

CHAPTER 3 PROJECT EVALUATION AND RECOMMENDATIONS

3-1 Project Effect

The effects of the Project and anticipated improvements in the present situation are listed below in Table 3-1.

Table 3-1 Effects and Improvements due to Project Implementation

Present State and Problems	Measures to be Taken in the Project	Effects and Improvements
<p>1. Safe and stable water supply is not provided to residents in the target area.</p>	<ul style="list-style-type: none"> • Piped water supply schemes will be newly constructed at 20 sites and diesel generator pumping system of 9 existing water schemes will be converted to solar pumping system in 4 Divisions. 	<ul style="list-style-type: none"> • The residents at the targeted 29 sites can use 35 lit/capita/day of safe water stably throughout the year from the completed water supply facilities. • Maintenance service contracts will be made between VWCs and a private maintenance service provider and the water supply facilities will be operated in sustainable manner with contribution of the operation and maintenance costs by the users. • Amount of water available for the residents will increase from 15-20 lit/capita/day to 35 lit/capita/day. • Coverage of safe and adequate water supply to the rural population of 700,000 in the Gambia will increase by 11%, from 53% to 64%.
<p>2. Unhygienic living conditions of the residents cause water borne/related diseases such as diarrhoea.</p>	<ul style="list-style-type: none"> • Awareness campaign and hygiene education will be conducted for the residents through the software-component programme to facilitate hygienic use of supplied water. 	<ul style="list-style-type: none"> • Water borne/related diseases will decrease by improving hygiene behaviour of the residents and environmental sanitation and utilising safe water supply appropriately.

Present State and Problems	Measures to be Taken in the Project	Effects and Improvements
<p>3. The Japanese side has supported the Gambian side in procurement of drilling equipment and technology transfer for construction of boreholes through the past grant aid project in 1992. However, construction of boreholes by DWR has not progressed very far due to shortage of supporting vehicles and trained staff.</p>	<ul style="list-style-type: none"> • Supporting vehicles necessary for construction of boreholes will be procured. • OJT on groundwater development and borehole drilling will be given to DWR staff who will be involved in the drilling works in this project. 	<ul style="list-style-type: none"> • DWR can implement groundwater development including construction of boreholes in this project more efficiently and promptly with utilising the procured vehicles as well as the existing drilling equipment owned by DWR. • Improved techniques related to groundwater development and borehole drilling will be equipped to the DWR staff.
<p>4. DWR has motivators in each Division to support operation and maintenance activities conducted by VWCs. However, the motivators cannot facilitate the activities efficiently due to insufficiency of reliable transportation.</p>	<ul style="list-style-type: none"> • Motorbikes will be procured for means of transport of the motivators. 	<ul style="list-style-type: none"> • Sustainability of the water supply facilities will be strengthened through facilitation of activities for capacity building of the community members, hygiene education and facilitation of conclusion of the maintenance service contracts by the motivators with utilising the procured motorbikes.
<p>5. Operation and maintenance activities of solarised water supply facilities are monitored with using a database established by other donor. Meanwhile, DWR cannot conduct monitoring activities appropriately due to insufficiency of proper monitoring equipment.</p>	<ul style="list-style-type: none"> • Computer will be procured for monitoring of the operation and maintenance activities. 	<ul style="list-style-type: none"> • Situation of operation and maintenance of the constructed water supply facilities in the 29 sites can be monitored more accurately and smoothly with utilising the procured computer.

3-2 Recommendations

1) Necessity of Continuation of Groundwater Development Plan

The water supply services will be improved by construction of water supply facilities with solar pumping systems through implementation of this project. However, more than 40% of the rural population in the Gambia are still forced to

use water contaminated with the organics and suffering from shortage of safe drinking water. Natural environment of the Gambia is harsh with an annual rainfall of only 600mm on average, which condition does not allow them to depend on the surface water or springs for sources of domestic water supply. Therefore, immediate interventions with utilising groundwater are expected to improve present water supply conditions.

Utilising the drilling equipment procured in 1992 in the previous grant aid project assisted by the Japanese government, DWR has succeeded construction of boreholes for several projects funded by other ministries and external donors as the sole entity specialised for groundwater development in the Gambia. It is recommended that DWR will continue interventions necessary for improvement of rural water supply in cooperation with external donors based on experiences in construction of solar powered water supply facilities with groundwater sources and their operation and maintenance through this project.

2) Necessity of Continuous Monitoring on Operation and Maintenance of Water Supply Facilities

The community members in the target villages are responsible for operation and maintenance of the entire water supply facilities constructed in this project including the costs to be required for running and maintaining the schemes. Meanwhile, the target communities will contract out the maintenance of the solar pumping system to private service providers in the Gambia with considering specialized skills and techniques required for service of the system. It is recommended that DWR will continue monitoring of appropriate setup of the subscription fee of the maintenance contract by the service provider, observation of payment of the maintenance costs by the user communities, and any other problems related to operation and maintenance of the facilities.

Furthermore, maintaining records of these monitoring activities in the database established in the project will help DWR adopt experiences and lessons learnt from the past interventions in sustainable operation and maintenance activities and planning and implementation of rural water supply projects in future.