

CLEARING THE AIR ON WATER

Relevant for: Indian Polity | Topic: Issues and Challenges Pertaining to the Federal Structure, Dispute Redressal Mechanisms, and the Centre-State Relations

A view of the Parambikulam dam. File. | Photo Credit: [K.K. Mustafah](#)

The prosperity of the Pollachi region of Tamil Nadu is attributed to the Parambikulam Aliyar Project (PAP). The project paved the way for surplus waters from eight west-flowing rivers to irrigate eastern Tamil Nadu. Of the eight rivers, six — Anamalaiyar, Thunacadavu, Sholayar, Nirar, Peruvuripallam and Parambikulam — are in the Anamalai hills. Two — Aliyar and Palar — are in the plains. The project is an exemplar of co-operative federalism, in this case between Kerala and Tamil Nadu. Using inter-basin diversion, the project irrigates drought-prone areas in the Coimbatore and Erode districts of Tamil Nadu. It also stabilises the existing irrigation system in the Chittoorpuzha valley in Kerala.

The PAP agreement was signed between Kerala and Tamil Nadu on May 29, 1970, with retrospective effect from November 1958. It provides for the diversion of 30.5 thousand million cubic feet (tmc ft) annually from Kerala to Tamil Nadu. It also provides for Kerala 7.25 tmc ft through the Manacadavu weir and 12.3 tmc ft at its Sholayar dam annually (19.5 tmc in all). This major project with an outlay of 138 crore was completed in 1972.

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The agreement ensures Kerala's riparian share in the Sholayar and Chittoorpuzha sub-basins as a guaranteed annual entitlement without applying the distress-sharing formula. It also ensures four months' flow (from the Northeast monsoons) from the Upper Nirar weir for Kerala's exclusive use in the Periyar basin. Except for the Kerala Sholayar dam, the Parambikulam, Peruvuripallam and Tunacadavu dams are situated inside Kerala territory but are controlled and operated by Tamil Nadu.

The agreement provides for review every 30 years since November 9, 1958. This, however, remains inconclusive. Kerala has reservations on the non-realisation of its share of 2.5 tmc of water from the Parambikulam group of rivers for the exclusive use of Chittoorpuzha valley; the failure of Tamil Nadu to give Kerala what it is entitled to at the Manacadvu weir and Sholayar dam in low-yield years from the reservoirs under its control; and construction of some structures in the project area without Kerala's concurrence.

Tamil Nadu regrets the non-realisation of the anticipated yield of 2.5 tmc from the proposed Anamalayar project and the expected yield of four months of flow from the Upper Nirar. It also proposes new constructions to augment its share — the Nirar-Nallar Project and Balancing Reservoir above Manacadavu — which have not got Kerala's consent.

'Kerala has agreed, in principle, to T.N. proposal for new dam in Anamalayar under Parambikulam-Aliyar project'

Tamil Nadu expanded its envisaged ayacut from 2.5 lakh to more than 4.25 lakh acres, in the four zones irrigating on a rotation basis. The deliberations are so far inconclusive because both States have focused on the total average yield and are not exploring furthering the utilisable yield from the available yield. Five decades-long joint gauging data (1970-2020) on yield and utilisation, approved by the Joint Water Regulation Board created inter-governmentally, shows that the actual combined yield of the entire project is more or less equal to the anticipated yield.

But if we consider the yield on a sub-basin level, there is huge variation between the actual yield, the anticipated yield, and also the yield available for utilisation.

A closer look at the project hydrology reveals that of the last 20 years, the Chalakudy basin experienced overflow from PAP in 12 years. Similarly, a sizeable portion of the water is lost through Manacadavu as unutilisable flows. These are due to the constraints in the present live storage capacity and the skewed inflow pattern. Kerala had consented to the diversion in the 1960s, anticipating enough storage spaces in both the Periyar and Chalakudy basins to meet its needs, but most of those storage reservoirs were subsequently denied environmental approval. The way forward lies in trapping the existing spill at Chalakudy and Bharathappuzha through new reservoirs, which will substantially alter the present flow regime of PAP.

Experts of both States could analyse and create working tables based on the observed flow regime to see how much additional water can be made available in the system through new reservoir systems and how that can be shared. Sharing becomes imperative as Kerala has largely transferred its storing options in favour of Tamil Nadu in PAP.

As new systems considerably alter the flow regime it is imperative that proper checks and balances be agreed upon to ensure the guaranteed entitlements at Sholayar and Manacadavu. Once the benefits are established by the technical officers, the political leadership can deliberate on the principles of sharing to review the agreement.

The leaders of both States have clear mandates and a reputation for being decisive. They can overcome hurdles for a mutually acceptable renewal.

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The Government's objection to the methodology of the Global Hunger Index is not based on facts

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