NWSSIP
Towards IWRM In Yemen

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Overview of the Presentation

- Background on Water Resources in Yemen
- Process of Developing NWSSIP
- NWSSIP’s Goal and Sub-sector Objectives
- Diagnostic Outlook of the Water Issues
- Guiding Principles for Yemen’s Water Strategy
- NWSSIP’s Financial Requirements
- Progress in Implementation
Background of Water Resources in Yemen

- Population 20 million (75% rural, national growth 3.0%)
- Total cultivated area 1.2 million hectares
- Groundwater irrigated area expanded from 37,000 ha to 407,700 ha between 1970 and 2004
- Average rainfall: 150 mm/year
- Total water use (year 2000): 3.4 BCM
- Annually renewed water resources: 2.5 BCM
- Per capita annual share of renewable water resources 125 m³
- Annual water deficit: 900 MCM (36%)
- Agricultural water use >90%
- Number of wells: >100,000
- Annual drop of groundwater levels 2-6 m
Institutional Structure of the Water Sector

CABINET

MAI

Irrigation (GDI)

......

......

MWE

WRM (NWRA)

UWSS (NWSA, L.C.’s)

RWSS (GARWSP, RWSSP)

Environmental protection (EPA)

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Process of Developing NWSSIP

- Need for a water strategy
  - Knowledge of the existing situation
  - Setting the objectives
  - Clarifying the cross-sectoral issues
  - Agreeing on the strategy (the road-map)
  - Identifying the implementation constraints/risks
  - Assessing the financial implications

- Participatory approach
  - 5 working groups
  - Cross-sectoral participation
  - Expert group retreat for document consolidation
  - National workshop (150 Participants)
Aim and Sub-Sector Objectives

- **Goals**
  - Formulate a shared vision for sector development
  - Set clear quantitative and qualitative targets
  - Mobilize government and donors support

- **Sub- Sector Objectives**
  1. **WRM**
     - Ensure maximum possible degree of sustainability
     - Maximize economic benefits through improved allocation
     - Raise awareness of water scarcity among the general population
     - Contribute to poverty alleviation by promoting efficient use and equity in water allocation
Aim and Sub-Sector Objectives  Cont.

(2) UWSS
- Increase coverage by WSS services for the urban population
- Financial sustainability of WSS utilities
- Separation of sector regulatory & service provision functions
- Continue decentralization process and introduce private sector participation in service delivery
- Human resources development

(3) RWSS
- Increase coverage by WSS services for the rural population (better health conditions, higher girls’ school attendance, etc.)
- Adopting the Demand Responsive Approach
- Community Participation
- Decentralization of GARWSP
- Development of low- cost appropriate technology
Aim and Sub-Sector Objectives  Cont.

(4) Irrigation
- Enhance sustainability through water resources protection
- Improve farmers’ income through increasing water use efficiency
- Enhancing water supply through better integrated water shed management
- Improve institutional performance in support for farmers

(5) Human and Environmental Aspects
- Ensure equitable access to water
- Ensure the highest possible level of resource sustainability, both in quantity and quality
Diagnostic Outlook of Water Issues

“Water use based on resource capture is unsustainable”

Factors leading to overuse of water resources

- Introduction of drilling and pumping technologies
- Weak legislative framework (Water Law issued in 2002)
- Lack of effective tools for law enforcement
- Low water use efficiency (UFW for Urban water use 30-50% and irrigation efficiency less that 40%)
- Water allocation not based on a recognized system of water rights (particularly for groundwater)
- Low financial incentives for water conservation (over-irrigation of cash crops)
- Low institutional and human capacity to tackle the water problem
- High population growth
- Etc.
Guiding Principles for Yemen’s Water Strategy

(1) Principles of good natural resources management
   - IWRM and basin management approach
   - Management of the resource for achieving efficiency and sustainability

(2) Social and economic Principles
   - Priority to domestic uses, with due consideration to equity and poverty aspects
   - Water allocation towards the highest economic return uses
   - Water needs to be balanced through demand management, incl. economic incentives/disincentives
   - Enhancing national and household food security through market driven growth rather than self-sufficiency
   - Fiscal, agricultural and trade policies to be factored into water sector policies
Guiding Principles for Yemen’s Water Policy Cont.

(3) Institutional Principles

- Water governance and capacity building are considered priority
- Decentralization, participation, and user organizations are key policy principles
- Role of private sector in water and sanitation service delivery is emphasized
- Regulatory functions are separated from service delivery
- Role of public financing is clearly defined
NWSSIP’s Financial Requirements

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Total required 2005-09 (M USD)</th>
<th>Donor funds committed/pipe lined (M USD)</th>
<th>Local financing Expected (M USD)</th>
<th>Net-financing requirement (M USD)</th>
<th>Share of total water sector investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water resources management</td>
<td>47</td>
<td>20</td>
<td>7</td>
<td>30</td>
<td>3 %</td>
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<tr>
<td>UWSS hardware</td>
<td>750</td>
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<td>265</td>
<td>130</td>
<td>49 %</td>
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<tr>
<td>UWSS software</td>
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<td>25</td>
<td>0</td>
<td>25</td>
<td>3 %</td>
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<td>RWSS hardware</td>
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<td>78</td>
<td>101</td>
<td>275</td>
<td>30 %</td>
</tr>
<tr>
<td>RWSS software</td>
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<td>6</td>
<td>0</td>
<td>22</td>
<td>2 %</td>
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<td>Irrigation</td>
<td>190</td>
<td>64</td>
<td>56</td>
<td>70</td>
<td>12 %</td>
</tr>
<tr>
<td>Environment</td>
<td>21</td>
<td>2</td>
<td>0</td>
<td>19</td>
<td>1 %</td>
</tr>
<tr>
<td><strong>Total water sector investment 2005-09</strong></td>
<td><strong>1,538</strong></td>
<td><strong>550</strong></td>
<td><strong>429</strong></td>
<td><strong>559</strong></td>
<td><strong>100 %</strong></td>
</tr>
<tr>
<td><strong>As percentage</strong></td>
<td>100 %</td>
<td>36 %</td>
<td>28 %</td>
<td>36 %</td>
<td></td>
</tr>
</tbody>
</table>
Progress in Implementation

- NWSSIP has helped mobilize more public funding for the sector, especially for the urban sub-sector.
- A monitoring and evaluation system is in place to measure progress achieved in implementation.
Thank you
for your attention

Questions !!!