

Water quality and seasonal changes of metals in the natural wetlands receiving sewage from Phnom Penh, Cambodia

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ABSTRACT

To investigate the seasonal changes of water quality and metals in the natural wetlands receiving sewage from Phnom Penh, water sampling has been conducted in Kob Srov wetland located in the northern part of the capital. Water samples are collected in both dry and wet seasons across the wetlands. Water samples are collected from each point of sampling at a depth of 30 cm below the surface level. Water samples are filled into an acid-cleaned polypropylene bottle after which are acidified with concentrated HNO₃ to pH < 2 and kept in an icebox during field work. Concurrently, on-site measurement of water temperature, pH, conductivity, dissolved oxygen (DO) and turbidity are also conducted at each point of sampling site by AquaRead AP 800. All water samples are transported to a laboratory and then transferred to a fridge where they are stored at 4 °C until analysis. Measurement of metals is performed by atomic absorption spectrometry (AAS). In this presentation, we show the changes in pH, conductivity, DO and turbidity and variation of Cu, Zn, Pb, Cr, Fe, Mn, Cd in wetland. These results serve as baseline databases in managing and monitoring water quality and metals pollution in the wetlands receiving sewage from Phnom Penh capital city of Cambodia.

Keywords: Water quality; Metals; Wetland; Phnom Penh; Cambodia

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