

**WRITTEN NOTE SUBMITTED BY THE STATE OF KERALA BASED ON THE
INTERIM ORDER DATED 27.10.2021 IN WPC NO.880/220**

Based on the interim order in WP(C) No.880/2020 dated 08.10.2021 filed by Dr. Joe Joseph & others Vs State of Tamil Nadu , when the matter was taken on 25.10.2021, it has been ordered that the Mullaperiyar Supervisory Committee (MSC) meeting be held at the earliest in order to arrive at a consensus regarding the maximum water level to be maintained in Mullaperiyar dam (MPD) at 139.99 ft.

The Supervisory Committee met on 26.10.2021 through Video Conferencing and based on that the chronology of events is as follows:-`

- The meeting of the Supervisory Committee was held at 3 PM on 26.10.2021 through Virtual mode.
- The minutes of the same was received in Government at 6 PM on 26.10.2021
- The dissent of the State of Kerala on the minutes received from CWC was forwarded to the Chairman, Supervisory Committee on Mullaperiyar at 9.00PM on 26.10.2021
- But it is seen that the concerns/ remarks of the State of Kerala on the issue was not seen reflected in the said minutes furnished to the Hon'ble Supreme Court by MSC.

The Honourable Supreme Court in its interim order dated 27.10.2021 in WP(C) No.880/2020 has directed to furnish Kerala the factum of rule curve and other matters/ issues discussed recently in the joint meeting.

Kerala has expressed its strong dissent on the ground that the rule curve prepared by Tamil Nadu is not acceptable to the State of Kerala for the following reasons:

1. As per the upper rule levels prepared by Tamil Nadu the levels on dates are as: 20th Oct: 137.75 ft; 31st Oct: 138.00 ft; 10th Nov:139.50 ft, 20th Nov:141.00 ft; 30th Nov: 142.00 ft; which cannot be resorted to in these unpredictable climatic conditions. As per the rule curve prepared by Kerala, the levels derived are 20th Oct: 136 ft; 31st Oct: 136.00 ft; 10th Nov:138.3 ft, 20th Nov:139.60 ft; 30th Nov: 140.00 ft
2. The rule curve prepared by Tamil Nadu in consultation with CWC showed two

peaks at 142 ft on September 20th and November 30th which is unacceptable to the State of Kerala.

3. There were also discrepancies in the 10-daily cumulative inflow data furnished to Kerala by Tamil Nadu and that adopted by Tamil Nadu for deriving Rule curves.
4. **While routing 1 in 100 year flood the water rose above 142 ft, which is against the water level permitted by Hon. Supreme Court. During flood routing exercise, it was seen that the water level rises above 142 ft for more than 50 hrs. This means that MPD may not be able to sustain the water pressure for such a duration, jeopardizing the safety of the dam and squarely undermining the directions of Hon'ble Supreme Court to limit the level at 142 ft.**
5. **Also, in MA No.2219/2018 in WPC No. 878/2017 dated 24.08.2018, the Hon'ble Supreme Court has directed to limit the levels at 139.99 ft.**

The detailed report regarding the above has been submitted to CWC and filed in the Honourable Supreme Court

Other considerations:

1. The Mullaperiyar Dam is a **126-year-old composite gravity dam**.situated at an altitude of 2890 feet above MSL on the Western Ghats The hearting of the dam, which accounts for more than 60% of the volume of the dam, was constructed with lime-surkhi concrete. Quite understandably, seismic forces were not considered in its design. In spite of strengthening measures taken twice Presently the dam is in deteriorating condition due to its age.
2. There would be an exponential increase in the water pressure and uplift pressure acting on the dam when the water level is raised from 136 ft to 142 ft. (i.e. from 859.167 to 936.648 tonnes per meter length of the dam)
3. The consequences of any failure of this dam could be extremely catastrophic and beyond human imagination. The apprehensions of the Govt. of Kerala regarding the life and safety of more than 30 lakh people of 5 districts residing downstream of the dam has to be given due importance and consideration.
4. The catchment area of Mullaperiyar reservoir is 624 sq.km. The gross storage capacity is only 12.758 TMCft at 142 ft. Mullaperiyar therefore is exceptionally vulnerable because it has a large catchment area and limited storage capacity. Consequently, the water level in the Mullaperiyar reservoir increases rapidly compared to Idukki which has catchment area of 650 sq.km and having a

capacity of 70.5 TMCft.

