

Dealing with sediments in river morphology restoration projects

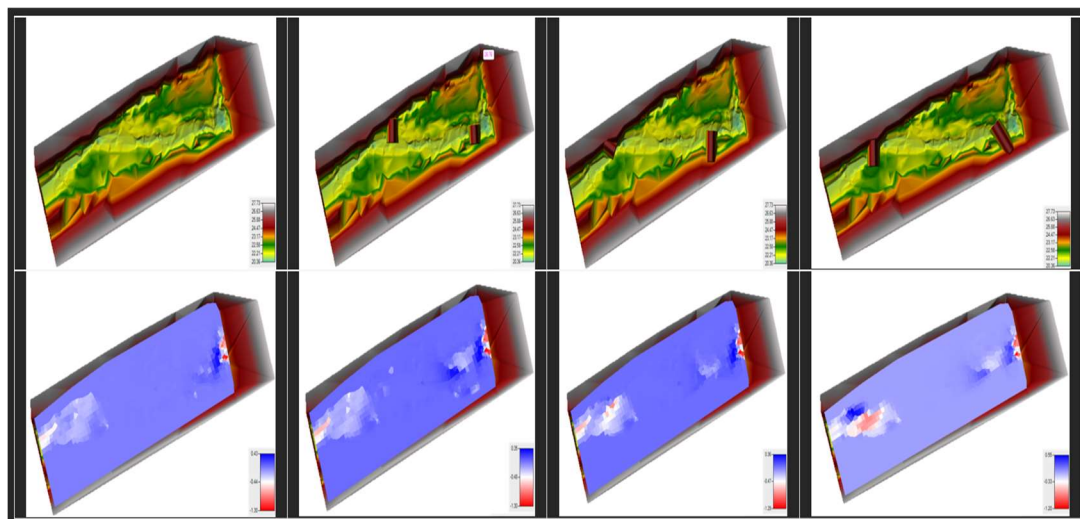
Summary

Anthropogenic activities such as urbanization, agriculture, and flow regulation have disrupted natural sediment dynamics, negatively affecting freshwater biodiversity and water resources. This study emphasizes the importance of evaluating the impact of sediment augmentation on river habitat. Restoration projects should incorporate an understanding of geomorphological and ecological processes while considering the effects of sediment on habitat diversity and function. Sediment augmentation, particularly through gravel addition, has been recognized as a valuable approach for enhancing sediment supply, habitat diversity, and overall river ecosystem health. By utilizing Hacrac analysis, it becomes possible to assess the variations in sediment augmentation configurations and their specific impacts on river habitats.

The results obtained from Hacrac analysis provide valuable insights into optimizing sediment augmentation strategies to promote habitat improvement and biodiversity restoration. By integrating this knowledge into river management plans, it becomes possible to achieve effective and sustainable conservation of river ecosystems.

Keywords

River restoration, sediment, habitat, modelling, rehabilitation.



This figure illustrates the influence of different sediment augmentation configurations on sediment erosion and deposition in a river system. The left image represents the scenario without sediment augmentation, while the subsequent images show the effects of various augmentation methods.



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