

Protection and participatory management of forest ecosystems of the RIF, Morocco

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SUMMARY

With the financial and technical support of the European Community, the ministry responsible for water and forestry started a pilot project targeting two forest areas, identified as particularly sensitive and representative, in an attempt to check the rapid and complex process of deforestation in the RIF region (forest clearing, delimiting of trees, removal of fuelwood, forest fires, etc.).

The project aim is to solve the technical, institutional, juridical and participatory problems that are hampering the implementation of coordinated and rational management of forest land in the RIF.

Deployment of a forest-specific approach based on the organization of users into local forest commissions and committees for specific forests and local development associations, coordination among the different partners and involvement in the rational management of forest resources, and the development of peri-forest areas, have produced the following major results:

- affirmation of a participatory and concerted forestry approach specific to the RIF;
- emergence of new coordinating entities;
- opening of dialogue and a gradual rebuilding of confidence towards administrative structures;
- general stability of forest lands and user respect of forest restrictions;
- reduced pressure on forests for fuelwood (dissemination of semi-communal improved stoves and installation of gas depots);
- improved living conditions for local populations, particularly women (less isolation, clean water, literacy).

These achievements have motivated the Ministry of Water and Forestry and the European Community (through its principal financial instrument for implementation of the Euro-Mediterranean partnership, MEDA) to finance two integrated rural development projects in the RIF area from 2001: MEDA Chefchaouen and MEDA Forest Resources Management.



The Moroccan RIF

The RIF massif forms the mountainous barrier of northern Morocco and covers an area of 20 000 km². Home to a population of about 1 million people, it has very pronounced ecological, physical and human bioclimatic characteristics and particularities that distinguish it from all other Moroccan massifs.

For the diversity and the importance of the species they contain (more than 2 000 species), the RIF forests (600 000 ha) are nationally and internationally important from the ecological and biological points of view and also from the point of view of forestry. Similarly, these forests have very important socio-economic functions among the local people.

Despite the significant advantages and potentialities, the RIF is facing a very complex problem (involving state disengagement, lack of opening outwards, poverty and deterioration of natural resources).

In order to reduce pressure on the forest ecosystems, and following the failure of a very repressive policy of forestry management, the Ministry of Water and Forestry has put a National Forestry Plan (NFP) in place since 1999. The NFP aims at the conservation and rational management of forests through the implementation of a participatory approach specific to the Moroccan forests.

Problems specific to the RIF forests

The RIF forest ecosystems are, at present, facing an increasingly critical situation because of anthropozoogenic pressures. These pressures have given rise to a decrease in the number of forest plants as well as a decrease in their density in space and time. The pressures are the result of the population increase in a mountainous region and a shortage of agricultural land.

The absence of activities other than subsistence agriculture and unproductive livestock keeping motivates people to undertake disorganized cutting and clearing of forest areas, thereby giving way to inevitable and irreversible destruction of soil. Added to all these constraints are:

- development of the cultivation of cannabis;
- lack of clarity regarding the situation of land over the entire forest massif;
- non-adaptation of modes and bodies for management of the forest heritage;
- lack of an alternative source of energy to wood.

All these factors aggravate the deforestation phenomenon.

The factors responsible for the direct deterioration of the RIF forest ecosystems are cutting of fuelwood and heating wood, cutting of timber, clearing, grazing in the forest and fires.

Cutting of fuelwood and heating wood

The cutting is done in a disorganized manner by the local people for domestic purposes, to satisfy their need for fuelwood and for heating wood, their main source of energy. The takings are estimated to be 8 tonnes/household/year for fuelwood, and 30 m³/household/year for heating wood.

Cutting of timber

Cutting of timber for commercialization of the products and realization of surplus value is practised illicitly.

Clearing

Clearing for extension of cereal cultivation

Family living space is decreasing because of the growth of population. This forces farmers to clear the forest so as to extend their fields for cultivation.

Clearing for cultivation of cannabis

The cultivation of cannabis is responsible for the spectacular advance of the line of deforestation. It has cleared away most of the oaks of the RIF and is now attacking the high plateau vegetation cover. The rapidity of the advance of the line of deforestation can be explained by the fact that the cultivation of cannabis is an itinerant one that needs good soil and considerable care. When the soil is exhausted (after about two or three years), the farmer moves on to clear fresh land in the forest.

Since 1980, about 21 000 ha have been cleared in Chefchaouen Province, i.e. an average area of 1 500 ha per year. In the same province, 1 055 ha of forest were cleared during 1994, which resulted in the writing of 1 151 reports by foresters.

