

Balintington Multipurpose Project

The Balintington Multipurpose Project is located at the Sumacbao River, Phillipines, which is one of several rivers draining the western part of the Sierra Madre, a mountain range on the eastern side of the Luzon Island (Fig. 1). It is designed for hydropower generation, agricultural irrigation and flood control and comprises a reservoir with an active storage volume of 490 Mio m³. The powerhouse is located directly at the dam toe and an irrigation weir is located about 7 km downstream of the main dam. The Balintington MPP is designed as a storage scheme, balancing the two major aspects i.e. energy production while providing sufficient water for agricultural irrigation.

This MSc-thesis aims on:

1. An evaluation of additional flows from the Chico River into the new Balintington reservoir. Possible weir, tunnel and powerhouse configurations including the installed capacity.
2. An economic assessment of the proposed Balintington scheme with and without the additional flows of the Chico River.
3. A water shed simulation including relevant structures allowing to estimate the required outflows at the Balintington powerhouse accounting for the historical diverted flows at the existing Penaranda irrigation weir.
4. Estimation of an optimum daily storage volume at the Balintington irrigation weir.



Fig. 1: River network of Sumacbao-Chico-Peñaranda Rivers with project elements marked in red including a photograph of the Balintington dam site (Source: Pöyry)

Kontakt:

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Besonderes:

Single MSc-Thesis, project oriented;
Thesis in English;
Monthly report to the local developer