

**GOVERNMENT OF INDIA
WATER RESOURCES
LOK SABHA**

UNSTARRED QUESTION NO:1722

ANSWERED ON:04.08.2010

SAFETY OF DAMS

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Will the Minister of WATER RESOURCES be pleased to state:

- (a) whether 10 percent dams in the country have developed cracks;
- (b) if so, the details thereof, dam-wise;
- (c) whether the Government proposes to declare these dams dangerous; and
- (d) if so, the steps taken in this regard so far?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRI VINCENT H. PALA)

(a) & (b): Dams are mostly owned and maintained by the State Governments. The State Governments have not reported that 10 percent of dams in the country have developed cracks. However, some of the project authorities have reported distress including cracks in dams such as Hirakud Dam, Rihand Dam, Konar Dam. The brief details on these dams is given below:-

Hirakud Dam (Orissa): Hirakud is a composite dam of earth, masonry and concrete. During initial filling in 1956, cracks were noticed. The problem was referred to Central Water Commission (CWC) in September, 1974 and CWC advised epoxy grouting of cracks which was completed in 1975. The Government of Orissa constituted a Committee of experts of eminent engineers in 1981. The committee opined that the distress was on account of high tensile stresses caused by the heat of hydration of concrete in the initial stages, followed by alkali-aggregate reaction. The Govt. of Orissa has constituted a Standing Committee under the Chairmanship of Engineer-in-Chief, Orissa for long term surveillance of cracks in the dam.

Rihand Dam (Uttar Pradesh): Rihand Project comprising concrete gravity dam was commissioned in 1962. Cracks were observed in various components of the dam and appurtenant works. Govt. of Uttar Pradesh (U.P.) constituted an Expert Committee in 1985 to recommend remedial measures for the safety of the dam. Various investigations revealed that alkali aggregate reaction in the concrete is the most probable cause of distress. Rehabilitation of the dam is going on under the guidance of Experts Committee constituted as a follow-up. CWC is represented in the Experts Committee.

Konar Dam (Jharkhand): Konar Dam is comprising of earthfill-gravity with concrete gravity spillway. The cracks were observed 8 years after construction. Epoxy grouting was carried out to seal the cracks, but the cracks reappeared again after 1-2 years. Thereafter, several visits have been conducted by experts to diagnose the problem and to suggest remedial measures to be adopted.

(c) & (d): As per information available, no State Government has conveyed/declared the distressed dams as dangerous. A National Committee on Dam Safety under the Ministry of Water Resources, Government of India, has been constituted involving members from various State Governments for monitoring various aspects of dam safety issues referred to it.