# NATIONAL PHYSICAL MASTER PLAN OF THE LEBANESE TERRITORY

#### **NPMPLT**

#### **FINAL REPORT**

#### TABLE OF CONTENTS

#### **Forward**

**Introduction:** Basics of the land use master plan.

CHAPTER I UNCONTESTED PHYSICAL FEATURES

- I.1 The size of Lebanon and its geographic location.
- I.2 Topography, an immutable fact.
- I.3 Favorable areas for agriculture.
- I.4 Distinguished natural areas and landscapes.
- I.5 The Lebanese coastal zone: potential and characteristics.
- I.6 Water resources and major water vulnerable areas.
- I.7 Areas prone to natural hazards.

CHAPTER II
CHALLENGES
OF THE FUTURE

- II.1 The challenge of economic development.
- II.2The challenge of social cohesion.
- II.3The demographic challenge.
- II.4The challenge of housing sector.
- II.5The challenge of needs: transport, water, waste, education, health.
- II.6The challenge of urban sprawl.
- II.7Environmental challenge.
- II.8The challenge of war and peace.

DAR - IAURIF December 2005 L0215-RPT-13 REV 0 - i -

### CHAPTER III BASIC CHOICES

- III.1 A unitary and integrated development of the national territory.
- III.2 A positive definition of the balanced development principle.
- III.3 Rational use of resources.

# CHAPTER IV THE PERSPECTIVES OF THE NATIONAL PHYSICAL MASTER PLAN

- IV.1 Structuring the territory around the major urban centers.
- IV.2 Integrating all regions into the national economic development.
- IV.3 Unifying the territory through an efficient transportation network.
- IV.4 Targeted distribution of major public facilities.
- IV.5 Ensuring a Distinguished urban development respecting the characteristics of each region.
- IV.6 Re-evaluation of the natural wealth of the country.
- IV.7 A sustainable development of water resources.
- IV.8 Effective solutions to the problems of quarries, wastewater and solid waste.

#### CHAPTER V PRINCIPLES OF LAND USE

- V.1 The land use principles in urban, rural, agricultural and natural areas.
- V.2 Rules to respect in areas with important sites (archeology, heritage, exceptional natural sites).
- V.3 The rules to respect in constraints prone areas (natural hazards and water resources vulnerability).
- V.4 Overall presentation of NPMPLT's recommendations for land use.

DAR - IAURIF L0215-RPT-13 REV 0

#### CHAPITRE VI THE FIRST IMPLEMENTATION PHASE OF THE NPMPLT

- VI.1 Transportation.
- VI.2 Tourism.
- VI.3 Industry.
- VI.4 Agriculture.
- VI.5 Education.
- VI.6 Attraction of investments.
- VI.7 Environment.
- VI.8 Power.
- VI.9 Water and Sewage.
- VI.10 Solid Waste.
- VI.11 Health.
- VI.12 Administrative, local democracy and the tax system.
- VI.13 Finances and Cadastre.
- VI.14 Urban planning.
- VI.15 Central support to the land management.

#### **ACKNOWLEDGMENTS**

#### PROJECT TEAM

DAR - IAURIF L0215-RPT-13 REV 0

#### LIST OF TABLES

- 1. Lebanon: some key data.
- 2. Components of water balance in Lebanon.
- 3. GDP composition in 1997.
- 4. Projected population growth by groups of Mohafaza group for 2030.
- 5. Projected distribution of population by groups of Mohafaza for 2030.
- 6. Proportion of inhabitants in agglomerations in 2000 and in 2030.
- 7. Evolution of household size through 2030.
- 8. Evolution of housing stock in Lebanon through 2030.
- 9. Adopted hypotheses for possible evolution of behavior and needs for 2030.
- 10. Urban and demographic growth in the Central Urban Area.
- 11. Urban and demographic growth in the agglomeration of Tripoli.
- 12. Urban and demographic growth in the agglomeration of Saida.
- 13. Urban and demographic growth in the agglomeration of Jbayl.
- 14. Urban and demographic growth in the agglomeration of Zahle.
- 15. Urban and demographic growth in the agglomeration of Nabatiyeh.
- 16. Urban and demographic growth in the agglomeration of Baalbeck.
- 17. Urban and demographic growth in the agglomeration of Tyre.
- 18. Challenges of the future and required responses.
- 19. Resident population per size of agglomeration in 1970 and in 1997.
- 20. Population growth and motorized trip forecasts in the CUA.
- 21. Projections of the energy demand for 2030.
- 22. Current and future use of water resources.
- 23. Proposed dams of the MoEW scheme.
- 24. Proposed lakes of the MoEW scheme.
- 25. The investment priorities of NPMPLT for the proposed dams and lakes.
- 26. The large irrigation and drainage projects planned or currently under consideration by the Lebanese Government.
- 27. Recommended regulations for construction, quarries and industrial establishments in urban, rural, agricultural and natural areas.
- 28. Recommended regulations for construction, quarries and industrial sites, and infrastructures in natural hazards prone areas.
- 29. Recommended regulations for construction, quarries and industrial sites in, and around distinguished sites.

