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Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
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مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

Mr. Ross Mountain
UNDP Resident Representative
Bir Hassan, Beirut

C/19/98

Subject: National Report on Sustainable Development

Dear Mr. Mountain,

Please find enclosed a draft copy of the National Report on Sustainable Development for your review. Capacity 21 and the Ministry of Environment are reviewing this report, and we appreciate your input on it.

Very truly yours,

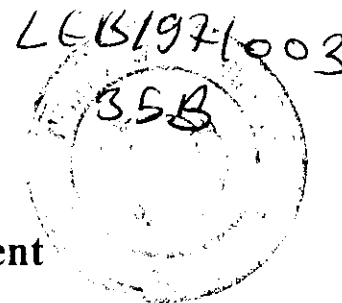
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CAPACITY 21
LEBANON

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Lebanon

A Profile of Sustainable Development



The Ministry of Environment

February 1998

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Preface

Introduction

Akram Chehayeb
Minister of Environment

Beirut , February 1998

General review

Photo 1 : Reconstruction of the center of Beirut
and preservation of archeological sites .
Photo : Marwan Younes ,1997

Sustainable development five years after Rio

The Earth Summit, that was held in Rio 92, came out with an international agreement and a remarkable degree of consensus on how to make the world more sustainable. The primary goal of the Summit was to find an equitable balance between the economic, social and environmental needs of presents and future generations and to lay the foundation for a global partnership between developed and developing countries as well as between Governments and sectors of civil society based on common understanding of shared needs and interests.

172 Governments, including 108 heads of State or Governments, adopted in the summit three major agreements to guide future work: Agenda 21 - a global plan of action to promote sustainable development; the Rio Declaration on Environment and Development - a set of principles defining the rights and obligations of States; and a Statement of Forest Principles - to guide more sustainable management of the world's forests. In addition, two legally binding Conventions, one on Climate Change and the other on Biological Diversity, were opened for signature at the Earth Summit. At the same time, negotiations got under way for a Convention to Combat Desertification, which was opened for signature in October 1994 and entered into force in December 1996¹.

The Rio Declaration states that the only way to have long-term economic progress is to link it with environmental protection. Hence, development is no more linked (only) to economic growth and in order to achieve sustainable development and to fulfill basic human needs, environmental protection shall constitute an integral part of the development process, and can't be considered in isolation from it.

This profile is intended to make a general review on the Lebanese national progress since the Earth Summit. It is aimed at highlighting the contribution of the Ministry of Environment (MoE) as well as, different government agencies, Non-governmental organizations (NGOs), private sector and other major groups, in identifying and implementing the initiatives related to sustainable development. Sustainable development means meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Although Lebanon was a prosperous upper-middle income country in the mid-70s, twenty years of war turmoil have left its productive stock severely damaged. Major negative environmental impacts of the war include infrastructure, forest fires, land abandonment, degradation of terraced land, overpopulation on the coast, destruction of fish breeding grounds, sea water intrusion due to over-abstraction from private wells, dumping of solid waste in land and coastal waters, coastal pollution from uncontrolled waste dumps and untreated effluent.

1-UN Earth Summit + 5 Newyork June 1997

Photo 2: Beirut Port photo Marwan Younes ,1997

Since the end of 1992, the Lebanese government has been facing a most extraordinary task in reconstructing the country, guided by a general framework (Agenda 21) for implementing sustainable development through reconstruction, administrative reform and human development. The initial activities were based on the **National Emergency and Reconstruction Programme (NERP)**, a five-years rehabilitation plan (93-97) concentrated on water, waste water, solid waste, electricity, telecommunication, transportation, education, health and technical assistance. In 1995, the Government submitted to the Parliament a 10-years plan referred to as **Horizon 2000** which covered in addition to the physical infrastructure sectors, the social infrastructure and private sectors. Through its three-years **National Administrative Rehabilitation Programme (NARP)**, the government's aim was to address the urgent needs of the various administrative units and rehabilitating them to a level of basic functionality so as to be able to deal with operations of any public entity.

The National Administrative Rehabilitation Program (NARP) was prepared to be executed by the Ministry of Administrative Reform, with major support from United Nations Development Programme (UNDP).

Major environmental investment has been taking place: In 1995-1996 Horizon 2000 program totaled US\$1,300 million², covering water supply, irrigation, wastewater and solid waste management. The environmental impact of public expenditure programs for infrastructure in water supply, sanitation, solid waste and power is likely to be beneficial to the environment, particularly in terms of human health, and current government policies recognize the need to introduce full cost recovery for environmental services. Some of the projects are now having environmental impact assessment so as to mitigate the various negative impacts on environment.

Although, the economic growth is still the central objective of the government, there has been since mid 1997 an important shift of attention of policy makers of development towards the social and other aspects of development. The Lebanese government is now seeking to better align towards achieving the objectives of sustainable and human development³.

The Ministry of Environment was created by Law 216 of 2 April 1993, to be the government institution responsible for the development of a national strategy for sustainable development. However, this has not been a major issue on the programme of the relatively young Ministry during its first four years. Instead, the Ministry had to deal with urgent environmental problems such as uncontrolled quarrying, sand withdrawal activities, municipal and industrial solid waste disposal, hazardous waste, birds hunting and environmental awareness. Nevertheless, MoE has elaborated an Environment Strategy Framework, and major achievements were realized: the ratification of many conventions such as Climate Changes, Biodiversity, and Desertification which were put into action through several projects. Other international conventions and meetings are also receiving active participation by the government such as conventions on water. Government's projects are internationally supported through different UN agencies, World Bank (WB), Global Environment Facility (GEF), and several countries. A number of other government organizations have responsibilities for environmental management in Lebanon, in particular the Council for Development and Reconstruction (CDR), which is leading the recovery and reconstruction program in the country. The overlapping responsibilities of ministries and the weak coordination among them constraint the implementation of environmental measurements. Nevertheless, the Council for Development and Reconstruction (CDR) is playing a major role in coordinating the various government institutions.

2- Council for Development and Reconstruction , Progress Report 1996

3 Ross Mountain, United Nations Resident Coordinator. UNDP, Lebanon Development Cooperation 1997 report.

Sustainable development is achieved by people not only for them. People must participate fully in the decisions and processes that shape their lives. In Lebanon a number of associations and federations, grouping individual organizations, were created in the early 90s and have since worked towards strengthening their capacity. They aim to take up common interests of their members, to mobilize resources and to lobby with government and other development partners. With many dedicated environment groups, Lebanon has experienced the establishment of environment clubs at schools and universities, as well as national environment days, and reforestation campaigns. Moreover, environmental concerns are becoming part of the daily life, a state that did not exist previously in Lebanon. The private sector is increasingly involved in environmental awareness. Academia and centers of research work on several environmental issues. Women participate increasingly in environmental awareness and training. Although elections of local authorities have not been occurred since 34 years, some municipalities in rural and urban areas are playing a great role in tackling the daily problems resulting from environmental degradation. Several municipalities have organized, during years of war, waste collection and treatment management. They coordinate with local NGOs and CBOs to solve environmental problems and ad-hoc issues.

Photo 3: Beirut: Overpopulation and urban encroachment are in continuous increase

Photo: Marwan Younes

Photo 4: A woman and a child carrying water in Akkar Caza (underserved northern part of Lebanon).

to solve environmental problems and ad-hoc issues.

Profile of human development in Lebanon⁴

Population in Lebanon		3,000,000
Urban population%	93-94	86
Rural population %	1994	14
in mount Lebanon: %		36.8
in north Lebanon: %		21.6
In Beirut: %		13.1
Annual rate of increase %		2.3
Largest density (the coast)	1993	1610 p/km2
Smallest density (Bekaa area)		120 p/km2
Life expectancy at birth (years)		68.7
Population with access to:		
Health services (%) ⁵	1985-95	95
Safe water (%) ⁶	1990-95	94
Sanitation (%)	1990-95	63
Daily calorie per capita	1992	3,319
Adult literacy (% 15+)	1993	91.7
Combined first-, second-and third- level gross enrollment ratio (%)	1993	74
illiteracy: %		13.6
illiteracy among females: %		17.8
illiteracy among males: %		9.2
Daily newspapers (copies per 100 people)	1992	18
Televisions (per 100 persons)	1992	32
Expenditures on community and social services (% of the budget)	1997	18,4
Expenditure on Agriculture (% of the budget)	1997	0,4
Importation of food needs (%)		80

4- UNDP Lebanon Development Cooperation, 1996 & 1997 Reports.

5-Some studies have contradictory results.

6- Some studies done by Ministry of Public Health (MoPH), laboratories in the American University of Beirut (AUB) and UNICEF have contradictory results.

I - Main economic and social factors

Photo 5: Reclamation of land on the sea.
One of the private sector projects.

A- Economic factors

This part briefly reviews selected development with respect to aspects of sustainable development in Lebanon. It covers reconstruction and rehabilitation project of the government as well as development of other factors, related to basic services and resources.

Since 1992, the goal of the government was to restore public services and stimulate private sector economic activity. Lebanon has always thrived on free enterprise and the government's plans were aimed at providing an appropriate infrastructure, in the broadest sense, to enable the country to compete regionally and globally. As well as the physical infrastructure, it was needed to create economic stability and establish an appropriate fiscal environment. External assistance, on bilateral and multilateral bases is playing a major role in the reconstruction and economic development of the country. The reconstruction programme is going on with participation from more than 20 countries.

1- Horizon 2000: Reconstruction rehabilitation, and recovery

In 1992, the Council for Development and Reconstruction (CDR) has prepared and launched the National Emergency and Reconstruction Programme (NERP). This \$2.25 billion programme was aimed at restoring basic infrastructure services such as electricity and telecommunication sectors. The plan was essential to allow proper functioning of the private sector, which would be mobilized to increase economic activity and lead to an increase in gross domestic product.

The first phase of rehabilitation has been completed and some major benefits are already being experienced: 24 hour electricity supplies are provided to most users; telecommunication systems are functioning better; some 1200 public schools have been rehabilitated. Garbage collection in Beirut has been in place for five years and this is gradually being extended to other regions. Renewing the roads and services in the northern and southern suburbs of Beirut is taking place⁷.

In the second phase of work (Horizon 2000) more attention has been made to physical as well as social infrastructure: Education, health, water supply, waste water, and solid waste sectors. Work is progressing in the rehabilitation and re-building of educational facilities. The government has also embarked on construction of a number of major new development projects, such as new power generating facilities, and several new hospitals including the Beirut University Hospital, as well as, the Beirut International Airport, expansion of the Lebanese University and some urgently required roads projects.

The National Administrative Rehabilitation Programme (NARP) that has been launched by the government, aims at eliminating corruption, building a stronger capacity within the civil service, in order to carry out its responsibilities professionally, as well as securing a greater separation between the political and administrative functions.

2- Economic development

The governmental economic strategy before the war emphasized on trade, financial services, and tourism. Agricultural sector was not a government's priority. This led to internal emigration of people from rural areas to the coastal line, specially to big cities (Beirut, Saida and Tripoli). The several governments, from 1991-1996, focused also on the reconstruction of the destroyed infrastructure in coastal zones as well as in rural areas. The reconstruction in rural areas focused mainly on roads, electricity and communication. Agriculture hasn't got enough

7- Council for Development and Reconstruction , Progress Report 1996 .

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Photo 6 :
Quarries around Beirut. The new quarrying regulations forced some quarries to stop their work on 1997

attention, neither creating integrated economic formations for rural people to work and stay in their areas. Upon taking office since November 1996, the government's policy took into consideration the priorities concerned with socio-economic development. These priorities include:

- (i) socio-economic policy: in order to achieve balanced development the government targets the three main areas of industry, agriculture and tourism; It aims to support the state's housing policy and to organize state-sponsored hospitalization, education and transportation network.
- (ii) administrative reforms: to free the administration from political influences and enhance administrative decentralization, and reactivate the role of municipalities.
- (iii) return and reintegration of displaced.
- (iv) To enforce environment laws and propose new legislation; and to find solutions to the problem of waste, rubbish dumps and quarries⁸.

Towards the end of 1997, there has been more concern about the public finance situation. Some experts suggested a new financial policy which reconsiders and increases the expenditures to reactivate the productive sector as well as ensures the efficiency of all public services. They called for reordering priorities with a view to ensure the essential needs of the majority of the citizens. In order to have more revenues, the government decided in 1997 to impose taxes on cars with rates varying from 20, to 200 percent.

