

Priorities for Marine Research and Policy in the Mediterranean Sea - a Multilateral View
by Dr Frédéric Briand, Director General, CIESM

Abstract

The Mediterranean Sea presents both a major research opportunity for the EU and a fantastic challenge for a desired integrated maritime policy. The Mediterranean Sea is not a "European Sea" as it is shared with a majority of Third Countries, but it is of primary importance to Europe. It straddles major socio-economic, technological and cultural divides, and the absence of EEZs prevents the application of the UN Law of the Sea over large expanses of waters. In such a sensitive geographic context, a European Maritime Policy is desirable as a reference but it will miss its desired objectives if it remains based solely on European views and transfixed on a legitimately proud European leadership in research.

As *the* Scientific Commission (23 Member Governments) covering the entire Mediterranean / Black Sea Region, CIESM has a century-old tradition of associating researchers from all Mediterranean shores in its activities. Building bridges between the scientific communities of countries that were often divided by wars or regional conflicts has given us enough experience to say that joint research can be a major vector of peace, as men and women of science and good will are often prepared earlier than others to extend a hand to the other side. It would be contrary to the interests of Europe in the long-term to develop a proud European leadership in research without any consideration of the legitimate aspirations of its closest, far less wealthy neighbours. As a matter of urgency, we strongly recommend that the EU develop multi-lateral agreements with its southern / eastern neighbours in the Mediterranean Basin, promoting partnership around knowledge/ technology transfers, scientific capacity building, and fair share of biotechnological property rights. In this context, CIESM will be pleased to associate its broad experience and resources, including a network of over 4000 marine researchers and relevant environmental databases, to such EU developments.

The Mediterranean is a goldmine of scientific opportunities and discoveries. Its seabed is extraordinarily complex, with hundreds of new species awaiting discoveries in extreme environments - ranging from mud volcanoes and seamounts to hyper-saline submarine lakes. This offers a fertile territory for biotechnological screening of new enzymes and molecules for huge potential applications in industry and medicine. Other major opportunities for research and innovation are to be found in the domains of alternative energy source (numerous sites of methane production on the Mediterranean sea bottom; marine microbial fuel cells) and of climate change. Because of its relatively small dimensions and semi-enclosed nature, the Mediterranean Sea reacts much faster to atmospheric forcing than the world ocean. Hence the Mediterranean represents a natural prototype for studying global climate change, and *inter alia* its impact on marine biodiversity, which is rich and quite unique (30% of Mediterranean species are endemic). Field data collected by CIESM monitoring programmes already indicate a continuous warming trend and higher salinity in the deeper water masses of the Gibraltar Strait, Tyrrhenian sea, Sicily Channel, and significant rises in sea level in the Levantine sub-basin.

Climate change, together with other anthropic impacts of unique intensity (growth in maritime traffic, over-fishing, new contaminants) will likely contribute to a further degradation of Mediterranean foodwebs - with a possible ecosystem shift from fish to gelatinous organisms of major economic consequence - accelerate the geographic extension of tropical alien species and the possibility of epidemiological outbreaks. The wellbeing and economic development of dense coastal Mediterranean populations, within and outside EU frontiers, is a mounting, legitimate concern within the EC. It must translate, as a matter of urgency, into integrative, multi-lateral research and remedial actions at the whole Basin-scale. The EU Green Paper is a rare opportunity to develop tools facilitating cooperation with neighbouring countries.