



Sustainable Agriculture  
and Rural Development  
**MOUNTAIN POLICY PROJECT**



**CIHEAM**  
IAM BARI

# **Sustainable Agriculture and Rural Development in Mountain Regions Project (SARD-M)**

## **SARD-M Policy Assessment in Lebanon**

### **Participatory and Negotiated Territorial Development: Preliminary Results for SARD in Lebanese Mountain Territories**

**Fady R. ASMAR**

**December 2006**

## Preamble

In 2005 and 2006, a set of activities had been implemented in order to learn about the ways **Policies, Institutions and Processes (PIPs)** concerning agriculture and rural development are supportive to sustainable livelihoods of Mediterranean mountain communities.

A range of selected **Mediterranean stakeholders**, interested and involved in mountain development issues at the regional, country and local levels, and representing the governmental and non-governmental spheres, have been mobilized and consulted for **information collection and discussion**.

These stakeholders played a key role in the collection of information related to policies, institutions and processes for SARD implementation in the mountain areas of their countries, showing **great awareness and high motivation towards SARD processes for mountain areas**.

The survey allowed the preparation of **ten Mediterranean country profiles**<sup>1</sup> presenting the PIPs framework for SARD in mountain areas and the identification and characterization of **twenty significant stories**<sup>2</sup> related to policies issues in mountain areas were also selected and characterized according to SARD principles.

**Two SARD-M rapid policy assessments** were carried out. In **Morocco**, the aim was to understand how the national policy for watershed management is matching SARD principles. In **Lebanon**, the implementation of pilot activities for initiating Participatory and Negotiated Territorial Development (PNTD)<sup>3</sup> processes in mountain territories was assessed, in the framework of the forthcoming new Lebanese Agricultural strategy.

**A regional workshop** "Drawing lessons and learning good practices on policies for sustainable livelihoods of mountain people in the Mediterranean region" was organized and attended by around 40 key Mediterranean stakeholders<sup>4</sup> (Tabarka, Tunisia, 8-10 September 2006). A balanced participation was ensured among governments and international organisations, research institutions and various civil society groups. The process of the workshop was mainly based on open and free discussions, taking into account case studies from all regions. Participants discussed issues related to policies for SARD and sustainable livelihoods in mountain areas identifying lessons and recommendations.

---

<sup>1</sup> Covering Albania, Bosnia & Herzegovina, the Former Yugoslav Republic of Macedonia, Serbia and Montenegro; Algeria, Morocco, Tunisia; Lebanon, Syria and Italy.

<sup>2</sup> For further information, see SARD-M Project website:

<http://www.fao.org/sard/en/sardm/Communi/materials/index.html>

<sup>3</sup> For further information on PNTD approach, see FAO website:

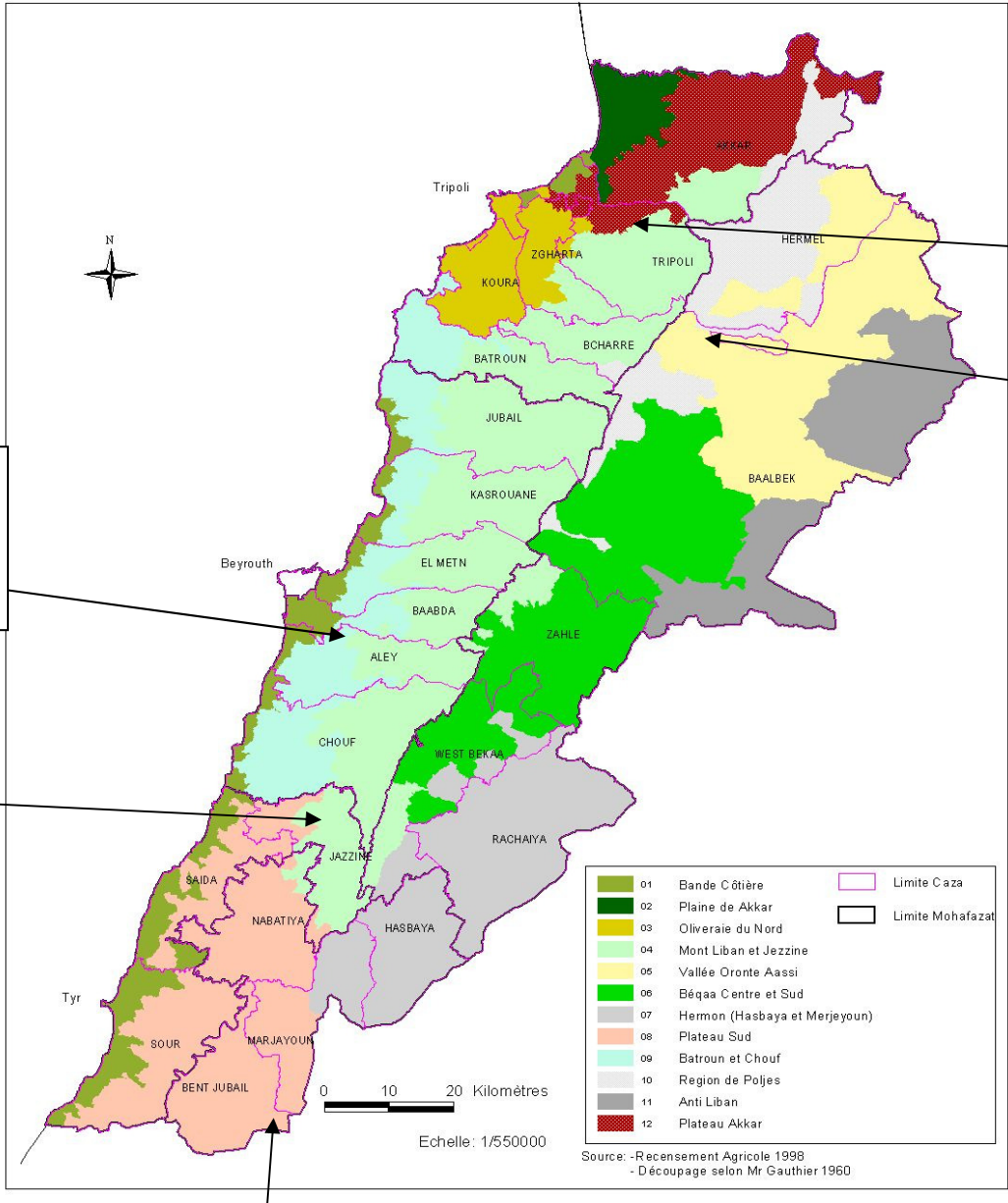
[http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/dim\\_pe4/pe4\\_040501\\_en.htm](http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/dim_pe4/pe4_040501_en.htm)

<sup>4</sup> 38 participants from the South East Europe mountain region (i.e. Albania, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Serbia and Montenegro), Maghreb (i.e. Algeria, Morocco and Tunisia) and Turkey from the Middle East (as Lebanon and Syria could not attend), and from other institutions with experience in SARD-M policy issues, such as ICARDA.

Map of Lebanon showing the territories where the PNTD approach was initiated

Ministère de l'Agriculture  
 Direction des Etudes et de la Coordination  
 FAO / Projet de Recensement Agricole

Zones Agro Climatiques du Liban



Halba-Akkar Zone

Northern plains of the Oronte River Zone

Middle Mountain Zone of Kesrwan and Metn

Higher Chouf Zone

Hasbaya-Marjeyoun Zone

Source: - Recensement Agricole 1998  
 - Découpage selon Mr Gauthier 1960

## TABLE OF CONTENTS

<b>I. Introduction.....</b>	<b>6</b>
<b>II. Methodology and Activities .....</b>	<b>7</b>
<b>III. SARD and Mountain Specificities .....</b>	<b>9</b>
A. Mountain specificities.....	9
B. PNTD Approaches.....	10
C. Mountains in Lebanon .....	11
D. Mountain Vulnerabilities .....	13
<b>IV. Changes and Driving Forces and their Impact on Mountain Areas .....</b>	<b>16</b>
A. Demographic Changes.....	16
B. Economic Changes.....	17
C. Technological Changes.....	17
D. Environmental Concerns .....	18
E. Political and Institutional Changes .....	18
F. Internal Driving Forces.....	19
<b>V. Mountains, Policies and Institutions for SARD .....</b>	<b>20</b>
A. The Forest Policy and Strategy .....	21
B. The Agricultural Development Strategy: a Brief Review .....	22
<b>VI. The Agricultural Development Strategy and the SARD Principles .....</b>	<b>26</b>
<b>VII. PNTD Pilot Activities in Four Lebanese Mountain Territories .....</b>	<b>29</b>
A. The Lebanese Agricultural Homogeneous Zones and Mountain Specificities .....	29
B. The Four Mountain Territories for the PNTD Activities .....	30
<b>VIII. The PNTD Implementation .....</b>	<b>41</b>
A. The Activities.....	41
B. The Strengths and Weaknesses of the PNTD Activated Processes .....	42
<b>IX. Conclusion.....</b>	<b>45</b>
<b>References .....</b>	<b>48</b>
<b>Annex 1: Framework for a rapid assessment of policies for SARD in Mountain Regions.....</b>	<b>49</b>

## List of Acronyms

AFDC	Association for Forests, Development and Conservation
AOC	Appellation d'Origine Contrôlée
CIHEAM	Centre International de Hautes Etudes Agronomiques Méditerranéennes
EU	European Union
FAO	Food and Agriculture Organisation
GIS	Geographic Information system
IAM-B	Institut Agronomique Méditerranéen de Bari
IDAL	Investment Development Agency for Lebanon
IFAD	International Fund for Agricultural Development
MOA	Ministry of Agriculture
NAP	National Action Program (to Combat Desertification)
NGO	Non Governmental Organisation
ONADAR	Observatoire National d'Analyse du Développement Agricole et Rural
OWL	Other Wooded Lands
PNTD	Participatory Negotiated Territorial Development
SARD-M	Sustainable Agriculture and Rural Development in Mountain regions
SDAR	FAO Rural Institutions and Participation Service
STA	Social Territorial Agreement
TCP	Technical Cooperation Project
UNDP	United Nations Development Program
UNICEF	United Nations Children and Education Fund
USAID	United States Agency for International Development
UTF	Unilateral Trust Fund
YMCA	Young Men Christian Association

## **I. Introduction**

The Lebanese Ministry of Agriculture has implemented from May to July 2006 pilot activities for starting Participatory and Negotiated Territorial Development (PNTD) approaches in four different areas with mountain profiles. The activities fell under the umbrella of the new National Agricultural Strategy, undertaken in the framework of the UTF Project "Assistance au recensement général de l'agriculture", based on a territorialization of Lebanon (Lebanon has been divided into 40 agricultural homogeneous zones), and on the starting up of decentralization processes through the involvement of the civil society.

The UTF project assisted by the FAO/SDAR Service, has mobilized a project team and local facilitators for initiating the PNTD approaches, adapting these to the local conditions.

CIHEAM-IAM Bari, as Regional Focal Point for the SARD-M Project, appointed a Lebanese consultant to assist the project team and local facilitators in PNTD processes and to assess the main weaknesses and strengths for future steps of PNTD that would be sensitive to SARD principles and mountain specificities.

The results of the activities can provide the Lebanese Ministry of Agriculture, FAO SDAR and SARD-M Project, and IAMB the basis for discussing and promoting further processes for PNTD in Lebanese mountain areas, and for sustaining the decentralization policy mechanisms. Moreover, the results could stimulate debates at the Mediterranean level on the policy-making mechanisms for SARD-M implementation and sustainable livelihoods in mountain areas.

It should be noted that most of the zones that were covered by the study have been subject to severe bombings in summer 2006. This has certainly resulted in some changes that were not included in this report. The changes are expected to be on all possible levels.

The ongoing process aiming at the reconstruction of the affected regions could and should strongly benefit from this experience as the PNTD approach could be a very useful tool for the planning of the future of these zones.

### **The report structure**

The report starts by introducing the methodology of work and the activities undertaken during the process. It proposes an overall picture of the Lebanese mountains, their main activities, and their vulnerabilities, and driving forces. Then a focus on main institutions and policies important for SARD implementation in mountain areas is given, with emphasis to the new agriculture strategy, within which the PNTD pilot activities are framed.

The second part describes the PNTD pilot activities, analyses the mountain specificities of Lebanon, based on the description of the pilot regions. It also describes the pilot regions selected for the initiation of the Participatory Negotiated Territorial Development process with a mountain perspective, used as an experimental tool to implement the new agricultural strategy, showing the weaknesses and strengths of the process, and proposing some recommendations for a better implementation of the PNTD approach at all the territorial levels.

## II. Methodology and Activities

The CIHEAM-IAM Bari consultant acted in close coordination with the UTF project team at the national and territorial levels, giving support to the facilitators engaged by the UTF project for the activities in the mountain areas.

The consultant undertook the main following activities:

- Review of documents and interviews with stakeholders to collect information on mountains, institutions and policies;
- Review of the activities and documents of the UTF project and the New Agricultural Strategy:
- Review the previous project activities already implemented in the mountain area (e.g. criteria for the characterization of the mountain areas, plan of action for the PNTD) with reference to SARD and mountain specificities, and propose the necessary methodological adaptations for the PNTD approach through:
  - Study and analysis of the Agricultural Strategy
  - Study of the PNTD document
  - Preparation of a Power Point presentation on the Sustainable Development of Mountains (based on the SARD-M Project document) and training the national PNTD focal points on this presentation in order for them to use it in their local meetings (the presentation was translated into Arabic by the Team Leader)
  - Proposing the initiation of a dialogue for the forest and rangeland policy
  - Introducing the national PNTD focal points to the « Schéma directeur d'aménagement du territoire libanais » which is the main baseline document proposed by the Government to organize the territory. This has helped the focal points to better understand the potentials of the regions they are working in, according to the vision and planning of the Government.
  - Attending a workshop on land use planning and valorisation of the natural resources in one of the territories selected (Northern Lebanon) organized by local stakeholders and international organizations; the consultant invited the focal points to join him to the workshop. The workshop was a good chance to meet the stakeholders and take part in the planning of the region;
- Preparing and assisting the national, local partners and the local facilitator in the implementation of the activities, guiding them to maintain a SARD and mountain perspective in the PNTD process through:
  - Meetings with the national PNTD focal points to discuss the PNTD approach, and provide them with the necessary support
  - Assisting the national PNTD focal points in the preparation of the local meetings
  - Participating in the regional meetings in the different territories or homogeneous zones and meeting the different stakeholders in the regions: farmers and farmer groups; NGOs; members of municipalities and mayors; religious authorities
  - Assisting the focal points in preparing their reports
  - Assisting the team leader to compile the reports
  - Compiling data and information on the different policies and strategies that might have an effect on mountains and on the implementation of the SARD process;
- For ensuring an appropriate assistance to the UTF project team in the different phases, the consultant has referred to the following basic FAO documents: "An approach to rural development: Participatory and Negotiated Territorial Development (PNTD); "Towards a framework for a rapid assessment of policies for SARD in Mountain Regions" (see Annex 1).

