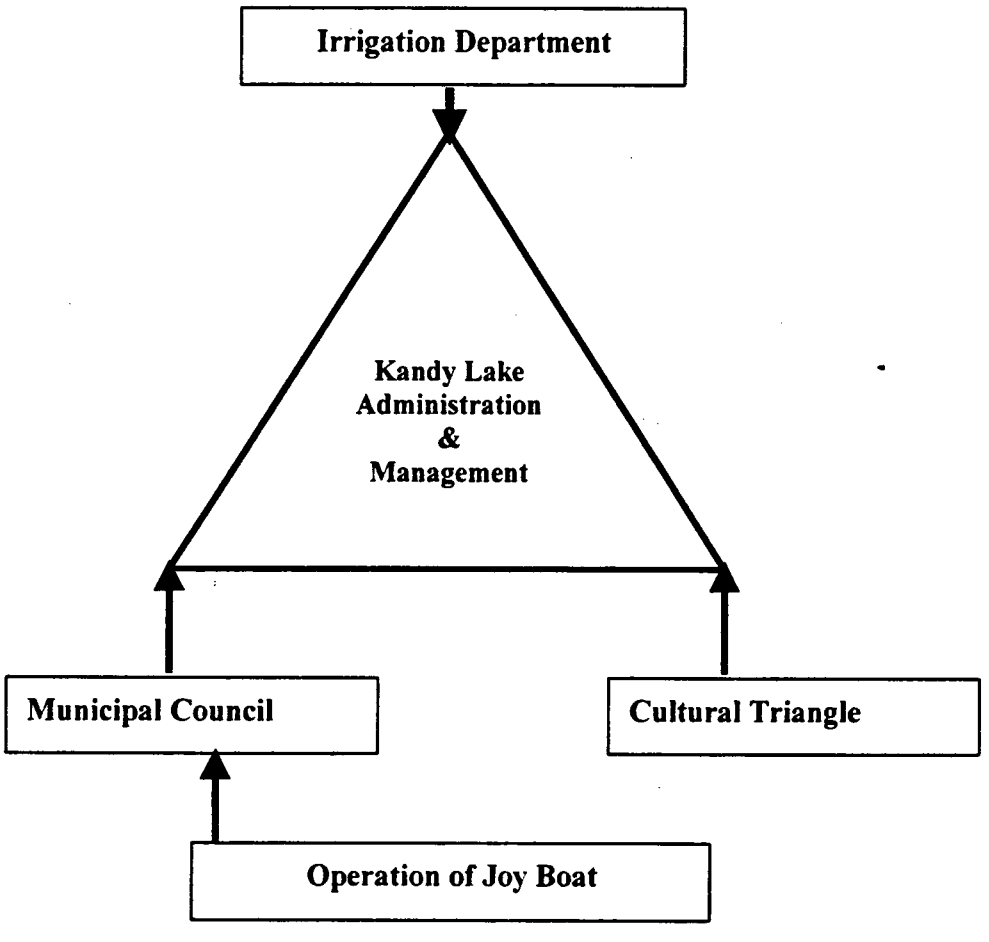
Kandy Lake

E.I.L. Silva

History

- A dam was built in early eighties between ***Dalada Maligawa*** and ***Poya Maluwa*** across the brook called ***Heel Pan Kandura*** by the Last King of Sri Lanka to reduce the walking distance by the King to the ***Poya Maluwa.***
- Water collected behind the dam inundating the paddy field creating a small standing water body then called ***Kiri Muhudha.***
- Water spilled over the dam during the rainy season and created another small water body called ***Bogambara Wewa*** in the immediate downstream.
- ***Kiri Muhudha*** was further enlarged by constructing the ***Ul Pan Ge*** for the royal bath and preparing the middle island (***Jayathilake Madapaya***) for queens bath.

Administration



Specific Features

- Only aesthetic water body in Sri Lanka
- Had continuos water over 200 years
- Enhances the panoramic view of the world heritage city
- Socio-economic significance
- Important archaeological site
- Important Limnological site
- Bathing, washing and fishing are not allowed

Hydraulic/ Limnological Characteristics

- Elevation 510 msl
- Catchment area 2.87 km^2
- Lake area 19 ha
- Circumference 3.05 km
- Fetch 1.16 km
- Maximum Depth 12 m
- Mean Depth 8.5 m
- Volume 38.4 x 10^{-2} MCM
- No littoral zone
- Three inflows, Heel Pan Kandura and Rajapihilla brooks and Nuwarawela Ela
- Surrounded by paved roads and concrete dams
- Banks are planted with many types of trees
- Receives waste water from various sources (schools, temples, hotels, restaurant etc.)

Present Status

Water Quality

- High in nitrogen and phosphorus concentrations
- High concentration of trace metals (e.g. Pb, Mn, Co, Ni, Mo)
- No oxygen below six meters at the deepest site
- Visibility and pH changes with the rainfall
- COD, BOD and suspended solids are high in inflows

Aquatic Flora and Fauna

- No littoral macrophytes
- Phytoplankton oscillate with green and blue green algae on seasonal basis
- Zooplanktons are mainly cladocerans and *rotifera*
- Fish fauna is dominated by self-breeding *tilapias*

Trophic Status

- Hyper-eutrophic with respect to nutrient concentrations and algal biomass

Algal Boom

- In 1999 June with the onset of south west monsoon a rapid growth of cyanobacteria (Blue green algae) occurred
- This cyanobacteria was identified as ***Microcystis aeruginosa*** (a non-nitrogen fixing blue green)
- They accumulated in the bays and edges at the Tennis Court end and decomposed producing noxious gases
- They also produced toxins killing fish that fed on cyanobacteria
- The lake was restored gradually by removing dead scum of cyanobacteria while increasing the water level.
- There was big publicity and public noise in this regard

Constraints

- Financial resources
- Poor co-ordination
- Poor co-operation
- Poor awareness
- Internal politics

Trend ?
Second Kandalama in Sri Lanka