



WICOS (Implementation of the water quality monitoring in the Western Iстриan Coastal Sea) is an Adriatic New Neighbourhood Programme-INTERREG/CARDS-PHARE Project, with main objectives:

- **Scientific support to the implementation of a strategy for the environmental protection and sustainable development of the sensitive coastal Adriatic Sea areas (CAOS)**
- **Estimation of long-term changes in the Adriatic ecosystem**
- **Evaluation of the relative importance of climatic fluctuations and oceanographic conditions variability vs. the anthropogenic impact of eutrophication.**

Since the observed area is Northern Adriatic, WICOS could easily be retained as continuation of the REQUISITE project, measuring the same parameters and having a complete view in the Northern Adriatic ecosystem. As in REQUISITE, our partner is Struttura Oceanografica Daphne; ARPA-ER, Cesenatico, Italy.

The WICOS project started in August 2008 and will last for one year.

BULLETIN FOR JANUARY 2009

The bulletin was primarily edited in accordance to measurements, and observations of the scientific and technical staff of Center for Marine Research (CMR) of the Ruđer Bošković Institute.

The description of the state in the marine ecosystem refers to the profile of seven stations 1 Nm distant from the western Iстриan coast (WIC), as required by the program WICOS. In the

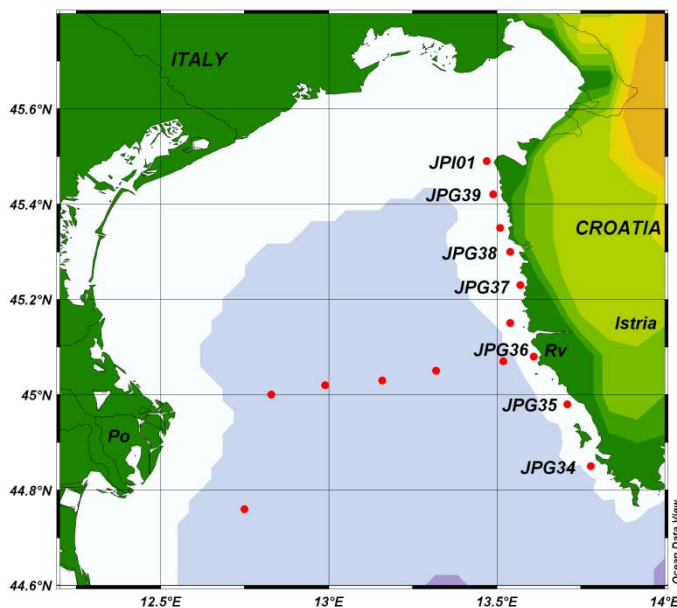


Figure 1.

case that the sampling along the Rovinj-Po River Delta (RV-Po) was performed in the next few days to the measurement along the WIC, all data obtained were compared and described in the bulletins.

The monitoring of the RV-Po profile is realized within the Croatian National Monitoring Program (Projekt "Jadran"), for which are available time series data from 1965 and is representative for the waters along the northern Adriatic. The profile includes 14 stations up to the limit of Italian territorial waters, of which at seven are performed complete measurements of all oceanographic parameters.

The measurement cruises were carried out using the oceanographic vessel "Vila Velebita" of the CMR.

Situation at sea

The sampling along the western Istrian coast (WIC profile) was performed on January 16th 2009, while the (RV-Po) profile on the 17th of the same month (Fig. 1).

The water column along most of the WIC profile was mixed, with temperature (around 11 °C), salinity (37.8) and dissolved oxygen saturation (95-100 %) homogeneously distributed (Fig. 2). On the surface of the northern part of the profile values of temperature (9.8 °C) and salinity (37.2) were slightly lower, however, in long-term averages.

In the first half of January, the freshwater inflow from the Po River was slightly above average, as a result of the prevailing cyclonic circulation, hence, the influence of riverine waters was not significant in the area. The slight decrease in surface salinity at stations in the northern part of the profile WIC was due to injections of local freshwaters (land sources, Isonzo River).

