



Spatio-temporal analysis of the sediment yield and water turbidity at the right-bank tributaries of the Pripjat River within Ukraine

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Regularities of the river channel processes are closely related to the magnitude and variability of the river load, and the sediment yield, and the sediment yield is one of the principal factors of the riverbed formation. Cycling and dynamics of the sediment yield need to be taken into account when making hydrotechnical calculation, project work and investigating of the riverbed processes. The amount of the river loads, which find their way into the sub-basin of the Pripjat River each year, depends more on the meteorological conditions of the year. That's why sediment yield and water turbidity are non-permanent from year to year. Since the rivers of the investigated region belong to different hydrological zones and regions, characterized by the uniqueness of water regime, which is caused by the peculiarities of hydrographic and orographic territory indexes, the content of the sediment yield and the amount are also not the same.

The water turbidity at the right-bank tributaries of the Pripjat River, which flow within the Ukrainian Polesie, is not large. The water turbidity of the Turia, Ubort River and Vyzhivka is especially small. In certain years the concentration of sediment yield can be bigger. Much more suspended particles are observed in the Styr, Sluch, and Horyn, the upper catchments of which are strongly cut and partially covered with easily washable sediments. The biggest annual average water turbidity was recorded on the Ikva River. Within the accumulative lowland in the downstream river sections, the right-bank tributaries of the Pripjat River carry cleaner water than in the upstream section since the part of sediment load of the river is build up on the riverbeds and creeks. It occurs as a result of the slope and speed reducing. However, on some right-bank rivers of Pripjat, which flow down from small local terrain uplands with cover of loamy forest and sandy sediments, water turbidity can be quite large.

The estimation of the spatio-temporal dynamics of the sediment load is accomplished by difference integral curves taking into account an average annual water discharge, maximum annual water discharge and also average annual sediment discharge and the biggest annual sediment discharge during the whole period of investigation of current hydrological posts for the right-bank tributaries of the Pripjat River within Ukraine. The analysis of synchronicity and equiphase condition of these oscillations had made it possible to identify general noticeable opposite orientation of the set of curves to the oscillation curve of general sediment load. Constructed graphs show interdependence of maximum annual water discharge, average annual

sediment discharge, maximum annual sediment discharge because the sediment discharge has to react to hydraulic fluctuation in the flow.