

EXECUTIVE SUMMARY

Long distance inter-basin transfer of water from surplus basins to water deficit basins has been mooted in our country in order to reduce the imbalance in the water availability between various regions. A National Perspective Plan (NPP) was formulated in the year 1980 by the Union Ministry of Irrigation (now Ministry of Water Resources) and the Central Water Commission identifying a number of inter-basin water transfer links in respect of both Peninsular rivers and Himalayan rivers of the country. The Peninsular Rivers Development and the Himalayan Rivers Development Components put together were expected to create an additional irrigation potential of 35 million hectares besides hydropower potential and other benefits.

The Pamba - Achankovil - Vaippar link proposal envisages diversion of 634 Mm³ of water from the surplus water available in Pamba and Achankovil rivers in Kerala to the deficit Vaippar basin in Tamil Nadu. Benefits from this proposal include irrigation to 91400 ha. in the drought prone districts of Tirunelveli, Virudhunagar and Kamarajar districts of Tamil Nadu, generation of peaking power of 500 MW through a pumped storage scheme, regulated releases of 150 Mm³ during lean period to Kerala etc.

The Pamba-Achankovil-Vaippar link project consists 150 m high concrete dam on Pamba-Kal Ar, 160 m high concrete dam on Achankovil Kal Ar and Achankovil dam, a 35 m high concrete gravity dam on Achankovil River. The Punnamedu and Achankovil Kal Ar dams are inter-connected by a 5.0 m dia, 8 km long tunnel for diverting the water of Punnamedu reservoir to Achankovil Kal Ar reservoir. Water from Achankovil is pumped to Achankovil Kal Ar reservoir. The water from Achankovil Kal Ar reservoir will be diverted through a 8.0 m dia, 9 km long tunnel to cross the western ghats. The main canal will take off from the tunnel exit and run for a length of 50.68 km before reaching Alagar Odai, a tributary of Vaippar River. Peaking power station of 500 MW installed capacity is located at the toe of Achankovil Kal Ar dam. Six mini hydropower plants with a cumulative installed capacity of 8.37 MW are located near inlet of inter connecting tunnel of Punnamedu and Achankovil Kal Ar reservoir, toe of Achankovil Kal Ar and Achankovil dam and at four canal drops on the main canal.

The peaking power plant comprises 5 units of 100 MW each. Three of the units are reversible type. 10 Mm³ of water released from Achankovil Kal Ar reservoir, for power generation during 6 hours peak load will be pumped back to Achankovil Kal Ar reservoir during the remaining period.

The project will require 2283 MU of energy to lift the water to Achankovil Kal Ar and 1095 MU and 19 MU of energy respectively will be generated during the peak hours and other periods.

Water logging problem is not anticipated since the terrain of reservoir and dam site area are hilly and undulated with dense jungle.

With the introduction of irrigation and increased agricultural activities employment opportunities would be created, general prosperity of the people of area will be improved.

The Punnamedu reservoir will submerge an area of 440 ha, which is entirely forest area. No population will be affected due to this submergence. The submergence area under Achankovil Kal Ar is 1240.7 ha comprising 871.7 ha of virgin forest and 369 ha of teak plantation. No population will be affected due to this submergence. The Achankovil dam will submerge an area of 323 ha comprising 86 ha of virgin forest, 218 ha of forest plantation and 19 ha of cultivable land. About 297 persons will be affected due to submergence of Achankovil reservoir in Achankovil village. Provisions of afforestation equivalent to double the area of submergence has been made.

The command area of the proposed link canal includes some of the chronically drought prone areas of the country where even the drinking water is a scarce commodity.

The quantum of 634 Mm³ of water proposed to be diverted by this link amount to only about 20% of the surplus available in Pamba and Achankovil rivers. The provision of regulated releases of 150 Mm³ during lean season will improve the flow in the river during the lean periods and help combat salinity intrusion, pollution control etc.

The cost of project has been assessed as Rs. 1397.91 crores (1992-93) and is programmed for completion in a span of 8 years. The B.C. ratio works out to 1.008.