

Partnerships

Environmental change is a global challenge. Strong national and international partnerships are crucial



Living With Environmental Change

NERC has helped bring together the UK's main funders of environmental research for a ten-year £1 billion programme Living With Environmental Change (LWEC). The unprecedented programme, announced in 2007, will focus on the regional and local impacts of environmental change from seasons to decades – the time and space scales needed by policy-makers.

The approach is unprecedented for two reasons: the size and extent of the environmental challenge facing the UK and the international community; and the way the research community and governments have come together to deal with it.

The LWEC approach will connect policy-makers, business and the public to researchers from the natural, engineering, economic, social, medical, cultural, arts and humanities disciplines. The reach will be national – partners

include the Welsh Assembly and Scottish Government, and international – UK researchers will work with emerging and developing economies.

The programme will provide decision makers with the best information to effectively manage and protect vital ecosystems services.



Antarctica as never seen before

An international team has created the most geographically accurate, true-colour satellite photograph ever made of Antarctica. The mosaic is made up of more than a thousand images from over three years of satellite observations and is freely available online.

British Antarctic Survey scientist Andrew Fleming said, 'It will deliver the best satellite images of the entire continent. It has a 15-metre pixel resolution so the detail is stunning. And it's not just a pretty picture. The dataset has a range of applications in glaciology and geology.'

Robert Bindshadler from NASA's Goddard Space Flight Center said, 'I think the mosaic will confirm areas of the Antarctic that may hold the most potential for scientific discoveries.'

The mosaic is a collaboration between the British Antarctic Survey, NASA, the National Science Foundation and the US Geological Survey, and is part of International Polar Year.

■ <http://lima.usgs.gov>



European alien invasion assessment

The Centre for Ecology & Hydrology led an EU-funded research project DAISIE (Delivering Alien Invasive Species Inventories in Europe) to bring together information on alien species and their effects.

The project has identified over 10,600 species that are alien within Europe and has produced detailed profiles of '100 of the worst'.

Key findings: the arrival rate of new alien species to Europe continues to increase. At

Setting global genomics standards

Research institutes around the world are producing vast amounts of genetic data. This rapidly expanding field needs to develop a common standard for describing genomes and metagenomes – all the genomes in a particular environment.

The Genomic Standards Consortium (GSC), led by Dawn Field and Tanya Gray from the Centre for Ecology & Hydrology with a range of international colleagues, is implementing its 'minimum information about a genome sequence' guideline to harmonise data collection and analysis within the wider genomics community.

Participants in the GSC include biologists, computer scientists, those building genomic databases and conducting large-scale comparative genomic analyses, and those with experience of building community-based standards. The work will have a lasting impact on the global genomics community.

■ www.europe-aliens.org

the current rate, one new alien mammal species is introduced to the continent each year; vertebrates tend to be deliberately released, invertebrates generally arrive as contaminants of plant material, and most plants escape from gardens; one in six European alien species are already known to have an ecological or economic impact.

The inventory and distribution maps are the first qualified reference system on invasive alien species for Europe.

New emissions service for capital cities

Cities all over Europe are queuing up for a new service that quantifies greenhouse gas emissions across a region's industries and economic sectors.

Four regions in Europe have already applied the new service from the Tyndall Centre for Climate Change Research at Manchester University. A further 21 regions are next in line, including ten capital cities: Madrid, Paris, Stockholm, Helsinki, Brussels, Athens, London, Oslo, Moscow, Ljubljana.

The system makes it easy for policy-makers, regulators and industry to produce energy scenarios for emissions reductions based on their own expertise and understanding. The system, known as GRIP (the Greenhouse Gas Regional Inventory Protocol) was co-funded by the Tyndall Centre, the Environment Agency, and the researcher Sebastian Carney as part of his PhD.

A new company, Carbon Captured Ltd, was founded in 2008 to meet further demand.

Sebastian said, 'Stakeholders engage with GRIP quickly as it enables energy scenarios to be formed in real time in a transparent and reflexive way.'

■ www.grip.org.uk

