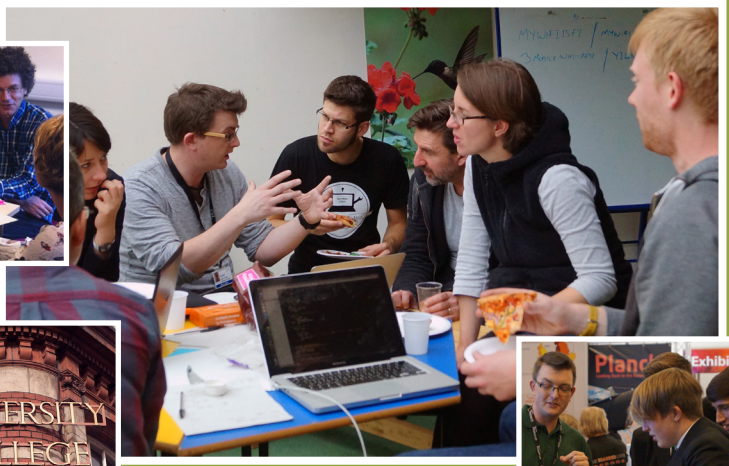
Impact Acceleration
in the
Centre For Biodiversity & Environment Research
2013 - 2015



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CBER
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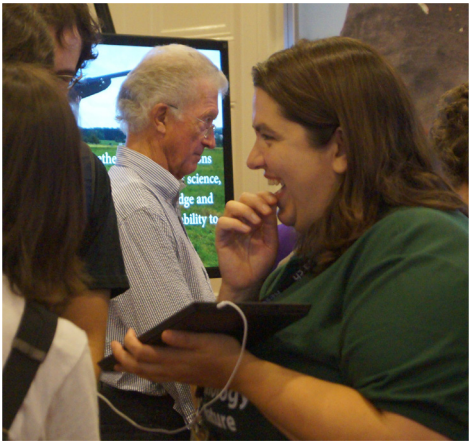

INTRODUCTION

In May 2013, the Centre for Biodiversity and Environment Research (CBER) at UCL joined the phase I Impact Acceleration project funded by the Natural Environment Research Council (NERC). This project, spanning two years, has organised a number of events covering a diverse range of topics from natural capital accounting to biodiversity monitoring and protection both globally and in the UK. We have collaborated with the Zoological Society of London (ZSL) to create the Conservation Hackathon project, which enjoys ongoing success. And we have engaged policy-makers, businesses and the public through lectures, workshops, and blogs, a well as holding stalls at several large science festivals.

The NERC Impact Acceleration project has enabled CBER to engage with a wider range of end-users including businesses, NGOs, policy-makers and academic institutions, and broadened the reach of biodiversity research in the department. It will continue to have ongoing impact in the future, through projects such as the Conservation Hackathon, which has the potential to yield real solutions to current issues in biodiversity research and conservation.

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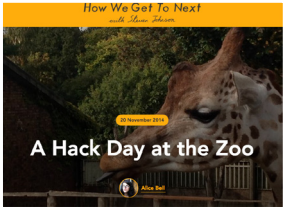
CONSERVATION HACKATHON

The Conservation Hackathon was developed in collaboration between CBER and the Zoological Society of London, and aims to engage scientists, programmers and technically-minded people in developing new tools and techniques to tackle big questions and big data in conservation research.

The first Conservation Hackathon was held in London in April 2014, and since then the project has blossomed into a diverse and thriving community of biologists, computer scientists, software developers and programmers from across the UK.

A second hackathon, held in November 2014 in collaboration with the IUCN, celebrated the 50th anniversary of the IUCN RedList with a Hack the RedList Day held at London Zoo. In attendance were representatives from ZSL, UCL, IUCN, Kew, and Esri UK, among others. The event proved so popular that a follow up Hack the RedList events is planned for 2015. Hack the RedList was also featured by Alice Bell in How We Get to Next, an online blog about the future of science.



