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MONITORING PROGRAM IN RESERVOIRS OF THE TERCERO RIVER BASIN CÓRDOBA, ARGENTINA

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Lakes and reservoirs are strategic locations for the environment and the society that are exposed to environmental degradation as result of human activities. Agencies responsible for the management of these resources require the development of new technological tools to extend its scope. The objective of this project is to develop an integral program of comparative monitoring of water quality and trophic state in a system of chained reservoirs in Córdoba, Argentina. Bimonthly water samplings are going to be performed in the multipurpose reservoirs Cerro Pelado, Rio Tercero, Cassaffouth, Reolín, Piedras Moras. Physicochemical and biological variables measure in reservoirs and their tributaries will be statistically analyzed. Water quality and trophic status will be determined by conventional techniques. Preprocessed Landsat ETM+, LDCM, CBERS-4, ASTER and MODIS satellite images will be used to generate geostatistical models to determine and predict spatio-temporal water quality patterns. Maps and generated models will be related to trophic index obtaining a geographic information system (GIS) that will be used to identify and distinguish spatio-temporal changes in trophic state of reservoirs. The developed system could be used by watershed authorities as a new tool for the active management of reservoirs, allowing the development of an early warning system to monitor changes in water quality, reducing critical areas of risk to public/animal health.

BIOGRAPHY

Maria Claudia Rodriguez has completed her PhD in Rio Cuarto University, Argentina and post doctorate in Polytechnic University Madrid Spain. She has published papers, chapters of the books, book. She is a researcher, consultant in water quality management, risk, wastewater treatment.

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