

Pastoralism and Its Development in Balochistan, Pakistan

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Abstract

Although Pakistan is primarily an agricultural country, many of the rural poor and mountain dwellers rely on animal husbandry for their livelihood. Pastoralists of Balochistan, like other nomadic and semi-nomadic peoples throughout the world, have developed complex strategies to cope with the harsh environments in which they live and raise livestock. However, dwindling range resources and increasing human and livestock populations have strained area rangelands. Although the people of Balochistan were once pure pastoralists, they are now shifting towards agro-pastoral lifestyles. No pure form of pastoralism currently exists in Pakistan, however, with the exception of Afghan nomads who spend their winters in Balochistan and parts of other similar provinces. Likewise, traditional methods of management have become less viable.

In order to sustain life in the mountainous regions of Pakistan such as Balochistan's uplands, it is imperative to devise sound rangeland resource improvement and development models. Advanced technologies should be utilised, as long as they are compatible with social frameworks of the region's pastoralists and agro-pastoralists. In addition to being socially acceptable, such models must also endorse commu-

nity land legislation, particularly when addressing common land pasture management issues.

Pastoralism in Pakistan

Background

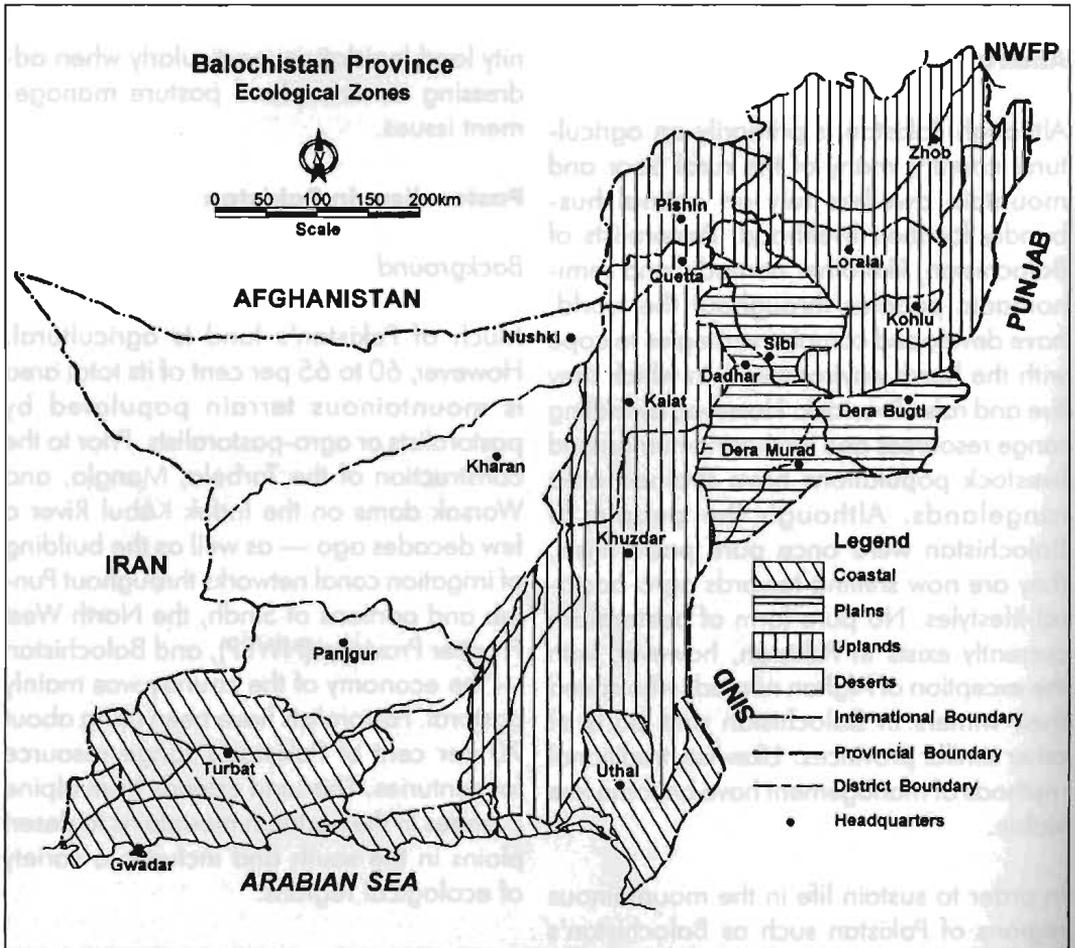
Much of Pakistan's land is agricultural. However, 60 to 65 per cent of its total area is mountainous terrain populated by pastoralists or agro-pastoralists. Prior to the construction of the Tarbela, Mangla, and Warsak dams on the Indus River a few decades ago — as well as the building of irrigation canal networks throughout Punjab and portions of Sindh, the North West Frontier Province (NWFP), and Balochistan — the economy of the country was mainly pastoral. Pastoralists have been using about 70 per cent of Pakistan's range resource for centuries. This land extends from alpine pastures in the northern mountains to desert plains in the south and includes a variety of ecological regions.

Range Resources and Ecology in Balochistan

Balochistan is the largest province of Pakistan, covering about 43 per cent of the country's total area. Balochistan's topography is diverse. Mountains cover 9.6 per cent of the total area, while uplands com-

prise 19 per cent of this region. The rest of Balochistan's geography includes piedmont, deserts, flood plains, and coastal plains. The annual rainfall varies from 50mm in the west to 400mm in the east. Because of its aridity and erratic rainfall, about 93 per cent of the area is considered rangeland. Climatically, the entire province could be divided into four ecological zones: coastal, plains, deserts, and uplands (Map 1).

social and linguistic groups. These pastoralists live in four provinces, including Azad Kashmir and the Northern Areas. Pure pastoralists hardly exist in Balochistan. Only the Afghan nomads who travel from Afghanistan into Balochistan in the winter can be classified as such. These nomads trace traditional migratory routes year after year, entering Balochistan at Chaghai,

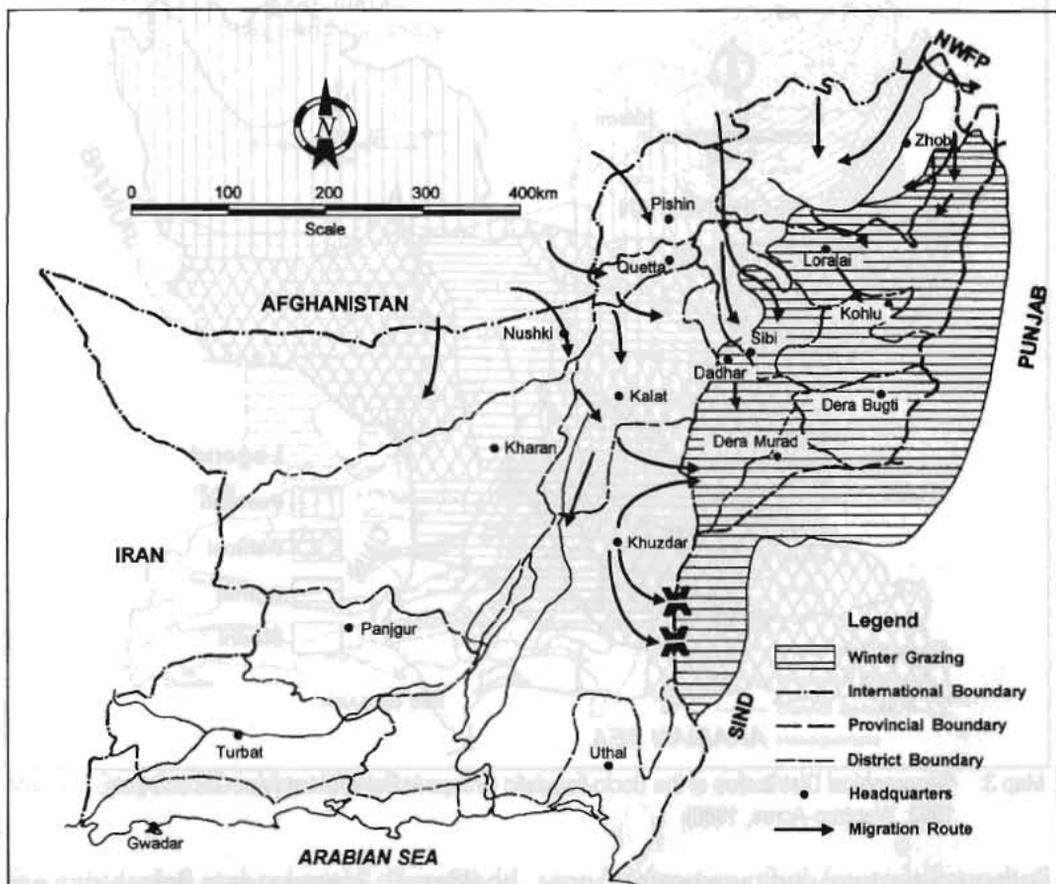


Map 1: Ecological Zonation of Balochistan Province

Major Types of Pastoralists

Pakistan's pastoralists can be grouped into two main types: local pastoralists and non-local pastoralists (*Afghan Pawinda*). Local pastoralists include people from different

Nushki, Quetta, Chaman, Pishin, Qamar Din Karez, and Zhob (Map 2). They then settle throughout the entire province for the winter. Some of these migrants also conduct trade at this time, while others work as hired labourers on Balochistan's or-



Map 2: Migration Routes and Winter Grazing in Balochistan

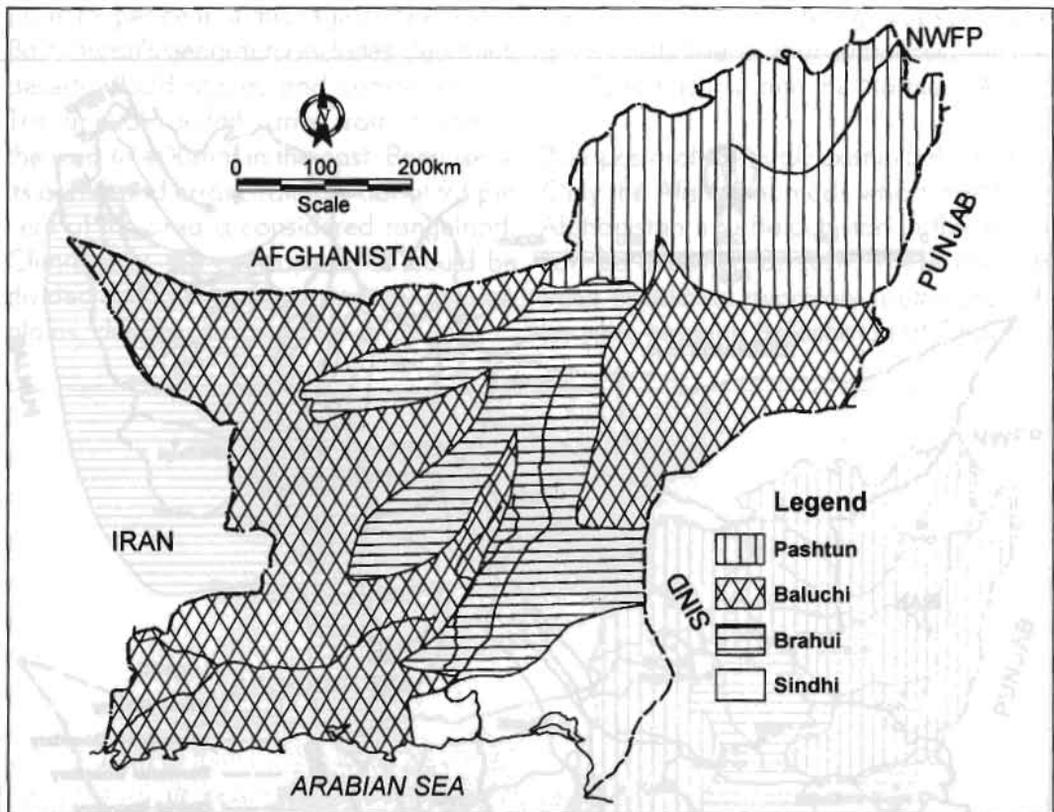
chards and farms and in the cities. Local herders are primarily agro-pastoralists who travel a variety of routes between summer and winter pasture lands.

