The conceptual design of decision support system to preserve *Neolissochilus hexagonolepis* (McClelland, 1839) in Pelus River, Perak

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Abstract

Over the past three decades, Malaysia extensively exploits the natural water resources to satisfy increasing demands of human and industrial development in line with the rapid urbanization. This exploitation contribute to the degrading of water storage and decreasing in water quality which consequently, fluctuates the habitat's quantity and quality of the river ecosystem. The biological functions of the fish population are highly dependent upon the characteristics of their aquatic habitat. Thus, any alteration to the river ecosystem will put the integrity at risk. To determine the condition and action for fish habitat is time consuming. Therefore, advanced technology tools such as Decision Support System (DSS) is needed in making decision process. This system was developed to support the user by applying easy-to-use concept and comprehensive one for preserve the target species that focus on habitat condition, includes physical and chemical factors. The concept applied in DSS for this study is based on IF-THEN rules concept. The *Neolissochilus hexagonolepis* (McClelland, 1839) in Pelus River, Perak fulfil all must-have criteria as a target species. The objective of this paper is focusing on brief description of aims and concepts in developing Decision Support System in order to preserve the target species, *N. hexagonolepis* in Pelus River, Perak.

Keywords: Decision Support System, IF-THEN rules, *Neolissochilus hexagonolepis*, habitat.

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