18 months of anthropological fieldwork in Alashan Left Banner, Inner Mongolia, this paper examines the shifting, entwined fortunes of the Bactrian camel and Mongolian herders in China's Gobi Desert, at a time when herders' lives are being transformed through the introduction of strict stocking limits on sheep and goats, introduced in the interests of biodiversity conservation and to combat desertification. The numbers of camels in Alashan declined from a peak of 250,000 in the mid-1980s to 40,000 in 2004, initially because of a boom in cashmere, which led to a preference among herders for goats over camels, and because of the availability of other modes of transport. This has become a cause of concern to the local government, which has sought in recent years to market Alashan to tourists as 'The Hometown of Camels' (Ch. *luotuozhixiang*), and has thus devised policies aimed at camel conservation. I will discuss the changing role of the camel, and the significance it plays in the lives of local Mongols, before situating the local government's conservation efforts within a broader move towards 'green governmentality' (Yeh 2005) on the part of the Chinese state. A key instance of this is the 'return pastureland to grassland' (Ch. *tuimu huancao*) policy. Rather than aiming continuously to increase pastoral production, as in the high socialist era, the state now imposes strict limits on the number of sheep and goats which Mongols can herd, in an attempt to ameliorate the degraded pastureland. Camels, however, are exempt from these limits. 'Camel culture', including camel racing and camel-

related crafts, is now actively promoted by the state, while sheep and goats, which have long been the economic mainstay of local Mongols, are denigrated. This paper shows how the herding of particular animals is bound up with particular social relations among herders; the prioritising of camels over other animals thus has the effect of reinforcing a certain kind of sociality. I thus seek to contribute to recent debates on the role of non-human actors in the constitution of social life (e.g. Callon 1986; Latour 2007; Candea 2012). In doing so I examine the recent EU-China Alashan Biodiversity Conservation Project, which calls for the integration of *'ecological, socio-economic and cultural factors, in promoting … biodiversity conservation'* (2010: 1). I suggest that such efforts at integration in fact reproduce a nature-culture binary that obscures the reality of sociality in pastoral areas. Finally, I show how conservation efforts directed towards camels are hindered by land privatisation policies introduced by the state in the late 90s, which have reduced the area in which camels can roam, as well as by the relocation of polluting industries from China's developed eastern regions to sparsely-populated areas such as Alashan.

Anthropological conservation: applying a disciplinary merger between environmental anthropology and conservation biology

Miranda Strubel *ms2228@cam.ac.uk*
Department of **Archaeology and Anthropology**

Interdisciplinary research is increasingly being called upon to deconstruct entrenched divisions between the natural and social sciences. While contributing to fruitful collaborations and providing new insights to real world problems, these new avenues offer a chance for anthropologists to disengage from the overspecialization occurring in many academic contexts and reinvent our holistic approach through different disciplinary lenses. In this paper, I review some of the current interdisciplinary trends happening within anthropology, while reflecting on

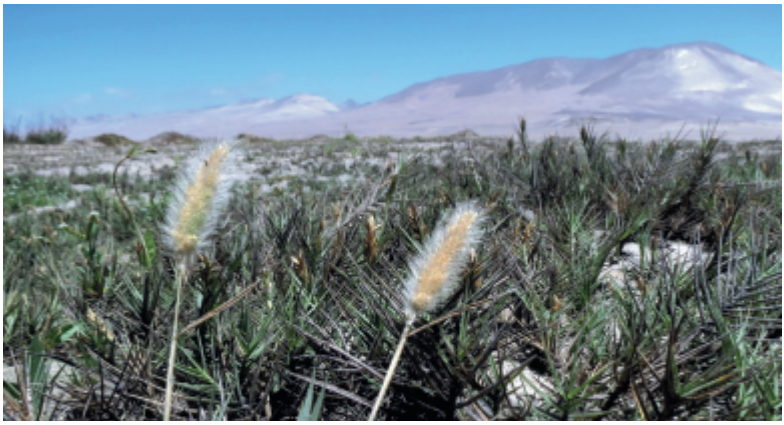
my own efforts to forge an interdisciplinary career and traverse disciplinary boundary lines. Here, I discuss a new approach to contemporary environmental issues – anthropological conservation. Although this is not an entirely new concept, it has elsewhere only been applied within the context of archaeology and the conservation of material culture. However, I argue that anthropological conservation is the way forward – particularly as the Cambridge Conservation Initiative and the University of Cambridge prepare for the development of their newly envisaged conservation campus. As the frequency of inter-species interactions increases, and the plight of Arctic peoples, as well as countless non-human species, escalates due to global climate change, the need for innovative approaches to environmental problems has never been so great. By highlighting several interdisciplinary success stories from the rapidly emerging fields of biomimicry and anthrozoology, I hope to illustrate the types of ground-breaking solutions these partnerships, and others like them, can contribute to our current ecological crisis. Furthermore, I propose that Anthropological Conservation – a true merger of disciplinary perspectives and methods, has the potential to achieve more success, in certain contexts, than either environmental anthropology or conservation biology can on its own.

