

Republic of Sudan

FY2016 Ex-Post Evaluation of Technical Cooperation Project

“The Project on Human Resources Development
for Darfur and the Three Protocol Areas”

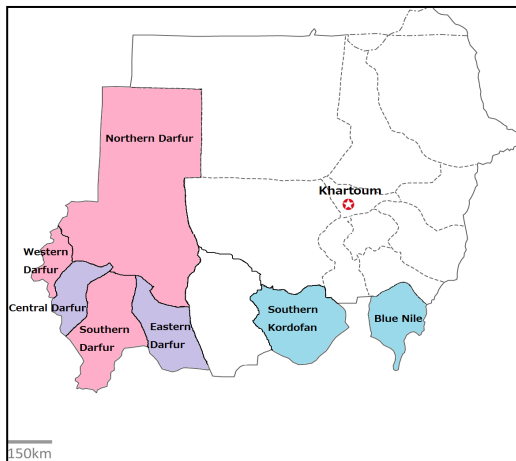
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0. Summary

This project was implemented to improve the service delivery capacity of related organizations in water supply, health and vocational training sectors in Darfur states and the Protocol Areas in Sudan, thereby contributing to residents' enhanced access to public services. Although the development of conflict-affected areas as well as improvement of water supply, maternal health and vocational training sectors are generally consistent with the country's policy and are highly consistent with the development needs and Japan's Official Development Assistance policy, there are some issues with appropriateness in project planning and approach. Therefore, the relevance is fair. While the project purpose was partially achieved in the water supply and health sectors, it was not achieved in the vocational training sector. This is because monitoring capacity was not sufficiently improved, and the project targeted multiple sectors and states although it was so-called “remote-controlled project.” Therefore, achievement of the project purpose is fair. The achievement of the overall goal remained to be medium because achievement of the project purpose was fair and, as for access to public services, the components to improve capacities, technologies and institutional buildings were not included, except for those concerned with the pilot activities, training of trainers (TOT) for the pilot activities, equipment provision and coordination capacity enhancement intended through Output 1. As a result, effectiveness and impact are fair. On the other hand, even though the project cost and the project period significantly exceeded the plan, the excess does not match the increase of the target area and the increase of outputs through modification of the project plan during the implementation period. Thus, efficiency is low. There are some problems regarding sustainability, since sustainability from organizational, technical and financial aspects depends on the target states, although sustainability in terms of policy and institutional aspect is high, so sustainability is fair. In light of the above, this project is evaluated to be unsatisfactory.

1. Project Description



Project Location(s)

(The blue color: the Protocol Area; pink and purple: Darfur states; and purple: with support only in health sector)



A graduate of the short-term training at carpentry work at his workshop

(Kadugli, South Kordofan State)

1.1 Background

In Sudan, “North-South Comprehensive Peace Agreement” was effected in 2005, followed by separation and independence of South Sudan in July 2011. However, the conflict between the two countries continued, as the negotiations on the attribution of Abyei and fixing borders, etc. did not make significant progress. Although peace agreement was concluded with some of the anti-government forces in the Darfur conflict, many anti-government forces continued trying to overthrow the government. The conflicts concerning with resources and lands among residents on various levels continued, and the number of new Internally Displaced Persons continued to be increased. In South Kordofan state and Blue Nile state, where North-South civil war was bitter, the armed conflict between the government army and the anti-government forces continued, while the situation was stabilized in 2009. In these states, maternal health, access to safe water and access to education (vocational training) were in worse condition compared with other states in Sudan. In response to this continuing situation, this project was planned and implemented.

