

Summary of the Joint Terminal Evaluation

1. Outline of the Project	
Country: Republic of Sudan	Project Title: Project for Human Resources Development for Water Supply
Issue/Sector: Water Resources Management	Cooperation Scheme: Technical Cooperation
Division in Charge: Water Resources Management Division 2 Global Environment Department	Total Cost (at the time of the Terminal Evaluation): JPY330Million
Period of Cooperation: June 2008 - March 2011	Partner Country's Implementing Organizations: Public Water Corporation (PWC) Training Center
	Supporting Organization in Japan:
Related Cooperation:	
<p>1-1 Background of the Project</p> <p>The provision of adequate and safe water supply services for human is one of the essential issues in the Republic of Sudan. And also the Government of Sudan has conducted the significant efforts to improve the critical water supply situation. According to the Quarter Century Strategy for Water Supply Plan (2007-2031), the specific objectives of the strategy are to achieve by the end of the strategy period, a consumption rate of 50 liter/capita/day and 150 liter/capita/day for rural and the urban population respectively.</p> <p>On the other hand, PWC was the responsible and organizational authority for water supply projects in Sudan, the responsibilities on operation and maintenance for the water supply facilities have been transferred from PWC. The present role of PWC is construction of the large-scale water supply facilities, coordination of international assistance, monitoring of SWC and human resources development by this decision of the government water supply policy.</p> <p>SWC has responsibility for the construction of small water supply facilities other than maintenance of urban and rural water supply facilities. As for the water supply population of each SWC, it is quite different from State of Khartoum (4,500,000), Sate of Gezira (3,050,000), Red Sea and Blue Nile State (about 300,000). In addition, the types of the water source and the water supply facilities in SWC are different. Furthermore, an average of engineer in each SWC is around 80.</p> <p>Various water related problems occur in each SWC by the drastic change of organizational situation in Sudan. There are problems of pump and generator in the villages of Sudan. Particularly, new generator and electric motor pumps are spreading in Sudan recently. Therefore, the engineers cannot cope with sufficient troubleshooting but only experienced on conventional reciprocating pump. In addition, the operation and maintenance technology of water treatment plant is not sufficient in each state. As a result, water supply in each SWC becomes unstable.</p> <p>Under this situation, the Government of Sudan has decided to transfer the training function to PWC. And a new building of PWC including a training center was built in Khartoum. Although PWC Training Center has opened in 2006, all of the staff doesn't have sufficient experience on training management and implementation. Therefore the Government of Sudan requested the technical cooperation project to the Government of Japan for training ability improvement of the staff of PWCT.</p> <p>1-2 Project Overview</p> <p>(1) Overall Goal: Institutional capacity for stabilizing water supply in the northern Sudan is enhanced.</p> <p>(2) Project Purpose: PWC Training Center establishes the system for the implementation of Training.</p> <p>(3) Outputs</p> <ol style="list-style-type: none"> 1) PWC Training Center acquires abilities to implement and plan training courses. 2) PWC Training Center acquires administrative abilities necessary for managing training courses. 3) PWC Training Center acquires the abilities of problem solution and feedback on training courses. 	

