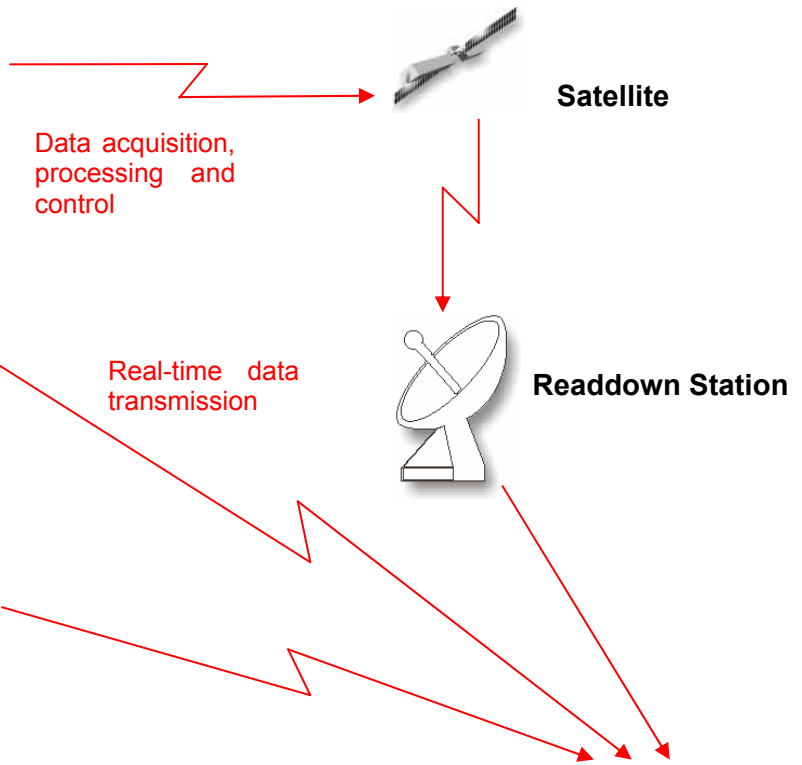
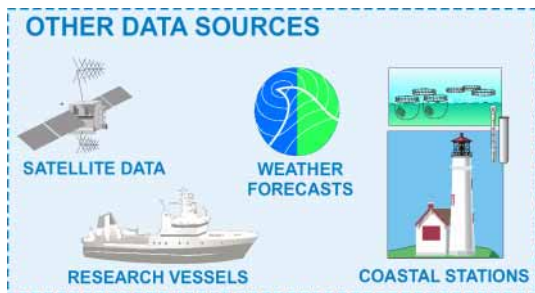


# Seawatch System Overview

## Acquiring Data

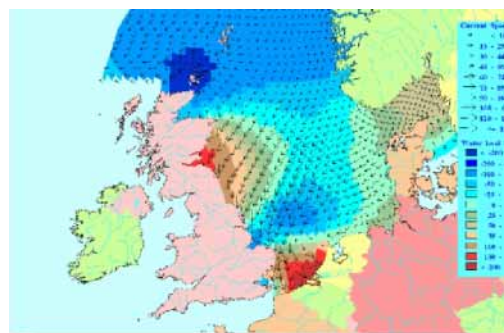
Data can originate from a variety of sources. Fugro can provide a range of oceanographic buoys that collect, process and transmit the data in real-time for a variety of parameters:

- Meteorology
- Waves
- Currents
- Temperature
- Salinity
- Oxygen
- Algae
- Nutrients
- Radioactivity
- Hydrocarbons
- Chlorophyll A



## Processing Data

- Data control, analysis and storage
- Numerical Modelling
- Forecasting



## Distributing Information to Maximise its use

### Public

- Environmental authorities
- Contingency and rescue
- Coastal management
- Coastguard
- Research Institutions

### Public and Private

- Resource Management
- Metocean Services
- Offshore Activities
- Recreation and Tourism

### Private

- Fisheries
- Aquaculture
- Shipping

## Distribution



## The Seawatch System

### Seawatch Buoys

Our buoys and sensor carriers are designed for reliable operation for months without maintenance. They have an impressive operational record from the roughest seas world-wide, from the Arctic to the Tropics. Seawatch buoys incorporate a self-contained energy supply together with a powerful data processing unit for acquisition, quality control, storage, processing and transmission.