The Conservation Hackathon project has sparked interest among many organisations and people around the world, and more hackathons are currently in the planning stages, including collaborations with the PREDICTS Project and the Natural History Museum, The World Wide Fund for Nature (WWF), and the British Library Labs.

Further, we are also planning the UK's first ever Fishackathon in collaboration with The US Department of State. Fishackathons have been very successful in the US, where they are now held in five cities. In June 2015, Conservation Hackathon will team up with Fishackathon to bring the concept across the Atlantic.

The Conservation Hackathon website provides a hub where end-users can find out more about the project, get details of future events and access a repository of code and outputs generated at previous hackathons. By providing open access, we hope to encourage longer-term projects to emerge from ideas and code generated at the events. The Conservation Hackathon project also maintains a strong social media presence, enabling us to engage with a large and diverse range of people and institutions.

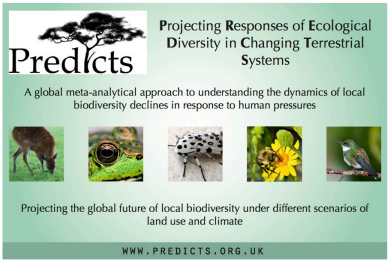
The Conservation Hackathon continues to go from strength to strength, engaging a wider range of people from technical and other backgrounds with science being conducted at some of the top academic institutions in the UK and abroad.

ZSL
LIVING CONSERVATION

Fishackathon

IUCN RED LIST

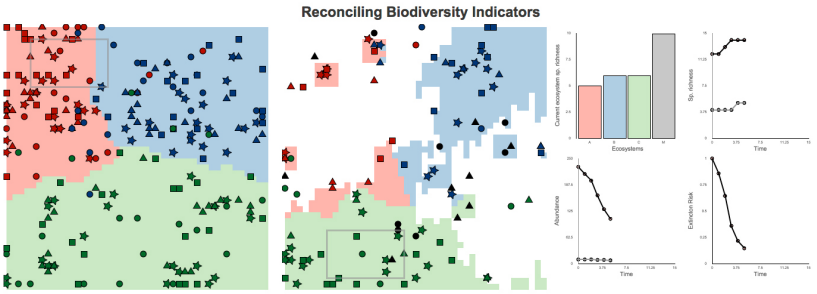
BIODIVERSITY MONITORING



PREDICTS is a collaborative project focussed on cataloguing and modelling the influence of humans on natural populations. Global models such as these are key advocacy tools, revealing overarching trends at global and national levels, as well as being applicable to national and local policy-making and business planning. CBER redesigned the PREDICTS project website, incorporating more targeted text to engage specific user groups including academics and policy-makers. This included the design of a flyer for the project to increase exposure and elicit new data for the project.

Predicts

The "Models of Global Biodiversity" workshop was held in January 2015 and aimed to provide a scientific critique of two powerful frameworks for modelling the responses of biodiversity to human impacts; the PREDICTS model and the Madingley Model. The meeting welcomed nearly 30 guests from institutions worldwide. Additionally, in February 2015, CBER held the "Future Directions for the LPI" workshop, which aimed to develop new analyses to inform future Living Planet Reports, and focussed on how global models could be strengthened or combined to better address the needs of different end users such as academics, policy-makers and the public. The meeting led to a follow-up LPI hack as part of the Conservation Hackathon project, to collect more data and develop new visualisation tools. CBER designed and programmed an



interactive infographic, “Reconciling Biodiversity Indicators”, to illustrate how results of different indicators are influenced by species’ characteristics such as dispersal and climate sensitivity. In conjunction with this, we produced a leaflet for policy makers on understanding biodiversity indicators, to be distributed at conferences and policy events.

