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## Soil cover development in the coastal zones of disappearing lakes

Michał Słowiński<sup>1</sup>, Bogusława Kruczkowska<sup>2</sup>, Jerzy Jonczak<sup>2</sup>, Sandra Słowińska<sup>3</sup>, Arkadiusz Bartczak<sup>4</sup>, Mateusz Kramkowski<sup>4</sup>, Łukasz Uzarowicz<sup>2</sup>, and Sebastian Tyszkowski<sup>4</sup>

<sup>1</sup>Institute of Geography PAS, Past Landscapes Dynamic Lab, Warsaw, Poland (michal.slowinski@geopan.torun.pl)

<sup>2</sup>Warsaw University of Life Sciences, Department of Soil Environment Sciences, Warsaw, Poland

<sup>3</sup>Institute of Geography PAS, Climate Impacts Laboratory, Warsaw, Poland

<sup>4</sup>Institute of Geography PAS, Department of Environmental Resources and Geohazards, Torun, Poland

An increased rate of shallow lakes overgrowth is a commonly observed process in the European lowlands. The transition period from the lake to the peatland state is the most productive phase in the whole evolutionary history of a lake. In this study, we analyze the influence of environmental changes in the Lake Rakutowskie wetlands complex (central Poland) and water level fluctuations on soil cover modifications in the immediate vicinity of the lake. Multidisciplinary research was conducted in a transect consisting of eight soil profiles. The transformation of soil cover was reconstructed on the basis of detailed studies of soil characteristics, water level fluctuations, radiocarbon dating, etc. Significant acceleration of the lake decline rate is associated not only with natural processes but predominantly with anthropic pressure. The obtained C<sup>14</sup> dates indicate a very rapid disappearance of the lake. Taking into account the causative factors, the lake will most likely disappear in the next hundreds of years. The contemporary surface of Lake Rakutowskie is several times smaller than in the past, and this is an effect of the influence of natural and anthropogenic factors. Former fibric materials have been transformed into sapric and hemic ones as an effect of soil exsiccation. The next (and last) step in the degradation of organic soils is muck formation. Along with the progressive dehydration and mineralization of organic soils, its physical and chemical properties have deteriorated, which is visible e.g. in soil structure and elemental content, especially TOC and TN. With the disappearance of the lake, larger adjacent areas are subjected to gradual degradation, leading directly to plant cover changes and irreparable landscape modifications.