1.2 Project Outline¹

Overall Goal		Access to public services for water supplies, health (maternal cares) and vocational training is improved in three Darfur states, Blue Nile and Southern Kordofan States.
Project Purpose		Capacities of service providers for water supplies, health (maternal health) and vocational training are improved in three Darfur states, Blue Nile and Southern Kordofan States.
Output(s)	Output 1	Coordination capacities of the state governments are strengthened through management of pilot activities and training programs.
	Output 2	Human resources for water supplies, health (maternal health) and vocational training are improved through the implementation of pilot activities and training programs.
Total cost (Japanese Side)		1,436 million Japanese yen
Period of Cooperation		June 2009–May 2013 (4 years) (extended period: June 2012–May 2013)
Implementing Agency		Ministry of Federal Governance, Government of National Unity (at the time of ex-ante evaluation): Later, as the result of government organizational reform, it became the Higher Council for Decentralized Governance (HCDG). At the time of ex-post evaluation, it became the Federal Governance Chamber (FGC).
Other Relevant Agencies / Organizations		<ul style="list-style-type: none"> • State Water Corporation (SWC) • State Ministry of Health (SMOH) • State Ministry of Education (SOME) and Technical School (TS), etc.
Supporting Agency/Organization in Japan		None
Related Projects		<p>【Technical Cooperation】</p> <ul style="list-style-type: none"> • Human Resources Development for Water Supply (2008–2011) • Frontline Mother and Child Health Empowerment Project in Sudan (2008–2011)

¹ The citations of the PDM are transcribed exactly as spelled or presented in the original sources.

	<ul style="list-style-type: none"> • Project for Strengthening Vocational Training (2011–2013) • The Project for Strengthening Peace through the Improvement of Public Services in 3 Darfur States (2015–2019) 【JICA Grant Aid Project in collaboration with UN agencies】 • The Project for Infectious Diseases Prevention for Children (collaboration with UNICEF) (2010–2012, 2013) • The Sudan Disarmament, Demobilization and Reintegration Programme (UNDP)
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1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the Terminal Evaluation

It was assessed that the project purpose would be achieved by the end of the project duration. The staff’s skills and knowledge improved through the implementation of the pilot activities, and administrative capacities also improved. Furthermore, the related state government departments supported the pilot activities in coordination with each other, which was confirmed through the amount of the disbursed budget of the local component borne by the state governments as well as their commitment of budget allocation for future activities.

1.3.2 Achievement Status of Overall Goal at the Terminal Evaluation

(Including other impacts)

It was assessed that the overall goal would be achieved to some extent. The pilot activities are the means of enhancing the capacities of the implementing organizations. At the same time, those activities can directly contribute to improving residents’ access to public services (i.e., the overall goal) from another aspect. A positive impact was seen because many residents have already received improved public services.

1.3.3 Recommendations from the Terminal Evaluation

The following recommendations were made at the terminal evaluation, which was implemented from January to February, 2013.