An improved framework and mechanism for private sector development are high on the government agenda. The Lebanese Investment Development Authority (IDAL) at the sector-wide level and the Central Bank with respect to the financial market, have taken important initiatives and developed considerable activities during the last three years. The banking sector is expected to play an increasingly important role in reconstruction, development and housing.

Regional cooperation is progressing with an emphasis on economic cooperation mainly with Syria. The Arab league decided to establish within a ten- year period (starting from 1998), an Arab free trade zone. Lebanon has contributed to this initiative by drawing up a blueprint of a process for creating an Arab common market.

There is still a long way for the several components of economic development to go. Agricultural sector is still suffering from lack of national strategy and a long term development program. While in industry, a slight progress has been made, although industrial sector suffers mainly from lack of adequate financing. The industrial sector which consisted of 23.518 industrial enterprises, is witnessing progress and 459 new enterprises were established in 1996⁹. UNIDO revealed in mid-1997 a country support strategy for development of the industrial sector. The creation of an independent Ministry of Industry in mid-1997 (after its separation from the Ministry of Petroleum) reflected the government's initiative towards the development and implementation of a coherent strategy for the industrial sector. There were favorable developments in the trade sector in the past four years, so as in the tourism sector. Hotels started rehabilitation works and new hotels were constructed mainly on the coastal zone of Greater Beirut Area and Kesrouan.

Experts in sustainable development recommended that the immediate demand for development and reconstruction must be balanced with the need to rehabilitate and enhance, after so many years of war and abuse, as well as maintain and monitor, the functions of the ecosystem and of the human environment. This task will be achievable when a national environmental strategy is approved and implemented by different governmental agencies, local community groups, and non-governmental organizations (NGOs).

8- UNDP, Lebanon Development Cooperation, 1997 Report.

9- Ibid

3- Changing consumption patterns

According to a World Bank survey, 15% of human loss (death, permanent disabilities, early death) is due to environmental reasons such as pollution, water contamination, and vehicle accidents. The cost of social loss caused by environmental degradation (water, waste water and sewerage), equals to around \$300 million

The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in the industrialized countries. It is necessary to examine the demand for natural resources generated by unsustainable consumption and seek ways of using resources that minimize depletion and reduce pollution. Causes and consequences of poverty are interrelated. They both reflect the absence of sustainable development strategy. Patterns of consumption are quietly affected by poverty, and vice-versa. Poverty in Lebanese rural areas led people to move from agricultural economic system to real estate speculation. They immigrated from their villages and settled on the coast causing overpopulation which had grave impact on environment.

There is not an integrated policy for changing consumption patterns in Lebanon. Nevertheless, some ministerial initiatives were undertaken through certain regulations and restrictions. Measurements have been applied by the Ministry of Economy and Trade on imported commodities to agree with the international qualification of productions. The Ministry of Environment prohibited the unauthorized importation of chemicals and set up precise conditions and measurements for new industrial establishment.¹⁴ Lebanese construction standards have been approved. Quarrying activities are being organized through the National Master Plan for Quarries, which was approved by the Cabinet on 1997. Fines on cutting trees and overgrazing are imposed, while violation of this law may also cause imprisonment. Electricity rates increased so did communication and water rates. Initiatives for environmental public awareness are increasing with a major support from the Ministry of Environment and through non-governmental organizations, mass media, and schools. In coordination with United Nations Industrial Development Organization (UNIDO), clean technology projects and public awareness of recycling are increasing. Campaigns for collecting paper from certain schools to be recycled are taking place. Private sector is increasingly participating in these initiatives and few industries started recycling glass, paper, metal and plastics. The Ministry of Environment has set up indicators to measure pollution of air, water and soil. Public transport has improved, even though it hasn't resolved pollution problems of vehicle emissions because leaded petrol without catalytic converters is still used in Lebanon putting the population at risk of severe health problems. It is recommended that the amount of lead in the imported fuel to at least 50%. Installation of filters on some cement factories has taken place (Chekka Area) and in December 1996, US \$ 100 million has been requested from the Friends of Lebanon Conference for power generation pollution reduction. Four factories have been equipped to allow the use of CFC11 and CFC12 gases in Lebanese industry to be phased out¹⁰. The government has set certain objectives concerning changing consumption patterns, such as establishing progressive import taxes on cars, with rates varying from 20 to 200 percent. The Government is also attempting to improve the coverage and efficiency of tax collection, mainly collection of energy bills where it was revealed mid December 1996 that 44 % of the energy bill remains unpaid¹¹. Electricity sector aims to establish gas turbines and some hydro-electric turbines and installations of filters on more existing power stations. Governmental policy of applying full cost recovery of environmental services (electricity, fuel, water) may change consumption patterns. However, a time will be needed before assessing the impacts of this policy.

10- Council for Development and Reconstruction, Progress Report Update 1997

11- UNDP, Lebanon Development Cooperation, 1997 Report .

Photo 8 : Beirut: Overpopulation and urban encroachment are in continuous increase
Photo: Marwan Younes

Some concerned non – governmental organizations have conducted studies and research on air and noise pollution . In its review of the problems of energy and environment , the «Association Libanaise pour la Maitrise de l'Energie » (ALME) indicated certain measures to be taken to fight energy pollution of fuel consumption by creating a tax penalizing the polluter and adopting an energy control policy.

B- Social factors

Internal emigration from rural areas to the coast and big cities started many years before the Lebanese war, mainly due to poverty and lack of a governmental integrated policy for a sustainable development in the rural areas. The environmental impacts of governmental policies have been to encourage indirectly unsustainable real-estate construction, which has put additional strains on access to clean water, healthy air, and sanitary networks. The war affected painfully the social cohesion and led to severe demographic changes in the country where thousands of families were displaced, and dwelled in big cities, thus increasing overpopulation and poverty. A deep discussion emerged since the early executed stages of Horizon 2000, on the social context of the reconstruction policy in Lebanon, and its impact on social dimensions. It is needless to say that reconstruction of the infrastructure will lead in a way or another to an economic growth and development. But a question may arise: Will the social problems be solved and poverty be alleviated only through the reconstruction process and economic growth, or these problems need an independent convenient policy which might urge the government to revise its strategies of reconstruction and give more attention for human power and trained rehabilitation ? Sustainable development can not be implemented through decisions, mechanisms and net economic policies only, but it starts with people themselves. Sustainable development means the participation of major groups in decision-making and identification of projects, thus adding human power and expertise to the physical and monetary capital.

1- Demographic dynamics

Between 1994-1996 a large survey of a 70.000 person base was conducted by the Ministry of Social Affairs in cooperation with UNFPA. This population and housing survey makes available, for the first time in more than fifty years, data on population and development in the country. The results of the survey were announced by the Prime Minister on 15 October 1996. This survey looked at population distribution characteristics based on indicators such as economic, educational, marriage, gender among other. It indicated that Lebanon doesn't suffer from dramatic growth of population, nor from high rate of infant death, or illiteracy. Nevertheless, Lebanon suffers from overpopulation on the coastal line, mainly in Greater Beirut Area, which increased poverty and had grave impact on environment, such as overuse of land resources, pollution of air, water and soil. The survey showed that nine out of ten reside in urban area , compared to 60% in 1970 . Although the number of persons per km² of land areas is not high (244) by international standards , in some quarters of Beirut the population density exceeds 25,000 persons per km².¹²

2- Combating poverty

Poverty is not to be suffered in silence by the poor. Nor can it be tolerated by those with the power to change it. The challenge now is to mobilize action - state by state, organization by organization, individual by individual.(James Gustave Speth, 1997)

If human development is about enlarging people's choices, the condition of poverty- from the human development perspective - means denial of basic opportunities and choices for living a tolerable life. Poverty can not be alleviated by (only) economic criteria, but also through social and human development¹³. There are no official precise recent studies on poverty in Lebanon.

12- UNDP Lebanon Development Cooperation 1997 Report.

13- UNDP ,Lebanon Development Cooperation 1997 Report

Photo 9 :

Some studies done during and after the war depended on surveys and statistics made in the seventies. The hyperinflation that occurred between 1984 - 1991, and the loss of the monetary value of the Lebanese pound, had a great negative impact on the social and economic level of the population, causing dramatic gap between income level and that of cost of living, which didn't decrease after the war. This gap is one of the deriving symptoms of poverty in the country.

Since 1992, the economic and social policies of the government directed towards reducing the effects of poverty rather than tackle the causes. These policies were based on increasing in wages and stabilizing national currency and limiting hypo-inflation. As well as using of indirect taxation on selected goods while reducing the income tax to a flat 10% rate. But these policies have had little effect in improving the social conditions of the poor. The social situation in the country continued to be very difficult after the war. Unemployment level is estimated to be 10%. According to the Trade Unions, salaries in 1995 ought to have been increased by 90% to recover the level of the early 1990s.

In the second quarter of 1997, political attention turned to underserved areas, particularly in Akkar (North Lebanon) and Baalbeck and Hermel (Bekaa) districts, in response to demands of the local population. These areas are generally believed to have a high incidence of poverty which have an urgent need for an emergency rehabilitation programme. The Bekaa members of parliament called on June 1997 for administrative decentralization to enable municipalities play their role and develop the region. The government decided on 27 June to allocate LL 150 billion for projects in the Baalbeck-Hermel region, mainly for irrigation projects, construction of a dam and a lake, water and waste water projects¹⁴. This programme will provide the basis for development and create employment opportunities. It will integrate women into the local economy through training and support for small scale economic activities.

Several projects for rural and peripheric areas are underway executed by different ministries, with the collaboration of UN Agencies and other international organizations. These projects aim at creating economic bases for local community groups which encourage them to stay in their areas of origin, such as the Integrated Project of Hermel - Baalbeck, undertaken by the Ministry of Agriculture (MoAg), and the return of the displaced and the creation of economic projects for the returning people undertaken by the Ministry of Displaced. In 1997, the Council of Ministers approved a plan for social development costed at US\$ one billion from which US\$ 400 million will be earmarked to develop impoverished rural areas such as the Baalbeck-Hermel and Akkar. Some of these projects will be covered in details later in this report. Moreover, programmes of rehabilitation and reform of public services in the social sectors were continued during the past three years.

2.1- Social services

In February 1997, at the request of Ministry of Social Affairs (MoSA), UNDP fielded a poverty mission to propose a framework for a national definition of poverty and poverty measurement. The mission report was submitted in May 1997¹⁵.

The Ministry of Social Affairs (MoSA) started since 1993 reactivating the social services centers in all regions of the country under an approach of decentralization of social welfare services to city and town quarters and to villages, and promotion of popular participation. In its Social Development Training Center, the Ministry of Social Affairs (MoSA) is now training 52 young persons, to become auxiliary social workers.

14-Ibid

15 - Council for Development and Reconstruction, Progress Report Update 1997

Photo 10: A returning woman to a previous war zone in mount of Lebanon . Photo, Hoda Kassatly

These social workers are mainly women (84%) who benefit from training programs to develop their skills in social service. In March 1997, a mission was launched in the context of a Sustainable Human Development Network activity, aiming at reviewing the mandate, role responsibilities and human resources of MoSA and assessing the major aspects of current national social policy. The Ministry of Social Affairs plays a central role in terms of provision of social welfare and social services. It provides coordinated action and support to handicapped, both from the war period and otherwise. A comprehensive programme of support would greatly benefit the Ministry and its network of integrated social services, both at the central and operational levels.

2.2 Participation of private sector in combating poverty

The private sector, namely a small number of commercial banks, launched in 1996 with support of external financing, a programme of finance for the middle class population. The Housing Bank, was reactivated under private sector management, to give average housing loans till \$30,000 to individuals. Moreover, the private sector is responsible for collecting garbage in some of mountainous areas like Metn and Chouf.

3- Education

Education is the basis for the creation of a competent and productive society. The Education Research and Development Center (CRDP) launched in January 1996, the reform of national education programmes, based on the newly decreed structure of the education system¹⁶. The objectives of the reform of school programmes aimed at developing the human potential and social capital in order to reduce poverty. The Lebanese parliament approved an increase to 14 years of the minimum age for labor, in compliance with the Convention of the Rights of the Child, thus giving way to compulsory and free basic education to be implemented in the near future. In the second half of March 1997 Education Research and Development Center submitted to the Government the draft school programmes, which will be gradually introduced in the educational programmes. Besides, the Ministry of National Education, and the Education Research and Development Center, in collaboration with the World Bank and UNESCO, organized in 1997 the first National Conference on Restructuring and Development of the Education Sector aiming at starting a dialogue with all concerned parties about the educational situation¹⁷.

