

Kutch's Water Champions In The Making

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Arid Communities and Technologies

It's a warm December afternoon and we are in the dry bed of the Khari River that lies at the north-west of Bhuj town in Kutch. Nawab Lakha is only 19, but he is confident as he offers me a detailed explanation of how the groundwater in the surrounding areas is gradually becoming saline. His hypothesis is that since the irrigation dam nearby has been lined with bentonite the water flow in the river has reduced, and the salinity-causing minerals, which normally would have been washed away, are now getting concentrated in the area, leading to the contamination of groundwater.

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Nawab is one of the five youths that Arid Communities and Technologies (ACT), a Bhuj-based NGO, has trained on water resources management based on geo-hydrological understanding. Geology is typically offered as a Bachelor's or Master's course by various universities across the country, with some even offering a specialisation in hydro-geology. ACT's programme, however, is aimed at creating local para geo-hydrologists or parabs. In Gujarati, the word parab means a water hut or a place on a public road that serves free water to thirsty wayfarers or travellers, especially during summer. Now the same term has been given to the para-workers.

Kutch's arid history is well known. It is associated with water scarcity and frequent droughts. Yet, for more than 500 years, Bhuj grew as an urban centre owing to its traditional water resource management system based on geo-hydrological knowledge. Unfortunately with time, as centralised systems became more popular, indigenous knowledge was gradually lost. The result is that the city is increasingly depending on external sources like Narmada's waters or borewells for its water supply.

So how are these young men getting involved to help the city become self-reliant in its water needs?

To attract local youth, word about the training programme was spread through other NGOs and meetings with the community. The potential candidates were interviewed by ACT, and a local citizens' group working on lake rejuvenation, to gauge their knowledge on water and interest in joining the programme. Finally six *parabs* were selected, none of whom had a college degree.

The parabs underwent a rigorous training schedule, which included a combination of classroom sessions and practical on-ground sessions covering various aspects like an overall understanding of urbanisation, climatic conditions of Kutch and Bhuj like rainfall, drought and other water-influencing parameters, scientific knowledge on geo-hydrology, groundwater and aquifers, watersheds, hydro-logical cycle, water management and so on. The group was also trained for specific skills on water related surveys such as well and surface water inventory, pumping tests, household surveys, map reading, and estimation and budget making.

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Today the [parabs](#) work with local communities to help them understand the science behind groundwater management and develop technical plans to manage their local water resources. Depending on their areas of interest they have taken up various tasks such as monitoring of the water quality and level in about 70 wells across the city, studying the quality of the water in borewells in the vicinity of Khari River and studying the impact of sanitation on the quality of groundwater among other things.

Being locals, the **parabs** are perceived by stakeholders as one among themselves, rather than as experts from outside. In turn, this initiative has satisfied the youths' desire to be a part of community and contribute to its greater good. Some of the **parabs** have restarted their formal education which they had to give up for various reasons. "This training and field experience on groundwater has given me a sense of purpose. I have gained confidence in myself and earned my father's respect. Recently, when my uncle wanted me to join him in his business, I refused because I feel that I am contributing to society through this work, and people also appreciate it. The best thing was that my father also felt that I am doing something useful and he supported my decision," says Nawab. The idea, now, is to make this trained group of youths self-sufficient by establishing a centre through which they provide professional services to the residents of Bhuj or even the Urban Local Body (ULB).

Many urban areas of India are rife with water problems, and there is over-dependence on the government for water supply services. But solutions can still be within arm's reach of the community if they understand and manage their local sources. And local youth, with some amount of training and support can play a significant role in this. What is needed are out-of-the-box ways of informal education and skill building.

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