



Press release

11:00 Hrs BST, Monday 8 June 2009

£100 million for UK's environmental challenges

A package of new research to help the UK prepare for the inevitable challenges of climate and environmental change is announced today (8 June 2009). £100 million is being invested in projects that will, among other things, tackle the spread of infectious diseases, produce resilient designs for cities and transport systems, and address the economic impacts of our changing environment.

This is the first set of research programmes to come under the umbrella of the Living With Environmental Change (LWEC) partnership of UK governments, departments and research councils. The funding for the new research comes from the £1 billion committed in 2008 by the LWEC partners, over the next 10 years.

The research includes completely new programmes, such as a £6 million programme to enable the design of more resilient buildings, transport and water systems in cities. It contributes to established programmes such as the Tyndall Centre for Climate Change Research. It also includes the development of new activities, such as ensuring that the technological, economic and social advances needed to combat environmental changes are acceptable to the public.

Science and Innovation Minister, Lord Drayson said:

“Tackling climate change is the biggest challenge of our generation. Through this groundbreaking research programme, the public will benefit from the development of innovative green technologies that will tackle climate change while enhancing their quality of life, and motivate all of us to tackle this challenge.”

Living With Environmental Change is the biggest environmental research programme ever undertaken in the UK, and is revolutionising the way science is carried out. It allows a much closer relationship between the researchers and their ‘customers’ – who are decision makers in government, NGOs and businesses – and raises their understanding of both the societal and scientific needs that should be addressed when making policy decisions.

Director of LWEC, Professor Andrew Watkinson said:

“Living With Environmental Change aims to make sure that organisations funding, undertaking and using environmental research work efficiently and effectively together to provide value for money and help stimulate the green economy.”

Richard Lochhead, Scottish Government Cabinet Secretary for Rural Affairs and the Environment said:

"This research provides us with a unique opportunity to join with other UK research funders to help combat one of the biggest challenges facing us today. Changes in our environment will affect us all and it is essential we find ways to adapt and deal with them, now and in the future.

"The Scottish Government is taking the lead on the programme's health objective, looking at the impacts of environmental change on human, plant and animal health. This is a vital issue and particularly relevant for Scotland, a country renowned for its natural heritage and widely regarded as producing some of the highest quality produce in the world."

Welsh Assembly Government Minister for Environment, Sustainability and Housing Jane Davidson said:

"Climate change is one of the greatest challenges facing the world today. It will mean all of us adapting the way we live and work as we experience hotter, drier summers and warmer, wetter winters. Tough choices will have to be made. It is vital that these decisions are based on the best science and research available. This research programme will play a key part in providing the evidence needed."

Living With Environmental Change is looking at environmental changes at a range of scales from the local to the global. Some of the most significant challenges will undoubtedly occur in developing countries. The Millennium Ecosystem Assessment showed that the loss of services from ecosystems (for example deforestation, soil degradation, water purification) is a significant barrier to reducing poverty, hunger and disease. LWEC is funding the development of Ecosystem Services for Poverty Alleviation (ESPA), a programme that aims to help reduce poverty and improve the wellbeing of people living in developing countries.

Mike Foster, MP, Parliamentary Under Secretary of State for International Development, said:

"I am very pleased that in the international arena there are plans to undertake cutting edge research to help meet the UK's obligations on the Millennium Development Goals."

The LWEC partners' board meets today (8 June) to decide on the next set of priorities for research funding. The board will be looking for research that will help the UK to deliver a low carbon economy, ensure food, water and security for people, and increase the resilience of vulnerable people, places and infrastructure.

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Notes to Editors

- A.** The Living With Environmental Change programme is a ten year partnership that brings together 20 research organisations funding, undertaking and using environmental research to find ways for society and individual people to adapt to the environmental changes that we face now and in the future. LWEC and its overall funding of £1 billion was announced in June 2008 by the Department for Innovation, Universities and Skills, together with the Department of Environment, Food and Rural Affairs.
- B.** Programmes and activities in the first round of major research approved for inclusion or funding under the LWEC partnership are:

1. Joint Climate Research Programme (NERC and Met Office)

The UK leads the world in predictive climate science and LWEC's overall success depends on making sure predictive capacity improves to the point where predictions can be used at the same time and space scales on which the economy is managed. This work will provide evidence that the UK needs in international negotiations as well as underpinning much of the predictive work needed to develop and implement successful mitigation and adaptation policies. It will also provide the foresight that UK business can use to lead on approaches to mitigation and adaptation. The programme was launched in March 2009.

2. Quantifying Uncertainty (NERC, Defra, Met Office, DECC, SG)

Funding is currently being made available to the climate science community (in addition to that under the Joint Climate Research Programme) to address the key issue of uncertainty in climate modelling. Unless we can better quantify uncertainty – or become more confident in the way we handle uncertainty in predictions of change – it will be difficult to develop effective mitigation or adaptation strategies. UK scientists aim to use this work to have a major impact on the work of the IPCC.

3. Avoiding dangerous climate change (DECC and Defra lead with other partners)

Avoiding Dangerous Climate Change (AVOID) is to be delivered by a consortium including the Met Office and research centres supported by Research Council partners, some of whose activities are themselves accredited. AVOID will make an important contribution to the UK position at the Copenhagen climate meeting and also no doubt to the way we look at risks to the UK in the round (Met Office Lead with other partners)

4. Centre for Climate Change Economics and Policy (ESRC funds with interactions from other LWEC partners)

This group, guided by Lord Stern, began work in October 2008. The LWEC Director sits on the Advisory Board and the group will be addressing the economic and policy challenges identified in the Stern review and the debate that followed.

5. Tyndall Centre for Climate Change Research (NERC, EPSRC, ESRC)

The internationally renowned Tyndall Centre for Climate Change Research that contributed significantly to the IPCC assessments on climate change adaptation and mitigation has been provided with additional funding to help orientate and engage the UK climate change research community to deliver more effectively on the LWEC environmental change objectives.

6. National Ecosystem Assessment (Defra, SG, WAG, NERC, DECC and involvement of other partners and stakeholders)

This world-leading initiative will produce the world's first national assessment of its kind. Following the Millennium Ecosystem Assessment chaired by Professor Robert Watson (Defra Chief Scientist) it will provide an assessment of the current state of all of the ecosystems in the UK. The study will provide the evidence foundation of the ecosystems approach to policy that Defra are leading on across Whitehall, identifying threats and opportunities.

7. Pollinators (BBSRC, NERC, SG, Defra and the Wellcome Trust)

This programme will determine the importance of the factors that lie behind the declines in pollinators (such as honeybees and bumblebees). Possible causes include, disease, chemicals (such as pesticides) and habitat change and a range of management practices. The research will aim to identify solutions that will help reverse the declines in this economically important group of organisms.

8. Ocean acidification (NERC, Defra, DECC, SG, NE)

This is another major long-term environmental issue to which partners are committed. The potential impacts of ocean acidification, resulting from oceans absorbing anthropogenic carbon dioxide, stretch from climate regulation to fisheries. Because ocean life is so sensitive to ocean acidity it now seems likely that marine fisheries could be adversely affected much sooner than had been thought. The marine food chain may already have been affected.

9. Ecosystem Services for Poverty Alleviation - ESPA (Partners: DFID, NERC and ESRC)

This programme will address key environmental vulnerabilities in areas of the world where poverty is worst. The aim is to find ways in which poverty can be reduced by accounting for regional variations in climate, weather patterns and land use without causing or worsening enduring environmental problems.

10. The Changing Water Cycle (NERC, Defra, EA, DECC, SEPA, WAG, SG)

This is a large initiative that is still gathering interest not only from LWEC partners but also key stakeholder groups (such as the UK water industry). This will be a very significant element of LWEC as there are expected to be very large changes to the global water cycle that will affect billions of people, including many in the UK. Some people will be more likely to experience drought, others flooding. Better drought and flood management will be a key outcome.

