Welcome

to the Inaugural Workshop of the

UK Environmental Observation Framework

17th – 18th July 2008

UK Environmental Observation Framework

The UK- EOF part 2

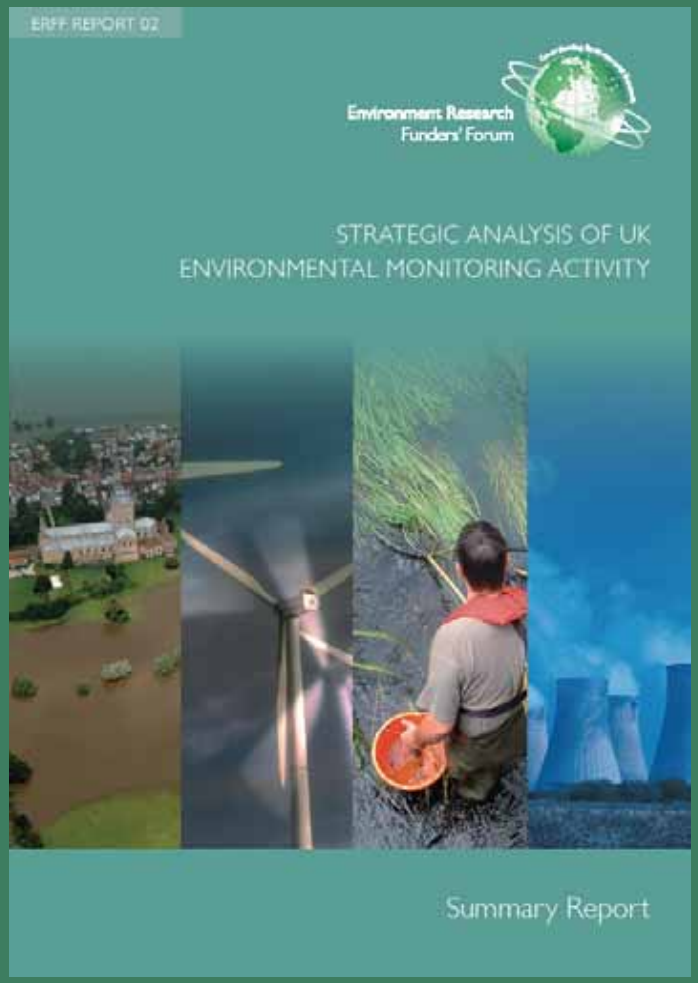
Beth Greenaway UK-EOF

17th July 2008

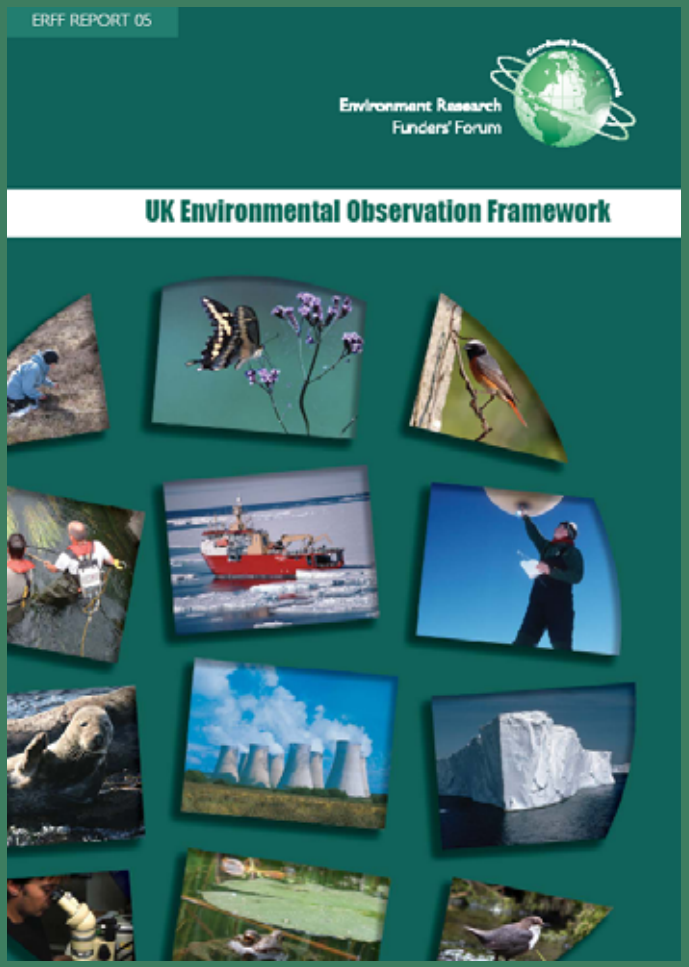
Contents

- Part 1
  - The new strategic UK-EOF
  - Concepts , scope and main outcomes
  - Who’s involved
- Part 2 The Workstreams

