The Lebanese legislative framework on environmental and landscape assessment
Workshop on environmental and landscape assessment
Seville, 12th-16th December 2016
“Pablo de Olavide” University
Outlines

• General Context
• Strategic Environmental Assessment & Land Use Planning Project
• Environmental Impact Assessment in Lebanon
• Landscape Baseline Study
• Case Study: CHUD Project
Lebanon 2016
- Area: 10452 Km²
- Population: 6071981

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(ALMEE – Ph.D Rita NAJJAR)

(ENPLAN)

Developing skills in the field of integrated energy planning in MED Landscapes

Lebanon

(LEBANON)

ALMEE

(Ph.D Rita NAJJAR)
General Context

The natural and built environment in Lebanon is strongly affected by land management plans:

• Current land management practices **are not sustainable** as they continue to erode the country’s natural resource base (soil, water, green cover, and landscapes).

• Whereas traditional practices such as terracing, controlled grazing and forest management helped protect the lands, **modern practices** have **significantly altered the natural and social make-up of our lands** including our perception of natural resources.

• **Population growth**, the continued **loss of arable land and biodiversity**, **concerns about food security** and the **rising costs of infrastructure** due to population growth and urban sprawl are major factors impacting land resources, our natural environment, as well as social behaviors.
Illegal slums

In the vicinity of Beirut International Airport, between "Khaldeh" and "Ouzai"

Recently, Strategic Environmental Assessment & Land Use Planning Project contributed to the development of mandatory Environmental Impact Assessment System

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Strategic Environmental Assessment & Land Use Planning Project

• **Project Duration**: 01 December 2002 – 01 December 2005

• **Objectives**: The overall aim of the project is to mainstream environmental considerations into sectoral public decision-making and undertakings at the national level through the application of SEA in order to alleviate major problems facing national sustainable development.

• **Achievements**:
  - Evaluation of the potential scope of SEA in Lebanon (Framework note on priority sectors).
  - Comparative study on available institutional options for SEA implementation in Lebanon.
  - Evaluation of SEA applicability and capacity needs assessment for SEA implementation in Lebanon.

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Strategic Environmental Assessment & Land Use Planning Project

- Development of the institutional and procedural frameworks for SEA application in Lebanon.
- Recommendations for mainstreaming SEA in different priority sectors & potential implications ---> Slide 11
- Elaboration of an SEA Decree based on the Framework Law for Environmental Protection (Law no. 444/02).
- Development of the SEA process (inclusion of economic & social criteria along with environmental criteria).
- Development of an SEA manual for capacity building.
- Elaboration of environmental guidelines to be incorporated in land use planning.
- Elaboration of a national strategy for incorporating environmental considerations in urban planning and land use management procedures.
Environmental Impact Assessment (EIA)

• A planning and decision making tool that contributes to environmental protection based on understanding the environmental consequences a proposed project may have prior to its implementation.

• The process thus enables decisions to be taken that minimize environmental effects while maintaining the objectives of the project proposal, or preventing actions that will be costly to the environment.

• An important tool in ensuring sustainability and provides information so that sustainable decisions can be made.
EIA system in Lebanon

• The legal basis for EIA and its 9 annexes is established in the Environmental Law no. 444/2002 (Chapter 4, Article 21-23) and Law no. 690/2005. It is being implemented even though the EIA application decree has not been issued by the Council of Ministers (COM) yet.
EIA system in Lebanon

• The EIA decree was prepared over a decade ago in the framework of a regional project funded by the Mediterranean Environmental Technical Assistance Programme implemented by the World Bank.

• The draft EIA and its annexes require that the project proponent hires a national consulting firm among the pre-qualified consulting firms of Council for Development and Reconstruction (CDR) (MOE decree No. 7/1 of 2003) to prepare either an EIA report or an Initial Environmental Examination (IEE) report.
EIA system in Lebanon

• In recent years, the MoE has improved efforts to enforce EIAs in sectors and in the permitting procedures of line ministries such as the Ministry of Public Works and Transport, Industry, and Tourism.

• All development projects regardless of EIA classification, must adhere to the environment quality standards for air, water, and soil (MOE ministerial decision 52/1 of 1996) as well as to air emission standards and wastewater discharge (MOE ministerial decision No 8/1 of 2001).
**EIA system in Lebanon**

Projects that duly require an EIA study:

<table>
<thead>
<tr>
<th>1. Irrigation and drainage</th>
<th>10. Mines, sanders, stone mills, sand sucking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Drinking water</td>
<td>11. Building hospitals</td>
</tr>
<tr>
<td>3. Wastewater</td>
<td>12. Tourism and recreation projects</td>
</tr>
<tr>
<td>4. Solid waste</td>
<td>13. Land reclamation</td>
</tr>
<tr>
<td>5. Agriculture and forestry</td>
<td>14. River and sea public properties</td>
</tr>
<tr>
<td>6. Building roads, bridges, railway lines, and tunnels</td>
<td>15. Inland and marine fisheries</td>
</tr>
<tr>
<td>7. Airports and harbors</td>
<td>16. Zoo building</td>
</tr>
<tr>
<td>8. Power generation and supply</td>
<td>17. Factories</td>
</tr>
<tr>
<td>9. Oil and gas</td>
<td></td>
</tr>
</tbody>
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EIA system in Lebanon

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14. River and sea public properties
15. Inland and marine fisheries
16. Zoo building
17. Factories

Only Large Scale Projects!