	Measures to be taken by the project's completion	Measures to be taken by the Sudanese side after the project's completion
Project Management	<ol style="list-style-type: none"> 1) Promote further communication between SMOF and other implementation agencies through the State Coordinating Committee (hereinafter, SCC) and regular reporting (e.g., monthly reports), and to strengthen the monitoring activities unit at the SMOF level 2) Conduct training to enhance the capacity of managerial staff of SMOF and implementing agencies 3) Inspect and manage the provided equipment regularly based on the inventory system 	<ol style="list-style-type: none"> 1) Further enhance management capacity in the provision of public services; introduce guidelines for monitoring/project management to appropriately introduce the PDCA (plan-do-check-act) cycle to CP and utilize it as an effective monitoring and evaluation tool 2) Further improve the inventory system (e.g., databases) and its proper management and utilization 3) Strengthen consultation and communication between HCDG and JICA, particularly on security issues and new activities 4) Further involve the local government staff and community and promote capacity building at the local/community level through on-the-job training (hereinafter, OJT)
Water	<ol style="list-style-type: none"> 1) Implement and complete the remaining pilot activities (rehabilitation work, etc.) and identify issues related to the water tariff collection system 2) Promote in-house training for the state and locality staff at SWC 3) Improve the database of existing boreholes by revising the survey format 	<ol style="list-style-type: none"> 1) Develop the capacities of locality staff (especially in surveying and planning) 2) Improve financing stability to expand the rehabilitation of boreholes; review, clarify issues with, and strengthen the water tariff collection system at the community level 3) Improve capacity for managing and procuring equipment 4) Promote borehole rehabilitation work in the highly prioritized areas shown in the state development policy; set up criteria for selecting sites for borehole rehabilitation
Health	<ol style="list-style-type: none"> 1) Start implementing in-service training for village midwives (hereinafter, VMWs) in cooperation with UNICEF based on the direct contract agreed upon between JICA and UNICEF on 31 January 2013. 2) Consider/recommend ways to follow-up/support supervision for VMWs by health visitors (hereinafter, HVs) 3) Extract lessons learned from in-service training of VMWs, 5S activities and TOT training for HVs and assistant health visitors (hereinafter, AHVs) 	<ol style="list-style-type: none"> 1) Consider/implement incentives or salaries for VMWs, the provision of consumables, and realistic and systematic supportive supervision for the VMWs' mental and financial empowerment 2) Consider capacity development for general practitioners, nurses, and midwives at the hospital where the VMWs will refer patients 3) Consider means of improving and strengthening the basic training for VMWs
Vocational Training	<ol style="list-style-type: none"> 1) Confirm the social and economic background of the admitted trainees at the time of selection for smooth monitoring and impact surveys after the training. 2) Conduct a tracer survey of past pilot activities 3) Develop the capacity of trainers through TOTs 4) Finish implementing the second pilot course at OVTC 	<ol style="list-style-type: none"> 1) Improve the efficiency of training provision in terms of cost effectiveness; support access to microfinance for graduates as a part of support for them to become entrepreneurs or employed 2) Develop clear policy on vocational training provided by technical schools (TSs), including a definition of short-term training; establish an effective implementation system for short-term vocational training courses at TSs that targets returnees in rural areas, ex-combatants, women, and internally displaced persons (IDPs) 3) Further collaborate with the Disarmament, Demobilization, Re-integration (DDR) program in providing vocational training for ex-combatants 4) Set up and implement targets for the training courses that reflect the demand of the market and trainees; consider contributions to social stability as much as possible at the time of implementation 5) Strengthen collaboration with industry sector, such as with craftsman unions, in planning and implementing training as well as promoting employment

2. Outline of the Evaluation Study

2.1 External Evaluator

Mayumi Hamada, Foundation for Advanced Studies on International Development

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: November 2016–March, 2018

Duration of the Field Study: March 4, 2017–March 20, 2017

August 5, 2017–August 10, 2017

2.3 Constraints during the Evaluation Study

The Japanese did not visit the target areas (i.e., Darfur states and the Protocol Area) due to security restrictions. Therefore, the evaluator implemented information collection at Khartoum, the capital, and El-Obeid, North Kordofan state, while the information collection at the target areas was implemented by the local consultant. There was difficulty in information collection on the whole.

3. Results of the Evaluation (Overall Rating: D²)

3.1 Relevance (Rating: ②³)

3.1.1 Consistency with the Development Plan of Sudan

The Five-year Plan of the Government of National Unity (2007–2011) set its goal as the “distribution of wealth, coexistence, legal order, as well as the integration and peace of Sudan based on the principle of peace and stability.” One of the prioritized strategies is “poverty alleviation and achievement of MDG objectives.” In this strategy, the balance of development between the central and local areas and the development of rural villages and the areas affected by conflicts are stipulated to be pursued. Specifically,, measures for health, water supply and education sectors, among others, are prioritized.

Regarding the health sector, one of the objectives described in the “5-year Health Sector Strategy (2007–2011)” is “improvement of maternal health,” in which training and skill improvement of midwives are emphasized⁴. In its subsequent policy, “National Health Sector Strategic Plan II (2012–2016),” it is also stipulated that improvement of maternal mortality ratio (152 per 100,000 births) as well as increase of skilled birth attendants (90% of births) shall be sought.