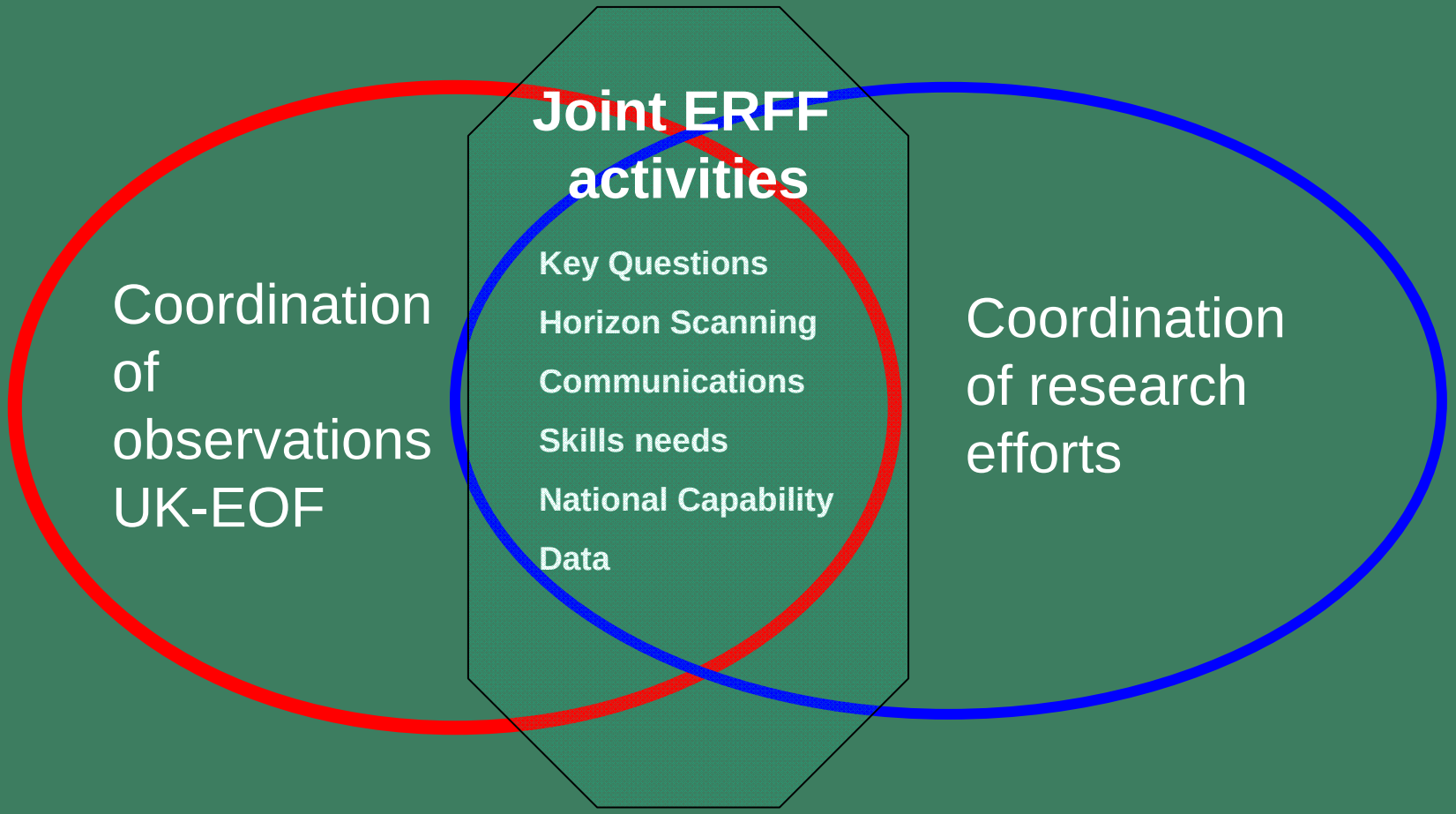
ERFF review of Environmental Monitoring



To UK-EOF



UK-EOF as part of the ERFF team:



Delivery Plan: Workstreams

WS1: Collective Aspiration – Statement of Need

WS2: Data Stewardship – Metadata catalogue, data policy, suitability tag.

WS3: Assessments co-ordination and Knowledge Transfer

WS4: Financing Mechanisms – cost guidelines, overall long term view

WS5: Community – cohesion and communication via clusters

WS 1 Collective Aspirations

Statement of Need

- Stage 1 (Martin Griffiths)
  - Initial steps and key stage at this workshop
  - Update and improve for ERFF Main Board October
- Stage 2 in 2009 and annual
  - Update detail
  - Map known work to aspirations
- Stage 3 Develop a decision making mechanism to match needs to collection

WS2: Data Stewardship

2A Metadata catalogue – Gemma Truelove

- Existing database to be updated in contents, scope and ability to search.
- Questionnaire provided user needs
- >1000 people would use it at least once per year
- Will rely on COLLECTORS to maintain their entry.
- New database by March 2009.

2B Data policy

2C Suitability tag.

WS2: Knowledge Base

2A Metadata catalogue

2B Data policy

Debbie King to lead

2C Suitability tag.

WORKSTREAM 2b – KNOWLEDGE BASE and DATA SHARING

- Data and information are a key element of UK-EOF
- Complex and political but essential to UK-EOF achieving outcomes
- 80% of raw data either not available or has constraints

WORKSTREAM 2b – KNOWLEDGE BASE and DATA SHARING

- Main aims are to understand constraints and reduce barriers
- Barriers can be any or all of:

  technical/financial/cultural
- Next steps: Bob Watson Think Tank, identify elements of effective data policies, work with organisations to implement and share best practise

WS2: Data Stewardship

2A Metadata catalogue

2B Data policy

2C Suitability tag.

A science led research programme to establish the standards and protocols used and to find way of flagging datasets which can be reused for other studies.

An example is the ECVs- essential climate variables for UNFCC.

Tender to be let later in 2008

WS3:Assessments coordination and Knowledge Transfer

- What use are we making of these observations. What do we want to do with them. Are they properly acknowledged?
- WS will start early 2009
- Catalogue the assessments made – 45 ‘’state of’s ’’ on list so far
- --- and ask are we making the best use of all our observation efforts?

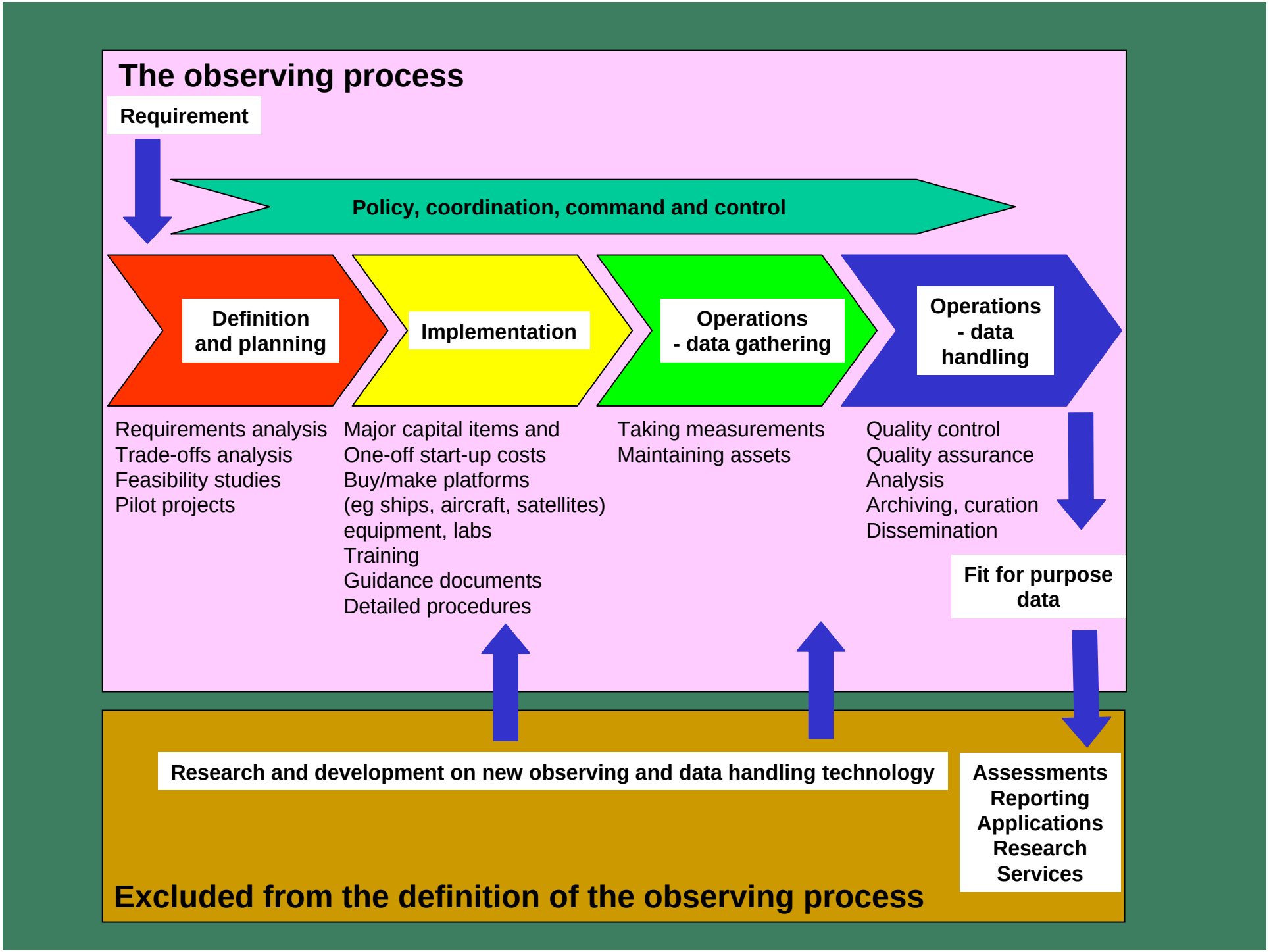
WS4:Financial Mechanisms

4A How do we cost observations?

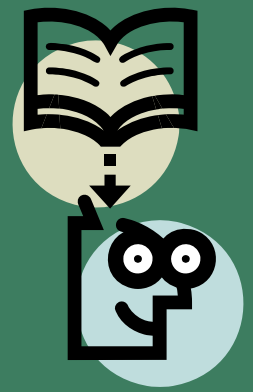
- Short project by Assimila to produce guidelines
- All data collectors / activity managers asked to re submit costs by end 2008
- A better estimate of resources used.

