BLUE GOLD
Towards Improving the Water Sector in Lebanon

5th BEIRUT WATER WEEK
NDU

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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 MANAGEMENT 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
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
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 me created
  - to enable the involvement of Lebanese as investors in the water sector
- A National Monitoring Centre
  - to assess water quality and management
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
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

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

Management

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