- Among the five zones, four were analyzed for this study by the SARD-M Project consultant. They were selected in a way to represent all the mountain regions in Lebanon, and to allow for the development of a typology of the Lebanese mountains, with their problems, their specificities, their constraints and the opportunities they may offer;
- Reporting on the policy and institutional framework for development of Lebanese mountains and on the PNTD pilot activities results.

### III. SARD and Mountain Specificities

The overall purpose of the SARD-M Project policy assessments is to provide an understanding of the strengths and weaknesses of various policies related to SARD in mountain regions. Given that SARD requires an integration of policies across sectors, the aim of the assessments is not to conduct an in-depth analysis of policies in a specific sector, but to try to provide more of a global overview and **cross-sectoral understanding** of the strengths and weaknesses of policies for SARD. The successful implementation of SARD requires **integrated** policy, planning and social learning processes; its political viability depends on the full support of the people it affects through their governments, social institutions and private activities linked together in participative action. From this perspective, the process of sustainable development will always precede the product - SARD is a journey rather than a destination. (FAO1997b)

The lack of the recognition of the mountain specificities in development processes, moreover, is widely recognized as a main cause of the ineffectiveness of interventions in mountain areas. Mountain specificities usually limit the opportunities in mountain areas, making production activities risky or not profitable. They also restrict the scope for upgrading and manipulating the resource base and make mountain systems exposed or, on the contrary, totally ignored by the development strategies from the plains and external environments. On the other hand, if properly harnessed, mountain specificities, such as diversity, niche and peoples' adaptation experiences, can offer useful opportunities for sustainable use and development of mountain areas.

#### A. Mountain specificities<sup>5</sup>

- **Constraints:** In terms of constraints, mountains are characterized by inaccessibility, fragility, marginality. It should be noted that these specificities are not only interrelated in several ways, but not all locations in mountain areas are equally inaccessible, fragile, or marginal. Nevertheless they help to shed light on some of the key constraints facing the development of mountain areas.

**Inaccessibility:** Its concrete manifestations are isolation, distance, poor communication and limited mobility. Besides the dominant physical dimension, it has socio-cultural and economic dimensions, which are reflected by socioeconomic differentiation and **inequity of access to resources, information and opportunities**. Inaccessibility exaggerates other conditions such as marginality and diversity.

**Fragility:** Due to altitude, steep slopes and other biophysical conditions, mountain areas are **vulnerable to degradation**. In most cases, the damage is irreversible or reversible only over a long period.

**Marginality:** Mountain areas tend to be marginal in terms of their remoteness and physical isolation, fragile and low-productivity resources. There are also several **man-made handicaps**, which **prevent participation in the mainstream pattern of activities**.

- **Diversity:** Diversity is an innate feature of mountain areas as one can find **immense variations** among and within eco-zones, even **within short distances**. Not only is there diversity in terms of the degree to which inaccessibility, fragility and marginality affects different mountain areas, more importantly mountain areas are home to a large number of biological resources. They provide an important source for water and unique products such as fruits, spices, flowers, medicinal plants, minerals, etc. There is also diversity in terms of the economic, social, cultural and institutional make-up of mountain areas. The socio-cultural diversity leads to variations in social organization, attitudes, and methods of managing collective goods and community resources. The **harnessing of this diversity in a sustainable manner** is therefore an important issue for mountain areas.

---

<sup>5</sup> Extract from FAO SARD-M Project framework for rapid assessment (see Annex 1).

- **Potentialities: “building on potential”**

Despite the constraints characterizing mountain areas, the diverse nature of the culture, resource base and environmental conditions create **potentials for products and activities that have a comparative advantage**. It offers a number of opportunities for resource and product-centred activities, which could **enhance both productivity and human welfare on a sustained basis**.

Mountain agriculture provides indeed much more than the mere production of food, fibre and commodities. When practiced in a sustainable way, it assures food security, environmental stability, conservation and sustainable use of the biological resources, rural incomes and employment, rural-urban population balance, social equity and cohesion, and maintenance of cultural features and identity in the overall context of globalization.

Mountains provide a wide range of goods and services essential for guaranteeing the availability of vital resources to the rest of the society in relation to water, biodiversity, landscape, risk prevention, specific products and culture, resulting in a series of **interdependencies between upland and lowland areas**. There usually tends to be a lack of recognition of the importance of these interlinkages in the institutional and policy frameworks of countries. Thus, the promotion of sustainable mountain development can play an important role to benefit lowland areas by ensuring adequate supplies of water, environmental stability, conservation of biodiversity, rural-urban population balance, etc.

## **B. PNTD Approaches<sup>6</sup>**

- **The purpose of the PNTD approach**

To be ecologically sound, economically viable, socially just, culturally appropriate and humane, development interventions need to address the issue of power asymmetries that are determined by unequal access to and control over resources and information, and unequal capacities.

The purpose of the PNTD approach is to reduce these asymmetries in supporting a process aiming at the creation of socially legitimized agreements by involving all stakeholders and leading to their commitment and ownership over the development process. It is thus addressing the complexity of the territorial system, its national and supranational context, and the diversity of actors' interests and strategies to promote the appropriation of bottom-up decision-making processes by the actors.

- **Phases and key issues describing the process**

The process can start and be sustained at different territorial scales and levels depending on the geographic, administrative and/or socio-economic context and the issues at stake. The efforts of opening the dialogue at various levels of the political sphere and within civil society are done to stimulate the establishment of several tables and arenas for dialogue and negotiation, around various and interrelated issues which occur at the same time and feed into a wider process of development linking the micro, meso and macro spheres.

The process can be operationalized in four main phases:

- *Views*: Firstly, the existing demands for external support have to be critically assessed to understand their rationale, their nature and the interests and strategies of the stakeholders from whom the demand originated (including hidden agendas). In particular, this phase corresponds to the territorial diagnosis and is the moment to open the dialogue among the stakeholders. It serves to put all of them on an equal footing regarding the information on the territory. The context-specific political, institutional and legal framework will be analyzed in order to

---

<sup>6</sup> From the FAO document “An approach to rural development: Participatory and Negotiated Territorial Development”.

understand the existing rules of the game at regional, national and international levels and their influence on local development.

- *Horizons*: In the second phase, the stakeholders are supported to set out coherent and feasible perspectives for the future development of the territory and to formulate proposals for later negotiation. The stakeholders become aware of all the issues at stake within the territory, allowing them to formulate possible proposals for territorial development, as a common ground for negotiation.
- *Negotiation and the Social Territorial Agreement*: The term “Negotiation” refers to the means to aggregate the diversity of interests in a given territory in order to formulate rural development proposals. The Social Territorial Agreement (STA) is the result of a participatory process and includes plans of activities or initiatives for local development (at short, medium and long terms) defined through negotiation among the different stakeholders in a given territory.
- Finally, the process is intended to lead to a *new cycle of negotiation* that will enable the stakeholders involved to refine, adapt and complement the agreement they have reached initially. Therefore, the dialogue among stakeholders should be institutionalized to consent to the replication of the negotiated territorial development process and to ensure its sustainability. The overall PNTD process inserts itself in the existing social, economic and political systems and might have an impact on them. Nevertheless, changes in these systems might be required for the enactment of the agreement.

#### ▪ **The conceptual principles of the PNTD**

- *Actor based*: Recognition of the heterogeneity of the stakeholders’ interests and visions of the territory.
- *Territorial based*: Based on the territories as spatial units of analysis, shaped by the social and historical relations between the actors and the territory.
- *Dynamic*: Understanding of and learning from the complexity of a changing environment to support positive patterns of change and help mitigate negative patterns.
- *Systemic*: Assumption of the complexity of a territorial context and the interdependencies within and between territories.
- *Multi-sectoral*: Integration of the environmental, social, economic, political and cultural dimensions of the stakeholders’ visions of the territory.
- *Participatory and negotiated*: Notion of the territory as a negotiation arena to strengthen dialogue and mutual trust, and increase bargaining power.

### **C. Mountains in Lebanon**

#### ▪ **Geographical data**

Apart from the narrow coastal strip, Lebanon is mostly a mountainous country covering a total of 10,452 km<sup>2</sup> with a highly urbanized coastal strip and most of the rural areas situated in the mountains. The topography is characterized by the Mount Lebanon and the Anti-Lebanon mountain chains that run parallel to the coast and are separated by the Beqaa Valley.

The ecological conditions of Lebanon are determined largely by topography and vary with altitude and exposition. The climatic conditions vary from Mediterranean climate along the coast and the mid altitudes of the mountain ranges, via sub-alpine or mountain Mediterranean climate on the highest slopes to arid/sub-desert in the northern plains.

Most rainfall occurs between November and March. The mean annual rainfall on the coast ranges between 700 – 1000 mm. The central part of the Mount Lebanon chain receives up to 1600 mm

annually. In the Beqaa Valley, the rainfall ranges from 200 mm in the northeast to 800 mm in the south. The Anti-Lebanon receives between 600 mm in the North to 1000 mm on Mount Hermon. The Lebanese Mountains can be differentiated along by altitude into the Thermo-Mediterranean, Eu-Mediterranean, Supra-Mediterranean, Mountainous Mediterranean and Oro-Mediterranean zones. These zones extend from a belt of evergreen *maquis* and *garrigue* to summer-green forests and dwarf thorny vegetation typical of the alpine and sub-alpine zones.

## ▪ **Properties**

The land ownership in Lebanon is almost equally distributed between the private sector, the public sector and the religious communities, under several tenure systems. However, the cadastre is not always updated and surface areas and boundaries are not always clearly set. This is mainly true in remote rural and mountainous areas.

The users of the lands may not always be the owners. Rentals, usufructs, customs and agreements are used to regulate this system. Forest workers, farmers, private rural companies or shepherds may be allowed to use the space under these usage systems.

## ▪ **Activities**

### **a. Agriculture and forestry**

With the exception of some major agricultural areas in coastal zones and on low altitudes, most of the agriculture (and all of the forestry) is concentrated in mountain areas and in the Beqaa Valley, the coastal strip being highly urbanized.

Lebanon is a major food importer. Fruits, vegetables and poultry production, however, exceed the local market consumption and could contribute to increasing exports. The opening of the Arab markets and the free trade agreements in place will certainly affect this production, by allowing the import of cheaper fruits and vegetables from neighbouring countries.

The average agricultural labour force is approximately 9% today, with high regional variations, going up to more than 20% in the Beqaa.

In terms of rural development, the Ministry of Agriculture (MOA) has implemented a \$5.5 million internationally supported integrated rural development program to provide small and medium-scale farmer assistance which would lead to sustainable human development through start-up activities. These activities include the improvement of health, social services, education and income-generating non-agricultural activities. The Council for Development and Reconstruction has initiated a rural development project. USAID is working in this domain within selected rural clusters, as well as UNDP, who initiated a project on Capacity Building for Poverty Alleviation. Several NGOs are also active in this respect.

A 12 million euros project has recently been initiated between the EU and the MOA. It aims at strengthening the capacities of the Ministry, the Chambers of Commerce and Agriculture, and the growers unions for the production and export of high value horticultural crops.

Farmers in rural and mountain areas need capacity-building to upgrade their farming practices in a manner that would help them to develop practices, such as organic farming practices that are more economically and environmentally sustainable.

Like all Mediterranean countries, the wood produced in Lebanon is generally of low quality. It is therefore unlikely to see investments in the field of wood production, unless intensive forest plantations are implemented and developed in medium and high mountain areas. Even in the case of intensive forest plantations, the wood production in Lebanon would never be able to compete with other wood sources. The economic value of the forests and other wooded lands in Lebanon will mainly be dependent on services (ecotourism, landscape, amenities, environmental functions, etc.) and on the non-wood forest products (pine nuts, oregano and other aromatic, medicinal and culinary plants). The

exploitation of species with a “sentimental value” like cedars, olives or junipers for the production of seedlings, small souvenir items and other handicrafts could also constitute an interesting economic value.

## **b. Tourism**

Tourism in Lebanon has traditionally been urban-based. Most tourists travel to such urban areas as beach resorts, country clubs, casinos, and restaurants. In recent years, however, tourism and recreation are increasingly practiced in natural settings such as forests, protected areas, valleys, and mountain areas.

Until recently, mountain tourism was restricted to winter skiing, secondary summer residences and hotels. This form of mountain tourism used to attract national and international tourists. Currently, a growing number of small businesses and non-profit organizations specialize in organizing eco-tours throughout the country. Several organizations (small businesses and non-profit organizations) provide such a service today. In addition, a number of associations (NGOs and federations) offer alternative forms of tourism and leisure trips, including climbing and rappelling, rafting, canoeing, cross-country skiing, mountain biking, speleology and paragliding. In addition, an increasing number of private or community-based initiatives provide camping facilities and various forms of recreation.

Sustainable tourism practices are supported by NGOs and a few private sector initiatives. NGOs work on promoting locally made products, nature tours, etc. However, it is of utmost importance to mention that the concept of sustainable tourism is not well understood at the decision-making level.

The Ministry of Tourism has recently signed a project financed by the USAID aiming at the implementation of mountain roads for mountain trekking all across the country and for the implementation of mountain lodges.

## **c. Industry**

As of January 1999, there were seventy-two industrial zones in Lebanon. However, not all of them have been decreed and none is adequately equipped to host industrial establishments (e.g. waste collection and treatment). Moreover, many industrial zones were established *de facto* and are presently being decreed even though they are located close to residential areas or natural sites. Statistics indicate that almost 82% of the total classified establishments are located outside industrial zones.

Mountain areas have their share of the chaos caused by industries and establishments situated outside industrial zones. However, in several mountain areas, small industries do play an important role in the socio-economic development of the regions.

The requirements of the urban development and the rehabilitation and reconstruction operations after the long years of war have led to the development of a particular industry in mountain areas, that of the quarries. In addition to the major threat, they impose on the natural ecosystems and the degradation they are causing, their anarchic development has caused severe scars in the landscape throughout the country. Several efforts are being developed to organize the sector and to rehabilitate the severely degraded landscape.