What about Urban sprawl???
EIA system in Lebanon

Outputs of an EIA study:

EIA indicates when a project

- Is likely to cause environmental damages;
- Causes adverse impacts on valued ecosystems, and other environmental features;
- Could result in harmful health effects on a community;
- Could provide an opportunity for environmental or social improvements.
EIA system in Lebanon

Process of an EIA study:

1. Project Preparation
2. Screening
3. Scoping
4. Baseline conditions and impact assessment
5. Mitigation
6. Review
7. Decision Making
8. Follow up
9. Public Involvement

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EIA system in Lebanon

Who is involved in an EIA?

• **Developers** that are responsible to conducting the EIA, however will often employ consultants with full or partial responsibility;

• **Consultants** with a multidisciplinary team dependent on the type of project, or an EIA coordinator with a number of sub-consultants;

• **The regulating authority** that will evaluate the environmental statement and will ultimately make a decision on the project, but can also set the requirements of the EIAs and advise on issues to be addressed by the EIA;

• **Non-governmental organizations** (NGOs) provide inputs and can be involved in decision making;

• **Affected or interested members of the general public** may provide inputs and be involved in decision making.
Landscape Baseline Study

Objective:
To give answers to the following questions:

• What are the features and qualities of the studied landscape?
• What are the main landscape and cultural issues at stake regarding the project?
• What is the capacity of the landscape considered to accommodate the project needs?
Landscape Baseline Study

Other effects of the landscape:

• Destruction of the existing vegetation and opening of the landscape;

• Modification of the colour and the initial appearance of the site;

• Partial or total artificialisation of the site (roads, embankments, areas without vegetation, etc.).
Lebanese EIA Procedures

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
</tr>
</thead>
</table>
| Initial Filing and Screening | - The Project Proponent completes a Project Screening Form (PSF) of the intended project in accordance to Annex 4 of the EIA decree and submits it the Ministry of the Environment for screening.  
  Screening is made through the Service of Environmental Technology based on significance/severity of impacts determined as a function of impacts magnitude, type, nature, extent, timing, duration, likelihood and reversibility as per the EIA Decree. The service determines if the project is among:  
  1. Annex I projects for which an EIA report is required  
  2. Annex II projects for which an Initial Environment Examination is only required  
  3. No further Environment Analysis is required.  
  Duration of the MOE response is 12 working days |
| Scoping                      | - Scoping is required for projects in Annex I and the EIA report  
  - The proponent is required to inform the stakeholders, concerned ministries and NGO of the preparation of an EIA report and the municipality should post on her bulletin board, an announcement to that effect during 18 working days and requesting comments from the public (article 7 section 30). Also MOE could also receive comments from the public or stakeholders during 25 days (article 7 section 4).  
  - The project proponent is required to submit a report on any EIA consultations and meetings with stakeholders (article 7 section 5).  
  - The scoping report is available for consultation at the MOE by the public or by the concerned institutions (article 7 section 9). |
# Lebanese EIA Procedures

<table>
<thead>
<tr>
<th>Technical Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A technical committee comprised of 3 to 5 members of various background and expertise from the different services of the MOE is responsible for the review of the EIA and IEE studies. If need be, experts not available at the MOE can be subcontracted to assist with the review of the EIA studies. The technical committee used the methodology described the “MNA Guide for the Preparation and Review of EA reports of the World Bank” is being used under section 4 part B “reviewing EA reports.” The methodology is based on ‘Review Checklists’ with corresponding scores (A-F). A total score of C is considered to be satisfactory despite omissions and/or inadequacies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decision and Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>-The Minister reviews the Committee’s report and notifies its decision to the Proponent and publishes it within 50 working days. This decision is transmitted to the concerned institutions and should be published on the municipality bulletin board during 12 working days. The decision could be acceptance of the EIA report, conditional acceptance and rejection.</td>
</tr>
<tr>
<td>In case of conditional acceptance or rejection, objections and complaints from the proponent can be submitted to the MOE within 12 days from the announcement of its decision and a reply should be provided within 12 days from receiving the complaints.</td>
</tr>
<tr>
<td>-In case the objection is related to a public or private project that has been approved without it being subject to an EIA or an IEE although it requires such a study, article 77 of the Council of State by-laws applies.</td>
</tr>
<tr>
<td>-In case the objection is from a public authority against MOE decisions of screening, scoping and EIA approval, the COM will decide.</td>
</tr>
</tbody>
</table>
# Lebanese EIA Procedures

