Physico - Chemical studies on the impact of pollution upon the River Nile branches,Egypt

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The water quality characteristics and some heavy metal ions (Fe+2, Mn+2, Zn+2, Cu+2 and Pb+2) of Rosetta and Damietta Branches over the sampling period were evaluated through four successive cruises (spring 2008 to winter 2009).The distribution of major cations and anions possessed the highest values in cold season and the lowest during the hot high flow period. Dissolved oxygen is depleted completely in the discharge point of El-Rahawy Drain, on the other hand chemical oxygen demand, biological oxygen demand, HCO3-, electrical conductivity,NH3, PO4-3,total phosphorus and total dissolved solid increase sharply at this site. The study reveled that the water on Damietta branch is better than Rosetta branch this attributed to presence of many polluted source of pollution a long the extent of -Rosetta branch especially El Rahawy drain, sobil Drain, several factories in Kafr El Zayat City. These sources were heavily loaded by domestic, industrial and agricultural wastes containing high amount of inorganic and organic constituents. The concentration of heavy metals in water samples were in the order of Fe+2> Mn+2> Pb+2>Zn+2>Cu+2. Fe+2, Mn+2 and Pb+2 Concentration exceeds the upper limits in the two branches, especially in winter.