
CHANGES IN LAND USE DUE TO THE CONSTRUCTION OF WATER RESERVOIRS

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This paper deals impacts of building of water reservoirs on land use changes in floodplains and adjacent areas of three reservoirs in southern Moravia – Nové Mlýny, Vranov, Brno. To monitor the development of land use the old topographic maps were used: second Austrian military mapping 1 : 28 800 (1836–1841), third Austrian military mapping 1 : 25 000 (1876) Czechoslovak revised maps 1 : 25 000 (1933–1945), mapping the Protectorate of Bohemia and Moravia (Messtischblätter) 1 : 25 000 (1943), Czechoslovak military topographic mapping 1 : 25 000 (1953–1955), military topographic mapping 1 : 25 000 of Czechoslovakia (1990–1991), basic maps of the Czech Republic 1 : 10 000 (2014). Nine basic categories of land use were monitored: arable land, permanent grassland, garden and orchard, vineyards and hop gardens, forest, water area, built-up area, recreational area, other area. Land use changed not only in their own floodplains, but also in their wider hinterland (up to 1 km). For three reservoirs and their adjoining areas a significant reduction of permanent grassland and arable land was observed. In the case of Nové Mlýny there was also detected a considerable decrease in forest areas. After construction of dams Vranov and Brno recreation areas were significantly expanded on their close hinterlands. The assessment of the long-term development of land use and land use changes in the background of the water reservoirs and in the floodplain area was further evaluated in the light of the vulnerability of the land to water erosion on agricultural land before and after the construction of system of water reservoirs of Nové Mlýny.