

**STRATEGIES FOR INSTITUTIONAL OPTIONS FOR  
RANGELAND MANAGEMENT IN THE NENA REGION**

**IFAD EXPERIENCE**

by

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## Executive Summary:

### MAIN FINDINGS AND RECOMMENDATIONS

North African and Middle East Rangelands correspond to fragile zones, typically dominated by harsh environmental conditions in terms of low and erratic rainfall, shallow and poor soils, extreme temperatures and high evaporation rates. However, despite the stability of the climate since long time, their productivity and their bio-diversity were much higher until the first half of the last century. The weak present contribution of rangelands to livestock feeding is certainly due to the tremendous increase in animal population, but also to the loss of traditional management tools and to the modification of land tenure and soil occupation. All concerned countries tried, during the second half of the last century, through development projects and programmes and policies to elaborate rules and regulations to develop the rangelands or at least to slow down their degradation. Most of those interventions were heavily top-down-based and not sustainable.

The failures of the first generation of projects stimulated national decision makers/institutions and donors to develop other more efficient approaches. IFAD approach consists of addressing the following issues mainly through empowering the local communities to become the main players in the rangelands management process: rangeland degradation, overgrazing, lack of information on pastoral systems, lack of information on range ecosystem processes, lack of trained rangeland and pastoral development specialists, and poor commitment on the part of governments for pastoral areas. The lack of pastoralists' participation in planning development programmes is also a major issue, especially with respect to the involvement of women since they play a major role in pastoral production. With changes arising from modernisation processes, many traditional management systems are no longer viable. The lack of alternative employment opportunities in pastoral areas is also of concern, especially with increasing human populations. Finally, the poor quality of education among pastoralists is a factor limiting their access to appropriate technologies.

This large spectrum of issues calls for a strong institutional building to be promoted on a number of fronts, but priority actions include improving the need for applied rangeland research on numerous aspects, training rangeland technicians, dissemination of appropriate technologies, and most importantly development of grass roots institutions. Experience shows that the grass roots empowerment is a slow process that takes place through initiating positive dynamic trends at environmental, social and economical level. At least three inter-related tools have been used by IFAD for the empowerment of the herders community: involvement of the herders through introduction of participatory approach; provision of economic incentives, and ; policy dialogue with governments for the promotion of appropriate land ownership rights/legislation to grant the local communities a long-term grazing, if not property right.

**Beneficiary participation** is the key to the success of conservation-oriented projects. It has been particularly emphasised because the Fund realises that without effective beneficiary participation such projects cannot be initiated, let alone be successfully implemented and sustained. NGOs have an important role to play in testing, identifying and experimenting with new alternatives and technologies that can contribute to sustainable rangelands management by the herders themselves. The NGOs are also better placed to identify community needs and to assist in sensitisation of beneficiaries and their organisation for the establishment of grassroots institutions.

**Granting property rights or at least very long-term grazing rights** to local communities is the most important resources conservation and management tool, yet the most complex one. Whatever solution found to allocate a part of the rangelands to a specific group and whatever means of protection from neighbours and intruders, the sustainability of any project would not be granted if the group of beneficiaries is not given enough security in terms of duration and inheritance for future

generations. The legal and administrative measures required to safeguard community control over resource use should be constantly on top of agenda priorities for policy dialogue with governments. The acknowledgement of the rights of local land users and the integration of customary land-tenure arrangements within new administrative structures is a pre-requisite for any long-term sustainable investment activity for the rehabilitation and management of the rangelands.

**Provision of conservation-oriented economic incentives** is another equally important tool for sustaining rangelands management. Herders are only willing to implement and maintain conservation practices on degraded land when such activities produce substantial and quick returns at low cost. The benefits from rangelands conservation activities are of long-term nature. For a typical poor herder, the issue at stake is not one technique as opposed to another. Rather it is how his/her interest is best served through the promotion of rangelands management practices. Appropriate incentives were needed in IFAD projects to persuade herders to participate in sustained management activities. For example, due to the fluctuation of rainfall and to the limited forage output in general, compensation of rested areas should be always included at least during the first two years of each project life. Also, the management plans should not focus only on the target groups and their areas, but include (even without additional expenses) the neighbours and the buffer zones. This also would strengthen the participation and diminish the competition between groups.

Despite the attractiveness of these approaches, serious difficulties will persist for two reasons. Firstly, while in theory governments generally support moves towards greater community empowerment, it is sometimes done under pressure from external donors. Secondly, due to increasing stratification and diversification of income within the herders communities and households, it is likely that conflict of interests will increase. This will place considerable strain on collective decision making processes for the management of the rangelands resources.

The above-mentioned findings and recommendations are based on the implementation of the following IFAD designed and financed projects in Morocco, Jordan, and Syria:

- The Rangelands and Livestock Development Project in Eastern Morocco (PDPEO), covering about 3.2 million ha;
- The Rural Development of Taourirt-Tafoural Project (RDTT), covering about 0.65 million ha, within Oujda Taourirt corridor, in Eastern Morocco; and
- The Badia Rangeland Development Project (BRDP) covering some 3.0 million ha in the Syrian Badia land.
- The National Programme for Rangelands Rehabilitation and Development (NPRRD)-Phase I, involving five pilot areas representing typical physical and institutional features of the rangelands situations in Jordan.

Analysis of implementation of these projects is presented below.

## INTRODUCTION

North African and Middle East Rangelands correspond to fragile zones, typically dominated by harsh environmental conditions in terms of low and erratic rainfall, shallow and poor soils, extreme temperatures and high evaporation rates. However, despite the stability of the climate since long time, their productivity and their bio-diversity were much higher until the first half of the last century. Indeed, until mid 50s, livestock requirements were covered without any supplementary feed and regardless the amount of the annual rainfall. Comparatively, their actual contribution to livestock feeding amounts only 30 to 35% in normal years, but could decrease to less than 15% in dry periods. The weak present contribution of rangelands to livestock feeding is certainly due to the tremendous increase in animals number, but also to the lost of traditional management tools and to the modification of land tenure and occupation. In addition, abuse of all type of resources and mutation of nomadic societies, together with several political and economical events that occurred during the second half of last century did, effectively, contribute to the:

- degradation of social tissues and to the erosion of most old moral values including high awareness and profound respect of nature,
- dramatic reduction of rangelands areas, and their breaking down into uncomplimentary units, and
- swapping out of most of traditional management practises with, at the same time, a tremendous lack of adequately adapted new management models, laws and regulations.

Collapse of the old well-balanced management mode was anticipated also by several other factors among which:

- The rigidity encountered by transhumants and nomads to move through international borders (mainly in the case of Al Hamad plateau across Jordan, Syria, Saudi Arabia and Iraq)), or even from one area to another, within the same country. Reasons are linked with political and security issues as well as with the expansion of cropping and appropriation of the land (case of the corridor Oujda-Taourirt in Morocco). The consequence was thus disturbance of the extensive livestock production systems in general and alteration of management tools, in particular those adapted to the management of draught crises. New forms of associations involving, in many cases, investors from other sectors, not necessarily belonging to the same social group, but having only a benefit making objective, were developed to reverse many socio-institutional arrangements.
- the progressive, then massive, introduction of subsidised feed and concentrate, had contributed to deep modification of the environmental, social and economical parameters which are characterising steppes and Badia lands,
- The declaration, in many cases (Jordan and Syria), of the rangeland areas as state property without defining clear policy for their management and/or elaborating any collaboration/association frame with their traditional users. This has created confusion and lack of trust and stimulated the desire of land appropriation mainly through cropping.
- Even, where rangelands have not been declared state property, their privatisation could not constitute always better solution. Indeed, in the absence of an overall strategy of development and the lack of an institutional organisation frame, the control of individual initiatives and decisions becomes out of hands.

On the other hand, the long experience over the last fifty years, demonstrates that the key issue to rangelands development is much more linked to socio-institutional aspects than technical matters, and

at much lesser degree to ad-hoc decisions. IFAD experience in this respect confirms this paradigm and would be used to contribute enriching other approaches and experiences.

All these have led to confusion, selfishness and lack of awareness. The results are increased melting of traditional management rules and adoption of ad-hoc solutions to solve crises rather than building long term strategies

### **BRIEF SUMMARY OF RANGELANDS DEVELOPMENT HISTORY**

All concerned countries tried, during the second half of the last century, through development projects and programmes and policies to elaborate rules and regulations to develop the rangelands or at least to slow down their degradation. Indeed, through the 60s and 70s a first generation of rangelands development projects were launched. Most of them consisted, however, of artificial cutting of small areas (varying from hundreds to few thousands of ha) among complex and diversified social and economical contexts. Combating desertification was the key word to most of such activities and programs mostly concentrated on technical aspects and lacked sustainability vision and failed in associating beneficiaries. Strong means of protection such as earth dams (Syria), stewards and barbed wire fences were used, but sabotage and “destruction” of these projects were stronger and reflected evident protests.

In addition, the lack of management plans and the absence of frequent monitoring and evaluation activities have led to more degradation of the plant cover as resulting from the distortion of the dynamic trends and the capping of the top of soils.

However, though that the association of beneficiaries was not among the priorities of this first generation projects, the inclusion of institutional aspects was attempted (Syria and Jordan) since the late 60s. Expansion of co-operatives (mainly in Syria) that occurred during the 70s and 80s, became one of the major activities of rangelands and extensive livestock production systems development programmes. But, appropriate technical packages could not follow (qualitatively and quantitatively) and most of co-operatives could not start rangelands management activities. Indeed, except the JCO (Jordan), which could achieve some promising but ephemeral results, co-operatives were mostly of service type, with priority given to the acquisition of feed and other inputs at subsidised prices. The main objective consisting in effective participation to the development and building of rangelands self-management capabilities could not be hit. In most cases, project activities are ended by the termination of the project.

The land tenure regime of rangelands was not much suitable for an appropriate allocation of rangelands to co-operatives. In Syria (and similarly in Algeria), the steppe was theoretically divided into units and each livestock co-operative was supposed to be established on one plot. But application of this concept was handicapped by several other facts, among which:

- Plots were geometrically delineated on maps without considering traditional institutional arrangements, with at the same time, an important lack of accurate information on socio-economical aspects. Also, other parameters of management, such as delineation of corridors used as traditional transhumance routes and particular arrangements to facilitate access to water, etc., were not clearly included in the proposed schemes.
- Security means such as legacy of the allocated land, duration of the exploitation of the rangelands reserved to each co-operative, inheritance issues (right of use or appropriation that should go to one or all members of the beneficiary family, etc.) and protection from other users and intruders, are missing determinant matters.
- Linkage with other ecological sectors and flexibility for flocks and Bedouin movements during wet and dry years were not considered. The result was the deviation of most

livestock co-operatives from their initial objectives to become phantoms in their majority, and,

- Technical, financial and administrative implementation capabilities and availability were not adapted to the needs of such ambitious programmes. If all co-operatives were involved at the same time, it would have been almost impossible to efficiently monitor and supervise all of them simultaneously, especially at the absence of an operational GIS and computerised programmes.

In conclusion, the first generation of rangelands development projects contributed in the development of technologies but failed in building sustainable institutional organisation of beneficiaries and adequate management models. Rangelands tenure regime was even rendered more complicated, and some buried old conflicts were dug out. As IFAD was established in late 1980s, it was not involved with these first generation projects.

Lessons learned from this first projects generation stimulated national decision makers/institutions and donors to develop other more efficient approaches. Various concepts and models have thus been designed. However, within the diversity of methods and proposed technical packages, most approaches revolve around the inclusion of the participatory concept as a mean of efficient participation of beneficiaries and as a guarantee of sustainability.

In this regard, IFAD has accumulated, during the last twelve years, an important experience in arid rangelands and extensive livestock production systems development in both technical and institutional ways. The experience, presented in this paper, refers to some of the North African and Middle East countries, where many IFAD supported projects have been designed and implemented. The most typical projects, where innovative institutional approaches were proposed are:

- The Rangelands and Livestock Development Project in Eastern Morocco (PDPEO), covering about 3.2 million ha and the Rural Development of Taourirt-Tafoural Project (RDTT), extending on some 0.65 million ha, within Oujda Taourirt corridor, in Eastern Morocco too.
- The Badia Rangeland Development Project (BRDP) covering some 3.0 million ha in the Syrian Badia land; and
- The National Programme for Rangelands Rehabilitation and Development (NPRRD)-Phase I, involving five pilot areas representing the most important physical and institutional features of the rangelands situations in Jordan. The expected results, from phase I, would serve to launch the National Rangelands Development Programme in the whole Badia land.

Technical parameters and related achieved results are not discussed in detail as the focus is brought on the institutional aspects and on their relationships with the envisaged strategies, as well as with the balance between proposed technical packages and social organisation of beneficiaries. This is important because the viability and all other economical, environmental and social consequences depend on the degree of the organisation of beneficiaries and on their motivation to maintain and develop all initiated activities during and beyond projects life.

## **IFAD APPROACH**

IFAD approach consists mainly of initiating positive dynamic trends at environmental, social and economical levels. Projects avoid, thus, to be artificially cut off from ecological and social entities of each concerned region of intervention. This is why most of projects deal with huge areas and important number of beneficiaries and include several activities. Also, because most of rangelands are suffering confusing tenure situation, interventions at individual (or small groups) beneficiary level that would not generate conflicts and limit the projects impact, are always ranking among first priorities.

The first generation of projects showed the ephemeral character of the “keys in hand” projects, as beneficiaries have not been properly associated. To guarantee effectiveness, IFAD has based its approach on the association of beneficiaries to project design and implementation. The participatory approach is the platform to the integration of such an expected association. IFAD innovative action in this context goes beyond the inclusion of the participatory concept in projects design to associate specialised NGOs, mostly on grant basis, to provide training on the participatory approach to the beneficiaries as well as to the technical staff in charge of projects implementation. Meanwhile, effectiveness is conditioned by the degrees of homogeneity in the organisation of beneficiaries and conflicts with neighbours, as training programme can not be extended to all members of the group and at lesser degree to other users of the resource not directly targeted by the project. This is the task of extension services that should be implemented through the development of awareness activities in all IFAD supported projects.

As in all concerned countries, institutional organisation of herdsmen has been more or less initiated since long time back, IFAD based its options on the existing forms of organisation, e.g., the livestock and rangelands development co-operatives. However, most of co-operatives, created prior to IFAD projects, have been deviated from their objective and IFAD main interventions consist, therefore, on encouraging the review and the re-adaptation of the existing co-operatives in order to keep only herdsmen exploiting the concerned rangeland and in providing at the same time material and technical support necessary to the establishment and takeoff of co-operatives.

Meanwhile, whatever proposed institutional option, the execution of the project, the effective participation and the sustainability can be guaranteed only if beneficiaries are given security in terms of duration of exploitation of allocated rangelands and protection from intruders and other users of the rangelands resources. This is why IFAD supported projects have always included in their design strategy and financed activities addressing the land tenure issue.

However, despite the common principles, the institutional options were slightly different from one project to the other, as resulting from the specificity of each region and the objective of each project. These particularities are discussed later.

### **Generic Issues and Characteristics of IFAD's Projects**

Despite various ecological, social and economical differences between the concerned projects, they all share the following main characteristics:

- Low and unsustainable productivity due to harsh ecological conditions, coupled with inadequate location (and/or insufficiency) of infrastructure (tracks, watering facilities, etc.) have disrupted the homogeneous grazing pressure. The more accessible areas are often more degraded.

- Management and utilisation of resources are constrained by an overlapping between traditional sort of land tenure governed by tribal arrangements and modern political and administrative policies and laws, which are not always adapted to Bedouins realities.
- Despite all efforts and willingness of Governments to develop these rangelands areas, Bedouins are still experiencing hard living conditions characterised by frequent mobility which is unfavourable to the adoption of sustainable development strategies. Also, in addition to the low education level provided to only few Bedouins, those who could get access to high education are mainly settled in cities or more favourable areas. This phenomenon corresponds to a direct erosion of human resources in these arid areas. Gradual lost of interest and divorce with the land and the culture of pastoralists are gradually affecting the creativity and anticipating a down-streaming of awareness.
- Due to the unclear policies and strategies to include these areas in national economical systems and to the top-down decisions concerning the management of rangelands and livestock resources, the confidence and the trust have been much altered and enthusiasm of Bedouins has been affected.
- The introduction of other players than herdsmen to the exploitation of natural resources opened the door to various modes of association disfavouring, in most cases, the small and medium livestock owners whom become indebted and tightly dependent for finance, food and feed on merchants and traders.

The adoption of the participatory concept, in all countries, is still in its beginning. Various interpretations are given and the right linkage between the beneficiaries and the administration is still very weak. Meanwhile, some NGOs could be associated and brought appreciable contribution mainly in Jordan and Syria. However, it is worth to note that beneficiaries were found more receptive to the concept than the technical staff in charge of the project's implementation and the decision-makers. **The whole concept of training should be reviewed to focus in priority, during a first stage, on the initiation of the technical and related administrative staff.**

### **The Rangelands and Livestock Development Project in Eastern Morocco (PDPEO)**

The PDPEO, appraised late 1989 and covering some 3.2 million ha of steppe, where about 10 500 rural families are principally practising extensive livestock activities, was effectively started at mid 91. The project concerns two Provinces (thus two DPAs: Oujda and Feguig) and is implemented by a PMU based at Feguig, where it virtually replaces the DPA. However, field activities and executed by the two DPAs.

Over 90% of the land correspond to a steppe with relics of degraded forest. Concerning the overall land tenure regime, except the *Stipa tenacissima* vegetation groups and minor forestry relics, which are considered as government lands (under Forestry regime) and few private cropped pockets, most of the land corresponds to tribal common rangelands; e.g. each tribe has its own rangelands but the area is almost open to all nomads and livestock owners, especially when other Moroccan rangelands are affected by dry periods.

To guarantee the necessary social consensus to the sustainability of development and management of collective rangelands, the basic institutional concept was built upon the establishment of pastoral co-operatives to include all pastoralists living in the project area. In total, 33 co-operatives, gathering an average of 250 members each, were proposed during appraisal. Despite that the tradition of co-operatives existed since long time in the region (the first one, El Fath, was created in 1974) the way was not well paved for the project to rehabilitate and strengthen such an institutional organisation that deviated from its first objective aiming at rangelands management to co-operatives of service.

Also, as the right of utilising tribal rangelands is supposed secured for all members of the same group, social affinities and degrees of cohesion between members and groups were almost the two most important criteria to adhere to a co-operative. This has opened the membership door to many members practising no livestock rearing activities. In addition, adhering to co-operatives was open to all categories of herdsmen and it was impossible to focus targeting only on the poor layer of the society. Co-operatives were, therefore, heterogeneous and in many cases the subscription corresponds to the hope to drain benefits from the project and to confirm the right of use, especially when the project area is suspected to become state property.

Meanwhile, in the case of PDPEO, the appraised number of 33 co-operatives was based on the results of a socio-economical survey, but also commanded by the cost of the establishment and the equipment of these co-operatives. Nevertheless, partition of big co-operatives into smaller units was expected, but financing of additional costs that would result from the increase of the co-operatives number was not included in the project total cost. The option of co-operatives union was also proposed and left to the co-operatives initiative and affinities.

Concerning the rangelands, each co-operative would use the portion of land traditionally accepted as to be the traditional rangeland of its members, but appropriation titles or rental contracts are not submitted to the co-operative. Flexibility and respect of traditional arrangements and mobility of flocks, in and out of the area, were recommended, but left to the co-operative decision. The technical package consists on several activities, but the most important proposed techniques are:

- alternating and gradual resting, of promising areas during two successive growing seasons, than their grazing upon simple but organised scheme. To reduce additional expenses to purchase more feed stuff and to avoid more degradation of non rested areas as due to the subtraction of part of rangelands, rested areas are compensated at the rate of 30 kg of barley (or equivalent in feed stuff) per ha/resting year, the compensation is handled to the co-operative which has the responsibility, upon internal arrangements and agreement, of its distribution between its members; and
- planting of fodder shrubs in order to rapidly increase the forage production, to reduce the chronicle shortage (mainly in autumn) and to enhance the regeneration of the native high grazing value species. To reduce the cost and to simplify their management, planted sites are frequently established inside or close to rested areas.

At the same time, to minimise the risk of conflicts between tribes and groups, it was recommended to focus efforts, in priority, on non-litigious areas. Meanwhile, to avoid their further degradation, litigious areas would be closed, until substantial regeneration is reached, than commonly used as reserves for very dry years, and/or for other management objectives such as organised hunting.

Management responsibility is left to the co-operative initiative, but recommendations were formulated to favour the small and medium flock owners (distribution of barley for the compensate of rested rangelands, contribution to the payment of some recurrent costs, the number of animals to be admitted in developed areas when opened to utilisation, etc.). Also, the protection of the rangelands (especially the rested and planted areas) is supposed to be undertaken by the co-operative, but due to the complexity of relationships between herdsmen (including those transhuming from and to other zones), co-operatives are assisted in this task by local authorities and the project which take in charge the salaries of the stewards during the two first years. The long term objective is to progressively bring up the co-operative to an independent management unit, to organise the rangelands into grazing cells on which a rotational grazing pattern could be practised and to build-up an exit strategy to guarantee continuity after the project life.

All necessary funds for correct start-up of the 33 co-operatives are supported by the project. These include buildings, transportation of livestock and related inputs facilities, training, extension,

prophylactic programmes, salaries of some employees (co-operatives accountants, stewards), basic infrastructure, such as watering points, dipping pools, etc. However, to materialise the participation and to develop self capability of management, members of co-operatives are supposed to undertake (from year 3) partially or totally some expenses such as prophylactic programmes, salaries of the stewards and the co-operatives accountants, the recurrent cost and the maintenance of the lorries, etc. Internal organisation and arrangement were left to the co-operatives initiative, but suggestions such as paying (to the co-operative) of fees to graze developed rangelands, were made.

### **The Rural Development Taourirt-Tafoural Project: RDTT**

This Project was identified in 1995, appraised by IFAD in 1996 and started late 1997. It covers some 646 000 ha and concerns about 14 000 rural families practising various agricultural activities corresponding to a variety of production systems including extensive livestock industry on collective rangelands and forestry vegetation. This project concerns 13 Rural Communes belonging to three Provinces: **Berkane, Taourirt and Oujda**. The overall responsibility of implementation is under the MOA through the DPA of Oujda, but execution is shared between the DPA, the Regional Directorate of Forestry and the Office of Berkane, with technical assistance provided by Research institutions and the Veterinary Laboratory of Oujda. Yet an important difference with the PDPEO is clearly visible.

At appraisal, the land occupation pattern includes some 129 000 ha of forests, 122 000 ha of *Stipa tenacissima* steppe, 234 000 ha of extensive rangelands, 7 500 ha of irrigated land and 111 000 ha of dry farming. From land capability side, most of the project surface (495 000 ha, or over 76%) is found suitable for extensive livestock production, whilst high productive land (irrigation) represents less than 1.2%.

From tenure angle, about 39% of the project area are under forestry regime (State land), around 36% is tribal land but including small private rangeland spots surrounded by cropped fields and around 18% are private cultivated land. The remaining (7%) corresponds to other land occupation means and patterns (roads, villages, wadis, etc.).

However, despite that more than 2/3 of the project area correspond to rangelands and although the important numerical presence of livestock (around 244 000 sheep and 174 000 goats at appraisal), cash crops and agricultural activities in general are found more attractive for short term profit earning, when compared to extensive livestock industry. Pastoralism has been, therefore, gradually neglected and/or replaced by on-farm small flocks highly dependent for their feeding on the farm by-products. This has, also, affected in the near past the government development strategy as most efforts were driven to the benefit of cultivated areas and to the resident flocks including dairy.

Socially, even if the project zone inhabitants belong to the overall social tissue of Eastern Morocco, there are particular characteristics that would distinguish them from the PDPEO beneficiaries. Indeed, despite the lack of a social survey, the RDTT zone contains many villages, cities, douars and isolated houses that suggest more complicated social relationships (blood alliance, mutual benefits, security means, administrative subdivisions, etc.) as compared to the PDPEO beneficiaries social structure. In addition, due to the importance of the area, serving as a corridor between the eastern part and the rest of Morocco, various relations were developed with people involved in other production sectors (merchants, industrials and manufacturers, employees, etc.), which affected the central interests for individuals and weakened the tribal and/or blood alliance affinities.

Therefore, due to the social and land tenure complexity and to diversity of production systems and activities, the proposed socio-institutional option is different from the proposal made for the PDPEO. Globally, the beneficiaries are associated to the project at three levels:

- (i) **at individual or private farmers level**, where livestock production is rather associated to farming activities on private land. In this case, the land tenure is not an obstacle

(except to obtain credit for those who do not have appropriation titles). However, as private farmers possess only limited rangeland areas that can be hardly managed, the rehabilitation of private rangelands would be considered only if some individuals would accept to commonly use their rangelands. The aim of the project intervention at this level is thus to develop, in priority, forage resources through planting of fodder shrubs, improvement of fallow and conversion of marginal “bour” poorly cropped to barley and wheat;

- (ii) **on common tribal rangelands**, the project would operate in very similar way to the proposal made for the PDPEO, e.g., creation of co-operatives and organisation of the rangelands in grazing cells (each cell would correspond to the co-operative members traditional rangelands), with also the implementation of a diversified technical package (including compensated rested rangelands, planting of fodder shrubs, water and soil conservation works, etc.). However, co-operatives are supposed to receive less assistance than those early created in the PDPEO; and
- (iii) **in the forestry domains**, where traditional users have to be organised in co-operatives or associations and should respect some technical parameters of management as dictated by the Directorate of Forestry. In this case, areas to be rested or grazed would be delineated within the global management plan of the forest as decided by the Directorate of forestry, but this does not exclude the dialogue with the users. Beneficiaries would be organised in co-operatives and/or associations, which would be equally assisted as the co-operatives on tribal land and would make use of all benefits including the compensation of rested or treated land (although that the land is state property), prophylactic programmes, creation and rehabilitation of basic infrastructure, etc. The association of beneficiaries to the management and the utilisation of forestry resources does not, however, promote or provide any kind of appropriation or consolidation of very long-term (eternal) right of use. Whatever arrangement and organisation, the feeling of insecurity by beneficiaries would remain an important obstacle to the sustainability of the procedure.

Activities for rangeland development are thus included in this project because:

- Rangelands, including forestry domains, have been already deeply altered and are facing serious risk of further deterioration. If no actions are taken, unpredictable mutation of all production systems would occur, and will certainly bring serious damages to all environmental components.
- Many of the pastoralists in the project area correspond to the poorest layer of potential beneficiaries, and their social and economical situation would be more disfavoured if they are not included among targeted beneficiaries.
- Whatever is their contribution to the overall agricultural output of the zone, extensive rangelands are strongly linked with all other ecological sectors, and their discard would disturb the already fragile equilibrium. Indeed, due to the diversity of production systems within the project area, rangelands are the only part of the land where animals would spend more than half of the year (while the rest of land is cultivated) and would provide other sectors with various livestock output.

Concerning beneficiaries adhesion to the project, little difficulties are expected to emerge at individual level. Oppositely, the organisation in livestock co-operatives (on tribal land) and/or forestry users associations (on forestry domains) would face several complications that would result from the following:

- It is not always evident that social affinities and blood relations are the best criteria of groups homogeneity. Other considerations and relations, often at individual level, overtook the spirit of belonging to a group. When such a spirit exists, it would mean, in some cases, more than a way to conserve the right of use of common rangelands. In this context, the pivot of institutional organisation would be the douar. This is, at least, the case of the forestry domains inhabitants.
- Social organisation and relationships are also disturbed by some administrative considerations. In many cases, the delineation of the Rural Communes (administrative entities) does not always correspond to tribal land boundaries. Some members, “administratively isolated” from their tribe, may not abandon their rights of use of the common rangelands located outside of their administrative unit. At the same time, fractions within a particular commune may not tolerate “foreigners” to share their rangelands. The village would offer better socio-institutional organisation platform, but not without difficulties.
- Accurate information on the socio-economical situation, including mapping of the land tenure situation, was not available during formulation and appraisal. It was not possible, therefore, to accurately identify the number of co-operatives to be created. Only upon rough estimation, some 40 co-operatives, including the inhabitants of the forestry domain and other related activities (livestock fattening), were estimated to be possible to create. Detailed baseline studies, including social survey, mapping of rangelands, mapping of the land tenure situation, etc., were strongly recommended to be finalised before the physical implementation of the project proposed technical package. Upon results of these studies and surveys, the PMU would re-equilibrate the proposals including the sizing and the location of some technical activities (planting of fodder shrubs, establishment of watering facilities, cisterns, etc.) according to the number of co-operatives and associations to be created and in line with the suggestions of well organised beneficiaries.

### **The Badia Rangeland Development Project (NRDP) - Syria**

Agro-ecologically, Syria is divided into five settlement zones in relation to the average annual rainfall and consequently to the dominant agrarian systems. El Badia is known as zone five, where rainfall does not exceed 200 mm/year (but large parts receive less than 70 mm) and where extensive livestock industry is the most important economical activity. However, due to the very harsh ecological conditions and to the necessary move of livestock to make use of fallow and by-products in other zones, El Badia is a kind of a transhumance reservoir, receiving most of the country small ruminants (roughly from October to the end of March), but camel flocks would stay the whole year around. However, despite several decrees and laws prohibiting cropping in zone five, most of relatively good rangelands have been converted into episodic barley fields. This practice was lastly banned but strong quantitative and qualitative damages have been already made to the natural vegetation.

Concerning the tenure regime, El Badia is considered state land but grazing is permitted to any one willing to raise sheep, camels and goats. Also, similar to all Arab steppes and Badia lands, each tribe and/or group of blood allied herdsmen have a traditionally accepted right of use of a, more or less, well identified part of the land (Meshta). Therefore, despite that from legal point of view, El Badia is globally state land, the tenure is quite complex as it includes state land, individual land rights for cultivation (but now banned), Mulk lands, agrarian reform lands, rented state lands, appropriated rights and rights of grazing.

The Syrian Government started, since the 50's, to implement rangelands development programmes in El Badia through the establishment of several Mahmiat. At the beginning, the objective was not to make benefit to Bedouins as all Mahmiat were until recently strictly used by some Government

institutions flocks (Directorate of El Badia, selection of Awassi sheep centres, etc.), with in addition an objective of conservation and protection of natural resources. Bedouins have not been associated and were not concerted, and consequently they kept always trying to illegally enter these Mahmiat, despite the high cost of their protection by the government, through a top-down approach. The typical protest was shown two years back, when all Mahmiat and most of Natural reserves have been grazed in anarchic way by Bedouin flocks.

However, a dramatic change in the government policy did occur during the last five years or so. Cropping in El Badia has been banned and new dimension was adopted to develop the totality of zone five as rangeland area.. Bedouins have been allowed to graze the Mahmiat with the condition to respect the stoking rates and the duration of grazing periods decoded by the technicians. The last step of this positive trend was the creation of the BRRDP, covering some three million ha of El Badia land, and which philosophy is based upon the effective participation of Bedouins. The project was appraised in 1998 and implementation started late 1999.

Concerning the institutional aspect, despite that Bedouins have not been associated to the previous rangelands programmes, most of them have been organised into co-operatives since 1968 (with the support of WFP). Actually, more than 450 livestock owners co-operatives have been created, among which some 150 are located within the project area. However, most of these co-operatives were found insufficient management means of common rangelands. The most pertinent reasons to that would be:

- The lack of both judicial platform and equipment means which have handicapped the co-operatives to effectively control and manage their grazing areas (Jaubert, 1993).
- Rangeland tenure situation prevented many co-operatives from improving rangelands. Proposed boundaries of the land allocated to co-operatives did not always coincide with customary tribal grazing areas (El Masri, 1991; Rae-et-al 1991).
- Membership was not clearly conditioned. Regardless of his activity, any one could subscribe within his social group in a co-operative. The main objective to this subscription is to take advantage of easy access to cheap input and services (subsidised feed stuff, prophylactic programmes, watering facilities, etc.). The social survey, carried out by IFAD before formulation, stated that most of the existing co-operatives were found non-operational as they were concentrating their efforts on the purchase of feed stuff. Many of them have been even designated as phantoms.
- Most of the credit that was allocated to co-operatives to develop and manage their rangelands, was used for livestock breeding and purchasing of feed stuff. The consequence was a rapid increase of livestock populations (during 70s and 80s) and more degradation of the natural resources.

The socio-institutional arrangement proposed by the project is based on the existing co-operatives. Meanwhile, the project recommended a stepwise approach, which would start with restructuring the co-operatives in order to limit the membership only to herdsmen effectively using the co-operative land. Also, it was expected that the members of co-operatives may not present the same interest and enthusiasm to adhere to the project and it was, therefore, recommended to start with those ones willing to adhere to the project, relatively well structured, having some control on their land and suffering no conflicts between members and with neighbours. Thus, the number of co-operatives suggested in the appraisal report has only an indicative value and would be altered upon the decision of beneficiaries and the results of the recommended detailed socio-economical survey to be carried out during the first years of the project life.

A piece of land would be allocated to each co-operative. The size and the delineation of the allocated area would correspond to the customary tribal grazing land and would depend on the nature and

acuity of conflicts with other groups. However, even if the considered piece of land is conflict free, it is expected that internal conflicts would arise between the members of the same co-operative as many herdsmen are still manoeuvring or hoping to come back to cropping of barley in El Badia. This is why it was not expected to start with more than 40 co-operatives (among the 150 existing ones) during the first four years. Also, to avoid sharpening the conflicts, strong delineation means should be disregarded and corridors have to be left for other flocks moves.

Several activities are programmed to help co-operatives to take off, but when comparing the Syrian to the Moroccan situation, co-operatives in Syria are much less advantaged as rested rangelands are not compensated. The shortage in feed units during the first three years would indeed result in additional charges (purchase of feed stuff) and would discourage herders from adhering to rangelands development and management activities.

On the other hand, to facilitate the adoption of the strategy proposed by the project and based on the participatory approach, IFAD contracted, through an ECP grant, an NGO (CARE International) to train both technical staff and representatives of co-operatives on the basics of the participatory concept.

### **National Program for Rangelands Rehabilitation and Development (NPRRD, Phase I), Jordan**

A National Programme for Rangelands Rehabilitation and Development was proposed by the GOJ to IFAD in 1991. Implementation of Phase I started late 1998. Its approach consists of selecting five pilot areas responding to criteria defined during appraisal. Among these criteria the most relevant are accurate identification of homogeneous groups of beneficiaries, having neither internal nor external conflicts, mainly concerning the right of use of well delineated rangelands. The project management would start dialogue with beneficiaries of the two first pilot units, e.g., Menshiat Al Aghyieth in the Hamad and Mreigha (Ma'an) to the south in involving concerned PDAs. The strategy key to this dialogue is to "initiate and guide the process but in taking care neither to impose views nor to speed up the process beyond that acceptable to the community". Following identification of homogeneous groups, the project would develop Range Management Plans (RMPs) at each pilot area, with full participation of beneficiaries.

**Phase I** would deal with the structural causes of rangelands degradation and would focus on strengthening the implementation capacity of the GOJ policies to develop rangelands and combat desertification. It would also introduce the participatory rangelands management process in five pilot areas. Depending on achievements of Phase I, **Phase II** would embark on a large scale participatory rangelands management throughout the Jordan Badia.

From the institutional side, Jordan has a long experience with co-operatives (JCO). Meanwhile, the appraisal suggested to select the pilot areas where coherent groups of users can be accurately identified. Each pilot area should also correspond to the whole territory owned or customary recognised and fully controlled by the selected group of beneficiaries. Members of selected groups will be organised either into a livestock co-operative or into any other form of organisation suiting their social structure. A management committee would be elected among and by the members of each group.

As reflected in the methodology proposed in the appraisal report, the key to failure or success would depend on the effectiveness of association and participation of beneficiaries. To that, it was advised to respect at least the two following conditions:

- start **dialogue with beneficiaries** of the two first pilot units, e.g. Menshiat El Aghyieth in the Hamad and Mreigha in Ma'an to the south. The strategy key to this dialogue is to "initiate and guide the process **but** taking care **neither to impose views nor to speed up the process beyond that acceptable to the community**", and

- develop Range Management Plans (RMPs) at each pilot area, with full participation of beneficiaries. In circumstances where the community developed a seemingly feasible plan but was unable to overcome specific identified constraints, the PMU would provide technical and legal support to the community. Where this was insufficient and particularly where issues of policy or legislation were raised the PMU would report to the PSC for appropriate solution.

Meanwhile, the organisation of beneficiaries and the success of the whole exercise depend first on the tenure regime of rangelands. This is why it was recommended in the appraisal report to study the property rights, to map the land occupation status and to elaborate appropriate laws and regulations upon which a national management plan would be designed and implemented on less confusing ground.

Officially, the Jordanian Badia land is state property, but access to all type of resources (including cropping) is permitted to any citizen. This has already resulted into formal and informal appropriation of most of the western fringe of the Badia (around 1 million hectares) and the process seems to extend to the east. Therefore, even at the absence of registration documents, several tenure situations are found: individual owned land for cultivation (cropping and/or planting), Mulk land, Miri land, rented land, tribal land (wajihat ashair), appropriated rights and rights of grazing, etc.

Similarly to other projects and in order to facilitate implementation, IFAD contracted an ONG (JOHUD) to provide training of the project technical staff and the beneficiaries on the participatory approach (in the two first pilot areas).

### **Implementation Progress**

Progress in the implementation of the proposed institutional organisation is deeply different from one project to the next as linked with the starting date of each project, but also to the interference of some other factors such as weather conditions and administrative routine. Globally, the most relevant results are those obtained by the PDPEO and at lesser degree those cumulated by the RDTPP (both in Morocco). Meanwhile, despite that the two other projects are either being started (BRDP – Syria) or affected by inappropriate takeoff (NPRRD - Jordan), some activities could be carried out and some early learned lessons are of great interest.

### **Achievements of the PDPEO**

This project is now over ten years old and its first phase (eight years) was terminated on 1997. In addition to the numerous supervision and backstopping missions undertaken by IFAD and the African Bank for Development, the project was subject to a mid-term evaluation (IFAD late 1995). Physical implementations were globally satisfactory and the project could demonstrate the possibility of rangelands rehabilitation. In many cases, the additional forage output could reach over 500% in some rested areas. Planting of fodder shrubs proved possible and was highly appreciated by herdsmen despite their reluctance at the beginning of the project implementation. Watering of livestock situation could be substantially proved, especially concerning the rehabilitation of some 50 cisterns. Genetic and prophylactic programmes contributed to increasing the marketing value of sheep by around 30%.

Concerning the institutional aspects, the initial objective targeting the creation of 34 co-operatives was fulfilled during the two first years of the project life. Efforts to support these co-operatives were maintained and strengthened. Six new co-operatives were, indeed, created during the period 1999/2000, and most of beneficiaries are now organised in 40 co-operatives, equitably distributed among the whole project zone (22 in Figuig and 18 in Oujda administrative territories). Regardless the various degrees of enthusiasm and effectiveness, this indicates, already, that it is possible to organise

beneficiaries even in the case of a so large area and diversified groups of users. The equitable distribution of the co-operatives on the whole project area is also a promise of a possible settlement of an overall management plan, especially that the proposed technical package was mainly based on simple techniques (resting) that are traditionally practised by the beneficiaries (Guedal). Despite the difficulties encountered at the beginning, an easy rotation scheme is being taking place and can be gradually improved to integrate more parameters (biological, economical and social).

Participation of beneficiaries went various stages and varied from one community to the other and between co-operatives. Many factors, linked with ancestral rules and traditions, did negatively affect the establishment of rested rangeland areas at the beginning. The most pertinent disturbing facts were:

- (i) Ouled Sidi AbelHakem, considered as Shorfa, do have the traditional right to graze all rangelands any where in Morocco; the establishment of rested areas by their neighbours (Beni Guil) was seen as a limitation risk to their mobility and as a reduction of the forage resources they were used to use without any restriction;
- (ii) the compensation of rested areas was understood at earlier stages as a kind of assistance to herdsmen and assimilated with subsidies, consequently many rested areas (supposed not to be grazed during two successive growing seasons) were grazed during the first months after their delineation and compensation;
- (iii) the unequal distribution of rainfall on the project zone disfavoured the driest sectors in terms of forage resources regeneration, which weakened the position of the technical staff, and increased the pressure where more rain was obtained, which generated some frictions between groups;
- (iv) the project was seen, by many individuals, as an opportunity to drain rapid benefits, which led to the creation of very heterogeneous co-operatives without any synchronisation and selection of objectives, and
- (v) the long-term objective was not enough understood as most of co-operatives were missing training in management practises.

However, the confusing situation was solved in reviewing the membership of the already existing co-operatives in order to keep only those livestock owners traditionally using the rangelands of the project area. Also, the distribution of barley (compensation of rested areas), was maintained but delayed until the concerned beneficiaries proved their willingness and capability to protect the selected site during at least six months.

The most significant test of success was faced when the first rested areas were opened to grazing. Upon their own initiative, but also due to training and extension impacts, concerned co-operatives decided to establish membership cards for all members and to pay a grazing fee (2 to 5 DH) per animal and per grazing period. There were almost no conflicts among beneficiaries and the grazing periods were well respected. Also, fees are paid to the co-operative by any member for the utilisation of the co-operative lorry (provided by the project). Collected fees are used to strengthen the revolving fund of the co-operatives.

The resulting costs to improve the watering facilities were totally supported by the project. Meanwhile, recurrent costs (fuel) are now partially supported by the beneficiaries. But the more promising sign of sustainability is that many co-operatives are ready to fully take in charge one (or more) watering points. Necessary funds for maintenance of the well and the pumping or water would be collected through the payment of an annual fee per animal belonging to the co-operative members.

Flexibility and tolerance were kept as many flocks, coming from other regions of the kingdom, have been accepted in the project area during drought periods. This periodical “over charging” of the rangelands is even much appreciated from technical point of view as it corresponds to an important

mean of plant cover regeneration (removal of coarse vegetation, pitting, etc.). It is also appreciated as it maintains the project area within a larger scope of complementarity with other regions and ecological sectors.

### **Achievements of RDTT Project**

Mainly due to the lack of an accurate socio-economical study, to the confusing situation of the land tenure regime in the project area and to very complex social structure of beneficiaries, very little has been achieved in the institutional aspects. Co-operatives are being formed but it is still too early to evaluate their effectiveness.

The project is supposed to work at three levels: private farm, common rangelands and state land (forestry). It is also implemented by different players (Office, Forestry Department, DPA, Vet. Laboratory, etc.) and at the presence of other programmes in the region. Without synchronisation of methodologies, some components (less attractive and more difficult) such as tribal rangelands development and management, would be disfavoured. First signs are reflected through the conversion of many rangeland sites to orchards financed by absentees. Conflicts between concerned parties in the implementation of the project, are also means of trust weakening. The most typical cases are found between the DPA and the Forestry Department. Each is claiming the tenure right of some sites, while beneficiaries are almost not involved.

Concerning the physical implementations, the project has indeed achieved several activities (planting of fodder shrubs, rehabilitation and creation of watering points, rehabilitation of tracks, etc.), but a global vision of management is still built on assumptions and verbal wishes expressed by few beneficiaries to organise themselves in co-operatives.

Co-operatives have been created to organise other production systems or activities, such as bee keeping and honey production, but it seems that beneficiaries are not among the poorest layer of the project area population. In this case institutional organisation may strengthen the global production but it would result into negative social impacts. This has been also found in other activities (reclamation of land and planting of fruit trees), where the real poor have not always enjoyed the priority of intervention. There is a risk that such an approach would affect, in the future, the common rangelands users when they will be invited to subscribe in co-operatives. Therefore, it is strongly recommended that co-operatives on common rangelands should not be created before the finalisation of the socio-economical study and the mapping of rangelands are completed.

### **Achievements of BRDP**

The platform of institutional organisation of the project beneficiaries is already existing as most of herdsmen are organised in some 150 co-operatives, among which at least 40 are found to suit, more or less, the project methodology and spirit. An additional socio-economic survey will bring more clarifications to gradually better fit the remaining co-operatives.

Lessons learned from the PDPEO could be used to restructure the first co-operatives willing to adhere to the project. In addition, IFAD engaged an NGO to introduce the basics of the participatory approach, and the first results are highly promising. However, due to the last drought (1998 – 2000) and to the hope of many beneficiaries that the government may come back on the decision banning dry farming in El Badia, all the programme was disturbed. Also, the fact that there is no compensation of rested areas could not help the project takeoff.

The issue of land tenure remains, however, pending matter. All questions related to the legacy of right of use, mobility of the flocks, different forms of association that may result from the “project attraction”, etc., should be carefully examined.

From technical side, the staff in charge of the project implementation is highly acquainted with all the proposed technical package and the already existing Mahmiat show the relatively high and rapid rate of the rangelands rehabilitation. The institutional aspect would certainly face some difficulties but the situation is much promising to reach at least what has been achieved in the PDPEO.

### **Achievements of the NRRDP**

This project failed in building any institutional organisation of the beneficiaries in the two first pilot areas: Mreigha and Menshiet Laghyiet. Despite that a training on the participatory approach was provided by JOHUD (NGO) upon an IFAD grant and although the relatively small size of the concerned communities and their rangeland areas, the PMU could not coop with herdsmen and started physical implementations upon a top-down decision procedure. There is still a hope that the situation can be recuperated in the remaining pilot areas, provided the current implementation approach is changed.

In conclusion, NPRRD is in a very worrying position and if difficulties are not rapidly lifted to allow the takeoff of proposed methodology and all allied activities, there is a risk to minimise the chances for further investments in rangelands development in Jordan. This would, thus, affect over 80% of the country surface and marginalise most the Bedouin society.

## **CONCLUSIONS AND LESSONS LEARNED ACROSS PROJECTS**

The Institutional options, retained for rangeland development appraisal reports, are largely dominated by the creation of livestock and rangelands development co-operatives. Such an option is in line with the policies of the concerned governments and seem to be welcomed by most beneficiaries of the projects. Meanwhile, due to the particularity of some areas and/or to the nature of the project, options were extended to include individuals (RDTTP) or any other form of association to be tested (NPRRD).

On the other hand, regardless the difference between projects and countries, the institutional options share some similar difficulties because:

- in many cases, the membership is altered by the some members claiming rights of use but practising no livestock activities;
- some co-operatives, existing before the projects implementation, have been deeply deviated from their initial mandate and gradually converted into “service type” institutions mainly seeking for cheap inputs and neglecting rangelands development activities; therefore their conversion to effective collaborators instead of passive recipients would face some difficulties;
- any benefit made by beneficiaries from the projects would stimulate the jalousie of those groups and individuals not included in the target groups. This is more delicate, because any intervention on common rangelands is still understood by many Bedouins and rural societies as an appropriation by the state of their lands. This activates conflicts and anticipates competition instead of collaboration;
- the future of the rangelands attributed to co-operatives is not clear. Indeed, it is nowhere mentioned for how long beneficiary groups would use the land allocated to them, there are no regulations to precise speculations and inheritance procedures, etc.;

- whatever support given to the co-operatives, legislation to secure protection of the co-operatives rangelands is missing. This serious issue is rendered more complicated within the confusing tenure situation; and
- in opening the door of the membership to all pastoralists belonging to a targeted group, disparities between big, medium and small herders can not be avoided. Therefore, unless a strong monitoring system is settled, the share of benefits and responsibilities would not be, always, to the benefit of the poorest.

Although their similarity, retained institutional options do not have equal opportunities of success in the different countries. The most determinant and sensitive issue is linked with the compensation of rested areas; applied in Morocco but ignored in Syria and Jordan. Also the first projects (PDPEO and at lesser degree the RDTT in Morocco) were more assisted (building of co-operatives headquarters, retrocession of lorries, etc.) than those launched in Syria and Jordan.

In all cases, implementation of the projects is based on the participation of beneficiaries. However, targeted groups have not been fully associated to the formulation and appraisal stages of the projects. Proposed technologies and methodologies of implementation were, thus, a sort of top-down decisions, and the role of participation is reduced to the validation of what has been proposed. In addition, in most cases neither the beneficiaries nor the technical staff is aware of the participatory approach principles before the start-up of the project implementation. Even if training is possible through the involvement of specialised institutions and NGOs, it is not always evident that the majority of beneficiaries would be concerned. The most active would drain more benefits.

Besides these common characteristics, each project has its own specific characteristics as resulting from different social, economical and environmental aspects but also as linked with Governments policies and strategies. The difference in the land tenure regimes of rangelands between the three countries (and some times between two sites within the same country) have differently affected the implementation of the projects. In Morocco, the extensive rangelands are tribal common domains, but in Syria the Badia land is state property with free access to forage resources. In Jordan the Badia is also state property, from juridical point of view, but appropriation and various utilisation modes of rangelands are now far-advanced practices. Also, while in Syria the Badia is now strictly reserved to the grazing as cropping has been banned, in Jordan and in Morocco, providing that there are no conflicts between users, there are no laws preventing cropping and/or establishing orchards in the rangelands.

Even if regulations concerning the creation of co-operatives are much similar between the three countries, facilities and assistance are different from one country to the next. For example, resting of rangelands is compensated in Morocco (from thirty to hundred kg of barley/ha/resting year), whilst in Syria and Jordan no compensation is provided. Also, even if the support of projects does not consist always on Government direct contribution, it can be obtained through associating different other programmes like the WFP assistance. Such linkages differ also between countries and programmes.

Differences are found even between neighbouring sites within the same country. Indeed, from institutional side, the main difference between the two Moroccan projects is linked to the fact that the PDPEO corresponds rather to purely wide rangelands areas. Oppositely, in the PDRTT appropriation of land and diversification of production systems, ranging from irrigated cropping to extensive livestock rearing, provide different social and economical platforms. Proposed institutional options are therefore slightly different.

Depending on Governments policies and priorities, some forms of assistance, such as distribution to co-operatives of transportation equipment (lorries, tankers, etc.) or building of co-operatives offices and storing facilities, are equally provided to all projects. The first project (PDPEO) seems to be the most favoured.

Technical capabilities to implement these huge projects in a participatory approach vary deeply from one country to the other. Specialists in range management are more available in Morocco, Jordanian are supposed to be more advanced in institutional building and organisation of beneficiaries (National teams and NGOs) and Syrians are much advanced in technical aspects such as Mahmiat establishment and reseeded of rangelands through native species utilisation.

Timing of the training on participatory concepts is not always properly fitted in the whole project implementation schedule. This kind of training should also avoid standardisation even if delegated to only one institution. Indeed, it would be too late to introduce it in the PDPEO, whilst the whole concept should be adapted to the PRDPT as due to the diversity of activities and objectives of beneficiaries. In Syria, the training seems to be anticipated because beneficiaries and their land were not enough organised to undergo the whole exercise; and in Jordan physical implementation was not synchronised with the training and did not consider the beneficiaries point of view. The result was in this case the loss of trust between the technical staff and the beneficiaries.

Technical packages are more or less well thought. However, a long-term view concerning the exit strategy to ensure sustainability beyond the project life is missing. In addition, despite that the fluctuation of rainfall is considered, there is no clear strategy to tackle the various situations faced by herdsmen. Focus is often brought on dry years, whilst a rainy year is in many cases a more serious factor of disturbance. To neutralise the impact of the single year (regardless of rainfall), herdsmen usually build a three dimension strategy associating: (i) several ecological sectors and zones, (ii) many years (usually a time frame of around five years) to balance the risk of fluctuations, and (iii) establishment of good relationships with many individuals through over several areas to escape the dry impact when it occurs in the area where the herdsman is traditionally living. Such a model associates the utilisation of several other resources, such truffle, specific fine herbs and bee keeping, that are offered by rangelands and that can be developed to diversify activities and income and to strengthen awareness.

## **RECOMMENDATIONS**

Despite their specificity and the tremendous surface they cover, arid rangelands are always connected with other ecological sectors and zones. This complementarity is dictated by the uncertainty due to the scarcity of forage resources, the shortage of water during certain periods of the year and the unpredictable fluctuations of rainfall. Consequently, self-sufficiency of arid rangelands should not be considered as basic objective. Therefore, if sustainable development and management are targeted, any area of rangelands to be developed should not be separated from the overall system based on complementarity.

Similarly, within the steppes and Badias, any part of rangelands to be developed should not be randomly cut off the fragile social and environmental equilibrium. If disturbed, local complementarity and mutual interests between social groups can result into serious damages to the nature as well as to the social tissues.

Comparatively, the technical aspects are much easier to implement than dealing with the social aspects. It is noted, however, that in most cases formulation and appraisal of projects are rather based on rapid social surveys. It is recommended that in the future, comprehensive socio-economical studies should be carried out between reconnaissance and formulation steps.

Lawyers are often not integrated in any step of the projects design and implementation. It is recommended that in the future, legal aspects should be treated by specialists in order to avoid individual interpretations by the technical staff.

Development and sustainable management of rangelands involve various activities ranging from basic infrastructure to health and education matters, which correspond to the first needs of rural and Bedouin societies. But, the projects are implemented under the control of Ministries of Agriculture

which staff does not include specialists in all fields. Also, some infrastructure (asphalt roads) and many programmes (education, health) are highly expensive and do not fit these ministries duties. It is therefore recommended that all other concerned ministries and institutions be engaged from the beginning and involved in the implementation of all allied activities. Such a participation should also include contribution to the project budget.

The land tenure is the most important issue facing the development of wide extensive rangelands. More specifically, the declaration of steppes and Badias as state property hides the reality. Indeed, every group of pastoralists (tribe, large family, allied individuals, etc.) has a certain right of use of a specific area. Bedouins are capable to accurately identify and delineate the zone of influence of each group. It is thus recommended to avoid geometrical designs of the land to be attributed to each group, because any modification of the traditional boundaries (even if they are not materialised) would bring conflicts to surface.

Whatever solution found to allocate a part of the rangelands to a specific group and whatever means of protection from neighbours and intruders, the sustainability of any project would not be granted if the group of beneficiaries is not given enough security in terms of duration and concerning the future generations (inheritance). It is thus recommended that, in the case that the rangelands are state property, a kind of contract or lease should be established between the government and the beneficiaries.

Due to the fluctuation of rainfall and to the limited forage output in general, compensation of rested areas should be always included at least during the first two years of each project life. Also, the management plans should not focus only on the target groups and their areas, but include (even without additional expenses) the neighbours and the buffer zones. This also strengthen the participation and diminish the competition between groups.

Development programmes and management schemes of rangelands should have a life span of several years in order to minimise the risk of severe dry sequences.

Training and development of awareness are mentioned in projects documents, but they remain rather weak. This is often due to the lack of qualified technical staff in charge of project implementation. A list of the most relevant themes should be elaborated during projects formulation and appraisal. In addition, it was found that in most countries there is a serious lack of range management departments in universities and high schools programmes and a limited knowledge about countries where it is possible to provide appropriate training. IFAD, ICARDA, ACSAD and other institutions should provide the necessary information to the ministries of agriculture in order to gain time and maximise the benefit.