BIODIVERSITY IN THE OVERSEAS TERRITORIES

CBER organised the ‘Biodiversity Monitoring in the Overseas Territories’ workshop in April 2014, which aimed to assess the current state of understanding of the biodiversity in the UK Overseas Territories, and foster collaborations that may inform the development of new monitoring and conservation projects within the overseas territories. The event welcomed attendees from the Royal Botanic Gardens Kew, the Joint Nature Conservation Committee (JNCC), the RSPB, the UK Department for Environment Food and Rural Affairs (Defra), the UK Foreign and Commonwealth Office, the UK Overseas Territories Conservation Forum (UKOTCF), British Antarctic Survey, Buglife, and Falklands Conservation. The workshop led to the development of two MRes research projects; the first investigating the impacts of shark fishing in Bermuda, and evaluating changing attitudes to sharks as

British Indian Ocean Territory

The British Indian Ocean Territory, also known as Chagos, is ar archipelago located in the center of the tropical Indian Ocean Although it lacks a permenant human population, a US nava facility on Diego Garcia has around 3,000 staff.

The British Indian Ocean Territory is home to an estimatec 3000 species of animal and plant, including 9 endemic species and over 250 non-native species. It also has some of the healthiest tropical coral reefs on the planet, comprising around 25% of the Indian Ocean's 'low threat' reef systems and home to many endemic species. For example, Ctenell brain coral (*Ctenella chagius*) is only found in the reefs of the Chagos Archipelago. Several on-going projects are monitoring coral reef health in the seas around the islands. The Chagos marine reserve is the largest 'no take' fishing zone, protecting the precious marine environment around the island.

Kew is involved in a restoration project to be enacted after rats have been successfully eradicated from the island. The Zoological Society London and UCL CBER are involved in a project to investigate the effectiveness of marine protected areas, employing new technologies such as pop-up satellite tags and under-water camera traps to monitor shark and tuna populations.

part of conservation management, and the second studying the abundance dynamics of native shorebirds in the Falkland Islands. The workshop also cemented a long-term collaboration between CBER and JNCC, and plans are underway to organise an environmental conference to bring together students from across the UK. Many of the future leaders and decision-makers of the UK overseas territories are currently undertaking degrees in the UK, and environment and sustainability should be at the heart of their thinking. Engaging a wide range of these students at one event, and offering an opportunity to debate concepts surrounding the green economy, environmental main-streaming and biodiversity monitoring, at an early stage of their careers could be hugely advantageous.

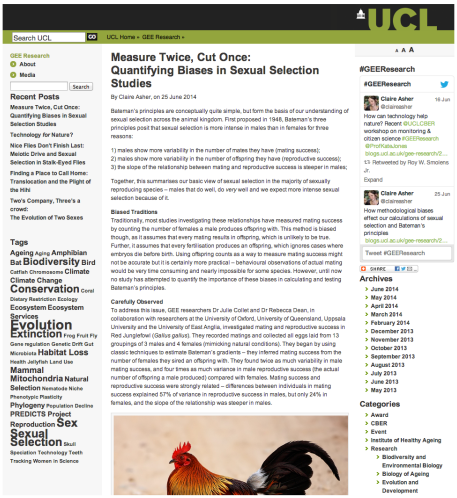
NATURAL CAPITAL FOR BUSINESS

The Natural Capital for Business Workshop was co-organised with the environmental consultancy, Eftec, and aimed to engage businesses with the science of natural capital accounting, and foster a better understanding of the needs of business amongst academics in the field. Attendees of the half-day workshop included the RSPB, NCC, CEH, CarbonClear and Anglian Water, among others. This meeting helped to develop an ongoing relationship between CBER and eftec, fostering a greater appreciation of the needs of business amongst CBER academics, and an improved understanding of natural capital science amongst environmental consultants responsible for developing new tools and frameworks for natural capital accounting.

