Malta gains EU support in a major Mediterranean initiative

" Dr. Aldo Drago, operating at the Malta Council for S&T and currently the Executive Secretary of MedGOOS, and Director of Research at the IOI-Malta Operational Centre, University of Malta, writes about a project entitled ***Mediterranean network to Assess and upgrade Monitoring and Forecasting Activity in the region (MAMA)*** *to be funded under the Vth Framework Programme of the European Union. Starting next November, the project will be run by a consortium made up of major marine institutions from all the Mediterranean countries, and aims to build the institutional framework and enhance the necessary infrastructure for the concerted basin-wide effort towards the setting up of a Global Ocean Observing System in the Mediterranean (MedGOOS)."*

The problems of sustaining marine living resources, protecting and restoring ecosystem health, controlling marine pollution, abating algal blooms, mitigating natural disasters, and protecting public health are not uniquely akin to small island states like Malta. Indeed the combined effects of global climate change and human alterations of the environment are already very pronounced in many coastal waters of the global ocean, including to certainly no lesser extent the Mediterranean Sea. Yet the economic activity of most of the riparian countries is to a significant proportion linked to the sea and to the use of coastal areas; and this is expected to increase in the future. The sea is an important economic asset not only for an island void of other natural resources like ours. The increasing range of services, amenities and social benefits deriving from the sea are exacerbating pressures on the marine environment and raise even more the need for its sustainable use.

In addition the role of the oceans on the functioning of the global climate system is now well recognised. Meteorologists use atmospheric observations from a network of land and ocean surface measurements to produce three- to five-day weather forecasts to anticipate the impact of storms, warm periods and other day-to-day events. Reliable longer term climate predictions covering the broader patterns of the weather over seasons and years, requires additional and improved observations within the upper layer of the oceans. An improved understanding and forecasting of climate has thus to rely on systematic observations of both the ocean and atmosphere.

In response to this demand the initiative to set up a Global Ocean Observing System (GOOS) was started in 1991. GOOS is an international effort led by the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the World Meteorological Organisation (WMO) and the United Nations Environmental Programme (UNEP), with scientific guidance from the International Council of Scientific Unions (ICSU). Endorsed at the Earth Summit in 1992, GOOS aims to create a global system for gathering, archiving, and distributing ocean data and derived products addressing the information needs of governments, industry, science and the public to tackle marine-related issues and problems in a timely fashion. In synergy with national monitoring and ocean observing programmes, GOOS will enable the scientific understanding of the environment and the relevant forcing mechanisms that produce change. It will furnish reliable predictions, with sufficient lead time, to enable sound decisions for the best use of available resources, and for minimising losses and damages including that to the environment itself.

" The information needed by governments, industry, science and the general public to deal with marine related issues, including the effects of the ocean upon climate, needs the support of a unified global and regional networks to systematically acquire, integrate and distribute oceanic observations, and to generate analysis, forecasts and other useful products – GOOS Prospectus 1998"

GOOS has taken a regional approach in an attempt to achieve its goals. MedGOOS is the regional component of GOOS for the Mediterranean. MedGOOS was founded under the auspices of UNESCO/IOC in November 1997 in Malta during the Workshop on GOOS Capacity Building for the Mediterranean Region organised by the Malta Council for Science and Technology (MCST) and sponsored by the Government of Malta, IOC, a number of European agencies and the Bank of Valletta International Ltd. The signing of the MedGOOS Memorandum of Understanding, during a special session at the 2nd EuroGOOS Congress in 1999, marked the establishment of MedGOOS as an informal association of 16 marine institutions from 13 European and Mediterranean Partner countries, namely Morocco, Egypt, Israel, Cyprus, Turkey, Greece, Slovenia, Croatia, Bosnia & Herzegovina, Malta, Italy, France and Spain.

The involvement of Malta in the development of MedGOOS has been instrumental, especially through the MCST. In 1998, the MedGOOS Executive Board decided to recognise this contribution by assigning to Malta the prestigious hosting of the MedGOOS Secretariat. Since then the Secretariat has operated under the auspices of MCST. It is now being relocated at the IOI-Malta Operational Centre of the University of Malta. The presence of the MedGOOS Secretariat in Malta is certainly of great prestige. It is a benefit for MedGOOS itself, while it enhances the role of Malta in the quest to promote regional cooperation in the peaceful uses of the Mediterranean Sea.