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>The Ministry of the Environment is required to follow up on the implementation of the Environment Management Plan and reporting the results of monitoring.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure of EIA</td>
<td>Section 12 of the draft EIA regulations states that the EIA and IEE available for examination at the MOE.</td>
</tr>
<tr>
<td>Penalties</td>
<td>Article 58 of the Environmental Protection Law 444 dates that Shall be punishable by imprisonment from one month to a year and to a fine ranging between LP 50.0 million (US$ 34,000) and LP 200.0 million (US$ 134,000) or either of these two sanctions, every person who (a) did not prepare an EIA or IEE; (b) implement a project contrary to the EIA or IEE approved by the MOE; (c) execute a project for which EIA/IEE is not required but is not conformed to the national standards; and/or (d) opposes or obstructs the measures of control, inspection and analysis provided in the environmental protection law.</td>
</tr>
</tbody>
</table>
Case Study - Lebanon

**CULTURAL HERITAGE AND URBAN DEVELOPMENT PROJECT**

<table>
<thead>
<tr>
<th>Project At-A-Glance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval Date (as of board presentation)</td>
</tr>
<tr>
<td>Closing Date</td>
</tr>
<tr>
<td>Total Project Cost**</td>
</tr>
<tr>
<td>April 17, 2003</td>
</tr>
<tr>
<td>December 31, 2016</td>
</tr>
<tr>
<td>US$ 61.89 million</td>
</tr>
</tbody>
</table>

(almee – ph.d rita najjar)
Objective

To Promote national and international cultural tourism in order to boost the local economy and enhanced quality of life in the historic centers of five old cities.

To improve the conservation and management of Lebanon's built cultural heritage.
Objective

Baalbeck

Tyre

Saida

Tripoly

Byblos (Jbail)

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The Environmental and Landscape Assessment

Prepared with the contribution of “ELARD”
Earth Link and Advanced Resources Development
A multi-disciplinary engineering, development and environmental consulting firm
(founded in 1996)
Description

The three main components of the proposed project are:

• Preservation and management of archaeological sites and development of their surroundings, thus enhancing visitor experience;

• Rehabilitation of historic city centers and urban infrastructure improvements which are carried out in and around the old towns to complement ongoing private conservation initiatives, attract and service tourists, and benefit the local community;

• Institutional strengthening to assist the specified agencies in playing their respective roles in preserving cultural heritage and deriving economic benefits for the country and the residents of the cities concerned.
Archaeological sites of Byblos City
Archaeological sites of Tyre City

The Coastal zone
- Protection and consolidation of the coastal front against coastal erosion and sea level rise
- Landscape and urban design of the public space and areas including beaches and parks
- Restoration of the public access to the coastline

The Port waterfront
- Restoration of the waterfront area and enhancement of its architectural features
- Landscaping of the waterfront area
- Creation of a public square

The Cultural promenade
- Creation of a cultural promenade along the waterfront
- Restoration of historical buildings along the promenade

The Khans
- Transformation of the Khan into a public space

Legend
- Traffic Monitoring Location
- Air & Noise Monitoring Location
- Sewer Network Sample
Summary of Potential Environmental Impacts:

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Construction</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>-</td>
<td>0/+</td>
</tr>
<tr>
<td>Air quality</td>
<td>-</td>
<td>-/++</td>
</tr>
<tr>
<td>Noise</td>
<td>-</td>
<td>0/++</td>
</tr>
<tr>
<td>Landscape and visual intrusion</td>
<td>-</td>
<td>+++</td>
</tr>
<tr>
<td>Waste generation</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Water quality / supply</td>
<td>-</td>
<td>-/0/++</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Archaeology and cultural heritage</td>
<td>-/0</td>
<td>+/-</td>
</tr>
<tr>
<td>Socio-economics</td>
<td>-</td>
<td>+++</td>
</tr>
</tbody>
</table>

+++ High positive impact
++ Moderate positive impact
+ Low positive impact
0 Neutral impact

--- High negative impact
- - Moderate negative impact
- Low negative impact

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Environmental Impact Assessment (EIA)

Summary of Proposed Elements of the Mitigation Plan:

• Design Phase
• Construction Phase (not shown here)
• Operation Phase (not shown here)
## Design Phase:

