

Role of the traditional water supply schemes in Poverty Alleviation in Turbat, Baluchistan

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The Context: Water and Poverty in Turbat

The word Turbat¹ literally means grave, in eloquent reference to the difficulties of sustaining lives and communities in one of the poorest and least-developed areas in Pakistan. The area is sparsely populated with only 3 households per sq. km. Only few unpaved roads exist. The climate is extremely hot and arid. The average mid summer temperature rises to over 50 degrees centigrade. Weather conditions are very hard with extreme dryness, sand storms and heat. Rainfall is very low. However, heavy rainfall in March 1998 resulted in flooding and destruction of more than 100 villages. Since then, there has been no rainfall. The water table has fallen to alarming levels. Paradoxically, cyclones and storm surges are a threat in the area.

*Karez*² are a traditional water supply system in Turbat. For thousands of years, the *Karez* met all the community's water needs. In the last 20 years, however, the *karez* supplying water for drinking and agriculture purposes to villages have fallen into disrepair as a result of drought and increasing poverty. Local systems of knowledge and co-operative endeavour, which had previously ensured both a sustainable supply and equitable distribution of water, have gradually been eroded. The funds to pay for repairs are increasingly hard to find, as poverty and drought deplete resources. The relatively less poor have installed tube wells to meet their water needs, but this has made things worse for the very poor, pushing them into abject poverty.

The local agricultural system has suffered greatly from the drought. The most dramatic examples of this are the potential loss of thousands of date palms. These date palms are capable of producing a substantial crop, providing food, jobs and a marketable product. The less dramatic but no less damaging effects of the drought are widespread: it becomes increasingly difficult to sustain agriculture; animals die, and as the water supply dries up, women are forced to make longer and longer journeys for household supplies. As the amount of water is reduced, so is its quality: sickness almost inevitably results as it becomes harder and harder to maintain good sanitation. The things have become progressively more desperate, families have had to migrate in search of water, more women have become responsible for water supplies.

The poor are the most vulnerable to the damaging effects of drought and poverty. The drought exacerbates the existing economic poverty and poverty of livelihood opportunities as productive lands diminish in size, as animal die, as vegetation dies off; as agriculture becomes less and less sustainable. The poor are pushed further into absolute poverty; more people are pushed below the poverty line, and levels of absolute and relative poverty increase.

When the National Rural Support Programme (NRSP) began to hold dialogues with villagers, they repeatedly stressed the need for water as their first priority. NRSP organised the villagers into community organisations (COs) which were able to marshal human and financial resources (including donors' grants) to rehabilitate/extend their *Karez*, so as to enable them to survive the worst effects of drought. When the *Karez* had been restored to

¹ Turbat is the district town of Kech District in Baluchistan.

² A water channel consisting of a series of high elevation 'mother wells' and low level connecting channels. A karez is owned by a group of villagers who build and maintain it. The land irrigated by a karez is distributed in proportion to the investment made by each participant. The irrigation capacity of a karez and the distribution of water rights (=share in irrigated land) are expressed as the area of land which can be irrigated in 12 hours. This is equivalent to an average 10 acres and is divided into sub-units. The water rights are measured in terms of these units and distributed to each farmer according to his share of investment. The head of the karez, the sarishta, is responsible for the maintenance of the karez and the distribution of water. He also mediates water disputes. In the past, a sarishta had a key position in the Balochi system and was a privileged water user.

full capacity, they supplied the community's drinking water and an additional number of 100-150 acres (40-60 hectares) of land per *Karez* were brought under cultivation. The villagers contributed in the costs in the form of labour, materials and some cash. NRSP has been working on the rehabilitation and extension of more than 80 *Karez*. Sufficient water is discharged from a *Karez* to irrigate 15-25 acres (6-10 hectares) in one day. There are more than 400 *Karez* in the Turbat region alone.

NRSP has a base of accurate information concerning its own activities. The proposed case study would build on village-level data and information on water and poverty issues. This is significant in itself, in the absence of reliable Government data about the region. The case study would also contribute information to district and regional level water initiatives such as the Mirani Dam. This project will make an enormous contribution to development of water resources in Turbat.

Objectives of the study

NRSP's initiatives of enabling the organised poor in Turbat to address their water problems are unique achievements and offer an opportunity to understand key aspects of NRSP philosophy of rural development process that is directly targeted at the poor and seeks to reduce poverty through a combination of livelihoods development and reducing vulnerabilities by enhancing the capacity of organised communities and linking them with government line departments and other national and international organisations and channelling of donors' resources in water sector to enhance the resource base of the communities.

The study seeks to build from the existing community level small-scale water resource management practices and to enhance grassroots communities' capabilities as a pre-requisite for sustainability. The objectives of the case study will be:

- To demonstrate how the poor are overcoming their water problems with NRSP support and gaining access to the water resources that help them in improving their livelihoods and reducing vulnerabilities related to water.
- To contribute to the process of policy development through providing a better understanding of the dynamics of livelihoods of poor in Turbat and in particular, the ways that the organised poor respond to the opportunities for their livelihoods improvement with NRSP support.
- To strengthen the advocacy role of the initiatives of NRSP's fostered community organisations when the effects of *Karez* are made evident. The NRSP and the communities can make a good case to the government and to donors for funds to continue and expand the work.

Methodology and Anticipated Findings

The case study will be based on research, project evaluations and narrative accounts of NRSP-implemented interventions at the grass-roots level in Turbat. The study will present an overall picture of rural communities and the way these communities have worked together to reduce poverty and improve their livelihoods through accessing water resources. Water-related infrastructure schemes implemented by the grassroots organisations with NRSP support include drinking water supply, irrigation channels, *karez* extension and rehabilitation, sanitation and drainage and flood protection bunds: all have made a positive impact upon the livelihoods of poor men and women.

The study would interview a range of key stakeholders at grassroots level to find the key drivers of NRSP approach/methodology of targeting poverty and reducing vulnerabilities to

water-related hazards. Based on the results of this, conclusions and recommendations will be drawn that will provide a more comprehensive poverty perspective to the development of Turbat and other parts of Baluchistan.

One of the goals of the study will be to establish a clear understanding of the relationship between water, poverty, gender and the multiple social and economic vulnerabilities faced by the poor in Turbat. The specific roles of grassroots organisations and Pakistan's Rural Support Organisations, as well as the advantages of village-level participatory methods for addressing water and poverty problems will be discussed. These will be linked with the Government's initiatives in water development such as the Mirani Dam.

The case study will establish close links with other NGOs and with Governments departments to replicate the successful aspects of water resource enhancement in other parts of Baluchistan.