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# RESOURCE MANAGEMENT SYSTEMS

## Pressure on Resources

Most people in rural Baluchistan are pastoralists and earn a substantial portion of their livelihood by raising small ruminants. Apart from large flock-owners, almost all rural households own at least a sheep or a goat. The total population of small ruminants has rapidly increased since the mid 1970s. For example, in 1960, the total number of small ruminants was 4.2 million, and this had increased to 7.1 million by 1972. Between 1976 and 1986, the numbers had almost doubled from 9.5 million to 18.4 million (Masood et al. 1988,90). At the same time, the human population has almost doubled (from 2.43 million in 1972 to 4.3 million in 1981) while the percentage of urban population, (in the same period) has increased from 10 per cent to 16 per cent. This has been concurrent with a significant change in the pattern of settlements and the abandonment of the traditional nomadic life-style which, in some cases, has been replaced by seasonal migration. This, in its turn, has led to the construction of new houses and the emergence of new settlements.

These population changes have exerted enormous pressure on resources and led to their rapid depletion. Forests have been felled to meet the insatiable demands for fuel-wood and timber, while Government afforestation programmes are of recent origin and of limited impact. According to official sources, 13,600 hectares were afforested between 1974 and 1986 (Masood et al. 1988, 1).

Ninety three per cent of the land area in Baluchistan is classified as pasture, and, according to one source, 60 per cent of this area is actively used for grazing (ICARDA 1987,8). Farmers complain about the scarcity of pasture for which they blame the lack of rain. However, exploitation of pastures and forests is so excessive that there is no opportunity for regeneration. The entire resource management system is under severe pressure. Administrative changes as well as changes in tenurial arrangements have also contributed to this scarcity (Buzdar 1987).

## Indigenous Resource Management Systems

The tribal system carries with it a considerable degree of authoritarianism and hierarchy within the political unit of each tribe (which often occupies a specified geographic area). In theory, all resources in the area were the common property of the entire tribe. In practice, tribal leaders claimed ownership of the entire resource base, and, during the colonial period, other tribal members were relegated to subject status. Tribal chiefs were the landlords, and land was cultivated by tribesmen who paid taxes to their chiefs. These taxes, commonly known as *shishak* (literally one-sixth), were levied on all cultivators by their chiefs and ranged from one-sixth to one-half of the produce, depending on the classification of land and irrigation arrangements. Several classes of land, e.g. land for the tribal chief, for the household of the tribal chief, for his guests, for his retinue, and for different lineages and their heads, were recognised (Ahmad 1975). This system was endorsed by the State until 1976.

This land tenure system began to change gradually from the mid 1960s, with the creation of revenue records and land settlement in some areas. One important impact of the establishment of revenue records was the government's demand for land revenue. Tribesmen, who were able to

obtain titles to land in the revenue records, were subject to dual taxation; land revenue demanded by the State and *shishak* demanded by the tribal chiefs. These tax demands created conflicts between new, landowning tribesmen and tribal chiefs on the one hand, and between the tribes and the State on the other.

Under the indigenous system, where ownership was vested in the lineage, it was obligatory to pay *shishak* to the tribal chief, and management of land was the responsibility of the entire community. In a limited number of areas, where there was perennial irrigation, the community would decide whether to leave some of the land fallow and cultivate the remainder. Similarly, decisions regarding crop rotation were taken by the community. Both these institutions provided sustainable management of land and subsistence to the community with its optimum population level.

In flood-irrigated areas, maintenance and construction of irrigation dams and canals, construction of drainage canals, and protection from soil erosion were the responsibility of all cultivators. In the flood irrigated areas of Kachhi District, for example, the entire area was cultivated by tenants who were collectively responsible for carrying out maintenance works. Some coercion was also applied, where necessary, to ensure the completion of maintenance works. Gradually, settlement records have been completed and individual ownership of land established. Management of land, in respect to measures adopted for erosion control and maintenance of irrigation works, is still the joint responsibility of cultivators and traditional institutions, led by the principal landlords in each area, are responsible for management of resources.

However, from the mid-1960s, with the establishment of revenue records, all common land and unsurveyed land was declared public property. It was not difficult for the influential tribal gentry, with the collaboration of revenue officials, to impose "enclosure" on common land and obtain its titles, (Ahmed 1975, Buzdar 1987). Consequently the common rangeland dwindled while the number of small ruminants increased enormously.

*Pasture*

All uncultivated land, rangeland, and cultivated land after harvest are designated as pasture. In some parts of Baluchistan, no specific rights of usufruct, or institutional arrangements to maintain pastures, exist. In these areas, all natives and nomads have free access to pasture. According to custom and local convention, wild vegetation is recognised as a gift of nature, and there is no restriction on its use. Cultivated land after harvest is also used as pasture, either by the owners themselves or, when it contains crop residue, on payment by the user. For example, pastoralist tribes of Kalat District migrate to Kachhi District in late autumn to find pasture for their flocks and refuge from the harsh winter. In Kachhi, and in most parts of Kalat District, specific pasture rights do not exist. However, the nomadic life-style of people in Kalat results in the closure of their pastures for about four or five months, and this permits the pasture to regenerate.

However, in other areas of Baluchistan, where pastoralism has been the predominant economic activity, pastures are specified and institutional arrangements for their management also exist. According to Buzdar (1987), among some tribes, the institution of range closure provides for regeneration of pastures. The practice of range closure varies from tribe to tribe and from area to area. In some tribes, the closure period lasts from one to four months, among other tribes it lasts only for a few weeks, and some tribes may not exercise closure periods at all. Where closure is practised, sanctions are applied to enforce it. At the beginning of the closure period, the entire community moves to other areas and returns home at a predetermined time. The institution of range closure and a common property regime for range management still survives in a limited number of areas.

It has been argued that, to achieve an economy of scale in grazing, common property rights over rangeland are economically more efficient than private property rights (Dahlman 1980, Dani 1987, and Buzdar 1987). However, 'common property regime' is a broad term. Empirically, in Baluchistan, it only means ownership by the authoritarian tribal gentry who are able to coerce others into managing the resources and production capacity (Ahmed 1975). The 'common property regime' is effective only at a lower level of the population hierarchy. According to some studies, the optimum level had been exceeded in Baluchistan by the early 1970s (Bhatti 1970, Babar 1973, and Buzdar 1987).

Over-exploitation of commonly owned rangeland is not necessarily the result of the disappearance of institutions for common property management. It can also be seen in relation to the large increase in small ruminants over a relatively short period. The two questions, the removal or weakening of common property management institutions and an extremely large increase in the small ruminant population, cannot be separated. Initially, the rapid increase in the small ruminant population might have occurred due to the weakening of institutions for the common management of rangeland. On the other hand, a rapid increase in flock sizes might have contributed to the weakening and removal of institutions for common property management. These questions are important for Baluchistan and empirical investigations are necessary before arriving at any firm conclusion.

The institutions for common property management in tribal society were able to prevent over-exploitation of rangeland only among the lower echelons of the population and were unable to devise a sustainable resource management system. The indigenous system of resource management still prevails in some parts of Baluchistan, but the institutional structure is unable to help solve the problems caused by small ruminants. Appropriate training and technical assistance can strengthen the capacity of endogenous institutions to manage resources in a sustainable manner. ICARDA is at present experimenting with different types of forage. For the first time, a research programme for the development of pastures is on the agenda.