The Ministry of Culture and Higher Education is undertaking a project for the protection of natural sites and monuments with the support from UNESCO. The initiative of the Government to establish higher vocational and technical education institutions (technology universities and institutes), the first one of which was established in Saida, (south of Lebanon) is a positive step towards sustainable development, through finding employment opportunities, thus alleviating poverty.

4- Human health

The Ministry of Public Health (MoPH) (Whose budget is 4-6 % of total national budget on average) is working with the support of World Health Organization (WHO), United Nations Children's Fund (UNICEF) and World Bank on introducing primary health care in a National Health System to all population. The National Health System provides every Lebanese with free hospitalization up to 85% of cost subsidy and conducts vaccination campaigns. The Ministry of public Health launched in September 1996 the first stage of a programme of cooperation between the Ministry and 16 national and international NGOs,

16- UNDP Lebanon Development Cooperation, 1997 Report

17- Ibid

Photo 11: Schools in displaced areas, now reconstructed and reopened, Photo Hoda Kassatly

involving 30 health centers, 20 managed by NGOs and 10 by the public sector. Among several initiatives taken by the Ministry, a National Committee for health and security at home, at work and on the road, was created early in 1996 to inform the public and to promote security through media campaigns and other initiatives. Construction of several hospitals and health centers is underway in rural areas mainly the North and Bekaa area and tender documents have been completed for the rehabilitation of six hospitals and 30 health centers under project financed by World Bank¹⁸. A US \$100 million have been requested from Friends of Lebanon Conference for Primary Health Care Program executed by Ministry of Health. This program covers rehabilitation, organization and management, as well as, new equipment for public hospitals and health centers. The Central Laboratory of Ministry of Health has largely improved his role in scientific monitoring and controlling local and imported nutritional products (meat, canned food...etc). Beside, the Ministry of Health and the Ministry of Technical and Vocational Education are developing training programmes for health inspectors.

Preventive programmes addressed by the Ministry of Public Health (MoPH), are for very basic diseases such as measles and polio. Health problems derived from polluting sources as motor vehicles, power plants, industrial points and ground water contamination, are still tackled through ad-hoc planning. A legitimate assessment of the current situation cannot be presented due to lack of field monitoring of source, and the absence of health registries documenting the true scope of related causes and effects. Health services in Lebanon provide curative care with an oversupply in hospital beds, while there is an important shortage of nurses.

Beside the shortage of nurses, health care coverage is a main problem to be urgently addressed by the authorities. Medical insurance coverage is available to only less than half the population, and it appears particularly problematic in the remote regions¹⁹. Private sector hospitals account for 95% of health care in Lebanon with an oversupply of services. Most top quality specialized health care, is concentrated in and around Beirut. Government hospitals suffer from lack of equipment, human quality, and fund. There are 760 local clinics, 80% of which run by non-government organizations. And community-based organizations..

5- Displacement and resettlement:

In 1975, series of conflicts broke out in Lebanon which lasted nearly seventeen years. Consequently, massive destruction occurred including extensive damage to houses, physical and social infrastructures, economic and educational institutions. In addition, more than 100,000 non-combatant civilians were killed as well as more than twice that amount wounded, handicapped, and left homeless orphaned, widowed and/or unemployed.

After the permanent cease fire in November 1990, the results of the long war became painfully clear: 90,000 families had been displaced, with an average of 5.7 persons in each family. Displacement had severe environmental impact on demography, economy, and social coherence of the community groups. Displacement caused imbalance in population distribution, causing overpopulation in urban inhabited areas, while most areas from which the displaced fled became totally empty especially the rural areas. Besides, agriculture was the first income generating sector for the displaced people in their previous areas where 55% of the displaced households were farmers, while farmer women present 87% of the working women in the displaced areas²⁰. An immense number of people lost their sources of livelihood, causing poverty and immigration. That led to degradation in agricultural lands, productivity and forests. Moreover, families and communities previously settled in geographically and confessionally defined areas have been scattered, causing a serious break-down in critical social support network.

18- Council for Development and Reconstruction, Progress Report Update 1997

19- UNDP, Lebanon Development Cooperation, 1996 Report

20- Ministry of Displaced, Return of the Displaced in Lebanon, 1996 Report

Photo 12: A newly constructed public hospital in Tannourine (Batroun Casa North of Lebanon)

5.1 The Ministry of Displaced (MoD)

The Ministry of Displaced was the first governmental initiative towards social cohesion and reintegration. It was created in 1992 to preserve and grant rights to citizens in order to guarantee the protection and the return of the displaced according to all relevant national and international laws. It is designated to initiate a successful process of return and reintegration of displaced persons in their villages and towns of origin. The Central Fund for the Displaced was established to fund and rehabilitate local infrastructure works of the areas of displacement. The Ministry of Displaced coordinates rehabilitation of the social sectors, and reactivation of economic activity through the United Nations Development Programme (UNDP) Project of Reintegration for the Socio-economic Rehabilitation of the Displaced. In this respect, there has been an increasing level of participation by non-government organizations working in close cooperation with the Ministry of Displaced. The priority of the Government has been physical reconstruction, be it infrastructure or housing, in addition to evacuation of illegally occupied buildings. By the end of 1996, 48299 illegally occupied housing units had been vacated. Each househead received a sum of money either to rebuild and/or restore his former house or rent a decent residence for the concerned family. A sum of US\$ 462 million was disbursed till end of 1996 of which more than half had been spent on evacuation of premises. According to the Ministry of Displaced, 28% of displaced families had returned to the Chouf, Aley and Baabda districts. Return needs are not limited to vacating houses, but economical, educational and health networks needed to be rebuilt in the former war zones, in such a way to make return permanent. A sum of 320 million dollars is needed for these projects²¹.

5.2 Efforts of line ministries

The Ministry of Displaced and other several line ministries: Ministry of Agriculture, Ministry of Public Works, and Ministry of Education are implementing projects in the former war zones with the cooperation of UN agencies, European Union and local non-governmental organizations. These projects aim at enabling development to be sustainable, as well as giving rural community groups in general and women in particular, the chance to stay in their areas through the creation of income generating programs. Several projects worked on the rehabilitation of agricultural training centers and water networks that were damaged during the war. Some of these projects are the rehabilitation of agricultural training center in Deir-El Kamar (Chouf Caza) and loans for farmers to renew their agriculture repair terraces. These projects are addressed by Ministry of Agriculture with European Union finance. An agreement of twinning of mountainous towns and villages with European towns has taken place. The agreement provides cultural and economic exchange and support. It aims at creating a youth center for social, cultural and sportive activities, thus strengthening the national consolidation among the local community groups. Moreover, several schools were reconstructed and rehabilitated to receive the returning people.

5.3 Continuous stress

Unfortunately, the cease-fire of November 1990, did not put a permanent halt to displacement. There are still several community groups in the south of Lebanon who are constantly exposed to Israeli military and economic pressures as well as being vulnerable to armed attack. These Lebanese have been forced to flee their homes in massive numbers several times since the 1990 cease-fire. In April 1996, thousands of families left their areas as a result of military attacks. The resulted general loss was estimated more than US\$ 500 million. The High Relief Commission is concerned with the displaced people as a result of Israeli military attack. Rural areas in general, and displaced areas in particular suffer from lack of a national integrated plan for more sustainable economic projects that make return of the displaced permanent.

21- UNDP, A Profile of Sustainable Human Development in Lebanon, Report 1996.

II- Environment Management :

The Ministry of Environment became , since its creation by Law 216 of 2 April 1993, the main responsible body for environmental management. Its responsibility is mainly to formulate a general environmental policy and propose measures for its implementation in coordination with the various concerned government administrations .

Other several institutions have direct or indirect involvement in environmental management, (see table 2). However, and because of the long war impact on administrative structure and human resource abilities, environmental management suffered from grave problems: incompatibility, inappropriate qualified personnel, inefficiency, low salaries and overlapping responsibilities.

Table 2.

Waste water	MoE, CDR, Housing, Hydraulic and Electric Resources, Health, Public Works
Solid/hazd. waste	MoE, CDR, Health, Urban Affairs, Public Works
Water resources	CDR, Health, Public Works
Land use & coastal management	MoE, CDR, Transport, Agriculture, Tourism, Housing, Health
Forest and agriculture.	MoE, Agriculture
Pollution	MoE, Transport, Industry
Cultural heritage	MoE, Antiquities Department

Source adapted from Metap 1995

Since 1992, the several governments recognized the urgent need for reform and rehabilitation, and considered the institutional strengthening as a significant component of the recovery program. This recognition was translated in the creation of several ministries mainly the Ministry of Environment and the Ministry of Administrative Reform.

2.1 Institutional framework and capacity building:

Since its creation, the Ministry of Environment has been in a difficult working environment, where it is not easy to establish clear roles and lines of communications. Yet the management of cross-cutting environmental issues requires clear and defined means of communicating and allocating responsibilities between line ministries. After 3 years of its creation, the MoE had only 13 employees including the Director General, and most of these have administrative rather than technical duties. The Civil Service Council seems to have been unable to provide the 139 employees specified in the Law 216. A law was issued on 15/3/95 allowing the MoE to contract up to 20 technical staff with salaries commensurate with skills (ie. Beyond the pay scales of the public service). At present, the technical work is performed by 20 fulltime engineers employed on fixed term consultancy contracts.

2. 1.1 Amendment of the Law on the creation of MoE :

The Law on the creation of MoE does not distinguish between the planning and implementation function of the Ministry. In order to activate and strengthen the role of MoE and to clarify its responsibilities, a protocol between MoE and (Ministry of Administrative Reform) was signed on March 1997 to amend the law on the creation of MoE. This agreement proposed wider responsibilities for the MoE and suggested the establishing of a National Council for Environment related to the MoE, which aims to prepare suggestions, and recommendations to arrive at an integrated management for the environment, with a master plan for execution of the policy. The amendment will reorganize the organigramme of the Ministry. The agreement was submitted to the parliament, and was approved on December 1997.

2.1.2 Priorities of MoE

Despite all the obstacles mentioned previously, MoE has set general priorities on the national level, these are: Management of hazardous and toxic waste, management of urban air quality arising mostly from traffic, development of land use planning, water resource management, control of soil erosion. The MoE 1997-1998 agenda of action plan included the following priorities:

a- Restructuring the organization of MoE and revision of the National Environmental Code

Under the MoE/UNDP project "Capacity 21", an attempt to clearly define the role and objectives of the Ministry is taking place. This includes the strategy framework of environment management in Lebanon and environment code.

b-Waste management: An Emergency National Waste management plan has been set by the Ministry in 1997 and the plan was approved by the Cabinet. The Waste Management Plan proposed by MoE includes: Sorting for recycling, composting the organic waste, bailing, and incinerating to a limited extent. As a result the open air dumpsite (Bourj Hammoud) was closed. Later on, an alternative approach of waste management to replace incineration by dumping what's left of waste (non recyclable) in sanitary landfills was introduced. Hence, the 2 incinerators Amrousieh and Qarantina were closed. By year 2000, it is expected that waste management plan be implemented, in all the Lebanese areas.

c-Quarries: In Lebanon, there are 710 quarries of which 246 of sand extraction. 45% of the existing quarries hold a license. 70% of the existing quarries are impossible to rehabilitate. The MoE has issued certain measures concerning the place in which quarries are allowed to work. Legal decisions were implemented and several quarries have been stopped from work. Closed quarries will be technically and aesthetically rehabilitated in collaboration with all concerned parties where construction debris will be treated and filled-in.

d- Air pollution: The results of an AUB study on air and noise pollution in Greater Beirut Area were announced in April 1996. The study included a number of recommendations to reduce air and noise pollution, and to adopt the use of lead-free fuel. In January 1996 MoE indicated that necessary decisions and legal measures will be taken to ensure the installation of filters against industrial pollution. The MoE has taken further measures for installation of filters in several industrial plants mainly in Chekka area. After the installation of filters, air pollution has been checked at Chekka, at the request of the MoE, and the results were satisfactory.

e-Environmental education & awareness: A national awareness plan has been established. An agreement between the MoE and the Education Research and Development Center (CRDP) has been made to encourage establishing of environmental clubs in schools and to produce environmental films. A committee has been established to follow up the integration of environmental awareness in the education system. This committee includes representatives from MoE, CDRP and Ministry of Education. A protocol between MoE and Ministry of Culture and Higher Education will be signed soon.

f-Information System: MoE has created its own information network, using among other projects, the Sustainable Development Networking Programme (SDNP), a UN project being implemented at MoE. Under the capacity 21 project, the MoE has launched a remarkable initiative towards strengthening the capacity of environmental NGO's by providing them information utilities (computers) and connectivity through the Internet.

