International Symposium on Assessing the Ecological Status of Rivers, Lakes and Transitional Waters, Hull, UK 11-15 July 2005

ASSESSING THE IMPACT OF SORTING AND IDENTIFICATION ERRORS OF MACROINVERTEBRATE SAMPLES

Andrea Sundermann¹, Peter Haase¹, Ralph Clarke², Steffen Pauls¹, Susanne Lohse¹, Rick Gunn², Ferdinand Sporka³

- ¹ Senckenbergische Naturforschende Gesellschaft, Lochmuehle 2, D-63599 Biebergemünd, Germany
- ² Centre for Ecology & Hydrology, Winfrith Technology Centre, Winfrith Newburgh, Dorchester, Dorset DT2 8ZD, UK
- ^{3.} Slovak Academy of Sciences, Institute of Zoology, Department of Hydrobiology, Dubravska cesta 9, 84206 Bratislava, Slovakia

This study assesses the impact of sorting and identification errors of macroinvertebrate samples collected and analysed using different protocols (e.g. AQEM/STAR, RIVPACS). The study bases on the auditing scheme implemented in the STAR project. Data from 8 participating countries are analysed at different taxonomic levels in regard to impact of sorting and identification errors on metrics commonly implemented in stream assessment. 55 samples following the STAR/AQEM protocol and 31 RIVPACS samples were analysed and then sent to a different project partner for auditing both sorting efficiency and repeated identification. The results of the errors of sorting audit are given in average number of gains and losses. The revised taxa lists derived by the identification auditors were compared with the primary analysts results. Comparisons are based on the differences in commonly used metrics and samples composition. The results stress the importance of implementing quality control mechanisms in macroinvertebrate assessment schemes.