Predictive models for bioassessment of large and Great Rivers

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RIVPACS-style predictive models have been used to assess the biological condition of small streams with great success. These models use data collected from reference sites to predict taxonomic composition in a stream, given a set of natural characteristics (e.g., catchment size, elevation). The predicted taxonomic composition can then be compared to the observed composition to assess the biological condition of the stream. The ratio between observed and expected taxonomic richness (O/E) provides an index of biological condition that can be interpreted intuitively and can be compared across disparate regions. Predictive models may provide a useful tool for assessing the biological condition of Great River Ecosystems. However, some issues that may require further study include sample comparability across different habitats and comparison of model performance with simpler alternatives.

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