NATIONAL MARINE SCIENCE COMMITTEE

Meeting Report – 20 July 2017

INTRODUCTION

The second meeting of the National Marine Science Committee (NMSC) for 2017 was held in Canberra on Thursday 20 July. The purpose of this report is to ensure the national marine science community keeps informed about the NSMC's action agenda, and has an opportunity to provide comment and input.

The meeting agenda had three main sections. Presentations on 'hot topics' in Australian marine science, member updates and information exchange, and National Marine Science Plan implementation.

HOT TOPICS

NMSC received three presentations on hot topics:

1. Alan Jordan (NSW DPI) spoke about 'NSW Marine Estate Governance and Assessment Reforms'. NMSC has recently been strengthened though greater involvement by State Governments. The work being undertaken on NSW Marine Estate Management is very impressive, and the presentation generated good discussion about best practices and cross-jurisdictional cooperation.
2. Adam Lewis (Geoscience Australia) spoke about 'Opportunities in Marine Observation from Space'. The presentation highlighted new sources of data from geostationary weather satellites (such as Japan's Himawari-8), low earth orbiting satellites (such as the European Sentinel satellites), and upcoming satellite missions. Access to these data sources is being enabled by Geoscience Australia, the Bureau of Meteorology, and CSIRO, including through the Australian Copernicus Data Hub. This effort needs to be supported. A number of exciting new applications were showcased. It is through these applications that we can demonstrate how modest national investment in activities such as data access, product delivery, and calibration/validation leverages the massive investments being made by international satellite agencies. NMSC has a role to play in fostering the required national coordination.
3. Karen Evans (CSIRO) spoke about the 2016 State of Environment (SoE) Report Marine Environment Theme. NMSC requested that the focus be on steps to improve SoE-Marine. The presentation highlighted key gaps and opportunities, in both management and science. NSMC will provide feedback to the Department of Environment and Energy on some suggested improvements, and will ensure that its relevant working groups (e.g.

on baselines and monitoring, and decision-support science etc.) take these gaps and opportunities into account.