In water supply sector, one of the four objectives concerning with water supply and hygiene fields to be achieved by 2027 includes “sufficient and safe water supply all over the country, both in urban (150 L/person/day targeted) and rural (50L/person/day targeted) areas” in “25-Years Strategic Plan for Water Sector (2003–2027).” Also, in “Water Supply and Environmental Sanitation Policy (2010),” it aims at achieving 79% of residents who can consume water by 20L/day in rural areas by 2015, and 100% of those who can consume water by 50L/day by 2031. “Water, Sanitation and Hygiene National Strategic Plan (2012–2016)” sets improved access to safe water as a goal, aiming at 20L/person/day from water sources within 500m from the residence in rural water supply.

On the other hand, in the field of vocational training, specific strategy is not necessarily clarified, although enhancing training opportunity is stipulated in the medium

² A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

³ ③: High, ②: Fair, ①: Low

⁴ Goal 4, P64-65

and long-term plan of the government. Also, there is no policy grounds to justify short-term vocational training⁵. This is because formal technical education and vocational training (3 years each) provided in technical schools and vocational training centers are the basic institutions in Sudan, while the short-term training, supported by the project, is not a formal training curriculum. Based on the above, development of conflict-affected areas as well as 2 out of 3 sectors are highly consistent with the government policy. Thus, the consistency between the project and the development policy is generally high.

3.1.2 Consistency with the Development Needs of Sudan

Due to long-term conflicts, basic life environment of Darfur people was significantly deteriorated. It is highly consistent with the people's needs to improve capacities of service providers for the betterment of public services in water supply, health and technical and vocational training, which are directly linked with people's life. The target areas of the project (i.e., rural areas of the Darfur states and the Protocol Area) are the areas where the status of water supply was most serious in the country as well as the status of maternal health was poor. According to the Sudan Household Health Survey in 2006, both areas were positioned as the worst three in the country in terms of 25 health indexes out 26, such as child mortality rate, immunization rate, child health and protection, contraception, HIV, etc.⁶. Also, in 2008, access to drinking water in Darfur areas and Protocol Areas (rural areas) were 38–43%, except for South Kordofan, which were 15–20 points below the national average⁷. In the field of vocational training, improvement of school management and the facilities and equipment were recognized as an urgent task⁸. Furthermore, unemployment rate is high in many of the target states because they are conflict-affected areas⁹. Also, it is regarded that the needs for short-term training is higher than long-term one, taking the risk of recurrence of conflicts into consideration. From the above, consistency between the project and development needs is high.

3.1.3 Consistency with Japan's ODA Policy

Japan's basic policy of ODA toward Sudan¹⁰ pursues "consolidation of peace," and "supporting the people in conflict areas and reintegration of society" as one of the

⁵ The project completion report, Chapter 5

⁶ The project completion report, P21

⁷ The project completion report, P17-18

⁸ The ex-ante evaluation summary, P2

⁹ Although the national average of unemployment rate (15 years or more) was 13%, it was above national average in the four states except for Blue Nile state (4%), while the average of three Darfur states (17%) was high. (The project completion report, P6)

¹⁰ Japan's ODA by country 2009, (22 Sudan), P536-537

prioritized areas¹¹. The project set as its overall goal better access to public services by the residents in conflict-affected areas (i.e., the Darfur area and the Protocol Area). Also, it includes ex-combatants as a target in vocational training field. Thus, it can be said to be a project of “supporting the people in conflict areas and reintegration of society.” Thus, consistency between the project and Japan’s ODA policy at the time of planning is high.

