

## Physical habitat modeling and ecohydrological tools

There is a growing consensus that ecohydrological and hydraulic-habitat tools should be combined when predicting the ecological effects of water management scenarios in rivers. We describe the principles of these technical tools, their predictive power, and their role within more general approaches for defining environmental water regimes. Using recent case studies, we illustrate how these tools quantify the expected impacts of hydrological and habitat alteration on aquatic communities, at the scale of stream reaches or whole catchments. In particular, we describe the potential of catchment-scale ecohydrological assessments for regionalizing environmental water regimes. We also illustrate the potential of spatially explicit habitat modeling at the reach scale for understanding the ecological effects of hydropeaking or morphological restoration. Finally, we show applications of hydraulic-habitat models at the catchment-scale. We discuss how ecohydrological and hydraulic-habitat approaches could be further developed to increase their biological realism and could be better integrated within modular platforms.

**Auteurs du document :** Lamouroux, N., Hauer, C., Stewardson, M.J., Poff, N.L.

**Obtenir le document :** Elsevier

**Mots clés :** HABITAT, MODELE HYDROLOGIQUE, ECOHYDROLOGIE, MODELE BIDIMENSIONNEL, HYDRAULIQUE, Ecohydraulics, environmental water, environmental flow, hydrological classification, in-stream habitat models, statistical habitat models, two-dimensional hydraulic modeling, habitats, hydrological model, ecohydrology, two-dimensional model, hydraulics

**Date :** 2017

**Format :** text/xml

**Source :** 49422

**Langue :** Inconnu

**Droits d'utilisation :** Date de dépôt: 2017-11-20 - Tous les documents et informations contenus dans la base CemOA Publications sont protégés en vertu du droit de propriété intellectuelle, en particulier par le droit d'auteur. La personne consultant la base CemOA Publications peut visualiser, reproduire, ou stocker des copies des publications, à condition que l'information soit seulement pour son usage personnel et non commercial. L'utilisation des travaux universitaires est soumise à autorisation préalable de leurs auteurs. Toute information relative au signalement d'une publication contenue dans CemOA Publications doit inclure la citation bibliographique usuelle : Nom du ou des auteurs, titre et source du document, date et URL de la notice (dc\_identifiant).

**Télécharger les documents :** <https://irstedoc.irstea.fr/cemoa/PUB00055733>

**Permalien :** <https://www.documentation.eauetbiodiversite.fr/notice/physical-habitat-modeling-and-ecohydrological-tools0>

Evaluer cette notice: