

# Natural Capital and Knowledge?

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*Valuing our Life Support Systems  
Natural Capital Initiative 2014*

# Natural Environment Research Council



- NERC is the UK's leading public funder of environmental science
- We invest £330Mn each year in cutting-edge research, postgraduate training and innovation in UK universities and research centres



# We support

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- 3000 scientists & 1000 PhD students
- 1000 research projects and 60 UK or international programmes



- 55 universities, 20 research institutes



- UK national capability:
  - 4 ships, 7 aircraft, 6 polar bases, 6 data centres, 32 community facilities

# Our vision

The **business** of the **environment**  
our strategic direction

To place  
environmental  
science at the  
heart of  
responsible  
management of  
our planet

# Meeting Societies' needs



- **Benefiting from natural resources**
  - Using natural resources sustainably to support a growing world population and economy
- **Resilience to environmental hazards**
  - Making vulnerable people, infrastructure and businesses more resilient to environmental hazards and emergencies
- **Managing environmental change**
  - Making informed choices about our impacts on the environment and how we respond to environmental change
- **Discovery science**

# Strategic research

– *our science investment that is important to our societal goals*

## Strategic Programme Area

Scale, complexity, opportunities for partnership development, logistics etc. are such that more time is required for programme development – requires more management (e.g. ESPA). Similar to a current large RP.



## Highlight Topics

Smaller investments, similar to Large Grants. A list of agreed topics will be published in a grant call once or twice a year, anyone in the community can respond with a proposal to address one topic.



## Joint Strategic Response

Smaller investments to be agreed over shorter timescales. Most likely in response to opportunities presented by partners to allow NERC to join initiatives (e.g. Tree Health)





# Wider NERC Funding Streams

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## National Capability

Large infrastructure, facilities, data centres, public and national good activities, long-term discipline and cross-discipline science

## Discovery Science

Standard, Large and Urgency Grant Schemes

## Training & Fellowships

Doctoral Training Partnerships, Doctoral Training Centres, Fellowships, short courses

## Innovation

Impact Accelerator Accounts, KE awards, Clubs

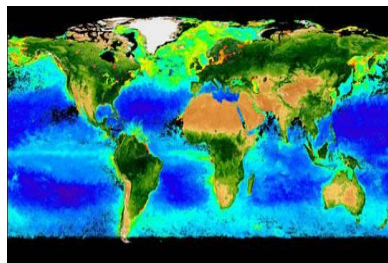
## Strategic Research

(previous slide) replacing Theme Action Plans and Research Programmes

# In light of this strategy, where next for Natural Capital?

NERC has provided a framework to address what is seen as delivering its roles for the next few years

How that is delivered throughout the science challenges is very much to be led and advised by you.





# NERC interactions in Natural Capital



## Valuing Nature programme



Ecosystems Knowledge Network

**Natural Capital Committee**



Valuing Natural Capital



**And more**

# To place environmental science at the heart of responsible management of our planet

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NERC business is management of the environment – *to manage it we need to understand the values we place on it*

- Science to understand the ecosystem functioning and services
- Science to understand how the natural environment interacts with man made environment.

## *Challenges include:*

- Food, water and energy challenges – nexus – how do we value each and the role/value of the environment this context
- The Urban Agenda
  - Impacts on human health (mental and physical) and productivity, air pollution,
  - Brownfield sites and remediating land

# To place environmental science at the heart of responsible management of our planet

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But we also see it as putting business into management of the environment.

## *Challenges include:*

- **Terminology** - translating science to business
  - - valuing capital and nature (science) vs green/blue/grey infrastructure (business)
- **Persuasion**
  - civil engineering companies see value of green infrastructure, their difficulty is convincing the specifiers of projects of this value; need for evidence, valuations and acceptance of proxy values

# Widening the perspective

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## International and Global Perspective

- Megacities including China and India & London

## Wider than land or freshwater agendas

- Marine – Oil rig decommissioning

## Business partnerships

- Civil engineers
- Agriculture
- ‘users of the landscape’

## Support for green, blue, grey infrastructure solutions

# Conclusion

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- An exciting and still emerging concept – tools and data are there
- Fits to NERC strategy
- Has application across many scales, sectors and to many grand and not so grand challenges
- Knowledge – big data (satellite and sensor technology)
- Key is integration – at across research disciplines, but also big communication challenge at Govt, business and public level