



Social setup and karez in Balochistan

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Karez is the most ancient and indigenous source of irrigation in Balochistan. It is a tunnel, which taps subsurface aquifer following the slope of an alluvial fan. Generally Karezes lie below the high hills adjacent to fertile levelled and virgin land. They originate in the pebbly beds and gravel mountains. Karez is a permanent source of water for daily domestic and irrigation purpose.

A mother well is dug to the aquifer at the head of karez system. Maintenance wells are dug, along the length of karez up to daylight point (the point at which water emerges). The course of wells and underground channel is usually straight. Average length of karez is two to three miles.

The province of Balochistan is surrounded by fertile valleys and karezes. The areas are Quetta, Pishin, Zhob, Loralai, Kalat, Nushki, Mekran.

Karez water fulfills a number of community needs both agricultural and non-agricultural. The water from karez is shared by many landowners whose socio-economic conditions very much depends upon regular operation of karez system.

A karez is not only a perennial source of water but an established socio-cultural institution which involves shared expectations and pattern of cooperation and conflicts. It is a pivot around which different activities of community organisation, linked with social status, placement in community and identification of an individual.

Among shareholders, the small landowners who do not have access to alternate source of water (such as tubewells), have high expectations for proper operation of karez system, because their socio-economic conditions are closely associated with it. To improve the livelihood of small shareholders it is necessary to delineate, elaborate and understand the social factors involved in the operation of karez system.

Findings of this study will be useful to irrigation planners and policy makers to intervene the strategies for improvement in karez system.

There has been little sociological research conducted on karez system. This study is both analytical and descriptive and is of explanatory in nature.

Objectives

Fundamental aim of this study is to develop sociological understanding of karez and to describe practical problems in the operation of the system. Significance of this study is obvious because water use in Balochistan has linkage with social aspects of karez system.

The objectives of this study are:

- Management of karez system in Balochistan.
- Tribal affiliations water conflicts.
- Community development and organisation in water use pattern.
- Power relation and leadership pattern among the shareholders.
- Activities of water users.

Research methodology

The major tools of data collection are direct observation, in-depth interviews with key information and group discussion with shareholders.

For historical, technical and administrative descriptions of karezes in the province, the source is Gazetteers of Balochistan and literature listed in References.

Analysis of system

Karezes are owned individually or collectively. Individually owned karezes are operated by single family shareholders whereas collectively owned karezes are operated by different families, clans, tribal groups. Karez water is managed collectively by a single nominee "Waterman" of co-partners or through a committee constituted of few prominent shareholders.

Land on karez is individually as well as jointly owned. This ownership involves brothers, uncles, and nephews. The landowners employ tenants on their lands according to their needs and convenience, on monthly wages or crop share. No uniform pattern of tenancy exists.

The watercourses are not cement lined. The main watercourse is managed collectively where as branches are managed by individual landowners.

Efficient operation of a karez is directly linked with its maintenance and cleanliness. Funds for maintenance are generated through sale of water, irregular grant from the Govt.; or cash contribution by the shareholders.

The inherited share of water is received by shareholders through a cyclic system. The rotation of this cycle depends upon number of shareholders and yield of karez.

Annually a meeting of shareholders is held to discuss the issues of management, maldistribution of water, activities of Waterman, repair of watercourses, funds and cleaning of karez. In meetings, although the power relations are already defined, but the influential shareholders may veto a particular issue, over the wishes of numerical majority.

Manifest and latent disputes, among the shareholders are

prevalent because of mismanagement of irrigation timing, water theft or misappropriation of funds. But they show a strong cooperation and coordination against formation of association of water users, a wish of farmers.

Kinship

Kinship has a significant role in determining share from the karez, water use practice, distribution system, and conflicts among shareholders and many other aspects of karez management. The karezes, which were, in the past, shared by one family or clan, have become involved by members of other tribes, as a result of exogamous marriages. The females are not given their due share, as a general practice. In some instances, a female demands for her due share, under the pressure of her in-laws. This may bring two families into conflict.

The pattern of management of karez system reveals that kinship pressure is a motivating factor in operation of the system. The administration is actually in the hands of few families who are backed by their kin.

This distribution of water is influenced by kinship in the following ways:

- Water is not released to non-community members.
- Non-relative is not permitted to pass watercourses through the land of owners.
- Free water, in the time of emergent need, is supplied to poor kin only.
- Waterman's sympathies to his kin create disturbance in water cycle, during the summer.

The land fragmentation and transference of karez water sometimes weaken the kinship ties and may operate conflicts, which ultimately break the kinship ties.

Community development

The karez water pushed the people of Balochistan to horticulture, which developed a strong inclination among individuals to develop their lands, making best use of karez. Those lands which had been lying barren from centuries became arable and an agrarian economy started to emerge. A few decade before the agriculture economy was totally depended upon supply of karez water.

Agricultural inputs, tenancy and farm labour are the manifestations of karez system. The karez water brings strong agricultural and livestock economic interdependency among community members. Access to karez water results in the development of orchards and expansion of fields as well as growing of fodder to keep livestock at home.

Karez water meets the requirements of daily life and creates tendency towards permanent settlement of population as well.

In places where there is no supply of fresh water, karez is used for drinking and washing of clothes and utensils. This water may also be used for construction of mud clay houses.

Villages, mosques, bazaars are constructed near karezes.

Karez is treated as a common property thus accessible, to non-shareholders equally, for domestic and livestock purposes.

The power relation of shareholders is determined by their economic condition, which has close linkage with karez management.

Community organization

Karez management system plays a significant role in setting up of tribal traditions and community organisation. Normally a large shareholder of karez water is responsible for karez matters. Having ascribed status he has a significant and psychological impact on the community. He keeps close contacts with government functionaries to extract funds for repair and maintenance of karezes. In the karez meeting, his suggestions and decision have a disproportionate weight.

Karez matters are also effected by jealousy and politics among close kin. Sometimes political ideological or economical status of family may segment the kin into groups. Politically influential shareholders have easy access to different agricultural inputs, farm equipment and agricultural extension services where as small shareholders are often deprived.

Conclusions

1. The successful operation of a karez system does not only depend upon its technical and structural arrangements but numerous social factors also play a key role, in this regard. These factors are:
 - (a) Opinions and aspirations of shareholders.
 - (b) Nature of social participation (cooperation and conflicts).
 - (c) Tribal values.
 - (d) Community leadership.
 - (e) Role of Government functionaries.

Clear understanding of these factors can help in setup of a feasible programme for efficient operation of karez.

2. It is clear, even to a casual observer, that karez system is deteriorating. Apart from technical reasons, the cooperation and conflicts among shareholders and other cultural or tribal factors are important causes of its deterioration.
3. With the erosion of traditional authority structure, the formation of a formal organisation of shareholders is becoming essential.

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