EVALUATION OF THE RIVER MANAGEMENT STATUS IN INANAM LIKAS RIVER BASIN, SABAH

NURSHAFRINA AIDA BINTI YAHYA

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ABSTRACT

EVALUATION OF THE RIVER MANAGEMENT STATUS IN INANAM LIKAS RIVER BASIN, SABAH

Phytoplankton are the main primary producers in freshwater and the abundance of this primary producer can cause different productivity level which determine the river health. Therefore, the productivity level can also be measured using Carlson's Trophic State Index (TSI). In this study, phytoplankton diversity and TSI are used to identify the productivity level thus evaluate the river basin management status in ILRB. The frequent used trophic state index classification is Carlson's Trophic State Index, while phytoplankton diversity are best using Shannon Weiner diversity index. 7 stations along ILRB were chosen for sampling station. For each stations, 3 replicate samples were collected between August to September 2015. Phytoplankton was collected using 20 μm phytoplankton net. The method in preservation and identification were recommended by APHA (2005). The Secchi Disk was used to determine the transparency while Hydrolab Multiparameter model DS5X was used to determine the chlorophyll *a*. The management status in ILRB is considered to be less effective because of the productivity level is high in both chlorophyll *a* (eutrophic) and transparency (hypereutrophic) indicated less effort in preventing algal bloom to occur and also water pollution, meanwhile, the phytoplankton diversity and phytoplankton species indicator (*Synedra ulna, Synedra acus, Cyclotella meneghiniana* and *Tabellaria fenestrata)* indicated that the ILRB was in mesotrophic state. The less contributions by stakeholders also causing the ILRB to be less effective in sustaining safe and clean water to consumers. Thus, both phytoplankton diversity and Trophic State Index can serve as an important tool in conservation of freshwater and more contribution towards sustaining good river basin management in ILRB is needed.