Telangana Today- 31- July-2022

State seeks details on cross regulators

Urges KRMB to share views on rule curves, operation of powerhouses, irrigation sluices

STATE BUREAU
HYDERABAD

TELANGANA HAS BEEN TIME AND AGAIN REQUESTING THE KRMB TO RESTRAIN ANDHRA PRADESH FROM DRAWING MORE THAN 34 TMC FROM THE SRISAILAM RESERVOIR

Telangana has made it clear to the Krishna River Management Board (KRMB) that the status of approvals for the Pothireddypadu Head Regulator (PHR), Srisailam Right Main Canal (SRMC) and Banakacherla cross regulators given by the Central Water Commission (CWC) is required to be known.

In a letter to the board's chairman, Telangana Irrigation and Command Area Development (I&CAD) Engineer-in-Chief (General) C Muralidhar said unless the records are made available, it would not be possible to understand the issues. He has also urged it to furnish further views on rule curves and the operation of powerhouses and irrigation sluices at the Srisailam and NSP.

The entire correspondence made in erstwhile Andhra Pradesh with the CWC and Ministry of Jal Shakti (MoJS), related to the Srisailam Right Bank Canal (SRBC) and Chennai Water Supply Scheme, the CWC note submitted to the 16th Technical Advisory Committee (TAC) and the status of approvals of the PHR, SRMC and Banakacherla cross regulators are required to be made available.

According to Muralidhar, Telangana is of the view that they surely have to bear in mind the preparation of the rule curves for Srisailam and NSP and understand the technical issues involved.

Since KRMB is closely associated with the CWC and MoJS, it is requested to obtain the required data or documents and communicate the same at the earliest, enabling to furnish further comments on the draft rule curves. "The KRMB ignored pertinent issues raised by Telangana. We are not asking for any confidential or classified documents of the CWC or KRMB," Muralidhar said. All documents such as the CWC note, technical correspondence between the State government and CWC and technical details of the components of the structures approved by the CWC can be shared without any objection.

These details are relevant to Telangana as it is the successor State of erstwhile AP to which the data is pertained to. Further, the data is related to a reservoir, which is common for Telangana and AP, he said.

Since it was clearly mentioned that while drawing 19 TMC of water, the Minimum Draw Down Level is the criteria for drawl of 2,250 cusecs and flood conditions are the criteria for release of 11,150 cusecs.

From the TAC note, it is also clear that the flows to be diverted are only flood flows. Hence, without knowing the MDDL, the level to discharge 11,150 cusecs, capabilities of the head regulator at various levels in the reservoir and main canal section considered in the note for clearance of the SRBC and CWSS by Planning Commission (16th TAC of 1981), it is not possible to arrive at the rule levels. He said there was no mention of building up of water level at the Srisailam reservoir up to an MDDL (allegedly 854 ft) and till that time no water is to be drawn for Nagarjunasagar requirements through the production of power.

Telangana has been time and again requesting the KRMB to restrain AP from drawing more than 34 TMC from the Srisailam Reservoir - 15 TMC to CWSS and 19 TMC to SRBC from July to October during the flood periods. Since there are segregated drawals at different levels, namely MDDL, and flood conditions which were stipulated while giving clearance by the CWC, the corresponding segregated demands also need to be followed in the formulation of rule curves.

'Backwaters will submerge parts of TS'

Initiate measures to safeguard State, Polavaram Project Authority urged

STATE BUREAU
HYDERABAD

The backwater studies carried out by the Central Water Commission (CWC) and Andhra Pradesh do not contain critical information such as backwater levels, and cross-sectional profiles at the historical temple town of Bhadrachalam and Manuguru Heavy Water Plant.

In a letter to Polavaram Project Authority (PPA) Chief Executive Officer, Telangana Irrigation and Command Area Development (I&CAD) Engineer-in-Chief (General) C Muralidhar said that these important structures including coal mines are likely to be affected by submergence and other effects causing loss and destruction in some areas in Telangana.

The water depth at Bhadrachalam (river bed level of 107 ft) will be more than 28 ft throughout the year with the Polavaram project at Minimum Draw Down Level (MDDL) condition at (135 ft) and will be 43-ft if FRL (150 ft) is maintained at Polavaram.

