

Adapting scale use for successful implementation of Cyclic Floodplain Rejuvenation in the Netherlands

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Abstract

The adaptive management concept of Cyclic Floodplain Rejuvenation (CFR) has been implemented at the operational level in Dutch river management. The floodplains of Beuningen, situated to the west of Nijmegen functioned as a pilot study. Current river management formed the reference framework within which the CFR approach. By comparing and contrasting processes of importance within different floodplain management disciplines on a bio-geomorphological scale classification, differences in the scale preferences of involved actors were identified and understood. The tool developed to distinguish these different preferences in scales is the Integrated Scale Hierarchy. We concluded that the ability of river managers and conservationists to scale up for the purpose of CFR was a necessary condition for the success of operational CFR. The constraining arguments for focusing at the current floodplain level of management as opposed to the river reach level more suitable for the implementation of CFR measures, were then subjected to validation. We found the concerns for navigational safety and increased managerial complexity to be valid whereas the arguments relating to hydraulic effectiveness and conservation appeared to be ill-founded. Consequently, scaling up to the reach level remains a challenge for managers of the restrained lowland rivers of The Netherlands.