2.1.3 Projects of MoE

In order to enhance the implementation of environmental management and sustainable development ,several projects were launched in the Ministry of Environment :

a- Capacity 21 programme

It is one of the main programs of MoE supported by UNDP and UNEP. it seeks to codify the existing legal framework, and aims at building capacity of human resources. The first phase of this project started on December 1994 and lasted for two years. The second phase has started on October 1997 for another two years. The broad objective of the Capacity 21 Project aims at creating an enabling environment for integrating the principles of sustainable development in decision-making processes in Lebanon. Capacity 21 (phase II) will concentrate on networking among NGOs, and on the private sector, as well as, it will concentrate on training, awareness building, technical assistance and reinforcement of the legal framework.

b - Sustainable Development Networking Program (SDNP)

SDNP's global mission centers on promoting sustainable development and the implementation of Agenda 21 in Lebanon by facilitating increased access to information, knowledge and expert advice and by encouraging increased collaboration and communication between stakeholders locally, nationally, regionally and globally. SDNP is designed to build capacity and train national stakeholders to become both consumers and suppliers of information on the Internet. This is accomplished through assistance in building capacity in individual institutions and among the target community at large, providing training and assisting in the formation of a coherent framework within which dialogue and information exchange can occur. This framework is provided by a project steering committee drawn from national stakeholders and the creation of a national SDNP Internet site.

c- Global Environment Facility Project (GEF)

This project will put into place an effectively managed system of protected areas to safeguard endemic and endangered species of flora and fauna, conserve their habitats and incorporate biodiversity conservation as an integral part of sustainable human development. The project will test a specific model of three demonstration parks where the Ministry of Environment, local non-governmental organizations, and in-country scientific institutions will cooperate and coordinate their activities to promote both the long-term ecological and the short-term economic objectives of wildlife conservation. It will also incorporate educational and sensitization components directed towards the local communities and will reach out to the public and decision-makers with documentary films and TV spots; thus testing the hypothesis concerning the possibility of promoting national reconciliation by bringing people and institutions together for the conservation of nature. The result of project is the management and conservation of three protected areas: the Horsh Ehden in the North, Palm Islands in Tripoli, and the Barouk Cedars in the Chouf area. Specific objectives of the project include:

1-Three functional protected areas managed by local teams of park rangers according to management plans prepared with the assistance of international conservation organizations and in-country scientific institutions and organizations that will conduct field studies, gather basic ecological data, analyse and publish results, and monitor the progress of the protected area. Based on scientific assessments an overall strategy of conservation will be defined and plans prepared for the future sustainability of the project beyond the present intervention.

2-Sensibilization and education campaign targeting a number of population groups within the vicinity of the protected areas as well as at the national level, in order to assure large-scale sustainability of biodiversity conservation efforts. This will include outreach to the local communities livings in the vicinity of protected areas, and preparation of educational

Photo 16 :

materials for awareness campaigns to alert stake holders to the need for biodiversity conservation and establishment of a protected area network.

d- Building Capacity for GHG Inventory in response to UFCCC Communications Obligations

This project will assist Lebanon in meeting its obligations to the global environment as a signatory of the EFCCC as stated in Article 4 of the Convention and to continuously respond to the objective of the convention (which is "...stabilization of greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate cycle"). The project aims at building Lebanon's capacity to continuously fulfill its commitment to the UFCCC's Conference. It also identifies and evaluates the vulnerability of Lebanon's fragile ecosystems, habitats and economies to climate change and that of the mitigate greenhouse gas emissions. The project develops and mitigation strategies that achieve national objectives.

e- Ozone Office : It is a Project aiming at planning and phasing out of ODS according to Montreal protocole.

f- Initiative for the Development of a Private Sector Intervention in the Environment Agenda

This project aims at advancing private-public partnership in order to learn how eco-efficiency activities and interact with other organizations in the region through exchange of information and experience.

2-2 Legal framework, instrument and mechanism

Lebanon has a large body of environmental laws, some dating back to the 1930s. However, these laws are characterized by obsolescence, lack of clarity regarding accountability for implementation, and lack of coherence, UNDP has supported MoE through the "Capacity 21" programme which started in 1994 in the review of the laws of environment management, and which is planned to continue these efforts until 1999. A Draft National Code for the Environment was prepared by MoE and submitted to the Cabinet on 1995. It is the first initiative towards defining the basis and norms for the protection of the environment and environmental consumption policy. The Council of Ministers decided in December 1995 to establish an ad-hoc committee to review and finalize the draft law. It has been finalized but not approved yet.

In addition to weaknesses in the legal framework and fragmented environmental management, environmental monitoring and enforcement need considerable strengthening. for example the MoE defines conditions for granting permits for classified establishments but lacks the capacity for environmental impact assessment. However, the MoE has enacted environmental regulation including a mix of emission and ambient quality standards for air, water (potable, waste water, and swimming), and air and noise pollution, as well as for industrial emissions. But these standards are difficult to enforce because of the fragmented and small-scale nature of industry and the lack of institutional capacity.

2.2.1 Economic instruments

The MoE plays a continuous role in preparing environmental regulations with several line ministries. Most of these regulations have been introduced and implemented such as increased fines on cutting trees, restrictions of the import of plastic wastes, regulations for petroleum storage facilities. Import of diesel vehicles (which was forbidden) has been authorized. The Import of diesel vehicles was initially authorized because Mazout emissions are less harmful than that of leaded gasoline. This is true if vehicle engines are in good condition, the case which doesn't apply to the existing vehicles in Lebanon.

2-3 Public awareness/ Environment education

One of the major goals of Capacity 21 programs is public awareness and spread of environmental information among stakeholder groups. Several workshops have been held, for this purpose. An environmental awareness strategy has been established. Training activities on environmental issues are organized by MoE in collaboration with UN Agencies and concerned ministries. Training for local community groups have also been undertaken by environmental NGOs. Environmental education and awareness have made their first steps in several schools. A national Environment Strategy has been drafted by MoE in collaboration with UNDP. A new education structure has been approved and will be introduced by the year 2000 where by environment issues will be incorporated into all subjects of the school curriculum. The Minister of Environment has launched in Spring 1997 the environmental days campaign and seashore clean-up, that have started on 5 June (World Environment Day) till 15 October (Arabic Environment Day), covering all the Lebanese areas, and ending up with the Arab Environment Festival. During this environmental campaign, 900 young men and women were trained to participate in public awareness and environment education programs that were initiated through school clubs and NGOs activities. The Ministry of Education has prepared a strategy for environmental education and sustainable development at the formal and informal levels. By year 2000, environmental education is expected to be integrated within the National Educational System. The «Centre du Développement et de la Recherche Pédagogique» (CDRP) is the main national body to prepare studies and formulate the educational framework and scholaristic programs. It is directly linked to the Ministry of Education.

2-4 Science and technology

The National Administrative Rehabilitation programme (NARP) that was launched in 1993, seeks the implementation of technology in 32 ministries and public administration. Thus, information and technical group of the Technical Cooperation Unit (TCU) have been institutionalized within the various ministries. Supported from UNDP, MoE is implementing the use of technology in the service of environmental issues through SDNP. The SDNP (as we mentioned previously) aims at promoting sustainable development and implementation of Agenda 21 in Lebanon by facilitating increased access to information, knowledge and expert advice, and by encouraging increased collaboration and communication among stakeholders, nationally, regionally and globally. It is designed to build capacity and train national stakeholders to become both consumers and suppliers of information on the Internet. The SDNP has started in MoE since April 1996, for a duration of 2 years and a half.

Concerning scientific and technological studies, the National Council for Scientific Research (NCSR) which is directly linked to the Council of Ministers, is the main national body and responsible through its different departments to formulate the scientific need and strategy and ensure best utilization of scientific resources for the public benefit. The NCSR includes the following departments: Marine Research Center; Geophysics Research Center; Solar Energy Center (for research guides); Information and Documentation Center; and Remote Sensor Center. Many universities have developed expertise in the field of the environment and sustainable development and can be considered centers of excellence in the region. NCSR has linked all universities to internet, a national NGO (LARN) is supporting these efforts.

2-5 Planning and financing

The MoE was established with a capital budget set out in the NERP of US\$ 33 million over 5 years which amounted to 0.5% of public sector investment. With the support of WB, a unit for Planning and Programming Project has been implemented in MoE, aiming at following up and disseminating activities and recommendations of Environment Framework Strategy and other sustainable development programmes. The unit is also responsible for the coordination and follow up of ongoing sustainable development related activities initiated by other ministries and assisting all stakeholders (within the resources available to Unit for Planning and

Photo 18:

Programming (UPP) and other resources to be mobilized) in preparing activities related to SD issues. Besides, the unit is concerned with carrying out selected studies of a cross-sectoral nature, such as transport and air pollution, clean technologies, and water pollution. It is designated to prepare and following up projects with international donors.

2.5.1 Environment expenditure and cost recovery policy

Environment expenditure decreased from \$10 million in the National Emergency and Reconstruction Programme (NERP), to \$3.5 million in (HORIZON 2000). This means it decreased from 1.8% to 0.3% of total program expenditure. However, since a number of reconstruction projects will generate major environmental benefits, adding solid waste and sanitation to the environmental budget, this shows a much higher level of expenditures for environmental protection. The government has presented to the Friends of Lebanon Conference projects for wastewater and environmental protection of a cost of US \$ 735²² million. These projects cover mediterranean coastal protection, industrial pollution control and inland water resources protection. The government's medium to long term policy, is to apply full cost recovery for environmental services and charges for environmental impacts. Benefits of the government and private sector from environmental resource mobilization (if implemented) are shown clearly in table 2.5.1.

Table 2.5.1 Potential resource mobilization

Funding sources	Estimated amounts (\$ million)
Cost recovery:	
. Electricity	
. Water supply	
. Sanitation	. US\$ 220
. Solid waste	
. Water mobilization (reservoirs, irrigation)	
Soil and water conservation	
Subsidies:	
. Electricity	. US\$ 100
. Fuel oils (Subsidy to electricity)	. US\$ 20
. Water	. US\$ 120
. Agrochemicals	
. Other	
Pollution charges:	
. Leaded fuel tax (25% of price)	. US\$ 77
. Natural resource protection fund	
Total	Over US\$ 500 million

Source: ERM Report 1995

It is expected that by year 2000, borrowing scale will decrease, as governmental policy for cost recovery of different environment services will be totally implemented, thus giving more chance for higher expenditure on environmental projects.

22- Government of Lebanon, Lebanon Recovering from the Past, Building for the Future, Friends of Lebanon Conference, 16 December 1996, Washington D.C October 1996

III Sustainable of Natural Resources

Sustainable management of land

The distribution of lands on the Lebanese surface (10500 km²) is as follow :

Protected areas	1%	Forestry lands	7%
Urban constructed areas	3%	Arable lands	25%

The long years of unplanned use of land on the coastal zone, as well as in the mountainous areas, caused a grave damage to natural resources. Changing agricultural practices led to degradation of terraced lands, while overgrazing of livestock caused deforestation, soil erosion and desertification. It is estimated that 65% of Lebanese lands are seriously affected by erosion issues caused by wind, temperature change and human activities. War had a direct impact on agriculture where hundreds of males abandoned agriculture and joined the war or migrated. The cultivated areas have dropped during the war from 360,000ha to around 200,000ha. Deforestation, desertification, and drought vary from one area to another according to climate, level of unplanned urbanization, and unenvironmental economic and social activities.

3.1 Achievements to combat desertification:

As soon as the countries affected by drought and desertification were called for the signature and ratification of the Convention to Combat Desertification (CCD), the Government of Lebanon, through the Ministry of Agriculture, and the Ministry of Environment answered the call. The CCD was signed in September 1995 and ratified in December 1995.

3.1.1 CCD

With the assistance and support of Food and Agriculture Organization of the United Nations (FAO) and United Nations Development Programme (UNDP), a National Secretary for the Convention to Combat Desertification was recruited, then a National Committee was constituted. This Committee is formed of representatives of Non-Governmental Organizations, representatives of the Ministry of Agriculture and the Ministry of Environment, scientists and experts, and representatives of FAO and UNDP. A first National Awareness Seminar (NAS) was organized and recommendations came out to help in the setting of the framework of the National Action Programme for Combating Desertification which will allow for better coordination and organization of all ongoing activities at the different scales and levels. The Ministry of Agriculture (MoA) will host the national secretariat for the CCD. The Committee wrote a project document for the preparation and implementation of a National Action Program for 2 years starting from January 1998.

3.1.2 Combating soil erosion:

Several projects to combat desertification and soil erosion have been initiated in the rural underserved areas, these projects are:

a- **Baalbeck- Hermel Integrated Rural Development Program** (in Bekaa Area) is an ongoing project which provides small and medium scale farmers assistance for start off activities, that include alternative agriculture for illicit crops, improvement of health, social services, education and income generating non-agricultural activities. The programme which is administered by MoA and supported by UNDP, UNEP and FAO includes social development training for rural women.

b- **Small Holder Livestock Rehabilitation Project**, has started in Bekaa area on 1995 by a wide support of International Fund for Agricultural Development (IFAD), Young Women Christian Association (YWCA), and with the participation of local NGOs. It aims at encouraging farmers to stay in their land, and also it aims at enforcing participatory role of

Photo 20:

women through training and orientation programs on technical know-how of agricultural skills. The project provides assistance to farmers through loans and livestock. A Rural Women Unit is established within this project to encourage women to participate in income generating work through training programs and loans. The other major ministry dealing with this programme is the Ministry of Public Works. The project is focusing also on terracing and reforestation. It is important to note that Baalbeck-Hermel area is highly susceptible to desertification problems.

c-Two projects are undertaken by Ministry of Agriculture and supported by FAO, providing the assistance to strengthen the **National Pesticides Management System, and Utilization of Compost Project**, which aim at establishing quality control of urban waste compost. Both projects are followed by the Agricultural Research Center at Fanar.

d-**Protection of the Vegetation Cover** (the European Union Vegetation Program): A project monitored and executed by MoAg. It aims at combating soil erosion and preserving vegetation cover through reforestation and public awareness. It also trains specialized engineers in managing the natural areas. It is addressing three pilot sites in Lebanon Western part of Bekaa, Nahr Ibrahim, and Hadath-El jibbeh.

e- **Reforestation:**

On the occasion of the World Day to Combat Desertification, the Minister of Agriculture announced on 17 June, 1995, an ambitious five-year programme of afforestation of 40,000 ha. The Ministry of Agriculture is responsible for the Integrated Capacity Building Five Year Plan. In 1982, Food and Agriculture Organization of the United Nations (FAO) estimated the country's need for new forest areas to be equivalent to 200,000 ha. The goal of this plan is to increase forestry areas from 7% to 20% of the national territory. The plan is supported by FAO and other donor organizations. As a result tree nurseries, were created in the different Mouhafazas to produce the trees needed. This activity was accompanied by a decree that prohibits cutting trees in Lebanon, with fine payments and even imprisonment for violations. Towards the end of this program, ten million plants are expected to be available annually as of 1998. Reforestation campaigns are taking place yearly by local NGOs and CBOs with the support of private sector and international NGOs. Forests suffered considerable destruction as a result of forest fires. Unless an integrated plan to combat forest fires is set up, afforestation efforts may not be effective. Around 1200h of forest trees are lost every year because of fire, cutting and urban encroachment.

Research centers are participating in several studies and surveys on sustainable management of land. The National Scientific Research Center (NSRC) is working on a Physiographic Mapping of Land Resources Project. The physiographic map project includes classification of soils, mother rocks, land use, forests, and green houses. The mapping will be a data base for future studies. The project started on 1997 with a modest government budget of L.L. 100 million.

3.2 Managing fragile ecosystems

Lebanon has signed Biodiversity Convention in 1992, which was ratified in 1994. It also signed the Convention on International Trade in Endangered Species of Wild Fauna and Flora. As a result, certain initiatives have been made such as the biodiversity study, biodiversity enabling activity to prepare a national strategy and action plan, and the implementation of the Protected Areas Project.

3.2.1 Biodiversity

A Biodiversity Country Study was undertaken by the Ministry of Agriculture and published in 9 volumes in January 1997. It indicated that forest areas in Lebanon witnessed a dramatic decrease in space. In 1993, forest areas were estimated not more than 70,000 ha, while

Photo: 21

protected forest areas 2700h, which represent 1% of total land area of Lebanon. Living species documented are 9119 of which 4633 are flora and 4486 are fauna.

3.2.2 Protected areas:

The Ministry of Environment has launched the protected Areas project on 8 February, 1996. The starting date of the project was November 1996. Its duration is for five years, for sustainable biodiversity protection. The 3 protected areas are: Arz Al-Shouf, Horch Ehden, and the Palm Islands. Using the expertise of International Union for Conservation of Nature Resources (IUCN) in this field, the project will put into place an effectively managed system of protected areas to safeguard endemic and endangered species of flora and fauna, conserve their habitats and incorporate biodiversity conservation as an integral part of sustainable human development. For the first time in Lebanon, the management of public lands is entrusted to non-governmental organizations (NGOs). With the coordination of MoE, UN agencies and IUCN, Protected Areas are monitored and managed by NGOs and Community Based Organizations (CBOs). There are at least 1 woman working in the park management staff and one war handicap. The management staff is around 23 persons.

3.2.3 Cultural heritage:

Considering Lebanon has a rich cultural heritage. This includes the world heritage sites of Baalbeck, Sour, Byblos and Anjar, the old cities of Tripoli and Saida, the recently excavated archaeological sites of Beirut, and a number of major historical and/or archaeological sites in urban and rural areas. Interest in recovering its role as regional tourism destination, Lebanon has signed the International Convention for the Protection of the World Cultural and Natural Heritage. Supported by UNESCO, the Ministry of Culture and Higher Education is undertaking a project for the protection of natural sites and monuments. The Ministry of Environment has declared several sites in Lebanon as natural sites, so as to save them from urban encroachment and degradation, such as Nahr Ibrahim natural site. A protocol concerning environmental awareness these initiatives will be signed between Ministry of Environment and Ministry of culture and Higher Education.

3.2.4 Protecting the atmosphere/ Conventions and projects:

The Lebanese Government, through MoE, has signed Montreal Protocol on 1993, and its amendments: London Amendment 1993, and Copenhagen Amendment. Montreal Protocol and its Amendments (London and Copenhagen) are being implemented and a national program has been submitted for 93-94. MoE and various line ministries are involved in the implementation of the agreed upon conventions. MoE is the focal point. The Ministry of Hydraulic and Electric Resources oversees pollution from power generation. Ministry of Petroleum oversees fuel imports and fuel specifications, and Ministry of Trade controls import of Ozone Depleting Substances (ODS). MoE has established an Ozone Office that oversees ozone issues. The Ozone Office has been set up to plan and phase out ODS project, with a duration of two years and a half, supported from UNEP/IE.

The United Nation Framework for the Convention of Climate Changes, was signed on 1992 and ratified on 1994. As a result, a project has been started by MoE for the Building Capacity for the Greenhouses Gas Inventory and Action Plans in response to UFCC Communications Obligations. These projects mentioned here have been covered in part two of this report.

3.3 Managing biotechnology

There are around 15 research projects, undertaken at the American University laboratories dealing with agriculture, medicine and biochemistry. St. Joseph University has several research projects in the medical department.

The National Council for Scientific Research (NCSR) is the main supportive institution for biotechnology research in Lebanon. Biotechnology research in NCSR suffers from lack of high technology and funding. The absence of a national plan policy to orient research is a constraint. The present policy of the NCSR is to support research undertaken by institutes or groups rather than individuals. NCSR is funded by the Lebanese Government and international agencies.

The Arab League Educational Cultural and Scientific Organization (ALECSO) has called for a meeting of Arab experts in biotechnology, which was held in Rabat (Morocco) on June 1997. The objectives of this meeting was to establish an Arabic Network to exchange information, and support biotechnology research and projects. The National Council for Scientific Research has participated in the meeting and in the preparation of the network plan.

3.4 Seas and coastal areas, drinking water resources

Water, particularly water quantities, is the most politically sensitive environmental issue facing Lebanon and the whole Middle East region. Water issues are tightly guarded by the Lebanese Government. Water resources are poorly distributed geographically and seasonally, while the demand for water in Lebanon vary from an area to another (see table 3.4)

The annual water surface flow availability is 2,280 Mm³/year, and 800 Mm³/year in the dry period. Water resources can supply total needs up to the year 2010, and 75 % of the annual flow occurs from January to May. While fresh water availability (total domestic/external, in million) 2,280 (1995). 65% of water supply to residents given in surface water. Besides, groundwater resources available are 400 to 1,000 Mm³/year. However, little is known about the true extent, storage capacity, and residence time of each aquifer.

Table 3.4 Demand for water in Lebanon (Mm³/Year)

Type of use	1994	2000	2010
Domestic -potable water	205	245	310
Industry	130	205	440
Agriculture Irrigation	800-1,105	920	790
Total	1,135-1,440	1,370	1,540
Overall surplus	840-1,145	910	740

Source: ERM estimates.

3.4.1 Marine environment

Lebanon's coastline extends over a stretch of 220km, most of which is extensively occupied by urban encroachment. (70% of the population). Densely populated settlements along most of the coastline with no adequate services, are causing major negative impact on the marine environment and environmental health. Exploitation of marine resources is unorganized, but has improved after the war as the use of pesticides and dynamite has stopped. Fish catches have dramatically declined over the past 15 years.

In a study on marine environment, Marine Research Center, which is one of the (NCSR) departments, identified the presence of DDT in fish tissue, and found lead and mercury concentrations in offshore waters. In this respect, pollution of the marine waters are significantly high: Positive concentrations of mercury, copper, cadmium, and PCBs due to discharging industrial wastes (80% of industries lie on the coastal zone), overuse of fertilizers and pesticides in agricultural areas, many of which are sources of pollution to the marine environment. A 1993 survey by the Ministry of Environment at 38 sites along the northern

Photo 23 :

coast, showed that the presence of total coliform and E. Coli in significant samples of variable qualities ranged between 35 and 11,000/100ml. As a result, some beaches were declared unsafe for bathing.

3.4.2 Fresh water, ground water:

According to the National Council for Scientific Research, and the National Water Quality Control Survey UNICEF/AUB (1990), water resources, drinking and ground water quality were exposed to similar problems as that of marine water (see box 3.4.2). It indicated that 70% of all natural water was exposed to bacteriological contamination, while 66% of town water networks, and 78% of village water networks, were microbially contaminated. Since two years there has been a progress in the state of the national water quality the National Central Laboratory water analysis data (1994) indicate that some 80% of the water from wells is bacteriologically polluted, possibly from inadequate sewage disposal. A new water quality survey has been undertaken by UNICEF and AUB. The results will be announced on April 1998. The new survey indicates remarkable progress in water quality.

Box 3.4.2 Potential Environment Stress on Water Resources

Economic/ Human Activity	Source of Impact	Evidence of Stress
Agriculture	Excessive use of surface and groundwater for irrigation	Seasonal water shortages Build up of salinity in agricultural soils, leading to reduced crop productivity
	Excessive application of agro-chemicals	Possible contamination of groundwater from pesticides and nitrate health implications.
Industry	Discharge of liquid waste Haphazard disposal of solid waste	Highly contaminated rivers and coastal waters Possible contamination of rivers, groundwater, and coastal waters from leachate
	Used of leaded gasoline	Lead in rivers and coastal waters from urban storm water run off
Transport	Disposal of waste oils Hydropower	Waste oils disposed in rivers, wells and sea, leading to chronic long-term pollution, impose increased costs for treatment None
	Thermal power stations, discharge of cooling water to coastal waters	Thermal pollution possibly leading to changes in marine ecology and possible damage to fisheries
Energy	Uncontrolled sewage disposal in some areas, inadequate provision of sewerage	Bacterial contamination of ground and surface water. health hazard
	Human Settlement	
	Excessive use of ground-water resources for domestic supply	Saline intrusion in groundwater in coastal areas

Source: Assessment of the State of the Environment, by ERM, November 1995.

