An analysis of the role of satellite-based information in the management of forests

Lead Supervisor: Stephen Morse, University of Surrey, Centre for Environmental Strategy
Email: s.morse@surrey.ac.uk

Co-supervisors: Geoff Griffiths, University of Reading, Department of Geography and Environmental Science; Jim Lynch, University of Surrey, Centre for Environmental Strategy

Indicators and indices have become increasingly important as tools within sustainable development and are intended to help bridge the gap between technical specialists and policy makers/managers. There are various ways of collecting data to populate indicators, including the use of earth observation (EO) data from space-borne platforms. However, there are still many unanswered questions as to how best to make the translation from remotely sensed EO data to relevant indicators for policy and management, especially in threatened ecosystems across the world. Answers are urgently needed to questions such as the extent to which EO data are currently employed in policy/management interventions and what factors work in favour or against this use? How best can remote sensing data be used to populate the indicators and indices that may be required by 'users'? The focus for the research project will be on the current and potential use of EO data for forest management in Brazil, a country with some of the most important forest ecosystems in the world also facing significant pressures from illegal logging, extractive industries, hydro-power and clearance for agriculture.
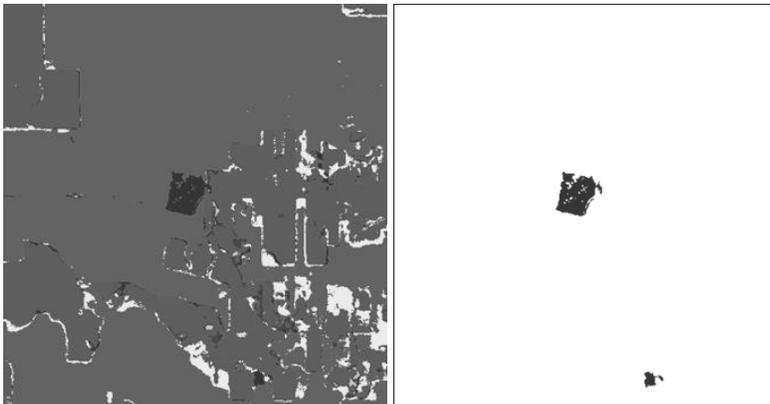
Detecting forest change in Brazil. Software allows for new change to be identified within a mosaic of existing land uses.

Source: National Institute for Space Research (INPE), Brazil

Training opportunities:
The student will be based at the University of Surrey but will also spend time at the University of Reading. Fieldwork will take place in Brazil and the student will be based in INPE, the Brazilian Space Agency, Sao Paulo, for 4 months. The student will learn a variety of skills in processing EO data, GIS, landscape ecology indicator development, forest management, institutional dynamics and policy development/implementation.

Student profile:
This project would be suitable for students with a degree in geography, environmental science/management or biological science/ecology with an interest in EO data, indicator development and the social sciences. Some knowledge of Portuguese would be desirable but not compulsory as training can be provided at the University of Surrey.
http://www.reading.ac.uk/nercdtp