4B Can we find ways of sustaining longer term funding?

- A longer term study – possible aim for the spending review 2009
- Discussions with Bob Watson in Sept
- Novel ways thought about
- Must make best use of existing monies and mechanisms as well as look to more novel solutions.
- First step is to articulate the barriers to funding longer term observations


The observing process
Requirement
Policy, coordination, command and control
Definition and planning
Implementation
Operations - data gathering
Operations - data handling
Requirements analysis
Trade-offs analysis
Feasibility studies
Pilot projects
Major capital items and
One-off start-up costs
Buy/make platforms
(eg ships, aircraft, satellites)
equipment, labs
Training
Guidance documents
Detailed procedures
Taking measurements
Maintaining assets
Quality control
Quality assurance
Analysis
Archiving, curation
Dissemination
Fit for purpose data
Research and development on new observing and data handling technology
Assessments
Reporting
Applications
Research
Services
Excluded from the definition of the observing process

WS5:Community

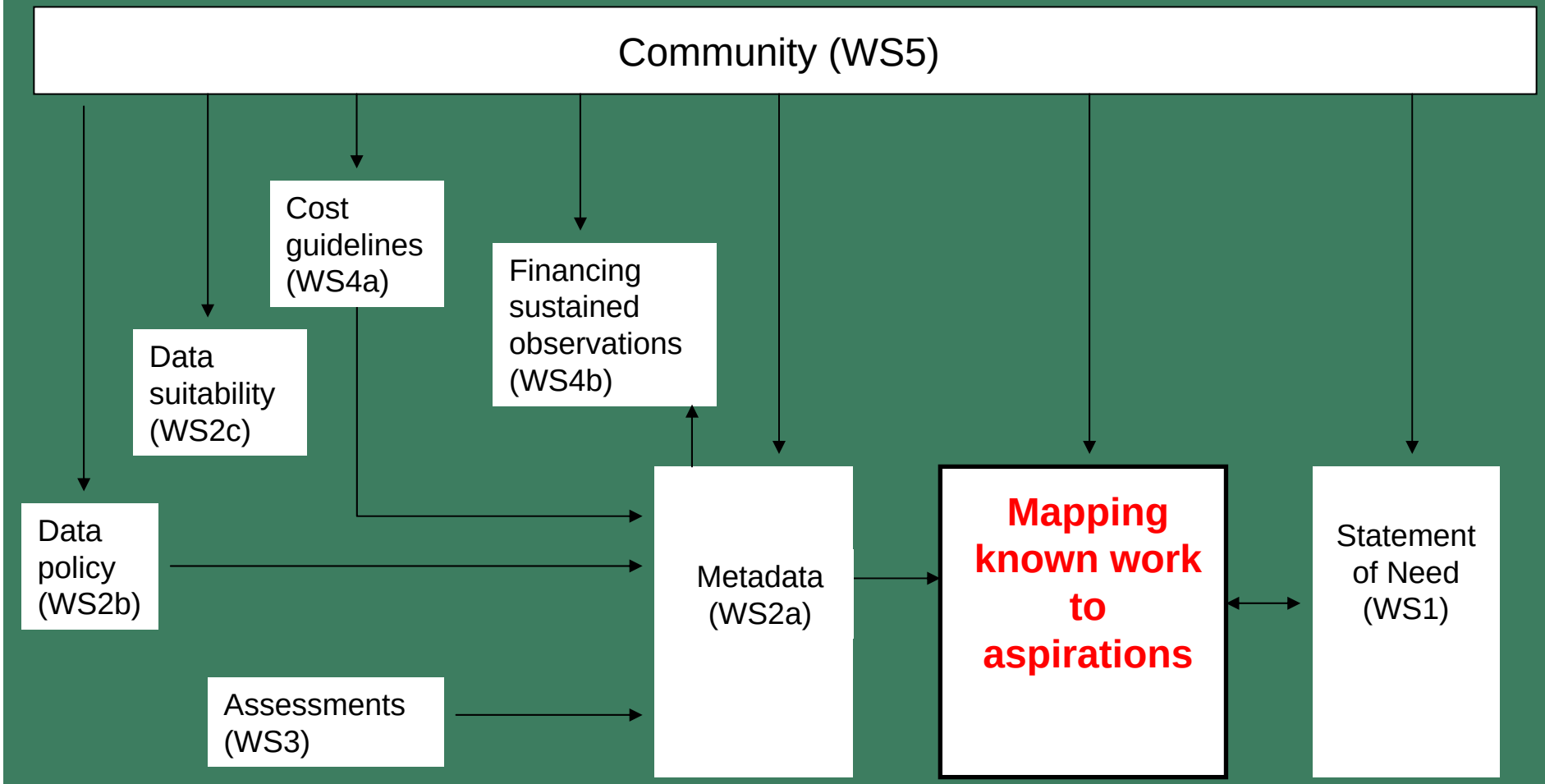


- Is extremely diverse but all have a role to play.
- A communication plan will be developed
- Website – **www.erff.org.uk** and / newsletters etc
- Need to organise into clusters – Workshop event
- Need to have champions for observations in ALL organisations – for ownership, communication, value and transfer of best practise and knowledge.
- Annual workshops plus input to the WSs.

YOU ARE ESSENTIAL TO MAKE THE UK-EOF work and to change the culture surrounding observations.

Workstreams Overview 2008/09

Mapping known work to aspirations



Definitions: Environmental Observations

Environmental *the broadest sense of observations from the natural environment concerning physical (including geological), chemical and biological properties of the environment. This includes observations collected on land, in air, in ice, in water in the coastal and marine environment, compliance or statutory information, earth observations from space and the effects of humans on the environment.*

Note the exceptions are social science and human health data.

Observations: *the taking, on a reasonably regular basis, of any form of observations relative to the status of the environment, regardless of frequency of, or purpose for which, the observations are made, or however they are made (from satellites, ships, etc). Such observations are designed to meet a wide range of societal needs by providing a variety of products and services. Surveys are in scope for some workstreams.*

Outcomes of UK-EOF in 2008/9

- First UK-EOF Statement of Need.
- Options paper for financial models.
- Data policy – issues explored, articulated and a draft policy for debate.
- (Meta) Database - Requirements and business case, new structure and front end on web.
- Contract let to devise data quality/suitability tag.
- Review of assessments and use cases.
- UK- EOF Management, clusters and secretariat in place.
- Community defined, built, first workshop (July 08), website established and newsletters written.

Questions?

