Habitat Improvement Techniques for Aquatic Fishery: Application Experiences at Ta-Chia River in Taiwan

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Abstract. With characteristics of river continuum, stream ecosystems have diverse components and environments from upstream channel to estuarine area. Therefore, the habitat requirements and composition of conservative object should be well understood before applying any improvement measure. In this paper, the causes of stream habitat changes were first illustrated with the categories and principles of habitat restoration methods. The structural restoration techniques of fish habitat improvement, including dam partial-removal, utilized by the authors for two research projects during last dozen years were then presented. Through the introductions on the project background, planning guidelines, structure design, and ecological evaluation, this paper tried to provide some effective examples of ecological engineering that ecological experts were invited for cooperation and advising.

Keywords: Fish habitat improvement, Structural restoration, Dam partial-removal