WATER QUALITY OF THE BELIHUL-OYA AT HORTON PLAINS

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The Belihul-Oya arises in the central massif and flows through the island's highest plateau, the Horton Plains. As a result of the sparse human habitation around the source of the river, NARA chose to test its water for use as a possible standard of pure water for comparison studies with other water bodies. Interest was further sti ulated by reports of visitors to Horton Plains bathing in and polluting the stream's waters.

W.H.O. selected parameters and standards were selected to ascertain the purity of water. Eighteen physico-chemical and two bacteriological parameters were selected for this study.

The composition of water of the Belihul-Oya passing through Horton Plains had no excess minerals or saline constituents. Total hardness was negligible and was very often found to be less than 4 mg/l. Alkalinity of the water fluctuated within 6 and 15 mg/l. Traces of iron & phosphates were also detected whereas nitrate and nitrites concentrations were neglible. No synthetic detergents were detected while organic matter levels were found to be between 2 and 4 mg/l. Satuaration with dissolved oxygen was observed (6.8 to 7.8 mg/l) whereas ammonia levels were frequently found between 0.21 and 0.47 mg/l at two stations which exceeded W.H.O. guidelines (Maximum acceptable level 0.06 mg/l) for drinking water. NH_3 concentrations were often negligible, occasionally reaching marginally higher values in the samples collected from some of the stations.

Water samples collected from the stream during the peak tourist seasons indicated bacteriological contamination on the average varing from 200 to 303 coliform organisms/100 ml of this value 113 to 147 organisms/100ml were identified as faecal coliform organisms. (W.H.O. standards for un-treated water feacal coli. 0/100ml coliform 10/100ml).

However, all values for chemical parameters except for Ammonia lie well within the tolerance limits set by W.H.O. stand point for drinking purposes.