

Water Qualities in the Lake Abaya-Chamo Basin

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The water quality characteristics of the Lake Abaya-Chamo basin in Southern Ethiopia were investigated. The chemistry of rivers' base flow, as well as springs and groundwater is dominated by calcium-magnesium-bicarbonate ions which are characteristic of the basaltic formation of the parent rock in the region. Rivers and groundwater in lower elevations show high chloride and bicarbonate due to the evaporative influence and longer residence time. Nutrient transport by rivers shows dependence on catchment buffering capacity. Lake Chamo showed a 40% increase in salinity over the past 40 years due to decreasing river flow and drought. Groundwater pollution has been related to well protection and aquifer flow characteristics.