Water Approach for Project Identification and Selection

1.0. The water sector in Lebanon is facing major problems; its technical, institutional and economic performance is not satisfactory. Significant investments accompanied by technical support were spent for improving the performance of the sector since 1992, yet water shortages, losses and unaccounted for are still high and most population is spending additional amounts for drilling private wells or purchasing water by tankers to cover the water shortages.

The water sector is managed by different authorities. At the national level, the MEW is the governing body for planning, developing water resources and providing assistance to the 4 Water Establishments. At the regional level, the 4 Water Establishments are responsible for the operation and maintenance of the sector, each in its area of operation. The Litani River Authority has jurisdiction over the Litani water resources management and hence overlaps with the Bekaa and South Water Establishments.

It is expected from the MEW to prepare a Master Plan at the national scale,, set guidelines and establish monitoring procedures, indicators and operating procedures. It is also expected to address the institutional and capacity building aspects and provide the support to the Establishments and establish a coordination mechanism among the concerned administrations, such as shared resources, water resources monitoring, etc...

- **2.0. Project selection criteria**

The criteria for the selection of projects are:

- Water deficit
- Infrastructure status
- Quality of water
- Institutional set-up

A group of performance indicators were elaborated to select the projects.

- **3.0. Hypotheses**

- Reservoirs were sized for a storage capacity of one day demand except for Beirut where 12-hr storage was adopted. It is believed however that beyond 15 years, following adequate management of the sector, this storage could be dropped to 20 to 30% of the daily demand, which would be the volume required to manage the peak hourly demand.
- Most distribution pipelines are old. It is recommended to replace those pipes for reducing losses and providing adequate supply. It is recommended as well to size the new distribution networks based on the peak hourly demand instead of the peak daily currently applied. This would help, on the long term, abandon of apartment and house reservoirs, as these are important media for water borne diseases and are seldom maintained by the users.
- The per capita water demand was assumed 250 l/c/d for large urban communities, such as Greater Beirut and 200 l/c/d elsewhere increasing to 300 l/c/d and 250 l/c/day elsewhere by 2010,

- **4.0. Project selection**

Importance and priorities were given to administrative and institutional aspects, water resources management, and sustainable operation. Capital investments were selected for the provision of adequate supply, assist in water resources, supply and demand management, and water quality.