eftec

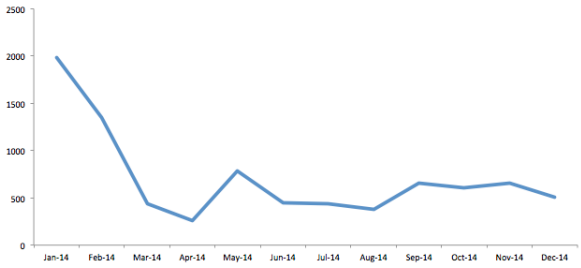
GEE RESEARCH BLOG

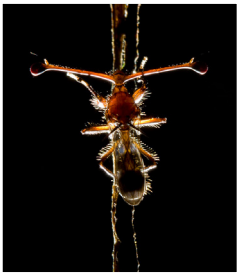
Since May 2013, the GEE Research blog has been providing short summaries of recent research in the department of Genetics, Evolution and Environment, aimed at a non-specialist audience. Covering topics ranging from sexual selection to conservation planning, the blog aims to engage members of the public as well as academics across the globe with research being conducted in UCL GEE.



The blog has proved extremely popular, receiving an average of 700 unique page views per month from over 350 unique users in 2014. The GEE Research blog is reaching an international audience, with 68% of users coming from outside the UK; including USA, India, Canada and Australia. There has been strong social media engagement with the GEE Research blog articles, including Twitter, Facebook and Reddit.

Funding for the long-term continuation of the GEE Research blog, in the form of a broader 'Environment Domain' blog which would provide training in engagement for staff and students and offer a platform to increase the visibility of research within the Environment Domain, is being sought.



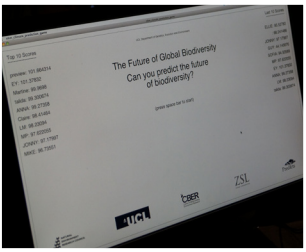


ENGAGEMENT

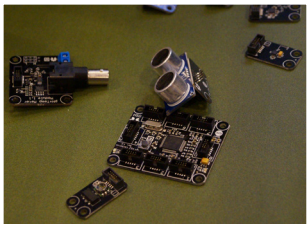
Royal Society Summer Science

At the 2013 Royal Society Summer Exhibition, Technology for Nature held a successful stall demonstrating applications of technology to ecology and conservation, such as the tracking technology Mataki.

Science Uncovered



To celebrate European Researcher's Night 2013, the Natural History Museum hosted 'Science Uncovered', an evening of special exhibitions, stalls and activities open to the public. Academics from UCL Geography and GEE displayed their work and talked to the public about environmental change. The stall included a game, developed in collaboration with ZSL and the PREDICTS project, to test the public's perceptions of present and future environmental change and biodiversity loss.



French Embassy State of Nature Series

As part of an on-going relationship between CBER and the French Embassy, UCL hosted three events on the 'State of Nature between June and November 2014. These events aimed to bring together academics from the French and UK research communities to foster collaboration and innovation. They included workshops and public lectures on the topics of 'Technology for Nature', 'Beyond Biodiversity Indicators' and 'Biodiversity Futures', and featured speakers from CBER, ZSL, the Muséum National D'Histoire Naturelle, the Centre D'Ecologie Fonctionnelle & Evolutive, Université Paris-Sud and Centre National de la Recherche Scientifique.

FUTURE DIRECTIONS

The NERC Impact Acceleration funding in CBER has facilitated the development of many projects, workshops and engagement activities which have in turn led to long-term collaborations between CBER academics and a wide range of stakeholders including business, policy-makers, NGOs and other academic organisations. Through the GEE Research blog and publicising the State of Nature Series and the PREDICTS project, this funding has enabled us to broaden the reach of NERC-funded science in CBER. Other projects, such as Natural Capital for Business, have offered the opportunity for academics to engage directly with businesses and influence the future of natural capital accounting, as well as directing their science to better inform future policy and business needs.

The Conservation Hackathon has been the most successful of our pilot projects, which continues to expand in scope and the number and variety of end users engaged. This project will continue to foster collaborations and offer an opportunity to inject the expertise of non-scientists into some of the most pressing challenges in conservation research today - obtaining, analysing and visualising big data.

Most of all, the NERC Impact acceleration funding has fostered an atmosphere of collaboration with non-academic partners within the Department, and reaffirmed and refocussed the department as a point of exchange between the worlds of science, business and politics.

ACKNOWLEDGEMENTS

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