Thanks …questions and contacts

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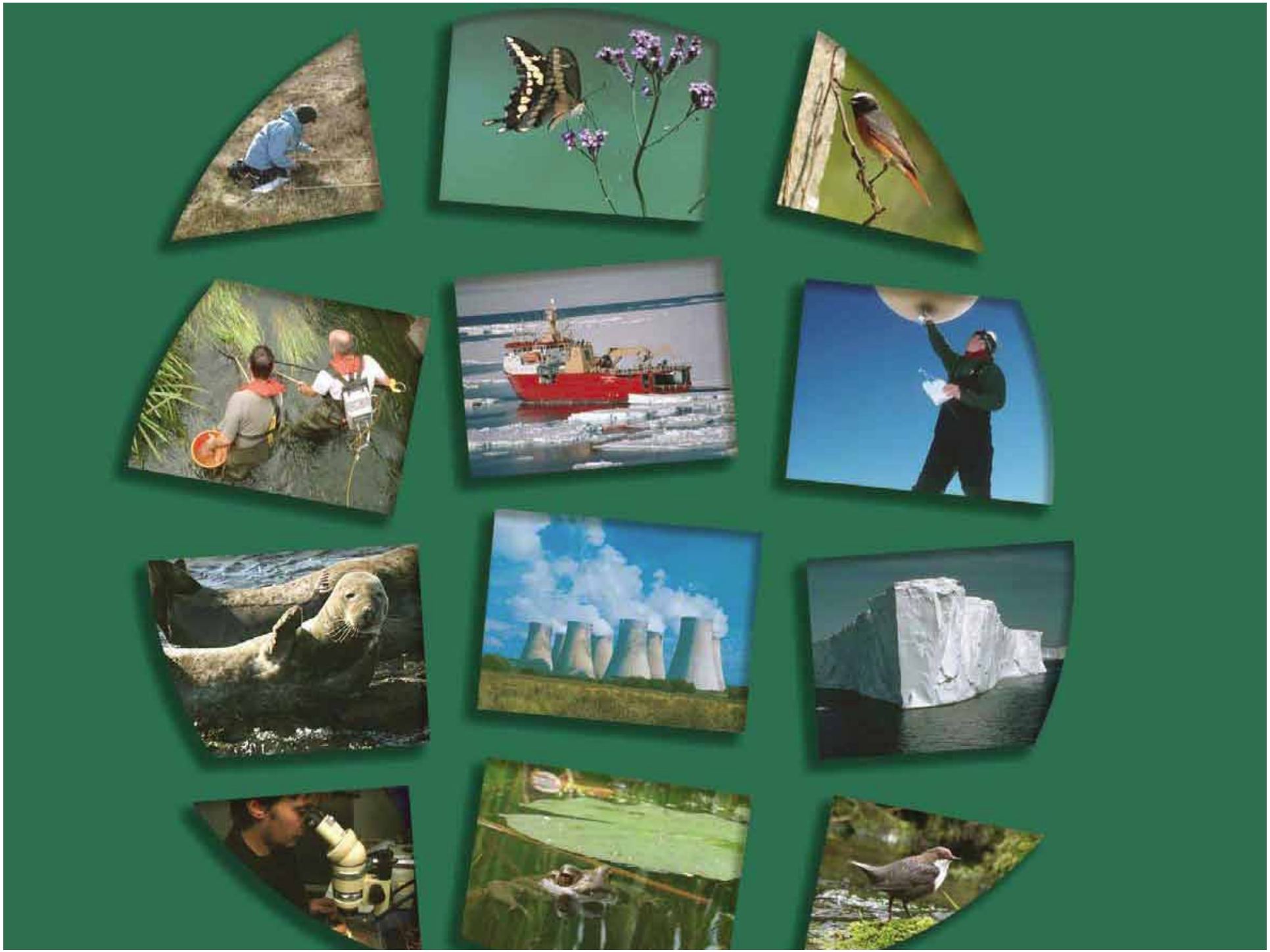


International Activities & Responding to the Changing Environment

UK-Environmental Observation Framework
Inaugural Workshop

Andy Shaw, Science & Innovation Manager Earth Observation, NERC

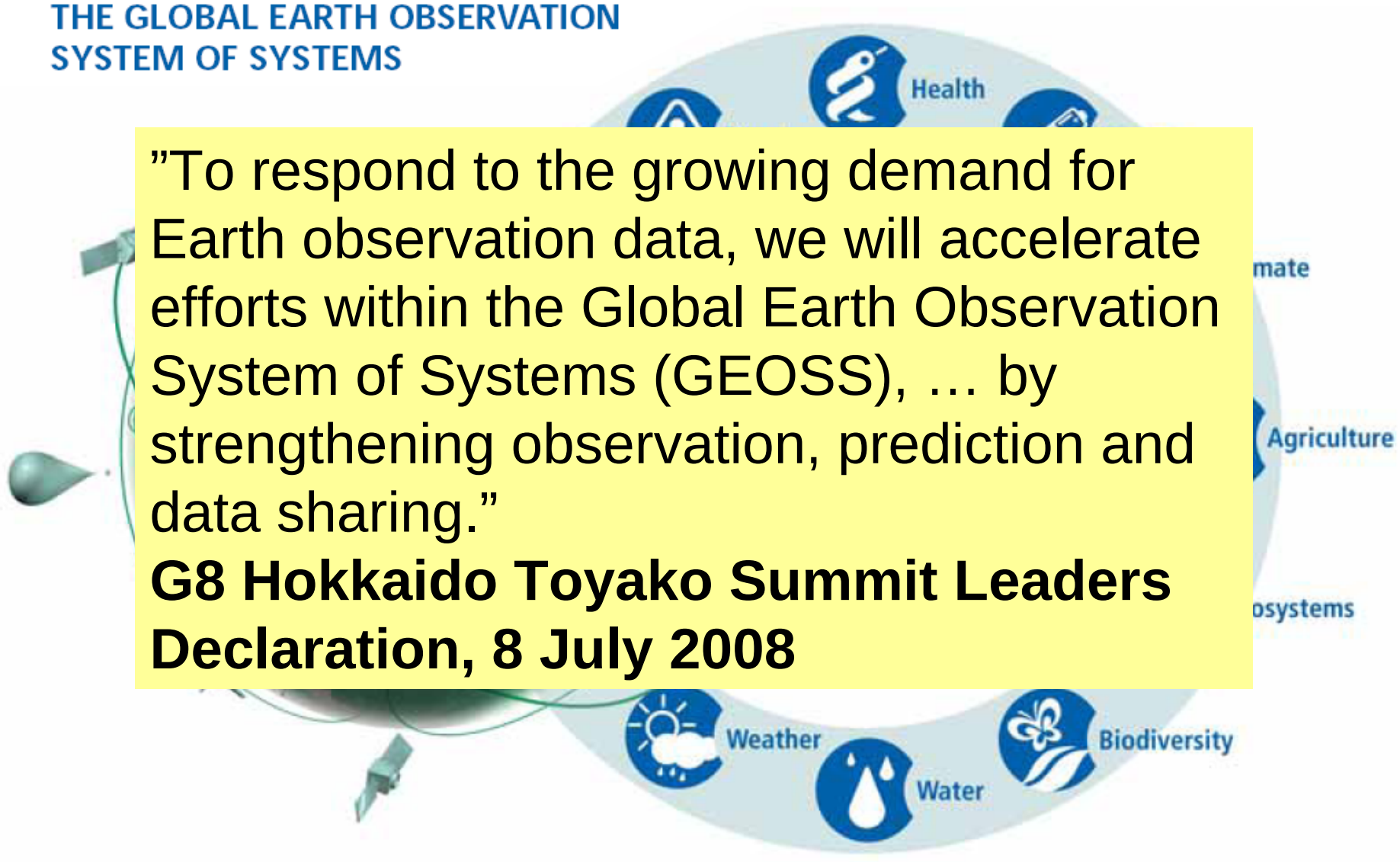
17 July 2008

NATURAL ENVIRONMENT RESEARCH COUNCIL

Changing global environment

Credit: NASA's Earth Observatory

The international response



”To respond to the growing demand for Earth observation data, we will accelerate efforts within the Global Earth Observation System of Systems (GEOSS), … by strengthening observation, prediction and data sharing.”