The first warning level of Godavari at Bhadrachalam is 150-ft (45.73 m), the second warning level at 155-ft (47.14 m) and the danger level is at 160-ft (48.77 m). Muralidhar said various studies for different magnitudes of flood revealed that the backwater level worked out at Bhadrachalam and Dummugudem are 58.32 m (191.35 ft) and 64.29 m (210.94 ft) for the flood of 36 lakh cusecs and 62.85 m (206.20 ft) and 65.31 m (214.30 ft) respectively with the operating level of 42.67 m (i.e. 140 ft; FRL being 150 ft). The area affected is 184.79 sqkm.

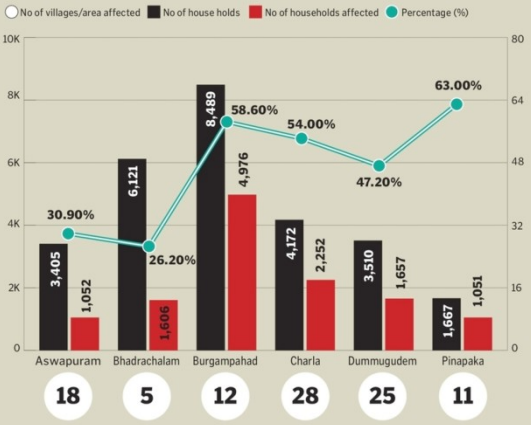
The affected villages for both the scenario of floods include 74 villages and 92 villages in the State. A population of about 1.2 lakh are likely to be affected by submergence. All the above aspects along with the likely impact of the inundation of important places of Telangana due to the Polavaram project was raised with MoJS, CWC and PPA during meetings with the PPA and Godavari River Management Board.

The PPA as a nodal agency for the construction of the Polavaram project should initiate measures for safeguarding the territory of Telangana and its inhabitants. This becomes more pronounced, as due to the recent flood, more inundation around Bhadrachalam temple premises and near the flood bank (Karakatta) is observed than the affected area during the 1986 High Flood Level (HFL).

The MWL of the observed flood in 1986 at Bhadrachalam is 55.65 m (182.60 ft) with an estimated discharge of 27 lakh cusecs. The sacred temple town Bhadrachalam known as Dakshina Ayodhya is located on the left flank at 1,236 km from the Godavari River origin. This year, the water level at Bhadrachalam gradually rose from a normal level of 38.71 mts (127.00 ft) on July 9, 2022, to as high as 54.35 mts (178.30 ft) on July 16, 2022, at 1 am with an estimated discharge of about 24.50 lakh cusecs.

This year, the water level at Bhadrachalam rose from 127 ft on July 9 to as high as 178.30 ft on July 16.

Places affected



Several areas/villages of Pinapaka, Aswapuram and Burgampahad mandals on the right bank and Bhadrachalam, Dummugudem and Charla mandals on the left bank got affected. The inundation continued for five days in Bhadrachalam town and surrounding villages which is an unnatural phenomenon.

The backwater levels impacting Bhadrachalam town will become a common phenomenon once the Polavaram project is completed and water is stored at FRL level as successive floods within a water year are a common feature in the lower Godavari basin. When Polavaram is stored at FRL, the flood level at Bhadrachalam would certainly be further compounded. IIT Roorkee estimated the PMF as 58 lakh cusecs and the backwater levels upstream of Konta on River Sabari as 218.40 ft with 58 lakh cusecs against the 180.15 ft with 36 lakh cusecs as computed by CWC.

A similar increase in backwaters levels on the main river Godavari will result in submersion of Bhadrachalam, habitations, forests etc and cause irreparable damage. The heavy water plant at Manuguru situated at a distance of about one km adjacent to Dummugudem anicut on the main River Godavari is also bound to face the impact of flooding.

There would also be local streams joining river Godavari in the reach of the Telangana area and will face drainage congestion along the river banks in Telangana territory. It was requested to ensure demarcating of the areas affected due to drainage congestions along Kinnerasani and Murreduvagu rivers and take necessary safeguards/protection measures against such drainage stagnations.