### Seawatch Sensors

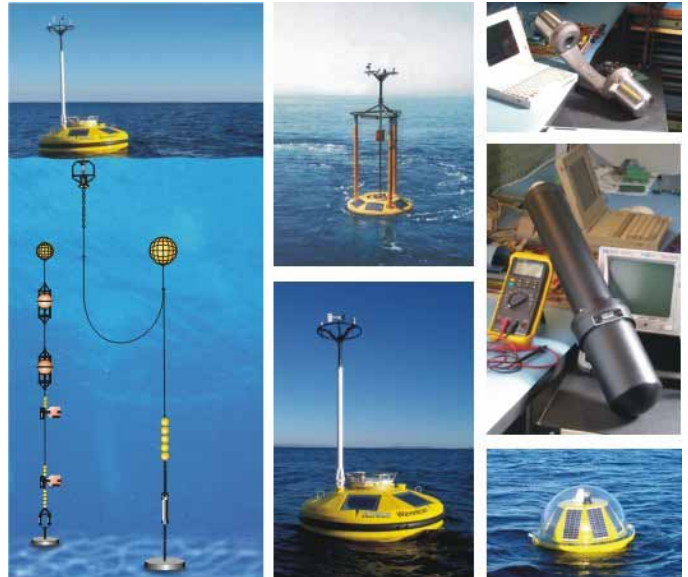
Seawatch supports marine environmental management through monitoring and profiling physical, chemical and biological parameters. State-of-the-art sensors are used to detect algae and underwater particles in real-time, to perform continuous *in-situ* water quality monitoring using sensors capable of alerting to changes in nutrient levels or radioactivity, as well as carrying out traditional meteorological and directional wave observations.

### Real-time, Two-Way Communication

Seawatch utilises state-of-the-art communication technology to ensure foolproof transfer of data in real time to the read-down station. Satellite communication is also used to control the buoy's processor, datalogger and sensor operations. Communication by cable or telephone lines are also available for sensor systems in fixed locations.

### Seawatch Integrates Data Sources

Environmental data may also be integrated by the system from a number of other sources. For example, in



**Seawatch can integrate sensors to suit the client's data collection requirements**

order to build the best basis for national and international weather service operations, data from Seawatch sensors may be integrated with data from research vessels, weather ships, free-floating buoys as well as various types of satellite data. The system allows seamless exchange of data in recognised data formats.

### Seawatch Databases

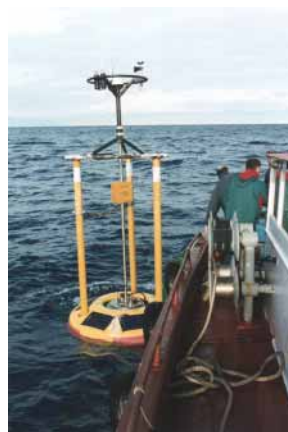
Seawatch databases are custom-designed to enable operators and end-users easy access to real-time data, historical time-series and statistics derived from the Seawatch system.

### Seawatch Models

Seawatch can simulate currents, storm surges, river discharges, tides, salinity, temperature and the transport of pollutants such as oil spills and effluent discharges. The models may be applied in both deep and shallow waters.

### User Interface

The individual user encounters Seawatch through a user-friendly computer interface, with menus guiding the user to the information of interest. A geographical information system (GIS) visualises the data for studies, analyses, environmental management and decision making.



**Deploying a Seawatch buoy**

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