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Application of the AISA hyperspectral image for verification of sediment transport results obtained from CCHE2D hydrodynamic model - Zegrze Reservoir case study, Poland

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ABSTRACT

Zegrze Reservoir was built on the Narew River and its tributary Bug River in the period 1957-1963. The hydraulic conditions at the Bug river mouth had been studied with the use of hydrodynamic two dimensional model CCHE2D. Distribution of the sediment transport was recorded by the AISA hyperspectral scanner and shown as a remote sensing index of Normalized Difference Vegetation Index - NDVI705 and Total Suspended Solids – TSS. Results of suspended sediments concentration from the CCHE2D model had been converted to a graphical (vector) form and compared with a remote sensing indexes. Relationship between remote sensing indexes and CCHE2D model simulation results had been evaluated using statistical method of Spearman correlation.