

## **Blnd12: Average Score per Taxon (ASPT)**

**Quality element:** Benthic fauna

**Water category and water body types:** Rivers, lakes, transitional waters<sup>3</sup>; all types

**Selection rationale:** All-round indicator of general pressure

**Indicator type (DPSIR):** State

**Description:** The Average Score per Taxon (ASPT) is a water quality index rating benthic invertebrate families according to their sensitivity to dissolved oxygen depletion. The ASPT was primarily developed to detect water pollution caused by organic substances. Thus, the ASPT is also sensitive to the effects of eutrophication (decay of excess plant material causing oxygen depletion). Other pressures leading to changes in oxygen availability such as impoundment (decrease of flow velocity) or siltation generate changes in ASPT. Habitat degradation and toxic stress often impact on invertebrate families that are also most sensitive to oxygen depletion (e.g. mayflies, stoneflies, caddisflies).

The ASPT is a robust indicator of widespread applicability across Europe (and worldwide), mainly for rivers and also for lakes. It was extensively used in the intercalibration exercise as a common metric.

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

**Unit:** Average score per taxon

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

**Data requirements:** Field data

**Other:** Calculated by the ASTERICS software  
(<http://www.fliessgewaesserbewertung.de/download/berechnung/>)

### **MARS spatial scale**

Experimental\*, river-basin and European scale

\* all river experiments

### **References**

Armitage, P.D., D. Moss, J.F. Wright & M.T. Furse, 1983. The performance of a new biological water quality score system based on macroinvertebrates over a wide range of unpolluted running-waters. *Water Research* 17: 333-347.

Šidagytė, E., Višinskienė, G., & Arbačiauskas, K. (2013). Macroinvertebrate metrics and their integration for assessing the ecological status and biocontamination of Lithuanian lakes. *Limnologica - Ecology and Management of Inland Waters*, 43(4), 308–318.

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<sup>3</sup> **Alternative indicator for transitional waters:** Ratio of sensitive to opportunistic species.