3.4.3 Efforts to improve the situation of the water environment

Lebanon is participating in a number of international conventions governing the management and monitoring of the Mediterranean, including: The Mediterranean Action Plan (MAP), the Barcelona Convention and its four protocols, the Marpol 73/78 Convention and all its annexes, and the UN Convention on the Law of the Sea.

MoE, Directorate of Urban Planning, and Ministry of Transport, are the major groups in the efforts for managing seas and marine protected areas. Through the assistance of UNDP projects mainly Capacity 21 and Protected Areas, MoE is working with NGOs and other stakeholder groups on human resource development and training for an integrated management and sustainable development of coastal and marine areas. Women and youth are mainly involved in these projects. The improvement of infrastructure work including waste water management in Beirut Area, will improve the water quality. Besides, the new Emergency Plan for solid waste collection that MoE has launched on 1997, has organized the coastal Bourj-Hammoud dump site and mitigated the grave impact on marine environment. Moreover, successful initiatives were initiated by several NGOs and environmental school clubs to clean the Lebanese coast (Summers of 95, 96 and 97).

Photos 24: Cleaning up the Lebanese seashore by NGOs and CBOs, Summer 1996.

A new department has been established within the Ministry of Hydraulic and Electric Resources to monitor water quality in Lebanon. As a result the technical staff of water authorities were trained through the Ministry of Hydraulic and Electric Resources (MoHER) to monitor the quality of drinking water on daily bases in collaboration with AUB laboratories and supported by UNICEF. A new national water quality control survey is on the way (As it was mentioned before. The results will be announced in April 1998. The Council for Development has prepared master plans to increase supply to citizens from natural resources. The Lebanese government has requested from the Friends of Lebanon Conference a total of \$670 million. The Ministry of Environment is collaborating with (MOHER) in water monitoring and preparing a study on water resources in Lebanon.

3.5 Waste management

Solid and hazardous waste collection and disposal services were severely affected by the war. Solid waste collection equipment was either damaged through acts of war or has deteriorated due to ageing and lack of maintenance. As a result, solid waste was dumped indiscriminately along roadsides, in vacant lots, and irrigation canals causing water pollution problems as well as blockages in the irrigation system. Existing solid waste disposal sites were overfilled and waste from those sites located along the seacoast are often washed away by the sea and carried to other countries. Industrial solid wastes and medical waste are generally mixed with municipal refuse. Another critical problem was the illegal disposal of industrial hazardous waste from highly polluting industries (tanneries, paint, metal finishing, etc.) and the disposal of thousands of barrels of hazardous waste which were imported during the war period and dumped in mountainous areas mainly in Kesrouan. Sukleen, the private company who is in charge of waste collection in Greater Beirut Area and some other Lebanese areas, started at the end of 1997 sorting the waste to be recycled, reused, or reduced. The rest of the waste are dumped in landfills in compliance with the international qualifications of sanitary landfills.

3.5.1 Efforts to improve waste management

Basel Convention was signed and ratified in 1994. In 1994, MoE has signed a bilateral accord according to article (11) of Basel Convention with the German Government concerning the import of used batteries. Consideration to the limiting of toxic waste production has been started within the GATT framework. While on March 1996, an agreement has been signed by Mediterranean countries to eliminate twelve toxins including aldrin, chlordane, chlorinated dioxin, PCBs and other toxic substances. Within the framework of Basel Convention dealing with toxic waste (signed in 1994), hazardous waste were reshipped again from Lebanon to originating countries, who covered the expenses of reshipment.

a- Waste water

The master plan of rehabilitating waste water infrastructural drainage undertaken in Greater Beirut Area will mitigate negative impact on ground water. Waste water treatment plant project of rehabilitation has been completed in Greater Beirut area. (Ghadir waste water treatment plant). The second step will be the rehabilitation and construction of several wastewater treatment plants in other parts of Lebanon. Construction and supervision contracts totalling some \$45 million have been awarded for a collector sewer to the north of Beirut leading to Dora. It is evident that the environmental impact of the recovery program on waste water and its treatment will be positive: Reduction in health hazards and improvement in coastal water quality.

Photo 25 : 2- Kobbeiyat- Akkar Caza summer camp held by Ministry of Education, Youth and Sport Directorate : young people cleaning village roads and forests .

b- Solid waste

The Ministry's integrated plan consists of the adoption of the following activities in each treatment facility: sorting for recycling, composting, bailing, incinerating to a limited extent, and sanitary landfilling in compliance with geotechnical standards. Solid waste collection in Greater Beirut Area has been resolved. The management and treatment of the wastes have been initiated recently. Waste collecting at other different Lebanese territories is usually monitored and contracted by local municipalities. In some areas, the waste collection service has been awarded to a private company. In other regions, local community groups organize and execute waste collect. The dumping sites at these areas are randomly selected and completely uncontrolled. Neither limited environmental impact assessment, nor environmental audits are being made in this domain. Early in 1997, the Ministry of Environment has come up with an emergency plan for closing the Borj Hammoud dumpsite, rehabilitating the incinerator in Amrousieh and the compost plant in Quarantina, both in Greater Beirut Area, as well as planning to initiate recycling and composting in Beirut and the Muhafazat. The Council of Ministers has approved the plan, but there has been strong pressure to immediately close the incineration plants and to find alternative solutions. In June 1997, the Minister of Environment confirmed that no more incinerators will be established in Lebanon. Sorting for recycling, composting, and bailing will be the alternative approach. The rest of the waste (non recyclable) will be dumped in sanitary landfills in compliance with geotechnical standards. At the request of the Council of Ministers, the MoE has prepared in 1997, a study on the appropriate places for sanitary landfills in the Lebanese Muhafazas. The study was sent to the Council to be approved. Action towards the alternative approach of waste management is promoted among NGOs and CBOs supported by UNDP. Successful initiatives of local community groups will be covered in part four of this report.

c- Toxic chemicals and hazardous wastes

In coordination with the MoE, the Lebanese Institute for Norms and Standards (LIBNOR) has prepared an integrated study on norms and standards for the industry to show the industrial measurements of clean environmental production. The Lebanese government passed the decree No. 22/1 dated 17/12/96 concerning the organization of plastic waste import according to the green, red and orange lists approved by EU. Preventive measures for limiting import of illegal hazardous wastes, have been strengthened and a Government decree has been issued for limiting the import of several plastic substances not previously listed in the 1988 Law on Hazardous Waste. Various wastes which originated in developing countries and entered Lebanon, have been confiscated and reshipped. Laboratory tests on water and soil samples taken from different regions (where barrels of hazardous wastes were found) and carried out in France and Lebanon concluded that there was no trace of pollution. The management of toxic and industrial chemicals is limited to Customs and Ministry of Environment (MoE) at points of entry. The implementation of decisions is a collaboration between MoE and Ministry of Industry.

d- Biomedical or hospital wastes

With WB support, and in coordination with MoE, the Council for Development and Reconstruction has commissioned a feasibility study on biomedical waste management. The next phase will be the implementation of a treatment plan of biomedical wastes undertaken by international expertised companies.

The National Council for Scientific Research (NCSR) has a mandate to formulate safety standards and develop regulations and procedures for importing, use and disposal of radioactive sources, and to develop local capabilities for monitoring doses and radioactivity in humans and the environment. Besides, the Lebanese University is in the process of establishing a laboratory for nuclear analytical measurement. International NGOs (Green Peace), local

NGOs, and mass media participated in bringing up the issue of hazardous waste through daily follow-up and campaigns of public awareness. With the support of Green Peace a local NGO (Green Line) has issued a book on hazardous waste and its dangerous impact on human, animal and vegetation.

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Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)

IV Role of major groups

The achievement of the local and national potential will be facilitated by increased participation of the different groups of civil society in national and local government. Three years ago, the Economic and Social Council, was established by the Government in conformity with the Ta'if Accord including all sectors of civil society, in order to consolidate the civil peace. It was expected that civil society organizations (NGOs, universities, labour unions, private sector, research institutions, media) will eventually participate in the national decision making, and advise on national policies and programmes and their implementation. But unfortunately, this Council has not been implemented yet, though a draft decree law on the composition of the Council was prepared by the Government in February 1996. Nevertheless, and because of social situation, the Government has recognized that to solve pressing socio-economic problems, a new social contract is to be agreed on. This can be realized through the implementation of the Economic and Social Council which would be a major support for economic and social development. It is evident that sustainable development can not be achieved without an agreement between the Government and other stakeholders of development on the opportunities and resources available, and on the priorities and policies to ensure a fair of the burdens and returns of development by the sharing different groups of society²³. This part will cover the initiatives of major social groups concerning social development, mainly empowerment of NGOs, women and youth, local authorities, trade unions, private sector and mass media.

4.1 Non-government organizations (NGOs)

Since the early 1970's, several NGOs have been established by researchers and scientists. Their main role has been to increase environmental awareness amongst the general public, and to draw attention to pressing environmental problems and human health issues. In early 80s, NGOs' activities were rather theoretical, covering researches and case studies on wild life, forests, rivers, flora and fauna, as well as marine environment. However, during the war, environmental concerns were inevitably considered to be a luxury. As the fighting decreased, public concern for the environment began to reappear and environmental NGOs were reformed. By the late 1980s, there were around 40 institutions and societies, distributed throughout the Lebanon, which were concerned with environmental issues. Their activities focused primarily on urgent local issues. Three years ago, eight of the NGOs combined to establish the Lebanese Environment Forum (LEF). This Forum, undertakes reforestation, establishment of sanctuaries, restoration of old churches and mosques, in addition to awareness campaigns for protecting the environment. Active environment NGOs played a major role in lobbying and enhancing pressures for the creation of MoE. Since its early creation, the Ministry of Environment (MoE) sought for a long term strategy of coordination among environmental NGOs. It also realized the urge need for a broad networking between NGOs and the Ministry. Organizations hold monthly coordination meetings with the Minister of Environment and workshops and seminars are set up by MoE and NGOs for the spread of environmental information and public awareness. Through Capacity 21 project, MoE has provided the active NGOs with computers and access to information through internet.

Three workshops were prepared by the MoE under the Project Capacity 21, where several active national NGOs participated in the workshops and in their final decisions. Since late 1996 NGOs have always been invited by MoE to participate in the decision-making regarding public awareness, strategy plans, and hot updated issues, such as hazardous waste, quarries, and the protection of monumental and natural sites. Besides, the Ministry has identified through Capacity 21 projects (phase II) certain objectives for environment NGOs to participate in several seminars in lobbying mobilizing and project formulation for better familiarity with MoE implemented projects. NGOs, also participate in training sessions for public awareness activities.

Photo 27 Forest Fire in Chouf Caza, Mount Lebanon young members in local NGOs and CBOs are fighting forest fire, Summer 1996.

4.1. NGO's projects

a-The House of Environment

House of Environment of Mount Lebanon (Metn Caza) is in the process of construction. This project was launched by LINE (Association Liban Nature Environment) and aims at the collecting and dissemination of environmental knowledge and know-how eco-efficiency among schools, community groups and NGOs.

b- Tree Nursery and Environmental Training Center

The Association for Forest Development and Conservation (AFDC) has started a tree nursery project since 1993 in Aley Caza. The tree nursery provides 25,000 pine trees/year. The second phase of the project is to construct the Environment Training Center which will be the first center of its kind in Lebanon.

c- Environment Information Center

On September, 1996 a local NGO (SPNL) has established the Environment Information Center, (Beirut) with a support from LIFE (UN project) to provide different resources for environmental education such as books training sessions for environmental educators.

Other several projects, implemented by different NGOs are taking place, mainly waste management, environmental clubs in schools and tree nurseries. Some of these projects will be highlighted through the evolution of this part.

4.2 Youth and gender

With the coordination of several ministries, various initiatives have been undertaken by different UN Agencies to strengthen public awareness among community groups, mainly youth and women. Several projects were implemented such as environment awareness strategy and programme, environment education strategy, and environment information dissemination. Line ministries are implementing projects, each in its field in strengthening the integration of youth and children in important issues. Through NGOs, the MoE is encouraging the youth involvement in environmental public awareness; The same does the MoAg through yearly reforestation campaigns. The Ministry of Education as mentioned previously is working on the implementation of environmental education through the National Educational System. Children, youth, and gender are having more access to environmental public awareness and sustainable development through school clubs and CBOs; By the year 2000, the environmental education will be totally integrated. Most of local NGOs participate in youth activities in the form of youth forums and summer camps. Moreover, the government's decision in creating the first university for technical studies will help in mitigating youth unemployment and emigration.

