THE GOVERNANCE OF THE GLOBAL OCEAN OBSERVING SYSTEM (GOOS)

Peter Ehlers

A. Introduction

Even in the 21st century man’s knowledge about the seas and oceans is rather limited. Though oceanographic research and observation activities have been going on for at least 150 years,1 tremendous deficiencies still exist. However, a thorough ocean knowledge is a prerequisite for good ocean governance, for making use of the seas in an environmentally acceptable, sustainable manner, and for effective coastal protection measures against marine threats requiring above all reliable forecast services. Likewise climate change cannot be assessed nor reasonable mitigation measures be taken without sufficient oceanographic data. The knowledge needed cannot be obtained from research activities only as they are restricted in time and project oriented. Scientific research has to be based on and supplemented by operational long-term ocean observations to provide analyses, predictions and other information products.2 Various States have for a long time performed operational oceanographic services as a basis for forecasts, in particular with regard to natural hazards and accidents, but also for environment protection and the management of marine resources. These services, however, are mostly restricted to coastal zones and specific areas of national interest. What is needed is an overarching global ocean observing system, integrated as the marine component into other earth observation systems such as the Global Climate Observing System (GCOS)3 and the Global Earth Observation System of Systems

1 The first international conference establishing principles for operational meteorology and oceanography was held in Brussels in 1853.
3 For details about GCOS see http://www.wmo.int/pages/prog/gcos/index.php?name=AboutGCOS.
(GEOSS). Such a global ocean observing system under the acronym GOOS is being set up at present under the leadership of the IOC together with WMO, UNEP and ICSU. It not only requires a clear scientific and technical conception, but also a firm basis for establishing the appropriate governance structure and ascertaining that the States will commit themselves to contributing to the system.

The idea of developing GOOS came up in the IOC in the late 1980s, but was also thoroughly discussed by WMO as the oceans play an important role in climate processes. In 1989 the IOC Assembly, at its 15th session, expressed the need to implement an integrated global ocean observing system, and in 1991, at its 16th session, took the formal decision on the development of GOOS. Since then the IOC has been working on the world-wide implementation of the system.

This paper will not examine the scientific and technical conception of GOOS nor the achievements gained and the relationship with other marine research programmes and earth observation systems. It rather focuses on endeavours to establish an appropriate governance structure, including in particular the international co-ordination of the system, regional efforts and the role of States participating in the system. In addition some specific legal questions will be discussed which have emerged during the implementation process. Considering the significance of regional approaches the development in Europe is dealt with in some detail.

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4 For details about GEOSS see http://www.earthobservations.org/geoss.shtml.
6 Intergovernmental Oceanographic Commission of UNESCO.
7 World Meteorological Organization.
8 United Nations Environment Programme.
9 International Council for Science.
10 In 1988 the Executive Council (EC) of the IOC established an expert group to prepare proposals for a global system.
11 At its 41st session in 1989 the Executive Council of WMO adopted Resolution No. 11 on the development and implementation of a global operation ocean observing system in support of climate monitoring.
12 IOC Resolution XV-4.
13 IOC Resolution XVI-8.
14 The scientific, technological and operational base for GOOS is described in detail in GOOS Prospectus (note 2), at 35; about progress in implementation see GOOS Brochure (note 2), at 8; D. J. Baker, Planning and Implementation for GOOS, A consultant study prepared for the IOC and the WMO, at 4, 26 (2009).