The indigenous pastoralists of Balochistan are ethnically diverse and composed of three main socio-linguistic groups: Baloch, Brahvi, and Pashtun. Small populations of other groups, such as Sindhi and Siraiki, also exist in Balochistan (Map 3). Each group retains its own traditions and social organization. Yet some mutual transformation among different groups has occurred over time. For example, people who were once pure pastoralists are now agro-pastoralists. Likewise, agro-pastoralists

have shifted towards more sedentary, overwhelmingly agriculturally-based lifestyles.

Pastoral Production Systems

Most local and non-local pastoralists move their herds in accordance with indigenous grassland management policies. These people usually make two major moves a year: from winter to summer pastures and vice versa. Occasionally, pastoralists change pastures every quarter in order to provide their animals with enough fodder — particularly during extreme weather. On the basis of their movement patterns these pastoralists can be divided into nomadic, transhumant, and sedentary herders.



Map 3: Geographical Distribution of the Socio-linguistic Groups in Balochistan (Van Gils and Baig, 1993; Wardrop-Acres, 1989)

Both agro-pastoral and pure pastoral production systems operate in Pakistan. In the latter production system, 50 per cent or more of a household's gross revenue comes from livestock or livestock oriented activities. Agro-pastoralists, on the other hand, earn more than 50 per cent of their livelihood from agricultural activities, while 10-15 per cent comes from animal husbandry. Agro-pastoralists can be further divided into those who irrigate fields and those who depend on rain to water their crops.

