

R&D Fund Project

An Impact Study Of Different Land Use Types For The Hydro Power Generation In Cameron Highlands



Water meter installed at flower under rain shelter plot at Sg Telom



Helley Smith Bedload sampling in progress

Project Overview

The Cameron Highlands Hydroelectric Scheme is facing problems pertaining to river sedimentation and adequate water resources. Initial request was received to determine impact on hydro station generation/operation due to agriculture and construction activities. Later, additional request was made for us to verify if sedimentation rate in Ringlet reservoir is indeed 300,000 m³ per year.

Deliverables

To determine the amount of soil erosion generated by each corresponding land use: forest, tea, market gardening, and urban area and the corresponding amount of silt/ sediment coming into TNB intakes.

To quantify the amount of water tapped by agriculture farms and water supply treatment plant, spillage, and the corresponding reduction of water available for power generation.

Benefits

The rates of sedimentation data can help identify main sources of the problem.

The rates of sedimentation coming into TNB reservoir can be used to estimate deposition rates and turnover time for major dredging rehabilitation works.

Identifying major sources of sedimentation can help focus on mitigation measures, i.e. :

- * Where to locate control structures
- * Strengthening the river banks
- * Better agricultural practices

4. Quantification of amount of agricultural abstraction can forewarn TNB if there is concern on adequate water use with increased farming activities in the future.