

Project No 9

CONSTRUCTION OF YATIMAHANA RESERVOIR IN MAHA OYA TO SUPPLY WATER TO MIRIGAMA INDUSTRIAL CITY

1. Project implementation agency: National Water Supply and Drainage Board
2. Estimated project cost; US \$ 150 million
3. Method of procurement: By open tender.
4. Development model: Joint Venture under PPP system
5. Implementation period: 5 Years

Background

The Maha Oya is the main drinking source for the major population centres of Aranayaka, Kegalle, Mawanella, Polgahawela, Mirigama, Alawwa, Giriulla, Divulapitiya, Pannala, Negombo, Warakapola, Wennapuwa, and Dankotuwa. There are at present a number of barrage diversion schemes diverting water to paddy fields. There is also a textile mill water intake for MAS Intimates Thulhiriya.



Various agencies related to water infrastructure have experienced water shortages in the Maha Oya basin for more than a decade, especially during the months of February and September. The water supply and demand situation in Maha Oya basin is not under proper management and hence water shortages in the area have increased substantially in the past few years. Moreover, the existing systems of watershed management, especially for pollution control, are inadequate to ensure the quality of water resources demanded by the rapidly increasing population and level of economic activity in the area. The water demands of the proposed Aero City Project and Mirigama Industrial Township under the Megapolis Plan will further exacerbate this situation.

Justification

A general feasibility study was carried out in 2004 by the National Water Supply and Drainage Board, on the improvement of water availability for water supply schemes from Maha Oya. The study concluded that establishment of a balancing reservoir at Yatimahana is clearly the overall most promising alternative from storage, geologic and environmental standpoints. In addition to the reservoir itself, the study also recommended that a hydropower plant be established at Yatimahana to serve the future energy requirements of the region.

The proposed project will bring many benefits to the people of the areas served by the Maha Oya. Firstly, the quality of life of people depending on the Maha Oya (especially in rural areas) for their potable water requirement will be improved by assured long term supply of water of good quality, as well as elevated income levels and increased job opportunities. Due to diversified crop patterns caused by the project, the daily intake of fruits and vegetables of people in the area will be increased, leading to positive side effects.

Proposals

Based on the findings from the 2004 study, as well as the water demands of upcoming megaprojects such as Aero City and the Mirigama Industrial Township, the Megapolis Infrastructure Committee has proposed that a reservoir be constructed at Yatimahana.

The proposed site is located 400m upstream of the confluence of Maha Oya and the Tangalle Oya. The water spread of the proposed reservoir is 85.7 ha, and the annual yield is estimated at around 285 million cubic meters. This site can store about 12.7 million cubic meters of regulating capacity that can be made available for assuring adequate water supply from the nine schemes downward from the dam site. If a hydropower plant is also to be constructed at the same site, the estimated potential hydropower from the plant is 2.12MW, or 18.59 GWh.

The positive effects of the balancing reservoir can be augmented by the provision of small regulation weirs at various points along the Maha Oya Downstream. Four sites have been considered for this purpose; Polgahawela, Alawwa, Giriulla and Badalgama. These could be combined with plans already in progress for construction of measuring weirs elsewhere.

A general feasibility study for this project has been conducted by in 2004. A detailed feasibility to be carried out and the government of Sri Lanka is determined to finance this study.

Cost Estimate

Preliminary estimates show that the project is estimated to cost approximately US \$ 150 million.