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>• Public participation</td>
</tr>
<tr>
<td></td>
<td>• Modification of design to reflect public consultation processes</td>
</tr>
<tr>
<td></td>
<td>• Development of re-routing schemes</td>
</tr>
<tr>
<td></td>
<td>• Assessment of projected increase in traffic vs. congestion and change in circulation patterns</td>
</tr>
<tr>
<td>Air quality</td>
<td>• Definition of existing standards and regulations</td>
</tr>
<tr>
<td></td>
<td>• Assessment of vehicle-induced emissions vs. traffic increase and change in circulation patterns</td>
</tr>
<tr>
<td></td>
<td>• Provide regular monitoring of vehicular induced emissions near the archaeological and heritage sites to meet ambient air quality standards and limit potential decay that may be caused by the formation of acid rain or smog</td>
</tr>
</tbody>
</table>
### Design Phase:

| Noise level                                                                 | - Definition of existing standards, regulations  
|                                                                            | - Assessment of vehicle noise emissions vs. traffic increase and change in circulation patterns  
|                                                                            | - Consideration for porous material, flexible joints and supports  
|                                                                            | - Consideration for sound barriers where necessary  

| Landscape and visual intrusion  | - Documentation of existing conditions  
|                                | - Blending color(s) of paint  
|                                | - Blending exterior construction material  
|                                | - Blending architectural features  
|                                | - Provisions for visual screens or greenbelts  

| Land use change                | - Relocation of agricultural trees planted in the site of the new parking in Jbeil to another agricultural site located outside the city  
|                                | - Compensation of the trees removed by trees planted in the parking lot and a public garden, as well as softscaping of the garden  

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Design Phase:

<table>
<thead>
<tr>
<th>Waste generation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Locate nearby disposal sites and secure permit for waste disposal</td>
<td></td>
</tr>
<tr>
<td>• Plan for adequate provision and location of waste bins in souks and markets</td>
<td></td>
</tr>
<tr>
<td>• Explore waste material recycling or re-use potential</td>
<td></td>
</tr>
<tr>
<td>• Assessment of projected increase in solid waste generation</td>
<td></td>
</tr>
<tr>
<td>• Assessment of projected increase in wastewater generation</td>
<td></td>
</tr>
<tr>
<td>• Development of solid waste management plan at archaeological sites</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water quality/supply</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provisions for proper surface and ground water drainage</td>
<td></td>
</tr>
<tr>
<td>• Use of non-toxic and readily biodegradable chemicals</td>
<td></td>
</tr>
<tr>
<td>• Assessment of projected increase in water demand</td>
<td></td>
</tr>
</tbody>
</table>
### Design Phase:

<table>
<thead>
<tr>
<th>Socio-economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Eliminate or minimize land acquisition and population resettlement</td>
</tr>
<tr>
<td>• Ensure community participation</td>
</tr>
<tr>
<td>• Develop proper compensation and resettlement plans</td>
</tr>
<tr>
<td>• Avoid stringent fast track plan to remove any establishment not conforming with zoning regulations</td>
</tr>
<tr>
<td>• Provision of relocation incentives for the populations to be displaced in the Palestinian refugee camp in Tyre and the residents of Khan El-Askar in Tripoli (71 families or 333 individuals along with 64 existing commercial activities)</td>
</tr>
<tr>
<td>• Avoid gentrification in the case of Khan El-Askar in Tripoli</td>
</tr>
<tr>
<td>• Ensure the development of a mixed socio-economic character to the different rehabilitated sites</td>
</tr>
<tr>
<td>• Protect the interests of tenants who remain and tenants who leave</td>
</tr>
<tr>
<td>• Create conditions for enhancing the income of remaining tenants</td>
</tr>
<tr>
<td>• Provide public private partnership incentives</td>
</tr>
<tr>
<td>• Ensure that the housing project will provide a qualitative improvement in the physical environment of the inhabitants</td>
</tr>
<tr>
<td>• Ensure that each family will be given an apartment commensurate with family size</td>
</tr>
<tr>
<td>• Ensure that residents would be charged affordable rents in a fair and just manner</td>
</tr>
</tbody>
</table>
Monitoring

• The monitoring plan focuses on:
  - selected environmental indicators,
  - the compliance with standards,
  - and the assessment of the level of impacts on the environment.

• The costs for the implementation of the monitoring plan during the construction and operation phases are outlined.

  (including the definition of indicators, frequency, and monitoring locations)
The environmental monitoring and management plans

Government of Lebanon

Council for Development & Reconstruction (CDR)

World Bank

Ministries of Culture-DGA, Public Works-DGU, Tourism, Municipalities Environment

Supervising Consultant

Contractor

Environmental Management and Monitoring consultant

CHUD

(AMEE – Ph.D Rita NAJJAR)
Carte du relief

Thank you for your attention