

E2-24 Evaluation of water quality in a paddy field ecosystem

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Paddy fields are temporary and seasonal aquatic habitats which are contiguous with surrounding marshes, inflow and outflow canals and irrigation channels. There is flow through, stagnation and drying off in the aquatic habitat consecutively, along with the progress of a paddy cultivation cycle. The physico-chemical parameters of water change accordingly. These changes are made more complex by different agronomic practices associated with paddy cultivation.

Some physico-chemical parameters of water in an irrigated paddy field ecosystem located at Batalagoda were monitored over a period of 17 months (November 1995 - March 1997) at fortnightly intervals, covering 3 complete paddy cycles. The magnitude of physico-chemical parameters such as temperature, pH, conductance, dissolved oxygen, biochemical oxygen demand, chemical oxygen demand, nitrate and phosphate levels and the concentration of insecticides change seasonally and in different parts of the field itself. High amounts of nitrates, phosphates and biocide residues carried in the paddy field outflow lead to the pollution of other aquatic habitats.

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