

Abstract

This study attempts to quantify the erosion and sediment transport in suspension in five watersheds North-West of Algeria, on an observation period of 32 years (1970/71-2001/02). The conditions that led to the erosion of each physical environment (topography, lithology, land use, climate and hydrological conditions) were taken into account.

The specific average annual sediment load during floods in 32 years of the study period ranged from 190 t.km⁻².yr⁻¹ in the sub watershed of wadi Abd downstream of the wadi Abtal station and 198 to t.km⁻².yr⁻¹ at station of Sidi Aek Djillali. At the annual level, the average specific degradation in the same sub-basins varies between 277 and 260 t.km⁻².yr⁻¹. Although the sub-basin of Wadi Abd downstream at the wadi Abtal station drains 5/6 of the total basin area of Wadi Mina, erosion is higher at the sub basin controlled by the station of Sidi Aek Djillali (1/12).

Analysis of evolution airborne concentrations based liquid flows some selected flood showed that the response rates to concentrations is steeped in three models (loop "clockwise" loop "counterclockwise" and form eight) left remarkably in winter and spring.