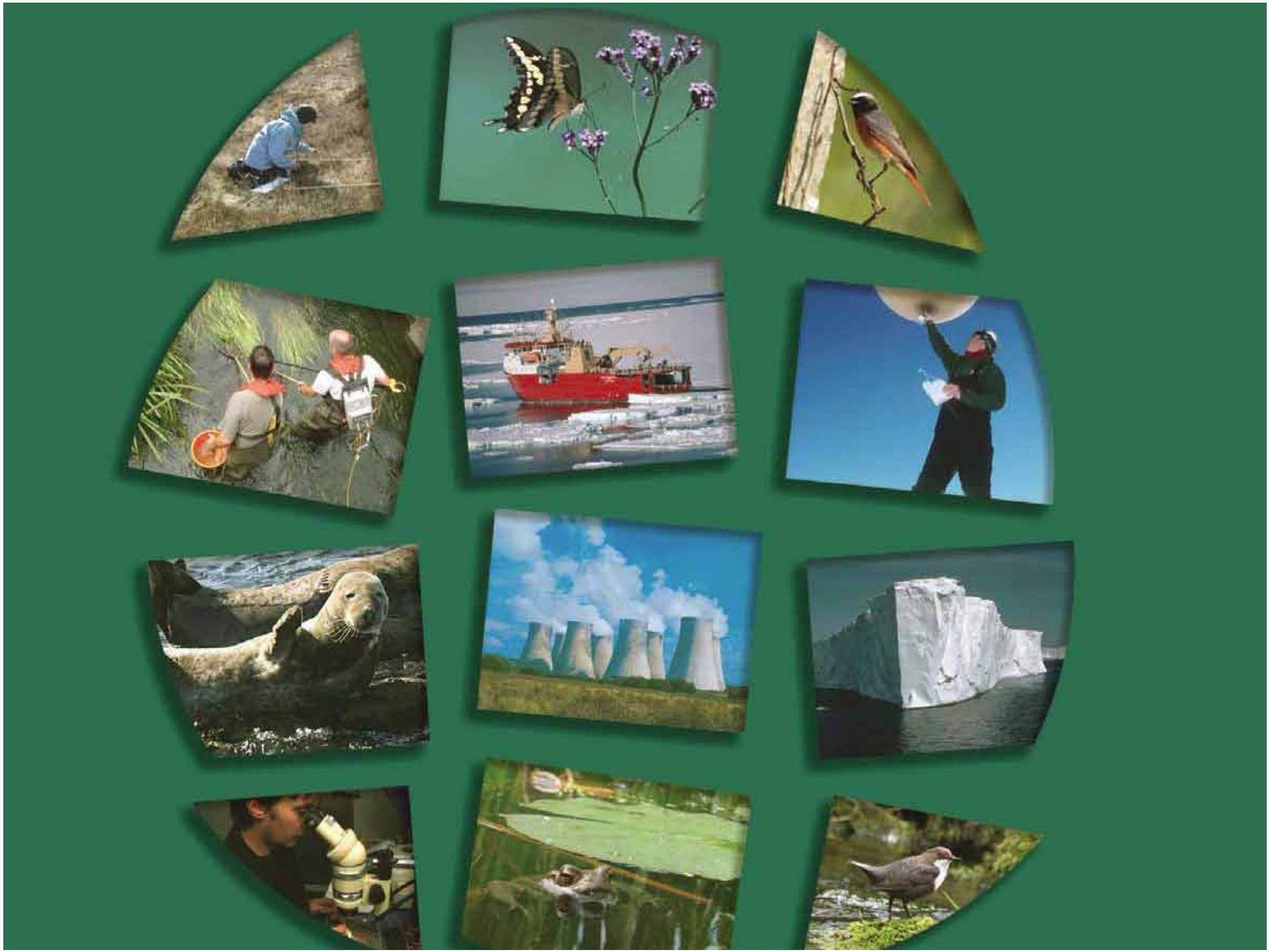
G8 Hokkaido Toyako Summit Leaders Declaration, 8 July 2008

The European response

… to name but a few!

Our response?

- Community
- Communication
- Engagement
- Policy
- Finance / investment



UK Environmental Observation Framework

Observation Clusters: Introduction

Beth Greenaway UK-EOF
Ed Hill
Martin Griffiths
Marion Bartholomew

Environment Research
Funders' Forum

Contents

- The clusters – why?
- 3 Potential models
- Examples
- Breakout session

What will the clusters do?

- Respond to and influence the UK-EOF
- Articulate ‘needs’
- Match needs to existing activities
- Ensure diverse community are involved and capture expertise and best practise
- Share tools/ techniques and improve operational efficiency
- Champion the area – celebrate / share results

Environment Research Funders Forum Main Board

UK-EOF Champion Bob Watson Chief Scientific Advisor Defra

And Champions of each of the 5 work areas

UK- EOF Management Group

UK-EOF Programme Manager and Secretariat

Evidence Groups e.g. Marine

Issues e.g. Data management,

Technology e.g. Satellites

Observation Clusters

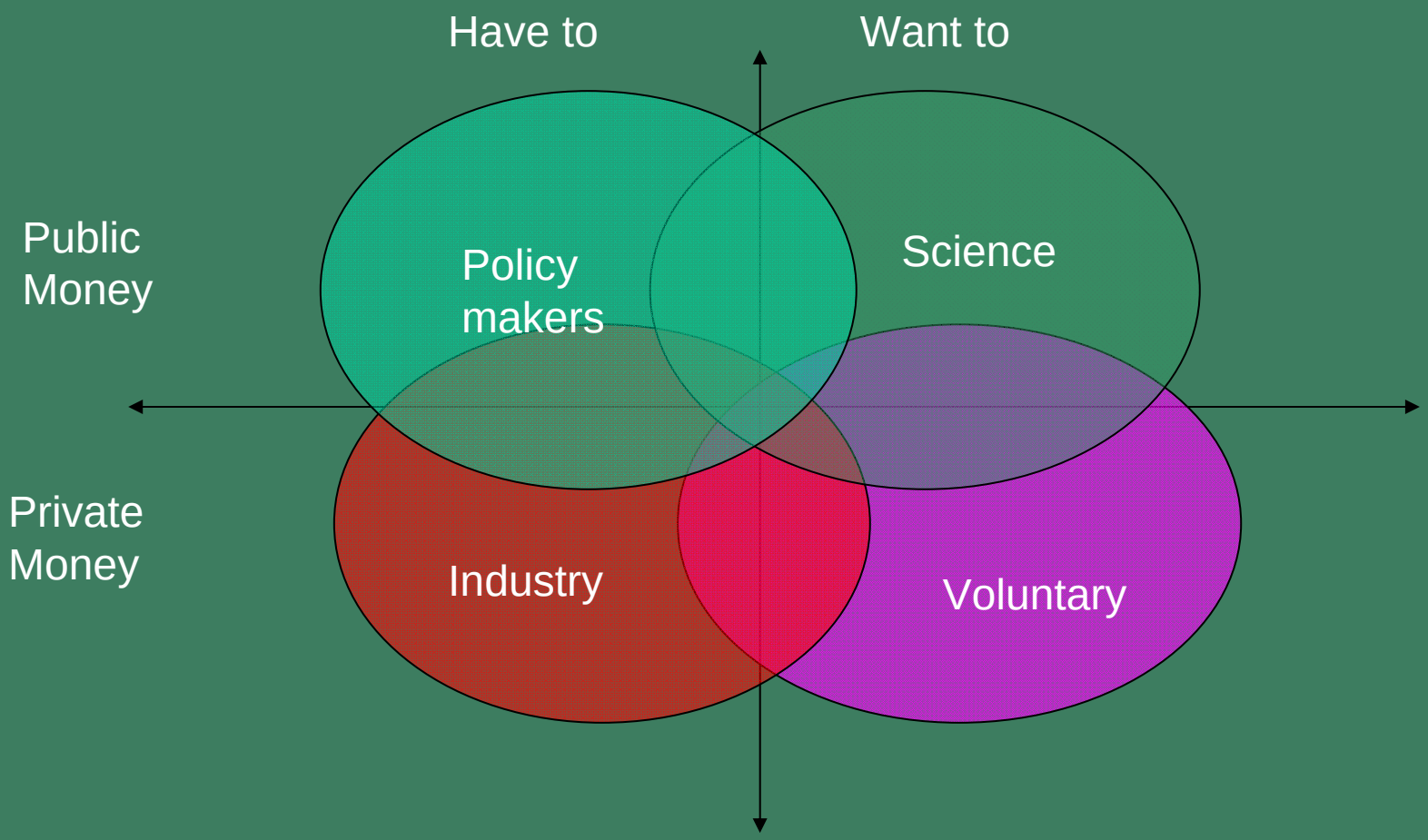
Work Streams

Collective Aspirations	Knowledge Base	Assessments and Knowledge Transfer	Financing Mechanisms	Community

UK Environmental Observation Framework

Various ways to group activities

Cluster model 1- WHO?