In 1995, a youth forum was born, supported by university teachers and several NGOs. It was called «Youth Expectations». More than 50 NGOs participate yearly in this forum. Meeting are held every summer in different areas. Discussions among young people coming from different areas of Lebanon have fruitful results. Young people get to know each other, after 17 years of turmoil and partition. The Ministry of Education through its Directorate of Youth and Sport holds every summer several youth camps, thus strengthening the national consolidation and open discussions among the youth who suffer from disorientation and identity crisis. The Ministry of Social Affairs encourages youth summer camps for returning which voluntary work is provided to implement sustainable development projects, mainly in rural areas. The Ministry of Displaced has organized youth summer camps for returning groups and local community people to strengthen national consolidation and peace. In 1996, one parliamentary session was

Photo 28 :

held where the speaker of parliament chaired children acted like deputies in a question and answer session. The community groups are involved in the protected area projects. The management staff includes people chosen from community groups; several women are expected to be within the staff.

4.2.1 Involvement of women

1994 Figures

Total enrollment in education institutions	770,599	49.91% Females
Primary enrollment	360,858	48.6% Females
Secondary enrollment	261,341	52.2% Females
Vocational enrollment	44,651	47.4% Females
College enrollment	74,810	48.19% Females

percentage of women²⁵:

-In Parliament:	2,34%
(The total number of deputies is 128)	
-In Government (Ministers)	0%
-General director	1 out of 10
-Chairwoman- Lebanese university	1 out of 13
-Director- Lebanese university	2 out of 47
-At local government level:	
Moukhtars	2 out of 5400
Municipality	3 out of 390

The Population and Housing Survey undertaken by Ministry of Social Affairs in 1996, revealed considerable improvement of the overall female activity rate. Female illiteracy has decreased markedly from 43.3 percent in 1970 to 18 percent in 1996.

Lebanon has participated in several global actions for women towards sustainable and equitable development. In 1996, Lebanon has signed (with reservation) the Convention on the Elimination of all Forms of Discrimination Against Women. Most of the national NGOs mainly those who are concerned with human rights (mainly women and children), and their well being, are involved in reviewing and implementing educational material with a view to promote dissemination of gender-relevant knowledge. Several NGOs have participated in Beijing Conference. As a result, a National Commission for the Advancement of Women was established by a Governmental decree. UN agencies and EU are supporting the creation of a national strategy in cooperation with concerned NGOs committee, in order to implement and enforce the Convention to End Discrimination Against Women.

Participation of women in sustainable development:

Several projects are undertaken for the development of women such as the ongoing project for the Development of Women Enterprises which works for Strengthening Institutions for Development of Women Enterprises. It was launched by Ministry of Social Affairs on February 1996, with the support of UNDP, IPF, AGFUND, UNIFEM and FES. Until to date the project was able to develop a core of twenty trainers and business counselors at the Ministry of Social Affairs as well as to conduct nine training courses for women potential entrepreneurs from different parts of Lebanon, graduating 230 women and two male entrepreneurs. More projects concerning strengthening women's capacity are supported by international NGOs such as OxFAM, Freidriche Eiberte, and YWCA. Part three has covered some of these projects mainly **Small Holder Livestock Rehabilitation Project in Baalbeck-Hermel Area** where a **Rural Woman Unit** was established to support women in launching their small business.

25- Aman Chaarani, the Lebanese woman, (Arabic), Commission National Libanaise-UNESCO 1997 Report

Women's involvement in environmental management is increasing. In 1995, Arabsalim Women's Association (South of Lebanon) started a solid waste collecting and sorting campaign. They began with metal composting organic waste campaigns and trained the local community groups to sort plastic and glass for recycling. On 1997, a UN project (LIFE), started supporting the brave initiative of the association.

The **Urban Management Planning programme (UMP)** is implementing a similar project in Beirut Area where around 300 women collect and sort waste (tissue and glass), a project that creates for them an income generating work. This project is also supported by (IIFE).

4.3 Local authorities

Since independence (1943) Lebanon has witnessed only 2 elections for local authorities. The first in 1953, and the last in 1963. Elections were expected to be organized for the third time on June 1997, but they were postponed by the government for one year, which leads to more deprivation of local communities from involvement and commitment in the management of their environment and development of their local potentials. Most of the members of several municipalities have either died, got old, or immigrated during the war. Thus, the local authorities became very weak in any participation concerned with sustainable development or environmental management. Statistics published by the Ministry of Municipalities in 1996, indicate that 50 percent of municipalities do not have a council and 25 percent are under regional administration²⁶. Survey results indicate the poor state of public basic and social services at the local level. For instance, in more than 70 percent of municipalities septic tanks are utilized as the only means of wastewater management disposal, and 52 percent of villages and towns dispose of household waste by burning only. Deterioration of quality of life in certain regions is essentially due to inadequate municipal management, as the majority of health and public services are to be ensured by municipalities. The government's decision in postponing the elections, increased the marginalization of the role of local authorities. There are only now around 107 municipalities who are active in Lebanon. During the war, the military illegal forces replaced by force the local authorities in imposing taxes on people. In the present, the lack of governmental integrated sustainable projects in rural areas kept municipalities very poor. The Major problems that most of the urban and rural municipalities face are solid waste, sewerage, heritage, public health and urban planning. Municipalities in rural areas, have more problems in organizing domestic and irrigation water, as well as urban encroachment upon agricultural lands and forest areas.

Nevertheless, several municipalities in Lebanon initiated remarkable activities dealing with environment management. The municipality of Tripoli has successfully worked on a five year dump site project which, with a support from WB, will receive the city's waste for five years. In Kesrwan Area, the local authorities succeeded in involving local communities in funding and supporting a municipality park, as well as, in environment management as waste collect and street cleaning. In Hammanah (Metn area), the local authorities coordinate successfully with local NGOs to solve environmental problems such as solid waste management. In Bcharré (North of Lebanon), and supported by LIFE (A UN project), a local NGO launched a project for collecting and sorting of solid waste in order to involve the local community groups in recycling policy and environmental awareness. The local authority is coordinating with the local NGO in this project.

4.4 Private sector

Since 1994, private sector organizations repeatedly called for privatization of public infrastructure and public services. It was argued that the rehabilitation and operation of the public utilities can be delegated to the private sector under agreed arrangements and under strict supervision according to clear policies for pricing and marketing services. The private sector, both in country and abroad, has big financial capabilities, a considerable human potential and high technical abilities. The Government has continued preparatory activities

towards restructuring of public services with a view to reviewing their status and/or management and operational arrangements. There have been positive developments in the electricity and telecommunications in particular.

The improvement of private sector is a governmental priority. The Lebanese Investment Development Authority IDAL vigorously promoted Lebanon with a view to attract private investment. It also commissioned a number of important studies and developed its project portfolio. The period of 1995-1996 witnessed the development of new bank products (personal loans, housing loans, payments and credit cards, etc.). They aim to finance economic and social projects (expansion, re-equipment and modernization of small-scale enterprises, rural loan programmes, creation of micro enterprises and handicrafts by displaced, housing). The Beirut Stock Exchange formally reopened on 25 September 1995, after a break of nearly 13 years. While, the Beirut Chamber of Commerce and Industry created in March 1996 with the participation of eight Lebanese economic organizations, a Lebanese Centre of Arbitration. The Lebanese Industrialists Association finalized mid-1996 an agreement with the banking sector to facilitate financing of small and medium-scale enterprises. Six local banks offer between 3 and 7 years (including a grace period) for construction of premises, workshops and equipment.

In order to support and strengthen the potential interventions of the private sector in the Environment Agenda in Lebanon, UNDP launched a series of consultations amongst the private sector represented by a core group of committed Lebanese leaders, local and international NGOs and government agencies, with a prime concern and goal is to promote clean environment as an endangered species. This led to the initiation of a Delta program in Lebanon which aims at Developing Environmental Leadership Towards Action through the creation of networks of business and industry working towards common economic and environmental objectives.

In July 1995, the Council of Ministers approved the creation of ELYSSAR, a mixed company for the redevelopment of the Beirut Southern Suburbs through a public works and housing redevelopment program, estimated at US\$ 2 billion. In September 1995 the Council of Ministers approved the establishment of the privately held real estate company. Société Libanaise pour le Développement du Littoral Nord de la Ville de Beyrouth (LINOR) which was capitalized at US\$ 250 million to develop the coastal area north of Beirut, including commercial and residential space, solid waste and waste water treatment site. Reconstruction of Beirut Central District that was mostly destroyed during the war, was initiated in 1994 by SOLIDERE, a privately-held reconstruction company. Infrastructure and restoration works of important heritage buildings will be completed in 1998.

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As an outcome of several months of fertile meetings and brainstorming sessions under UNDP guidance and support, UNDP's working groups were able to identify certain activities, which aim at learning how eco-efficiency activities, advancing private-public partnership, and interacting with other organizations in the region through exchange of information and experience. These activities are:

- Delta programme in Lebanon. This program aims at "Developing Environmental Leadership Towards Action" through the creation of networks of business and industry working towards common economic and environmental objectives.
- Public private partnership for the Urban Environment.
- Public private partnership for Eco-efficiency in the Mediterranean Region.

These activities are supported by UNDP, METAP, WBCSD and other. Several private sector associations are interested in implementing these activities such as: The Association of Lebanese Industrialists (ALIND), the International Chamber of Commerce (ICC), and the Lebanese Businessman Association.

A national NGO is being established to promote environmental management concepts at the private sector level.

4.4 Labour unions

Since 1992, labour unions reactivated their movement and pressure for better pay, and improved social benefits. The social situation since 1991 (the end of the Lebanese war) has not ameliorated, and the series of recommendations adopted by the Government in June 1994 concerning its socio-economic policy were not initiated until Mid 1995 when an indefinite strike of teachers led to change of government. On 1996, the Government decided a general ban on manifestations, to prevent a strike decided by the General Confederation of Labour Unions. On 1996, the government finally agreed to an adjustment of salaries and some changes in social programmes. The General Confederation of Lebanese Workers (GCLW) organized late in 1996 a seminar on collective negotiations in cooperation with the International Labour Organization (ILO). The recommendations of the seminar emphasized on the necessity to protect trade union freedom, and called for the protection of public freedom and collective negotiations. In 1997, A split occurred in the trade union following elections of (GCLW). The split weakened its capacity to solve the vast problems faced by the workers such as salaries, inflation and the cost of living, the modernization and updating of the Lebanese labour law, and the scope of public services, etc.

4.5 Mass media:

A recent workshop held in the MoE (April 1997) was on Media and Environment. Several journalists, who write on environmental issues, attended the 2 days workshop. The workshop aimed at involving the media in environment issues by changing environment topics in the media from "mere news" to important national issues.

Since March 1997, one of the first leading newspapers in Lebanon, (Al-Nahar) has spared an independent daily page for environment and heritage, reflecting different opinions of community groups, NGOs and experts on several environmental issues. A weekly supplement "Nahar of the Youth" is mainly concerned with human rights, education and environment. Its target group is the wide range of young Lebanese people. Since March 1996, a Lebanese monthly magazine "Environment and Development" started issuing. It is concerned with environmental issues within the general context of sustainable development on global, regional and local levels. It is the first of its kind in the Arab world. It is interesting to know that this magazine is directed and issued by an engineering company, thus strengthening the role of the private sector in environment and sustainable development.

Conclusion

Barriers and Recommendations:

This report, reviewed the national progress in Lebanon since Earth Summit, 1992, with respect to sustainable development and environmental management. In its four parts, the report didn't discuss nor analyze the situation, but rather reflected the progress during the last 5 years. It covers economic and social factors, management of land and water resources, environmental management in terms of legal and institutional frameworks, as well as, it reveals the role of major groups such as NGOs, community groups, private sector and local authorities in enhancing sustainable development. It highlights advantages and disadvantages of initiatives undertaken by several stakeholder groups.

While reviewing the national progress since the Earth Summit, two main facts should not be forgotten:

- 1-Lebanon has suffered a 17 years war that destroyed his economic stock and degraded gravely its social services sectors (health, education, environmental services sectors ..etc.)
- 2-The environmental management, in terms of institutional and legal framework, is new in Lebanon; The Ministry of Environment was created only four years ago.