Session C: Socio-ecological systems and their management

Management of coast ecosystems by early South American settlers: an archaeobotanical analysis of a shell midden in southern Peru

Maria Garcia *mag68@cam.ac.uk*
Department of **Archaeology and Anthropology**

The study of plant remains in archaeological sites enables a closer exploration into human interactions with their landscape. As *'we are what we eat'* (molecularly) and leave behind fragments of it, both our cultural behaviour and ecology influence the composition and nature of bioarchaeological remains. Archaeobotanical research, or the study of plant remains within archaeological sites, allows more precise insight into those prehistoric and historic interactions. The interpretation of finds, however, requires a broader comprehension of past human ecology and adaptation. Incorporating an ethnographic approach - a descriptive account of social and cultural patterns within contemporary societies - supports and helps contextualize these archaeobotanical findings. As a complement to the archaeological investigation of a 7000 year old shell midden in the Southern Coast of the Ica River Valley, Peru; the aim of my research is to illustrate, through an integrated approach of archaeobotanical analysis and ethno-graphical record, about human ecology among fisher-hunter-gatherer societies. My research strategy includes the analysis and classification of charred and non-charred macro plant remains (>1mm). It also covers the revision of behavioural patterns in ethnographical material from four contemporary nomad societies (Yhagan, Changos, Yuki and Seri). The range of my study include seeds, floral elements, fibers and tubers of plants from multiple ecozones within the same stratigraphic layer. These finds



correlate with ethnographical accounts of societies inhabiting similar coastal conditions. They specifically support a seasonally based migration and selective ex-situ/in-situ food processing, all of which indicate a more ample use of the landscape and varieties of plant resources. Exploring the shell midden assemblage through this combined methodology provides a more nuanced understanding of human adaptation, plant resources and environment. It also contributes background knowledge to prehistoric plant usage among South America's first settlers.

The politics and reality of interventions for social and ecological benefit

Josie Chambers *jc706@cam.ac.uk*
Department of **Geography**

Despite widespread effort to intervene for more sustainable and equitable outcomes, joint progress has proved elusive in local conservation and development 'win-win' interventions. Meanwhile, problematic global trends continue of increasing economic inequality, widespread human suffering from resource insecurity and preventable illness, and declining biodiversity and ecosystem

services. This talk will challenge some of the dominant paradigms for understanding and implementing interventions for social and ecological benefit. The push for narrow short-term tangible benefits, poor recognition of and moral accountability for unintended outcomes, and powerful narratives obscuring the reality of what interventions are achieving may be inhibiting overall progress to address the systemic drivers of widespread social and ecological injustices. We will consider some theoretical cases to examine the potential for a more holistic way of thinking about the drivers of social and ecological change and possible interventions for local and global progress in theory and practice.

Mapping sacred forests in villages close to the Gola Rainforest National Park, Sierra Leone

Rebecca Wilebore *rw326@cam.ac.uk*
Deparment of **Plant Sciences**

Forest remnants are often neglected in conservation strategies, however they can provide significant value for biodiversity conservation, particu-larly at the landscape level. In Sierra Leone, West Africa, sacred forests are preserved as meeting places for secret societies, and areas for rituals and initiation ceremonies.

Non-initiated persons are forbidden from entering the forests, so we used a participatory mapping approach combined with freely available high resolution satellite imagery in Google Earth to map the location of sacred forest patches around villages within the districts of the Gola Rainforest National Park. Using a multivariate generalized linear model we explored the predictive power of landscape and topographic features on the position and size of sacred forests. The same analysis was conducted on patches of oil palm plantation as an alternative land use that has significantly lower conservation value than natural forest but high economic value for villages. We show that land cover classifications from Landsat 5 and other medium resolution remote sensing imagery are unable to detect these forest patches effectively due to their small size, so the alternative mapping approaches used in this study may serve as effective tools for understanding land use in complex rural landscapes.