PSVI model

Cluster Model 2
Domains- what in?

UK Environmental Observation Framework

Domains-
what in e.g. :

UN system –

GTOS (Global Terrestrial Observing System)

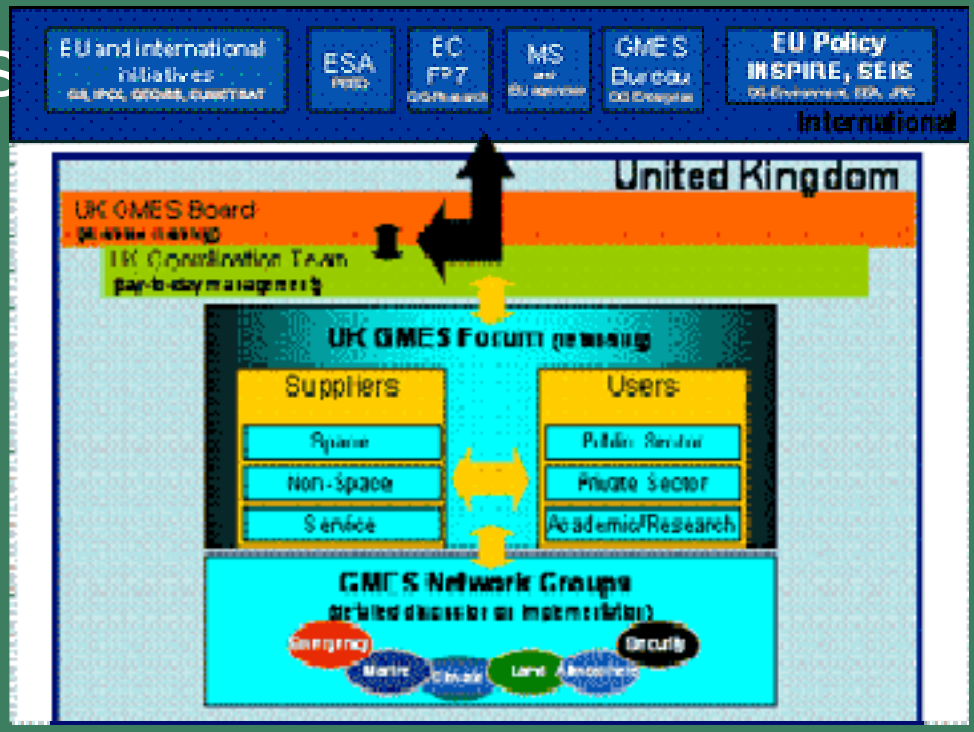
GCOS (Global Climate Observing System)

- OOPC Ocean Observing Panel for Climate
- AOPC Atmosphere Observing Panel for Climate
- TOPC Terrestrial Observing Panel for Climate

GOOS (Global Ocean Observing System)

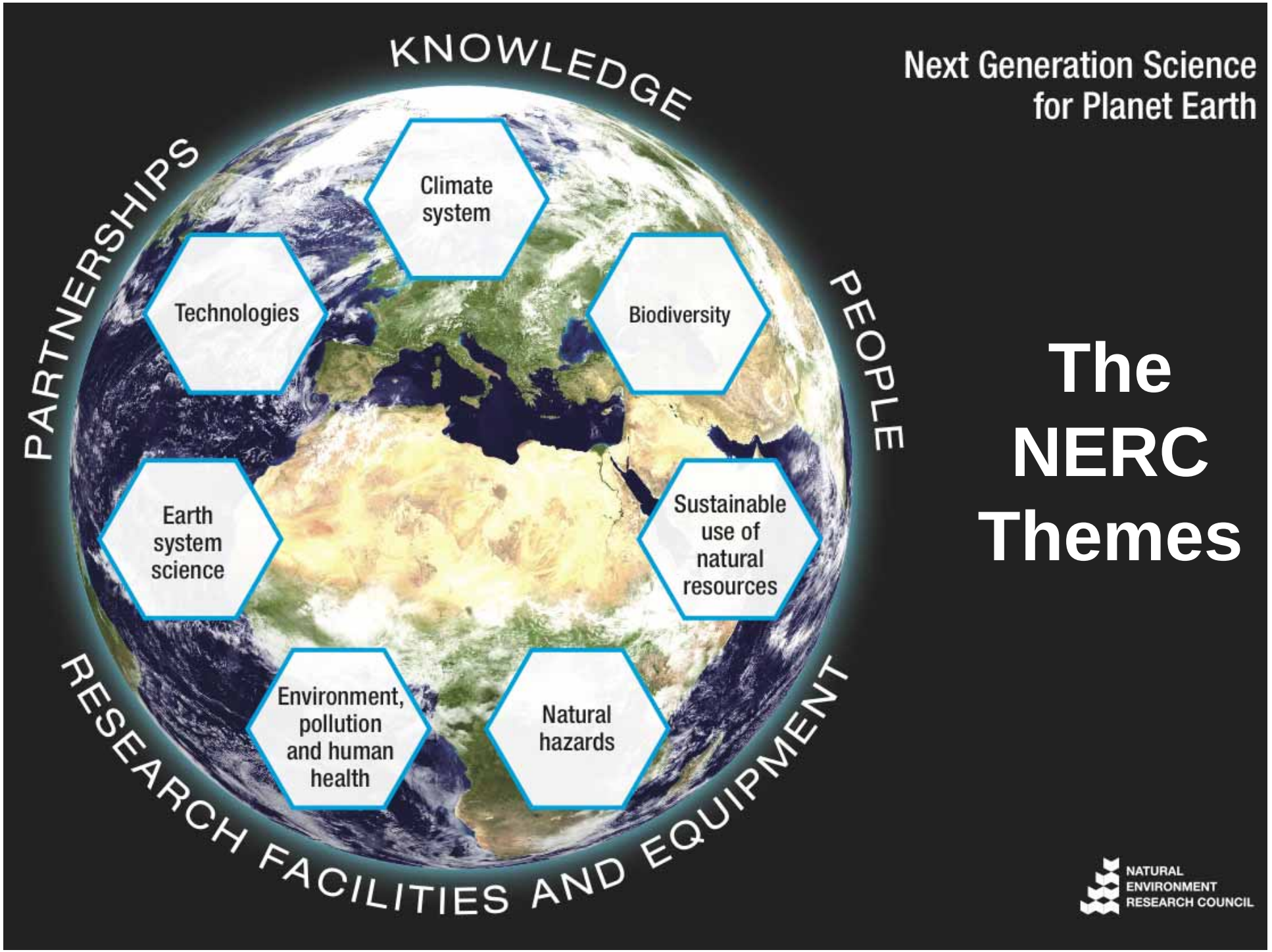
Domains example -UK GMES

- Network Groups
  - Atmosphere
  - Climate
  - Emergency
  - Land
  - Marine



Cluster Model 3
The Questions/ Issues – Why?

