

The Influence of Conservation Measures, Limiting Soil Degradation, on the Quality of Surface Water Resources

Authors : V. Sobotková, B. Šarapatka, M. Dumbrovský, J. Uhrová, M. Bednář

Abstract : The paper deals with the influence of implemented conservation measures on the quality of surface water resources. Recently, a new process of complex land consolidation in the Czech Republic has provided a unique opportunity to improve the quality of the environment and sustainability of crop production by means of better soil and water conservation. The most important degradation factor in our study area in the Hubenov drinking water reservoir catchment basin was water erosion together with loss of organic matter. Hubenov Reservoir water resources were monitored for twenty years (1990–2010) to collect water quality data for nitrate nitrogen (N-NO₃-), total P, and undissolved substances. Results obtained from measurements taken before and after land consolidation indicated a decrease in the linear trend of N-NO₃- and total P concentrations, this was achieved through implementation of conservation measures limiting soil degradation in the Hubenov reservoir catchment area.

Keywords : complex land consolidation, degradation, land use, soil and water conservation, surface water resources

Conference Title : ICWRRED 2014 : International Conference on Water Resources and Renewable Energy Development

Conference Location : Osaka, Japan

Conference Dates : October 12-13, 2014