Participants' abstracts

Managing mangroves: exploring identity and practice among oyster harvesters in the Gambia

Jacqueline Lau, *jdl47*

Geography · Africa (West) · Coastal and Marine

In the context of rapid degradation of mangrove ecosystems and declines in fisheries, scientists and social scientists have focused increasing attention on how to best understand and conserve coastal ecosystems and the wellbeing of artisanal fishers. Combining this concern with calls for political ecology to better incorporate understandings of cultural identities, my research is focused on a case study of an artisanal oyster fishery in the Tanbi Wetlands National Park in the Gambia.

Social understanding, policy framing, and environmental change: Implications for conservation

Thomas Pryke, *tp363*

Geography · Europe · Coastal and Marine, None

I am working in the UK, specifically focussing on the coastal protected areas of Suffolk, which represent both nationally and internationally important areas for many coastal habitat types. My research combines physical and social science techniques to explore how those involved with conservation at the coast understand and approach environmental change in these area, how they respond to such change, and what ramifications this might have on how conservation is undertaken in these areas.

Agent-based modelling and land use in Uganda

Katy Jeary, Kew60

Geography · Africa (East) · Tropical forest

Agent-based modelling to understand the social and ecological impacts of land sparing and land sharing in western Uganda, in particular the impact of future land use policies on habitat for biodiversity, carbon storage, water provision, food security and household incomes.

Assessing conservation outcomes: Peru's Conservation Concessions

Judith Schleicher, *js525*

Geography · America (South) · Tropical forest

My current research focuses on the impacts of Conservation Concessions (CCs) in the Peruvian Amazon. CCc are areas given to non-government actors for conservation purposes for 40 years

renewably. My thesis investigates (1) the impacts of CCs on deforestation and forest degradation in comparison to alternative land use designations, (2) how different stakeholders perceive the ecological and social impacts of CCs and (3) the challenges facing the establishment and management of CCs.

Agent based modelling of anthropogenically-driven changes in rural land use and vegetation cover in the Western Uganda

Ronald Twongyirwe, *rt369*

Geography · Africa (East) · Tropical forest

My research interests span across several aspects of human socio-ecological systems. The PhD project is focusing on understanding how human interactions with their environment influence the bio-physical and ecological aspects in a critical landscape in Western Uganda. Using a mixture of remote sensing and GIS, and empirical data, I aim to construct the first agent-based model to understand the intricate land use and vegetation cover patterns in this landscape.

Towards a transformative REDD+ in Ghana?

Albert Arhin, *aaa72*

Geography · Africa (West) · Tropical forest

My research explores the dynamics of the making and shaping of REDD+ policies in Ghana and what it tells us about the prospects of the REDD+ mechanism creating a pathway for transformational change in the forestry sector.

Reconciling food production and biodiversity conservation in Europe

Claire Feniuk, *cf357*

Zoology · Europe · Temperate and boreal forests, Grassland, Freshwater

Reconciling the conflict between agriculture and biodiversity is one of the major challenges we face this century. My research aims to explore the trade-offs between food production and nature conservation in eastern Europe, and to look for landscape-scale land-use strategies that help to balance these two aims.

Sealed mountains and hidden lands: cultural ecology of conservation in Bhutan

Riamsara Kuyakanon Knapp, *rk391*

Geography · Asia (South) · Mountain, None

My PhD research concerns the relationship between environmental conservation and Buddhist beliefs and practices in Bhutan, with particular focus on sacred natural sites conservation within protected areas, whether it be through places such as *neys* or *beyul*, or practices such as *ridam*.

My research draws from and addresses theorizations in cultural landscapes and political ecology. I am interested in multi-disciplinary research and employ methods from the social and environmental sciences.

Seeing forests from new heights: applying recently developed satellite imagery analysis technologies to monitor tropical forest protected areas

Gillian Lui, *gl373*

Plant Sciences (Forest Ecology and Conservation) · Global · Tropical forest

My MPhil research involves applying a suite of land-cover classification analysis platforms and databases (e.g. CLASlite, the University of Maryland's Global Forest Change dataset, and ENVI) to quantify spatial patterns of deforestation within and surrounding tropical forest protected areas worldwide, with the ultimate goal of relating these findings to metrics of biodiversity decline.

Direct and indirect influences of climate on species' range boundaries: how are the restricted ranges of the Ethiopian Bush-crow and the White-tailed Swallow influenced by climate?

