THE DYNAMICS OF GROUND WATERS AND HYDROGENIC SOIL SUBSIDENCE IN THE BYDGOSZCZ CANAL VALLEY

Key words: ground water, land depression, meadow soil subsidence, plant communities

S u m m a r y

In meadows of the Agricultural Experimental Station at Minikowo located in the valley of the picturesque Bydgoszcz Canal, currently within Natura 2000 area, in PL02 Bydgoszcz region, the absolute elevations were measured in 2006 and compared with the elevations recorded in 1916 and 1963. The dynamic of ground water level across the valley was determined in the years 2006–2007. Field measurements showed that between 1916 and 2006 the elevation of the valley above sea level decreased from a few dozen to over 200 cm. The lowest reduction in the height was demonstrated on the valley margin and it increased to the main so-called Prussian Ditch. At present a considerable part of the valley about 940 m wide is in the depression in relation to the water level of the Bydgoszcz Canal. The groundwater table measured in 15 drains located across the valley depended most on the rainfall during the vegetation period and on the distance from the Prussian Ditch. Its dependence on the distance from seepage waters was, however, weak.

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