

Inter-Agency Committee on Marine Science and Technology

Minutes

Thirty-fourth Plenary Meeting held on Wednesday 11 June 2003 from 10.30am in Room B01, at DEFRA, Cromwell House, Westminster, London.

Present: Prof Howard Dalton, DEFRA (Chair) Dr Graham Bryce, OST Dr Bruce Callander, MOD Mr Shaun Cleary, FCO Dr Robin Cook, Scottish Executive Prof Mike Cowling, Independent Member Dr Chris Gordon, Met Office (for Dr John Mitchell) Dr Peter Hedges, EPSRC Prof Peter Liss, Independent Member Dr John Lock, DEFRA Dr John McGuinness, HSE (for Mr Bob Simpson) Dr Sydney Neill, DARDNI (for Dr Ivan Heaney) Dr Philip Newton, NERC Mr David Palmer, Environment Agency Mr Ian Townend, Independent Member	Secretariat: Mr Trevor Guymer Dr David Pugh Visitors: Dr Meric Srokosz, NERC: for Item 3 Dr Richard Wood, Met Office: for Item 3 Mrs Frances Franklin, CEFAS: for Item 4 Apologies: Mr Graeme Cobb, DTI Dr Ivan Heaney, DARDNI Dr John Mitchell, Met Office Mr Bob Simpson, HSE
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1 Introductions

The Chairman, Howard Dalton (Chief Scientist DEFRA), welcomed new members and visitors. He explained that this was his first meeting as Chair of IACMST: he aimed to be impartial in the role, and emphasised that he will be chairing a cross-Government committee, not one singularly attached to DEFRA.

Minutes of the Thirty-third Meeting (9 January 2003)

The minutes of the Thirty-third meeting were approved.

Matters Arising

Future funding

1.1 It was confirmed that DEFRA will support IACMST activities with the expected allocation for 2003/4 to be transferred from OST (£48k).

JASON-2 UK Support

1.2 There will be a EUMETSAT Council meeting on 24-25 June when countries are expected to make final commitments to support their share of JASON-2 funding. After the January 2003 IACMST Plenary the CSA (OST) called a high level meeting of Departmental Scientific Advisers and others to examine the issue of UK involvement. This meeting, on 29 January, had recognised that JASON-2 might not go ahead without UK funding. Peter Ewins, Chief Executive, Met Office agreed to ensure that a business case was put together for JASON-2, and also to set up a UK long-term operational interest group around a nucleus of operators, with the research side in attendance as observers. Ian Townend, Chair of the IACMST GOOS Action Group had attended the 29 January meeting, and agreed that the consultant currently working for the GOOS AG on cost benefit analysis (Eftec) would look at JASON-2 value as a pilot study.

1.3 Individual Departments commented on their responses. The MOD had decided to pay their share if an overall “national case” was established; £100k would be available per annum. NERC noted that they normally do not fund operational observations, but recognised that global environmental research needs monitoring programmes, of which JASON-2 is an important example; the NERC Science Board had agreed in principle and the final decision would be made by 13 June. If this is positive then £540k would be available over nine years. DEFRA had made enquiries across the interested policy divisions and found that they could not individually support the business case with sufficient priority. It was pointed out that because the budgets exist within the policy groups of DEFRA, the individual responses looked at these individual benefits rather than collectively, or within the national context. The Environment Agency was not considering funding because the data would not be sufficiently relevant for their activities.

1.4 In general discussion it was pointed out that if JASON-2 does not fly then global regional sea level variations will not be mapped after 2008. The sums involved are relatively small and the deadline at the end of June has been known for a long time.

1.5 Chair noted that MOD and NERC were on track to contribute their share of the UK portion of the total JASON-2 budget. He would look again at the possibilities of DEFRA contributing, wearing his DEFRA Chief Scientist’s hat.

Action: Chair

Publication of IACMST Minutes

1.6 This had been discussed and agreed in principle at a previous meeting. In line with other Government Department policy IACMST minutes (and those of any subsidiary bodies and Action Groups) should be available on the web after approval by email. Links to some of the attached papers should also be possible, but not all of these could be published on the IACMST web site. Minutes should continue to be brief (around four pages), so avoiding the preparation of a separate reduced version for web publication. If there are sensitive items, these could be removed or summarised.

Action: Secretariat

2 Departmental Presentations

2.1 Each member of IACMST described briefly their involvement in marine activities.

Chairman explained that he is 80% employed as Chief Scientific Adviser, DEFRA with a very wide remit of challenging scientific issues (GM, environment, animal diseases...). A scientific strategy had just been published, and an ongoing activity is to align the individual science units with the policy groups, whilst maintaining a core Science Directorate responsible for quality assurance, horizon scanning etc. Economic and statistical analyses might also be aligned more closely with the science. The other 20% of his time maintains his links with the University of Warwick.