"A request was made to the Andhra Pradesh government for necessary action for demarcation of such areas. The response is still awaited. After examining the detailed possible adverse effects of Polavaram project backwaters, we once again request to conduct a comprehensive backwater study by an independent competent agency at the earliest," Muralidhar said. He also urged to take suitable protection measures in the affected areas in Telangana territory and prevent large-scale submergence.

The Times of India- 31- July-2022

Godavari dams reduce sediment load, study warns of spike in coastal erosion

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Pune: Godavari, the most important river in peninsular India, has seen a dramatic decline in its sediment load over the past five decades, aggravating coastal erosion along the Bay of Bengal where it empties, a Savitribai Phule Pune University study published in the international journal Science of the Total Environment shows.

A river carries sediment load in a dissolved form, in suspension or as bed load. In the case of Godavari river, this load dropped at an average annual rate of 2 million tonnes per year reducing the sediment transport to the Bay of Bengal, thus causing extensive delta erosion by sea waves.

Lead researcher Sumit Das said coastal erosion and loss of land in the Godavari delta may further intensify into an irreversible destruction phase as more reservoirs are built under a warming and wetter climate with the increasing intensity of tropical cyclones and sea-level rise.

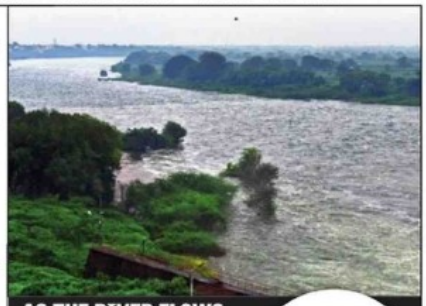
In the Godavari basin, a significant reduction in sediment load after 1995 was closely associated with the construction of dams and, as a result, entrapment of sediments in their reservoirs, he added. Since 1970, as many as 650 dams have been constructed in the Godavari basin, the highest in peninsular India.

HOW COASTAL AREAS ARE IN DEEP TROUBLE

- When sediment is in short supply, deltas and wetlands shrink
- Shrinkage of deltas affects the coastal vegetation
- Coastal wetlands are vital for the wildlife habitat, and for protection from storms
- Sediment flux to coastal areas decreases because of human activities and practices that decrease soil erosion
- Upstream dams retain sediment behind reservoir walls, and decrease sediment discharge rates

- SPPU researchers said that the sediment load in the Godavari reduced from **150** million tonne between **1970** and **1979** to **115** Mt in **1980–1989**, 98mt in **1990-1999**, **48mt** in **2000–2009**, and **47mt** in **2010–2019**, respectively
- The study revealed that dam constructions have been primarily responsible for this reduction

In the Godavari basin, a significant reduction in sediment load after 1995 was closely associated with the construction of dams



AS THE RIVER FLOWS

- Flows east for 1,465km, draining Maharashtra, Telangana, Andhra Pradesh, Chhattisgarh and Odisha
- Forms an extensive 170km long delta in Andhra Pradesh

Godavari, India's second longest river, starts in Trimbakeshwar in Nashik, Maharashtra

- Coastal erosion can be permanent due to rise of the global sea level, or a decrease in sediment supply from rivers due to upstream dams, or construction of permanent coastal structures

The current environmental deterioration of the Godavari basin due to deforestation and land-use changes, increased agricultural activities, extreme rainfall events in central India may heighten human-induced sediment erosion at certain places, he added. Das said many Asian rivers have experienced such decline primarily due to sediment accumulation within dams in recent times. These rivers include Krishna, Cauvery and Narmada. "The downward shift of sediment load collectively in dams has resulted in increased erosion of coastlines and deltas due to sediment starvation in many rivers of the world," he added.

Researchers assessed sediment loads of the Godavari's catchment area by collating daily discharge and suspended sediment concentration data extending over five decades from 25 gauging stations. The data source for the study was Central Water Commission, New Delhi which monitors the discharge and sediment load in Indian rivers. "Over the past 40 years, all outlet gauging stations in the Godavari and its major tributaries experienced decreasing trends in sediment load from the 1970s to 2019 with a mean annual reduction rate of 1.11 million tonne per year in Pranhita, a tributary, and 2.06 million tonne per year in the Godavari," Das said.