## **D. Mountains Vulnerabilities**

The National Action Program to combat desertification (NAP) states the problems related to rural and mountain regions which lead to desertification and land degradation, showing the difference between natural and human induced factors. The Forestry Outlook Study for Lebanon looks at the internal and external driving forces affecting the forestry sector in Lebanon. The identified human activities and driving forces are of interest to our study.

**Human activities** in mountain regions **causing desertification and land degradation** in Lebanon mainly include:

- Agricultural encroachment and cultivation of soils that are fragile or exposed to erosion by wind or water
- Overgrazing – often selectively – of shrubs, herbs and grasses
- Deforestation and overexploitation of wood resources, in particular for fuel-wood and charcoal
- Uncontrolled use of fire for agricultural and forest clearing
- Non-sustainable agricultural practices
- Poor irrigation practices and inefficient water use
- Chaotic urban sprawl on fertile lands and forests
- Pollution (solid waste dumping, wastewater effluents, industrial wastes).

The **driving forces** for these activities are complex and varied. They include:

*At the local level*

- Poverty and lack of basic security
- Lack of awareness
- Unsustainable land use practices
- Inadequate extension service
- Remoteness of mountain regions and centres of production from market places and decision making centres
- Lack of technical know-how
- Difficulty of access to agricultural credit schemes
- Inaccessibility
- Fragility of the systems

*At the national level*

- The civil war (1975-1990) and its consequences including displacement, migration and lack of enforcement of regulations
- Political instability
- Absence of a comprehensive strategy for the sustainable use of natural resources
- Absence of a comprehensive strategy for mountains and mountain issues
- Land fragmentation due to inheritance laws and the high transactional costs
- Disabling land tenure system
- Absence of land use planning
- Absence of policies and plans for water, agriculture, forestry, mountain tourism and mountain-related issues in general

*At the institutional level*

- Centralized decision-making, despite the efforts to start implementing decentralization
- Sectoral solutions for multidisciplinary problems
- Weak inter-departmental and inter-ministerial coordination and cooperation, duplication of efforts and overlap in the mandate of public institutions
- Absence of regional structures for comprehensive natural resources management
- Weak institutions at the local level

*At the legislative level*

- Absence of a comprehensive legislative framework leading to reactive and inadequate legislation
- Weak enforcement of existing legislation

*At the macro level*

- Foreign debt
- Unfavourable terms of trade
- Unfair competition from subsidized imports.

The combination of these factors and driving forces with the environmental conditions lead to land degradation and desertification, especially in mountain areas because of their vulnerability. The consequences of desertification are extremely serious and often dramatic to the poor, especially in mountain areas, as desertification reduces production and makes it increasingly precarious. Affected populations will resort to survival strategies that will worsen the situation and inhibit development.

The most immediate and generally widespread of these survival strategies is to intensify exploitation of the most readily available natural resources, but at the cost of enormous effort. The second strategy is increasing rural migration: this may simply involve men and young people leaving for a seasonal or longer-term job in other areas of the country, particularly the towns, or going to other countries; or the migration may take on the proportions of a population exodus in search of better living conditions. These survival strategies are often accompanied by breakdowns in the integrity of communities and sometimes families. When survival is difficult, people become withdrawn and sometimes strongly individualistic; this leads to a variety of ethnic and individual conflicts.

Examples on the first survival strategy in Lebanon, namely the exploitation of available natural resources, are many and varied including agricultural encroachment of fragile land, overgrazing of shrinking rangelands, clearance of forests for agriculture and improper urban and quarrying activities. The second survival strategy can clearly be noted by looking at the Lebanese urban population, which has increased from 2,120,000 in 1985 to 3,000,000 in 2000 (out of around 4,500,000 inhabitants).

This resulted in land abandonment in mountain areas, leading to the neglect of terraces and other soil and water conservation measures in many places. Moreover, this migration trend has put tremendous pressure on the existing urban infrastructure resulting, in many cases, in chaotic urban sprawl.

## IV. Changes and Driving Forces and their Impact on Mountain Areas

Lebanon is currently undergoing rapid changes in all the sectors and at different levels. All the changes, at the national, regional and international levels are affecting the rural and mountainous regions, which were already severely affected during the years of war and post-war.

### A. Demographic Changes

According to the Ministry of Social Affairs, 88% of the population live in urban areas. The estimated population growth rate is at 1.8%. This rate is negative for rural areas and is positive and increasing for urban areas. The urbanization level increased from 79.4% in 1985 to 89.7% in 2000 and is expected to attain 93.5% by 2025.

A large portion of the population (38.8%), although registered in their various *Mohafazats* of origin, actually reside in Beirut. There is an intensive internal national migration towards Beirut and its suburbs. This exerts a big pressure, which in the absence of proper land use planning and adequate infrastructure, results in major environmental problems.

According to the Ministry of Displaced, about 28% of the resident populations, 810,000 citizens, were displaced during the war (1975-1990). Economic and social considerations have played a role in determining the pace of return. Displacement was associated with large-scale destruction of villages, towns and housing units rendering immediate return impossible. More than 940 villages and towns were affected. The most seriously affected *Mohafazat* was Mount Lebanon followed by the South. Despite all the efforts undertaken at the different levels, a high proportion of the displaced population is not willing to return to their native villages.

According to the United Nations Human Settlement Program, the urbanization level is expected to increase from 88% in 2000 (79% in 1985) to 93% in 2025.

The last population census was carried out in 1932. Recent estimates based on surveys reveal a population of around 4 million inhabitants. According to UNDP, the population growth is projected at a moderate and declining rate of less than 2% for the next 20 years. In general, the population density is 400 persons/km<sup>2</sup>, against 72 persons/km<sup>2</sup> in 1932.

Population density at the *Mohafazat* level reveals that highest pressure is put on Beirut city, followed by Mount Lebanon (including the suburbs), and the least with Beqaa, followed by Nabatieh. This highlights the rural migration towards urban centres.

During the years of war, post-war and until today, Lebanon has been losing a large number of the working population and of highly qualified professionals from all the sectors through emigration.

The high level of emigration will affect directly the mountain areas by reducing the working population, but most importantly by changing the level of perceptions and values. Some people will be looking at the services and non-monetary values of the mountains (including forests, landscapes, water resources, etc.) thus affecting the land use and the related activities.

The increase in the urbanization level and the fact that a high proportion of the displaced population is not willing to return to their native villages and towns will directly affect the agriculture and forestry sectors. On the one hand, the increase in the urbanization level will mean an increase in the urban extension, which will be at the expense of the peri-urban forests and other wooded lands, and of some orchards and agricultural fields. On the other hand, the migration towards the cities and the abandonment of the villages and agricultural fields in rural areas, will lead to an extension of the forests and other wooded lands, through the natural reforestation of the abandoned lands. However, the level of urbanization will also have a serious effect on the availability of labour willing to work in agriculture and forestry-related fields, as they will be looking for better-paid jobs, more adapted to the urban life and its requirements.

The increase of the urbanization at the expense of the peri-urban forests and the lower mountain range will result in the need to travel farther in order to reach the forest and the less urbanized regions. This will also mean the need to improve the urban environment, by providing more green spaces, in coastal cities and in developing cities on the lower and sometimes medium mountain range.

Although the national forest and tree resources assessment project has shown a relatively good level of forests and other wooded lands (OWL) cover in Lebanon (13.2% forests and 11.3% OWL), the increase in urbanization is causing a high level of fragmentation of the forest cover, which hinders the proper development and conservation of these resources.

## **B. Economic Changes**

The favourable geographic position, combined with the large entrepreneurial ability of its population and a liberal, market-oriented economic policy, made of Lebanon the gateway to and the turntable of the Near-East economy, especially in the services sector. This sector accounts for almost 70% of the GDP and industry for 18%. The contribution of the agricultural sector to the GDP has been around 8-12% during the last few years.

The Lebanese economy is still struggling to recover from the war and conflicts that have devastated the country and affected all productive resources. Agriculture was severely affected through loss of infrastructure, resources and assets. The urbanization resulting from the displacement of the populations has resulted in the loss of many productive agricultural lands in the lower altitudes, which was neither counter-balanced by the development of new agricultural lands nor major agricultural projects on existing agricultural lands in mountain areas.

The economic and social pressures combined with the lack of employment in rural and mountain areas are also resulting in the displacement of the population and in the high rate of emigration abroad of mostly young male people.

Several projects are launched in the different sectors aiming at poverty alleviation and socio-economic development. However, coordination and/or complementarities of all the socio-economic development and poverty alleviation efforts, ensuring the sustainable use of the natural resources, the sustainability of communities living in mountain areas and mainstreaming gender issues in the programming process both at the national and local levels, utilising decentralized and community-driven approaches, is still a challenge.

High poverty levels in rural and peripheral areas have several implications on natural resources in general, mainly when it comes to meeting basic needs like food, housing and fuel wood (and charcoal).

## **C. Technological Changes**

Technological changes will affect the development of the mountain areas, both directly and indirectly. New technologies could be used for a better management of the existing forests, for the development of the agricultural sector and for the improvement of the reforestation and afforestation campaigns.

Among the changes that are expected to affect the sector and contribute to the stabilization of rural and mountain populations, we cite:

- Information and communication, facilitating the transmission of knowledge and relevant information;
- Remote sensing, geographical information systems and other computer-aided decision-making tools, improving the monitoring and assessment of the natural resources;
- Biotechnology and modern nursery techniques, improving the capacity of production of healthy and vigorous seedlings;
- Soil amendments like hydro-gels, increasing the level of survival of seedlings and reducing the water demand of some crops;
- Forest fire fighting techniques;

- New technologies improving the potential of the non-timber forest products;
- New technologies improving the valorisation of timber, through the development of small industries for the production of particle board for example;
- Development of the pest management techniques improving the capacity to control the pests and diseases;
- Development of new technologies allowing the replacement of fuel wood by other low cost renewable sources of energy;
- Improvement in the sustainable forest management;
- Improvement in the grazing and rangeland management techniques;
- Improvement of the food industries and crop transformations;
- Development of new road networks to reduce the barriers caused by the remoteness;
- Better utilization of refrigerated trucks and refrigerated storehouses for a better transport and storage of fresh products;
- Development of on-line marketing and selling of local products.

#### **D. Environmental Concerns**

Lebanon has signed most of the environmental conventions and treaties. National action programs are developed and being implemented with the assistance of international organizations and bilateral and multilateral partnership agreements. These conventions and treaties have helped to increase the level of awareness and concern of the population towards natural resources and environmental issues.

Several protected areas and nature reserves are established. The issues related to sustainable forest management are being dealt with properly. The land-planning scheme (Schémas directeur de l'aménagement du territoire libanais) is proposing a system of national parks and protected areas to be implemented in the country. It is also proposing the establishment of a cedar and mountain arboriculture corridor on the summits of Lebanon, along with a framework law for the protection of the higher mountains.

Civil society is directly involved at different levels and is playing a major role in the implementation of the conventions and treaties. This has also influenced the level of expectation of the population from the forests and natural resources.

#### **E. Political and Institutional Changes**

The current unstable and unpredictable political situation in the country and in the region makes it very difficult to analyze the effects that political changes might have on the mountains and rural areas. Therefore, we will only be looking at the institutional changes and their effects on the sector.

The increasing role of the Ministry of Environment and the direct implication of civil society in the different aspects related to natural resources will certainly lead to some changes.

The Ministry of Agriculture is currently revising some aspects of the forest legislation and is finalizing a law for organic farming. The ban on the production of charcoal was recently abolished to allow for a controlled exploitation and stop illicit felling. The charcoal production will contribute to the reduction of the highly flammable biomass and will directly contribute to poverty alleviation. The consequences of the return to the controlled production of charcoal will be monitored and evaluated by the team of the Rural Development and Natural Resources Directorate. The development of the organic farming will open new horizons for mountain agriculture and will contribute to the sustainability of the human settlements in mountain areas. It will also strongly contribute to the development of agri-tourism.

The protection and conservation of forests and ecosystems induces consequences on the landowners and users. The laws and legislations that govern the protection and conservation measures impose controlled exploitation or sometimes forbid exploitation. While these legislations contribute to the protection of these ecosystems and have a positive effect on the natural resources in Lebanon, they

may have direct consequences on the food security and on the income of the owners and users. Economical and compensational measures will have to be studied and applied in order to ensure the sustainability of the legislation.

On the other hand, and in light of the international discussions on decentralization and its consequences on the mountain areas, the Rural Development and Natural Resources Directorate is currently studying the possibility of applying decentralization up to a certain level. The effect of this institutional change will lead to a higher involvement of the local community groups, the municipalities and the grass-root organizations in the different questions related to forest management, food industries, sustainable agriculture and all the aspects of sustainable rural development. However, this should only be applied after the implementation of a capacity building and awareness raising campaign.

## **F. Internal Driving Forces**

Severe constraints hinder the development of mountain areas in Lebanon, the most important of which being the very limited budget allocated to the development of this sector.

One of the most important challenges facing the mountain areas in Lebanon is the conflict on land use. The development of urbanization and the need to increase the agricultural production can only be at the expense of the forests and range lands. This challenge can only be faced with proper land use planning and certainly the adoption of the land-planning scheme (Schémas directeur de l'aménagement du territoire libanais) or the development of another integrated land use program, involving the local communities.

The Rural Development and Natural Resources Directorate will soon develop a forest policy and national forest program, and a mountain and rural areas policy in collaboration with the different concerned state and non-state stakeholders. Another important challenge to be faced is the integration of the policy and the program in the overall development programs of the country.

The free trade and open markets policies and the decrease of interest in the agricultural sector could have a positive consequence on the forestry sector, by reducing the development of new agricultural projects, thus reducing the risk of land use conflict in this respect. This will also contribute to the development of traditional crops, niche products and the revival of other forgotten sectors, that are not concerned by the free trade and that will bring an added value to the Lebanese agricultural products.

The low income generated by the traditional forest-related activities will certainly decrease the stress put on the forests and the overexploitation of the resources. However, if the exploitation is not controlled and if illicit felling still occurs, some of the rural population may have the tendency to overexploit the resources in order to meet their immediate needs and demands. This double-sided blade will only be dealt with through appropriate legislation, awareness raising and sustainable management.

The encouragement of forest plantations will present another opportunity, as it will allow for the exploitation of these plantations at maturity, for fuel and industrial wood thus reducing the stress caused on the natural forests. This activity could also offer the opportunity of applying certain aspects of international treaties and agreements.

Until today, very little coordination exists between the ministries in charge of mountain areas, namely the Ministry of Agriculture, the Ministry of Environment, the Ministry of Energy and Water (watershed management), the Ministry of Interior (municipalities) and the Ministry of Finance. The coordination among all the concerned institutions and the stronger collaboration with the civil society will have a great influence on the sustainable management, the protection and the conservation of natural resources.

## V. Mountains, Policies and Institutions for SARD

Since the end of the war in 1990, Lebanon's main challenge has been to rebuild its economy. The country suffers from a severe debt burden, economic stagnation and unemployment. The Government is working on the rehabilitation of several sectors affected by the war and its consequences, and on stopping the degradation of natural resources.

Several line-ministries and public bodies are contributing to rural development, natural resources conservation and combating land degradation. This is through proposing and implementing the necessary strategies, policies, programmes and specific projects within the framework of sustainable development.

It should be noted that even without a specific focus on mountains, the Government and its bodies are implementing policies and processes aiming at the development of mountain areas.

- In 2002, the Ministry of Agriculture celebrated the International Year of Mountains by organizing a series of workshops, awareness raising activities and sensitization campaigns. A calendar showing Lebanese mountains scenes and landscapes was produced and distributed to all partners of the MOA.
- Both the Ministry of Agriculture and the Ministry of Environment are launching initiatives to save the natural patrimony and promote protection and proper management of natural resources. Laws prohibiting woodcutting and protecting forests from fires, grazing and mismanagement are issued.
- The Green Plan, an independent organism connected to the Ministry of Agriculture, is in charge of the implementation of hill lakes, irrigation networks, agricultural roads and terraces.
- The Ministry of the Displaced has encouraged the return of war displaced by allocating funds for the reconstruction of villages, houses and religious monuments.
- The Ministry of Social Affairs is engaged in poverty alleviation.
- The Ministry of Administrative Reform is working with municipalities on sustainable development plans (with the technical and financial assistance of the EU).
- The Council for Development and Reconstruction has recently prepared a land use plan (Schémas directeur d'aménagement du territoire), in which mountain areas are given a particular focus in terms of protection and conservation (mainly high mountains, beyond human settlements).
- The Ministry of Economy is developing economic measures to encourage investment and improve the quality of the products.
- The private sector, NGOs' and international organizations are assisting the country by providing technical and financial support to specific projects.

On another level, the Ministry of Administrative Reform has implemented a project financed by the EU for the local development of some municipality groups in 12 regions of Lebanon, most of which are in mountain and rural areas. The project aimed at building the capacities of the municipalities to develop their own local development action plans in the different sectors. The project team has succeeded in producing the local action plans, but has left the population unsatisfied with the results, as it was not accompanied by the implementation of tangible activities and projects.

Although Lebanon is fulfilling its commitments towards the international conventions and agreements, there is yet no Sustainable Development Strategy for the country, agreed upon by all parties and stakeholders. There are on-going efforts at different levels and in different ministries, but no mechanism has yet been created. The political instability that the country has recently been going through since 2005 is hindering the process.

There is no written mountain and rural development policy. Each concerned ministry develops laws, legislations and projects. Until now, there is no coordination mechanism linking the efforts made by the various concerned stakeholders. In addition to the recently finalized Agricultural Strategy, the Ministry of Agriculture being one of the concerned line-ministries is developing laws, legislation and projects in a

certain framework, aiming at the development of the agricultural sector; the food industries; the conservation, promotion and management of the forest and tree resources. Those activities concern both the mountain zones and the coastal agricultural zone. Among the activities, the MOA is undertaking, we cite:

- Enforcement of the law and legislation
- Issuing of new laws, decrees and legislation
- Forest conservation and development
- Promotion of non-timber forest products
- Capacity building of concerned stakeholders
- Institutional development
- Quality control of food products and food industries
- Plant and animal health
- Water management and conservation
- Research and extension
- Rehabilitation and reclamation of lands.

Although the Rural Development and Natural Resources Directorate in the Ministry of Agriculture is in charge of the different aspects related to rural development, mountain issues are not directly addressed. This directorate is mainly concerned by forests and forestry; rangelands; public gardens; protected forests; hunting and fishing; rural engineering and irrigation; food industries; and food quality control.

## **A. The Forest Policy and Strategy**

The Ministry of Agriculture is initiating a process to develop and implement a national forest policy and strategy and is seeking funds to start this process. The priority goals were developed with the assistance of an FAO consultant in the framework of the TCP project on the monitoring and assessment of forests and tree resources in Lebanon.

Although the policy is not developed yet, it is described in this document, as it constitutes one of the major elements of mountain development and the implementation of the SARD-M process.

The following priority goals are proposed for the development of the forestry sector to the year 2020:

- Adopt an **ecosystem-based approach** that maintains forest health, structure, functions, composition and biodiversity through integrated land-use planning, the implementation of a system of representative protected areas and the establishment of mechanisms to advance the conservation, management, planning and maintenance of urban and peri-urban forests.
- Foster the **participation and involvement of rural populations** in particular the most marginalized ones, in forest management and conservation, improving access to natural resources and enhancing the equitable sharing of multiple benefits thereof, improving therefore rural livelihoods and contributing to poverty alleviation.
- Support **private forests and other investments made by forestland owners** in small and medium-sized viable forests and woodlots businesses through the right mix of extension services and incentives.
- Stimulate the **diversification of markets** for forest products and services promoting value-added and best end-use through expanded research and design as well as markets for environmental services.
- Create an independent **Government Agency** (Forest Office) or strengthen **the existing Forest Department** for a better management of forests and other wooded lands, and a better integration of the concerns of all governmental and non-governmental stakeholders with a view to:

- Strengthening the integration and collaboration of all planning authorities (tourism, environment, public works, water, agriculture, etc.) for a better management and development of the resources and the reduction of the negative impacts, like fragmentation
- Implementing decentralization progressively (or at least administrative deconcentration) for a better and more efficient participatory approach to forests and OWL management.
- Review, amend, harmonize and update the **forest legislation** with forest-related and environmental legislation to rationalize taxation, make provisions for incentives and payments for environmental services, recognize intellectual property rights, and include emerging new issues and relevant international commitments.
- Establish a comprehensive **national forest reporting system** that consolidates data, information and knowledge for all features of the forest, both urban and rural, other wooded lands, trees outside forests and land use change through:
  - Disseminating the results of the first forests and tree resources assessment
  - Ensuring the necessary funds and personnel for a regular reporting exercise
  - Broadening the information gathered to cover the needs of the different reporting exercises
  - Building upon the existing systems to gather information related to land degradation and rangelands.
- Maintain and enhance the **skills and knowledge** of forest and natural resources practitioners at all levels (engineers, forest guards, NGOs, private sector, municipalities, etc.) by creating a training centre and a research institute to:
  - Develop the capacity of forest and natural resources practitioners to efficiently and effectively use new technologies, tools and techniques
  - Develop technical and post-secondary education to meet the requirements of sustainable forest and other natural resources management
  - Create the necessary processes to bring new and traditional knowledge and ideas to policy evolution, decision making and field practices
  - Inform investors about opportunities for investment in the forestry sector for the development of forest products and services
  - Enhance extension through appropriate communication and outreach programmes.

## **B. The Agricultural Development Strategy, a Brief Review**

The preparation of the agricultural strategy was influenced by the three fundamental principles followed by the Government of Lebanon for the rebuilding of the national economy after the years of wars. These principles are applied to the agricultural sector as follows:

### *Agriculture and sustainable development*

- Agriculture and economic development: agriculture is one of the main economic activities
- Agriculture, natural resources and environment: agriculture has impacts on water, soils, biodiversity, pollution, landscapes, etc.
- Agriculture and social equity: agriculture contributes to poverty alleviation.

### *Agriculture and liberalization*

The agricultural sector seems to be slowly moving towards liberalization through:

- The updating of legislation to be better adapted to the market needs and to the health of the consumer
- The opening of the market through bilateral and multilateral agreements

- A stronger role given to the private sector with a drastic reduction in public intervention, except for the creation of new structures like Export Plus that aim at giving a support to the private sector
- A stronger commitment of the State through the implementation of projects of public interest (communication networks in rural areas; water and irrigation projects; environmental protection; watershed management; education in rural areas, etc.) and through a stronger participation of the rural population and the grass-root organizations in the decision making process.

### *Agriculture and good governance*

Agriculture is one of the major stakeholders for the implementation of good governance, through:

- The participation in the national budget equilibrium
- The participation in the equilibrium of the commercial balance
- The participation in the reduction of the debts
- The encouragement of national and external investments.

### **a. The Framework of the Strategy**

The strategy mentions the fact that rural development and sustainable agriculture are starting to be taken into consideration by the Government and that some actions are starting to be undertaken to reduce the poverty pockets in rural areas. However, social measures being implemented in rural areas are not connected to agriculture; and environmental problems, caused by the mismanagement of the natural resources and the misuse of agricultural inputs, are far from being addressed properly.

Several challenges and obstacles should be overcome as they might hinder the proper development and implementation of the Agricultural Strategy:

- An increasing internal demand on agricultural products in quality and in quantity
- A precarious, old and untrained manpower
- The agricultural lands being eaten up by real estate development and by abandonment
- An inappropriate management of the water resources
- A specific modernization, requiring a specialized extension service
- A need to enforce applied research, training and extension
- The challenge of international agreements and their impact on the Lebanese products
- The need to promote the technical and commercial efficiency of the production lines
- The need to improve governance and participation.

The strategy proposes the steps to be followed for a sustainable agricultural development, respectful of the environment and characterized by:

- High value-added products, with an increase in quantity, quality and uniqueness accompanied by high quality services, leading to higher incomes and better feasibility.
- The efficiency of the proximity, enhanced by the small surface area of the country and its geography, allowing for the specialization of production zones with a reduced production. This could initiate the development of private initiatives for the production and distribution of typical products and their implementation both in Lebanon and in the neighbouring countries.
- The occupation of the lands (the land use) with a restructuring of the properties. The abandonment of the non-irrigated agricultural lands and the subsequent occupation of the space by unproductive forest species could be overcome with the planting of productive forest and range species; the irrigated lands could be restructured and made available for agricultural production.
- The protection of the environment, through the development of a high technology responsible agriculture, leading to an economy of the water resources and a reduction of the pollution caused by the agro-chemicals. This requires the appropriate training of the farmers and their awareness raising.

- The implementation of a dynamic land use planning, in a fair and equilibrated manner, taking into consideration the environmental aspects and favouring the modernization of agriculture and the zonal specialization.
- The generation of new jobs to meet the requirements of the high tech agriculture, with an eventual decrease in the low productivity of manpower found in the traditional agricultural systems.
- Combating poverty, through the implementation of rural development projects (poverty is mainly concentrated in the rural areas) in the framework of the land use planning in order to increase the chances of the social acceptability of the efforts aiming at the modernization of the agricultural sector.

The strategic objectives:

Requalifying agriculture

- Productivity
- Added value
- Technical and genetic innovations
- Durability
- Modernization

Increasing the agricultural absorption capacity of the capital

- Accessible and pertinent information
- Project conception and implementation capacity
- Follow-up to funded projects and evaluation capacity

Moving towards a “project approach”

- Reduction of the “free” distribution
- Increasing the incentives on respected contractual basis, with project follow-up and evaluation

Bridging the gap between the upward and downward movements

- Administrative deconcentration
- Broadening decentralization through the successful strengthening of the municipality system
- Organizing the agriculturalists and the farmers into intermediary structures (cooperatives, farmers unions, regional agricultural chambers, etc.) to allow for the efficient functioning with the deconcentrated and decentralized bodies
- Updating and adapting of the legislation in the different fields related to agriculture.

#### **b. The main axes of the agricultural development strategy**

- Mobilizing water and rationalizing its utilization
- Appropriate land use
- Efficiency of the techniques
- Improving the production lines
- Integrating the territory in agricultural and rural development
- Renovating the public and private institutional framework
- Systematizing the stakeholders’ participation and linking this with rural development.

#### **c. Institutional innovations to be considered**

Three institutional innovations could be considered in the current situation, for a better coherence in the conception of the agricultural development policy and its rural component:

- *The National Observatory for the Analysis of the Agricultural and Rural Development (ONADAR):* Creation of unit for the collection of data, treatment of information and analysis of programs and projects (to assist in monitoring and evaluation) related to agricultural and rural development; and follow-up of the adopted agricultural strategy.

- *Decentralization/deconcentration*: Decentralization of the decisions concerning the rural or agricultural development for a better coordination among the concerned stakeholders and a more efficient way of addressing the financed actions (public or private funds), while looking for synergies at the territorial level.
- *National Programs for the Development of Strategic Products*: Construction of national development programs, with products offering the double advantage of mobilizing and coordinating the means to develop a product, and to increase its capacity to compete against external products, while favouring the specialization and making the necessary adjustments.

## VI. The Agricultural Development Strategy and the SARD Principles

SARD-M provides a framework covering the principles of sustainable development including economical viability, culturally appropriate approach, social justice, ecological balance and long-term productivity. SARD-M is not only concerned by agriculture, but also by natural resources, environment, health and social, institutional and economical sectors. In other words, SARD-M is concerned with the three pillars of sustainable development: the economic sector, the environmental sector and the social sector. Four processes are recommended to be the pillars of any sustainable development strategy and of the implementation of the SARD-M mechanism: political, participatory, financial and technical processes.

In that sense, the Agricultural Strategy is in line with the principles of SARD-M and of sustainable development, as it concerns the issues of sustainable development, combating poverty, food security, environmental sustainability.

The Strategy addresses mountain issues in an implicit way. It provides a framework for rural development and sustainable agriculture in rural regions. In Lebanon, the rural regions are mainly mountainous.

The Strategy matches the SARD-M principles by adapting the basic principles of sustainable development to the agricultural sector and by setting this path as the main development principles, despite the fact that it does not directly address mountain issues:

- Agriculture and economic development: agriculture is one of the main economical activities.
- Agriculture, natural resources and environment: agriculture has impacts on water, soils, biodiversity, pollution, landscapes, etc.
- Agriculture and social equity: agriculture contributes to poverty alleviation.

