

## **Blnd15: Total fish abundance (incl. abundance of commercially-relevant fish)**

**Quality element:** Fish fauna

**Water category and water body types:** Rivers, lakes, transitional waters; all types

**Selection rationale:** Simple and robust indicator responding to different pressures, relevant for assessing service provision (fish yield)

**Indicator type (DPSIR):** State, Impact

**Description:** Total fish abundance represents an integrative indicator sensitive to multiple pressures. The total abundance measured as catch per unit effort (CPUE), reacts to low dissolved oxygen concentrations and eutrophication effects (e.g. nutrient enrichment, algal blooms). Water clarity and macrophyte habitat can impact on CPUE, as well as wider catchment factors that affect fish abundance, such as the amount of non-natural catchment land use as well as habitat quality, barriers and water abstraction impacts in spawning streams. The metric is also considered a simple and robust indicator for describing the impacts of fishing intensity in aquatic ecosystems. Coupled with the information on fish species relevant for leisure or commercial fishing, the indicator allows for quantifying the service supply.

**Spatio-temporal scale:** Sampling site, single survey

**Unit:** Catch per unit effort expressed as fish number/weight caught per unit effort fishing (hours)

**Standardisation:** To be standardised against type-specific reference conditions

**Data requirements:** Field data

**Other:** none

### **MARS spatial scale**

Experimental\*, river-basin and European scale

\* selected river experiments

### **Reference**

Argillier, C., Caussé, S., Gevrey, M., Pédrón, S., De Bortoli, J., Brucet, S., Emmrich, M., Jeppesen, E., Lauridsen, T., Mehner, T., Olin, M., Rask, M., Volta, P., Winfield, I.J., Kelly, F., Krause, T., Palm, A., Holmgren, K. (2013). Development of a fish-based index to assess the eutrophication status of European lakes. *Hydrobiologia*, 704(1), 193–211.