

Modeling the impact of hydromorphological alterations by dams and channelization on fish habitat.

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As a consequence of introduction of Water Framework Directive it has been discovered that hydromorphological pressures are one of the main causes of impact on aquatic fauna. However, the impact may vary depending on river type and fish community. To test this hypothesis, we modelled alterations of fish habitat on 6 river sections across Poland using MesoHABSIM approach. The original models of habitat for Target Fish Community were based on repeated field surveys in reference river sections, classified into four fish-ecological classes. Introducing to the models three hydromorphological modification types (damming, channelization and dredging) changed persistent habitat availability for the fish community. The change was measured with Habitat Stress Days Alteration index. Overall the modifications caused increase of habitat stress days, but impact varied depending on season, hydromorphologic river type and expected fish community.