

Into the deep

As an advisory group and champion for marine science, the European Marine Board wants to help to shape the discipline's future. **Amanda Stringfellow** reports.

In 1995, the European Commission decided that it needed a body to advise on the research agenda for marine and polar science. A combination of Commission funds and member contributions resulted in the European Marine and Polar Science Board—which split three years later into the European Marine Board and a polar counterpart.

Since then, the EMB has been advising the Commission and member states on the best policy and funding strategies for marine research. Niall McDonough, EMB executive secretary, says this is no easy task. “A very large proportion of our planet is covered by deep ocean and it's almost totally unexplored,” McDonough says. Research requires vessels and remote-operated vehicles, which are expensive to build and maintain in underwater environments. The vast nature of the seas mean that any meaningful projects hinge on international cooperation.

It is this collaborative element that the EMB seeks to bring to EU policy. Based in Oostende in Belgium, the EMB represents 36 national oceanographic institutes, funding agencies and national networks of universities across 19 countries, which fund its work. McDonough says the board's mission is to develop common positions on major priorities for seas and ocean research and to communicate these to European and national policy-makers. “Managing the environment does not stop at national borders,” he says.

According to Richard Lampitt, an oceanographer at the UK's National Oceanography Centre, one of the biggest challenges for the discipline is making sure collaborations are mutually supportive and continue for long periods of time. “Pulling people together is tremendously important,” he says. Lampitt says that the EMB plays a pivotal role in advising the Commission on marine science and how it should fund research through Horizon 2020 and other European programmes. “It's a group of high-calibre experts advising on how research funding ought to be spent and how the call texts ought to be prepared,” Lampitt says.

On average, the EMB produces around four policy briefings a year, which are put together by working groups of national representatives and presented to policymakers. These have included opinions on marine ecosystem-based management, supporting growth in the maritime economy, and the oceans' role in climate change. The EMB also provides science support to the EU Marine Strategy Framework Directive on protecting marine areas, and its most recent policy brief advised on sustainable

management of the deep sea through integrated research. The group holds annual forum events in Brussels, and together with the Commission organises the EuroOCEAN science policy conferences every three to four years.

Under Horizon 2020, the Commission has shown a strong interest in marine

science, identifying the blue economy as one of the strategic pillars of the programme and spending €144 million on it in 2014. “We need to know more about our seas and oceans to help use ocean resources sustainably and drive growth and jobs in Europe,” the Commission said.

Lampitt—who coordinates the Fix03 network of deep-ocean observatories that received €7m under Framework 7—says this is essential to the success of marine research, as EU funding ensures a cohesive approach and that the data generated is comparable. “European grants generally only cover 10 per cent of the cost of doing the work, but it's the crucial glue that sticks the multinational communities together in a very effective way.”

Overall, around 15 per cent of marine research funding in Europe comes from the EU budget, with 85 per cent contributed by member states. The EMB works hard to try to convince both the EU and national organisations to spend more, McDonough says. The importance of the ocean is under-appreciated, he says, and this is illustrated by comparing marine-science funding with that given to Europe's space programmes. “It's significantly greater than anything committed to mapping the ocean, yet we have a planetary frontier on Earth that we should be understanding more about,” he says. “We need a real transformation in how we appreciate the ocean.”

Looking forward, the EMB has honed in on the growing political support for research into societal problems, and hopes to tap into this to increase its impact. This will involve promoting interdisciplinary marine research with relevance to topics including climate change, global food security and marine management, McDonough says. “Research has to take on a role in generating knowledge outputs that are directly usable,” he says.

In the meantime, the EMB is encouraging its members to join and support international research efforts such as the European Ocean Observing System, a project to coordinate marine observation systems across Europe, and Sea Change, an in-depth research review of the links between oceans and human health. “We still have a long way to go before we have a full collection of good biological data from the marine environment,” McDonough says.

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