*Water*

There is an acute shortage of water in a large number of areas. Its proper management can, to some extent, solve the problem of scarcity. *Karez* (underground water channels), springs, rivers, rain, and floods are the major water sources. Specific rights of water users have been established for generations. Most of the perennial water is the property of a tribe, a lineage, or a specified group of users. The user-group is responsible for maintenance of the water source and water course. The institutional structure guarantees access to all legitimate users and provides a mechanism to ensure maintenance work by them. Distribution of water among different users is a settled issue and a *mir-i-aab* (water manager), appointed by the community, is responsible for just distribution of perennial water. In flood irrigated areas, where inundation canals and diversion dams are required, all the cultivators in the area are responsible for maintenance work. Sometimes, in heavy floods, dams are washed away and canals get silted, requiring an enormous amount of work. Water management is the joint responsibility of the villages in these areas and the institutional structure requires all users to participate in rehabilitation work. Absentees from the work are bound to pay labour costs for the work they have not performed.

Drinking water often comes from ponds filled by rain and floods and is consumed by both men and beasts. In times of shortage, its use is restricted to the local community and nomads or seasonal migrants are not allowed to use it for themselves or for their animals. This is largely due to the fact that water shortages force the migration of villagers to other areas.

*Organisational Aspects*

After the legal foundation of the tribal system was abolished in 1976, removing the judicial powers of the *sardars* (tribal chiefs), there was a marked disintegration of traditional institutions and values. Metamorphoses in property relations, organisation of agricultural production, and communications are distinctly visible in some rural areas where the progressive reduction of economic and political dependence on the *sardar* has led to situations conducive to the development of alternative institutional structures. The authoritarian structure is declining, giving way to a new and less centralised power relationship. In this period of transition, broad-based organisational structures can be created and sustained with appropriate external support and assistance. This has created opportunities for projects, such as the ones outlined in Chapter One, to organise and encourage the sustainable management of local resources.

The tribal system provided *sardars* with some control over the tribal levy force. Since they were responsible for maintenance of law and order and administration of justice, tribal chiefs enforced law and order through the control of heads of lineage or smaller kin groups. These lineage heads also paid taxes to their chiefs for parts of their estates. They had influence at the local level but were unable to mediate without the approval of the *sardar*. The abolition of the *sardari* system reduced their dependence on *sardars* and the Government actively supported them to help augment their power. Previously, district administrators only dealt with tribal chiefs but now they deal with local level leaders.

The power of 'local influentials' is indicated by the local government elections in 1983 and 1988. The 1983 elections brought 'local influentials', from some areas of Kachhi district, into conflict with the overlord of the tribal chiefs of Saravan. The conflict resulted in many deaths. Accordingly, in 1988, the local government elections were not held in Kachhi district. Instead, the district administrator negotiated with the 'local influentials' and they "hand picked" councillors for all the union councils.

Disintegration of the tribal system brought another layer of social power, the 'local influentials', into prominence. These are the people who really matter in the villages. Instead of approaching ordinary villagers, the government officials sought cooperation from local power holders. It is the local power holder who can make the visits of an official to the village comfortable. For an official, this amounts to due recognition of his status and acknowledgment of his power. Naturally, the power structure of the village cannot be altered overnight but organisational effort could be directed towards mass mobilisation to make these 'local influentials' more responsive and responsible to the community. This is possible because most of the development schemes (e. g. irrigation works) provide maximum benefit to 'local influentials' who own large shares of the resources in the village, although their benefit to the villagers who earn their livelihood from these resources cannot be underestimated. Benefits are more equally distributed in water supply schemes which reduce the burden of fetching water from long distances and eliminate the need to migrate in search of drinking water.

'Local influentials' have their role in the community, not only because of economic pre-eminence but also due to their linkages with members of their own class and their influence with the local administration. However, the colonial bureaucratic attitude, that treats everyone in the village as lower class, except its landed gentry, should be changed among officials; particularly among those responsible for local government and rural development.[3] Government officials deal only with influential villagers and seek their cooperation in mass mobilisation or in implementing development schemes. This further strengthens the role of 'local influentials' in the community and they remain intermediaries between the villagers and the State. Unfortunately, traditional relationships between the landed gentry and the government officials are still strong and this hampers development of broad based institutions. This is largely due to the fact that the problem of law and order in the countryside is tackled through authoritarian structures.