Based on the four pillars cited above, several cross-cutting issues exist between the Strategy and the SARD-M principles, namely:

- **Political**
  - Strategic Objective 4: Bridging the gap between the upward and downward movements through administrative deconcentration; broadening decentralization with the successful strengthening of the municipality system; organizing the agriculturalists and the farmers into intermediary structures (cooperatives, farmers unions, regional agricultural chambers, etc.) to allow for the efficient functioning with the deconcentrated and decentralized bodies; updating and adapting of the legislation in the different fields related to agriculture
  - Integrating the territory in agricultural and rural development (One of the main axes of the strategy)
  - Renovating the public and private institutional framework (One of the main axes of the strategy)
  - Decentralization/ deconcentration: The strategy explores the possibilities of implementing decentralization, or at least deconcentration as a first step, for a better management of resources by the resources owners and direct users. The division of Lebanon into 40 agricultural homogeneous zones is one of the tools used to initiate the decentralization/deconcentration process
  - The strategy proposes a specific territorial approach based on the homogeneity of agricultural systems and on several criteria like climatic conditions and socio-economic development
  - Strategic Objective 1: Requalifying agriculture through productivity; added value; technical and genetic innovations; durability; modernization
  - The strategy proposes the adoption of modern technologies, high quality specific products, niche products and high value crops for the improvement of the agricultural sector.
  - Mobilizing water and rationalizing its utilization (One of the main axes of the strategy)
  - Appropriate land use (One of the main axes of the strategy)

- Efficiency of the techniques (One of the main axes of the strategy)
- Improving the production lines (One of the main axes of the strategy)
- **Participatory**
  - Systematizing the stakeholders participation and the linkages with rural development (One of the main axes of the strategy)
  - The strategy proposes a project approach through which local communities would be trained and offered the possibilities to develop and implement projects that answer their needs, based on the identified territorial vocations
  - The strategy proposes the participatory approach and dialogue as tools for its implementation
- **Technical**
  - The strategy identifies one of the major problems of agriculture in Lebanon as being a lack of know-how in the modern agricultural techniques and in the water management related problems, mainly at the grass-root levels in remote areas
  - Strategic Objective 2: Increasing the agricultural absorption capacity of the capital through accessible and pertinent information; project conception and implementation capacity; funded projects follow-up and evaluation capacity
- **Financial**
  - Strategic Objective 3: Moving towards a “project approach” through the reduction of the “free” distribution; increasing the incentives on respected contractual basis, with project follow-up and evaluation
  - The strategy looks at the financial and fiscal aspects related to agriculture and land use and proposes sustainable mechanisms to finance the development of the agricultural sector while contributing to poverty alleviation.

The Strategy is in line with the objectives of the Government, it is also affected by the different policies adopted in Lebanon, both at the national and international level. It is built in a way to try to minimize the impact of the different policies on the production lines and to benefit the prevailing socio-political climate and the international agreements by proposing specific niche products.

Capacity building and extension are necessary for the successful implementation of this Strategy, along with the administrative and fiscal reform that will provide a suitable environment for the production of high quality products and cash crops.

Although the Strategy addresses some of the issues related to the management of natural resources, mainly the management of water and soil resources, the aspects related to forestry and pastoralism are very weakly addressed.

Mountain issues are covered by all the aspects related to rural development. Lebanon being mostly a mountainous country, it is very frequent to combine both mountain areas and rural areas under the same umbrella.

The sustainable management of mountains in the Mediterranean region can only be approached through the complementarities between the agricultural, sylvicultural and pastoral systems (the agro-sylvo-pastoral system). The evolution of the needs of Lebanese society has caused the addition of two components to this very old system; small industries and tourism. If the Strategy mentions the need to develop the food and agricultural industries (mainly in rural areas), the production of characteristic products and the development of the agri-tourism and ecotourism, the issues of grazing and forest management are vaguely mentioned.

The analysis of the reasons behind this lack, are beyond the scope of this study. However, it must be noted that the Ministry of Agriculture has prepared and adopted the National Action Program to Combat

Desertification, and has recently finalized the first forest and tree resources assessment and inventory. It is now in a situation to start working on the forest and rangeland strategy and policy, which could be developed in line with the Agricultural Strategy and the SARD principles.

## VII. PNTD Pilot Activities in Four Lebanese Mountain Territories

The Lebanese MOA, through the support of the UTF project, the FAO/SDAR and the CIHEAM Bari (SARD–M Project) has initiated PNTD processes in order to start agricultural territorialization and stakeholders' participation, as advocated by the Agricultural Strategy, and as key elements to contribute to decentralization process. Decentralization being a long process that requires the involvement of different institutions and policies, the PNTD could only contribute to a tentative initiation without any commitment on behalf of any institution or stakeholder.

The UTF project assisted by the FAO/SDAR Service, has mobilized a project team and local facilitators for initiating the PNTD approaches, adapting these to the local conditions.

CIHEAM-IAM Bari, as Regional Focal Point for the SARD-M Project, appointed a Lebanese consultant to assist the project team and local facilitators in PNTD processes and to assess the main weaknesses and strengths for future steps of PNTD that would be sensitive to SARD principles and mountain specificities.

### A. The Lebanese Agricultural Homogeneous Zones and Mountain Specificities

PNTD pilot activities were based on the identification of territorial units. These territories were identified according to the work realized by the UTF (FAO) project "Assistance au recensement agricole" that divided Lebanon into 40 Agricultural Homogeneous Zones, based on different criteria (socio-economic, edaphic, climate, etc.). The division of Lebanon into territories (or homogeneous zones) was undertaken in order to implement the Agricultural Strategy in a participative approach at the grass-root level.

Several criteria (intensity of agricultural production, characteristic crops, irrigation, slope, communication means, human settlements, agricultural know-how and dimension of the zone) were used for the division into zones, thus ensuring certain homogeneity within each zone. The results of the agriculture census undertaken in 1999 and the different maps produced were used.

National consultants have undertaken studies and analysis in the different zones in order to prepare development plans and determine the dominant vocations of each of these zones, based on the realities, strengths and needs and taking into consideration the involved stakeholders.

The description of the Agricultural Homogeneous Zones undertaken in the framework of the UTF project has allowed for the determination of the priorities and specific needs in the different territories. A review of these results has permitted to highlight how mountains, with their specificities, are driving forces in the determination of priorities and needs of the territories they belong to:

- *On the economic level:* with a few exceptions, the per capita income is lower than the population average and the active population is rather old. The exceptions are mainly in regions where illicit crops used to be planted; this situation has drastically changed since the implementation of eradication programs. Another exception concerns the tourism sector in mountain regions with ski resorts, luxury hotels, and secondary summer residences.
- *On the social level:* except in some mountain towns, the level of unemployment is usually higher, with a lower population density than in most urban zones and an insufficient access to basic services.
- *On the environmental level:* the role played by agriculture, rangelands and forestry is important, but not perceived in the same manner as in urban centres. This difference in perception often leads to conflicts on the land use between the urban population who does not always understand the economic importance of the forests and the rangelands, and the important role played by forest activities and grazing both on the environmental and economic levels, and the rural population who

considers the forest and rangelands, as a source of income regardless of any environmental consideration.

Mountain regions in Lebanon have some challenging political, social and economic characteristics.

- Despite the important road network that covers the country and makes most of the mountain regions accessible, they remain marginalized and vulnerable (politically, socially and environmentally). Mountain populations are not always consulted when it comes to issues of interest, laws and legislations, or even projects to be implemented in their region. However, the consultation process is being progressively implemented by some NGOs and governmental institutions.
- The Anti-Lebanon mountain chain constitutes the major borderline between Lebanon and Syria, and part of the borderline with Israel. This trans-boundary zone is currently politically sensitive and will not be dealt with any further in this document.

## **B. The Four Mountain Territories for the PNTD Activities**

Five of these zones were selected by the SARD-M Project team to start the implementation of the Participatory Negotiated Territorial Development (PNTD) approach. The five zones are: Hasbaya-Marjeyoun in South Lebanon; the Higher Chouf in Southern Mount-Lebanon; the coastal and middle zone of Metn and Keserwan in Mount-Lebanon; the Northern plains of the Oronte River (Hermel) in the Northern Beqaa; Halba – Akkar in North Lebanon.

Among the five zones, the first four were analyzed for this study (Hasbaya-Marjeyoun; the Higher Chouf; the coastal, lower and middle zone of Metn and Keserwan; the Northern plains of the Oronte River). They were selected in a way to represent all the mountain regions in Lebanon and to allow for the development of a typology of the Lebanese Mountains, with their problems, their specificities, their constraints and opportunities.

These different Agricultural Homogeneous Zones were extensively described in the UTF study.

### **a. Commonalities**

The review of these studies allowed for the identification and analysis of some commonalities for the selected territorial contexts.

*Common problems* being faced:

- Lack of markets and marketing
- Remoteness from major cities and market places
- Lack of services
- Land tenure system and small sized properties
- Lack of integrated agricultural strategy
- Lack of expertise
- Need for improvement of infrastructure.

*Factors* affecting production cost and *limiting the development of agriculture*:

- Mountainous lands
- Small and narrow terraces
- Remoteness of agricultural lands from villages and from market places
- Impracticality to use modern machinery
- Limited amount of irrigated lands and lack of irrigation projects

- Lack of manpower
- Lack of know-how of existing manpower on modern production techniques
- Aged farmers and manpower
- Lack of extension services
- Abandoned agricultural land requiring high rehabilitation costs
- Land fragmentation
- High cost of inputs
- The climatic conditions of the region: severe spring frost in some years; floods in some other years (specific to the Hermel region)
- High level of urbanization (specific to the Metn-Kesrwan region).

The *strengths of the agricultural sector*:

- Fertile land
- Availability of water
- Favourable climatic conditions
- Early maturity of the crops and possibility to earn the high prices of the early seasons (in some of the regions).

The *weaknesses of the agricultural sector could be overcome through*:

- The development of markets, in collaboration with municipalities and cooperatives
- Finding solutions for the land tenure system and for the land fragmentation; reducing taxes on properties
- Sustainable use of water resources; building dams to increase the area of irrigated lands thus reducing the production costs linked to pumping underground water and preserving this water as a reservoir for the future; dams would also contribute to the reduction of the flood risk
- Extension services and capacity building to farmers to improve yield, reduce production costs and find new markets
- Processing units and refrigerated stock houses
- Sustainable development of intensive agriculture under greenhouses (wherever possible)
- Development of apiculture
- Development of carob (*Ceratonia siliqua*) plantations and other agro-forestry species and activities, in the regions where it is possible
- Encouragement of floriculture, aromatic and medicinal plants (mainly sage and oregano)
- Development of a management plan for forests and other wooded lands
- Development of the rangelands; encouragement of sustainable grazing of goats or other livestock in forests and other wooded lands as a tool for forest fire prevention and for increasing the incomes of the local populations
- Development of ecotourism, agri-tourism and other forms of sustainable tourism in mountain areas
- Organization of the fruits and vegetables market places, wholesale markets
- Organic farming
- Support to the animal production sector
- Development of the food industries sector
- Implementing an "AOC" (Appellation d'Origine Contrôlée) for the protection of the local products
- Encouragement of small house-industries and handicrafts with the appropriate marketing chains
- Encouragement of the work of the cooperatives and development of new specialized cooperatives (packing, cooling, marketing, etc.) in cooperation with municipalities
- Providing the farmers with health insurance or coverage system (social security) and retirement plans; in addition to special funds for reimbursement in case of natural disaster.

Lebanon has witnessed a great development in democracy expressed in municipal work that was negatively affected by the 30 years of inactivity caused by the war. The local community groups were deprived from the right to participate in their own governance in a democratic process involving them at the grassroots level. The recovery of the municipal elections has allowed for the re-launching of the local governance process through elected Municipal Counsels whose role is to lead the different processes related to local development.

## **b. Specificities**

In addition to the commonalities, there are several aspects that were recognized as specificities for each territory, as a tool to better highlight constraints, diversities and potentialities of these areas. The specificities of each territory are described below according to the SARD-M classification: territorial specificities; constraints (inaccessibility, fragility, marginality); diversity (natural, social, economical); potentialities.

### **1. Marjeyoun – Hasbaya (South Lebanon)**

#### **• Territorial Specificities**

- The zone under study is situated in South Lebanon, at the borderline between Lebanon, Syria and Israel, at an altitude ranging from 400m to 1,850m on the Mount Hermon. The climate is mild to cold on higher altitudes with an average rainfall of 800mm/year (reaching 1,200mm).
- All natural vegetation formations and agricultural fields have been neglected during the war and are currently being rehabilitated.
- Since 1948, and because of the prevailing situation, the region has been suffering from the out-migration of people, both to Beirut and other cities, and to different parts of the world, to the extent that some villages have lost 85% of the population.
- After the liberation from Israeli occupation in 2000, the Government has implemented several development projects in the different sectors, but has neglected the agricultural sector; while local and international NGOs and organizations had a particular focus on agriculture.
- Many national and international organizations are active in the region, answering the needs of the population whenever the Government is not able to act. The main organizations are: USAID; Save the Children Federation; Terre des Hommes; YMCA; UNICEF; Red Cross; Union of Churches; Mercy Corps; World Bank; World Vision. Some of these organizations provide assistance to solve some specific problems or to develop some specific aspects; the World Bank is currently working on an integrated irrigation project.

#### **• Constraints**

- Inaccessibility
  - The existing road network is old and is no longer sufficient to cover the development needs of the region.
  - Although water resources are abundant in the region with the presence of rivers and water springs, the addiction system is very weak compared to other Lebanese regions, with many households not yet connected to the drinking water network. The situation of the sewage system is even worse.
- Marginality
  - For several years, the region has suffered from occupation and from lack of attention from the Government.
  - Despite the richness in water, several villages suffer from a total lack of water for irrigation purposes and only 1.84% of the total land is irrigated. This is mainly due to the mountainous nature of the region and to the lack of irrigation projects.

- **Diversity**

- Natural

- The mountainous nature with its cold climate, its narrow lands and its sloped terrain plays an important role in the determination of the nature of the crops and has imposed primitive agricultural techniques.
- The Hasbany River is home to a local fish species; trout are sometimes reared.
- Around 32% of the region is covered by forests and other wooded lands with broadleaves formation of oak species and accompanying flora, usually unproductive, except for the production of charcoal and for grazing.

- Social

- The political power has always played an important role in the decision making process, in addition to the tribal (in the extended family understanding) mentality and its direct links to local politicians; and to the religious belonging, the area being rich in religious diversity. The decision-making structure is therefore based on a combination of political and tribal-religious considerations.
- The religious diversity in the region was not affected by the war.