5. Idukki reservoir is nearing FRL and any sudden large releases from upstream can worsen the situation, forcing to make large releases from Idukki Dam affecting the downstream. Presently Idukki dam is in yellow alert
6. It was agreed in the Secretary level meeting held on 17.09.2021 to give permission for transportation of materials needed to carryout balance strengthening measures of the Baby Dam by the Govt of Tamil Nadu and also cutting and removal of few trees. GoTN was asked to submit an application for tree cutting in the proper format, but the same has not been submitted in proper format by Tamil Nadu so far.

Effective measures that may be taken by Tamil Nadu to resolve this issue:

1. The full outflow capacity is to be utilised by GoTN (at 137 ft outflow possible is 2735 cusecs, but TN is drawing only 2200 cusecs only till 05:00 AM on 27.10.2021 and just increased to 2300 cusecs when water level rose to 137.8 ft).
2. In managing a reservoir like Mullapperiyar, the volume of water used by TN can be ensured without increasing the water level beyond 136 feet by adopting the following measures.
 - a. Additional storage may be created at appropriate places in TN or the capacity of Vaigai dam may be enhanced to store more water.
 - b. The capacity of the existing tunnel may be enhanced or additional tunnel may be constructed, for drawing more water from Mullaperiyar reservoir so that the reservoir level can be kept at a safer level without reducing the water availability of Tamil Nadu as suggested by the Empowered Committee constituted by the Hon'ble Supreme Court, in its order dated 18.02.2010 in OS No. 3/2006.
3. There is no demand for reduction of water used by Tamil Nadu. In fact, Kerala is requesting to use more water by adopting appropriate measures mentioned above.

In view of the spatial and temporal variability in rainfall, recent incidents of heavy rainfall in the State of Kerala, and specifically, the catchment of the Mullaperiyar dam (particularly during 2018 and 2019) and consequent sudden rise in the reservoir water level, projected change in rainfall patterns due to climate change and its impact on floods, insufficient spillway capacity to discharge any sudden inflow into the reservoir, limited capacity of the tunnels to divert excess

water in case of an emergency, the age of the Mullaperiyar dam and its safety, the filled up status of Idukki reservoir, and the looming colossal damage to the life and property of the people living downstream of the Mullaperiyar dam in the event of occurrence of a disastrous event, Govt. of Kerala objected to the keeping the reservoir level high.

The Chairman and member representing Tamil Nadu was of the opinion that at present there is no concern regarding existing Mulla Periyar Dam (MPD) as it was reported to be safe, structurally, hydrologically and seismologically for storing water upto 142 ft, as per the report submitted by Empowered Committee in 2012. Kerala expressed dissent on this, considering the present age of the dam which is a masonry dam constructed in lime-surkhi and situated in seismically active zone III, and the recent events of surges in water level in Mullaperiyar dam, which is indeed a cause of concern for the people of Kerala. Also, heavy rainfall prediction till 31st October 2021

Though it was requested to record the dissent of Kerala on the decisions of Committee, the same was not incorporated in the affidavit filed on 27.10.2021.

U.N report on - "Ageing Water Storage Infrastructure: An Emerging Global Risk" regarding unsafe dams is doing its rounds which tags Mullaperiyar dam predominantly with details of supporting references stating that the dam is unsafe.

The coming monsoon that is to set off during this week too would likely affect the inflow into MPD, hence the State of Kerala reiterates its stand to increase the outflow to the maximum possible extent.

Hence the logical next step is construction of a new dam to ensure water to Tamil Nadu and security to people living downstream and to decommission the existing dam.

Filed By

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