Changeability of phosphorus concentration in upper part of Zagozdzonka river catchment, Poland

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One of the most important sources of phosphorus in the agricultural areas is diffuse sources. The Zagożdżonka river catchment is a lowland catchment located in a central Poland about 100km south from Warsaw – capital of Poland. Typical for this region agricultural catchment, were 70% of area are under cultivation is investigated since 1991 (three investigation periods 1991-1995, 1999-2000, 2008) to monitored the phosphorus transport in river. The results of dissolved phosphorus and total phosphorus concentration during three research period in upper part of Zagożdżonka river will be presented. The results concern two gauging stations: Plachty Stare (area of the catchment 82,4 km²) and Czarna gauge (1,9 km upstream of Plachty Stare gauge, subcatchment of 23,4 km²). The maximum observed concentration of dissolved phosphorus reached 1,95 mgPO₄/l for Czarna gauge and 1,22 mgPO₄/l for Plachty Stare gauge. Total phosphorus concentration reach 5,78 mgP/l for Czarna gauge and 4,43 mgP/l for Plachty Stare. The decrease of concentration between gauging stations and research periods has been noticed.