

SediCon Dredge for Cebadilla reservoir, Costa Rica

A SediCon Dredge was operated in Cebadilla reservoir during summer 2011



Cebadilla Reservoir



SediCon Dredge at Cebadilla



Sediments

Project Description:

40 MW, 500 000 m³ reservoir of La Garita HPP, commissioned in 1958
Annual production of 115 GWh, La Garita HPP takes the water from Grande River at Elevation 470 masl and has a free flow water way of approximately 6 km into Cebadilla Reservoir, which is made off-stream.

Location:

Cebadilla reservoir, Costa Rica
[9°55′57.40″N, 84°21′17.63″W](https://www.google.com/maps/place/9°55′57.40″N,84°21′17.63″W)

Client:

Instituto Costarricense de Electricidad (ICE), the main electricity producer in Costa Rica.

Sediment Challenge:

Annually an estimate of 100 000 m² sediments deposit in the reservoir. At present sediment deposits occupy 300 000 m³ reservoir volume, of which 50% is in the live storage. Peak tariff is 5 times higher than night tariff, therefore valuable production capacity is lost. Sediments are old, fine and cohesive, and contain a large amount of organic material.

Solution:

SediCon installed and demonstrated a SediCon Dredge with efficient water jetting, designed for the actual sediment properties. The raft was manufactured locally whereas the dredge was manufactured in Norway. The dredge was mobilized at site in two weeks.

Implementation:

The dredge was operated from June to August 2011.

Results:

The water jetting combined with gravity powered suction was able to remove cohesive sediments at a rate of up to 120 m³ per hour.

SediCon is the leading supplier of sediment handling worldwide and provides reliable solutions with low water consumption and uninterrupted power production.