(4) Inputs (as of the time of the Terminal Evaluation)			
Japanese side:			
Japanese experts: 9 experts Equipment and materials: JPY 64 million			
Training in Japan: 8 trainees Local Expenses: JPY 12.5 million			
Sudanese side:			
Counterparts (C/Ps): 18 persons			
Local costs: 433,155SDG			
Office space in PWC Training Center for the Project Team			
2. Evaluation Team			
Members of Evaluation Team	<Japanese Side>		
	Dr. Yuji MARUO	Team Leader	Senior Advisor, JICA
	Mr. Hayato SATO	Evaluation Planning	Water Resources Management Division 2 Global Environment Department, JICA
	Ms. Tamahi YAMAUCHI	Evaluation and Analysis	IC Net Limited
	<Sudanese Side>		
Mr. Mahmoud Haroun A/elgabar	Senior Superintendent Water Engineering	Director of Public Water Corporation Training Center	
Ms. Eatiadal Elrayah Malik	Director of Public Water Corporation Training Center		
Evaluation Period: October 12, 2010 – November 4, 2010		Type of Evaluation: Terminal Evaluation	
3. Evaluation Results			
3-1. Achievements of the Project			
(1) Achievements of the Outputs			
Output 1 (PWC Training Center acquires abilities to implement and plan training courses.)			
Output 1 is mostly achieved. For implementing and planning training courses, PWCT needs to grasp the training needs of the trainees (in this Project, from SWCs) to plan the contents of the training courses and their schedule, and to implement the courses according to the schedule. PWCT activities started at the same time as the Project. Hence the Expert team helped to establish the training implementation system. Because of the capacity of PWCT, it was planned that PWCT train the leaders of each SWC who later train other colleagues in their SWCs through the training of trainers (ToT).			
Output 2 (PWC Training Center acquires administrative abilities necessary for managing training courses.)			
Output 2 is mostly achieved. As mentioned above, the Project is to start training implementation by establishing such items as the training implementation system, organization, regulations, and budget control. Since PWCT was established in 2007 and no PWCT staff members had ever managed training courses, the Experts helped them develop up to 12 manuals for the management of training courses and explained how to use them.			
Output 3 (PWC Training Center acquires the abilities of problem solving and feedback on training courses.)			
Output 3 is achieved. In the mid-term evaluation, this output added the aspect of feedback to future training courses. According to the trainees, training courses in Sudan have no feedback system, which means that course coordinators are not accustomed to problem solving and feedback. The Experts helped develop the evaluation sheets on training courses, lecturers, and accommodation and food, and conduct interviews with the trainees. Based on the interviews, the counterparts and the Experts conducted after-training meetings and evaluation of the course.			
(2) Prospect for the Achievement of the Project Purpose (PWC Training Center establishes the system for the implementation of training.)			
As stated in the achievement of the Outputs, with the support of the Experts, PWCT developed its regulations and the TOR of its personnel, the training implementation system, 12 manuals for			

management of training courses, the budget management system, four manuals for implementation of training courses, and implemented so far 18 training courses according to the schedule. For management and implementation of the training courses, C/Ps acquired abilities, although limited in a number of ways, to implement, plan, and manage training courses, find solutions to problems, and provide feedback to future training courses, with the technical support of the Experts. It is fair to say that PWCT established almost an entire training implementation system from scratch during the Project period. However, to build the capacities of the C/Ps, it is necessary to keep implementing the training courses with monitoring by the Experts. At the end of the Project, the Experts are to have C/Ps implement the training courses on their own.

3-2. Summary of Evaluation Results

(1) Relevance: High

The relevance of the Project is high.

The political surroundings of the Project remain the same as at the time of the mid-term evaluation. The Project is in line with Sudanese government's policy. The final draft of the National Policy for Water Supply and Sanitation of October 2009 refers to human resource development for water supply as one of its priorities. The Quarterly Century Strategic Plan for 2007-2031 stresses the importance of training. The PWC 5-year plan (2007-2012) states that PWC should support SWC at the state level in training.

The Project is also in line with the Japanese ODA policy. The country assistance program for Sudan of the Japanese ODA (2008) stipulates water and sanitation as two of the focal assistance sectors. TICAD IV also addressed effective water resource management and access to safe water and sanitation facilities.

The Project targets the urgent needs for sustainable water supply in Northern Sudan. The training of the water supply sector in Sudan was limited for more than 10 years. The Project meets the training needs in the water sector in Northern Sudan. The themes of the training courses were confirmed as the urgent needs of the states in the field surveys by the Project team. The contents of the courses were developed based on these field surveys and the interviews with the trainees after the training courses. The field surveys also identified other specific needs in some SWCs that PWCT needs to consider in planning courses in the future. However, since not enough information of SWCs has been collected so far, the Project team plans to collect it by the end of the Project.

The Project applied the ToT system by training of one personnel member on each field at each SWC who later trains his or her colleagues. Given the large area and demands of each state, it was not possible for ToT to cover all the demands while equipment and the training system at SWCs were inadequate. It is necessary in the future to train at PWCT more personnel of each state.

The Project matches the needs of PWC and PWCT. In 2007, the PWC 5-Year Plan stated that PWC should support SWCs by training. That is why PWCT was established. The Project helps PWCT establish the training implementation system. UNICEF helped PWC construct hand pumps and maintain them for more than 20 years. The water supply facility course of the Project complements this support with a multiplier effect.

Japan has technical advantage in water supply sector, and also has excellent training facilities. Japan has high-level water supply technologies which can be adapted to the current water supply situation in Sudan.

(2) Effectiveness: High

The effectiveness of the Project is high.

