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Macroinvertebrate Assemblages in the Glinščica Stream – Urban Stream Case Study

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Macroinvertebrate communities are widely used to assess the biological integrity of running waters. They respond to organic pollution as well as habitat changes. In our study on Glinščica stream, impact of organic pollution was excluded as all five sampling sites were assessed as moderately polluted. On the other hand individual sites differ in morphological characteristics of banks and channel. The modifications of those features as well as longitudinal changes in riparian and channel vegetation progress downstream. However according to DCA and Bray-Curtis cluster analysis composition of the macroinvertebrate assemblages does not follow this pattern. The number of taxa appears to be higher in heterogeneous environments, whereas in channelized streams, where habitat diversity and niche potential are reduced, aggregation of very adapted species is favoured. In our case, the number of individuals increased downstream and at the most physical altered site (5) the highest number of specimens was found. However, only two species dominated: *Caenis luctuosa* and *Gammarus fossarum*. This also reflects in Shannon-Wiener diversity index, where great decrease in diversity was observed. At regulated sites 3 and 4 the highest number of taxa and Shannon-Wiener diversity were recorded, but taxa were mainly very common. This was confirmed with EPT and IBMWP scores, which show, that less modified sites support a slightly higher quality macroinvertebrate fauna.