Response of Oceans 20205 Executive board to the recommendations of the Programme Advisory Board (PAB) made at its second meeting June 2009.

Response published 22 December 2009

Recommendations

Oceans 2025 development and evaluation

1. To consider cross cutting topics or areas for external evaluation of the Oceans 2025 programme that could help in moving the programme beyond 2012 and to notify them to the NERC Evaluation Advisory Group for Council's consideration.

Response: Agreed. Potential topics are science/policy interfaces, the impacts of the oceans as they relate to NERC Priority themes (esp. climate change and biodiversity) and the development and exploitation of technology developing under the auspices of Oceans 2025. Attention may also be given by NERC's National Capability Advisory Group (NCAG) to aspects of the long term national capability supported under Oceans 2025, which is envisaged to continue. For example it may be appropriate in future to consider how well the UK activity on sustained observations enables the UK to deliver its wider international responsibilities. It will, however, be up to NERC to decide whether or not to carry out topic-specific or wider evaluations.

2. To ensure maximum use of SOFI workshops and other mechanisms to develop cross programme linkages and outreach to the wider community, to develop future priorities and to inform NERC strategy.

Response: Agreed. Whilst ad-hoc proposals are encouraged the Executive Board is also playing a more strategic role in identifying specific topic areas and ensuring that discussions facilitated are fed into the strategic processes in a timely manner.

3. To consider how the legacy of the Oceans 2025 Programme will be progressed, presented to a variety of communities (policy, scientific both national and international) and archived.

Response: Agreed. Arrangements to capture project outputs and milestones using NERC reporting mechanisms are in place. The impacts of the science are being captured and will be widely disseminated. A substantial amount of the Oceans 2025 programme is national capability and envisaged to be of long term duration. The legacies of Oceans 2025 will include the extent to which a healthy and vibrant UK marine science community is developed and able to influence and compete internationally, the legacy of skills, training, data and knowledge exchange and the ability of the community, in

particular the NERC supported marine centres, to respond collaboratively to the science policy drivers nationally and internationally. These aspects will be further addressed in the 2010 programme Implementation Plan.

Programme and Risk Management

4. To undertake a mid-term 'health check' to assess the impact of external risk factors on the delivery of Oceans 2025 caused by e.g. real/anticipated slippage in cruise programme/FAB transitioning, to assess vulnerabilities and impact on overall achievement of Oceans 2025 objectives and to determine how the management of such impacts will be handled.

Response Agreed: The Executive Board will make an assessment in November 2009, addressing each Centre's own planning as part of the individual Centres' Centre Activity Resource Planning (CARP) submissions to NERC (December 2009), and jointly looking across the programme at consequences and opportunities. Attention will be given to the factors outlined and the impacts on deliverables, to the opportunities presented by the new Theme Action plans and the threats of the ramp down. The outcomes will be in the form of management options that will inform the development of the 2010 implementation plan.

5. To ensure the programme wide risk register is regularly reviewed by the Executive Board and that key risks – esp. ship related- are communicated to NERC.

Response: Agreed, the Risk Register is formally reviewed by the Executive Board at least twice annually. Individual Centre Directors are responsible for management and review of specific risks on an ongoing basis and these are fed into the NERC 'star' system for risk management.

Profile and communication to stakeholders (incl. public)

6. To increase efforts to ensure that Oceans 2025 highlights and achievements are identified and communicated at strategic level to appropriate stakeholders. In particular to explore opportunities to intensify Oceans 2025 advocacy and explore additional sources of funding for programme level outreach.

Response: Agreed. A wide range of mechanisms to engage with stakeholders are in place and are being strengthened as opportunities arise. At programme level an Oceans 2025 'annual review' brochure with highlights aimed at a stakeholder audience will be produced in early 2010 and widely disseminated. A number of opportunities for public engagement at programme level for Oceans 2025 are being pursued. The views of the PAB on how best to highlight the achievements of the programme towards the end of Oceans 2025 funding period would be welcome.

Observation

7. To explore scope for greater interaction between the observation community and modellers, in particular in respect of the Western Shelf Observatory where welcome progress has been made on integrating observations.

Response: Agreed. Joint observational and modelling initiatives have already proven to give added value to both cruise planning and model diagnostics. Interactions between modellers and observationalists working in the Irish Sea has led to a new hypothesis about the conditions necessary to generate these inertial oscillations and thermocline mixing. This insight will greatly assist in the timing strategy for future cruises. Existing data from the Irish Sea is also proving to be a useful benchmark for modelling studies of a highly dynamic and complex region. As new shelf sea models are developed (e.g. NEMO) it is important to have a metric by which their skill can be measured. The Western Shelf Observatory (WSO) data will provide a benchmark against which subgrid scale parameterisations and the simulated representation of observed processes can be tested.