3.1.4 Appropriateness of the Project Plan and Approach

Although the project targeted the conflict-affected areas where the Japanese experts had difficulties in visiting, it covered multiple sectors and multiple states. Besides, at the time of planning, allocation of budget from Sudanese government to the target areas were in difficult condition¹², while the implementing organizations were not regarded to be accustomed to conduct periodic monitoring¹³. With this reason, securing the budget and the establishing the monitoring system, that the project aimed at, were ambitious plan to be achieved within short period. Also, the access to public services (i.e., the overall goal) was not sufficiently achieved, because activities to enforce skills, organizational capacity and structure, other than the pilot activities, were not included in the plan. As the result, the flow of “input – output – outcome – impact” did not link well and there was a problem as a project plan. As a reason for these problems, it is pointed out that the project was planned and implemented without sufficiently being able to comprehend the latest situation of the target areas, and to plan based on analyzing specific problems, because sufficient information was not available due to security reasons at the time of ex-ante evaluation. Although the project was planned and implemented with emphasis on its speed as it targeted conflict-affected areas, it is considered that the project objectives were not achieved since it was planned and implemented without being able to obtain sufficient information at the time of ex-ante evaluation, thereby sufficient effect was not brought about.

In the meantime, it can be understood that there was a principle, at the time of planning, to “think while running” (i.e., to cope with issues by continuously planning with information obtained after commencement with information obtained after commencement)¹⁴. Actually, significant change is observed after project commencement such as expansion of the target areas, increase of inputs such as dispatch of experts, equipment provision and facility reinforcement, etc. However, it cannot be said that the

¹¹ The ex-ante evaluation summary, 5. Evaluation result of the five evaluation criteria, (1) Relevance

¹² The allocation of resources such as budget to the target areas was in short, as it did not reflect the needs of the areas where the basic social services were deteriorated by the conflicts (The ex-ante evaluation summary, P2).

¹³ At the time of the project completion, the custom to make monthly report had not been established, either (The project completion report, P110).

¹⁴ Interview with those who were concerned with the project

background and the aim of these changes were sufficiently shared even among those who were concerned with the project¹⁵, which possibility impeded effective operation and management.

In addition, some issues were observed in terms of the indicators to measure achievement of objectives in the Project Design Matrix (hereinafter, PDM), which shows the project plan. For example, the indicator for Output 1 (i.e., “the coordination capacities are improved” is set as “appropriate budgets are allocated”). It is unclear that in what situation we can judge that “appropriate allocation” is achieved. Also, it was not proper to measure the achievement only by this indicator, because the “coordination capacities” actually included the capacities other than acquiring budget, such as monitoring, etc. Furthermore, the indicator for the project purpose (i.e., “capacities of the service delivery are improved” was set as “activities are implemented in sustainable manner”). The indicator is not the one to be able to measure “to what extent the service delivery capacities are improved, as the result of achieving the project outputs through the activities.” In this way, some issues were observed in terms of concreteness, comprehensiveness and logicity. These points had not been properly corrected during project implementation. The modification of the project plan mentioned above were not appropriately reflected into the PDM, either. Thus, there is possibility that the PDM lacking concreteness and logicity had not been properly revised until the end of the project completion, and that modification of the project plan mentioned above had not been appropriately reflected into the PDM became hindrance to sharing the background and the aim of the repeated modification of the project plan among those who were concerned with the project.

Moreover, as the result of reignited conflict in South Kordofan state and Blue Nile state in 2011 during the project implementation period, emergency assistance was implemented in these two states in the fields of water supply (only in Blue Nile state), agriculture and income generation in 2012, as a part of the project. However, agriculture was out of the scope for this project. As for the support in water supply field in Blue Nile state, what was planned and implemented was not the restoration of the water supply facilities in the target village, supported by the pilot activities of the project, but the water supply facilities damaged by the conflict¹⁶. Thus, this emergency assistance is out of the causal chain of the “input – output – outcome – impact” of the project. In the meantime, at the time of implementing the emergency assistance, it was planned to revise the PDM to reflect the modification of the project plan. However, the PDM had not been revised to reflect this point until the project completion. Therefore, some issues are observed in

¹⁵ Interview with those who were concerned with the project

¹⁶ Interview with those who were concerned with the project

terms of project planning and its modification.

