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[\[PDF \(1393K\)\]](#) [\[References\]](#)**The characteristics of Lake Tonle Sap in Cambodia based on changes in conductivity**[Yasuaki OKUMURA](#)<sup>1)</sup>, [Shinji TSUKAWAKI](#)<sup>2)</sup>, [Shuichi ENDOH](#)<sup>3)</sup> and [Hideo OYAGI](#)<sup>4)</sup>

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**Abstract**

Lake Tonle Sap in Cambodia is the largest freshwater lake in Southeast Asia, covering an area of about 2,500 km<sup>2</sup> in the dry season and 12,500 km<sup>2</sup> in the monsoon season. Due to such a unique seasonal change in hydrological phenomena related to the Mekong River system, the lake's water quality must change dramatically. As there is a lack of basic data on the water quality and hydrological phenomena of Lake Tonle Sap, we launched a limnological research survey.

This paper deals with the characteristics of the lake based on conductivity changes. Between the monsoon dry seasons, conductivity and water depth in the lake shore changed dramatically. Both were low in the dry season when the water depth was 0.5 m and the conductivity was 40 μS cm<sup>-1</sup>, and they were both high in the monsoon season, at 8 m and 120 μS cm<sup>-1</sup>, respectively. However, the conductivity offshore was high at an approximately constant rate throughout the year at around 100 - 120 μS cm<sup>-1</sup>. This is because the waters that flow back from the Mekong River in the monsoon season remain in the offshore area. Conductivity decreases in the lake shore area in the dry season, which causes a low level of conductivity water to flow in from surrounding regions of the lake. It is the influence of the water flowing back from the Mekong River that increases the conductivity in the lake shore

region during the monsoon season.

**Key Words:** [Cambodia](#), [Lake Tonle Sap](#), [Conductivity](#), [The multi-parameter water quality profiler](#)

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