

Seminar @IWG-WB

Dr. Valentin Chardon

Can gravel augmentations and bank re-erosion may rehabilitate geomorphological functionality of large regulated rivers? The case of the Old Rhine River downstream of the Kembs dams (France/Germany)

29. July 2022

11:30-13:00 Uhr

KIT, Geb. 10.81, Room 305

or online:

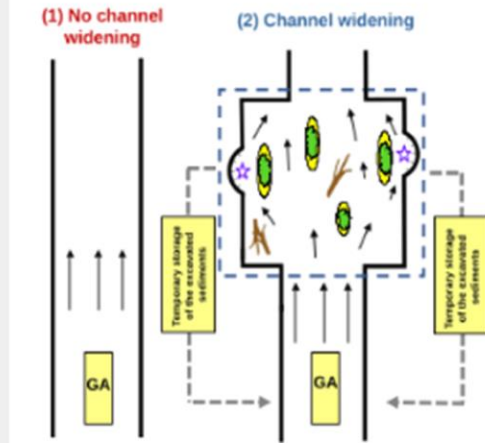
[https://kit-
lecture.zoom.us/j/68909342401](https://kit-lecture.zoom.us/j/68909342401)



Can gravel augmentations and bank re-erosion may rehabilitate geomorphological functionality of large regulated rivers?

Abstract

Over the last two centuries, most European rivers have been strongly regulated, inducing notable sediment starvation and flow reduction. This regulation altered aquatic and riverine habitats, biocenosis and ecosystem services. Gravel augmentation and bank re-erosion are increasingly promoted in large rivers to reactivate bedload transport, rejuvenate bed sediments and diversify fluvial habitats. However, practical questions remain in terms of efficiency and sustainability of these operations. This talk will present unprecedented feedback from three gravel augmentations and one controlled bank re-erosion conducted along the Rhine River downstream the dam of Kembs (France/Germany). The restored sites were monitored over periods of 1 to 7 years. From this study, operational recommendations and scenarios were proposed to improve the sedimentary management of large regulated rivers.



Biography

Currently, Valentin Chardon is a post-doctoral researcher in physical geography, especially in fluvial geomorphology, at the Centre National de la Recherche Scientifique (CNRS – LIVE UMR 7362). A large part of his research focus on rivers rehabilitation of active channel and floodplain areas of small to large rivers. His work is mainly based on innovative field monitoring, modeling and remote sensing methods to assess the effects of rehabilitation actions on alluvial habitats of altered reaches. Valentin also studies the long-term river trajectories of regulated rivers from planimetric historical sources to define management guidelines. More recently, he started to study the effects of global climate change on river water temperature.

