Berichte zur Gewässergüte

Assessment of selected substances from the WFD-Monitoring in fish in the waters of Mecklenburg-Vorpommern

Monitoring 2013-2017

Summary in English

The State Agency of Environment, Nature Conservation and Geology Mecklenburg-Vorpommern (LUNG M-V) has successfully established a monitoring programme of pollutants in fish from rivers, lakes and the coastal waters. First results from all stations in the programme are now available for the period 2013 to 2017:

1. Almost all monitoring stations show an exceedance of the environmental quality standards for mercury and the polybrominated diphenyl ethers (PBDE) in fish.
2. No concentrations above the limit of quantification were detected for heptachlor and heptachlor epoxide. However, the limit of quantification was still above the environmental quality standard, thus no assessment of potential exceedances was carried out. The quality of the analytical method is currently insufficient.
3. All other environmental quality standards defined for fish have been fulfilled:
   - Hexachlorobenzene (HCB)
   - Hexachlorobutadiene (HCBD)
   - Dicofol
   - Hexabromocyclododecane (HBCDD)
   - Perfluorooctanesulfonic acid (PFOS) and its derivatives
   - Polychlorinated dibenzo-p-dioxins (dioxins, PCDDs), Polychlorinated dibenzofurans (furans, PCDFs) and dioxin-like polychlorinated biphenyls (dl-PCBs)
4. Sampling of fish in synergy with the WFD monitoring programme for the ecological status component fish and the cooperation with local fishermen were successful.
5. The pre-defined size-classes for the sampled fish are practical and helpful. The mean age of the fish was for most samples within the recommendation.
6. Achieving sufficient sample material from fish livers was challenging. For several samples there was insufficient material to carry out the whole analytical spectrum.
7. With the exception of mercury, concentrations of pollutants were higher in the liver samples than in the fish filet, evidence for their tendency to accumulate in the liver. Measurements in liver samples can thus act as an early warning for pollutants that are too low in filet samples, but exhibit an increasing trend.

Perch (Perca fluviatilis), one of the preferred species for pollutant monitoring (© Dennis Gräwe)