

Module 3: International Experiences and Case Studies

# Strategic Environmental Assessment

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## **Jordan – Water Sector**

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# SEA ... Definitions

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- A tool for identifying and upstreaming environmental and social issues for development planning, decision-making, and implementation processes at the strategic level.
- A catalyst and interim step toward a holistic understanding of environmental and social implications of policy planning and public investment.
- A tool for assessing development policies and programs to determine their adequacy for sustainable development.

# **Jordan Water Sector**

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- **Jordan Water Sector Planning and Associated Investment Program 2002-2011**
  - **water supply**
  - **water demand management**
  - **strategic planning and management**
  - **institutional reform**

# The Filter

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- **Environmental Assessment**
- **Forestry and Watershed Management**
- **Pest Management**
- **Natural Habitats and Bio-Diversity**
- **Cultural Property and Heritage**
- **Transboundary Issues**
- **Safety of Dams**
- **Involuntary Resettlement**
- **Indigenous Peoples**
- **Development in Disputed Areas**

# Additional Factors

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- **Social Assessment**
- **Disclosure of Information to Stakeholders**

# The Process

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- **Government awareness, buy-in, and commitment to the SEA process**
- **Identify and meet with Stakeholders**
  - **Ministries (6) + selected line agencies**
  - **Aqaba Special Economic Zone**
  - **Royal Scientific Society**
  - **Jordan Environment Society**
  - **Friends of the Earth – Middle East**
  - **Univ. of Jordan (various departments)**
  - **\*\*\* No time to include civil society**
  - **\*\*\* No time to include donors**

# The Process ...

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- **Share the development/investment plan and ask for response**
  - **Not every stakeholder was interested in every issue.**
- **Compile findings**
- **Hold stakeholder meeting to disclose findings and seek additional input + consensus**
  - **Hosted and conducted by the Min. of Planning**
- **Additional written input from parties**
- **Finalize draft report**
- **Identify follow up activities**

# Potential Strategic Environmental Issues

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## Water Resources Development

<b>Intervention</b>	<b>Potential Strategic Issues</b>
<b>Rehab of Amman distribution network</b>	<b>Routine construction</b>
<b>Deir Alla Zai water treatment expansion</b>	<b>Routine construction</b>
<b>Ram aquifer &amp; Disi Amman conveyer</b>	<b>International waterbody Safe yield Right of way Indigenous people Biodiversity</b>
<b>Wadis Mujib, Wala, &amp; Hasa reservoirs</b>	<b>Dam safety Biodiverstiy</b>
<b>Amman/Zarqa wastewater treatment</b>	<b>Wastewater disposal and reuse Routine construction</b>
<b>Wadi Zara Ma'ain-Hisban supply and treatment</b>	<b>Wastewater disposal and reuse Dam safety Biodiversity</b>

# Potential Strategic Environmental Issues

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## Water Resources Development

<b>Intervention</b>	<b>Potential Strategic Issues</b>
<b>Maqarin (Wehdeh) reservoir (Yarmouk river)</b>	<b>International waterway Dam safety Biodiversity Resettlement</b>
<b>Wadi Araba aquifer investigation</b>	<b>Safe yield</b>
<b>Brackish groundwater desalination</b>	<b>Brine effluent disposal</b>
<b>Sea water desalination</b>	<b>International waterbody Biodiversity</b>

# Potential Strategic Environmental Issues

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## Water Demand Management

<b>Intervention</b>	<b>Potential Strategic Issues</b>
<b>Tariff increases to recover O&amp;M</b>	<b>Economic (ability to pay)</b>
<b>New irrigation methods for use efficiency</b>	
<b>Groundwater licensing and enforcement</b>	
<b>New building codes with water savings fixtures</b>	<b>Economic</b>
<b>Customs exemptions on water savings devices</b>	
<b>Conservation and public awareness</b>	

# Potential Strategic Environmental Issues

## Strategic Planning and Management

<b>Intervention</b>	<b>Potential Strategic Issues</b>
<b>National water master plan</b>	
<b>Amman water and wastewater management contract</b>	
<b>Water information system analytical tools</b>	
<b>UFW programs</b>	
<b>5-year plan for JVA</b>	
<b>Demand management programs</b>	
<b>National water master plan</b>	
<b>Supply augmentation programs</b>	
<b>Increased PSP in water and ww operations</b>	
<b>Increased public awareness</b>	
<b>Automation of King Abdullah canal &amp; Zai treatment plant</b>	

# Potential Strategic Environmental Issues

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## Institutional Reform

<b>Intervention</b>	<b>Potential Strategic Issues</b>
<b>Water agencies restructured</b>	
<b>Water quality improvement &amp; conservation</b>	
<b>Operations and management support</b>	
<b>Program management unit established</b>	
<b>Human resources development</b>	

# Alternatives & Mitigation (Focus on the Supply)

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- **Demand already beyond sustainable yield**
- **Best management of available water resources**
  - **The usual issues: irrigation efficiency, pricing, licensing, reuse, allocation, urban water, UFW, etc.**
- **Non conventional supply alternatives**
  - **Fossil groundwater (already in the plan)**
  - **Desalination of brackish water for irrigation (limited)**
  - **Interbasin water transfer (not formally in the plan)**
  - **Full EIS necessary for these. Common elements.**

# Cost of Mitigation

- **\*\*\* Very important, but was not addressed due to time constraint**

# Enabling Frameworks (as an element of SEA)

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- **Policy and Legal**
- **Institutions**
- **Monitoring and enforcement**
- **Human development and training needs**
- **Public consultation and involvement**
- **Input provided by stakeholders**
  - **Complaints and re-stating the issues**
  - **Very useful**

# Next Steps

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## Near term

- **Seminars and training workshops on the environment to enhance capacity at all levels**
- **Include safeguard policies**
- **Environmental training for staff in all water related organizations**
- **Specifically, prepare staff to understand and comment on the EIA preparation for the Disi-Amman water conveyer**

# Next Steps

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## Longer term

- **Increase in-country capability to manage and/or carry out EIAs and social assessments for all water management projects**

# Conclusions

- **What did we learn that the we did not already know?**
- **How will this work support the broader SEA issues in the country (other sectors)?**
- **The process and the exercise was useful in bringing stakeholders together in a focused manner**