Andrew Bladon, *ajb273*

Zoology · Africa (East) · Grassland

I am investigating the mechanisms of climatic range-restriction in two taxonomically distinct but sympatric species. The Ethiopian Bush-crow (*Zavattariornis stresemanni*) and white-tailed swallow (*Hirundo megaensis*) inhabit Acacia grassland common across East Africa, yet their ranges are defined near-perfectly by a tight climatic envelope of around 6,000km sq. Understanding the mechanisms of this restriction is crucial to conservation planning for the species, especially given the opportunities presented by the newly formed Borana National Park

Developing a package of measures to support ecosystem service provision by beneficial insects on farmland

Felicity Bedford, *feb39*

Zoology · Europe

The overarching aim of the project is to produce a recommended set of agri environment land management options similar in structure to the Farmland Bird Package. Recommendations will be constructed using outputs from a variety of sources including literature review, field work and population modelling. The resulting Beneficial Insects Package will supply the provisioning and nesting resources required to support native wild species delivering pollination and pest control services on UK farms.

Rural development and affordable living

Janet Hall, *jh900*

Architecture · Europe

Rural housing is associated with higher living costs, further to premium house prices due to an aspirational lifestyle associated with rural living in the UK. In recent years there have been increasing numbers of 'affordable homes' built in rural areas, encouraging the growth of minimal homes in terms of rooms and dimensions. Can rural areas offer a greater spatial potential for affordable living?

Agriculture and conservation politics, trade-offs: water security and livelihoods in the Western Himalayas

Eszter Kovacs, *ek334*

Geography · Global · Urban ecosystems

My PhD drew from political ecology approaches to studying environmental management interventions, to probe how international ideas of rurality and conservation intersected with the cultural and political economies of a post-socialist state; I focused on the trade-offs and politics of reconciling conservation interests on agricultural land. I am currently a postdoctoral research associate on the ESPA-funded project on the Political Economy of Water Security in the Himalayas.

Sugarcane in the Brazilian Cerrado: effects on the biodiversity and greenhouse gases emissions

Jessica Fonseca Da Silva, *jf483*

Plant Sciences · America (South) · Tropical forest, Grassland

I focus on the ecological consequences of ethanol from sugarcane to the Brazilian Savannas, the Cerrado. I am to produce woody species distribution maps; assess which species and areas are most threatened by sugarcane cultivated fields; measure fluxes of nitrous oxide from sugarcane fields in comparison to the native Cerrado areas; measure nitrogen deposition and model the deposition of N in the landscape; and highlight the most suitable areas for sugarcane and for conservation.

Conservation in agricultural landscapes

Anthony Lamb, *ajl85*

Zoology · Europe

I am interested in minimising the environmental cost of agriculture. Farming displaces wild species, compromises ecosystem services, contributes to global warming and pollutes the neighbouring environment. These environmental and social costs are projected to rise dramatically as global demand for food doubles by 2050. My current research seeks to optimise the design of agricultural landscapes so as to meet food production needs whilst minimising the associated environmental and social costs.

Integrating agent-based simulation and land-use change modelling to improve the design of tropical forest carbon offset schemes: a case study of Calakmul, Southeast Mexico.

Kinne Gueye, *kg370*

Geography · America (Central and Caribbean) · Tropical forest

My research aims to improve understanding of how best to allocate funds and resources from forest carbon offset schemes to cut down greenhouse gas emissions and provide viable alternative livelihoods for forest-dependent communities. For this, I look to develop a spatial explicit framework using agent-based modelling and geographic information systems to simulate land-use outcomes from various forest management scenarios in a rural community in the southeast of Mexico.

Agriculture and biodiversity trade-offs and synergies

Anca Serban, *as2344*

Geography · Asia (South) · Tropical forest

I am interested in understanding how trade-offs between agricultural productivity and biodiversity conservation are negotiated between different actors in forested landscapes and what are the socio-ecological implications of different policy interventions in these landscapes.

The use of amphibian skin anatomy in conservation

Collin Vanburen, *cv300*

Earth Sciences · Global

My research focuses on bridging the fields of anatomy and conservation, specifically how features of amphibian skin restrict habitat use and facilitate infections. I previously worked on the functional anatomy of fused neck vertebrae and how the shape of the radius bone limited mobility and posture in dinosaur forelimbs.

Swinging livelihoods, heterogeneous attitudes, and incentives to adopt silvopasture in the tropical forest frontier

Aiora Zabala, *az296*

Land Economy · America (Central and Caribbean) · Tropical forest

Land uses in the tropical forest frontier are important in buffering degradation. Extensive cattle-farming in mountainous pastureland can cause soil erosion and biodiversity loss. What type of incentives may encourage long term adoption of sustainable practices? This study analyses participation and short term adoption of a pilot silvopasture project in Chiapas, Mexico. It focuses on livelihood strategies and perspectives as explanatory variables, using quantitative modelling and Q methodology.

