Record Nr. UNINA9910688456503321

Titolo Integrating Ecohydraulics in River Restoration : Advances in Science and

Applications / / Jose Maria Santos, Isabel Boavida, editors

Pubbl/distr/stampa Basel:,: MDPI - Multidisciplinary Digital Publishing Institute,, 2020

Descrizione fisica 1 online resource (248 pages)

Disciplina 333.7153

Soggetti Restoration ecology

Watershed restoration

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Sommario/riassunto

Rivers have been intensively degraded due to increasing anthropogenic impacts from a growing population in a continuously developing world. Accordingly, most rivers suffer from pressures as a result of increasing dam and weir construction, habitat degradation, flow regulation, water pollution/abstraction, and the spread of invasive species. Sciencebased knowledge regarding solutions to counteract the effects of river degradation, and melding principles of aquatic ecology and engineering hydraulics, is thus urgently needed to guide present and future river restoration actions. This Special Issue gathers a coherent set of studies from different geographic contexts, on fundamental and applied research regarding the integration of ecohydraulics in river restoration. ranging from field studies to laboratory experiments that can be applied to real-world challenges. It contains 13 original papers covering ecohydraulic issues such as river restoration technologies, sustainable hydropower, fish passage designs and operational criteria, and habitat modeling. All papers were reviewed by international experts in ecology, hydraulics, aquatic biology, engineering, geomorphology, and hydrology. The papers herein well represent the wide applicability of ecohydraulics in river restoration and serve as a basis to improve current knowledge and management and to reduce arguments between different interests and opinions.