

**The Idukki Dam**, located in Kerala, India, is a 168.91 m (554 ft) tall arch dam. The dam stands between the two mountains Kuravanmala (839 m) and Kurathimala (925 m). It was constructed and is owned by Kerala State Electricity Board. It supports a 780 MW hydrolic power station.

It is built on the Periyar river, in the ravine between the *Kuravan* and *Kurathi* Hills in Kerala. At 167.68 metres, it is one of the highest arch dam in Asia and third tallest arch dam. It started generating power on 4 October 1975. Technically, the dam type is a concrete double, curvature parabolic, thin arc dam.

This dam was constructed along with two other dams at Cheruthony and Kulamavu. Together, the three dams have created an artificial lake that is 60 km<sup>2</sup> in area. The stored water is used to produce electricity at the Moolamattom Power house, which is located inside nearby rocky caves. The Government of Canada aided in the building of the dam with long term loans and grants



## History

The idea of constructing a dam for power generation was first conceived in 1919. As per history, Shri Kolumban, the head of 'Arya' race during 1922, showed the way to the Malankara Estate Superintendent and his friend Thomas, who were on hunting spree in the forest, the spot of present Arch Dam. He told them of the legend of Kuravan and Kurathi Hills. Mr. Thomas was impressed by the sight of water flow between the mountains and it was his idea that has materialised in the form of Idukki Arch Dam. Sri. W.J. John of Malankara Estate submitted a report to the Government of Travancore in 1932 on the possibility of constructing a dam at Idukki for Power Generation.

In 1947, a preliminary investigation report was prepared and submitted by Sri.P.Joseph John, then Chief Electrical Engineer to the Government of Travancore. It was during 1956 that the Central Water

The construction of this Dam commenced on 30 April 1969. Storage of water in idukki reservoir commenced in February, 1973. The inauguration of trial run of the first machine was celebrated on 4th

Commission conducted a detailed investigation based on the Government's request. The project report was prepared in 1961 and the Planning Commission accorded sanction for implementing the scheme in 1963 and the preliminary works of the project were started.

October, 1975. Commercial operation of the Power Station was Commissioned on 12 February 1976 by the then Hon. Prime Minister Smt. Indira Gandhi

Construction of this Arch Dam and two other dams at Cheruthony and Kulamavu has created an artificial lake of 60 km<sup>2</sup>. width and the water stored, is utilised for production of electricity at the unique Moolamattom Power house, which is located inside the rocky caves.

The Idukki Dam project was aided by the Government of Canada through long term loans and grants. Consulting Engineers from Canada were advising and assisting Project Engineers under the Canadian Aid



## **Usage**

## **Power Generation**

The Project harnesses a major portion of the power potential of Periyar, the largest river in Kerala, by the creation of a reservoir of 2,000 M.cum (2 Billion Tonnes) capacity, diversion of waters thus impounded through a water conductor system consisting of a power tunnel and two underground pressure shafts to an underground power house situated in Muvattupuzha Valley. The installed capacity of the Power House is 780MW consisting of 6 Units of Pelton-type turbines with a power generation capacity of 130 MW

each. The regulated waters of Periyar falls through a drop of about 669.2 metres (2195 feet) while generating power in the underground power house.

## **Irrigation**

The tail waters flowing to Kudayathurpuzha through tunnel and open channel is diverted for irrigation purposes in the Muvattupuzha Valley.

## **Tourist destination and attraction**

Idukki valley is 121 km away from Kottayam, and is a small hill town surrounded by a spread of beautiful, wooden valleys and meandering

streams. Idukki is a well known tourist center in Kerala.

The Idukki Wildlife Sanctuary extends over the Thodupuzha and Udumbanchola taluks of Idukki district, spread over 77 km<sup>2</sup> and is about 450 - 748 m above sea level. The Idukki Reservoir formed by three dams - Cheruthoni, Idukki and Kulamavu - extends to 33 km<sup>2</sup>. One can find Elephants, bisons, sambars deers, wild dogs, jungle cats, tigers, wild boars etc. and variety of Snakes like Cobra, viper, krait and a number of non poisonous snakes in this Sanctuary. The birds of Idukki are Jungle fowl, myna, laughing thrush, black bulbul, peafowl, woodpecker, kingfisher etc