The Project Purpose will mostly be achieved with some challenges. The training implementation system is almost complete and the C/Ps acquired abilities to implement, plan, and administer training courses. Meanwhile, it will take time to finalize organizational arrangements of PWCT such as regulations and budget management and accounting procedures. It also takes time for C/Ps to master all the steps of training implementation and management so that they can control the quality of lectures. For proper implementation of training courses, a new training center must be constructed.

The three Outputs help achieve the Project Purpose. Planning, implementing with feedback for further improvement, and managing the training courses are the necessary and sufficient elements to establish the implementation system of training courses.

The important assumptions to achieve the Project Purpose, i.e. 'Budget for the Center is secured continuously and the structure of the organization is not changed dramatically' have been fulfilled so far. Since the Project started, 90% of the proposed budget by PWCT has been approved on average. The PWCT budget was increased every year, which shows the high concern of the Ministry of Irrigation and Water Resources about the Project and the strong support of PWC.

(3) Efficiency: High

The efficiency of the Project is high.

All the three Outputs were mostly achieved. While the C/Ps and PWCT had no experience in implementing training courses, the technical support of the Experts to C/Ps was efficient enough to enable the C/Ps to plan, implement, and manage training. However, it is necessary to monitor the work of the C/Ps even after the Project period to ensure that they can properly conduct the work by themselves. Meanwhile, the activities mentioned in the PDM were generally adequate to achieve the Outputs.

After the first year, the Project concentrated on arranging the organization of PWCT and preparation of the training courses. 18 training courses were held in a year and half and six more training courses are to be held in the remaining six months. Given the intensive schedule of training courses in two years, it is fair to say that the Project implemented the activities efficiently.

As for the important assumptions to achieve outputs, the first assumption, i.e. 'Trainees in the course for instructions will stay and continue working at the Center as instructors' is not clear on who the trainees are in the course for instructions. The record on the second assumption, i.e. 'Staff members of the Training Center will continue working at the Center without transfer', is mixed. Six C/Ps were replaced in the first period of the Project as they were unable to fulfil their mandates, which hindered the efficient technical transfer of the Project. However, the new, younger C/Ps kept working for the rest of the Project period. Hence this assumption was mostly fulfilled.

The Experts have a good working relationship with C/Ps. As a result, they gained the trust of C/Ps. It also contributed to the efficiency of the Project.

(4) Impact: High

The expected impact of the Project is high.

The Overall Goal is expected to be achieved with several conditions. The capacity building of 7 core personnel at each state has already started. Some trainees already conducted transfer their knowledge and techniques to other colleagues at SWCs. By teaching other colleagues they would ascertain their knowledge and technique, so that their capacity would be developed.

As to the institutional capacity of water sector in general, under the National Water Policy which put importance on training, the development of PWCT Master plan is underway with the support of Experts, which is the positive impact of this Project. The field survey in August 2010 revealed that, as positive by-products of the training, several databases were developed in three states, and seven wells were rehabilitated. However, most of the trainees faced the problems of limited equipment and facilities for training, although most of the DGs of SWCs urge the importance of the training. The difference among the SWCs on conducting technical transfer by the trainees lies in how much importance the DG puts on training-related issues and the availability of the total budget for water supply. In Gedaref state, the training facilities were constructed with necessary equipment, which could be a model for other states. Three states also plan to construct training centers. The DGs are interested in applying the techniques and knowledge from the PWCT training to their water supply plan regardless of the scale. Moreover, for developing institutional capacity for stabilizing water supply in Northern Sudan, it is necessary to address other issues such as organizational structure of PWC and SWCs for effective water administration, effective tariff scales, financial management, and information management.

Hence the achievement of the Overall Goal will depend not only on the availability of the budget for training courses and for water supply in general in Northern Sudan, but also on the above-mentioned issues.

(5) Sustainability: Moderate to High

The expected sustainability of the Project is moderate to high with several challenges.

In the political and institutional aspects, the current draft National Water Policy is expected to be

finalized without change in the importance of human resource development in water supply. The PWCT Master Plan describes the long term plan of the PWCT activities and suggests the principle functions to be realized because of the high interest of the Ministry of Irrigation and Water Resources and the strong support from PWC. Moreover with the support of the Project PWCT enabled quick improvement which is highly evaluated in terms of sustainability.

3-3. Factors enabling the realization of positive effects

Followings are the factors enabling the realization of positive effects.

