# **Chapter 4 Project Evaluation and Recommendation**

### 4-1. Project Effect

The following benefits are expected from the implementation of the project.

- (1) Suspension of water supply or poor water supply condition are solved in the western Ghoutah (Moadamiya, Daraya, Sehnaya and Asrafia) of the rural province of Damascus where there is increasing population and number of houses.
- (2) Inhabitants of about 247,000 people (31,000 of first phase and 216,000 of second phase) in the western Ghoutah are supplied with safe and stable water of 125 liter/capita.
- (3) Water borne diseases can be prevented and sanitary conditions in the western Ghoutah are improved.
- (4) Shortage of water in overpopulation Damascus city will ease by stable water supply in the western Ghoutah.

Thus, the project will be effectively justified by examining the following effects.

(1) Improved water supply quantity

At present, water tenders work hard and spent more time in order to supply water to residents in the western Ghoutah. However, with the necessary equipment and facility, suspension of water supply or poor water supply condition.

(2) Decrease in water borne diseases

It will be clear by water quality at the water meter in the house or data in the health center.

(3) Progress in city development

Development of the western Ghoutah can be achieved through adequate supply of safe water to the population.

## 4.2. Recommendation

Adequate and stable supply of safe drinking water is a basic social need. After its completion, the project will supply hygiene water and therefore contribute much to the improvement in living environment and sanitary condition of the people in the western Ghoutah. In order to achieve the expected benefits, attention is required on the following key issues.

(1) Secure budget allocation for components borne by the Syrian Government

The Syrian Government has committed to undertake the detailed design of main structures and electric equipment, civil works, pipe laying works, and installation works of mechanical and electrical equipment. These activities are estimated to cost 139 million Syrian pounds (108 million Syrian pounds for first phase and 31 million Syrian pounds for second phase) in five years, shown in below.

Table 4-2-1		<b>Budget Allocation</b>		Unit: thousand Syrian Pound		
Year	2000	2001	2001	2003	2004	Total
Amount	4,419	31,820	55,432	36,528	10,952	139,151

It is very important to secure the budget allocation for the project and the Ministry of Housing and Utilities is expected to raise the necessary funding required for the duration of the project.

#### (2) Selection of local contractors

Many works for the project shall be implemented by the Syrian Government and 10 local contractors shall carry out the works at the same time. It is necessary therefore, that local contractors who have the expertise and enough experiences shall be selected for the project.

#### (3) Adequate power supply connection with main electric source

Power supply is critical in the installation and operation of equipment and facilities, i.e., the transmission pumping station till the end of 2001 and the booster pumping station till August, 2003. Therefore, the Establishment shall coordinate with the Electric Authority and ensure that there will be adequate and stable power supply in the project sites.

#### (4) Staffing for operation and maintenance

Important consideration must be given to the recruitment and selection of an adequate number of highly competent staff to manage the project. After implementation of

the project, not only the number of water pumps, transmission pumping station and booster pumping station and will increase but also the number of pipeline. In order to ensure a reliable and safe water supply to the consumers, reinforcement of operation and maintenance staff is absolutely required. It is necessary that the reinforcement of these personnel will not only be in terms of the number of staff but also in the improvement of their technical and managerial capability through continuing education and training programs.

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### (5) Improvement of collecting water charge

It is estimated that increasing cost of the operation and maintenance by the new facility is nearly same as one of collection water charge expanded supply area by the new facility.

Water charge in Syria is the uniform rate and it is very difficult to increase the rate in only rural province of Damascus. Therefore, collecting water charge shall be improved for the stable management of the Establishment.