Grazing in the forest

For several years, livestock breeding has declined severely because of the decrease of its profitability. This explains why there is a significant reduction of pressure on the forest from herds. This situation has promoted a spectacular natural regeneration of the RIF cedars.

Fires

Fires are very frequent in the central RIF, mainly during winter. They are caused mainly by human activities (clearing, charcoal making, collection of honey, etc.).

In Chefchaouen Province, 4 400 ha have been burned since 1980, at an average of 300 ha/year. During 1994, 45 forest fires were detected, causing the destruction of about 1 700 ha of forest. These direct factors of deforestation cause loss in terms of biological diversity and reduction of forest coverage, which are important from the points of view of ecology and forestry and have a significant impact on the environment through erosion.

In conclusion, although the forests of the central RIF cover only about 330 000 ha, or 38 percent of the provinces of Chefchaouen and Al Hoceima, they are diversified and of high quality. At present, however, that biological diversity is severely threatened by the magnitude of the problem of forest clearing; hence the necessity and urgency of intervening to preserve the forest ecosystems of the RIF.

Approach and activities of the GEF-RIF Project

Financing and objectives of the project

Addressing this problem, the European Community contributed, by subsidy, to the financing of the project aimed at the preservation of the forest ecosystems of the RIF. A basic study was carried out in 1993 to identify sites that are important in relation to ecology and/or biology and forestry (see Table 1). This was followed by the drawing up of a physical programme, and then by a financial intervention.

Fourteen sites in the central RIF were chosen to be the subject of a participatory approach to the management of natural resources eligible for line B7-5040 European financing. The 14 sites comprise all the diverse forms of vegetation of the RIF and cover an area of approximately 102 000 ha, or 31 percent of all the residual forests of the three provinces of the RIF (Al Hoceima, Taounate and Chefchaouen).

Following this study, a financing agreement for protection of the RIF forests was signed on 21 September 1994 between the Kingdom of Morocco and the European Community for a duration of three years, divided into two phases of 18 months each. After the expiry of the first phase, the second phase could be committed, depending on the progress of the implementation of the project and on the results of the evaluation mission planned for the end of the first year of the project.

Support from the European Community was initially limited to a pilot project that corresponded to a concrete implementation of programmes related to the forest sector on two sites identified as being the most sensitive and most representative (the Bab-Berred and Tanghaya-Kourt massifs in the Chefchaouen province), as well as to the search for a model of harmonious development on the periphery of the forest massifs.

The main objectives of this project can be summarized as follows:

- to halt the process of deterioration of forest capital and to protect and rehabilitate the threatened, sensitive forest ecosystems;
- to achieve local people's participation in a rational management of residual natural resources, contributing to the betterment of people's living conditions.

TABLE 1 • RIF sites that are important to ecology and/or biology and forestry, Morocco

PROVINCE	TOTAL AREA (ha)	FOREST AREA (ha)	NUMBER OF IDENTIFIED SITES	AREA OF IDENTIFIED SITES	NUMBER OF SITES CHOSEN	AREA OF CHOSEN SITES	%
Al Hoceima	332 000	120 000	6	43 700	5	42 000	41
Taounate	561 000	39 000	4	19 000	3	18 400	18
Chefchaouen	435 000	170 000	7	53 500	6	41 500	41
Total	1 328 000	329 000	17	116 200	14	101 900	100

Phase 1 of the GEF-RIF project

Because of the complexity of the problems to be solved, the types of interventions to be made and the diverse levels of intervention, the project was based on two relatively independent components, in terms of technical and financial management.

Component 1

The first component, Institutional Support to the Forest Sector, consisted of four studies carried out in the RIF. These made it possible to clarify the status of and the prospects for RIF forest management, to improve the demarcation procedures and to specify the vocation of the RIF forest spaces.

The four studies addressed the following activities:

1. study of and search for modalities for the legal handling of land issues particular to the RIF forests;
2. preparation of a master plan for the development of the RIF forests;
3. preparation of a general energy programme for the RIF;
4. development of administrative procedures and enhancement of natural resources.

Component 2

The second component, Development and Enhancement of the Massifs, comprised the implementation of a financially, technically and administratively autonomous project on two pilot forest massifs of Province (Bab-Bered, of 7 000 ha, and Tanghaya-Kourt, of 13 000 ha), and consisted of a series of concrete actions involving local people's participation.

Actions to support the development of forestry included:

- support for land demarcation;
- the drawing up of a concerted development plan for the management of uses for each massif;
- the carrying out of silvicultural operations;
- reforestation;
- firebreak trenches.

The wood energy programme included:

- a programme for supply of fuelwood and heating wood;
- design of energy-saving equipment;
- construction and propagation of collective ovens and improved fireplaces;
- creation of wood and gas depots.

