

Water Chemistry of Sewa River Flowing from Khadwa to Gatti, Kathua District, Jammu and Kashmir State

Abstract : Chemical analysis of water flowing in Sewa River, Kathua district, Jammu and Kashmir 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 Si, Fe, Mn, Ni and Pb, which are present 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 to be considered 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), M.R (Magnesium Ratio), CR (Corrosivity Ratio), EC (Electric conductivity) are in safer levels and as such waters of Sewa River are safe to be used for agricultural purposes. Total hardness places the waters in Soft Category. TDS less than 500 ppm indicate waters to be safe both for human consumption and agriculture. Bicarbonates, Sulphates, Nitrates and Chlorides indicate values lower than permissible limits. pH of waters too is within the permissible limits. For bringing Fe, Mn, Ni, Pb and Si down in waters, the catchment areas need to be properly forested and Vetiver Grass Technology used for the whole belt between Khadwa to Gatti villages. Lastly higher Pb values in the waters are partly due to bad sanitation existing in the whole belt along the banks of the river, which needs to be taken care of.

Key words : Water Chemistry of River Sewa, J & K, polluting elements present, Control measures.