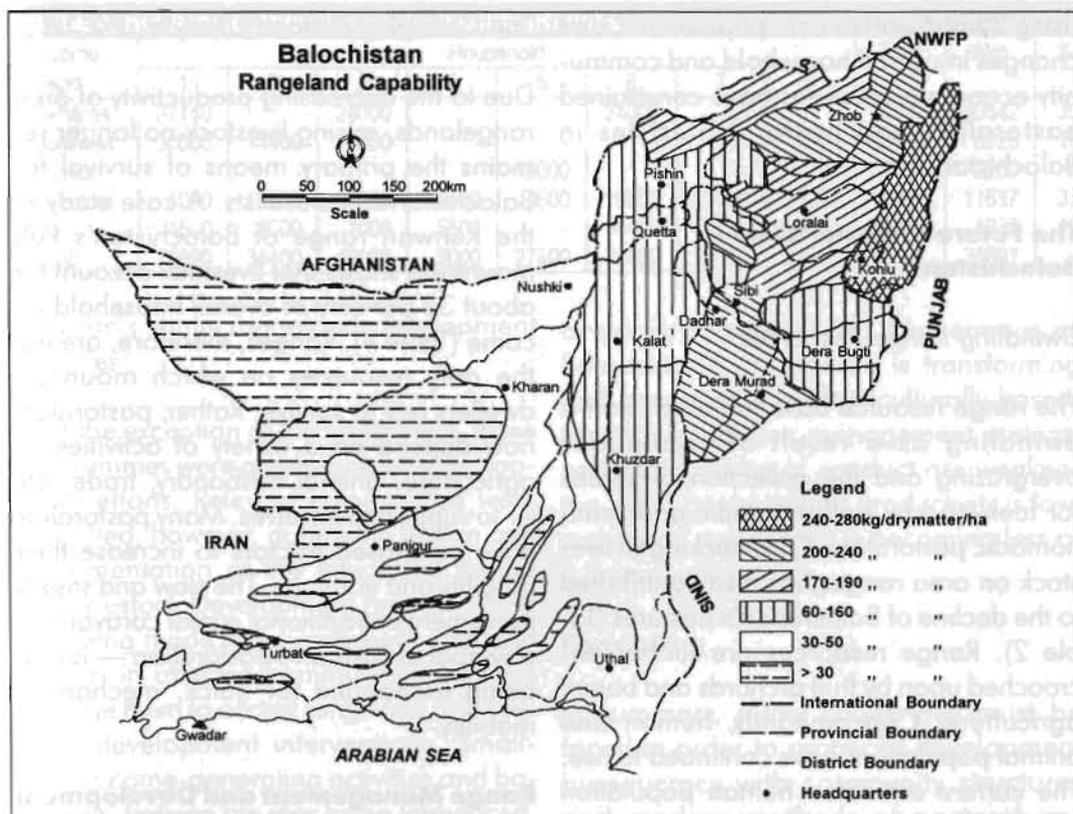
Rangeland Capability

Balochistan's rangelands can be classified into one to six capability classes. Grassland productivity ranges from 280 kg/dry matter/ha to less than 30 kg/dry matter/

ha (Map 4). Rangelands in Balochistan are continuously grazed and commonly owned by area pastoralists. As such, the 'tragedy of the commons' may apply to this area. Potential production is approximately three times current production levels. Although resources are available, the means of improving the potential of the resource base's potential is needed (Table 1).

Survival Strategies

The pastoralists and agro-pastoralists of Balochistan rely on many coping strategies to exist in their high mountain environments. Such strategies include herd mobility, moisture security, livelihood linked with overall biomass availability, diversification of pastoral activities, flexibility, and collective sustenance.



Map 4: Rangeland Capability of Balochistan

The pastoralists use a variety of methods to actualise the above strategies. Combining agricultural and pastoral activities helps secure and strengthen the local economic base. Herders also practice folk agronomy, planting a variety of crops with different maturation cycles. Ethno-engineering and indigenous agroforestry practices (shelter belts, crop bush fallow rotation, etc) are also used to secure local livelihood. Traditional credit and other community-based

support structures further aids pastoralists of Balochistan.

When range resources are productive and human and livestock populations remain low, pastoral norms stay intact. Traditional pastoral strategies work well. Even today, under more challenging environmental conditions, many indigenous pasture management practices are viable. However, the increasing amount of degraded pasture,

Table 1. Estimated Annual Forage Production from the Rangelands of Balochistan

Rangeland	Area (m.h)	Current Production		Improvement Potential	
		DM (t/h)	Total DM (mt)	DM (t/h)	Total DM (mt)
Central Balochistan	8.00	0.5	4.00	1.00	8.00
Eastern Balochistan Range	5.00	0.4	2.00	1.50	7.50
Western Balochistan Range	18.50	0.3	5.55	0.80	14.80
Suliman Mountain Range	1.50	0.3	0.45	2.00	3.00
Total	33.00		12.00		33.30

rising human and animal populations, and changes in overall household and community economic structures have constrained pastoralists and pastoral lifestyles in Balochistan.

The Future of Pastoralism in Balochistan

Dwindling Range Resources

The range resource base in Balochistan is dwindling as a result of continuous overgrazing and the collection of shrubs for fuelwood by both nomadic and semi-nomadic pastoralists. Overstocking of livestock on area ranges has also contributed to the decline of Balochistan's pastures (Table 2). Range resources are further encroached upon by fruit orchards and *barani* agriculture. Concomitantly, human and animal populations have continued to rise. The current estimated human population is 6.7 million; livestock total 11.25 million head (Table 3). All of these factors are contributing to the desertification of Balochistan's ranges.

Table 2: Stocking Rate of Balochistan Rangeland Area

Year	Total Ran. Ar. ('000 ha)	Population ('000)	E/E (000)	ha/EE
1972	22,500	7,977	11,567	1.9
1980	22,500	7,945	13,032	1.7
1983	22,500	8,240	15,232	1.5
1996	22,500	8,240	18,053	1.2

FAO 1983/84

The overstocking since 1972 to date has increased by about 36%.

