

**The projects:** In recent years, Bulgarian Oceanographic Institute (IO-BAS) participated in a series of projects funded by program BG02 "Integrated management of marine and inland waters" financed by the Financial mechanism of the European economic Area (EEA FM) 2019-2014. The aims of these projects were: deploying moored real time monitoring stations; installation of ferry boxes on four ships; collecting samples for priority substances and specific pollutants from water, sediments and biota; creation of tools for assessment of the marine environment through the application of new technologies and best practices to tackle the lack of marine data in two main areas of interest: detection and classification of marine litter in coastal areas, regular monitoring of marine eutrophication of surface waters; filling the gaps of data in preparation of the next assessment of the state of the marine environment, targets and indicators; developing proposals for improved monitoring programs. Data management for the following projects had to be provided - "Improved Maritime Waters Monitoring (IMAMO)", "MARine Litter, Eutrophication and Noise assessment tools (MARLEN)", "Development of the Marine Environment and the Improvement of monitoring programs developed under MSFD (ISMEIMP)".

**Implementation:** The data management (fig.1) of these projects was assigned to the Bulgarian oceanographic data center (BgODC). The success of the data management is vital for the ultimate success of the projects. The BgOdc had to:

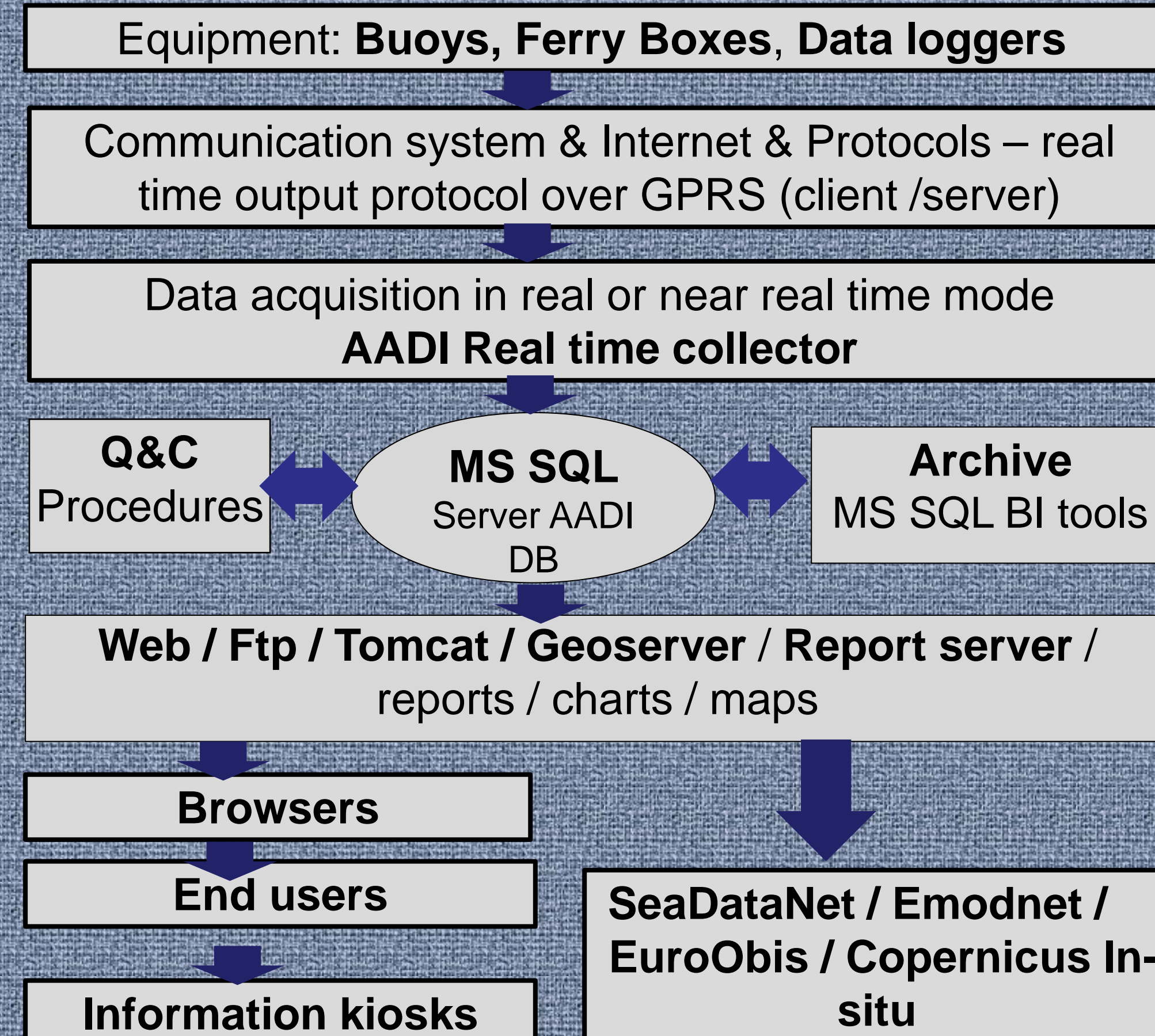


Fig.1 Data workflow

➢ handle the real time data coming from AAnderaa real time collector; manage and store data reliably within MS SQL spatial data base

