

Water Chemistry of Chenab River Flowing In Kishtwar - Thatri Area of Jammu and Kashmir

Amita Fotedar and B K Fotedar

Department of Environmental Science, University of Jammu, Jammu , Jammu and Kashmir

ABSTRACT

Chemical analysis of water flowing in Chenab river from Kishtwar to Thatri area Jammu and Kashmir (J&K State) was carried out for Si, Ca, Mg, K, Na, Fe, Mn, Cu, Ni, Zn and Pb. The analysis revealed all cations to be present below the permissible limits except Fe and Mn, which are above safer levels and hence toxic for human consumption. As far as agricultural use of this water is concerned, no element is in higher concentration and is non-hazardous for crops. Turbidity values are higher because of higher rate of erosion in the catchment areas. The different parameters, SAR (Sodium Absorption Ratio), SSP (Sodium Soluble Percentage), RSC (Residual Sodium Carbonate), MR (Magnesium Ratio), CR (Corrosivity Ratio), EC (Electrical Conductivity) are < 6 , < 20 , < 2.5 , < 50 , < 1 , < 1 (in micromhos/cm at 25°C) respectively and as such water of Chenab river in Kishtwar-Thathri area is safe to be used for agricultural purposes. Total hardness places the waters in soft category. TDS < 500 ppm indicate waters safe both for human consumption and for irrigation. Bicarbonates, sulphates, nitrates and chlorides indicate values lower than permissible limits. pH of waters too is within safer levels. For bringing Fe and Mn down in the waters, the catchment areas need to be properly forested and vetiver grass technology used for the whole belt from Kishtwar to Thatri.

Key words : Water Chemistry of River Chenab, Polluting Elements