



## **International Journal of ChemTech Research**

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555 Vol.10 No.15, pp 26-30, **2017** 

## Environmental Quality Estimation in the Minero River Basin (Cundinamarca, Colombia) using Artificial Neuronal Net - Levenberg Marquardt

Rodríguez Miranda Juan Pablo<sup>1</sup>\*; García Ubaque Cesar Augusto<sup>2</sup>; Sánchez Céspedes Juan Manuel<sup>3</sup>

<sup>1</sup>Sanitary and Environmental Engineer. Magister in Environmental Engineering. PhD (Candidate). Associate Professor. Universidad Distrital Francisco Jose de Caldas. Director of the AQUAFORMAT research group. PostalAddress: Carrera 5 Este No 15 - 82. Avenida Circunvalar Venado de Oro. Bogotá DC Colombia.

<sup>2</sup>Civil Engineer. Doctor of Engineering. Associate professor. Francisco Jose de Caldas District University. Director of research group GIICUD, Colombia.

<sup>3</sup>Electronic Engineer. Magister in Administration.GIIRA Research Group.Assistant teacher.Francisco Jose de Caldas DistrictUniversity,Colombia.

**Abstract**: The present paper considers the use of artificial neural network artificial intelligence technique, Levenberg Marquardt method, to emulate the evaluation done by a group of experts, for the estimation of the concurrent environmental quality evaluated in the conditions of the Minero River Basin, integrating the variables water quality (BOD, TSS, N-NO<sub>2</sub> y  $P_{total}$ ) an the precipitation in a collaborative model.

**Key Words:** Artificial Neural Network, Watershed, Environmental Quality.

Rodríguez Miranda Juan Pablo et al /International Journal of ChemTech Research, 2017,10(15): 26-30.

\*\*\*\*