

## SUMMARY

Anthropogenic acidification and the subsequent recovery of surface waters has been a well-described and long-monitored process over the past century, especially in remote mountain areas with acidic bedrock and poorly developed soils sensitive to acidification. Therefore, The High Tatra Mts. were the most heavily affected European sites, and acidification indirectly affected the species composition of littoral and profundal chironomids. The main driver of the shift in the chironomid species composition was the change in nutrient availability and its flux from the catchment due to the precipitation of phosphorus with Al-complexes (oligotrophication of acidified lakes) or, conversely, the release of phosphorus from these bonds (eutrophication of strongly acidified lakes) depending on the pH of the water and soils in the catchment. In the context of biological recovery in 2011, the expected increase in total abundance in acidified lakes (that already chemically met the criteria of non-acidified lakes) was not confirmed since total abundance declined relative to the late 1980s. However, the expected inhabitation by new taxa has been observed. Strongly acidified lakes reacted differently during the recovery process: the expected decrease in total abundance was confirmed, but trends in species composition and taxa numbers varied widely among lakes in this category. Surprisingly, this group of lakes showed more taxonomically and numerically balanced communities during recovery.