Chlorophyll *a* concentration was low, with values similar to those measured in October and November (0.4-1.0 µg/L; Fig. 2), which, however, did not differ significantly from the long-term averages. The highest values were measured at surface of the northern stations.

Nutrient concentrations distribution was very similar to November. The water column was still completely mixed and the values were homogeneously distributed, with the exception of nitrate in the surface layers of the northern stations. Freshwater input, indeed, significantly enriched in nitrate than in other nutrients. (Fig. 3)

The values of all the parameters along the RV-Po profile were correlated to WIC.

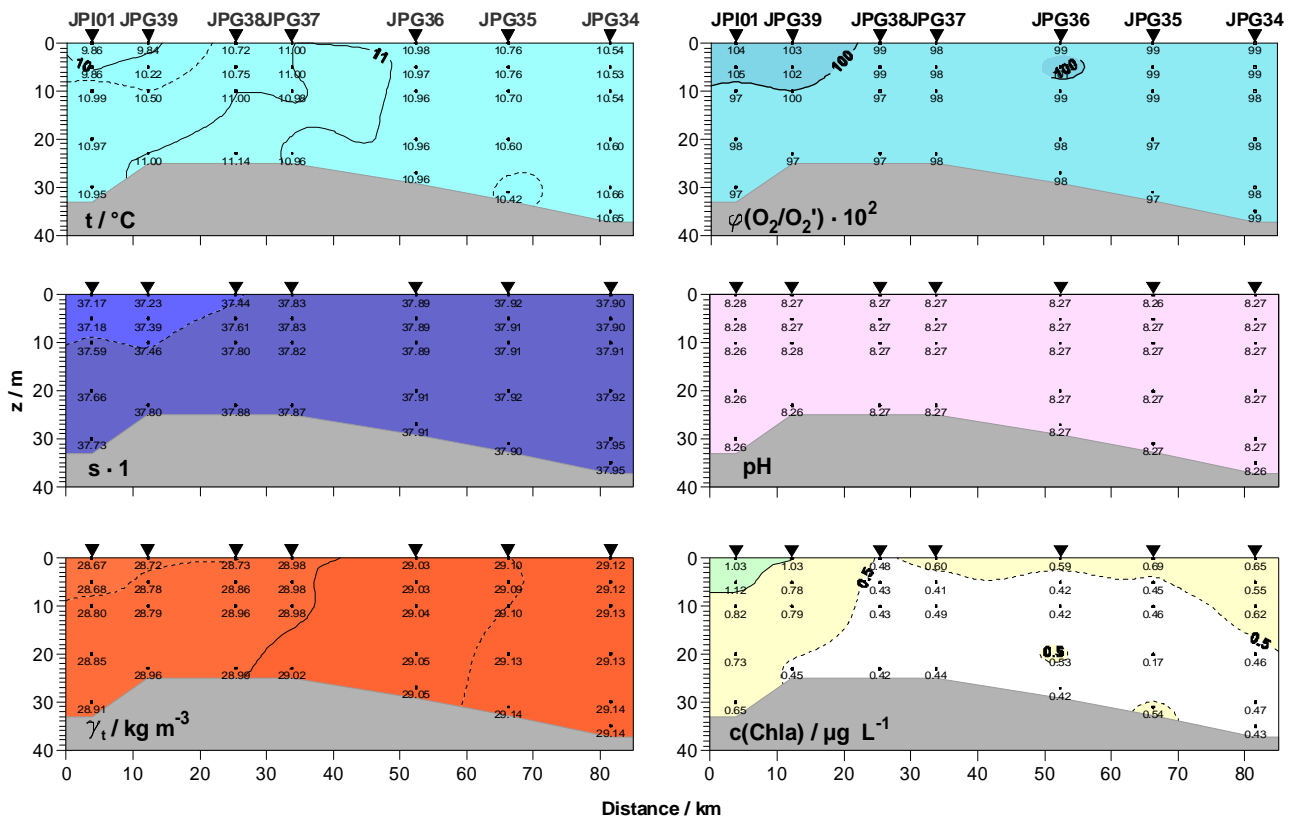


Figure 2.

