

This diploma thesis deals with morphometric analysis and hydrological regime of Skalnaté pleso lake and Hincové Oká lakes, especially the lake level fluctuation, during the period 2011 - 2014. One of the tasks was the bathymetric mapping of observed locations. For Hincové Oká lakes was it the first mapping of bathymetry at all. The hydrological regime and lake level fluctuation regime of observed locations shows interesting differences from the other Tatra lakes whose hydrological regime is controlled by precipitation amounts. The annual culmination of Hincové Oká lakes (the largest lake) is shifted into the spring caused by melting snowpack. When there is no rainfall for a couple of days Skalnaté pleso lake often dries up, even during summer months, when levels of most Tatra lakes reach their maximum values. However summer drying is shortterm. Lake level fluctuation regime is very dynamic. After a strong rainfall event its level rises very steeply, up to 0,14 m per hour.