- Many ways to articulate e.g.
  - NERC Themes
  - Living With Environmental Change objectives
  - Marine Strategy-/ UKMMAS
  - ERFF Classification Scheme – EPICS part
- Will link to Statement of Need –and the questions will be discussed tomorrow

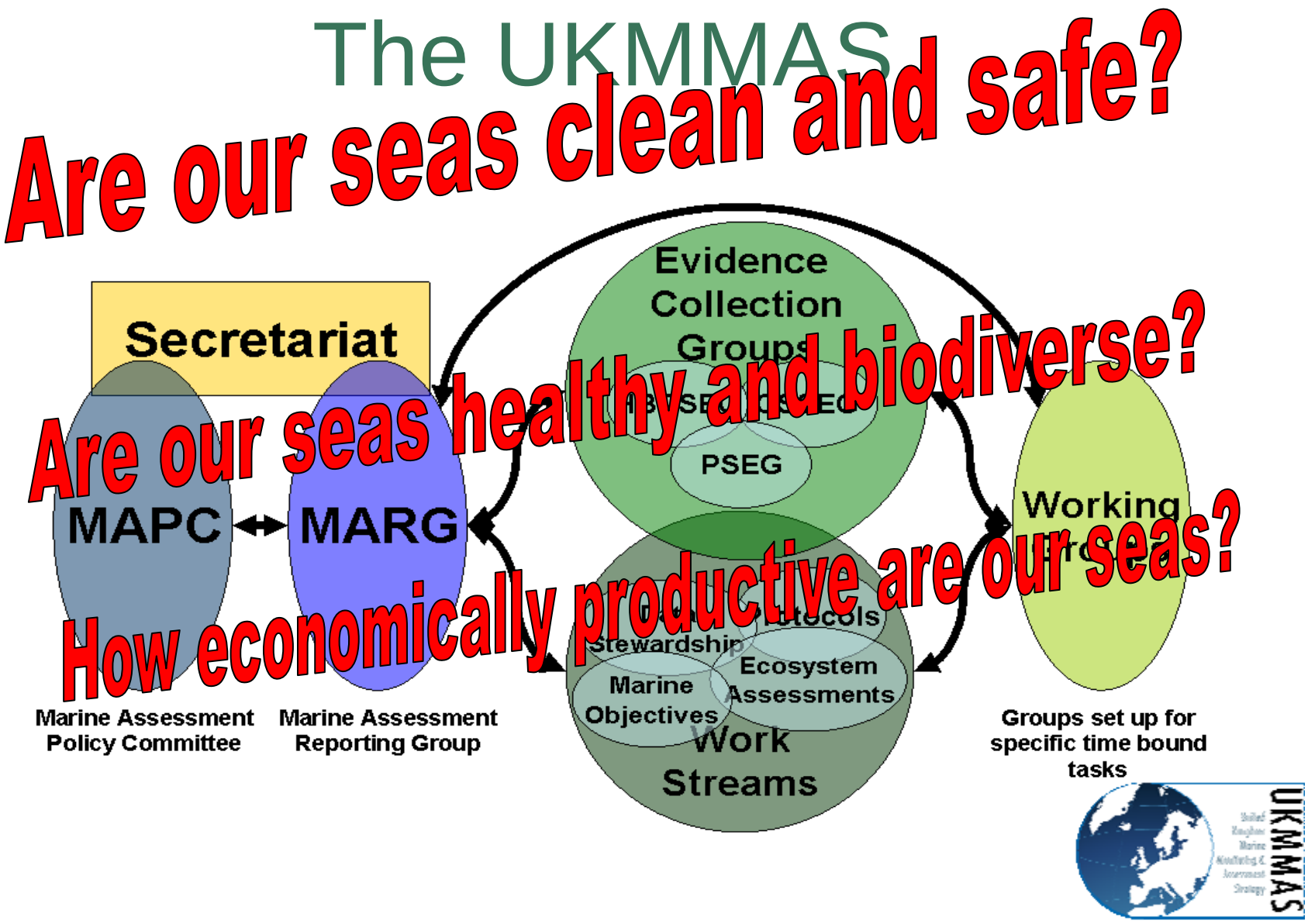

KNOWLEDGE
PEOPLE
RESEARCH FACILITIES AND EQUIPMENT
PARTNERSHIPS
Climate system
Biodiversity
Sustainable use of natural resources
Natural hazards
Environment, pollution and human health
Earth system science
Technologies
Next Generation Science for Planet Earth
The NERC Themes
NATURAL ENVIRONMENT RESEARCH COUNCIL

EPICS

- Understanding the earth systems
- Understanding pressures
- Understanding impacts
- Understanding consequences
- Monitoring solutions

From the ERFF Environmental Research classification scheme 2008

The UKMMAS


Are our seas clean and safe?
Are our seas healthy and biodiverse?
How economically productive are our seas?
Secretariat
Evidence Collection Groups
PSEG
MAPC
MARG
Working
Stewardship
Ecosystem Assessments
Marine Objectives
Work Streams
Marine Assessment Policy Committee
Marine Assessment Reporting Group
Groups set up for specific time bound tasks
UKMMAS

LWEC Objectives

A NERC / Defra led *To predict the impacts of* ***climate change****, mitigate or adapt to these and manage extreme events*

B NERC / Defra led *To manage* ***ecosystems*** *for human well-being and protect the natural environment as it changes*

C BBSRC led *To promote human well-being, alleviate poverty and minimise waste by ensuring a sustainable supply of* ***food and water***

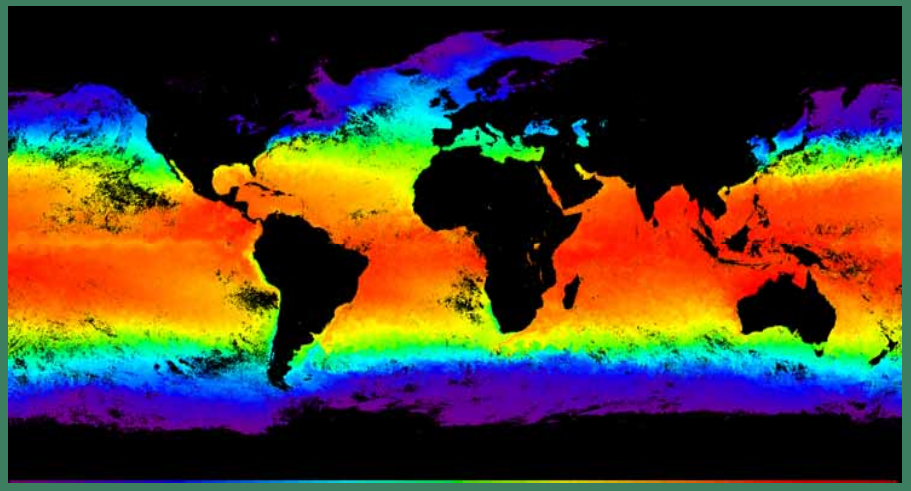
D Scottish Government led *To protect human, plant and animal* ***health*** *from diseases, pests and environmental hazards*

