

L-G Vinai Kumar Saxena launches Sindhu Jal Samriddhi Abhiyan to address seasonal water scarcity in Ladakh

Under project, first-ever rock check dam over River Indus inaugurated in Leh

Rock check dams to support irrigation and strengthen water security in high-altitude villages of Ladakh

Leh, May 27: An innovative Rock Check Dam, the first of its kind in India, aimed at achieving long-term water and agricultural sustainability in Ladakh, was today inaugurated by Lieutenant Governor, Shri Vinai Kumar Saxena, at Upshi in Leh. The Rock Check Dam, built over River Indus, 44 km from Leh, at an altitude of 11,400 feet, has been conceptualised by L-G Shri Saxena as an eco-friendly, cost-effective and a sustainable remedy to Ladakh's water crisis.

This rock check dam has been built using large rocks, sourced from the riverbed and the surroundings, to hold the water in the river. L-G Shri Saxena has named the project as **"Sindhu Jal Samriddhi Abhiyan (SJSA)"** that aims at augmenting the water level by creating rock check dams at specific locations of the river, particularly the narrow passages where tapping the river water is relatively easier and more effective. The location of the check dam is identified in consultation with the villagers/locals. The Lieutenant Governor has directed the Irrigation & Flood Control Department to construct three more such check dams within a month on experiment basis.

In many parts of Ladakh, the Indus River becomes too shallow. As a result, standard motors and pumps fail to lift water from the river, to the uphill fields. This is where these rock check dams would play a crucial role. These check dams would create a big pondage area storing ample water for use during the peak sowing season. Because the rocks have been sourced directly from the riverbed, there is no use of cement or concrete in the construction of this check dam. This makes it a completely eco-friendly project.

The L-G said that the Sindhu Jal Samriddhi Abhiyan would help improve irrigation facilities, strengthen water security and support sustainable agriculture in remote villages. "It is another innovative and eco-friendly project, aimed at achieving long-term water security in Ladakh after the successful launch of Project Him Sarovar. The Rock Check Dam has been conceived as a model of sustainable water and agricultural security, while preserving the fragile ecological character of Ladakh's ecosystem. The initiative has received encouraging response from villagers," L-G Shri Saxena said.

Unlike the engineered cement-concrete check dams, a rock check dam is a semi-permanent barrier built across the river channel. It slows down the velocity of the water and creates large pondage area behind, while allowing the excess water to flow through, creating a cascading effect and increasing oxidation in the river.

The rock check dam at Upshi is nearly 200 feet long. It has the base-width of 30 feet on the river bed for greater stability, while its top deck is 15 feet wide and is 5 feet high from the riverbed. The rock check dam has been designed to withhold the high pressure of the water. At present, the flow of water in the Indus is approx. 25 Cusec (Cubic feet per second) that would increase nearly eight-times to 200 Cusec during July-August. The design of the rock weir would ensure that it does not get washed away when the volume of water increases substantially.

Remarkably, construction of this check dam has been completed in just seven days – from 12 – 18 May 2026 – during which the L-G conducted three site visits to oversee the construction of this project. Nearly 180 MT of rocks, each weighing 500 KG to 10 MT, have been meticulously interlocked within the riverbed to construct this check dam.

The rock check dam has successfully created a vast pondage area, stretching up to 1500 feet (500 meter) upstream and storing nearly 40 million litres of water. The depth of the water on the edges of the river is 4-5 feet, while in the middle of the river the depth goes up to 10 feet.

