

# The plankton diversity and density in the Iranamadu tank in the wet season

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The Iranamadu tank is one of the largest surface aquifer found in Northern Sri Lanka. The capacity to harvest large amount of rainwater makes this reservoir a potential source for drinking water supplies.

A study was conducted to determine the diversity and density of the planktons from October to December 2005, from the start till the end of the wet season in the Northern Sri Lanka. Samples were collected using Plankton nets once a week from 0500 hrs onwards along the two selected sub-sampling areas (SS); one from the outlet sluice (SS I) and the other from the catchments area (SS II). Onboard sampling was carried out too.

The samples consisted of major phytoplankton like the *Microcystis sp* (29%), *Microspora sp* (26%), *Chlorococcum sp* (15%), *Pediastrum sp* (6%), *Volvox sp* (6%), *Gleocapsa sp* (6%), *Nostoc sp* (3%), *Spirulina sp* (3%), *Chlamydomonas sp* (3%), *Sorastrum sp* (2%), *Spheerocystis sp* (2%) and *Scenedesmus sp* (2%). The zooplanktons consisted of *Cyclops sp* (4%), *Brachionus sp* (3%), *Lecane sp* (3%), and a species of water mite (1%) with various density levels. The *Microcystis sp* was the dominant phytoplankton ( $1423 \times 10^2/1$  at SS I and  $1363 \times 10^2/1$  at SS II) followed closely by *Microspora sp* ( $1288 \times 10^2/1$  at SS I and  $1274 \times 10^2/1$ ). The *Cyclops sp* ( $249 \times 10^2/1$  at SS I and  $229 \times 10^2/1$  at SS II) was the dominant zooplankton followed by the rotifers *Lecane sp* ( $152 \times 10^2/1$  at SS I and  $205 \times 10^2/1$  at SS II) and *Brachionus sp* ( $160 \times 10^2/1$  at SS I and  $187 \times 10^2/1$  at SS II). The phytoplankton density was high which indicates the need for a better filtration process in any drinking water supplying unit when this tank is considered for that purpose.

**Key words:** Iranamadu tank, plankton, density.