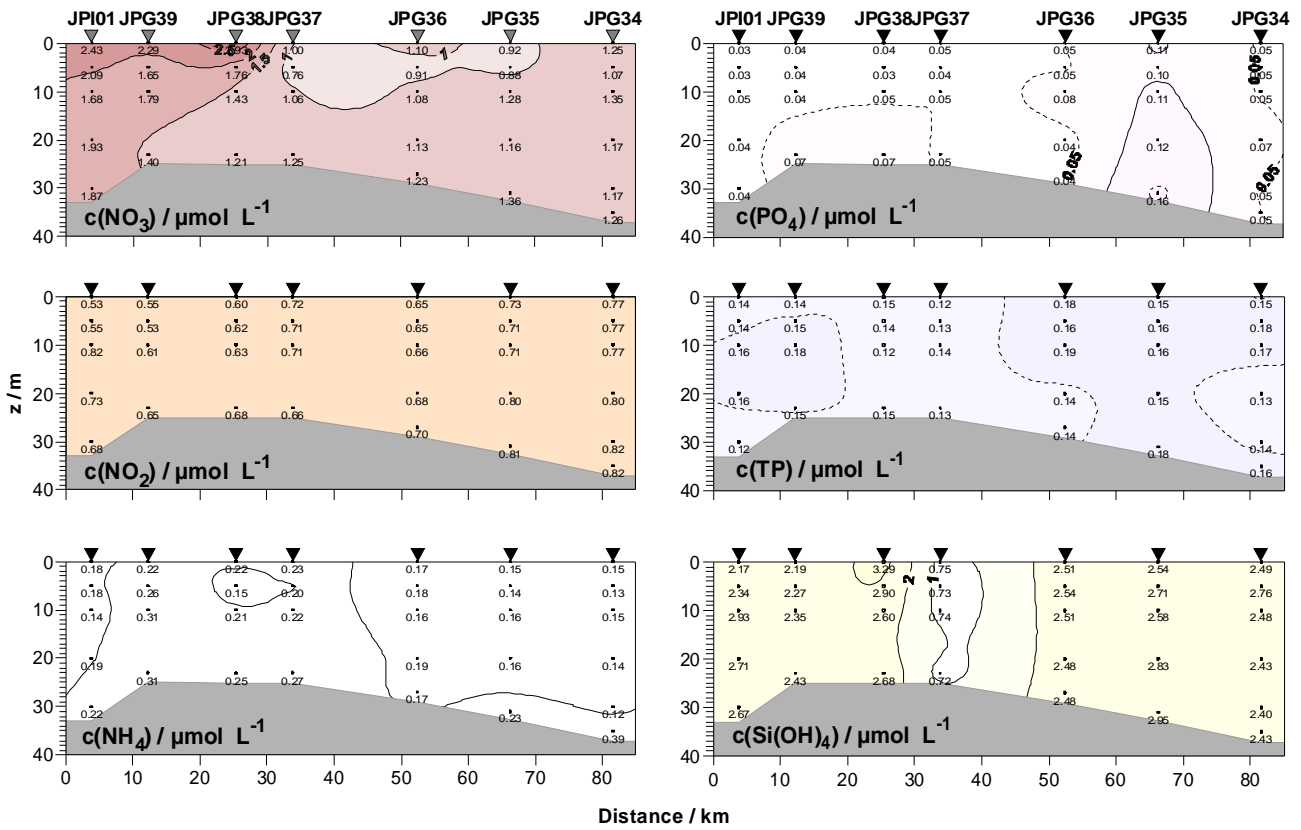


Figure 3.

Unusual phenomena

As in the previous months, mucilaginous aggregates, jellyfish, or other type of unusual phenomena were not detected. Marine snow was present in small concentrations.