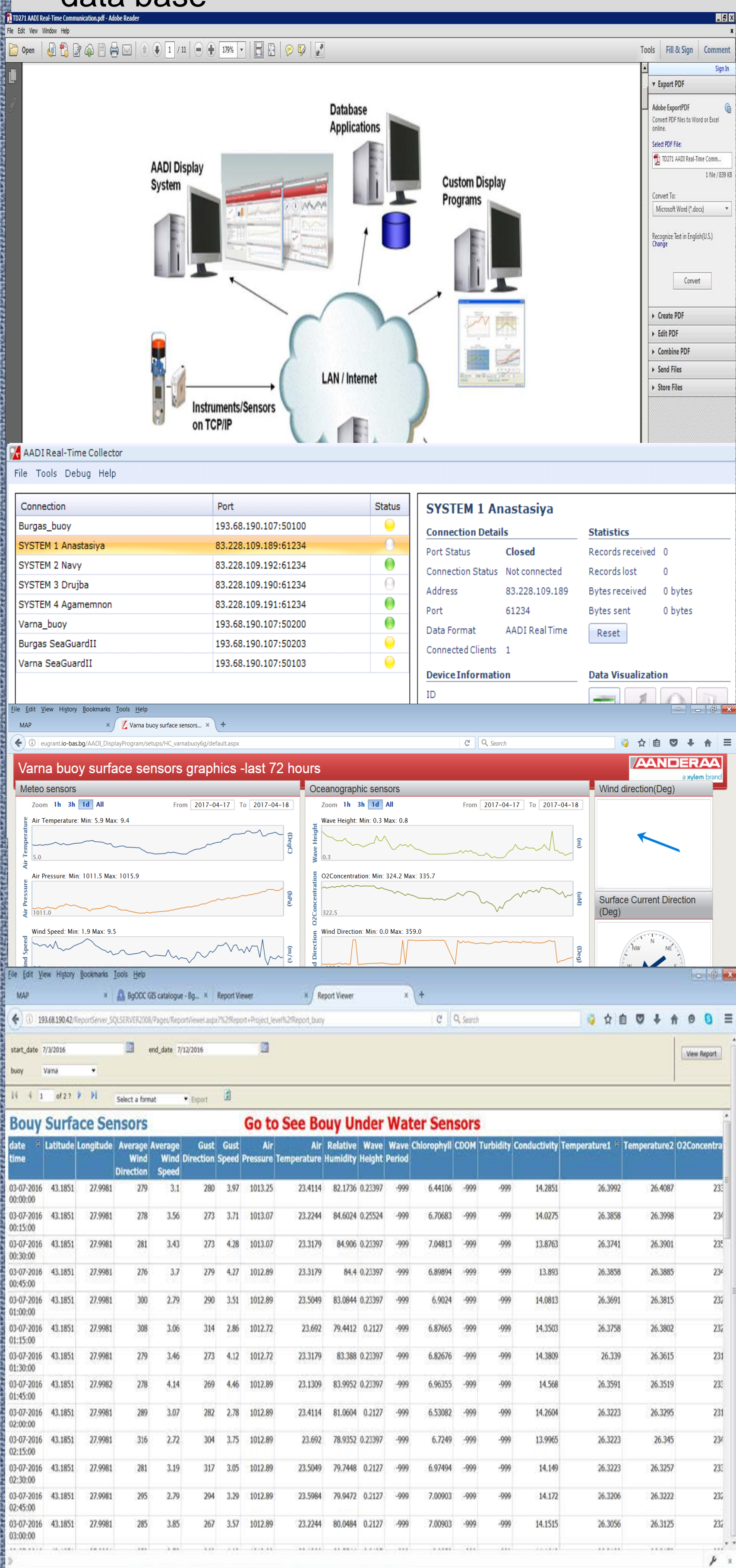


Fig.2 Data Acquisition screenshots

➢ registrate maps and data of various formats and sources in catalog maintenance on BgOdc website. Ensure the availability of high quality oceanographic data for a wide group of users using side kiosks

