

Education and the future of conservation

Supervisors:

Dr Aidan Keane (University of Edinburgh, aidan.keane@ed.ac.uk)

Dr Janet Fisher (University of Edinburgh)

Dr Chris Sandbrook (University of Cambridge)

Dr George Holmes (University of Leeds)

Project summary: This project will explore the role of formal education in shaping the views and skills of future conservation leaders.



Project background:

Conservation plays an important role in shaping the environment, lives and livelihoods of people throughout the world. Yet amongst conservationists, there exist important differences in opinions over what the ultimate aims of conservation should be and how they can best be achieved. For example, there are ongoing, and sometimes heated, debates about the relative merits of sustainable use of threatened species as opposed to their strict protection, or the extent to which markets can be a force for conservation. The direction of conservation over coming decades will be shaped by its future leaders, many of whom will emerge from those studying conservation today. Conservation education takes many forms, but a key strand is the delivery of formal courses within higher education institutions. Traditionally many such courses were created within schools and departments focussed on the natural sciences, principally biology, but conservation today is an inherently multi-disciplinary subject which draws widely on other academic disciplines such as economics, politics and psychology and is delivered from a variety of different perspectives. To date, however, there has been no systematic mapping of the range of subject material that these courses to deliver or the skills they attempt to develop, and there is little understanding of the role that formal conservation education plays in shaping the views of students.

This PhD will build upon the work of the Future of Conservation project (<http://futureconservation.org/>) which has developed a tool for exploring the opinions of conservationists about hotly debated topics and for measuring their positions along three key dimensions - the relationship between conservation and human wellbeing, the role of science and ecocentric goals, and the risks and benefits of market-based approaches - which can be used to characterise a range of different views. Using interviews and documentary evidence, the project will collate a database of higher-education institutions offering conservation-relevant courses and survey the material they deliver (e.g. the coverage of core topics such as biodiversity science, the ethics and values of conservation and common approaches to conserving nature, as well as skills-based teaching such as data science or stakeholder engagement techniques). The views of students starting conservation education will be measured, and compared to their views on completion using a before-after design. Changes

in views will be modelled against both student characteristics and the content and disciplinary focus of the taught material to understand how these factors shape attitudes towards key questions in conservation.

Key research questions:

The project will answer the following key research questions:

- What topics and skills are taught in conservation-related degrees across the UK and other selected nations?
- What are the views of students studying conservation-related degrees on key topics, such as the role of market-based approaches?
- How are students' views shaped by the education they receive? How does this relate to the content of their degrees?

Methodology:

The project will employ a mixed-methods approach, combining the statistical analysis of quantitative survey data about students' views on contentious conservation issues with the collection of new qualitative data about the content and delivery of conservation education. Together these approaches will provide new insights into the role of formal education in the development of conservationists' views. Data will be collected from institutions within the UK and selected other countries with strong conservation offerings where English is the dominant language (e.g. USA, Australia). The countries will be selected by the student in consultation with the supervisory team. The research builds upon, and benefits from, the supervisory team's previous work in this area and tools developed under the Future of Conservation project.

Timetable: Year 1: Literature review; Training and skills development; Developing data collection protocols; Interviews; Before-After survey data collection. Year 2: Continuing interviews; Before-After survey data collection; Year 3: Data analysis and writing-up; Dissemination activities

Training:

A comprehensive training programme will be provided comprising both specialist scientific training and generic transferable and professional skills. For example, we expect that the student would undertake training in statistical computing using R, including multilevel modelling and item response theory, and/or specific training in the design and implementation of interviews and the analysis of qualitative data, as appropriate to complement their existing skills.

Requirements:

We are looking for an enthusiastic and creative student with interests in conservation and education and a proven track record of both collaborative and independent working. Strong quantitative skills and an openness to mixed-methods are essential, as are excellent communications skills; experience of collaborative working with organisations would also be advantageous.

Further reading:

- Holmes, G., Sandbrook, C., & Fisher, J. A. (2017). Understanding conservationists' perspectives on the new-conservation debate. *Conservation Biology*, 31(2), 353–363.
- Kareiva, P., & Marvier, M. (2012). What Is Conservation Science? *Bioscience*, 62(11), 962–969.
- Sandbrook, C. G., Fisher, J. A., & Vira, B. (2013). What do conservationists think about markets? *Geoforum*, 50, 232–240.
- Lucas, J., Gora, E., & Alonso, A. (2017). A view of the global conservation job market and how to succeed in it. *Conservation Biology*, 31(6), 1223–1231.