

CHAPTER 10

TRADITIONAL DRYLAND RESOURCE MANAGEMENT SYSTEMS IN SYRIA: CONSTRUCTION OR REALITY?

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INTRODUCTION

Recurrent failures in dryland development policies have led to a growing recognition that profound changes are urgently needed in development strategies. Technocratic biases associated with the general lack of understanding of the social and cultural basis of dryland societies are considered a major cause of the unsatisfactory results of past programmes (Bonfiglioli, 1992; Livingstone, 1985). Sedentarization programmes for nomadic populations, land alienation and land-use regulations imposed on agro-pastoralists have often been justified by viewing dryland societies as inefficient and destructive to the environment. The wide adoption of these negative stereotypes, which are now largely recognized as misconceptions, is related to their political utility. Indeed, negative images of dryland societies served to justify state interventions primarily aimed at strengthening the control of government administration over populations generally perceived as politically unreliable (Bocco, 1993a).

In the 1960s and 1970s international agencies supported, with pseudo-scientific data, dryland 'development' strategies of the new independent states. The 1977 UN Desertification Conference recognized the holistic character of the problem. One main hypothesis on which the 1977 Plan for Action was based was that the technology to combat desertification was already available. The Plan emphasized the need for technology transfer while the socio-economic and political aspects related to dryland resource depletion were under-estimated (ICIHI, 1986).

The Rio Conference has marked a change in the discourse of international agencies. Agenda 21 stressed both the need for active participation of local populations in the design, and implementation of dryland programmes and the potential of endogenous knowledge and traditional resource allocation systems. The Desertification Convention is building on the gains of Agenda 21, recommending specific recognition of the value of traditional knowledge and traditional resource allocation mechanisms when developing anti-desertification measures (Ledgar, 1994).

The blame for desertification has shifted from local populations to inappropriate government policies, that are now held responsible for the weakening of traditional systems which regulated the 'harmonious' relationship between dryland societies and their physical environment. We are far from the 'Tragedy of the Commons' theory which holds that sustainable use of pastoral resources cannot be achieved under common property (Hardin, 1968). The rehabilitation of traditional systems, largely based on common property, as a means to promote participation and sustainable resource utilization has become an important component of the new dominant theory. The latter is not without backing as several studies, mainly in Sub-Saharan Africa, have demonstrated the effectiveness of certain traditional pastoral management systems (Swift, 1988). Nonetheless, considering the extreme economic and social diversity of pastoral and agro-pastoral systems and the complexity of state apparatus, the rapid generalization of the new approach raises questions.

The case of Syria is of particular interest for the rehabilitation of traditional management systems. The country was the first in the region to initiate a large sheep and range management programme based on the revival of the ancient Arab pastoral management system known as *Hema*. Although participation was remarkably high – over 90 percent of the families utilizing the range joined the programme – the range management component of the project was the least successful. The aim of this paper is to discuss several biases which affected the design and implementation of the project, focusing in particular on the effects of state interventions on traditional systems and the apparent consensus between experts, government institutions and agro-pastoralists.

A new strategy inspired by the *Hema* system was discussed in a recent workshop on 'Pastoral Communities in the Near East'. Recommendations stressed the need for active participation and the potential of communal range management in order to reverse the alarming degradation of steppe areas. While such conclusions are appealing, to what extent do they relate to reality?

SETTLEMENT, AGRARIAN CAPITALISM AND LAND REFORM

State interventions have played a major role in the transformation of agro-pastoral systems and the control of resources. Advocates of the rehabilitation of traditional systems argue that, prior to state intervention, the *Hema* system regulated an 'harmonious' land/man relationship. More precisely, the alienation of tribal land through the application of land reform regulations in the late 1950s is considered as the main factor causing the disappearance of the traditional system of rangeland management that had been based on the tribal organization of Bedouin society (Masri, 1991). This issue is of importance as it shifts the responsibility for land degradation on to the state, therefore legitimizing the restoration of tribal rights.