The Met Office has strong interests in marine observations (Argo); modelling the physical properties of seas, and planning to extend this to biological and chemical modelling; seasonal forecasts where oceans are the key; climate and climate change.

The main EPSRC marine interests are in the area of marine engineering: offshore structures, oil and gas extraction, ships and renewable energy. Most funding is in the responsive mode. A marine energy (wave and tide) programme of around £2.5 million is linked with the DTI. A

flooding programme (rivers and some coastal) is being planned with NERC, the Met Office and the Environment Agency. Future areas for research might involve carbon sequestration and offshore wind energy generation. Overall the EPSRC marine-related budget is around £15 million.

NERC is concerned with environmental research and training. There is increasing emphasis on working with other funders (NSF, ESF and the EC). Work is funded through various mechanisms: institutes, real and virtual; thematic programmes, for example Rapid Climate Change; responsive mode; and the provision of research facilities, such as research vessels and deep sea submergence capabilities. The development of marine scientific instruments is also included.

The FCO has responsibilities for UNCLOS, and UK involvement, for example in UN marine meetings such as the annual New York Informal Consultative Process.

OST, although no longer hosting and chairing IACMST, will retain a seat. They are concerned with science within and across Government as an input to evidence-based policy making. They also support the Chief Scientists Advisory Committee and maintain an overview of all scientific work across Government Departments.

The Scottish Executive maintains the Fisheries Research Services Marine Laboratory in Aberdeen. Their IACMST representative, Robin Cook, is a member of the Scottish Executive's cross-cutting Science Group. A marine science strategy for Scotland is being developed. Other Scottish interests which he represents include SEPA, SNH and the Food Safety Authority (Scotland). Major marine interests in Scotland include aquaculture and fish diseases.

Northern Ireland operates its own research vessel and undertakes sea bed mapping as well as some automated monitoring. Survey data is needed for fish stock recovery plans using an ecosystem-based approach.

The Environment Agency develops and enforces risk-based regulation, including those relating to marine discharges. They are also required to "form an opinion" on the state of the environment, which requires that they have a wide view of marine and other conditions. Recent management changes have meant a refocusing of science on issues and pressure points. They are also horizon-scanning for three to ten years ahead.

MOD has strong operational interests in the sea. They support Met Office work on modelling and forecasting, both operationally and seasonally. Bruce Callander, their IACMST representative, is also Research Director for the Operating Environment across the whole of MOD (including oceans).

DEFRA has a wide policy remit involving marine science and research. Their interests include fish stock recovery, fish cultivation, environment, gravel extraction, wind farms, and flood management. There is an overall R&D budget of around £13 million.

The Health and Safety Executive are concerned with oil and gas operations offshore and construction and diving near shore. Their Offshore Research Focus is published regularly on the web.

The three Independent Members explained their individual backgrounds. Cowling is Professor of Marine Technology at the University of Glasgow with an interest that spans engineering and biology. He is also a member of the Marine Foresight Panel and active in the Scottish Association for Marine Science. Liss is Professor at the University of East Anglia. His research interests include chemistry in the global change area including sequestration. He

chaired the Earth and Environmental Sciences Panel in the recent Higher Education Funding Councils' Research Assessment Exercise. Townend is Director of the ABP R&D laboratory in Southampton. This laboratory has a mix of consulting and research which approximately balances over the long period. Earlier emphasis on the physical environment is moving significantly towards ecological modelling and impacts, mainly because of legislation such as the Habitats Directive.

2.2 Chairman noted the wide range of interests and responsibilities across the IACMST membership. Secretary plans to visit as many individual Departments as possible over the next few months to learn about their activities in more detail and to discuss ways in which IACMST can help them in their work.

Action: Secretary

3 Climate Change Presentations

3.1 Meric Srokosz, NERC presented the RAPID Programme. RAPID aims to investigate and understand the causes of rapid climate change, with a main (but not exclusive) focus on the role of the Atlantic Ocean's thermohaline circulation. RAPID links with the USA NSF and other international programmes. Satellite altimetry (including, if it flies, JASON-2) will give valuable information for the scientific projects. RAPID is a pre-operational programme to show what can be done by way of analysis and prediction; in line with other NERC thematic programmes, it is not a long-term operational commitment. He noted that the recent G8 meeting had endorsed the need for co-ordinated global observation strategies.

3.2 In discussion it was agreed that many of the objectives would be realised and deliver potential operational capability by the end of the six-year programme.

3.3 Richard Wood, the Met Office Hadley Centre, presented their research on modelling ocean climate change. The current "third coupled model", HadCM3, has 20 ocean and 19 atmosphere levels. Driven by various IPCC scenarios it can produce statistics of regional storm surges, sea level and waves. These in turn can be applied to understanding potential impacts, costs, and disruption. Long coherent data sets are needed to test models. In turn, models can be used to suggest where long-term monitoring activities should be located for greatest sensitivity to change.

