

## Global Change and River Ecosystems{u2014} Implications for Structure, Function and Ecosystem Services [

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Monografía

Rivers around the world are threatened by changes in land use, climate, hydrologic cycles, and biodiversity. Global changes in rivers include, but are not restricted to water flow interruptions, temperature increases, loss of hydrological connectivity, altered water residence times, changes in nutrient loads, increasing arrival of new chemicals, simplification of the physical structure of the systems, occurrence of invasive species, and biodiversity losses. All of them affect the structure and functioning of the river ecosystem, and thereby, their ecosystem services. Understanding the responses of river ecosystems and their services to global change is essential for protecting human well being in all corners of the planet. Rivers provide critical benefits by providing food from fisheries and irrigation, regulating biogeochemical balances, and enriching our aesthetic and cultural experience. Predicting responses of rivers to global change is challenged by the complexity of interactions among these man-made drivers across a mosaic of natural hydrogeomorphic and climatic settings. This book explores the broad range of determinants defining global change and their effects on river ecosystems. Authors have provided thoughtful and insightful treatments of specific topics that relate to the broader theme of global change regulation of river ecosystems

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**Contenido:** Foreword: Global change and river ecosystems{u2014}implications for structure, function, and ecosystem services -- Understanding effects of global change on river ecosystems: science to support policy in a changing world -- Biogeochemical implications of climate change for tropical rivers and floodplains -- Dynamics of a benthic microbial community in a riverine environment subject to hydrological fluctuations (Mulargia River, Italy) -- Global changes in pampean lowland streams (Argentina): implications for biodiversity and functioning --Factors regulating epilithic biofilm carbon cycling and release with nutrient enrichment in headwater streams --Periphyton biomass and ecological stoichiometry in streams within an urban to rural land-use gradient -- The physico-chemical habitat template for periphyton in alpine glacial streams under a changing climate -- The periphyton as a multimetric bioindicator for assessing the impact of land use on rivers: an overview of the Ardières-Morcille experimental watershed (France) -- Discharge and the response of biofilms to metal exposure in Mediterranean rivers -- Effects of eutrophication on the interaction between algae and grazers in an Andean stream -- Comparing fish assemblages and trophic ecology of permanent and intermittent reaches in a Mediterranean stream -- Global change and food webs in running waters -- Effects of hydromorphological integrity on biodiversity and functioning of river ecosystems -- Organic matter availability during pre- and post-drought periods in a Mediterranean stream -- Flow regime alteration effects on the organic C dynamics in semiarid stream ecosystems --A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin --Implications of global change for the maintenance of water quality and ecological integrity in the context of current water laws and environmental policies

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