The facts show a rather more complex picture. Briant (1982) has studied the long history of permanent interaction between states and nomadic populations in the ancient Near-East. Since their emergence, relations between states and nomads have been characterized by either conflict or alliance. Government strategies under the Ottoman and French administrations were in line with those of their predecessors. They alternated coercive interventions with measures strengthening the political and economic power of Bedouin sheikhs.

The current movement towards sedentarization in the semi-arid and arid areas began in the mid 1800s. Some areas were previously cultivated only to be abandoned later by sedentary populations (Lewis, 1955, 1987). The sedentarization of nomads at the end of the nineteenth century was closely linked to the active policy pursued by the Ottoman authorities (Lewis, 1987). State intervention was primarily aimed at fortifying the 'desert frontier' and strengthening the authority of the government in areas that largely escaped its control. The reinforcement of the Ottoman army was followed by large expeditions against Bedouin tribes. After a few years, however, the Ottoman administration adopted a conciliatory policy of alliance with certain Bedouin sheikhs. Sedentarization policies were pursued through measures such as the supply of seed and implements and the allocation of land. The principles of land vivification were integrated in the Ottoman Code of 1858. Rangelands were considered as 'dead land' (*mawat*) and as such were part of the state domain. According to the Ottoman classification, they could be acquired after five years of cultivation (Bocco, 1987).

However, sedentarization was generally only partial. For a long time, the first villages to be settled, to the south-east of Aleppo, were merely groupings of tents. Permanent dwellings, the 'sugar loaf' cones characteristic of the Aleppo region, only became common in the 1930s. Until the end of the 1950s, cultivators used very extensive farming methods and herds remained more than six months in the steppe. Fallows still covered more than 50 percent of the cultivable area. Wheat, which constitutes the basic diet of the local population together with milk products, was the major crop planted while barley took up only about 10 percent of the land given over to cereal cultivation (Jaubert and Oglah, 1985).

Until the end of the 1940s sedentarization and the extension of cultivation in the dry areas advanced relatively slowly and were limited to a push westwards along the Damascus–Aleppo axis. Indeed, during the French mandatory period, sedentarization projects were limited to small irrigated schemes in the Orontes and Euphrates valleys (Velud, 1993). Hamidé (1959) notes that 'the officers in the Bedouin Control Force were guided by the idea that the Bedouin is firmly attached to a wandering life and considers working on the land to be degrading'. The mandatory authorities attempted a consolidation of their position through a strategy of alliance with nomadic tribes, in particular with their sheikhs. French authorities accorded the

Bedouins a considerable degree of autonomy and strengthened the political power of the sheikhs. Nationalist leaders accused the French of using the Bedouin tribes against the nationalist movement (Mahhouk, 1956). The autonomy accorded to Bedouin sheikhs was legalized by the Bedouin law promulgated in 1940. This defined a desert line beyond which the French authorities recognized the independence of sheikhs in conducting tribal affairs. The role of the state was limited in the 'desert zone' to the maintenance of public security. The most important change introduced by the law was related to land tenure. According to the Ottoman Code and the land tenure legislation of the French administration, uncultivated areas were classified as state domain. The 1940 Bedouin law permitted grants of uncultivated land, and large grants were made to sheikhs in the north-east of the Jezira (Lewis, 1987).