- Economic

- Olive and fruit trees are dominant, coupled with some handicrafts, like embroidery, Abaya weaving and wood stoves industries. The agricultural and small industries sector was very much affected by the war.
- The industries in the region are mainly for processing of products. The main industries are: olive oil press; honey packing; spices, jams, dry legumes and various preserves packing; stoves; stone mills; wood and aluminium mills and factories; stone carving for constructions.
- *Pinus pinea* forests are dominant and constitute an important source of income for families and municipalities (collection of cones for the extraction of the stone pines).

- **Potentialities**

- According to the agricultural census undertaken in 1998, the number of agricultural units was 7,987 tenants. Most of the young manpower has migrated from the region. Most of the land is barren and unsuitable for agriculture. The minimum unit size is 5 *dunums*, requiring 3-5 man/days, depending on the crop and on the work to be undertaken. Most of the manpower is local, with some seasonal manpower hired for specific tasks.
- The relief and the nature of the region are suitable for goat herding, but other livestock herds are also kept, in addition to some poultry farms and some apiculture. The Hasbany River could provide an important source of fish and fresh water aquaculture.
- The area being very rich in water, it would be possible to increase the irrigated surface through the installation of new irrigation systems and the rehabilitation of the old and degraded networks. Some international NGOs (e.g. Mercy Corps) have paid particular attention to this fact and have rehabilitated and modernized the irrigation systems in some villages.
- The agricultural roads network is acceptable but could be further developed and maintained.

In addition to the potentialities listed above, below is a list of some of the projects being implemented in the region that will certainly affect positively the agricultural sector along with other vital sectors:

- Sewage treatment plants
- Opening of new agricultural roads and rehabilitation of the existing network
- Building schools and sports clubs
- Rehabilitation of irrigation canals

- Promotion of organic farming; provision of certified seeds and necessary material for organic farming; packing and marketing of organic products; building of a refrigerated store house; extension services on organic farming
- Assistance to the development of the agricultural sector through the implementation of 3 agricultural services centres (the services are provided at very affordable prices), comprising: olive press; honey production, extraction and packing unit; wax candle making; tractors
- High quality oil produced and exported to Italy; implementation of an oil quality testing lab
- Extension services and on the job training
- Successful experience to be replicated in other regions
- Studying the development and implementation of an integrated irrigation network from the Hasbany River
- Assistance to small milk producers
- Technology transfer and extension
- The farmers' cooperative of Khyam has developed a kiwi production farm with the financial and technical assistance of an Italian NGO.

The region being one of the poorest regions in Lebanon (if not the poorest), development projects are required at all levels and in all sectors. The following are the development needs in the agricultural sector:

- Implementation of projects mainly in the very rich Khyam plains
- Rehabilitation of agricultural lands and terraces
- Development of the agricultural industries
- Enforcement of the sector to increase the competitiveness of the products
- Availability of water for irrigation
- Potential to plant certified fruit trees
- Development of the animal production sector
- Marketing of the animal products
- Dairy products production units
- Development of the forage crop production
- Extension services.

## 2. The Higher Chouf (Mount Lebanon)

### • Territorial Specificities

- The zone under study is situated in South-Eastern part of the Mount-Lebanon *Mohafazat*, at an altitude ranging from 150m to 2,000m on the Mount-Lebanon. The zone composed of three main groups of villages, constitutes 57% of the Chouf Caza.
- The region witnesses seasonal and daily movements to the cities (and mainly to Beirut) of working manpower, employees, specialists. This is mainly favoured by the closeness of the region to the Capital.
- According to the agricultural census undertaken in 1998, the number of agricultural units was 5,000 tenants. Most of the farmers have another source of income. The minimum unit size is 5 *dunums*, requiring 11 person-days, depending on the crop and on the work to be undertaken. Most of the manpower is local, with some seasonal manpower hired for specific tasks.
- All natural vegetation formations are well protected thanks to the political and social will of the local communities.

### • Constraints

- Inaccessibility
  - Although in a relative good condition, the road network linking the region to its surroundings and linking the villages needs to be rehabilitated.

- Agricultural roads need to be rehabilitated and improved in order to better serve the population.
  - Marginality
    - Irrigation canals still need to be rehabilitated, along with drinking water systems.
    - The situation of the sewage system needs to be improved.
- **Diversity**
  - Natural
    - The broad altitudinal range induces a variety of climatic conditions allowing for a variety of crops and vegetation types.
    - Water resources are abundant with the presence of rivers and water springs, and mainly with the presence of the Barouk Mountain, playing the role of a huge water reservoir.
    - Around 45% of the region is covered by forests and other wooded lands with broadleaves formation of oak species and accompanying flora, usually unproductive, except for the production of charcoal and for grazing.
  - Social
    - The rich religious diversity in the region was affected by the war. Many villages were abandoned; after the end of the war, their inhabitants have come back and rehabilitated what was destroyed.
    - The fragility of this region is linked to the complexity and to the rich diversity of its social structure with several religious communities living in the same territories.
  - Economic
    - Agriculture has always played a major role in the economic development of the region. The local communities have settled near water springs and rivers, and have adopted irrigated agriculture. Olives, mulberries (for silk production) and almonds were planted since the 17<sup>th</sup> century; in the 1950s, the mulberries were abandoned and progressively replaced by pome fruits.
    - 9% of the total area is exploited for agriculture; 50% is planted with olives; 38% is planted with fruit trees (apples, grapes, peaches and cherries). Terraces were traditionally planted with cereals, legumes, carob trees and grapes. Most are currently abandoned. 30% of the total land is irrigated.
    - The industries in the region are mainly involved in the processing of products. The main industries are: olive oil press; honey packing; spices, jams, dry legumes and various preserves packing; stoves.
    - In addition to the *Pinus pinea* forests which constitute good source of income for families and municipalities (collection of cones for the extraction of the stone pines), the region's main forest asset is the Chouf Cedar Forests, which compose the Chouf Cedar Reserve, one of the most important Protected Areas in Lebanon.
    - 24% of the region is rangelands that are neither planted nor managed.
    - The animal production is distributed among caprine, bovine and poultry; the size of the goatherds is decreasing despite the suitability of the region for this activity.
- **Potentialities**
  - The area being very rich in water, it would be possible to increase the irrigated area through the installation of new irrigation systems and the rehabilitation of the old and degraded networks.

- Several projects are on-going in the region:
  - The Chouf Reserve: Protection and conservation of the cedar forests through sustainable management and ecotourism; promotion of local products
  - ARAL Project (financed by the EU in collaboration with the Ministry of Administrative Reform): assistance for the preparation of local development plans for municipality unions
  - Treatment of sewage and used water
  - World Vision Project: organic farming in collaboration with agricultural cooperatives (three plots).

The activities undertaken in the framework of this project and the findings of the agricultural strategy have allowed for the determination of development potential and the proposal of projects that could be implemented.

- Infrastructure and irrigation
  - Construction of Bisri dam and water adduction to surrounding villages
  - Construction of hill lakes and soil dams
  - Rehabilitation of existing irrigation networks
  - Rehabilitation of existing agricultural road networks and opening of new roads for agricultural development and forest fire prevention and control.
- Agricultural
  - Implementation of pilot farms for bovine and caprine production in remote areas to avoid disturbances caused by the proximity to villages; the concentration of the farms in some areas would reduce the costs linked to transport of milk and would enhance the introduction of mechanization
  - AOC for olive oil; honey produced in the protected area; and local tomatoes
  - Integrated management of olive and fruit trees plantations
  - Nursery for the production of certified fruit trees seedlings
  - Promotion of organic farming through the replication of the successful World Vision Project
  - Capacity building and extension services in the Baaqlin agricultural schools.
- Socio-economic
  - Awareness raising on health issues and nutrition, in collaboration with schools
  - Modernization of olive and grapes press
  - Activation of the olive oil and honey quality control labs
  - Programs for rural women empowerment and for household industries
  - Promotion of agri-tourism, ecotourism and marketing of local agricultural products.

### **3. The Northern Plains of the Oronte River - Hermel (Bekaa)**

- **Territorial Specificities**
  - The “Region of the Apricot” falls between the Hermel and the Baalbeck Gazas, at the Northeastern borderline between Lebanon and Syria, at an average altitude of 700m. The climate is semi-arid with an average annual rainfall ranging between 100 to 200mm.
  - Agricultural was traditionally conducted on a family basis. This is progressively decreasing with the younger generations losing interest in agriculture. Manpower (mostly foreigners) is now more seasonal or daily, depending on the tasks to be achieved.
  - The level of out-migration from the region is very high; people have migrated to Northern and Southern America, to the Gulf countries and to the main cities in Lebanon, looking for better-paid jobs and higher incomes. This has resulted in the abandonment of the agricultural lands and the lands are almost deserted.
  - During the Lebanese war, very high-value cash crops were developed: cannabis and opium. They have constituted one of the major sources of income for the local populations and

have strongly contributed to the development of the region. The culling out of this production has strongly affected the region, especially since all the efforts and promises to compensate for the loss were in vain and not respected. No crop has yet found to be as efficient and income generating as cannabis and opium. The UNDP Project on the integrated rural development of the region has proposed crops to replace the illicit plantations. However, again all efforts were in vain, as no crop was successful, because of the very high temperature and very low humidity and precipitation in the region.

- **Constraints**

- Inaccessibility
  - Although the existing main road network has recently been rehabilitated and is currently in a good condition, the region is very far from the Capital and from the business centres.
  - The agricultural roads need to be rehabilitated and complemented.
  - In most villages, secondary and internal roads are in a very bad condition.
  - It should be mentioned that some villages still suffer from a total isolation with the world.
- Marginality
  - The sewage system is only available in the Hermel village.
  - Drinking water reservoirs need to be rehabilitated.
  - Water and electricity are not connected (people depend on small generators or on electricity from Syria and on underground water).
  - Younger generations, mostly educated, are progressively abandoning agriculture and moving to better-paid jobs, services and public administrations.
  - Agriculture is suffering from land fragmentation, where small fields are progressively abandoned. This is mainly due to the land tenure system. Only large and medium size plots are currently being exploited and developed. Most of the farmers are landowners; land is usually inherited although most of the land is neither demarcated nor registered in the cadastre.
  - All economic activities linked to agriculture are progressively losing importance in the region because of all the problems linked to the high production costs, lack of investment and lack of markets.
  - Agricultural techniques are mainly traditional and primitive. Small farmers who are trying to preserve the lands they have inherited are usually unable to work in other fields or to improve their techniques and invest into more efficient agricultural practices. Large farmers are depending more on mechanization and modern agricultural techniques. Both small and large farmers are in need of good extension services to improve the efficiency of their production and to utilize the most appropriate techniques.
  - Pickles, food preserves and jams are usually homemade because of the unavailability of transformation units.
  - The three existing olive press are not sufficient to cover the needs of the region; one grape press (for molasses) has existed in Ras Baalbeck since the 19<sup>th</sup> century.

- **Diversity**

- Natural
  - The region is composed of 7 villages, divided into two main zones: the first zone being mainly mountainous is composed of bare mountains with no woody vegetation, with some plains usually planted with cereals and legumes and the remaining lands of the zone being used as rangelands; the second zone is mostly plains with a rich soil, usually planted with cereals, vegetables and fruit trees. This zone is rich in underground water.
  - The forests in the zone are of an open structure, mainly composed of *Juniperus excelsa* stands on higher altitudes. Rangelands are open.

- Economic
  - Traditionally, the dominant crops were legumes, grapes, cereals and mulberries; walnuts along the riverbanks; olive trees have been introduced several decades ago; apricot trees were introduced between 1900 and 1950. However, agriculture has strongly suffered from out-migration and many of these cultures were abandoned.
  - Apricot drying was also tried but was not very successful, because of the varieties planted that were found to be more suitable for jams and juices. However, as no juice factories are available in the region, the trials were almost in vain. Saffron and cotton were also tried with no better results.
  - Mills are no longer working; tanneries do not exist; carpet and rug making is a tradition being lost in one village close to the region under study.
  - The livestock usually feeds on open rangelands, either planted with barley or left on local vegetation, and on agricultural residues. Farmers supplement the feeding either by planting forage/fodder crops or by buying from the market, mainly during very dry years when wild vegetation is scarce.
  
- **Potentialities**
  - The dry climatic conditions coupled with the availability of underground water give the area a high agricultural potential and allows the farmers to work almost all year round, thus being able to harvest their crops some 15 to 30 days before other regions in Lebanon (apricots, tomatoes, artichokes, etc.).
  - Irrigation canals are available; except for the lands surrounding the Oronte River, which are irrigated directly from the river, all lands are irrigated from underground water. Two dams are expected to be built in the region.
  - A local NGO (Jihad el Bina'a) and local community groups are currently promoting alternative crops and small industries that seem to be promising. They are mainly based on organic production, agri-tourism, livestock production and fodder crops. Mushrooms and new apricot varieties are tested and are producing very high quality fruits; apricot juice is also tested. Organic olive oil is promoted. Extension services and capacity building of rural women are also aspects of the activities undertaken by the local NGO.
  - The traditional apricot fields are progressively being replaced by apples, peaches and nectarines because of the short season of the apricot, the unavailability of manpower to harvest the yield in a very narrow period and the lack of processing industries. The olive plantations are witnessing a regular increase in the planted surfaces; olive oil is extracted in local press. Walnuts and almonds fields are stable and provide good yields. Cereals, mainly wheat and barley are also increasing mainly because of their low production cost and the existence of an immediate market (the Ministry of Economy buys the entire yield). Green vegetables, tomatoes, artichokes and watermelons are stable, although the surface of watermelons and tomatoes under green houses is progressively decreasing because of the high production costs and the unavailability of markets. The arable lands, and mainly the hills and slopes are planted with barley and used as rangelands. Many lands are left unplanted because of their nature and the high costs related to their rehabilitation.
  - Animal production is probably the most important aspect of agriculture in the region and is based on livestock production with large bovine, caprine and ovine herds. Honey produced in the Hermel region is of a very good quality because of the nature of the vegetation and the remoteness of the fields from any source of pollution. Honey production brings an additional income to local families. Fish farming is becoming an important source of income for some 80 farmers along the riverbanks where trout are raised. A fish feed production unit will soon be implemented with the assistance of USAID.
  - The Small Holders Livestock Rehabilitation Project (started as an IFAD fund; now integrated in the Ministry of Agriculture) has equipped a cow milk gathering centre with a lab; the centre offers extension and veterinary services to the farmers; a local NGO will soon be collaborating with the project team to gather and redistribute goats and sheep milk; the project includes a component for the empowerment of the rural woman through capacity building, micro credits and other facilities.