DAR - IAURIF December 2005

#### LIST OF FIGURES

#### **UNCONTESTED PHYSICAL FEATURES**

- I.1 Lebanon in the world.
- I.2 Lebanon in the Middle East.
- I.3 Topography features.
- I.4 Schematic topographic section.
- I.5 Population densities per morphological zone.
- I.6 Soil maps.
- I.7 Slopes.
- I.8 Current use of agricultural lands.
- I.9 Irrigation projects.
- Agricultural domain of national interest. I.10
- I.11 Sites and landscapes.
- I.12 Vegetation map.
- I.13 Main rivers.
- I.14 Current natural areas.
- I.15 Natural domain of national interest.
- I.16 Protected natural reserves and grottos.
- I.17 The coastline, a tight space.
- I.18 The coastline, fragile assets.
- I.19 Geology.
- I.20 Vulnerability of sedimentary areas.
- I.21 Intensity of lineaments.
- I.22 Main faults.
- I.23 Map of water resource vulnerability.
- I.24 Flood risk.
- I.25 Landslide risk.
- I.26 Seismic risk.
- I.27 Desertification risk.

#### CHALLENGES OF THE FUTURE

- II.1 Percentage of households living below the absolute poverty level (314 USD per household per month) per Caza, based on the ESFF study of 2002.
- II.2 Distribution of monthly income of Lebanese households in US\$ in 8 categories based on the USJ study of 2001.
- II.3 Distribution of Lebanese households in function of their income in 1997 and in 2001.
- II.4 Population growth in Lebanon between 1931 and 1997.
- II.5 Urban pressure.

DAR - IAURIF December 2005 L0215-RPT-13 REV 0

#### THE PERSPECTIVES OF THE NATIONAL PHYSICAL MASTER PLAN

- IV.1 Urban structure principle.
- IV.2 Economic development principles.
- IV.3 Tourism development principle.
- IV.4 Principles of transportation of goods.
- IV.5 Principles for defining road network.
- IV.6 Principle for public urban transport.
- IV.7 The four dominant land uses.
- IV.8 Principles for the growth of agglomerations.
- IV.9 Central agglomeration, management stakes.
- IV.10 The agglomeration of Tripoli, principles for the development of the urban area.
- IV.11 The agglomeration of Saida, stakes of urban development.
- IV.12 The agglomeration of Zahle, stakes of urban development.
- IV.13 The agglomeration of Baalbeck, stakes of urban development.
- IV.14 The agglomeration of Nabatiyeh, principles of urban development.
- IV.15 The agglomeration of Sour, principles of urban development.
- IV.16 Green and blue sections.
- IV.17 Principles of making good of the coastline.
- IV.18 The priority projects of dams and lakes.
- IV.19 The condition of irrigation projects.
- IV.20 Areas to be excluded from quarrying activities.
- IV.21 The priorities in the actual sewage master plan.
- IV.22 Guidelines for excluding areas from sanitary landfills.

#### PRINCIPLES OF LAND USE

- V.1 Urban zones foreseen by the NPMPLT.
- V.2 Major agricultural areas of national interest foreseen by the NPMPLT.
- V.3 Mixed rural areas foreseen by NPMPLT.
- V.4 Natural areas of national interest foreseen by NPMPLT.
- V.5 Sites with especial assets foreseen by NPMPLT.
- V.6 Vulnerable areas taken into consideration by the NPMPLT.

DAR - IAURIF December 2005 L0215-RPT-13 REV 0 - vi -

## **Forward**

The decree-law 5/77 dated January 31, 1977, creates and sets the duties of the Council for Development & Reconstruction (CDR). Article 3 of this Decree—Law requires CDR to establish "the general framework for urban planning orientations" in Lebanon and submit it to the Council of Ministers for approval.

Based on this legislative arrangement, the Government has made CDR in charge of elaborating, not only the framework for urban planning policy, but also a physical Master Plan that will constitute the basis for urban planning policy. The plan will also serve as a guideline for all stakeholders participating in the national and land use development, starting with public bodies, administrations and autonomous offices.

The recommendations of this study for the urban planning sector, as decreed by the Council of Ministers, will be imposed, among others, on local urban planning master plans that will be elaborated or reviewed afterwards. In fact, Article 4 of Decree-Law 69/83, dated September 22, 1983 and related to Urban Planning, has foreseen that these local master plans should be elaborated "in the framework of a national land use master plan".

This conformity of local plans would be accomplished progressively. The plans that are in force will continue to be in use, until they are reviewed; after which, they will be redesigned in accordance with the "guidelines of urban planning" that were defined by the Government, and for which the present National Physical Master Plan provides the philosophy and the general consistency.