11. Environment and Human Health Programme (Partners: NERC, EA, Defra, MoD, MRC, The Wellcome Trust, ESRC, BBSRC, EPSRC and HPA)

Estimates suggest that some 30% of human health problems worldwide have a strong environmental component. In the UK damage to human health from poor air quality costs us all on average six months of life expectancy and the nation some £20bn a year in health care. Environmental change may exacerbate this and key uncertainties in air quality pollutant dynamics need to be resolved. Equally we need to prepare for new and emerging diseases in ways that require close NERC, MRC and DoH collaboration.

12. Centre for Environment and Health (MRC, DoH/HPA with interest from other partners developing)

This new multi-disciplinary grouping using a mix of more traditional and leading edge techniques is centred around Imperial and Kings Colleges in London to identify and

understand health impacts of a range of environmental changes on the scales that influence management policies and practices.

13. Adaptation and Resilience to a Changing Climate - ARCC (Partners are: EPSRC, ESRC, with potential interest from DCLG and other partners such as the TSB and NERC as the programme develops)

This programme will enable the design of urban systems that are more resilient to climate change. The projects will address a range of issues: transport systems, water (urban floods and droughts), built infrastructure, health (impacts and adaptation of infrastructure).

14. Science Heritage Programme (AHRC, EPSRC)

This programme takes forward recommendations made by the House of Lords Science and Technology Select Committee report on science and heritage of November 2006 which concluded that there was a compelling need for a comprehensive national strategy for heritage science which covered both immovable and moveable heritage. The joint five year research programme has a dual purpose: it will provide funding opportunities for high quality research to increase our understanding, and improve the resilience of cultural heritage in the face of 21st century environmental change. It will also develop the heritage science community by funding networks and other awareness-raising and capacity building activities.

15. Centre in Understanding and Managing Natural and Environmental Risks (Defra, NERC, EPSRC, ESRC)

LWEC partners identified risks and the way we deal with them as a cross-cutting aspect of LWEC. This centre, with its headquarters at Cranfield University, will enable improved management of risk through a focus on better understanding the ways the public responds to perceived risks in areas such as natural and man-made hazards, extreme events and new and emerging diseases.

16. Research Centre on Sustainable Behaviours (ESRC, Defra, SG, WAG, EA)

This centre that will focus on sustainable consumption. The successful research group is about to be announced. Set within the context of broader debates about sustainable development and "one planet living", the focus of the Centre will be on the research challenges of informing moves within UK society towards more environmentally sustainable patterns of consumption and ways of living, and of achieving more effective pro-environmental behaviours to help to address the environmental challenges faced by the UK in the wider world.

17. Knowledge Exchange (NERC, ESRC, BBSRC, WAG, Defra)

The Rural Economy and Land Use Programme (Relu), with additional funding from the Natural Environment Research Council, is consulting on a call for proposals on 'Adapting Rural Living and Land Use to Environmental Change'. The first objective of the call will be to build networks and capacity for creative knowledge exchange between researchers and policy makers, businesses, practitioners and the wider public, with a view to strengthening adaptive capacities, primarily within the UK. The second objective of the call will be to test novel approaches and partnerships for interdisciplinary research and analysis on living with environmental change in rural contexts. It is intended that projects funded under the call will help to demonstrate how the Living with Environmental Change Programme might meet some of its major challenges regarding interdisciplinary working, stakeholder engagement and knowledge exchange

18. Public Engagement (ESRC led)

LWEC partners have approved plans to launch a public engagement activity to ensure that the technological, economic and social changes that are necessary to combat climate change (for example) are acceptable to the public. The UK cannot afford to develop a technology only for it to be rejected as unacceptable by the public. This activity will help manage such risks.

C. The LWEC partners are:

- Natural Environment Research Council
- Economic & Social Research Council
- Engineering & Physical Sciences Research Council
- Biotechnology & Biological Sciences Research Council
- Medical Research Council
- Arts & Humanities Research Council
- Department for Environment, Food & Rural Affairs
- Department for International Development
- Department for Communities & Local Government
- Department for Transport
- Department of Health
- Department of Energy and Climate Change
- Environment Agency
- Welsh Assembly Government
- Scottish Government
- Natural England
- Scottish Environment Protection Agency
- Local Government Association
- Technology Strategy Board
- Met Office