ASCABOS - A NEW CAPACITY BUILDING PROGRAMME SUPPORTING OCEANOGRAPHIC SERVICES IN THE BLACK SEA

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Abstract
Communications, data and information exchange are the key elements of the operational ocean monitoring and forecasting networks, defined in the Global Ocean Observing System (GOOS). ASCABOS (A supporting programme for capacity building in the Black Sea region towards operational status of oceanographic services) is designed to strengthen the communication system ensuring flexible and operative infrastructure for data and information exchange. ASCABOS aims at increasing public awareness and at stimulating and motivating the utilization of operational oceanographic information in regional management and decision-making practices. To support and to strengthen the exchange between scientists, governmental managers and other users ASCABOS is planning to organize a cost-effective VOS pilot programme, applying modern technologies for data collection, transmission, storage, use and dissemination.
Keywords : Black Sea, Instruments And Techniques.

Understanding the Earth system is crucial to enhance the human health, safety and welfare. Global Earth Observations as a critical element are sustained by operational services. Europe (EuroGOOS, MedGOOS, BS GOOS, etc.) has world leadership in this field as it has been supporting the investment in marine research and technology through EC FP 3, 4, 5, and is continuing in FP6.
The first Black Sea GOOS project ARENA [1] fulfils its mission set out in the Black Sea GOOS Strategic Action and Implementation Plan, and has fostered development of operational oceanography in the region. ARENA already contributed to the process of a sustained pan- European operational oceanographic system establishment. The following significant results have been achieved:
1. Design the basis of the Black Sea operational oceanographic system; 2. Improve the regional capacity to serve GOOS objectives; 3. Assess the capacity of the region and end users' needs [2]; 4. Establish links between partners and communication system for exchange of data and products [3]; 5. Set up initial nowcasting/forecasting system of the Black Sea circulation and ecosystem state [4]; 6. Launch a significant amount of national and international initiatives, as the ASCABOS project.

The ASCABOS project overview and end user involvement

The ultimate goal of modern oceanography is an end user oriented product. Beneficiaries include shipping, oil and gas industries, port and harbour, commercial fisheries, tourism and recreation industries, governmental agencies, coastal zone managers, etc. ASCABOS is designed as a three-year programme and its specific objectives are.
1. Co-ordination of a flexible and operative infrastructure for data and information exchange to support observing and forecasting systems.
2. Building the scientific capacity of human resources through especially designed educational and training programme.
3. Continuously collecting and updating of the historical data and meta-data bases and extending the end-users access by development of a Black Sea information system.
4. Organization of a cost-effective VOS pilot programme.
The problem, which is particularly acute, concerns the communication capacity in the region since the development of distributed observing systems and closely related operational forecasting is dependant on the exchange of significant data and information volumes. A very serious requirement is education and training of a wide spectrum of end-users, including young scientists, in order to achieve a high level of operational services and to create proper awareness and socio-economic impact. Historical metadata related to the Black Sea have been collected within different international initiatives. Enhancing the options to access data and update the metadata base is an essential user requirement, which is being settled. ASCABOS is called to further sustain the exchange between scientists, governmental managers and other users through development of a fully operational Black Sea information portal.
Analysis of operational observing systems shows that their running components are concentrated predominantly in the coastal zone. However, collection of meteorological and hydrological data in the open sea is particularly valuable for the Black Sea as a unique European basin. Therefore, ASCABOS started organising a SOOP observational programme. Suitable conditions exist in the Black Sea as there is sufficient number of regular ferry lines (Fig. 1). The goal is to provide a strategic forward look for advancing implementation of the basin-scale multi-parametric, autonomous, cost-effective system.

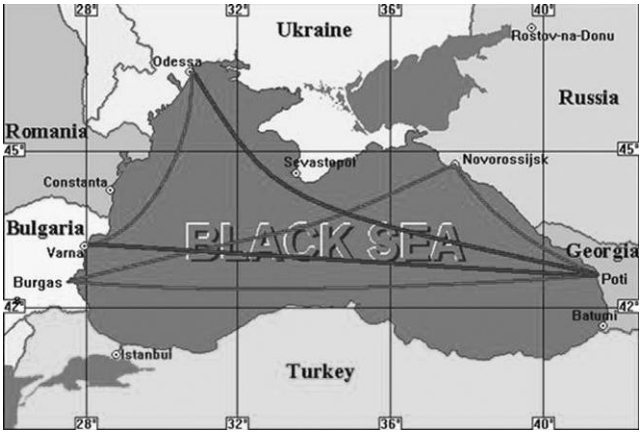

Fig. 1. Tentative design of VOS lines in the Black Sea

Conclusions and recommendations

Undertaking these crucial actions will assist an optimal realization of the Black Sea GOOS objectives. ASCABOS will also respond to the GEOSS requirement to turn the observations into knowledge products. It is also in unison with the GMES and GEO approach to start enhancing the existing systems with co-ordinated calibration and data exchange. A methodology to exchange multiple sources data and an operational portal, designed in ASCABOS, will enable understanding and facilitate decision making, thus, yielding information products useful to society. Furthermore, ASCABOS is underpinning other ongoing regional initiatives and programs seeking the interoperability and coherence of all key actions. This ensures a rational development of long-term sustained GOOS.

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