

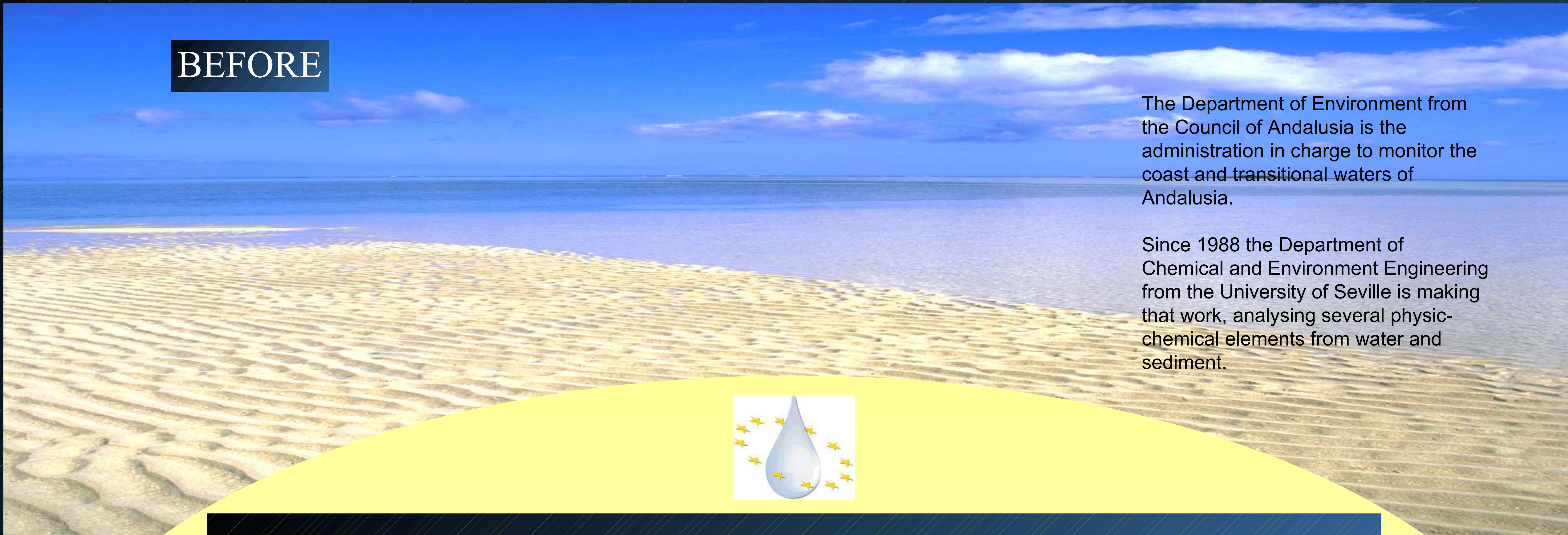


ENVIRONMENTAL MONITORING & GIS: A future goal of the Water Framework Directive. The case of Andalusia coast.

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BEFORE



The Department of Environment from the Council of Andalusia is the administration in charge to monitor the coast and transitional waters of Andalusia.

Since 1988 the Department of Chemical and Environment Engineering from the University of Seville is making that work, analysing several physico-chemical elements from water and sediment.



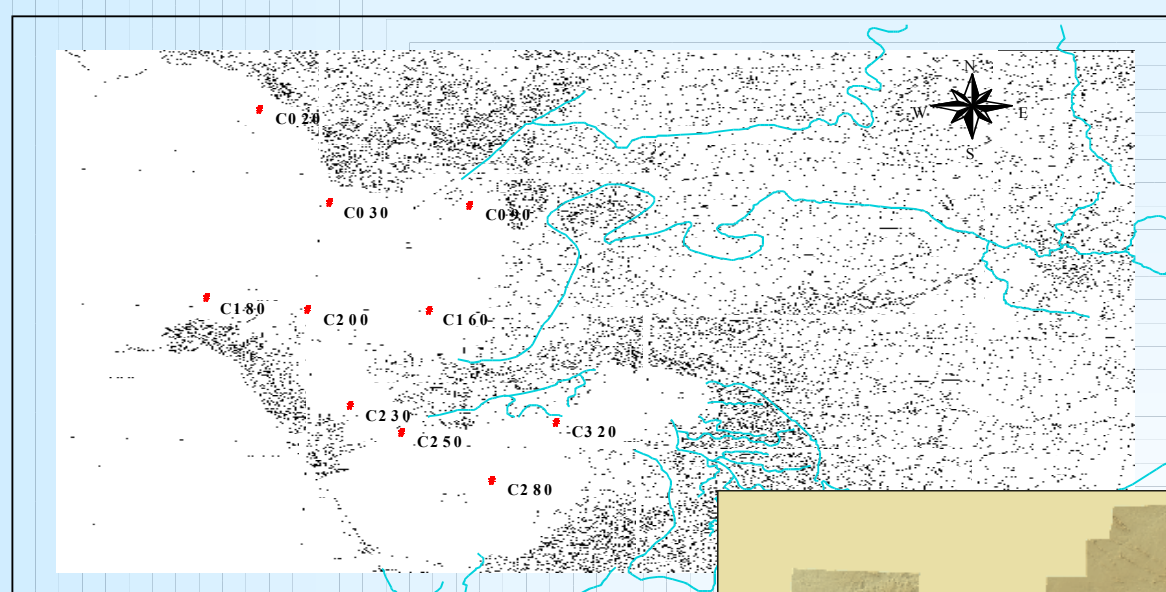
2000/60/CE: THE WATER FRAMEWORK DIRECTIVE (WFD)