8. To consider making linkages between relevant marine and terrestrial sustained observations – recognising any similar challenges and constraints

Response: Agreed. This may be partially addressed through the development of the UK Marine Science Strategy and action items arising, and through engagement with the UK Environmental Observation Forum (under the Environment Research Funders' Forum (ERFF), with Defra through the "Charting Progress 2" initiative and the UK Marine Monitoring and Assessment Strategy. The Integrated Carbon Observation System (ICOS) and the development of the NERC Biodiversity Theme Action Plan are also important in this context, with the latter expected to include marine-terrestrial comparisons of large-scale ecosystem functioning. Opportunities to develop relevant linkages within the wider NERC community, e.g. with CEH, will also be explored.

9. To encourage the community to pursue further integration of observations, including linking to Cefas/Defra initiatives on observations and observatories and national and international data portals.

Response: Agreed and being pursued by the NERC Centres through a range of mechanisms, though the constraints on partners and the challenges of working collectively need to be recognised. Internationally the Centres participate through the Partnership for Observation of the Global Oceans and engage with EUROGOOS, the Intergovernmental Oceanographic Commission, the World Climate Research Programme, the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM) and other coordinating bodies. Liaison with Cefas/Defra is ongoing through the UK Marine Monitoring and Assessment Strategy (UKMMAS) and related channels.

The direct engagement of the PAB members may be helpful in stimulating further integration.

10. To advocate at national level to enable greater coherency and sustainability of funding.

Response: Agreed. This is being pursued at national level through NERC representation on the Marine Science Co-ordination Committee(MSCC) and the development of the UK Marine Science Strategy and well as through engagement with ERFF and with individual departments such as Defra and the MoD.

Data and visualisation

11. In respect of the progress with the development of the pilot data portal for visualisation (PML):
    - to consider the degree of commitment to use the portal across the Oceans 2025 Community, including addressing how the portal would be implemented, used and maintained in future.
    - to ensure synergy and linkage to e.g. Defra, the Marine Environmental and Data Information Network (MEDIN), Global Monitoring for Environment and Security (GMES) beyond Oceans 2025.
    - to undertake user engagement at the current stage of development of the portal to ensure 'appropriate products/tools' are being developed to address user needs.

Response:

The visualization portal is a joint effort between BODC, who are concentrating on the data storage, serving and security, and PML, who are concentrating on the visualization parts. The portal can be accessed by any web browser. For the future, the questions revolve around funding and its security and will need to take account of NERC considerations concerning the optimum ways to secure, achieve for the long term and enable access to NERC gathered data in a seamless way (the concept of the NERC data portal) and how best to enable the development of products and services, including visualization tools.

Synergy/linkage to Defra is clearly via the MEDIN activity and within that, BODC is the data centre for oceanography.

GMES covers a wide range of projects: the flagship project is 'MyOcean' (the marine core service that includes POL, BODC, NOCS and PML as partners) which is developing an open standard-based portal (lead by University of Reading). Other GMES labeled projects are developing which may use similar portals.

The PML portal has been developed largely through an FP6 project (InterRisk) with user engagement throughout. Users included head of theme 10 WECO and the MEDIN Coordinator. For Oceans 2025 we will provide a portal and then plan to have a period of consultation with the user community This will be followed by an analysis of what can be realistically achieved and a plan to deliver key products/tools where not otherwise available.

Underpinning Technologies

12. To consider the need for a formal Oceans 2025 technology status/exploitation strategy to be developed. This would cover all the technologies (sensors, communications, platforms etc) that have been developed under Oceans 2025, including those which have been adapted for Oceans 2025 programme work. The strategy would include exploitation but should also address a promotion/outreach of the technology, how it was used and how it benefited the Oceans 2025 programme, etc.

Response: The Board agrees that, whilst good interaction is occurring across the Oceans 2025 technology community, activity is needed to increase the degree of engagement between scientists and technologists working under Oceans 2025 to enhance technology applications and drive scientific opportunities. In the first instance it is proposed that a plenary session of the 2010 Annual Science Meeting be devoted to such engagement, to be supplemented with workshops and related activities thereafter.

13. To encourage the sharing of molecular genomics expertise across Oceans 2025 Centres .

Response: Agreed. This may be pursued through a SOFI workshop in first instance, drawing on NCAG considerations of the development of large scale 'omics' facilities.

Oceans 2025 Programme Advisory Board and Annual Science meetings

14. To encourage plenary speakers at future annual science review meetings to span the breadth of programme, its highlights and impacts – e.g. from molecular through cells, individuals and populations to communities and ecosystems.

Response: Agreed. To be actioned by the Oceans 2025 Science coordinator.

15. To seek additional PAB members to provide input and expertise in relation to Arctic science, molecular genomics, and to ensure links to MSCC/Defra.

Response: Agreed. To be actioned by the Executive Board and Secretariat.

National Marine Coordination Office
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