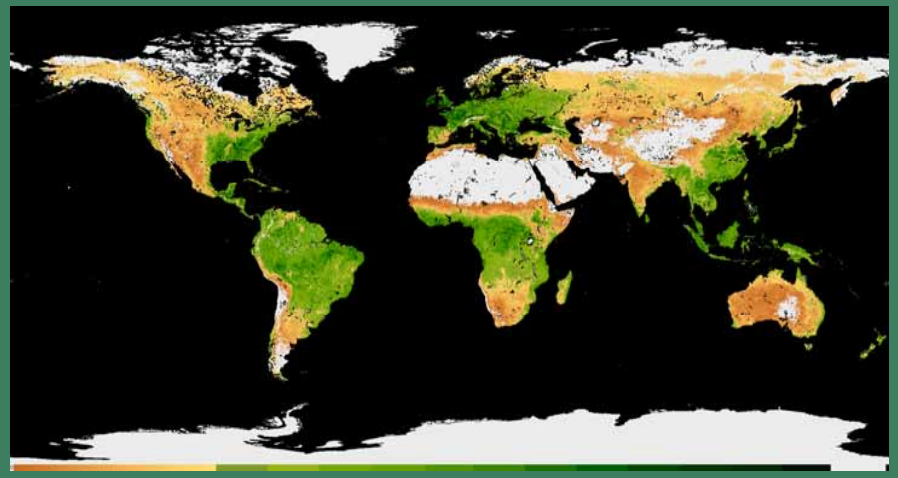
E EPSRC led *To make infrastructure, the* ***built environment and transport*** *systems resilient to environmental change*

F ESRC led *To help* ***people*** *from different cultural and social backgrounds respond to a changing environment*

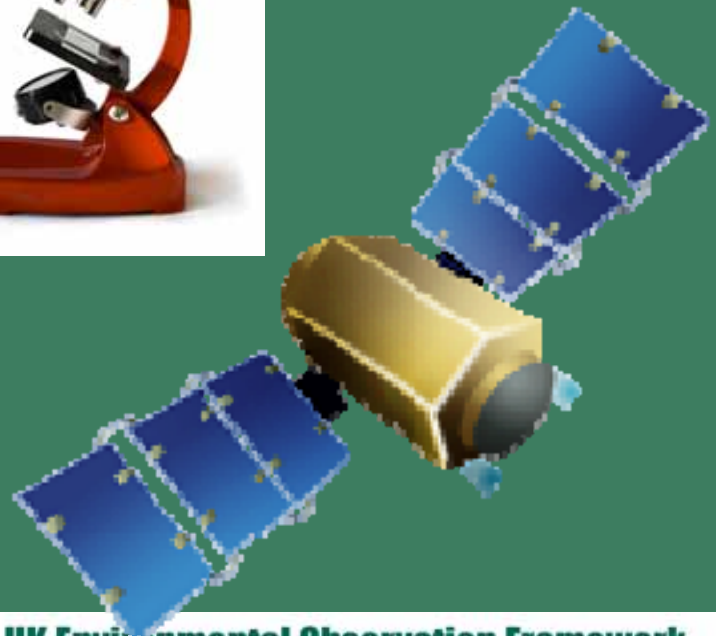
Alternative cluster: Where?

- Geographic Location
- Scale
- Not an issue? Or do local programmes face very different issues to global?





Alternative Cluster: How?



UK Environmental Observation Framework

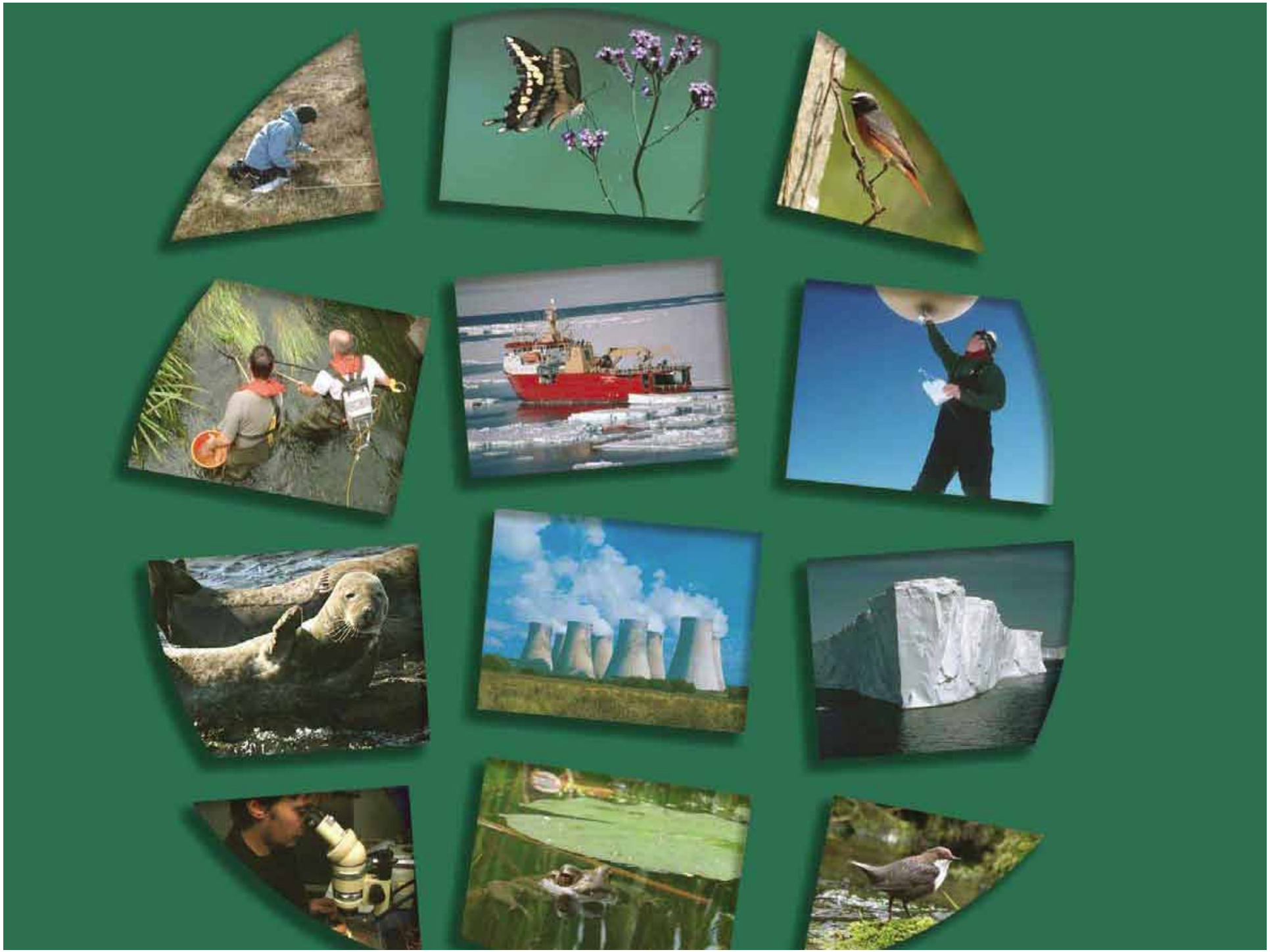
Overview

- There are various ways to group the activities
- The ‘database’ we develop will have ability to catalogue programmes by all aspects i.e. who, what in, why, how
- Advantages of each model (PSVI, Domain, question) depends when each cluster model is used and for what.

Strawman For Discussion

‘The UK-EOF observation clusters should, for practical and pragmatic reasons be based on the major Domains.

The key Questions being answered will be captured in the Statement of Need and the Management Group will have an overview of the cluster activities and how they match to the questions.

Where issues need to be resolved at organisational level the PSVI model will be most helpful’

Questions?