



Resolution 1168 (1998)¹

Future challenges in European maritime science and technology

Parliamentary Assembly

1. Seventy per cent of the earth's surface is covered by the oceans and an additional seven per cent by rivers and lakes.
2. The oceans have a vital function for life on earth and for the earth's climate. Their exploration and exploitation assure humanity important minerals and hydrocarbons (gas and oil) as well as living resources such as fish and algae.
3. Developments in off-shore technology have provided access to huge deposits of oil and gas under the sea floor and to new, untapped mineral resources.
4. Marine renewable energy, comprising the use of wind at off-shore sites and in coastal regions as well as the use of waves, tides and water currents to produce electricity, has considerable potential.
5. The production of fresh water for human consumption, for agriculture and for industry through the desalination of seawater may, in the future, be of major importance for many regions in the world.
6. Fisheries and aquaculture, but also the exploitation of other living marine resources, must be subject to sustainable management.
7. The use of the oceans for transport purposes is of fundamental importance for world trade and has contributed to important economic developments in coastal as well as inland regions. New developments in this sector, including the renewal of port infrastructures, will be of great importance for European competitiveness and for employment.
8. The European maritime heritage is made up of historic ships (including sunken wrecks), the immovable heritage (ports and coastal, river and canal structures) and the documentary heritage (books, archives, pictures, music and other objects).
9. New scientific and technological means enable the discovery and recovery of archaeological remains from deep sea sites, but make the sites vulnerable to non-scientific exploitation.
10. Finally, coastal zone development and sea space utilisation pose new scientific and technological challenges for our society.
11. The Assembly considers that the issues referred to above justify new scientific and technological initiatives in order to increase the knowledge-base for ocean management and exploitation and to increase the competitiveness of European enterprises working in the marine environment.

1. Assembly debate on 24 September 1998 (31st Sitting) (see [Doc. 8164](#), report of the Committee on Science and Technology, rapporteur: Mr Roseta; and [Doc. 8206](#), opinion of the Committee on Culture and Education, rapporteur: Mr O'Hara). Text adopted by the Assembly on 24 September 1998 (31st Sitting).



12. It therefore welcomes such initiatives as the creation of a European Marine and Polar Science Board (EMaPS) within the European Science Foundation, and it appreciates the work of the Maritime Industries Forum, the Committee of European Shipbuilders' Association and the Alliance of Maritime Regional Interests in Europe (AMRIE) – all three having research and development activities; as well as the work of the Conference of Peripheral Maritime Regions of Europe and the Conference of European Island Regions.

13. It also welcomes the United Nations initiative to declare 1998 International Year of the Ocean and the choice of "the oceans, a heritage for the future" as the central theme of the 1998 Lisbon World Exhibition - Expo '98. It congratulates the Independent World Commission on the Oceans and expresses its support for its important work.

14. In this context the Assembly calls on the governments of the member states, and in particular those of coastal states as well as the European Union:

- 14.1. to work towards the formulation of a comprehensive European maritime policy;
- 14.2. to develop and use scientific and technological knowledge in designing this policy, including the protection of the European maritime heritage;
- 14.3. to promote marine research and technological development (RTD) by:
 - a. undertaking long-term research on fundamental issues such as the origin of life, climate and the role of oceans;
 - b. promoting and co-ordinating interdisciplinary research for the understanding of the oceans and their multiple functions;
 - c. making a special effort to improve the understanding of marine eco-systems with a view to their protection;
 - d. maintaining and further developing the important European potential in marine science and technology, namely by increasing the share of marine-related RTD in public RTD budgets;
 - e. strengthening research in the field of marine biodiversity;
 - f. developing sustainable fisheries by
 - studying the dynamics of fish populations and the factors influencing these for the development of more sophisticated models for the assessment of fish stocks;*
 - promoting the development and use of fisheries technologies compatible with the sustainable use of these resources;*
 - g. exploring the production and use of living marine resources for different purposes in industry (pharmacy, chemistry, etc.) and for human consumption including by the application of biotechnology;
 - h. developing marine biotechnology and assessing the scope and legal framework for different applications;
 - i. making sure that aquaculture RTD will prepare the industry for strict environmental and health standards as well as increase production targets;
 - j. studying ocean ecosystems and their role in life on earth and earth's climate, ocean modelling and forecasting, and in particular supporting the Global Ocean Observing System (GOOS) and its European component (Euro-GOOS) for the development of operational oceanography and new maritime services;
 - k. increasing research for a better understanding of the sea floor;
 - l. studying and developing technologies for the extraction of different mineral resources from the ocean bed, including RTD for off-shore production systems and equipment recycling;
 - m. enhancing coastal management research (coexistence of fisheries, aquaculture, shipping, tourism, etc.) and assessing and developing sustainable user systems for coastal resources – including new uses of sea space;
 - n. promoting RTD activities that will strengthen the competitiveness and technical excellence of European shipbuilding, off-shore construction and related industries (including high-speed ship development);

- o.* giving higher priority to the development of safe and environmentally-friendly sea-transport systems, including the use of new communications and space technologies for transport monitoring as well as the development of multi-modal transport systems (sea-road-rail);
 - p.* improving the design and functioning of port facilities;
 - q.* increasing RTD efforts for the use of marine renewable energy (wind, waves, tides, currents) and for the development of the inexpensive production of desalinated water;
 - r.* promoting the application of social sciences (economy, sociology, history, law etc.) to problems related to ocean management;
- 14.4. to encourage education and training in marine subjects;
- 14.5. to work for the protection of the underwater cultural heritage, including wreck sites in the deep seabed, whatever the nature of these wrecks;
- 14.6. to improve public information on the oceans and their multiple functions and uses;
- 14.7. to engage in consultations with a view to creating a European maritime agency to promote co-operation among the many European centres of excellence and European maritime industries as well as all other interested parties, in particular political decision-makers. In this respect the Assembly welcomes the initiative taken by Portugal and supported by several other countries, aiming at setting up such an instrument of co-operation.