

Rehat reckoner: slow but steady



WATER WHEELS They still lift rain-harvested water even today in parts of Bundelkhand

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BUNDELKHAND REGION OF UP & MP: Persian wheel may be breathing its last in Egypt where it is fabled to have been originated in ancient times, but is live and kicking in two districts of the water-challenged Bundelkhand region—Lalitpur (in Uttar Pradesh) and Tikamgarh (in Madhya Pradesh).

Persian wheel, which is also known as Bucket Wheel or Water Wheel, is called 'Rehat' locally and is in vogue in the region since the times of Chandela dynasty—ninth century onwards.

"Nothing has changed about this water lifting device since Chandelas—except that steel replaced wood in most moving parts of the device," says Professor Shiv Pujan Pathak, a Bundelkhand historian and retired head of department of history, Jhansi College.

Fields after fields in the districts have rehats in action to irrigate vegetable crops during the interlude between Rabi and Kharif cropping seasons.

"Post-rains the bucket-

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PROF SHIV PUJAN PATHAK
Bundelkhand historian

chain is smaller but as the summer catches on and water level in wells starts falling, we keep on adding more buckets to the chain. Post-rains, my chain had just 20 buckets and now it has 45. Earlier the buckets were made of wood, but now they are made of aluminum," says Bhagirathi Kushwaha, who has his two-acre field in Khandi panchayat in Talbehat. A nearby ancient pond—Odwan Tal—made by tapping a rain rivulet recharges his well.

He and farmers around him use rehat to irrigate all crops. He had brinjal, tomatoes and onions these days in the field. Rehat is a glorious example of irrigation system that judiciously uses the rain-harvested water in

HOW IT WORKS

Rehat is a simple water-lifting device wherein series of small buckets are chained together. A wheel suspends the chain into a well. The wheel rotates through a shaft while an animal (or a pair) takes a circular walk. Two gear wheels revolve the bucket-wheel making buckets dip in the water one after the other and rise sequentially to empty themselves into a trough and channeled into fields. Earlier rehats were very common in entire north India.

The first known mechanical aid practised in ancient India was the bucket-wheel or the water-wheel (Persian wheel). The oldest evidence of the existence of water-lifting devices is furnished by the antiquities unearthed from the Mohenjo-Daro and Harappa excavations. Sir Johan Marshall who studied the pottery evidences from Mohenjo-Daro expresses his opinion about the possible use of pottery for water-wheels. His argument runs thus: 'the jars that have been denominated "scored pottery" were made for attachment to an appliance for raising water.

parts of Bundelkhand. Rehats were common in all the areas where there were small or big ponds, small or big dams. The water harvested in the reservoirs recharges the wells.

"Because it uses physical work of animals and men, and works slow, people do not extract water indiscriminately, unlike the modern day water pumps that throws water rapidly at a push of a button. So rehat is even relevant today in the

region," says Dharmendra Tripathi, a drought-activist in Talbehat. While they all use bullocks to run the system, some farmers use camels in Tikamgarh district.

(Next: Ancient NREGS)



■ A farmer irrigating field by using the rehat.

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