

Integrated Oceanographic Monitoring and Forecasting System

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This paper describes structure of integrated oceanographic monitoring and forecasting system, which includes the following structural parts: Monitoring Station(s), Communication Subsystem, and Forecast Models. The Monitoring Station is a buoy with attached sensors to perform hydrodynamic and water quality measurements; Communication Subsystem establish interactive communication between a mainland computer server and the deployed monitoring equipment; and set of deterministic and data-driven Forecast Models provide computation of different hydrodynamic and water quality parameters. Integration of the outlined modules is provided with User and Administrative Interfaces to allow interactive communications between the user and the system; and GIS interface is used as a post processing and analysis tool. Coupling of forecasting models with continuous monitoring allows online assimilation of data into the models.