#### 4. Part of the coastal zone and middle mountains of Metn and Kesrwan (Mount Lebanon)

- **Territorial Specificities**

- This zone is diversified in terms of geographic situation, as it constitutes a continuation of Beirut along the northern coastline, the lower mountain range surrounding the cities and the middle mountain range directly connected to them.
- The interest of this zone for this study is the interface with the cities and the direct relationships that exist between the cities and the mountains. To a certain extent, the mountains here are a continuation of the coastal cities, as they frequently constitute the sites for the secondary residences of urban people.
- The importance of the highly urbanized coastal portion of the region lies in fact that it constitutes the major market for all the agricultural products produced at the level of the country; in addition to the fact that one of the major wholesale fruits and vegetables markets in the country is found in this region.
- Most of the agricultural lands are irrigated. Modern irrigation techniques are available, mainly in the regions with intensive agricultural systems.
- The mountain areas in this zone could be divided into two major parts:
  - Mountain areas with an urban character, where people have different jobs and are not dependent on agriculture for their living. Weekend farmers and hobby farmers are frequent, in addition to small farmers planting their home gardens for family consumption;
  - Mountain areas with a rural character, where agriculture plays a more important role in the local economy.

- **Constraints**

- Inaccessibility
  - The road network connecting the zone to other zones and to the Lebanese regions is in a good condition and is regularly maintained as the major highway linking Beirut to the North goes through the coastal part of the zone; the highway linking Beirut to Damascus through the Beqaa Valley, is at the Southern limit of the zone. The road network connecting the villages and the cities within the zone is in a good condition as well. However, several villages still suffer from very bad road networks linking them to the urban centres.
- Fragility
  - The development of the cities and their extension to higher altitudes, along with the decreasing role of agriculture in the national economy has led to the abandonment of the agricultural practices and the lack of interest in agriculture. This has resulted in the collapse of the system and the progressive reappearance of the forest vegetation on abandoned agricultural lands.
  - This new land cover turned out to be fragile and susceptible to fire, in addition to being unproductive.
  - The Lebanese war has also played a major role in the change in the land use, as many lands had to be converted into new urban areas, in a very un-organized manner, to offer housing for people fleeing from the “heat” of Beirut.
- Marginality
  - With a few exceptions, marginality is not one of the constraints the region suffers from.

- **Diversity**

- Natural
  - The region is highly urbanized covering 41% of the land area. Agriculture only 9% of the total land area and rangelands cover 2%. Forests and other wooded lands constitute 47% of the land cover of the zone. This is mainly due to the abandonment of agriculture

and the reinvestment of the natural vegetation on abandoned agricultural land. They have traditionally been used for grazing animals (mainly goats), for charcoal production and as an interface between the villages and the agricultural fields. With the increasing urbanization and the change in the mentality, these uses have drastically decreased, leaving the forests and other wooded lands unproductive and susceptible to forest fires. However, this vegetation is mostly unproductive, except for some charcoal production, which is recently being authorized by the Ministry of Agriculture, after several years of total banning.

- Social
  - Although charcoal production has always been one of the main forest activities in the region, the attitude of people towards the forest has changed and many people are reluctant to accept any form of forest exploitation.
  - The Maronite Church, and specifically the Maronite Patriarch, in close collaboration with a Lebanese NGO, the Association for Forest Development and Conservation (AFDC), has designated one of the forests in the zone, as a “Sacred World Heritage”, thus protecting it. The forest is owned by the Church; it overlooks the city of Jounieh and surrounds the see of the Patriarch as well as the Sanctuary and Basilique of Our Lady of Lebanon.
  - The same NGO has established a Religious Tourism Centre in another village of the same zone by rehabilitating an old convent surrounded by forests.
- Economic
  - Food industries, banks, services, schools, universities, tourism facilities are also extensively present in the region.
  - Despite the low proportion of agriculture in the total land use of the region, several agricultural pockets are found both in the highly urbanized coastal zone and in the low mountain range. Agriculture still plays a major role in the economy of the villages falling in the middle mountain range.
  - The agricultural regions are diversified, although the total area occupied by agriculture in the zone is very limited. Seasonal vegetables and fruit trees (almonds, avocados, citrus, etc.) are planted under intensive agricultural systems (greenhouses or open) in the coastal area and in the lower mountain area. The fruit trees orchards vary according to the surface, until the upper limit of the zone, where apples, pears, stone fruits and vineyards are found.
  - The coastal region of the zone is known for fishing. Animal production does not constitute a major element in the agricultural landscape, although livestock and poultry production exist in some farms.

- **Potentialities**

- On-going and planned projects are mainly undertaken by the private sector and by NGOs, at a small scale.
  - YMCA: agricultural extension services; small development projects.
  - INDEVCO (Industrial Development Company): the company has initiated an NGO for rural and agricultural development; provision of fruit trees seedlings at very low price.
  - Chal: Local agricultural cooperative.
  - Liban Village: Local agricultural cooperative; veterinary and agricultural extension services; assistance to farmers for livestock production.
  - Methyl-Bromide alternatives project: Ministry of Environment; progressive replacement of Methyl-bromide by safer alternatives.

## VIII. The PNTD Implementation

### A. The Activities

The four steps required for the operationalization process of the PNTD (see first part) were not all covered by the activities of the project team. Their work was mainly focused on the initialization of the process and on testing the method. It must be noted that the first step, which consists for the most part on the diagnosis, was mainly achieved in the Agricultural Strategy and in the Agricultural Homogeneous Zones.

The project team has further analyzed the territories, identifying the changes that have occurred and strengthening their knowledge of the “Horizons” of the territories, mainly in the agricultural sector. Based on the dominant potentials identified by the UTF project for each territory, agriculture was selected as an entry point to initiate the “Negotiation” and “Social Territorial Agreement”. These findings are presented in the individual reports of the national facilitators.

The meetings, round table discussions and peer-to-peer meetings that were undertaken through the process have led to the identification of five projects for each territory that were agreed upon by all the concerned stakeholders in the region.

The work of the SARD-M Project consultant consisted of two main phases:

**Phase I** was based on a socio-territorial approach to update the study of the homogeneous zones and to identify local players:

- This phase has benefited from the study of homogeneous zones as a starting description of the target area.
- Focused group meetings were carried out with communities of the target areas. Through its extensive appraisal, this phase also enabled developing a biophysical and socio-economic overview of the areas, identifying the main development assets and constraints, and the main expectations of population and local players.
- Round table forums were undertaken gathering presidents and members of municipalities, agricultural cooperatives and other local actors, women groups and interested individuals. *Mokhtars* (mayors) were present where municipalities were absent.
- Peer-to-peer meetings.
- Field visits.

**Phase II** was based on a process of evaluation as well as participatory and negotiated planning, allowing for the consolidation of the results of the first phase, in particular relating to the problems of the area and the expectations of the population and the local players.

Assisted by the SARD-M consultant, the UTF project team has initiated the pilot implementation of the PNTD process in the following way:

- Updating the study undertaken in the framework of the UTF project. To that effect, the 5 national consultants (or facilitators) have assessed the situation in the pilot zones. They made use of the important database and statistical and thematic maps developed by the GIS unit of the MOA, and the thematic maps on the vocation of soils developed in the “Schémas directeur d’aménagement du territoire libanais” allowing for the characterization of the territories. The assessment has led to the following conclusions:
  - Local communities are realizing the importance of the valorisation of the products specific to each zone and the necessity to implement the process of “Appellation d’Origine Contrôlée” (AOC) for products with high value-added and high competitive power.

- The role of some institutions promoting agricultural production, like the Export-Plus program of IDAL (Investment Development Agency of Lebanon) is decreasing, after having strongly contributed to the marketing and export of agricultural products during 5 years.
  - Most of the actors (farmers, cooperatives, and local communities) are disappointed by the different projects and initiatives conceived and implemented in mountain and rural areas.
  - Some of the local community groups are particularly advanced in the process of project preparation based on participative and negotiated approaches. This is mainly true in the Chouf Mountain Zone, where the local stakeholders have prepared an action plan integrating all the projects and feasibility studies that should be implemented in order to answer the needs of their zone.
  - The extension services of the MOA are not yet very efficient and do not answer the needs of the farmers. This service is currently provided by private companies through the marketing of their own products and services, which is neither very efficient nor very objective.
  - The agricultural lands and activities are being progressively abandoned because of the low income generated by agriculture as compared to activities in other sectors.
  - The fragmentation of land and properties, one of the main problems and characteristics of the Lebanese agriculture is being intensified by the problems linked to inheritance and to the obsolete legislation related to this issue.
- Establishing contacts with all concerned stakeholders in the zones. This activity undertaken by the facilitators and assisted by the national coordinator and the SARD-M Project consultant has allowed the team to realize the importance of the coordination of the activities undertaken by the different stakeholders in the zones. This should be taken into consideration in the future for a better involvement of the local community groups, a higher confidence and a better trust in the institutions in charge of the agricultural sector in mountain areas.
  - The elaboration of priority projects for each zone, that could constitute the backbone of local action plans. The identified priority projects were in line with the axes proposed in the UTF project. The problems linked to development and the objectives to be reached in the framework of the implementation of a local development plan were taken into consideration. The following are some of these objectives:
    - Support the agricultural sector through the diversification of the production, focusing on transformation and marketing of agricultural products.
    - Create job opportunities that could contribute to maintain the local population in their villages.
    - Valorise and preserve the human and natural resources in the regions in order to better receive visitors and tourists.
    - Benefit of the eventual classification of the regions into regional parks.
  - Five priority projects were identified and elaborated in each of the pilot zones. These projects are described in the individual reports of the facilitators.

## **B. The Strengths and Weaknesses of the PNTD Activated Processes**

The initiation of the implementation of the PNTD process in the pilot areas was characterized by its transparency. The meetings with the different stakeholders have led to the identification of the strengths and weaknesses of the process in the following way:

### **a. At the local or micro level**

#### ***Strengths***

- The cooperation, participation, openness towards each other, exchange of know-how and high level of responsibility have contributed to the reinforcement of the democratic practices through communication and dialogue among the partners.

- The concept of working for the benefit of a territory rather than for one village plays a very important role in the local equilibrium through development, common interest and social solidarity.
- The process has contributed to the identification of the real needs of the region in a very pragmatic and realistic approach.
- The participation of stakeholders from different levels, including people with high competencies and specialists in several fields of expertise, has contributed to a better identification of the territorial characteristics, potentialities and constraints.
- The participants in the different territories have given a high priority to the development of agriculture through extension services, better production and marketing. Priority was also given to the development of ecotourism and all its related activities.
- The process has contributed to a better understanding of the strengths and weaknesses in each zone along with the identification of beneficial projects and the need for regional planning, while differentiating between development needs and required management competencies.

### ***Weaknesses***

- The participants have expressed their doubts on the feasibility and the implementation of the projects. This lack of confidence is mainly caused by the failure of most of the previous projects, studies and research activities that aimed at sustainable development but were never implemented.
- The local communities were very keen on including non-agricultural projects or components, like solid waste management and sewage systems, in the elaborated projects, while the facilitators were focusing on agricultural related projects and activities.
- The lack of knowledge of the local stakeholders about the objectives, orientations and projects of the donors and funding agencies.
- The municipalities expressed their fear of not being able to raise the necessary funds to fully implement the projects, or to have to complement them with funds from their own budgets.

## **b. At the country or macro level**

### ***Strengths***

The strengths of the process are mainly linked to the importance of the process itself and its direct impact on mountains, if properly applied, and to the devotion and conviction of the project team.

- The agricultural strategy and other strategies and policies at the level of the Ministry of Agriculture or at the national level aim at providing solutions for the crisis that mountains are going through.
- The project team is familiar with the strategy and its components.
- Despite the fatigue of local people for such processes, they were ready to embark in the process.
- The process has initiated a dialogue among the actors in the different regions.
- Concerned actors and stakeholders in the different regions were able to think together and decide on some priorities related to the agricultural sector in their regions. Such a mechanism could and should be extended for a better implementation of the PNTD at the country level.
- The Ministry of Agriculture has provided the team with the necessary institutional support to undertake the work.

### ***Weaknesses***

- The agricultural sector is suffering from severe problems linked to national and international issues.

- The current economic situation and the severe budget restrictions hinder the involvement of the MOA in the implementation of the PNTD, in the development of proposed projects and in the recruitment of new personnel (guards, extension officers, technicians and engineers). This would lead to the inability to implement the PNTD, to properly manage the resources and to apply law enforcement measures in the appropriate way.
- Rural people are fed-up with sterile projects imposed on them and are no longer ready to embark on new initiatives.
- Even if the PNTD is implemented and the rural people are willing to work on future development plans for their territories, the lack of budget from the Government and the lack of financial assistance from foreign sources hinder the process and increase the level of disappointment of the rural populations.
- The Agricultural Strategy is still not fully implemented yet.
- The PNTD being a long process, it should be implemented with existing and on-going policies.
- The PNTD approach would not be successfully implemented if it is perceived as another unsustainable project, and if it is not accompanied by any development initiative, and does not lead to the implementation of any of the projects proposed in anyone of the territories.
- The PNTD approach should be implemented in a way to avoid the continuation of the multiplicity of efforts and the scattering of mountain related issues between several governmental and non-governmental authorities with the dramatic lack of cooperation that does not contribute to the stability of the mountain areas (decrease of migration rate; slight increase of income; slight increase of level of satisfaction of rural communities).
- The PNTD should better be implemented with the direct involvement of the Rural Development and Natural Resources Regional Services, in addition to and with the support of the UTF project team.
- The capacity building of the project team was not given the appropriate time allocation.
- The project team did not have the necessary technical and financial support to organize meetings and workshops in a very efficient manner.

## IX. Conclusion

The sustainable management of the mountain areas is a challenge for the future. They are sources of food, wood, non-wood forest products and rangelands for the rural and urban populations. They answer the need for nature of the urban population. They play a very important role in the development of the economy and the tourism sector of Lebanon. Although the future cannot be predicted, in terms of how future generations will be looking at the mountain areas, it is assumed that the conservation of these important ecosystems and territories will contribute to the well-being and food security of these future generations.

