

## **Water audit in Yakkaduwa Pangnasara boy's hostel, University of Kelaniya**

M.M.M.K. Mudannayaka, B.A.V.J. Pathum, S. Mathithipan, N. Jeyasri, and V.P.A. Weerasinghe\*

Department of Zoology and Environmental Management, Faculty of Science, University of Kelaniya, Kelaniya

**Corresponding author: [primali@kln.ac.lk](mailto:primali@kln.ac.lk)**

Water audit is a systematic approach of identifying, measuring, monitoring and reducing the water consumption by various activities in a building/institution/industry. This water audit was done for the Yakkaduwa Pangnasara hostel building in the University of Kelaniya. To achieve the main objective of water budget in the hostel building, there were sub objectives namely; identifying water uses, measuring actual water consumption, identifying water wastage and leakages and giving suggestions for water reduction of wastage and leakages carried out. Water usage volumes were identified using visual observations. Actual water consumption was estimated using a questionnaire survey and flow rate measurements. The questionnaire survey was based on the water usage data of students, non-academic and canteen staff. Visually observed leakages were measured. Using observations and flow rate measurements data, the actual consumption was estimated. Total input was calculated using water bills. Finally, the unaccounted water loss was calculated using total input and estimated consumption. The unaccounted water loss should be equal or less than 5% in well managed water system, but in this water audit the unaccounted water loss is 8.52 %. Unaccounted water losses should be reduced by decreasing water losses and applying more water conservation practices in the hostel. Awareness programs also will help to reduce the water losses in the hostel.

**Keywords:** Water audit, water conservation practices, hostel, water losses, University of Kelaniya