A comparative analysis of Free Trade Zones, case study: Nasr City FTZ, Cairo, Egypt

Heidi Hamed, *he250*

Architecture and Urban Studies · Global · Urban ecosystems, None

During the past few decades, Free Trade Zones (FTZ) have become a growing phenomenon as well as an important element of world trade. Taking a distinctly urbanisation and developmental perceptive on FTZs, this dissertation will aim to analyse the extent to and mechanism by which Free Trade Zones (FTZ) perform. This research will also assess FTZ's urban character and ability to house and generate new forms of social and economic organizations.

Balancing food production and biodiversity conservation in the neotropics

David Williams, *drw34*

Zoology · America (North) · Tropical forest

I am looking at ways of conserving biodiversity and maintaining ecosystem services in Yucatán, Mexico, whilst also producing food. This involves analysing the amount of food produced by different landscapes and assessing their value for biodiversity and carbon storage. I can then use scenario building to examine different ways of meeting current and future food demand, and estimate their impacts on the natural world.

Biodiversity conservation, What app for that?

Peter Damerell, *pjd59*

Geography

This project aims to explore the potential of disseminating social science research through digital games. In order to gain a holistic understanding of what such a process entails we have developed our own game concept which aims to achieve benifits for biodiversity conservation through the use of animal movement data. By developing an initial idea into a storyboard that can be pitched to a games development company will aim to uncover the potential and pitfalls of this new frontier.

List of all participants

Albert Arhin..... Geography.....aaa72
Felicity Bedford..... Zoology..... feb39
Andrew Bladon..... Zoology.....ajb273
Josephine Chambers..... Geography.....jc706
Peter Damerell.....Geography..... pjd59
Claire Feniuk.....Zoology..... cf357
Jessica Fonseca Da Silva..... Plant Sciences.....jf483
Maria Angélica García..... Archaeology and Anthropology.....mag68
Jan Laurens Geffert..... Geography..... jlg57
Kinne Gueye.....Geography..... kg370
Janet Hall.....Architecture.....jh900
Heidi Hamed..... Architecture and Urban Studies.....he250
Timothy Hughes.....Department of Engineering..... thh22
Katy Jeary..... Geography.....Kew60
Radhika Kothari.....Geography..... rvk24
* Eszter Kovacs.....Geography..... ek334
Riamsara Kuyakanon Knapp.....geography..... rk391
Anthony Lamb..... Zoology..... ajl85
* Jacqueline Lau..... Geography.....jdl47
Gillian Lui..... Plant Sciences (Forest Ecology and Conservation)..... gl373
Jasper Montana.....Geography..... jm915
Thomas Pryke.....Geography.....tp363
Judith Schleicher.....Geography.....js525
* Anca Serban..... Geography..... as2344
Daniel Simpson..... History and Philosophy of Science..... ds660
Miranda Strubel.....Archaeology and Anthropology.....ms2228
Ronald Twongyirwe..... Geography.....rt369
Collin Vanburen..... Earth Sciences.....cv300
Jessica Walsh.....Zoology.....jcw63
Thomas White.....Social Anthropology..... trew2
Rebecca Wilebore..... Plant Sciences..... rw326
David Williams..... Zoology.....drw34
* Aiora Zabala.....Land Economy..... az296

Lenke Balint..... RSPB..... lenke.balint@rspb.org.uk
Helen Anne Curry.....History and Philosophy of Science..... hac44
* Alison Harvey.....UCCRI..... ah786
Katherine Homewood..... UCL..... k.homewood@ucl.ac.uk
Pippa Howard.....FFI..... pippa.howard@fauna-flora.org
Julia Jones.....Bangor University.....julia.jones@bangor.ac.uk
Thomasina Oldfield.....TRAFFIC.....thomasina.oldfield@traffic.org
Jake Reynolds..... CISL..... jake.reynolds@cisl.cam.ac.uk
Chris Sandbrook.....Geography..... cgs21
* Bhaskar Vira.....UCCRI / Geography..... bv101
Peter D Walsh.....Biological Anthropology.....pdw36
Samir Whittaker..... BirdLife.....samir.whitaker@birdlife.org

* Conference organising team: please contact us if you have any questions or comments, or write to **uccri-conference2014@conservation.cam.ac.uk**

https://research-institute.conservation.cam.ac.uk/conference