

# UC Merced

## Frontiers of Biogeography

### Title

call for data: PREDICTS: Projecting Responses of Ecological Diversity in Changing Terrestrial Systems

### Permalink

<https://escholarship.org/uc/item/3pm6c22d>

### Journal

Frontiers of Biogeography, 4(4)

### Authors

Newbold, Tim  
Hudson, Lawrence  
Purves, Drew W.  
et al.

### Publication Date

2012

### DOI

10.21425/F5FBG15577

### Copyright Information

Copyright 2012 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

## call for data

## PREDICTS: Projecting Responses of Ecological Diversity in Changing Terrestrial Systems

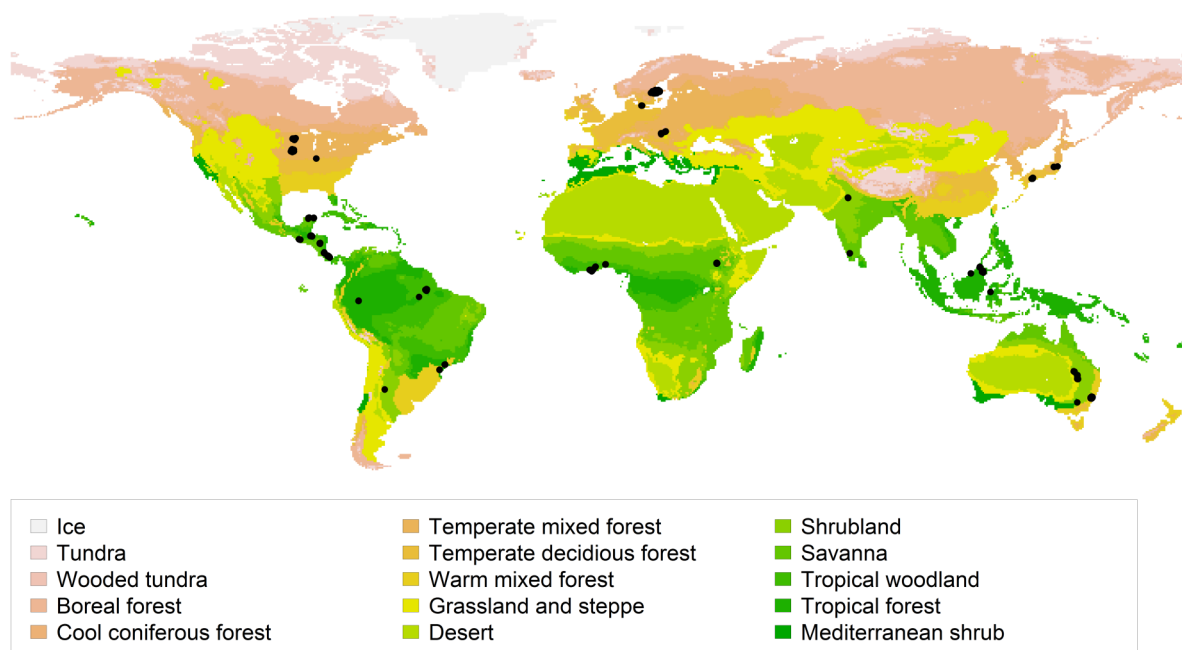
The PREDICTS project, which started in March this year, is a three-year NERC-funded project to model and predict at a global scale how local terrestrial diversity responds to human pressures such as land use, land cover, pollution, invasive species and infrastructure. PREDICTS is a collaboration between Imperial College London, the UNEP World Conservation Monitoring Centre, Microsoft Research Cambridge, UCL and the University of Sussex. In order to meet its aims, the project relies on extensive data describing the diversity and composition of biological communities at a local scale (i.e. estimates from individual sites or plots, rather than across whole landscapes). Such data are collected on a vast scale through the committed efforts of field ecologists.

We require estimates of diversity and composition that are comparable among different sampling locations. Therefore, we are looking specifically for data collected from more than one site using a consistent methodology. The ideal data are abundances or densities of all sampled species

at each site (i.e., a site x species matrix). However, abundance data are almost impossible to collect for some taxonomic groups, so we are also collecting data on the presence/absence of species or site-level estimates of community composition or diversity. We are particularly interested in studies where land use or land cover vary among the sites.

