Study of eutrophication phenomenon in Keddara dam

This study is a part of the researches which are aimed at determining the trophism degree, from the parameters that cause pollution of a stretch of water by eutrophication phenomenon. From some analysis, we try to understand how this pollution develops in order to apply the methods to fight this phenomenon.

In the first main line, we tried to identify the factors that cause eutrophication phenomenon, and it emerges that nutrient salts, such as phosphorus and nitrate are the main limiting factors of the accelerated production.

In the second main line, we analyzed and interpreted data for Keddara dam's stretch of water. The results showed a relatively high concentration of phosphorus and a relatively pronounced phytoplankton production.

In the third main line, were applied empirical models of Vollenweider, OECD and Canfield & Bachmann to determine:

- phosphorus concentration in the stretch of water from the total phosphorus in hydric inflows;
- the maximum concentration of chlorophyll from the average concentration of chlorophyll and clarity of water using Secchi disk.

In this element of the study, we highlight the likelihood of trophism degree and Keddara dam's stretch of water, depending on the results obtained by the models for the different parameters.

Finally, we complete the study by recommended methods in the fighting the eutrophication phenomenon.

As the water pollution by eutrophication phenomenon is accelerated by demography development and industrial growth, and given the crucial importance of Keddara dam considering that it supplies water to the Greater Algiers and its surroundings, the conclusion is that the same dam must be preserved against this phenomenon, in relation to the results obtained and which indicate a relatively pronounced trophism degree during the study period.