- (1) Good communication between C/Ps, Experts, and JICA contributed to smooth implementation and achievement of the Project Purpose.
- (2) Strong support of DG of PWC to the Project.
- (3) Ownership development and effective feedback from the good C/Ps trainings in Japan
- (4) By increasing the number of implementation of training courses C/Ps develop their capacity of management and implementation of the training courses and create trust between Experts and C/Ps.
- (5) The mutual trust by both parties creates further development of the Project.

3-4. Factors obstructing the realization of positive effects

Followings are the factors obstructing the realization of positive effects.

- (1) Since they had not have the similar experience, C/Ps have had difficulties in finding problems, time management, and evaluation of the course, etc.
- (2) Since PWCT budget belongs to PWC, the budget management of PWCT is sometimes difficult, such as in sudden payment.
- (3) Some SWCs which have problems of paying fee and transport for the course could not send the trainees.
- (4) Since most of the SWCs don't have equipment and facilities for training, the technical transfer could not be conducted even with the trainees' efforts.

3-5. Conclusions

Conclusion of this Evaluation is as follows.

The Project purpose will be achieved by the termination of the Project.

The Overall goal is expected to be achieved with several conditions.

On the five evaluation criteria the evaluation results of the Project is generally high.

- The relevance of the Project is high and its effectiveness and efficiency are also high.
- The implementation process is mostly good with a few issues to concern.
- Impact of the Project is high with several conditions.
- In order to sustain the training implementation, there are several challenges to overcome. Hence the sustainability of the Project is moderate to high.

PWCT achieved quick progress with strong ownership and leadership of the DG of PWC and Director of PWCT, intensive support from JICA Sudan Office, and effective management of the Project.

In order to enhance the effect of the training PWCT should support to establish the training units in SWCs so that they could conduct their own training, which could be supported by PWCT.

3-6. Recommendations

The Evaluation team recommends that the Sudanese side and JICA consider the following concrete actions to be taken by the termination of the Project, and after the Project, respectively, as follows:

3-6-1. Recommendations by the termination of the Project

- (1) Conduction of training courses by C/Ps themselves

C/Ps should conduct the remaining training courses on their own initiatives with the least involvement of Japanese Experts in order to enhance human and institutional capacity for sustainability.

- (2) Compilation of Human Resource database of all the SWCs

PWCT should compile Human Resource database of all the SWCs in order to grasp the precise training needs so that they could plan the new training courses to be implemented after the completion of the Project.

3-6-2. Recommendations after completion of the Project

(1) Expansion of the training capacity of PWCT

The current training capacity of about 25 trainees at one time based on the limited accommodation capacity is too small compared to the vast demands of the SWCs. The capacity in terms of facilities, budget and human resources of PWCT should be expanded.

(2) Completion and authorization of mid- to long-term development plan of PWCT

The mid- to long-term development plan, which has been elaborated by PWCT, should be completed and authorized by the Sudanese government.

(3) Diversification of training programmes

To respond to diverse needs of SWCs, PWCT should initiate much more training programmes on various engineering topics, with different technical levels, and on administrative programmes as well, in such topics as project planning, financial management, water tariff structure, etc.

(4) Independent bank account for PWCT budget

For the effective and efficient budget management PWCT should have independent bank account.

(5) PWCT's support to establish training unit in SWCs

PWCT should provide continuous support to SWCs in institutionalizing a training unit for the effective dissemination of knowledge and skills of water supply services to various levels of SWCs personnel. The function of the training unit includes effective feedback of the results of the technical transfer and the training needs of SWCs to PWCT.

(6) Effective utilization of the manuals by PWCT staffs

PWCT staffs should utilize the management manuals for the effective management of PWCT. Those manuals should be revised properly, whenever it is necessary.

3-7. Lessons Learned

(1) Positive elements to achieve the quick progress of PWCT development

There are several positive elements which contributed jointly to enable the quick progress of the Project as follows,

- Strong ownership and leadership of DG of PWC and Director of PWCT
- Long assignment period of the leader of Japanese Experts
- Intensive support from JICA Sudan Office
- Ripple effects provided by supporting to other related JICA project (Darfur project)

(2) Positive outcomes by dividing one training course into several times

Some positive outcomes were earned by dividing one training course into several times as follows:

- Intensifying mutual understanding between trainees, Experts and course coordinator by increasing occasions of contact during the training period.
- Enhancement of capacity development of course coordinators by increasing the managing opportunities of training courses.
- Trust building between Course coordinators and Experts by increasing occasions of technical transfer in management of training courses.
- Encouragement of busy trainees to attend the courses by limiting the length of each training period into 2 weeks.