

# The WWQA Ecosystems Workstream: Lake Restoration in Practice

## Emerging pollutants in aquatic ecosystems

### Problem statement and objective of the study

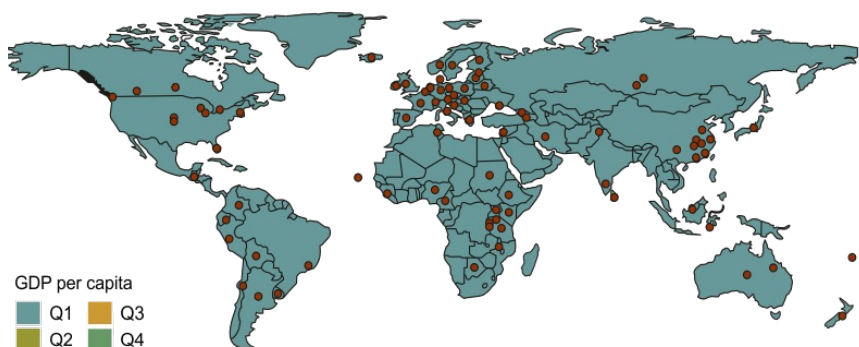
Lakes and reservoirs play a critical role for domestic supply and other ecosystem services. A number of SDGs can only be achieved through provision of healthy waters. Multiple stressors impact water quality and ecosystem health of lakes and reservoirs. This work aimed to evaluate the view of practitioners in identifying the priority pressures and policy response for lake and reservoir restoration. While heavy metal and, more pervasive, nutrient enrichment remain widespread water quality problems for lakes and reservoirs, these pollutants often interact with other pollutants and pressures, including a range of 'emerging pollutants'. We conducted a Global Survey to gauge perception of key issues needed for successful restoration.

### Results of the online Global Survey on Lake Restoration

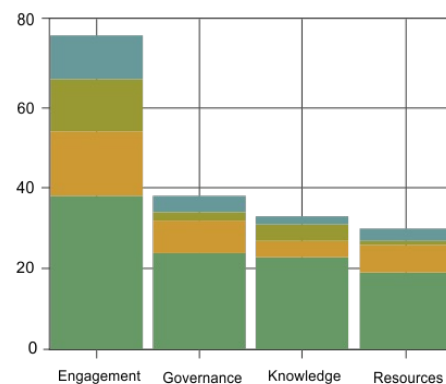
The Global Survey collected the experiences of lake restoration experts around the world, receiving a total of 179 responses from 30 nations on six continents. It offered details on present lake and reservoir management strategies, difficulties, and pressures, and the gather opinions on solutions to improve water quality and ecosystem health.

Fertiliser emissions are perceived as the main global pressure on lakes and reservoirs, but hydrological changes, invasive species, and the effects of climate change were also highlighted. Management responses to novel or emerging pressures were more visible in more developed economies, with improved monitoring capability of high importance in less developed ones. This illustrates that awareness and attention to emerging pollutants is a major gap in many countries. The most crucial factors for restoration success were strong governance, stakeholder involvement, knowledge, and resources. Most frequent causes of failure were inadequate support for cross-sector collaboration, a lack of awareness of the issues, and weak governance.

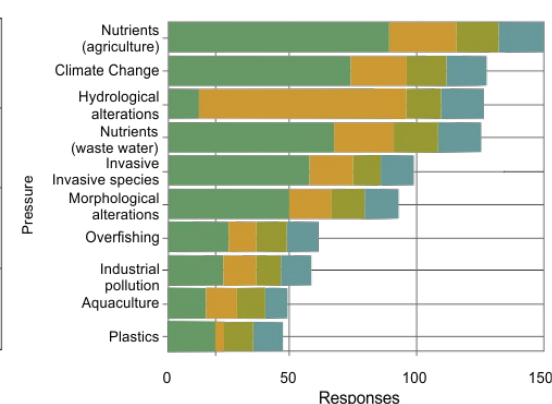
Global Survey of Lake Restoration Practitioners



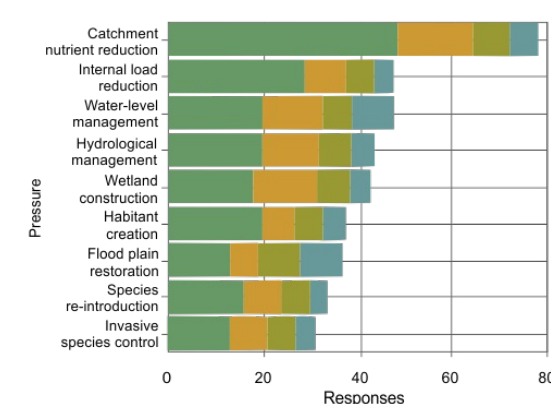
Key factors for restoration success



Ranking of pressures



Key approaches to restoration



### Conclusions and policy implications

A critical need for improved capacity and awareness of emerging pollutants in many lakes and reservoirs cannot be tackled while basic monitoring and policy engagement remain so limited. The SDGs provide impetus for improved lake and reservoir management, but current ambitions remain woefully inadequate, even before accounting for climate change. A major upscaling of ambition, political commitment and global finance is now paramount to achieve sustainable lake and reservoir, and other waterbody, management.