The ecodevelopment programme included:

- a socio-economic survey;
- sensitization and technical training;
- planting of fruit trees and development of arboriculture;
- diversification channels;
- improvement of systems of livestock development.

The infrastructure programme included:

- construction and improvement of opening-up of tracks;
- supply of drinking-water;
- small and medium irrigation systems.

Phase 2 of the GEF-RIF project

Following recommendations of the evaluation mission for the first portion of the project, funds for the second portion of the GEF-RIF project were provided by the European Community for a duration of two years, beginning in June 1998.

The second part of the project was specifically aimed at creating, at both the national and the local levels, conditions and specific actions seeking to guarantee protection and rational management of the forest ecosystems of the RIF.

The technical and institutional support component

This component included the drawing up and provision, for the Administration of Water and Forestry, of the tools (legal, technical, strategic and institutional) required for the application of measures for protection of the forest ecosystem of the RIF (also required to settle the land, forestry and legal problems caused by clearing, demarcation and use of the forests).

The development and enhancement of the massifs component

The testing of a package of measures (legal, land, technical, social and organizational) in three pilot forest massifs corresponded to a concrete application of a general strategy ("massif approach") and to a



search for a model of harmonious development on the margins of the forest massifs identified as being the most sensitive and most representative of Chefchaouen Province.

The project centres on:

- achieving maximum integration of the project with forestry so as to popularize the approach and the results (to spread the realizations progressively);
- strengthening and popularizing actions for stabilization of the field of forestry (in matters of approach to demarcation and participatory management);
- pursuing the massifs experiments initiated in Chefchaouen Province and extending them to the neighbouring natural park massif (Talassemtane);
- strengthening and continuing experimentations and initiatives relative to the enhancement of the forest resources of the RIF;
- consolidating the organizational authority of people's representative bodies around the massifs (associations, user groups, cooperatives, etc.);
- searching continuously for partnerships and committed actions.

Four results are expected from the specific objectives:

- the launching of concrete applications (statutory, strategic, technical and practical) by the Ministry of Water and Forestry based on recommendations (measures, tools and solutions) resulting from the institutional studies of component 1 of the first phase;
- the continuation of the "massif approach" followed by the two pilot massifs in Chefchaouen province (Bab-Berred and Tanghaya-Kourt);
- the launching of a similar approach on the third massif (Talassemtane) in Chefchaouen Province;
- the continuation and strengthening of the focus of competence and experience in the development of RIF forests and the promotion of various forest products.

The main activities undertaken during this second phase are:

- continuation of forest demarcation work and consolidation of land inside the forest (ratification) and outside the forest (registration of private land);
- application, with local people's involvement, of plans for the management of uses;
- ecodevelopment actions with direct and indirect impact on the preservation of forests (improvement of livestock and production systems, opening up, wood energy, improvement of living conditions, etc.);

- promotion and consolidation of local and collective organizational structures;
- provision of training and of technical and statutory pedagogical documents (textbooks, guides and instructions) for administrative officials;
- continuation of experimentation and promotion of initiatives on the enhancement of forests and natural resources of the RIF (aromatic plants, beekeeping, mushrooms, cork, handicrafts, heather, ecotourism, etc.).

Follow-up and coordination bodies

In conformity with the specific implementation conditions laid down in the financing agreement, before the beginning of the project the Administration of Water, Forestry and Soil Conservation formed a National Follow-up and Coordination Committee, and a Provincial Project Follow-up Committee.

The project approach in organizational and participatory terms

The organizational approach to users

Starting from the general approach adopted by the project, based on the organization of user-communities and their participation in rational management of forest resources, the project adopted a progressive approach in order to form responsible and efficient legal consultation structures and to involve these bodies in a sustainable development process.

For this reason, a committee was constituted for each forest massif in order to develop progressively a collective conscience on the notion of the interdependence of actions and solidarity among the local douars around each forest massif.

Elsewhere, local forest committees were constituted, each consisting of users of the same forest space (extent of land, collection of fuelwood, agriculture, clearing, etc.).



To carry out all project actions successfully and to move towards the empowerment of local communities in the preservation of forest resources and their use, on the one hand, and towards a better consideration of the social factor in forestry development plans, on the other, two types of body were formed:

- Massif committees bring together all the actors and users of the forest massif.
- Local committees, are more targeted in space, and take into consideration the specific needs and local interests of the user groups, and utilization of their forest space to contribute to a rational management of space over the whole massif. Those committees also play the role of project interlocutors for the various actions to be undertaken.

The phase of constitution of the massif committees was preceded by an awareness raising campaign and by the presentation of the pilot project and its objectives to the douars and the headquarters of the Bab-Taza, Bab-Berred and Bouhmed circles.

The meetings organized by the pilot project team were intended to present the pilot project and its objectives, and also to present the project plan prepared by the project team concerning the organization of the people and the constitution of the massif and local forest committees. Discussions with local authorities and elected representatives were successful; this provided more information for the proposed project plan and answered the questions of the composition, functioning and duties of the massif and local forest committees. At the end of each meeting, a calendar of meetings with the local people of the two massifs was drawn up.

The meetings were held with the local douars of the two massifs (94 communities) from 27 September 1995 to 23 October 1995 and aimed at:

- presenting the pilot project, objectives, composition and duties of the massif and local forest committees;
- mapping the forest space utilized by the people of each douar in terms of dimension and supply of fuelwood and heating wood;
- designating, with the people of each douar, two male forest delegates, one elderly and one young, and a woman delegate to sit on the massif and local forest committees.

All the information received from the douars during the project team's tours and surveys was used as the basis for the subdivision of the two forest massifs into homogeneous zones, each consisting of a certain

number of douars. A local committee was constituted in each homogeneous zone. The subdivision was approved by the massif committees.

Constitution of the massif committees

A massif committee, consisting of a whole set of social, administrative, technical and institutional actors concerned with the use of the same forest massif, is a consultation and coordination authority for the definition of use modalities of a homogeneous and geographically demarcated forest massif. The massif committee has the following objectives and aims:

- to establish a permanent dialogue between the local people and the technical experts and authorities;
- to make known the multiplicity of functions and management forms (and therefore, the status) of the forest space;
- to recognize an uncontested space where there are modalities for harvesting forest products and managed uses to be redefined in terms of local needs and in the framework of a plan for the general development of the forest massif;
- to bring out progressively a collective conscience regarding the notion of the interdependence of actions, and to promote solidarity among the local douars around each forest massif;
- to promote user groups so as to obtain better management of the whole massif and reduce forest deterioration.

Local forest committees

Although the massif committee is a consultation and information body seeking to harmonize the interventions and sensitize the many local douars (and rural communes) to the necessity of a general approach for the development of the massif and satisfaction of their long-term needs, it is clear that, by virtue of its level, the committee does not constitute an authority for discussions and resolutions of local problems and particularities.

In addition, to take into account the problems experienced by the douars, their own specific needs and the characteristics of their land and forest space, it was envisaged that local relays should be created nearer to the douars and in the form of committees representing a fraction, an ethnic group or several douars using the same forest space, and that at this level consideration must be made of the current uses.

The forest massif (Bab-Berred, Tanghaya-Kourt) could thus be subdivided under several local forest

committees, more or less along the line of the subdivision of rural communes (into parts) and/or fractions, when the former is representative of a division of forest spaces and of uses between the douars and fractions.

The local forest committee, represents a group of users in the same use-space and with similar needs. It could enrich discussion for the drawing up of a general development plan by introducing its particular problems for consideration.

Local development associations and production

With the advancement of the project and implementation of the actions in the douars, together with the participation of the people and the establishment of a climate of confidence between the two parties, the informal authorities (local forest committees) were substituted by local development associations, which are now considered the main interlocutors of the project and other players in the rural environment.

Forty-four local development associations have been formed, bringing together 92 douars.

Partnership and participatory approach

The GEF-RIF project team adopted a progressive participatory approach as implementation of the identified actions proceeded, vertically and horizontally.

Vertically, participation progressed from dialogue and consultation to the assumption of management, conservation and rehabilitation of the collective infrastructures through negotiation of terms of agreement, and financial or physical participation in the implementation of the actions and in the follow-up and monitoring of the work. The rate and modes of participation vary from action to action and from zone to zone.

Horizontally, the project team tried to extend participation in the implementation of actions to other local partners: rural communes, provincial departments, non-governmental organizations (NGOs) involved in rural development, ministerial departments and international organizations.

Implementation of the first phase of the GEF-RIF project (September 1995 to March 1998) made it possible to capitalize on a satisfactory experiment in terms of the preservation and participatory management of the forest ecosystems of the RIF. The

results obtained and the tools developed can be summarized as follows:

- creation of new consultation and dialogue bodies (massif communities and local development associations);
- preparation of strategic studies for the whole RIF, ad hoc studies and development research pilot actions;
- concrete results in the field with the participation of people and rural communes;
- constitution of technical, legal and institutional references specific to the RIF region.

Thus, the funding of the second phase of the GEF-RIF project enabled the project team to further that experiment and to prepare other tools and strategies to feed the integrated rural development (IRD) project, the management of natural resources (MNR) and the project for the development of forest and peri-forest areas of Chefchaouen Province.

It was with this perspective, and with the aim of seeking to popularize the general strategy adopted by the project, that the project team tried to involve civil society in the local development process by signing partnership agreements with local NGOs, which serve as links between the local development associations formed within the action area of the project and the provincial department, ministerial departments, international organizations, etc.

Conscious of the roles played and tasks carried out by the local NGOs as a necessary link for the implementation of a general strategy for the development of a very restricted area, the management of the project signed partnership agreements with:

- the Talassemtane Association for Environment and Development (TAED) on 15 January 1999;
- the Association of the National Union of Women of Morocco, Bab-Taza branch, on 10 February 1999;
- the Association of Young Promoters of Chefchaouen Province on 21 April 1999;
- the Association for the Advancement of Women (ZAINAB) on 27 December 1999.



The terms of those agreements are aimed mainly at:

- organizing and carrying out sensitization campaigns and recognizing problems concerning the safeguarding of the environment and preservation of the resources of the project area for the benefit of the local development associations;
- participation in the creation and management of local development associations from the three forest massifs;
- supervising training of members of associations on the basis of the expressed needs and in accordance with the action programme drawn up jointly;
- participation in the follow-up and supervision of work.

Results and recommended tools

The results at the Ministry of Water and Forestry include:

- affirmation of a forestry strategy specific to the RIF;
- progressive change in the conduct of foresters;
- application of forest area demarcation procedures adopted by consensus and consultation;
- coherence and improvement of supervision and management of the forest massifs.

For the people of the RIF project intervention area the results include:

- the opening of dialogue among the RIF people and progressive re-establishment of confidence *vis-à-vis* the administrative bodies;
- the birth of new collective authorities for consultation and discussion (massif committees, local committees and local development associations) recognized by the administration and the people;
- the launching of a blueprint for development dynamics through the realization of actions that meet the needs expressed by the people;



- satisfying the demand for forest products, while meeting the requirements for the management of forest domain.

For the forest heritage, the results include:

- a halt in the clearing of wood on the forest massifs covered by the project, and effective and respected demarcation of the forests of those massifs;
- an institutional, legal and technical framework tailored to the RIF forests;
- a technical benchmark for the development, protection and regeneration of forests, as well as for the enhancement of the natural resources of the RIF;
- people's participation in the management of forest uses in the framework of the development plan (plan for the management of harvests).

Impact of the GEF-RIF project

The GEF-RIF project has had the following impacts on the preservation of forests:

- stability of the forest domain and a significant decrease in wood-clearing offences, thanks to the method of demarcating forest domain by consensus;
- decreased pressure of livestock herds on forest space as a result of the availability of commercialized livestock feed in the douars opened up by the project;
- decrease of at least 50 percent in the consumption of fuelwood and heating wood by households that have benefited from the wood-energy programme;
- tree planting and enhancement of forest resources in the framework of the concerted development plan for forest and peri-forest areas.

At the socio-economic level, the GEF-RIF project has had the following impacts:

- improvement of the users' environment (opening up, drinking-water supply, improvement of sanitation, improved ovens, access to gas, literacy, learning, etc.);
- improvement of the revenue of users (increase in fruit growing, PMH, beekeeping, natural saffron, creation of employment, etc.);
- increased farmers' purchasing power (reduction in the cost of transport, stability of price of inputs and foodstuffs all year round, significant reductions in forest fines, etc.).

Conclusions

This implementation of programmes planned for the first phase (September 1995 to March 1998) made it possible on the one hand to carry out four strategic studies in the RIF. The results and proposed scenarios of those studies were the subject of sub-programme No. 1, MNR (financed by the European Community, 1999) and the implementation of a strategy for integrated participatory development of forest and peri-forest areas specific to the RIF zone. That development model was to be generalized on all of the forest massifs of Chefchaouen Province from 2001, in the framework of the project for integrated development of forest and peri-forest areas of Chefchaouen Province, financed by the European Community.

If one takes into consideration the specificities of the zone, particularly the intense clearing of the forest domain considered as land reserved for the cultivation of cannabis, the stakes for intervention aiming at safeguarding the ecosystem can only be controlled by a participatory approach. Despite the difficulties encountered initially, the GEF-RIF project has succeeded in establishing a climate of confidence, thanks to dialogue with users and to actions effected in the field. These factors made it easy for the project to create partnership institutions that have facilitated the implementation of several socio-economic projects, having a direct impact on the improvement of standards of living and the sensitization of the people regarding the issue of the safeguarding of natural resources.