

Steady and Spatio-Temporal Monitoring of Water Quality Feeding Area Southwest of Great Casablanca (Morocco)

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Abstract : In Morocco, where semi-arid climate is dominant, the supply of industrial and drink water is provided primarily by surface water. Morocco has currently 118 multi-purpose dams. If the construction of these works was a necessity to ensure in all seasons, the water essential to our country, it is impartial to control and protect the quality of running water. -Most dam reservoir used are threatened by eutrophication due to increased terrigenous and anthropogenic pollutants, coming from an over-fertilization of water by phosphorus and nitrogen nutrients and accelerated by uncontrolled development of microalgae aging. It should also be noted that the daily practices of citizens with respect to the resource, an essential component involved in almost all human activities (agriculture, agro-industries, hydropower, ...), has contributed significantly to the deterioration of water quality despite its treatment in several plants. Therefore, the treated water, provides a legacy of bad tastes and odors unacceptable to the consumer. -The present work exhibits results of water quality watershed Oum Erbia used to supply drinking water to the whole terraced area connecting the city of Khenifra to the city of Azemmour. The area south west of Great Casablanca (metropolis of the kingdom with about 4 million inhabitants) supplied 50% of its water needs by sourcing Dam Sidi Said Maachou located, last anchor point of the watershed before the spill in the Atlantic Ocean. The results were performed in a spatio-temporal scale and helped to establish a history of monitoring water quality during the 2009-2011 cycles, the study also presents the development of quality according to the seasonal rhythmicity and rainfall. It gives also an overview on the concept of watershed stewardship.

Keywords : crude surface water quality, Oum Er Rbia hydraulic basin, spatio-temporal monitoring, Great Casablanca drink water quality, Morocco

Conference Title : ICSWRM 2016 : International Conference on Sustainable Water Resources Management

Conference Location : Jeddah, Saudi Arabia

Conference Dates : January 26-27, 2016