



Monitoring fluvial ecosystem: the Río Quequén Grande, Argentina.

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Evaluation and protection of water resources is always an important and complex research subject, as it involves socio - economic and environmental issues. It is known that human activities modify the surface and groundwater condition. Water quality in particular, is altered by concentrated or diffused contaminants, that strongly impact on freshwater ecosystems. The water quality issue is taken into account in the European legislation but it is not considered in Argentinean legislation. Aim of this on going research is to know the environmental conditions of the Río Quequén Grande watershed. The development of an integrated system of the geological, geomorphological, sedimentological, hydrological, geochemical and ecological information is required with the aim to assess the environmental variables involved. The Rio Quequén Grande watershed is located in the southeast section of the province of Buenos Aires, Argentina, and it is a typical example of Argentinean river that drain the flat pampas of the region. The watershed has a surface of about 9940 km². It is part of one of the most productive plains in the world, and is characterized by intense agricultural activity. It outflow into the Atlantic Ocean, near the city of Necochea.

Topographic and bathymetric profiles, textural bed sediments analysis and chemical water characterization of some affluents and the main course are available at present. A Geographic Information System has been implemented with all the available information and data layers.

A monitoring campaign has been defined with aim to integrate the above data with further information. At each monitoring site, field data collection is focused on characterizing stream hydraulic geometry, bed sediments, riparian vegetation, habitat parameters and freshwater quality. The last includes measurement *in situ* of electrical conductivity, temperature pH, potential redox, and dissolved oxygen. Samples of water were carried on for their analysis by physical-chemical and biological laboratory methodology.

The present work aspires to design and start a monitoring network and contributes to solve the environmental problems of the region.