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SPOR B - VANDPLANINDSATSEN

### Udenlandske erfaringer – eksempler på vandløbsarbejdet i Tyskland River Restoration in the North German Lowland – Year 13 of the WFD<sup>1</sup>

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Brooks and small rivers of the North German Lowland, caused by their geochemical background by the glacial ages, within the morane landscape once have been gravel streams. Their groundwater-fed origin and the high habitat variety, accompanying deciduous wood with roots and a high amount of dead wood giving three dimensional structures within the water column characterized these waters as productive summercool salmonid stretches – also important as spawning places for migrators from the rivers, e.g. sea trout, river and sea lamprey.

Heavy construction work, hard maintenance over time and increased excessive land use during the last decades turned these once thriving biotopes into sluggish canals with moving sand. Engaged people tried to restore these waters, mostly against heavy pressure of land users and authorities. International knowledge of how to regain the vital functions, however, grew steadily.

With the Water Framework Directive, activists hoped that the chance has come to restore habitats in a large scale. Today, in year 13 of the WFD, however, we have to admit that mostly formal work has been done, in most places abandoning structured forthcoming of restoration of the 1980ies and 90ies. To cite a specialist “There has never been a time of such a lot of talking, with a so small amount of setting improvements into practice.” Thus, Germany, as many other EU-countries will not be able to reach the WFD-goal 2015 – if they will do until 2021 - - - 2027.

“Active sites”, however, continued to hold on. Long-time experience, often gained in step-by-step activities, helps to take the most effective way, avoiding mistakes. Here, one doesn't mind too much about the politically-induced shifting of watercourses from “natural” to “heavily modified” – for most of the watercourses stretches in the North German Lowland, with the agro-industrial Federal State of Niedersachsen holding the front position. Pragmatic view on what has to be done says “in hmwb waterbodies the rule is: You have to do what you can do” – and not “ok, hmwb, I am free – doing nothing”.

Examples are given for rural and urban waters where especially the salmonid reaches have been restored by in-stream restoration, using gravel (fig. 1), boulders and wood (fig. 2). Trout, brook and river lamprey, stone loach and accompanying characteristic invertebrates reveal the positive results. Adopt-a-brook groups and engaged individuals co-operate with water authorities, land owners and maintenance organisations to further improve the situation.

To stabilize the results on catchment level and in the time of climate change develop the necessary adaptations, however, strong efforts have to be taken within the total system. Stream corridors with deciduous trees as buffer to avoid the entrance of erosive materials, pesticides and nutrients as

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well as re-gaining the characteristics of the summercool stream are the inevitable basis. Altering present day subsidies for agriculture, adaptation of river maintenance to the goals and consequent action of water authorities are needed. – In addition, at least since the International Year of Forests 2011 and within the United Nations` Decade on Biodiversity 2011-2020, one has to remind the important role of river accompanying woods as a means of climate adaptation and biodiversity.



Figure 1: In-stream structure – “microgroin” (Lenkbuhne) inducing current and morphological variation by gravel and boulders.



Figure 2: Sticks and stakes – inexpensive tool to structure riverbed and shore, preventing erosion, where trees are lacking.



Two examples in addition to the publication for semi-shaded streams on their way to more nature.