Although its application was suspended in 1941, the law opened the door to a possible recognition of tribal rights. The control of almost all the areas that could produce cereals gave the sheikhs considerable economic power by the beginning of World War II. The sharp rise in grain prices during the war and the establishment by the Allies of a crop-purchasing bureau stimulated the rapid expansion of cultivation and the emergence of agrarian capitalism in the dry areas of Syria. Within a few years several tens of thousands of hectares were ploughed, particularly in the Jezira plains between the Turkish border and the Euphrates River. By the end of the 1950s, most of the rangelands in the semi-arid zones (annual rainfall between 350 and 200 mm) had disappeared, replaced by cereal crops. Bedouin sheikhs established large estates, often in partnership with private entrepreneurs. The latter, generally merchants from Aleppo who had bought stocks of agricultural machinery, financed the cultivation of the new areas. They carried out all stages of the operation, from cultivation to harvesting of the crops. The largest entrepreneurs had individual plots covering several thousands of hectares (Hannoyer, 1980). The Bedouin sheikhs received a share of 20 to 30 percent of the harvested grain, as well as the straw and stubble left on the fields.

Profound changes in the economic activities of the great camel-owning tribes were occurring at this time. The increasing use of motorized transportation effectively accelerated the decline in caravan traffic – a decline that had already begun in the 1930s – and camel-herding virtually disappeared. 'By the end of the decade their (sheikhs) interest had diverged from those of nomads and had become those of sedentary landowners rather than of Bedouin sheikhs' (Lewis, 1987: p. 160).

This period was marked by profound changes in Bedouin society. The penetration of capitalism undermined the legitimacy of tribal sheikhs, traditional tribal solidarity ceded place to a landowner/share-cropper relationship based on capitalist norms of profit (Hinnebush, 1989; Khalaf, 1981, 1993). Alienation of tribal land by the sheikhs generated considerable

resentment among tribe members who were pushed out of their grazing areas. Cereal cultivation spread at the expense of the best pasture lands. The greater availability of water, due to the use of water tanks that could be hauled by tractors or mounted on trucks, reduced the constraints linked to water shortages. It became technically possible to exploit areas of the steppe south of the Euphrates that had formerly been difficult for sheep because of a lack of water. However, the range in these areas was of a much lower quality. The receding of the range forced many families that could not afford the necessary equipment – water tanks and trucks – to settle as share-croppers.

With independence came a gradual change of policy towards the nomadic population. One objective of the first nationalist government was to abolish all privileges accorded to the Bedouin sheikhs by the French authorities. The Agrarian Reform laws of 1951 also called for the expropriation of the large estates granted during the mandatory period. Bedouin sheikhs, Members of Parliament, together with landlords and rich merchants, were part of the opposition forces. Furthermore, because of their past alliance with the French and their relations with Arab monarchist regimes, they were perceived as enemies.

Tribe members, in particular share-croppers and landless labourers, were considered as potential allies of the new nationalist regime. The allegiance of tribe members to their sheikhs had weakened during the agricultural boom. Nonetheless, nomads moving to neighbouring countries were a potential prey to external political influence. In 1947 the Ba'ath Party called specifically for the settling of the Bedouin (Seurat, 1980)¹. The goal of sedentarization of all nomads was explicitly expressed in the Syrian constitutions of 1950 and 1953 (Lewis, 1987). However, the 1953 and 1956 new Bedouin laws largely preserved both their independence and the political power of the sheikhs, although they were no longer appointed by the authorities and had to be elected by the sub-sheikhs of their tribe. Mahhouk (1956) reports that in 1954, one sheikh from the Euphrates district failed to obtain the majority of votes. This, however, was an exception. Land reform laws ran up against opposition from large landowners and the sheikhs still strongly represented in Parliament and were therefore not enforced. Furthermore, the instability and political divisiveness characterizing the 1950s hampered any effective implementation of a national economic development policy (Hopwood, 1988). A special development budget approved in 1955 allocated 10 million Syrian pounds to a

1 Article 43 of the constitution of the Ba'ath Party stipulates: 'Le nomadisme est un état social primitif. Il affaiblit la production nationale et fait d'une partie importante de la nation un membre paralysé et une entrave à son développement et à son progrès. Le parti lutte pour la sédentarisation des nomades en leur attribuant des terres, pour l'abolition des règles tribales et pour l'application aux nomades des droits de l'Etat' (Seurat, 1980).

seven-year sedentarization programme (Mahhouk, 1956), but the programme was largely ineffective.

Political unification of Syria and Egypt within the United Arab Republic marked a turning point in economic and social policies. One result was the abrogation of the special legal privileges enjoyed by the Bedouin and the end of the political power of sheikhs. They were not able to oppose the agrarian reform laws which began to be applied in 1958, a process that was to intensify when the Ba'ath Party came to power in 1963. Most sheikhs lost their estates and many fled to Iraq, Kuwait or Saudi Arabia in the early 1960s.

The notion of tribal land alienation through land reform needs to be examined in more detail. West of the desert line, where sedentarization began during the Ottoman period, farmers generally owned the land they cultivated (Jaubert, 1987). In a majority of cases the land had been acquired before land reform during the Ottoman or the French mandatory period. Large holdings owned in these areas by Bedouin sheikhs or urban merchants were confiscated during land reform and 55 percent of this land was redistributed to former share-croppers and landless labourers (Lewis, 1987).

East of the 1940 desert line most of the land is state-owned (Jaubert, 1987). Estates established by Bedouin sheikhs were confiscated and reintegrated into the state domain. Members of the tribes did not benefit from land distribution, but state land was granted under long leases to former share-croppers. In the mid-1980s, the average size of holdings was more than 100 ha in most areas (Jaubert, 1987). Only a few estates had been divided amongst tribe members before land reform and thus escaped confiscation.

Uncultivated areas were classified as state land. In this respect, land reform brought no significant change compared to the Ottoman Code and the French land tenure legislation. The controversy surrounding the effects of land reform relates to the confiscation of uncultivated reserves considered to be the remains of the ancient *Hema* system of range management². Draz (1969), in his study of the *Hema* systems of range reserves in the Arabian peninsula, indicated that range reserves confiscated under land reform regulation were rapidly depleted. However, these were small sites located mainly along the Lebanese border. The steppe areas used by nomadic flocks were considered as open access grazing (Bocco, 1987). The low livestock/land ratio in the 1940s and 1950s was directly linked to the harsh conditions prevailing in the steppe areas. Water shortages and drought conditions that periodically decimated the herds reduced the pressure on the range (Tleimat, 1991).

THE SHEEP AND RANGE PROGRAMME – FROM RESOURCE CONSERVATION TO INCREASING PRODUCTION

The early 1960s were marked by a clear change in agricultural policies. The main aim of the new policies was to reduce the increasing agricultural deficit

of the country. The authorities adopted an import substitution strategy, by concentrating efforts on wheat, milk products and sugar. The main focus for the authorities became the development of irrigated agriculture. The government adopted the plan proposed several years earlier by The World Bank (IBRD, 1955; Métral, F., 1980). In the early stages, efforts concentrated on small-scale irrigation schemes such as the Ghab project in the Orontes valley, and after 1976 the Euphrates Valley project. After having played an important part in increasing agricultural production in the 1950s, the dry rained areas were relegated to the bottom of the scale of state priorities.

The risk of degradation of the steppe and the dry cultivated zones was well-known, however, and during a ten-year period the Ministry of Agriculture tried to limit the pressure on these areas and to improve the management of rangelands. In 1964, with the help of the World Food Programme, the Ministry initiated a project to stabilize and develop nomadic sheep herding. The project was based on the creation of range co-operatives whose function was to distribute feed and organize the use of rangelands. It had at its disposal US\$4.5 million earmarked for loans to build warehouses and buy supplemental feed. The establishment of a feed supply system had the dual objective of (a) reducing grazing on the steppe in order to allow regeneration of its natural vegetal cover, and of (b) alleviating food shortages during periods of drought. The export of fodder and concentrates used to feed livestock was outlawed at the beginning of the 1970s.

The first herding co-operative was established in 1968. Each co-operative was responsible for a specific territory where grazing rights were restricted to members. This part of the plan was presented as a reintroduction of the

- 2 The origin of the *Hema* concept dates from the pre-Islamic era. *Hema* (or *Ahmia* or *Mahmia*) referred to restricted access grazing sites. Often placed under the protection of tribal divinities, they were used as reserves to buffer feed shortages (Chelhod, 1975).

The Prophet Muhammad took over several pre-Islamic tribal *Ahmia* to secure grazing for the herds of the armies of Islam. The concept of *Ahmia* as grazing reserves is recognized by Islamic law. However, the definition and status of tribal *Ahmia* remain vague in the Shari'ah (Shoup, 1990). The concept is subject to loose interpretation. For example, Draz (1969) defines five types of *Ahmia*:

- (1) Animal grazing is prohibited but the cutting of grass is allowed during certain times.
- (2) Grazing and cutting is permitted only during certain seasons.
- (3) Grazing is allowed the year round, the kind and number of animals being specified.
- (4) The reserve is kept for beekeeping.
- (5) The reserve aims to protect forest trees.

Masri (1991) cites the 'security *Hema*' (mined areas) along the Iraqi and Jordanian borders.

traditional system of collective management of rangelands and followed the recommendations of Omar Draz (1969). Herding co-operatives were seconded by co-operatives to fatten lambs for the market, the objective being to restrict access to the steppe to ewes and lambs needed for restocking the herds. Between 1968 and 1973, 46 herding co-operatives and 15 fattening co-operatives were set up.

The creation of co-operatives was backed by a law passed in 1970 outlawing rainfed cultivation in areas where annual rainfall was under 200 mm. More specifically, the law limited cultivation to 10 ha, for each family that had cultivated in this zone prior to 20 July 1970. In fact, the role of the co-operatives was restricted to the distribution of supplemental feed and the supply of credit. At the end of the first phase of the project in 1973, no significant measure had been enacted to control grazing and to protect the range (FAO, 1984).

The second phase, funded by The World Bank, was a continuation of the World Food Programme's project. Its objectives were to establish 14 herding and 15 lamb fattening co-operatives and to increase the production of forage shrubs such as *Atriplex*. In fact, the project concentrated exclusively on supplying supplemental feed. A fund created for this purpose received a further allocation of US\$11.5 million and the General Organization for Feed (GOF) was set up in 1974. The GOF was responsible for supplying the co-operatives and was to keep a permanent reserve of feed sufficient to cover animal needs for a three-month period in case of drought (FAO, 1984).

The quantities of feed distributed by the co-operatives vastly exceeded the objectives that had been set by The World Bank. In fact, the quantities absorbed by the herding and fattening co-operatives between 1980 and 1983 were between 70 and 360 percent in excess of forecasts (FAO, 1984). The supplemental feed distributed by co-operatives was highly subsidized: between 1978 and 1984 its cost was between 20 and 50 percent below market prices (Nygaard *et al.*, 1982; Jaubert and Oglah, 1985). The number of herding co-operatives increased rapidly, from 117 in 1979 to 310 in 1984 (Masri, 1991).

At the beginning of the 1960s steppe range still supplied 70 percent of the herds' food requirements, but this proportion had fallen to 20 percent by the early 1980s (FAO, 1984; Thomson *et al.*, 1989). The massive use of concentrates also led to a rapid increase in sheep numbers, going from 6 million in 1974 to 13 million in 1988. As an estimated 75 percent of the sheep grazed part of the time in the steppe, this growth in numbers accelerated the deterioration of the range.

The provision of supplemental feed allowed for a continuous expansion in mutton supplies at a time when market conditions were especially favourable. From 1974, the effects of a growing population and higher income levels combined to increase domestic demand for meat. External demand,

particularly from the Gulf countries, also rose rapidly (Kaldi, 1984). Saudi imports of live sheep, valued in 1974 at US\$30 million, rose to US\$300 million by the end of the 1980s, according to FAO figures. The market for locally-bred Awassi sheep also benefitted from a relatively protected status since this meat is preferred by regional consumers. Neither chicken, which had seen a significant boost in production, nor imported mutton were able to compete in quality. According to FAO figures, the share of live sheep sales in Syria's agricultural exports rose in value from under one percent in 1976 to nearly 40 percent of the total in the late 1980s (Jaubert, 1993a). Sheep thus became the major agricultural export, surpassing cotton in certain years.

The programme was designed by a forage and pasture expert. It was adopted and implemented by the authorities and it benefited from the financial support of The World Bank. Ninety percent of the concerned population joined the programme. Compared to most pastoral projects, the programme benefited from extremely favourable economic conditions. With such a large consensus and favourable economic circumstances, all assets were gathered to fulfil the objectives of the programme. The consensus, however, was only apparent: the experts, the authorities and the Bedouin were pursuing diverging objectives.

The reintroduction of the traditional system led to controversy. Draz's (1969) recommendations had been based on observations made in Saudi Arabia. The few examples of rangeland control he noted in Syria were not located in the steppe areas grazed by nomadic flocks, but along the Syrian-Lebanese border and in an area west of Homs. Draz did not claim that the *Hema* system was, or had been practised, in the steppe areas. He only argued that the system of collective range management he observed **might** be applicable to other areas as a means to protect the range.

The acceptance by the authorities in the mid-1960s of a programme recognizing tribal organization might seem surprising. Shoup (1990: p.200) argues that 'the concept of community property was appealing to the socialist nature of the Ba'ath Party's ideology, and the fact that *Hema* was an example of Arab socialism overshadowed its tribal origins'. The acceptance of Draz's proposal relied more on political considerations than on the aim of reversing the overgrazing of the range. Lewis (1987) notes, however, that the project did not receive full acceptance. Certain members of the administration and/or the party perceived the revival of the *Hema* system as retrogressive. Little is known about internal decision-making processes and possible political tensions related to the project. However, range co-operatives were given neither legal nor material means to control access to the steppe. It is also interesting to note that in 1974 the project, which was under the responsibility of the Ministry of Agriculture, passed into the control of the Peasants' Union, an organ of the Party in the rural areas (Masri, 1991).

Herders who massively joined the project had probably less interest in Arab socialism and the preservation of the steppe than in the supply of feed at subsidized prices. The plantation of *Atriplex* shrubs had very limited success and when possible Bedouin chose to grow barley. Furthermore, the law prohibiting cultivation in the steppe was fairly ineffective. Studies made in the early 1980s of two villages in the 150–200 mm rainfall zone in Aleppo province showed that nearly 70 percent of the villagers' land was illegally cultivated (Thomson *et al.*, 1989). According to other studies, the law was similarly ignored in the Raqqa region (Hannoyer and Thieck, 1984). A few attempts to apply the restriction took place in the Aleppo province in 1983 and 1984, the result being that a few tractors were confiscated and sowing was delayed. Surfaces cultivated illegally between 1980 and 1985 have been estimated at between 200 000 and 700 000 ha, according to the year (Masri, 1991).

Pressure on the arid zones intensified suddenly in 1987 in the wake of a decree allowing cultivation in zones with average rainfall of under 200 mm. Permission to cultivate was accorded only in the autumn, following exceptionally heavy early rains which promised a good rainy season. This encouraged many farmers or herders to try their luck at cultivation (Métral, F., 1993). The ploughing of nearly one million hectares could not have been possible without heavy logistical support, and the authorities permitted imports of both agricultural machinery and seeds. In some regions, the equipment of state farms on irrigation projects was also used.

IS RANGE MANAGEMENT A KEY ISSUE?

The unprecedented rise in the sheep population and the expansion of cultivation in arid areas has led to a drastic reduction and depletion of vegetation in the steppe areas. The degradation of the rangelands is of growing concern to international agencies. There are also signs that the authorities, at the national level, have recognized the problem. For example, in 1991 the Syrian Ministry of Agriculture amended the decree permitting cultivation in areas below 200 mm of annual rainfall, in order to limit the expansion of cultivation (Leybourne, 1993)³.

Range degradation was the central theme of the FAO/CARDNE workshop on Pastoral Communities in the Near East, held in Amman in 1991. Among the ten key issues of the workshop, seven are directly related to range depletion and/or management (the remaining three focus on the political power of pastoralists, the relations between pastoralists and agriculturists and

3 Decree 17 of 1992 was passed in order to gradually prohibit unirrigated cultivation in steppe areas, with the intention of replanting with fodder shrubs all land not covered by a licence.

the use of concentrates and forage crops) (FAO, 1991). The workshop recommendations are in line with those of the Rio Conference and the Desertification Convention. They stress the need for:

- (1) range management policies recognizing tribal rights,
- (2) active participation of all users of the range,
- (3) giving responsibility to local groups for maintaining ecological equilibrium.

Such conclusions were drawn by participants, the majority of whom are technical experts who may hardly be suspected of fascination with pastoral nomadism. No doubt something has changed. The 'Tragedy of the Commons', along with the negative images of nomadic populations, have been washed away.

While the recommendations are appealing, to what social and economic reality do they relate? What are 'Pastoral Communities' today?

Swift (1988: p.2) in his review of the main issues in pastoral development, defines pastoral production systems as 'those in which 50 percent or more of household gross revenue (i.e. the total value of marketed production plus the estimated value of subsistence production consumed within the household) comes from livestock or livestock-related activities (for example caravan trading), or where more than 15 percent of household food energy consumption consists of milk or milk products produced by the household. An agro-pastoral production system is one in which more than 50 percent of household gross revenue comes from farming, and 10–15 percent from pastoralism'. Neither livestock mobility nor the resource base are considered as determinant characteristics. The definition, however, does not raise particular difficulties when applied to Sub-Saharan Africa (Bonfiglioli, 1992). In countries such as Mali, Niger, Sudan, Ethiopia, Kenya or Mongolia – the case studies on which Swift's review is based – livestock are mainly fed (or underfed) on grazing. 'In most of the countries concerned, the pastoral economy makes use of resources with low opportunity cost (especially of land which cannot be cultivated or otherwise used)...' (Swift, 1988: p.2). According to the definition given by Sandford, 'pastoralists are people who derive most of their income or sustenance from keeping domestic livestock in conditions where most of the feed that their livestock eat is natural forage rather than cultivated fodders and pastures' (1983: p. 1).

Implicitly or explicitly, the term pastoralism refers to livestock systems largely dependent upon natural grazing. Since the early 1980s in Syria, the importance of the range as a source of feed has further declined. In her survey of semi-nomadic flocks, Leybourne (1993) found that natural forage (grazed on the fallows and the range) represented less than 9 percent of the feed offered to sheep while range grazing accounted for only 2.5 percent.

Semi-nomadic flocks are primarily fed on supplements and crop residues from irrigated areas. The stability of the system is far more dependent upon the availability of supplements and the price of feedstuffs than upon the availability of natural forage. Under current circumstances the total depletion of the remaining rangelands would have a marginal effect on the sheep feeding system.

It is therefore questionable whether the large amount of attention paid to the range meets the concern of the 'target population'. If asked about their main issues of concern, herders would probably mention feed supply, the price of trucks and diesel and the marketing of sheep and barley, rather than fodder shrubs. The question, therefore, remains to be answered. Indeed, the FAO/CARDNE workshop did not examine the herders' perceptions of the problem. Furthermore, while the recommendations stress the need for more participation, the herders' opinions do not appear as a research priority.

If herders and other users were to be interviewed the suggestion might be to extend the questionnaire to include their views on 'local groups' responsible for maintaining ecological equilibrium. This would certainly help in assessing the feasibility of the proposed range management strategy. It would also contribute to clarify the term 'communities'. It is questionable whether this term is more related to reality than the term pastoral.

As shown by Leybourne (1993), tribal links might still play a part in the management of flocks. Access to feed such as crop residues, for example, can be determined by social links with farmers living in the areas to which shepherds migrate. Nonetheless, the large concentrations of tents and the concerted moves of flocks and families no longer take place. Flock management and migration patterns are largely determined by economic variables such as the price of feed and sheep, which are beyond the control of tribes. Production, including grazing, is now organized individually (Leybourne, 1993).

The depletion of the range is a problem which deserves attention. There are clear signs of soil deterioration, but there are also signs that the resilience of the ecosystem might be greater than suspected. For example, Masri (1991) mentions the quick regeneration of palatable shrubs in the 'security *Hema*' along the Jordanian and Iraqi border in one of the driest and poorest parts of the Syrian steppe. The range, however, is now part of a livestock system comprising various sources of feed, including residues and by-products from irrigated crops. The expansion of cultivation in the steppe and the overgrazing of the remaining range areas are directly linked to the evolution of the overall sheep breeding system. The steppe cannot be dealt with in isolation. Part of the solution probably lies in a better use of alternative sources of grazing that could be produced in rainfed and irrigated areas.

If herders are to adhere to a programme, it will have to meet their priorities. Considering that current sheep production systems are neither pastoral nor

managed by communities, the emphasis on communal range management is questionable. Defining the range as a key issue does not reveal a better understanding of current agro-pastoral systems. In our opinion, it reveals a strong environmental bias.

CONCLUSIONS

Two decades before the Rio Conference, the range co-operative project was based on the revival of the traditional *Hema* system of range management. The project, however, failed to reverse the degradation of steppe areas. On the contrary, it largely contributed to the drastic rise in sheep numbers and the consequent increased pressure on pastoral resources.

Several factors have led to this failure. The project was based on an idealized view of the evolution of the social organization of tribes that relied on the traditional system of range management. Supporters of the project argue that tribal land alienation through land reform was the main factor leading to the disappearance of the *Hema* system. Such an analysis legitimates the restoration of tribal rights. However, tribal solidarity had been severely altered before land reform, in particular by the penetration of agrarian capitalism in the late 1940s.

The consensus between experts, the authorities and agro-pastoralists was only apparent. All of these groups were pursuing divergent objectives. The initial aim of the project was to combat the mismanagement of range resources. Its acceptance by the authorities was overridden by a political objective. The revival of the *Hema* system was perceived as a means to establish Arab socialism in the steppe areas. Shepherds, who joined the co-operative programme en masse, were primarily interested in the supply of supplementary feed at subsidized prices.

The emphasis on the necessary participation of local users and the rehabilitation of local knowledge are an important breakthrough in dryland development strategies. Nonetheless, the lack of understanding of dryland societies and production systems remains a problem. In the case of the Middle East, there is a clear deficit in social and technical research focused on dryland populations and their production systems (Bocco, 1993b; Métral, J., 1993; Jaubert, 1993b). Bridging the gap will require several years and a substantial research effort.

But the main threat might lie elsewhere. Negative images have been replaced by an idealized perception of dryland societies. As in the past, existing data can be ignored when it does not fit with the dominant approach. Development policies can be based on faulty assumptions. 'Pastoral Communities in the Near East', for example, are more a mental construction than a social and economic reality. Participation is merely a rhetorical

discourse when problems and solutions are defined in the absence of participation.

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MAN AND THE BIOSPHERE SERIES

Series Editor J.N.R. Jeffers

VOLUME 19

**POPULATION
AND ENVIRONMENT
IN ARID REGIONS**

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PUBLISHED BY



PARIS

AND



The Parthenon Publishing Group

International Publishers in Science, Technology & Education

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