The Changing Pastoral Lifestyle

Due to the decreasing productivity of area rangelands, raising livestock no longer remains the primary means of survival for Balochistan's pastoralists. A case study in the Kenwari range of Balochistan's Pub mountains shows that livestock account for about 33 per cent of overall household income (Table 4). Ranges, therefore, are not the only resources on which mountain dwellers rely to survive. Rather, pastoralists now depend on a variety of activities — agriculture, animal husbandry, trade, etc — to support themselves. Many pastoralists have purchased tractors to increase their mobility and earnings. The slow and steady movement of traditional camel caravans — a symbol of Pakistan's pastoralism — is now being exchanged for quick, mechanical mobility.

Range Management and Development

Rangeland Development Approaches

Until recently, rangeland development in Balochistan has been confined to government forests and rangelands. Not only have rangeland users had little or no involvement in the planning or executing of these activities, but such programmes have been rarely introduced. The Maslakh Rangelands Development project (1954-1965); the 'Assistance to Rangeland and Livestock Development Survey', UNDP/FAO (1983-84); and the Integrated Range and Livestock Development Project, UNDP/FAO (1992-97) comprise

Table 3. Balochistan Livestock Projected Population 1996 (base year 1983 FAO Report 1983/84)

Livestock (all species)	Base year						E/E
	1983	1988	1993	1994	1995	1996	
Local	8,034	8,652	9,097	9,204	9,290	9,388	1,531
Refugees	1,554	1,654	773	1,803	1,834	1,867	2,922
Total	9,588	10,306	9,870	11,007	10,124	11,255	18,053

Table 4. Household Annual Average Income (Rupees)

Income Head	Household								Total	Avg	%
	1	2	3	4	5	6	7	8			
Services	37140	-	24000	-	-	24000	-	-	85140	10642	30
Business	30000	14400	11000	-	-	-	-	-	55400	6925	19
Labour	-	-	-	-	18000	-	-	-	18000	2250	6
Livestock	4000	12000	12000	3500	9600	10000	22000	20000	93100	11637	33
Agri.	4500	8000	1000	5500	-	4400	-	10500	33900	4237	12
Total	75690	34400	48000	9000	27600	38400	22000	30500		35691	

Pakistan's main rangeland development activities.

With the exception of the last project, these programmes were purely bureaucratic, top-down efforts. Relevant communities were consulted, however, during the design and implementation of the Integrated Range and Livestock Development Project. Efforts are being made to educate both men and women in affected communities and encourage them to accept rangeland and livestock development interventions. Small-scale income-generating activities and basic skills' training are also being introduced.

Range Management and Traditional Pastoral Lifestyles

Although simply involving local pastoralists in decision-making processes of development projects is highly beneficial, other complications arise when trying to reconcile traditional lifestyles with modern development techniques and expectations. Rangelands are common property with no single owner or user. This creates problems for development workers, as the uses and limitations of community land are not specifically addressed by local legislation. Quite often, it is difficult to implement mutually agreed upon projects that rely on communal property.

As pastoral communities often are uneducated, collective community losses and the value of common resources are not easily

or quickly comprehended. Furthermore, as Balochistan's pastoralism is transforming and becoming more agriculturally-based, traditional pasture management systems and social codes of conduct are weakening. Also, as rangeland productivity is low, preserving rangelands is becoming less of a community priority.

Conclusion

In summary, many challenges must be faced in order to reconcile development bureaucracy with community structures and modern methods of pastoral improvement with traditional management systems. During this transitional stage of pastoralism and agro-pastoralism in Pakistan, natural resources, such as rangelands, suffer greatly. Efforts must be made to bridge cultural, practical, and ideological differences in order to improve and sustain quality pastoralism in Balochistan.

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Year	Total Area (000 ha)	Protected Area (000 ha)	Percentage (%)
1972	22,500	7,577	33.7
1980	22,500	7,546	33.5
1983	22,500	8,290	36.8
1985	22,522	8,290	36.8

Table 1. Protected area in Balochistan, 1972-1985. Source: National Range Management Committee, 1973; Forest Department, 1980; Working Paper PAK/88/07, Project PAK/88/07.

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