In the first six months of the project, we have collated over half a million records from 5877 sites (Figure 1), representing 9068 species, thanks to the generosity of 86 authors who have sent us data. However, a database of this nature necessarily includes biases towards certain parts of the world and particular taxonomic groups. We are especially keen to acquire data that address some of these biases. Currently the most under-represented biomes are tundra, boreal forest, savanna and deserts; the taxonomic groups that we need most data for are plants and invertebrates.

Alongside the large database that we are compiling, we will develop models that help un-



**Figure 1.** Sites that we have data for after the first six months of the project, superimposed on a map of the world's biomes (derived from the IMAGE model; Bouwman et al. 2006).

derstand how biological communities are responding to human pressures and use these to project into the future. Results from the models will provide input to policy processes, such as the Global Biodiversity Outlook and the Intergovernmental science–policy Platform on Biodiversity and Ecosystem Services (IPBES); we hope this will contribute towards meeting targets for reducing the rate of biodiversity loss. To meet these aims, we need your help!

If you have appropriate data that you would be willing to share with us, please get in touch ([enquiries@predicts.org.uk](mailto:enquiries@predicts.org.uk)). As well as data from individual studies, we welcome contributions from existing large-scale monitoring and data-collation efforts. All contributions will be acknowledged appropriately and all data contributors will be included as co-authors on an open-access paper describing the database (this will be published by the end of the project in 2015).

Tim Newbold<sup>1,2</sup>, Lawrence Hudson<sup>3</sup>,  
Drew W. Purves<sup>2</sup>, Jörn P. W. Scharle-  
mann<sup>4</sup>, Georgina Mace<sup>5</sup> and Andy Pur-  
vis<sup>3</sup>

<sup>1</sup>United Nations Environment Programme World Con-  
servation Monitoring Centre, Cambridge, UK.  
Tim.Newbold@unep-wcmc.org.

<sup>2</sup>Microsoft Research Cambridge, UK

<sup>3</sup>Division of Ecology & Evolution, Imperial College Lon-  
don, UK

<sup>4</sup>School of Life Sciences, University of Sussex, UK

<sup>5</sup>University College, London, UK

## References

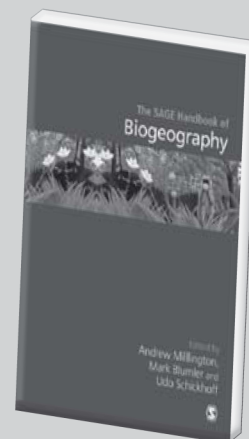
Bouwman, A., Kram, T. & Klein Goldwijk, K. (2006). In-  
tegrated modelling of global environmental  
change: an overview of IMAGE 2.4. Netherlands  
Environmental Assessment Agency. Bilthoven,  
The Netherlands.

Edited by Marcus V. Cianciaruso

## THE SAGE HANDBOOK OF BIOGEOGRAPHY

Edited by **Andrew Millington** *Flinders University*, **Mark Blumler** *State University of New York, Binghamton* and **Udo Schickhoff** *University of Hamburg*

The SAGE Handbook of Biogeography is a manual for scoping the past, present and future of biogeography that enable readers to consider, where relevant, how similar biogeographical issues are tackled by researchers in different 'schools'. In line with the concept of all SAGE Handbooks, this is a retrospective and prospective overview of biogeography that will: consider the main areas of biogeography researched by geographers detail a global perspective by incorporating the work of different schools of biogeographers explore the divergent evolution of biogeography as a discipline and consider how this diversity can be harnessed examine the interdisciplinary debates that biogeographers are, and are not, contributing to within geography and within the biological sciences. Aimed at an international audience of research students, academics, researchers and practitioners in biogeography, the text will attract interest from environmental scientists, ecologists and biologists and geographers alike.



## CONTENTS

Revisiting Theories and Concepts \ Explaining Distributions, Gradients and Disturbances \ Reconsidering Biomes and Ecosystems \ Utilizing Mapping and Modeling \ Linking Biogeography and Society View the full table of contents here

September 2011 • 624 pages

Cloth (978-1-4129-1951-7) • £95.00

[www.sagepub.com](http://www.sagepub.com)

