

Long-term changes in the water quality and fish community of a large boreal lake affected by rising water temperatures and nutrient-rich sewage discharges – with special emphasis on the European perch



In this study, we report the changes in the water quality and fish community of a large boreal lake (Lake Pyhäselkä, Finland) in 1975–2005, when the lake was affected first by industrial and municipal sewage discharge and then by rising water temperatures. In the 1980s, the lake's trophic state proceeded from oligotrophic to mesotrophic, which favoured cyprinids. The increased cyprinid density strengthened the competition pressure on perch (*Perca fluviatilis*) reducing the growth rates of young perch. The lake's trophic state shifted from mesotrophic back to oligotrophic in the 1990s as a result of effective treatment of sewage waters. The water temperature in Lake Pyhäselkä rose from the beginning to the end of the monitoring period. The higher temperature favoured perch. In future, the warming may benefit pikeperch (*Sander lucioperca*) even more than perch. This will probably affect the perch population, as pikeperch prey effectively on perch.

Auteurs du document : A. Voutilainen, H. Huuskonen

Obtenir le document : EDP Sciences

Mots clés : eutrophication, fish, freshwater lake, global warming, pulp mill effluent, eutrophication, poisson, lac, réchauffement global, effluent de papeterie

Thème (issu du Text Mining) : FAUNE

Date : 2010-08-04

Format : text/xml

Source : <https://doi.org/10.1051/kmae/2010017>

Langue : Anglais

Télécharger les documents : <https://www.kmae-journal.org/10.1051/kmae/2010017/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/long-term-changes-in-the-water-quality-and-fish-community-of-a-large-boreal-lake-affected-by-rising-0>

Evaluer cette notice: