

1st high dam on Yamuna may pose flood risk to city: Experts
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The Chamoli flash floods of February 7 have brought the spotlight back on the first high dam on the Yamuna scheduled to come up at Lakhwar in Dehradun and Tehri in Uttarakhand after the Union environment ministry's expert appraisal committee recommended the 300MW Lakhwar Multipurpose Project for environmental clearance in its December 2 meeting last year.

The move has reignited a three-decade old worry among environmentalists who have been flagging the project as a potential risk for the national capital.

River activists have warned that the project could push Delhi to water scarcity, depletion of groundwater levels and major flooding and loss in case of a disaster.

The Lakhwar Multipurpose Project is expected to provide 19.03 MCM (million cubic metres) of drinking water to Delhi, according to the project details on the environment ministry's Parivesh website. It is also likely to provide irrigation on 33,780 hectares and water for domestic and industrial use — 78.83 MCM to neighbouring states, including Uttarakhand, Uttar Pradesh, Haryana, Rajasthan, Himachal Pradesh and Delhi.

Over 50% of the land affected by the proposed project is forest land. Clearance was first issued to Lakhwar and Vyasi, which together make the Lakhwar Vyasi Multipurpose project, by the environment ministry in 1987. Work was started by UP's department of irrigation and tunnels; an underground powerhouse was completed by 1992. After the formation of Uttarakhand, the project was handed over to NHPC and bifurcated into two parts -- Lakhwar MPP (300 MW) with Katapathar Barrage and Vyasi hydroelectric project (120MW).

After environmentalists moved the National Green Tribunal on the lack of environmental appraisal of the project, the tribunal on January 10, 2019 directed the expert appraisal committee to appraise the project afresh under the environment impact assessment notification 2006.

Dam authorities brushed aside the concerns raised by environmentalists.

"Yes, it's the biggest high dam on the Yamuna with the highest storage capacity. But all these fears are baseless. We have conducted very detailed studies on environmental implications. Also, locals are waiting desperately for the dam. It's a major developmental project for this region," said a senior official of the Uttarakhand Jal Vidyut Nigam Limited who did not wish to be named.

Manoj Mishra, convener of the Yamuna Jiye Abhiyan, said the Lakhwar dam is an "invitation to trouble" for Delhi. Located right on the Yamuna and being the first city downstream, the Capital will be the first to be impacted in case of anything going wrong with the dam.

“Unlike cities such as Panipat, Sonapat, Karnal and Yamunanagar, which also fall along the route of the Yamuna, Delhi is right on the river. If the Lakhwar dam breaks or if there is any disaster there, Delhi has had it. The first to be submerged will be east Delhi and parts of south Delhi. Other cities are still a few kilometres away from the river, but Delhi will not even have the time to respond,” Mishra said.

The proposed height of the dam is 204 metres, which is as tall as a 70-metre building, and the impact of water gushing from such a height will be first faced by Delhi, he added.

Mishra said along with facing the risk of a possible disaster, Delhi could also be water starved. During monsoon rains currently, the Yamuna and its aquifers get rejuvenated because there is nothing holding the river back upstream. Since such big dams primarily hold monsoon water, Delhi will be drastically starved of Yamuna’s water.

The Delhi Jal Board’s documents show that the Capital currently gets 50 gallons per person per day, which is nearly 200 litres per person per day, much higher than the average in other cities. Delhi’s requirement is around 100 litres per person per day, according to experts. The DJB’s water management plans are also centred on making the city self-sufficient in its water needs.

“Compared to the Alaknanda and Bhagirathi the sediment load and volumes are much lower in the Yamuna and this dam is quite downstream. It is also fed by a number of glaciers. We have to see what kinds of checks they have against flooding or disasters,” said Navin Juyal, a retired geologist from the Physical Research Laboratory in Ahmedabad.

Residents of Lohari village along the Yamuna are both happy that the project may finally take off after over 30 years and the locals may benefit from compensation, rehabilitation and jobs but they are also anxious about what this could mean for the river. “We are very happy that the dam is coming. This is because it will bring livelihood opportunities to us. There are so many young boys here who have no jobs. Residents have been waiting for the project to take off for over 30 years now. We were children then,” said Ramesh Chauhan, a resident of Lohari. At the same time, the Yamuna is of enormous spiritual and religious significance to people here.

“The Yamuna is our mother. Our life is linked to the river. Whenever water levels have risen, we have prayed to the Yamuna and she has saved us from disaster. Even in 2013, during the floods, water levels had risen dangerously, so we went to the temple on the Yamuna banks and prayed for hours. All the villagers were there. We believe that we were saved from being washed away because of our faith in the river,” said Tikam Singh, another resident.

One of the risks associated with dams is a break that may result in a flood wave up to tens of metres high, travelling along a valley at high speeds.

The impact of such a wave on developed areas can be sufficient to completely destroy infrastructure, according to documents on the Parivesh website.
