



## Community-based water storage structures in the Central Plateau Hill region of Rajasthan

At Kota ( Udaipur district , Rajasthan), community-based water-storage structures (15 in number) were surveyed for their type, status and institutional management arrangements to develop suitable strategies for effective management.

All the ponds were of embankment type and were managed by *Gram Panchayats*, excepting Sukher ka naka and Chalwa, which were managed by recently constituted water-user association (WUA) and *Jal Sangam Samittee*. Catchment area of these ponds ranged from 2 to 15 km<sup>2</sup> while their potential command area varied from 50 to 300 ha. Observed irrigated area under these ponds was reduced by 50% of the potential area (20 to 260 ha) owing to heavy siltation up to 2 metres.

All ponds, except Gopalpura, are utilized mainly for irrigation and for animal drinking. Gopalpura pond was additionally used for fisheries also. Wheat was the main crop irrigated with pond-water. In the time of scarcity of water during *kharif*, maize-crop was also irrigated. The water distribution mechanism in all the ponds was same. *Gram Panchayat* forms a water distribution committee every year prior to *rabi* season which looks after cleaning and repair of distribution channels to stop

leakages, decision on time for releasing water and to resolve any conflicts arising in the process of water-use. Lack of people participation and lack of funds led to poor water-use efficiency and maintenance of these structures. The water-use charges fixed by the *Gram Panchayat/WUA* varied from pond to pond and ranged between ₹67 and 368 per ha.

It was found that all except Chalwa and Bharodi have sufficient capacity to fulfill the requirement of the dependent households if filled fully at least once in a year. The demand of water under different ponds varied from 36,000 to 780,000 m<sup>3</sup> per annum for crop production; and it ranged between 20,271 and 83,431 m<sup>3</sup> per annum for livestock. There is a need to sensitize farming community for organizing water-user groups and associations for management, operation, maintenance, and cost-recovery of water besides removal of nutrient enriched silt from the tank bed in participatory mode to restore storage capacity of these structures.

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