The WFD constitutes the most important EU initiative in the water field for decades. All member states countries have to adapt their water management system to the requirements for assessment, monitoring and public participation.

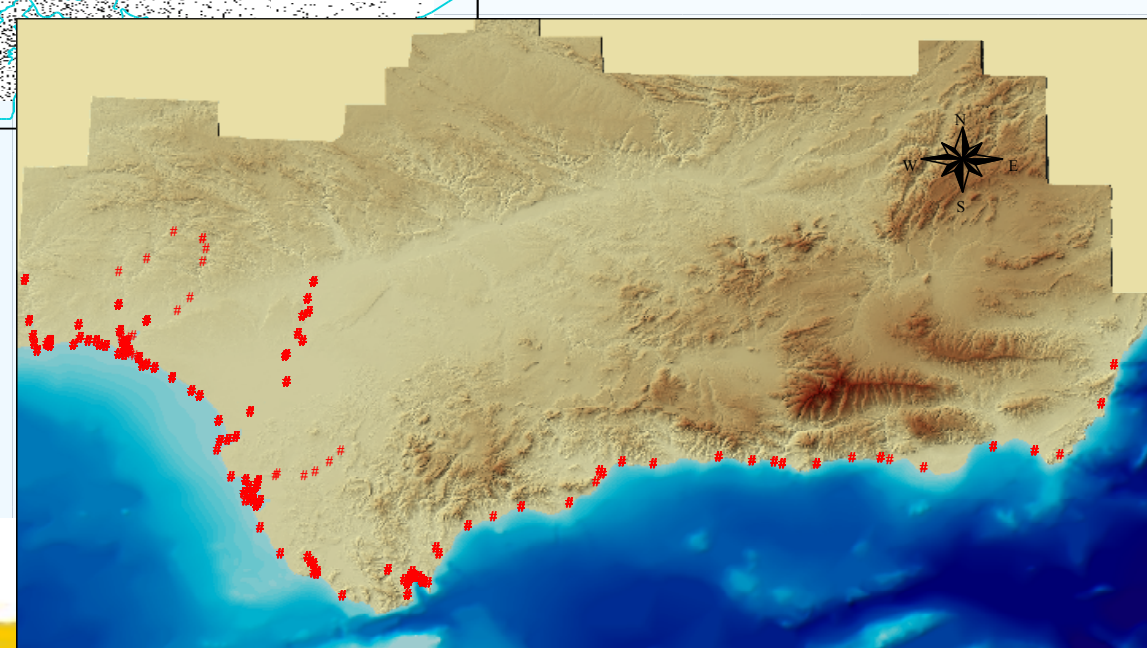
The WFD requires "good water status" for all European waters by 2015.

In respect to environmental monitoring, a multidisciplinary approach is needed. Attention needs to be paid to geography and geology, to biological quality elements, to hydromorphological quality elements and to chemical and physico-chemical elements. Every member state has to divide their water in surface water body types, establishing type-specific reference conditions for this surface water body types. Selection of monitoring points, frequency of monitoring, etc, has to be carefully chosen and extensively explained. Other aspects like identification of pressures, assessment of impact are also needed.

AFTER



Detail of the sample stations in Cadiz Bay



Sample stations of Andalusia coast



Ecoregions

For that aim, The Department of Environment from the Council of Andalusia has former a multidisciplinary working group. It is integrated by several departments of the University of Seville and one environmental enterprise.

Each one is in charge of different aspects of the WFD sharing their results between the others and making in common some of them, when a multidisciplinary advice is required.

Andalusia has been divided already in different types of water, ecological regions and actual and potential eutrofization zones. A big effort is being made in developing analytical methods for the analysis of priority substances.

The working group is preparing their result in geographic information system (GIS). According to WFD and like other member states they final has to present two maps with a colour code, the ecological status classification map (high, good, moderate, poor, bad) and the chemical classification map (good, failing to achieve good).

As it can be seen, GIS will be an important tool of EU environmental monitoring and management in the future. Lots of environmental information will be available for government's decision-making and public participation.