

**THE DYNAMICS OF NUTRIENTS IN A MEDITERRANEAN RIVER (PALLAS, FRANCE)
AT TWO TIME SCALES OF ANALYSIS : SEASONAL AND FLOOD EVENTS**

M.G. Tournoud (1), B. Picot (2), C. Rodier (1).

(1) Hydrosociences Montpellier (UMR UM2-CNRS-IRD 5569),

(2) DSESP, Université de Montpellier 1 (UMR CNRS-UM1 5556).

tournoud@dstu.univ-montp2.fr / fax +33-467524861

The river Pallas is a coastal river in south France, draining an area of 60 km². The watershed response to hydrometeorological events is characterized by long periods of low water levels interspersed by very brief and intense flood events. The dynamics of nutrients must be studied taking into this hydrological dynamics.

The experimental work was carried out over two years with fortnightly sampling frequency during the low water period and hourly sampling frequency during the flood events. The water samples were measured for Kjeldhal nitrogen, nitrate, nitrite and ammonium concentrations, for total phosphorus and orthophosphate concentrations and for suspended solids.

Analysis of the data show the seasonal changes in the concentrations of nutrients over the course of year are quite slight compared with the rapid variations occurring during the flood events.

This analysis of the data on the basis of the hydrological processes allow the computations of the annual fluxes of nutrients at the outlet of the watershed, and the comparison between the mean daily fluxes and the amount of nutrients exported during the flood events.