

Phytoplankton Diversity and Community Structure in *Situ Gede* Large Pond,
Tasikmalaya Regency, West Java, Indonesia

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ABSTRACT

A study about phytoplankton community structure in *Situ Gede* large pond, Tasikmalaya Regency, West Java, Indonesia was conducted from April 2008 to June 2008. This study was a descriptive research and the main objective of the study was to explore the phytoplankton diversity and community structure on that large pond. There are four parameters of biotic community structure were analyzed in this study. The four parameters were the phytoplankton composition, the phytoplankton diversity used Shannon-Wiener diversity index (H'), the Simpson's domination index (C), and Pielou's evenness index (E). The study showed that *Situ Gede* large pond had high diversity of phytoplankton. There are 54 genera has been identified from this large pond. The chlorophyceae or green algae was the most diverse group with 17 genera followed by the Bacillariophyceae (10 genera), myxophyceae (6 genera), Dinophyceae (3 genera), Cryptococcaceae (2 genera), Chrysophyceae (1 genus), Xanthophyceae (1 genus), and unidentified class (11 genera). The diversity index, the domination index and the evenness index showed the phytoplankton community in this large pond were on medium stability, it means that the pond has been polluted. Further study is required to identify the pollutants and to examine the water quality of *Situ Gede* large pond and then to discover the correlation between phytoplankton community structure and the water quality.

Keywords: phytoplankton, diversity, community structure, *Situ Gede* large pond