



Civic Influence Hub

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**Towards Improving the Water Sector in Lebanon**

**5th BEIRUT WATER WEEK**

**NDU**

**22 May 2014**

# CURRENT STATUS

- ▶ Water is a major constituent of Lebanon wealth hence it should be used to advance the economy of the country .
- ▶ Water sector faces many challenges and solutions are urgent
- ▶ Solutions need to consider social, economic and must be done on **INITIATIVES TO:**
  - ▶ **INCREASE WATER SUPPLY**
  - ▶ **OPTIMIZE WATER DEMAND**
  - ▶ **IMPROVE MANGEMENT AND INSTITUTIONS**
  - ▶ **ENSURE UP-TO-STANDARD QUALITY**

# CHALLENGES FACING THE WATER SECTOR

# At the Government level

- ▶ Weak central oversight and coordination over the water sector
- ▶ Inadequate regulatory framework constraining the promotion of sustainable water management
- ▶ Political and individual conflicts of interest which are hindering decision making
- ▶ End-users not trusting the public establishments
- ▶ Inability to enforce laws

# At the Institutional Level

- ▶ The utilities do not have sufficient capacity and lack information about water resources, sector performance & assets
- ▶ Lack of coordination/alignment between various stakeholders
- ▶ Weak partnership with the Private Sector
- ▶ Overlapping responsibilities between the authorities
- ▶ Lack of trained and qualified employees
- ▶ Low collection percentage and high cost base
- ▶ None of the Water Establishments is able to recover its total costs despite notable under-spending on maintenance and technical staff and the subsidies provided through nonpayment of the electricity bill

# At the legal level

- ▶ The Water Law 221/2000 was designated to improve water service efficiency in Lebanon; however, it was never fully implemented, and a new "Water Code" is currently under development
- ▶ Absence of a National Council of Water to work at the strategies and tactics level
- ▶ Lack of water law enforcement (no. 144 & no. 320) at all levels, as well as other related laws and decrees
- ▶ Absence of Water Users Associations, noting that the related law issued in ...; however not yet activated

# At the Technical Level

- ▶ Low utilization of surface water (1200 MCM losses into the sea) and lack of water infrastructure storage combined with high technical losses
- ▶ Zero reuse of treated water in irrigation and industrial purposes
- ▶ Misuse of groundwater (spontaneous and excessive withdrawal, mainly used for irrigation purposes)
- ▶ Absence of natural and artificial recharge of aquifers
- ▶ Progressive Sea water intrusion
- ▶ Pollution of water resources

# STRATEGIC SOLUTION





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- ▶ Based on the principle of people's right to water
- ▶ promotes disruptive measures that ensure:
  - ▶ sharing of water resources nationwide
  - ▶ reforming the water sector management
  - ▶ transforming water from a commodity to a national wealth
  - ▶ creating platform for public private partnership
  - ▶ enforcing water laws
  - ▶ promoting sustainable use of water and conserving freshwater ecosystems



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- ▶ through four specific objectives:
  - ▶ Increasing water supply
  - ▶ Optimizing water demand
  - ▶ Ensuring up-to-standard water quality
  - ▶ Improving the Water management efficiency

# BLUE GOLD Strategic Solution

- ▶ A National Council of Water
  - ▶ to develop water national policies and strategies
  - ▶ to oversee the development of the sector based on the Integrated Water Resources Management approach
- ▶ Water Users Associations
  - ▶ to put into action the set strategies and action plans
  - ▶ to take-over the operations and the maintenance of irrigation networks
- ▶ A Watch Dog Organization from the civil society
  - ▶ to monitor the performance of different stakeholders at all levels
- ▶ An Anti-Trusts Fund must be created
  - ▶ to enable the involvement of Lebanese as investors in the water sector
- ▶ A National Monitoring Centre
  - ▶ to assess water quality and management



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# BLUE GOLD INITIATIVES

## Locally

- ▶ The concept of **interconnectivity between Networks** must be introduced and tested as a solution model to increase water availability and improve water quality;
- ▶ The **private sector** must be introduced to participate as operators for production, distribution, metering and billing;
- ▶ **Municipalities** must be involved at the production stage through smaller scale projects such as the development of hill lakes.
- ▶ A **Training Center** on water must be established to build the capacities of stakeholders working in the water sector.

# NWSS vs. Blue Gold

Budget: 7.74 Bn USD

## The NWSS

### ► Infrastructure Initiatives

- I.1 Optimization of surface water resources,
- I.2 Artificial recharge of groundwater aquifers,
- I.3 Surface storage 44 dams,
- I.4 Water supply transmission,
- I.5 Water supply distribution,
- I.6 Irrigation rehabilitation and expansion,
- I.7 Wastewater collection, 3,2 Bn USD

### ► Water Sector Management Initiatives

- II.1 Institutional and organizational,
- II.2 Financial and commercial,
- II.3 Legal and regulatory,
- II.4 Environmental concerns,
- II.5 Water conservation and awareness



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# NWSS vs. Blue Gold

Budget: 5 Bn USD

## *Supply*

1. Increase surface storage and **inter-basin connectivity 15 dams**
2. Rehabilitate irrigation and domestic networks
3. Optimize river flows through **canalization**
4. **Increase forestation** for groundwater recharge
5. Artificial recharge of underground aquifers
6. **Capture water from sea springs**
7. **Harvest rainwater from rooftops**
8. Treat and reuse grey water

## *Management*

13. Create monitoring and information center on water
14. **Establish a national training center on water**
15. Setup legal administration

## *Demand*

9. Implement drip irrigation schemes
10. Promote high-value crops
11. Install household efficient appliances

## *Quality*

12. Develop wastewater treatment solutions and expand sewage networks 1.8 Bn USD



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OF LEBANON

5-YEAR PLAN

An innovative holistic vision  
for Lebanon's water resources

THANK YOU



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