
IRBAS: intermittent river biodiversity analysis & synthesis

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Abstract

A large proportion of the global river network is composed of intermittent rivers (IRs). IRs are characterized by dynamic alternations between terrestrial and aquatic habitats. These habitats support a unique high-diversity biota consisting of aquatic, semi-aquatic, and terrestrial species. In addition to their biodiversity values, IRs also provide essential ecosystem services to society, including flood control and irrigation. The abundance and distribution of IRs, and their natural intermittent flow regimes are being altered by climate change and by water abstraction and inter-basin transfers. Despite their values and ongoing alterations, IRs are chronically under-studied and protective management is inadequate. The aims of the IRBAS project are to discover and quantify biodiversity patterns and relationships in IRs, provide policy-makers and resource managers with tools they need for effective management and restoration, and raise awareness about the importance of IRs with scientists, managers, and the public. To achieve these aims, the IRBAS team will compile, standardize and submit data to public data portals, and produce new knowledge and tools, including (1) georeferenced databases of IR biodiversity; (2) empirical models of flow-habitat-biodiversity relationships; (3) environmental classifications and maps of IRs; (4) hydrological and biodiversity trend analyses; and (5) IR management guidelines. To ensure the success of IRBAS, we are bringing together some of the most productive and influential scientists in IR ecology.

Keywords: rivers, climate change, drying, biodiversity

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