The war has settled down just on the eve of Earth Summit, thus giving the Lebanese Government a tremendous chance to reconstruct the country and implement sustainable development through reconstruction of the infrastructure, administrative reform and through human development. Reconstruction activities were initially based on the National Emergency Reconstruction Program (NERP). Phase II of the reconstruction program, (Horizon 2000) has been started, covering in addition to the physical infrastructure sectors, the social infrastructure and private sectors. Administrative reform has started by the creation of the Ministry of Administrative Reform, which launched the National Administrative Reform Programme (NARP), thus putting the ministries and governmental institutions on the track of efficiency through introducing technology, expertise and in-service training and information concerning environment and sustainable development.

Lebanon faced and is still facing the challenge to participate and be integrated in the global framework of environmental management and sustainable development suggested in Agenda 21. In contrast with the large environmental agenda in Lebanon, there is only a limited amount of resources-financial, institutional, technical, human - that can be made available for environmental management in the short run. Therefore, the challenge is to focus limited resources on carefully selected priorities to gain the largest social benefits in the most effective way.

Initiatives on the international and national levels have been undertaken; The ongoing Reconstruction will definitely have a positive impact on the economic growth. International Conventions on Biodiversity, Combating Desertification and Climate Changes have been signed and ratified. Ad-hoc projects are executed mainly by Ministry of Environment, Ministry of Agriculture, Ministry of Health, Ministry of Education and other several line ministries. But a longer time is required before assessing or evaluating the initiatives and action plans undertaken by several ministries concerning environmental management and sustainable development.

Remarkable progress has been achieved through the participation of NGOs and local community groups in environmental management. For the first time in Lebanon, the management of the Protected Areas Project was entrusted to local NGOs and CBOs. Several women are participating in the management staff. This experience is seen as a success story and it is important to apply similar achievements in other different parts of the country. Moreover certain environmental NGOs play a major role in national decision-making concerning environmental problems such as hazardous wastes and quarries.

-The implementation of sustainable development in Lebanon is still facing major barriers due to several reasons:

-The government's policy stressed on the reconstruction of the infrastructure. The initiatives undertaken by line ministries concerning socio-economic development related to health, education, agriculture, employment and other income generating chances (mainly in rural areas), implemented several ad-hoc projects without a strategy framework that combines all projects together in an integrated national plan.

-Lack of updated land use planning for urban and rural areas, as well as, lack of data base and census concerning demographic dynamics and human health.

-Since its creation, the Ministry of Environment is working in a difficult situation. The overlapping responsibilities among several ministries concerning environmental management is a major problem. Besides, environmental laws in Lebanon have been set up since more than 50 years and haven't been updated since. Nevertheless the Ministry of Environment was able to issue several decrees pertaining to international conventions and national agreements on environmental management and sustainable development. Besides the approval of the amendment of the law on the creation of MoE will help the ministry in implementing environmental management.

-weakness of the role of local authorities in rural areas. Since 1943 the Lebanese government organized local elections for two times only thus preventing local authorities from participating in the sustainable development of rural areas.

Based on the report's contents, several recommendations are proposed:

-The urge need to undertake environment impact assessment studies for the big ongoing projects executed in Lebanon by the private sector. The governmental approval of the Environment Impact Assessment project that was prepared by MoE and submitted to the government since more than 2 years is an necessity.

-Agricultural development must be a priority on the government's agenda. Urban overpopulation is due to internal emigration from rural areas to urban areas. The government, as mentioned before, doesn't have an integrated action plan for a sustainable development in the rural areas..

-Create sustainable development integrated projects in rural areas (mainly displaced areas, Akkar, Bekaa and the South) to alleviate poverty and stop people from emigrating to the urban overpopulated main cities. The integrated projects cover health, agriculture education and other income generating economic chances.

- Integration of environmental education in the national educational program as well as through non-formal ways. This project has been started through the Centre du Developpment et du Research Pedagogique, with participation of MoE.

-There is an urgent need to strengthen the existing institutions with major responsibility for environmental management, with a special focus on the Ministry of Environment. The Ministry needs to improve its capabilities in most areas in order to fulfill its mandate.

-Encourage and enhance the establishment of the Council of Environment which was decided in the protocol signed by Ministry of Environment and Ministry of Administrative Reform, and was approved by the Cabinet on December 1997. It is likely that this Council binds the ministerial initiatives within one integrated master plan for sustainable development.

-Finalize and implement Environment Strategy Framework, that was prepared by MoE and submitted to the Cabinet. This framework will involve all stakeholder groups in environment management and sustainable development. Implementation of laws through incentives and

enforcement of high fines for violations, will enhance the progress of the Sustainable Development.

-The consolidation of the existing laws and regulations through the adoption of the Basic Environmental Law for Lebanon, which was prepared under the UNDP Capacity 21 project and through which upgrading and updating legislation on environment has taken place. Once this is in place, it will be necessary to review the regulations pertaining to this law, in particular those relating to environmental standards, such as air and water quality.

-The urgent need for a national environmental information system to support decision-making at several levels and to disseminate environmental information to the general public, as well as, targeted information to in-service staff within ministries and public institutions. The absence of measured information about condition of the environment in Lebanon makes it difficult to develop a strategic view and check compliance with environmental regulations.

-Networking of environmental awareness among ministries, and between ministries and other stakeholder groups (private sector, NGOs, CBOs, universities, centers of research...etc).

-Encourage CBOs to participate in sustainable development projects, through training sessions, dissemination of information that concerns and helps them apply environmental patterns of consumption. Besides, the creation of income-generating projects must be achieved through cooperation and coordination with local community groups to assist to their needs.

Annex I

Most important environmental NGOS are:

- The Committee for the Protection of the Environment in North Lebanon:

Established in 1984, it has around 240 members. Among its achievements are collecting garbage and cleaning Abou Ali River, establishing fishing harbours, plantation and distribution of around 70,000 trees a year, restoration of a church and a mosque in Tripoli. Its greatest success was in the reforestation programme in North Lebanon.

- The Lebanese Committee for Environment and Development: Established in 1979, the Committee has around 175 members. The Committee has established a charter for the environment and an anthem, and they organise conferences, symposiums, and various topical activities. For example, on the 10th of June every year the Committee organizes activities in support of the International Day of the Environment. The committee's reputation is more for theoretical work than practical activities.
- Greenline: Established in 1991, Greenline has around 180 members. Its objectives are to expose environmental threats, popularize environmental awareness, and contribute towards a scientific framework for a sustainable environmental management policy. Their activities include rescuing an old Phoenician cemetery in the South, organising environmental awareness campaigns, a lecture series, campaign for the preservation of traditional fishing harbours. In addition, it participated in establishing by the first bird sanctuary and an animal encounter reserve in Lebanon.
- The Green Forum: Combines more than 20 associations together. Their first priority was to issue a mensual publication targeted to NGOs and local community groups including schools. They launched and participated in the National Clean Day.
- Association for Forest Development and Conservation: (AFDC). It started activities on 1993 in Mount of Lebanon in Aley and Chouf Cazas. Its main concern is in reforestation, environmental training and public awaress and pine-tree nurseries.
- Society for Protection of Nature Resources In Lebanon.
- Lebanese Committee for Environment and Development.
- Greenline.
- The Committee for the Protection of the Environment in North Lebanon.
- Friends of Nature.
- Friends of Horsh Ehden.
- Association for Social and Cultural Development - Nabatiyeh.
- Societe de Protection des Animaux - SPA.
- Center for Environmental Development in Hermal.
- National Committee for Environmental Activities.
- Association for Environmental Conservation.
- Movement de l'homme-Antelias and Beirut.
- Man and Environment Society.
- Association for Environmental Conservation - Bcharre.
- Friends of Cedar Forest.
- Society for Protection of Nature - Sh' hym
- Man and Environment Association - Beit Shaar.
- Committee for Environmental Protection and Cultural Preservation - Nabatiyeh.
- Friends of Ehden Forest Society.
- Environment Protectors Party - The South.
- Protection of the Environment Committee - Chekka.
- Bird Society - Hazmieh.
- Environment Sans Limites - Maghdousheh.
- Protection and Development of Forest Resources Society.

- Scientific Society for Environmental Education and Development - Tripoli.
- Society for Conservation of Nature - Bekaa.
- Environmental Committee - Baalbek.
- Rene Moawad Foundation, Centre for Research and Education for Democracy - CRED.
- Human Rights Society.
- Animal Encounter (Aley).
- Consumer Protection Society (its activity is very weak in the present time).
- L'Association Libanaise Pour La Maitrise De L'Energie (ALME). This association is mainly concerned with scientific studies and researches.
- Association Liban Nature Environnement (Line)

N.B: There are many associations which are not mentioned here. They were founded years before the war. They were concerned with health, social, and developmental issues. Their activities at the present, are extended to cover environmental issues. They participate in reforestation activities, public awareness, workshops, and seminars. They form as well as the NGOs mentioned above, a pressure group facing current environmental problems such as quarries, waste and water contamination.

some associations and organizations emphasize on human health and development as well as social work. These are
 Lebanese Red Cross (LRC), Association d'Entraide Professionnell (AEP), National Social Service Council, Lebanese Association for Human (ALDHOM), Young Men's Christian (YMCA), Maronite Social Fund.

Annex II

Decrees issued by the MoE 1993-1997:

In spite of the difficulties, the MoE has issued several decrees that enhance the implementation of Agenda 21 both on national and international level. Most of these decrees are implemented successfully.

- 1- Decree 1/93 (11,5,93): Prohibited car tyres burning.
- 2- Decree 2/93 (20, 5,93): Organized the activities of quarries, mining, and asphalt factories.
- 3- Decree 2/B (12,5,94): Prohibited use and importation of birds' voice recording devices.
- 4- Decree 7/B (10,1,94): Organized hunting seasons and places..
- 5- Decree 8/B (10,1,94): Prohibited hunting all over the Lebanese territory from 1/1/95 till 31/12/97. This decree is issued by MoE and MoAg and is implemented in most of the Lebanese areas.
- 6- Decree 15/B (21,9,94): Prohibited and stopped the work of all unlicensed quarries, and sand mining.
- 7- Decree 20/B (2,11,94): Identification of well-established and specific measurements for environment protection from pollution.
- 8- Decree 22/B (14,11,94): An authorization for a certain private quarry.
- 9- Decree 11/1 (19,5,95): Organizing hunting (MoE & MoAg).
- 10- Decree 5/1 (18,8,95): Organizing the import of petrocok.
- 11- Decree 9/1 (18,9,95): Amending the decree related to petrocok importation.
- 12- Decree 14/1 (6,10,95): Creation of a Natural Coservation in «Karm- Chbatt», Kobeiatte.
- 13- Decree 15/1 on (5,10,95): Prohibition of any work or change in Fakra Bridge area, Kesrouan.
- 14- Decree 22/1 (6,11,95): Imposition of certain environmental conditions on industries & factories.
- 15- Decree 23/1 (6,11,95): Prohibition of importation or use of extinguishing liquid devices.
- 16- Decree 27/1 (6,12,95): Amending the decree 1/9 related to the importation of petrocok.
- 17- Decree 37/1 (18,1,96): Licenced importation of asbestos.
- 18- Decree 40/1 (20,3,96): Amending decree 22/1 applying environmental conditions on the industries.
- 19- Decree 41/1 (25,3,96): Amending decree 37/1: Subjecting the import of asbestos to forehand approval from the MoE.
- 20- Decree 42/1 (26,3,96): Prohibiting the importation of asbestos.
- 21- Decree 52/1 (29,7,96): Identifying well established specifics & measurements for the mitigation of water, soil & air pollution.
- 22- Decree 91/1 (24,10,96): Organizing waste importation (chemical, industrial...etc.)
- 23- Decree 22/1 (17,12,96): Amending the decree 91/1 related to waste importation. It prohibited the import of all plastic waste according to the list provided by EU.
- 24- Decree 34/1 (14,1,97): Considering «Nahr Ibrahim» as a natural and reserved site, protected by MoE.

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Collecting data has been achieved through:

- Questionnaires have been distributed among NGOs, and major groups (Academia, centers of research...etc) in order to indicate progress during the past five years.
- References, publications (mentioned above).
- Personal contacts.

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