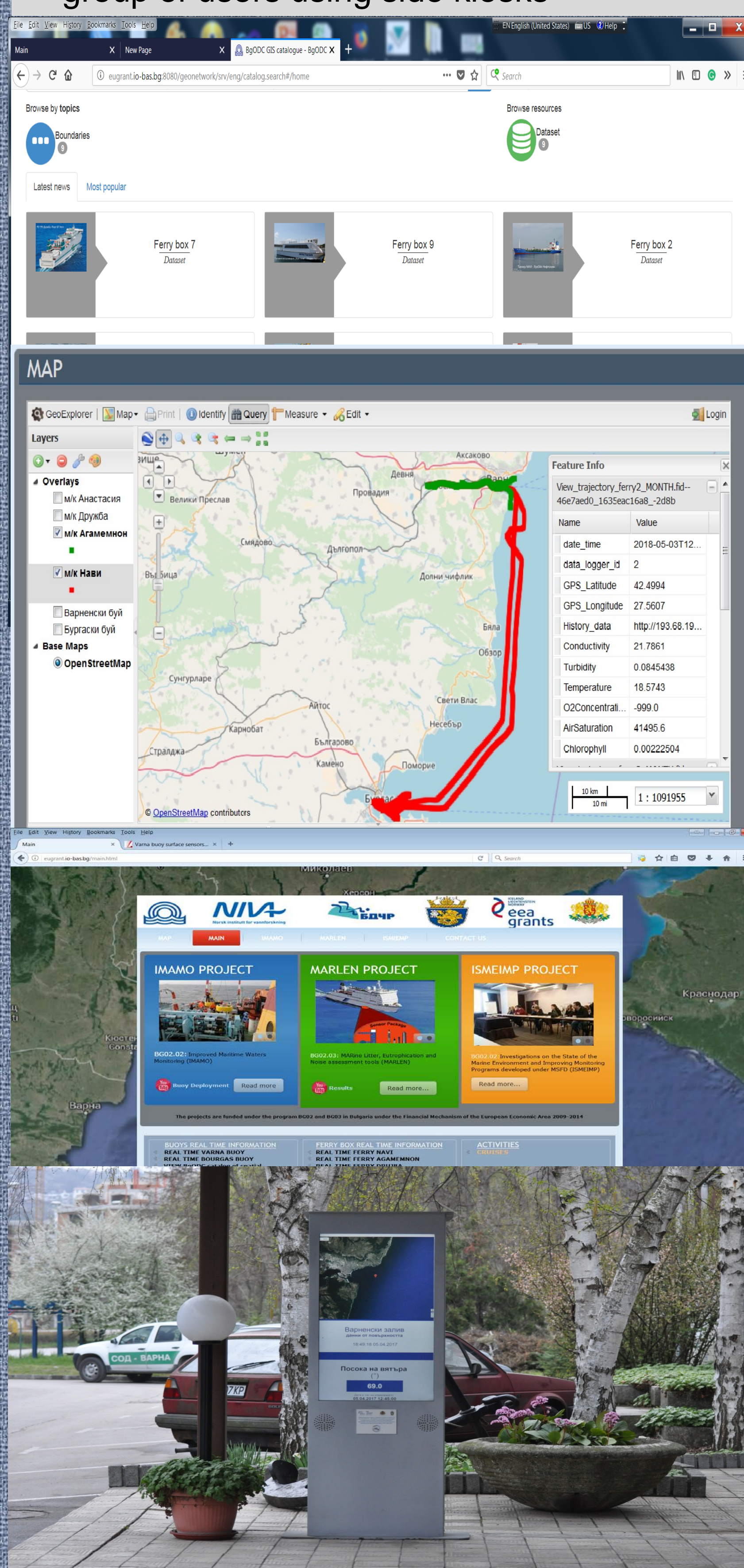


Fig.3 Data presentation screenshots

➢ Perform automatic quality control procedure composed of a set of tests performed in the MATLAB environment:

- Impossible Date Test
- Stuck Value Test
- Impossible Location Test
- Spike Test
- Correlation Test
- Range Test

