

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 2458

ANSWERED ON 10.08.2026

EFFECTIVENESS OF AIR-FILLED RUBBER DAMS IN MITIGATING FLOODS

2458 Shri NATHWANI PARIMAL:

Will the Minister of Jal Shakti be pleased to state:

- (a) whether Government has examined the effectiveness of air-filled rubber dams in mitigating floods in medium and small rivers;
- (b) whether any technical guidelines have been issued regarding their deployment;
- (c) if so, the details thereof; and
- (d) the States identified, if any, for pilot implementation?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) to (d) Water resources development projects, including the selection, design and construction of air-filled rubber dams are planned, funded and executed by the respective State Governments based on site-specific techno-economic feasibility.

Air-filled rubber dams are inflatable structures constructed across rivers to impound water during lean flow conditions. They are primarily intended for water conservation, groundwater recharge, irrigation, urban water supply etc.

These flexible structures function as inflatable weir barriers that can be rapidly deflated during high-flow or peak flood events, thereby permitting unhindered passage of floodwaters. Pilot studies and international experiences have been examined to evaluate their suitability under Indian conditions. Overall, rubber dams have demonstrated only limited effectiveness in large-scale flood mitigation. Their utility is largely localized and case-specific, particularly in rivers or drains traversing urban areas, where they can temporarily impound water and facilitate controlled release to alleviate drainage congestion during intense rainfall events.

At present, no technical guidelines have been issued by the Central Government for large-scale deployment of air-filled rubber dams.

Irrigation and flood management being State subjects, the identification of rivers and suitable locations for the construction of flexible or rubber dams is undertaken by the respective State Governments based on local hydrological, topographical and socio-economic considerations. Several States, including Bihar, Gujarat, Maharashtra etc. have initiated pilot and demonstration projects to evaluate the suitability and effectiveness of rubber dam technology. Notable examples include the rubber dam constructed across the Phalgu River at Gaya in Bihar and the rubber dam across the Ambika River at Pathakwadi village in Tapi district of Gujarat.
