



## Information Services of Maritime Industry

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The ultimate goal of modern oceanography is an end user oriented product. Beneficiaries are the governmental services, coast-based enterprises and research institutions that make use of the products generated by operational oceanography. Direct potential users and customers are coastal managers, shipping, offshore industry, ports and harbours, fishing, tourism and recreation industry, and scientific community. Indirect beneficiaries, through climate forecasting based on ocean observations, are food, energy, water and medical suppliers. Five general classes of users for data and information are specified: (1) operational users that analyze the collected data and produce different forecasts serving to impose regulation measures; (2) authorities and managers of large-scale projects needing timely oceanographic information, including statistics and climatic trends; (3) industrial enterprises, safety of structures and avoiding of pollution; (4) tourism and recreation related users aiming protection of human health; (5) scientists, engineers, and economists carrying out special researches, strategic design studies, and other investigations to advance the application of marine data. The analysis of information received during the extensive inquiry among all potential end users reveals variety of data and information needs encompassing physical, chemical, biological and hydrometeorological observation. Nevertheless, the common requirement concerns development of observing and forecasting systems providing accurate real-time or near-real time data and information supporting decision making and environmental management.

Availability of updated information on the actual state as well as forecast for the future changes of marine environment are essential for the success and safety of maritime operations in the offshore industry. For this purpose different systems have been developed to collect data and to produce forecasts on the state of the marine environment and to provide them in real-time to the users in applying the latest advances in instrument-building, information and communication technologies. In the Bulgarian sector of the Black Sea have been developed and putted in operation several systems for the collection and presentation of marine data for the needs of different users. The systems are located both along the coast and in the open sea and the information they provide is used by both the maritime industry and the widest range of users. Combining them into a national operational marine observational system is a task that has to be solved, and that will allow to get a more complete and comprehensive picture of the state of the marine environment in the Bulgarian sector of the Black Sea. Such a system will help to support the activities of the offshore industry.