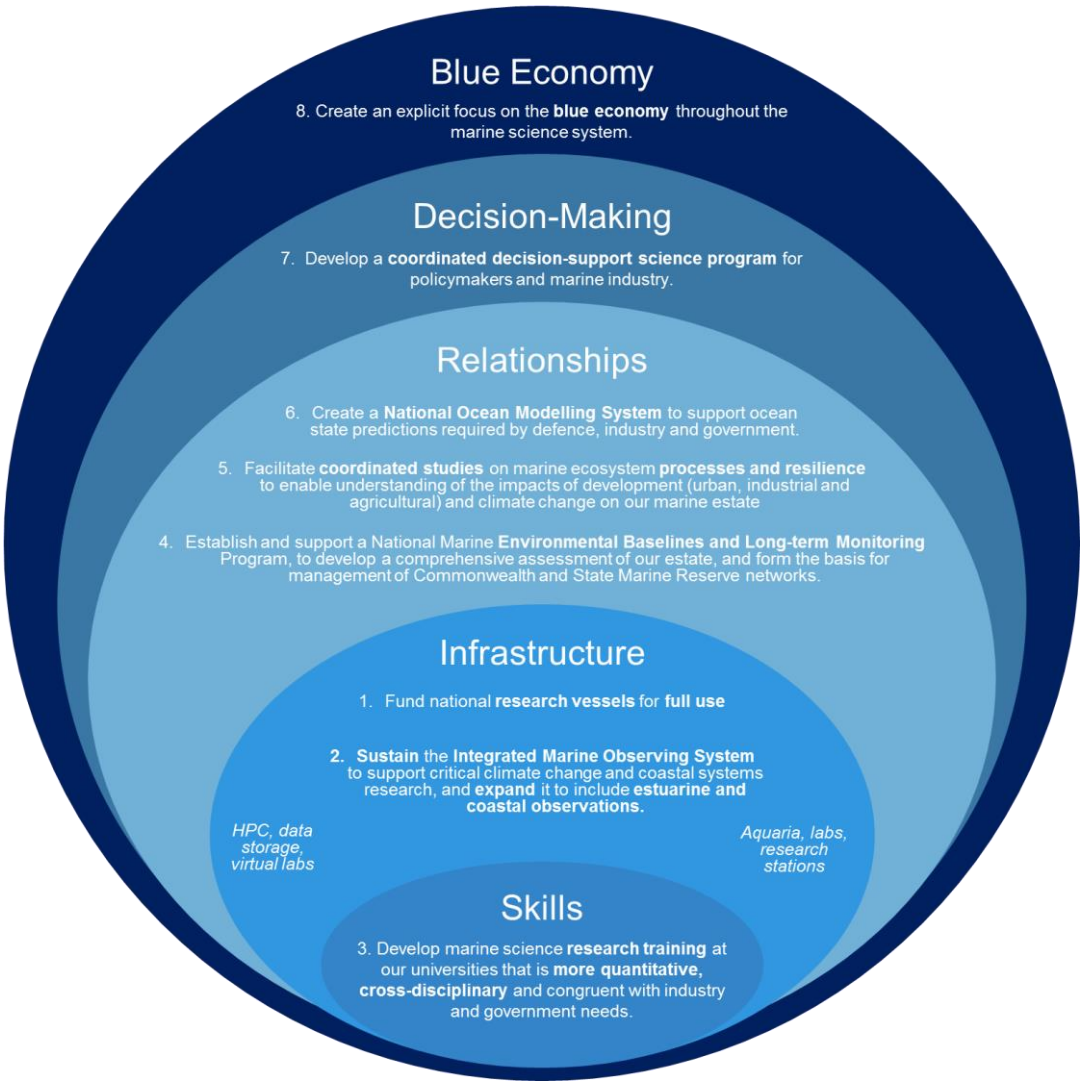
MEMBER UPDATES

NMSC welcomed the Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC) and the International Ocean Discovery Program (IODP) as our newest members.

With 29 members across universities, publicly funded research agencies, and federal and state government portfolios, a key role for NMSC is to facilitate information transfer across the sector.

IMPLEMENTING THE NATIONAL MARINE SCIENCE PLAN

Implementing the National Marine Science Plan is a major focus for the Committee. Action is being undertaken on all eight high level priorities as follows. We have begun to think more carefully about how these eight priorities interact and collectively support the vision of Australian marine science driving development of the blue economy. A draft representation shown below:



The two most infrastructure-intensive priorities are being progressed as part of the Australian Government's response to the 2016 National Research Infrastructure Roadmap:

1. Utilisation of the national research vessel fleet.
2. Sustaining and expanding IMOS.

3. A working group on research training has been established under the leadership of Erika Techera (UWA). Terms of reference are being developed, and a combination of teleconference and face to face meetings is being planned.

4. The working group on national baselines and monitoring will be led by David Souter (AIMS) following John Gunn's departure from AIMS. A national workshop is being planned in the coming months, to be hosted at Geoscience Australia. A steering committee has been formed to organise the workshop and ensure all relevant parties are engaged. There is already a lot of baselines and monitoring activity within the NESP Marine Biodiversity Hub, the Reef Integrated Monitoring and Reporting Program (RIMREP), Parks Australia, IMOS, several State jurisdictions, several research-industry partnerships etc. The purpose of this NMSC working group is not to duplicate any of these efforts, but rather to provide a framework for them to collectively contribute to the vision of a national baselines and long term monitoring program. A page has been set up on the NMSC website to make relevant information available (see here).

5. The working group on coordinated studies of processes and resilience led by Peter Steinberg (UNSW/SIMS) held a well-attended workshop in mid-May. It was agreed that a two-tiered approach would be undertaken. The first being development of a general framework, and the second being a more detailed approach in a few specific systems through "showcase" projects. The NMSC report from this working group can be found here.

6. A paper on the national ocean modelling system priority was discussed, which can be found here. It was agreed that this priority will be focused on national scale hydrodynamic, biogeochemical and trophodynamic modelling. The National Marine Science Plan's aspiration to encompass socioecological modelling will be more sensibly dealt with as part of other priorities in the medium term (see below). Further input into thinking about a national ocean modelling system will be generated at the Forum for Operational Oceanography 2017 conference held in Fremantle on 25-27 July. A new working group will then be established to take this priority forward.

7. Coordinated decision-support science program – During discussion at the last two NMSC meetings, it has been agreed that this is an overarching priority of the National Marine Science Plan (as shown in the diagram above). The rate and trajectory of change in marine systems will require a paradigm shift in thinking that is unlikely to emerge from past experience with marine systems. Issues confronting decision makers include climate impacts, biosecurity, social licence to operate, restoration ecology, and the

interplay between these things in a multi-sector management environment. While some work was commenced on this priority last year, the Committee feels that the approach needs to be reconsidered during the course of 2017. This is likely to happen in the last quarter of the year due to constraints on the availability of the NMSC leads (Rick Fletcher, WA Fisheries and David Smith, CSIRO).

8. The priority to create an explicit focus on the blue economy throughout the marine science system has begun to be considered by the Committee. A discussion paper was provided (see here), suggesting that there are at least three components to consider i.e. (i) Full integration of socio-economics, (ii) Accelerating the innovation cycle, and (iii) Indigenous engagement. As an initial step, it was agreed to undertake a desktop analysis identifying the experts within fields relevant to the NMSP blue economy agenda, noting that this needs to cover Demography, Geography, Sociology, Management, Accounting, Economics, Economic History, Marketing, Statistics, History, Law, and Political Science. Specific focus will also be given to indigenous engagement at the next meeting.

AUSTRALIAN OCEAN DATA NETWORK (AODN)

A draft AODN implementation plan for 2017-19 was presented to the NMSC. Following discussion with AODN Director Roger Proctor (by teleconference), the plan was approved and can be found here. Progress reports will be provided to NMSC on a quarterly basis.

NEXT MEETING

The next NMSC meeting will be held in Canberra on Thursday 19 October 2017.

NMSC Chair, on behalf of the Committee
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