3.4 In discussion it was noted that wave direction is very important for long-shore beach transport, and that although this is not at present a funded project at the Hadley Centre, forecasting changes in wave directions is technically feasible.

3.5 Chairman thanked the two speakers and noted the importance of collaboration nationally and internationally in understanding and predicting the impacts of potential climate change.

4 UK Integrated Marine Mapping Workshop

4.1 Frances Franklin, CEFAS, reported on the September 2002 workshop organised on behalf of DEFRA. The report of the meeting had previously been circulated to all members. It had been held partly as a response to the Marine Stewardship Report published in May 2002 by DEFRA. Analysis had shown that people want a portal to marine information which is user-friendly. She outlined the components and qualities which an effective portal would have: planning, co-ordination, standards, funding, catalogues and tools. Existing search tools include Magic, Google, Autonomy, and OneCoast. The full report, available from CEFAS, gives details of many other sources of marine information.

4.2 Frances Franklin expressed a personal view that IACMST and its Marine Environmental Data Action Group had not done enough in the past three or four years to make and maintain an effective marine portal. She made a plea for better co-ordination.

4.3 In discussion Professor Cowling, Chairman of the IACMST MED Action Group, noted that the concern for easier access to marine information is long standing. The workshop report serves a useful purpose in reinforcing those concerns. The issue is how to implement a better system in a robust way. We operate in a free market economy and there is a danger that the many needs expressed by the workshop will be addressed individually rather than part of a central strategy. Government Departments have a responsibility to avoid funding too many initiatives, by adopting appropriate measures of coordination and integration. The Environment Agency pointed out that data collectors are under financial constraints and often required to focus on local and immediate needs for their data rather than making it available in a wider and longer-term context. The view was expressed that IACMST should work towards better co-ordination of data rather than tackle the much more difficult problem of fully integrating data and information systems. IACMST operates a structured information web site which is accessed by around 4,000 individual users per month.

4.4 Chairman summarised the discussion affirming that it is the role of IACMST to address the concerns about access to marine information across Government. It will be an important part of the ongoing work. He thanked Frances Franklin for bringing the issue to the attention of the Committee.

5 Autonomy

5.1 Professor Cowling introduced this item noting that it followed naturally from the previous discussion. He emphasised the dangers of information overload, and the opportunities which proper data management might offer. Although the development of the internet and the arrival of web portals had made improvements, the vast number of so-called portals, and the realisation that keeping web sites up to date is a very substantial and expensive task, has meant that the solution has not yet been delivered. An international, Cambridge-based, information software house had approached the IACMST Secretariat with information about the Autonomy system. Autonomy offers an apparent increase in the power of the user to access and construct new relationships from a wide range of separate, identified sources. The algorithms used are claimed to give much better focus to the information delivered, with an interactive learning process which improves the results.

5.2 In discussion it was noted that there may be other sources of appropriate software. Autonomy should be investigated, although the money required is well in excess of present IACMST resources. The Environment Agency is already looking at ways of integrating its data through the Internet, and has used Autonomy in association with the BBC web site.

5.3 Chairman summarised saying that IACMST noted these developments and the potential benefits. The IACMST Secretariat should look in more detail at what Autonomy and perhaps alternative sources of information software could deliver. This should begin with a statement of user requirements and then seek to match them against software capabilities. A small, short-life working group (Cowling, Environment Agency, DEFRA-Lock, and IACMST Secretary) should report back by the September 2003 Plenary.

Action: Secretariat

6 Marine CREST Working Group

6.1 Philip Newton reported briefly. NERC now represents the UK on behalf of IACMST. A Lisbon meeting of the Group had recommended the setting up of a more permanent forum with funding. Programme Managers from the various European Countries would attend. Some pilot schemes should be developed with a regional and/or thematic focus. He noted that he is now also one of the NERC representatives on the European Marine Board of the ESF which will make links between the various European initiatives easier. A further meeting of the Group is planned at the end of June.

Action: NERC

7 Any Other Business

7.1 Secretary informed that the IACMST web site will be progressively improved over the next few months with more information posted on meetings and activities. He invited members to send suggestions for improvements and changes.

Action: Secretary, Members

7.2 DEFRA circulated a leaflet informing on the Proudman Oceanographic Laboratory Coastal Observatory (<http://www.cobs.pol.ac.uk/>) which is built on real-time measurements and model predictions with particular focus on the Irish Sea and Liverpool Bay.

7.3 Professor Cowling noted that Trevor Guymer has now replaced David Pugh as IACMST Secretary. David, who had been Secretary for more than 10 years, will be retiring in the summer. On behalf of the full IACMST he wished him a long and happy retirement.

Inaction: David Pugh

The meeting closed at 13.15

DTP/saea
12 September 2003