A large MedGOOS project involving major institutions from all the Mediterranean countries has been recently approved for funding within the Vth Framework Programme of the EU. The Secretariat had an important role in the technical preparation and contractual agreements related to this project, and will be assisting the MedGOOS Chair from the International Marine Centre (IMC) in Italy in the coordination and running of the project. The project, entitled "Mediterranean network to Assess and upgrade Monitoring and forecasting Activity in the region" (MAMA), aims to facilitate the development of ocean observations and forecasting for the benefit of a wide group of users in the Mediterranean Sea. Through this project MedGOOS will be in a position to provide guidance to the Mediterranean states and stimulate the necessary awareness, capacity building and pre-operational R&D to ensure that MedGOOS is fully effective when it is eventually established, hopefully in ten to twenty years time.

"*The aims of MAMA are centred on the trans-national pooling of scientific and technological resources through the sharing of experiences and the transfer of expertise, to bring capacities at comparable levels, and provide an integrated effort towards the planning and design of the initial ocean observing and forecasting system in the Mediterranean. The focus will be on the sustainable use of the coastal zone, on*

the interact with end-users and raising awareness on the benefits of ocean forecasting with dissemination of results and products".

The main objectives of the project centre on building the basin-wide network for ocean monitoring and forecasting, linking all the Mediterranean countries, broadening and strengthening the already existing network of national institutions; identifying the gaps in the monitoring systems in the region and in the capability to measure, model and forecast the ecosystem, taking stock of current RTD projects; building capacities for expertise in the setting up and running of observing platforms, in managing data, in modelling and forecasting the ecosystem; designing the initial forecasting system from the basin scale down to the coastal zone, inter-comparing experience and standardising practices, towards the co-ordinated upgrading of the observing and forecasting capabilities in all Mediterranean countries; raising awareness on the benefits of ocean forecasting at local, regional and global scales, involving stakeholders and disseminating results and products especially through demonstration projects.

The strength of MAMA lies in the participation of **all** the riparian countries, including newcomers to such regional research initiatives like the Libyan Arab Jamahiriya, the Palestinian Authority, Algeria, Albania, Syria, Lebanon and others. The participation of the Mediterranean Partnership countries is indeed crucial and vital for the long-term success of MedGOOS. An early dialogue between the Mediterranean countries is also expected to foster collaboration in the exploitation of MAMA results to the benefit of the future full implementation of an operational ocean forecasting system in the region.

This is certainly a special moment for MedGOOS. The means to start building MedGOOS concretely are now in place. The current project is indeed ambitious, but the commitment and dedication of all the Mediterranean partners evidenced in the drafting phase augurs well to make this project an example of the tremendous thrust in combining efforts and building on regional co-operation.

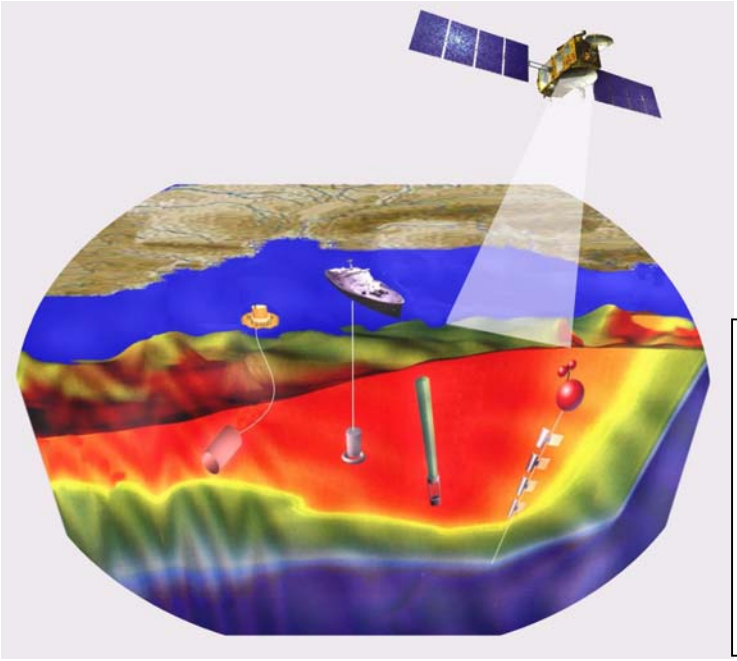

Figure Caption:
Elements of a typical ocean observing system consisting of moored arrays and buoys, profiling and drifting sondes, ships of opportunity and satellite sensors.