The PNTD and SARD-M Project could be used as policy tools to enhance the integrated management of the mountain regions. This would result in the encouragement of the multiple functionalities of the rural space, which could lead to:

- The reduction of migration from rural and mountain areas
- The reduction in the abandonment of agricultural land
- The reduction in the reinvestment of forests on these abandoned lands
- The mitigation of land degradation and desertification, along with the protection of land and soils
- The encouragement of new initiatives and activities linked to mountains, like ecotourism and outdoor activities
- A marked contribution of the forestry sector in poverty alleviation and food security
- The improvement of the livelihoods of the local populations
- The preparation and implementation of integrated development projects based on a participatory approach and answering the needs of the local populations
- A better implementation of the Agricultural Strategy
- The initiation of the forest policy and strategy baseline dialogue and the development and implementation of this policy
- The initiation and development of a rural development policy
- The reimplementation of the traditional agro-sylvo-pastoral system as the main land use system, to which the small industries and ecotourism components are added, thus contributing to the sustainability of the livelihoods in the mountain zones
- The sound and progressive reintroduction of human activities into the abandoned mountain regions and the redynamisation of the local economy while respecting the landscape values
- The adoption of the participatory approach in the decision making process for all issues related to the management and development of the mountains
- The preservation, promotion and valorisation of ecosystems of major interest: forests, riparian formations, particular ecotones, cliffs, etc. along with elements of the rural, historical, cultural and religious heritage and their integration into the management plans of the zones.

In order to enhance the strengths of the process at the micro and macro levels, the following recommendations could be taken into consideration for a further implementation of the PNTD approach at the country level, in other mountain and non-mountain territories.

- The staff, engineers, extension agents and decision makers of the MOA (and other governmental institutions) should be more involved in the implementation of the PNTD and aware of the SARD-M principles; capacity building of actors to be involved should take place prior to the implementation; PNTD and SARD-M principles should be appropriated at the highest level of the MOA and considered as the baseline for any future development strategy in all related sectors.
- In order to reduce the overlapping of activities proposed and implemented by the different stakeholders, and to increase the efficiency of such initiatives, mountain areas related committees could be established at the following levels:

- *Regional level:* involving all the stakeholders in a given region and moderated by the Regional Head of Service of Rural Development and Natural Resources
  - *Ministry level:* involving all the experts in the MOA working on issues related to mountains and rural areas (from the different directorates); the Regional Heads of Service of Rural Development and Natural Resources would also be members in the committee and would help in communicating the concerns of the local communities to the MOA; this committee would be chaired and moderated by the Director General
  - *Decision-making level:* involving decision makers and experts from the different ministries, public and private organizations, and national and international NGOs.
- Before the implementation of the PNTD, some pilot projects proposed by the local stakeholders should be financed and implemented. This would strongly contribute to increase the confidence of the stakeholders in the PNTD approach and reduce their level of disappointment from previous initiatives and approaches.
  - In-depth analysis of the concerned stakeholders in the different territories should be undertaken in order to identify the role that each partner could play in the development process.
  - The PNTD should be implemented through the coordination between all the concerned stakeholders and the appropriation of the approach by the MOA team and local stakeholders. The MOA team would fulfil the role of moderators and should be able to lead the process throughout the long journey.
  - The negotiation capacities of the local stakeholders should be further built for a better coordination and cooperation, and a better elaboration of development projects based on a participatory approach.
  - The local stakeholders should be better educated, sensitized and trained by:
    - Reinforcing the education at school and youth levels on the importance of the mountains, the threats, the vulnerabilities, the specificities, the opportunities and the challenges.
    - Putting in place training sessions on the sustainable management of the mountain regions and their territorial specificities, for the different concerned stakeholders: local populations, land owners, politicians, etc.
    - Involving the tourism and leisure professionals and the user groups in the conservation of the mountains and their territories and the conciliation of the uses through raising the awareness of the users on issues like the application of codes of conduct, quality charters, and quality labels.
  - The Social Territorial Agreements should be prepared by all the concerned stakeholders who would share the common vision of their territories; this vision would be appropriated by all and proposed to donors for implementation of projects and activities.

The analysis of four territories very representative of the complexity of the country has allowed for a better understanding of the importance of the PNTD approach for the implementation of the agricultural strategy, the forest policy and other forms of strategies and policies.

The participatory and negotiated territorial development and the elaboration of social territorial agreements in all the different territories and regions of the country could strongly contribute to overcoming the constraints of the territories and better exploit the potentialities. This would also contribute to the reinforcement of the concerned institutions for a more efficient implementation of strategies and policies and a better answering of the needs of the local populations. The elaborated social territorial agreements would provide the necessary guidance for donors and policy makers to channel the money where it is most needed and where it would better contribute to the sustainable development and sustainable livelihood systems.

The Agricultural Strategy elaborated by the UTF project in the Ministry of Agriculture and the Forest Policy initiated by the same ministry would strongly benefit of the lessons learned during the pilot implementation of the PNTD. These lessons could be further extended to other ministries and other strategies and policies, using the territorial approach. They would also strongly contribute to the preparation of a mountain and rural areas development policies along with the compilation of all the on-going efforts into a national sustainable development strategy and policy.

The integration of the different policies in the PNTD process could only be useful if the specificities, vulnerabilities and opportunities of each territory are taken into consideration. This integration is almost impossible to achieve in all the development sectors, as each institution and organization has its own development tools. However, the adoption of the PNTD approach and SARD-M principles by the Ministry of Agriculture would increase the efficiency of the activities implemented and policies developed.

Lebanon is mostly a mountainous country with a rich natural, social and economic diversity, where constraints like inaccessibility, marginality and fragility are hindering the development and where huge potentialities exist for sustainable development.

Tourism represents nowadays the major industry in the world. Visited for the diversity of its landscapes, the hospitality of its people and the cultural and historical richness it offers, Lebanon does not escape from this rule. With their great and rich features, the Lebanese mountains are an important local and international tourist destination. The overexploitation of the natural sites leads to an increasing pressure on the wild species and increases the stress on the natural ecosystems. This is where the issue of sustainable tourism lies, respectful of nature and local populations, and integrated in the different components of the territory.

The analysis of the interactions between the richness of the biodiversity and the landscape, the cultural and historical heritage of the territories has allowed for the identification of the strengths linked to their natural richness and the threats they are subject to. Studying the specific characters of the territories would mean first to understand the importance of the safeguard and the preservation of their unique cultural, natural, agricultural and religious patrimony, in a privileged environment, with an exceptionally rich biodiversity and a collective memory going beyond the limits of the region to those of the whole country.

The preservation and sustainable management of the mountain territories does not only concern the local inhabitants and users, the tourists, the visitors and the sports enthusiasts, the religious entities and the decision makers. It concerns all the future generations of the world.

## References

**AKL, G; BASSIL, M; ESTEPHAN, J; HAWI, I; HUSSEINI F; KASSAR, Gh; KOZAH, A; TAMIM, Z, 2005.** TCP/LEB/2903 National Forest and Tree Inventory and Assessment, Lebanon. Ministry of Agriculture, Lebanon / Food and Agricultural Organization of the United Nations. Beirut, February 2005. Unpubl.

**AKL, G.& ASMAR, F. R, 2005,** Outlook Forest Study for Lebanon, Ministry of Agriculture and FAO, February 2005. Draft, Unpublished.

**ASMAR, F. R. 2003.** National Report on the Forestry Sector in Lebanon. April 2003. Ministry of Agriculture, Republic of Lebanon. Unpublished.

**FAO 2000.** Land Cover Classification System. LCCS. Classification Concepts and User Manual. A. Di Gregorio, FAO Environment and Natural Resources Service, L.J.M. Jansen FAO Land and Water Development Division. Rome 2000.

**FAO 2004.** FAO Forest department. FRA website, country brief for Lebanon

**FAO 2005.** Participatory and Negotiated Territorial Development (PNTD)

**FAO 2005** Towards a framework for a rapid assessment of policies for SARD in Mountain Regions

**FAO and Mediterranean Agronomic Institute of Bari 2005.** The Sustainable Agriculture and Rural Development (SARD-M) and related documents

**ICIMOD,** Mountain Perspectives and Policies, in Policy focus for Mountain development, Newsletter No. 34, [http://www.icimod.org/publications/newsletter/news34/n34\\_persp.htm](http://www.icimod.org/publications/newsletter/news34/n34_persp.htm)

**MOA 2003** National Action Program to Combat Desertification, Ministry of Agriculture, Lebanon. June 2003.

**MOA 2004** Agricultural Development Strategy of Lebanon. Jan. 2004

**MOA 2004** Agricultural Homogeneous Zones

**Sustainable Agriculture and Rural Development Project website,** <http://www.fao.org/sard/en/sardm/about/ratio/index.html>

**United Nation 1992,** Agenda 21 Chapter 13



## Project for Sustainable Agriculture and Rural Development in Mountain Regions

### *Framework for a rapid assessment of policies for SARD in Mountain Regions*

#### SARD-M Project and SARD-M policy assessments

The Project for Sustainable Agriculture and Rural Development in Mountain Regions (SARD-M) in line with its objective of *"strengthening mountain populations' livelihoods with improved policies for sustainable agriculture and rural development"*, is developing and implementing a framework for a rapid assessment of policies for SARD in mountain regions.

The overall purpose is to provide an **understanding of the strengths and weaknesses of various policies related to SARD in mountain regions.**

**In light of the specific qualities or specificities** that characterize mountain areas, the assessments try to bring about a better understanding of how the SARD framework is applicable to mountain regions and examine the types of **policies and policy packages, institutions and processes** that are important to achieve SARD in mountain areas, with attention being paid to **how the comparative advantages of mountains can be harnessed** to promote development in a sustainable manner.

#### Expected output

The assessments aim to have common exit points that can facilitate **comparison across regions**:

- **identification of problematic areas and priority issues** that are facing a region;
- **evaluation of the overall strengths and weaknesses** of SARD-M policies, making sure that the policies examined provide a balanced coverage of social, economic and environmental pillars;
- **general recommendations** of things that need to be improved in the policies, the processes and the institutions involved in the formulation, implementation and evaluation of policies;
- **proposals for concrete action-oriented follow-up activities** that meets the demand existing in the assessed region.

#### Targets

**Middle-level practitioners and trainers** involved in SARD-M policy making, implementation, monitoring and evaluation, from:

- **governments**, at national and decentralised levels (i.e. ministries of agriculture, environment, rural development, finances...);
- **civil society organisations**, including local authorities.

## Approach

The purpose of the framework is to offer some **basic guidelines and references** that can assist in the assessments of SARD-M policies.

Given that SARD requires an integration of policies across sectors, the aim of the assessments is not to conduct an in-depth analysis of policies in a specific sector, but to try to provide more of a **global overview** and **cross-sectoral understanding** of the strengths and weaknesses of policies for SARD.

The assessments are to be conducted within a **short period of time** and meant to be an exercise of reflection that provides **main elements** for a diagnostic of the current strengths and weaknesses of SARD-M policies.

As the success and failures of policies rely not only on the contents of the policies themselves, but also on the context of how they are developed and implemented, the SARD-M policy assessments place a **particular emphasis on examining the processes and institutions** that are involved in the formulation, implementation, and evaluation of policies.

### *Some tools for a participatory process:*

As the assessments are to be more of a qualitative study, **literature reviews and interviews** of key informants, from both **government and civil society** in diverse sectors related to SARD, conducted in an **iterative** manner, are the main tools utilised for the assessments.

The holding of **multi-stakeholder workshops at decentralised and/or national levels** is an extremely useful tool to gather information and opinions on how well policies are working on the ground and to provide insights into the strengths and weaknesses of the processes involved in the formulation implementation and evaluation of policies for SARD-M and how well the various institutions involved in these activities interact with one another.

### *Main steps:*

#### **1. Background information of the country under study**

Describes the issues facing agriculture and rural development in the country, notably **problematic or priority issues** and the **role and importance of mountains and their specificities** (i.e. potentials, constraints and diversity).

#### **2. Selection of an entry point for SARD-M policy assessments**

Entry points will preferably address **problematic or priority issues** facing a given region and be selected **in consultation with stakeholders**.

#### **3. Situation of SARD-M policies within the country's policy framework**

- Basic description of political history and system of governance
- Major ministries responsible for SARD-M policies, their roles and interactions at various levels of governance
- Types of policies and policy frameworks that exist for SARD in mountain regions.

#### **4. Impacts of policies on SARD in the country's mountain areas**

Examination of **policies related to entry point** as well as **other pertinent economic, social, environmental and institutional policies** that directly or indirectly affect the entry point under study.

- What are the objectives of the policies under study and do they address the issues facing the country at the national, regional and local levels taking into account the specificities of and linkages between lowlands and uplands?
- What kind of positive or negative impacts do the policies being studied have on SARD?
- Are there policy contradictions?
- Do the policies address mountain specificities during the formulation, implementation and evaluation processes?

**5. Effects that existing institutions and policy formulation and implementation processes** have on policies for SARD in mountain region:

- What are the strengths and weaknesses of the institutions at the national, regional, and local levels responsible for formulating and implementing SARD-M policies?
- How do political, participatory and financial mobilization processes and institutional arrangements/knowledge management procedures impact upon the effectiveness of policies?
- What impacts do mountain specificities have on these processes?

**6. Summary of findings, recommendations and proposals for follow-up activities** (e.g. SWOT analysis).

## Some references

The development of this framework has drawn heavily from the work conducted by:

- **FAO** in policy issues related to SARD (i.e. Guidelines for the integration of sustainable agriculture and rural development into agricultural policies. FAO agricultural policy and economic development series 4. written by Hardaker, J. Brian, Rome: FAO. <http://www.fao.org/docrep/w7541E/w7541e00.htm>);
- **OECD** Development Assistance Committee (i.e. OECD DAC. – 2001 - The DAC Guidelines: Strategies for Sustainable Development. OECD: Paris. [http://www.oecd.org/document/40/0,2340,en\\_2649\\_201185\\_2670312\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/40/0,2340,en_2649_201185_2670312_1_1_1_1,00.html));
- **United Nations Department of Economic and Social Affairs (UNDESA)** in establishing guidelines for the development of national strategies for sustainable development (i.e. UNDESA – 2002 - Guidance in Preparing a National Sustainable Development Strategy: Managing Sustainable Development in the New Millennium. Background Paper No. 13 (DESA/DSD/PC2/BP13) <http://www.johannesburgsummit.org/html/documents/backgrounddocs/nsdsreport.pdf>).

## For more information

- **Contact in the SARD-M Project Team:** Mr Takashi Takahatake (takashi.takahatake@fao.org)
- **SARD-M Project Website:** <http://www.fao.org/sard/en/sardm/home/index.html>