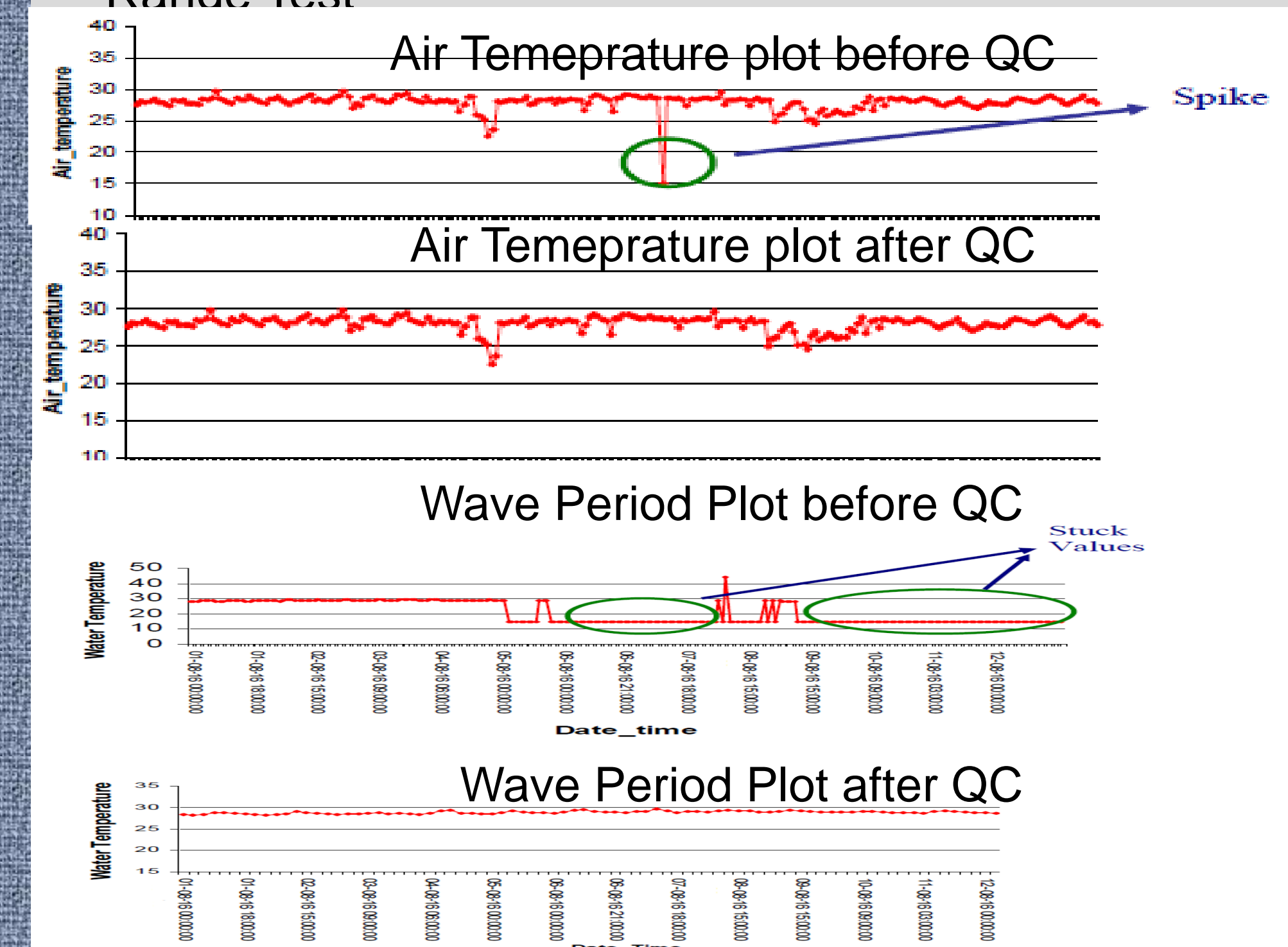
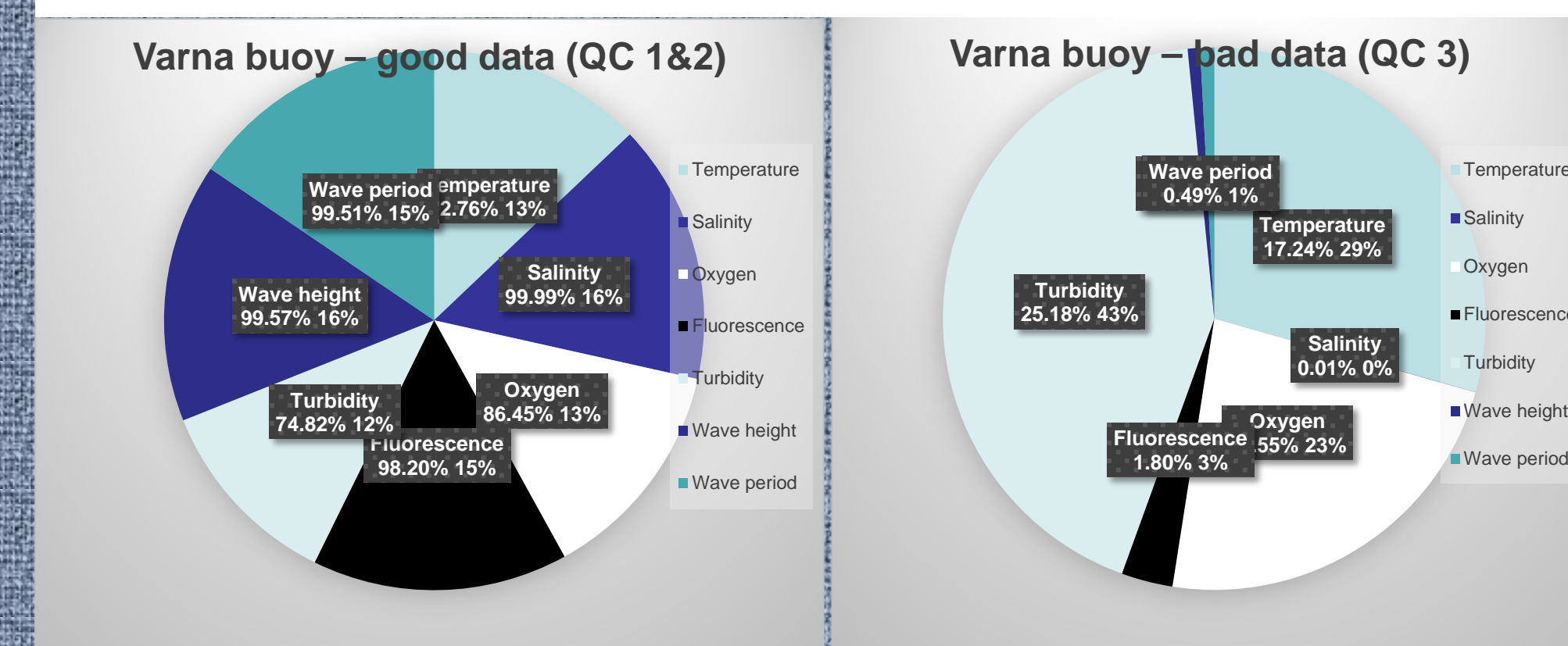
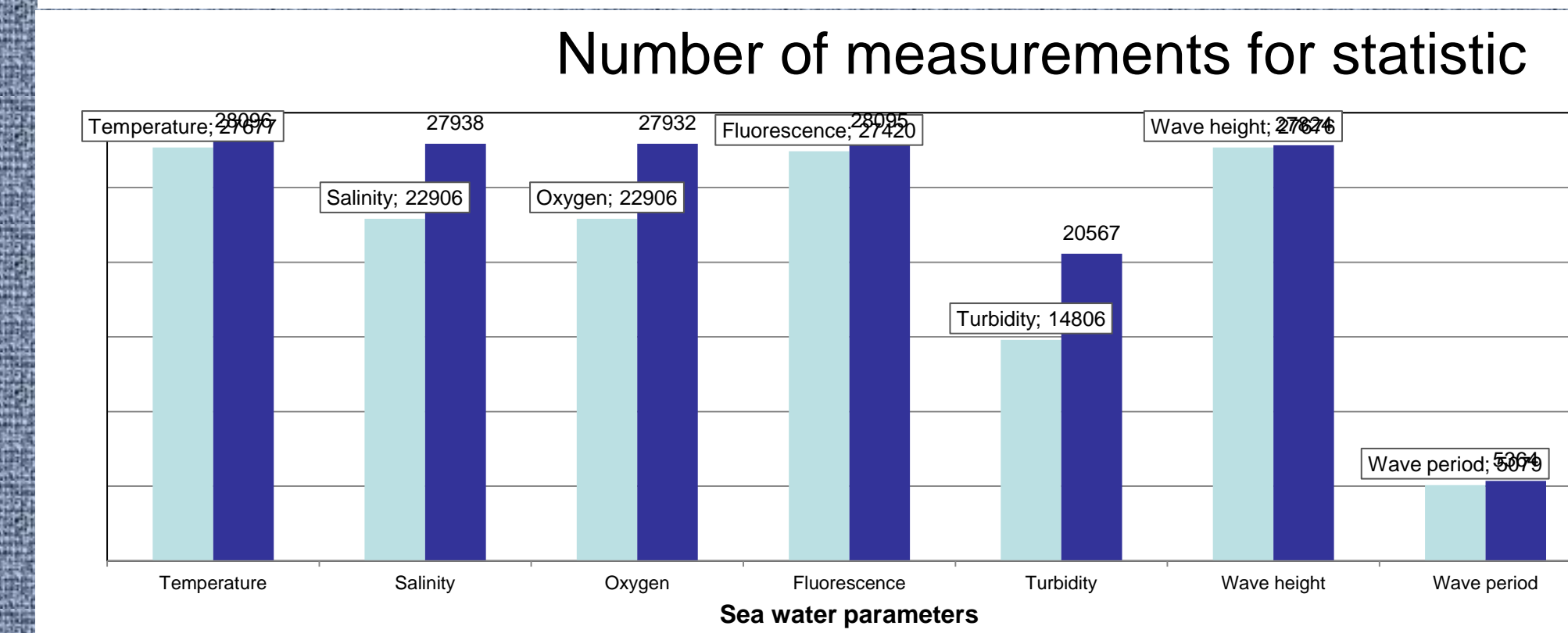


Fig.4 QC screenshots



**Technical prerequisites:**

- AADI Geoview - web based display solution for real time environmental data
- AADI Real-Time Collector
- AADI instruments over TCP/IP
- MS SQL 2014 Express (free edition) with file stream option and reporting services enabled
- Windows OS
- GeoServer with GeoNetwork, GeoExplorer
- IIS 7

**Conclusion:**

The final goal was to Implement pathways to forward acquired data to the appropriate data repository in the European infrastructures that are driving the EMODnet thematic portal. The metadata are created according to the SeaDataNet vocabularies and published through the SeaDataNet infrastructure. The experience gained from this realization has increased the quality of work of the BgODC in the processing of oceanographic data