



Assessment of specific sediment yields in dams of Morocco from climate and catchment properties

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Empirical models are developed to estimate the amounts of sediment entering reservoirs in Morocco and this as function of climatological and morphological characteristics of the water supplying catchments.

24 dams were selected in North and Central Morocco of which data on monthly rainfall and mean annual temperature were available as well as the contributing catchment area A as morphological parameter.

The Modified Fournier Index (MFI) was used as the climate aggressivity factor and the aridity index (I_a) of De Martonne was chosen to classify the reservoirs into humid, semi-arid, arid or hyperarid regions.

For each aridity region the best multiple regression was sought for assessing the specific sediment yield as function of the combined effect of the Modified Fournier Index (MFI) and the surface area A of the catchment.