<Aspect of Project Evaluation in Conflict-affected Country and Area >

Since this project supports conflict-affected areas (i.e., the Darfur region and the Protocol Area), the following points were examined in accordance with “Manual for project evaluation in conflict-affected countries and areas” of JICA.

① Timeliness: The time of the project commencement corresponded with the time when related ministries of the Sudanese government began activities to fill the gap left after the exile of international NGOs in March 2009. From the perspective of peacebuilding, the timing of the project cooperation is regarded as being appropriate.

② Political and policy contribution: As a political significance from peacebuilding point of view, it is meaningful to show “fruit of peace” to the residents in the target areas, who felt a growing sense of unfairness to the government. The project brought Japan political and policy significance in a sense that mutual trust was established and strengthened¹⁷ between Japan and Sudan, who had become increasingly isolated in the international society.

③ Content of Activities: The project plan was designed to minimize influence by conflicts of the project, like conducting in-country training such as TOT and meetings where the related organizations joined together were held in Khartoum, the capital city, because it was difficult for the Japanese to visit the target areas.

④ Selection of areas and beneficiaries: The reason why the project targeted multiple states was to avoid further antagonism among the tribes. Due to lack of information, it could not be confirmed whether sufficient measures were taken with consideration to minimize unstable factors such as confrontation among tribes, etc., in determining the sites for repairing boreholes and selecting the participants of training and so on, in conducting the pilot activities.

⑤ Implementing structure: At the time of planning, many donors tended to avoid direct support toward or involvement with the Sudanese government. It was a general approach for those donors to directly support residents who would be benefitted, utilizing NGOs, etc., thereby avoiding the government body. The negative impact from a political and social aspect, caused by selection of the project counterpart and the implementing organizations, as well as the risk to foment unstable factors could not be confirmed.

As stated above, this project was generally relevant to the country’s development plan, and highly relevant to the development needs and Japan’s ODA policy. However, some issues were observed regarding appropriateness of the project plan and the approach.

¹⁷ Interview with and questionnaire to JICA Sudan Office (of those days)

Therefore, its relevance is fair.

3.2 Effectiveness and Impact¹⁸ (Rating: ②)

In this project, the PDM was established at the initial stage (PDM1) through the ex-ante evaluation and revised twice (in December 2009, when the target areas were expanded [PDM2] and in December 2011, when the project was extended [PDM3]). Although the target areas were expanded and the project duration was extended, there has been no significant change in the project purpose, the outputs, the overall goal and their indicators, except for minor revisions such as expression. On the other hand, the following issues were observed of the indicators, so they could not be utilized in this evaluation.

1) The indicators for the project's purpose and the overall goal show "continuation of the activities," so the objectives expected to be achieved cannot be measured (e.g., The indicator for "improvement of access to public services" was "Measures to improve access are taken in sustainable manner," etc.); and 2) The indicators for Output 1 and Output 2 were lacking in concreteness and do not show the scale to measure the achievement of the outputs (e.g., the indicators for "human resources development" and "skills and knowledge are improved," etc.).

The evaluator sorted out the levels of the indicators in accordance with the logic of the objectives as shown in Table 1, and conducted analysis accordingly. Meanwhile, the indicators were sorted out based on those established in the ex-ante evaluation as well as the "reference indicators" proposed by the project and approved by the Sudanese side at the terminal evaluation as much as possible. As necessity required, it was complemented based on the information acquired through document reviews and interviews with those who were concerned. The evaluator did not modify any of the numerical targets of the existing indicators.

¹⁸ Sub-rating for Effectiveness is to be put with consideration of Impact.

Table 1 Latest PDM (PDM3) and readjustment indicators

Narrative summary (PDM3)		Indicators (PDM3)	Indicators (utilized for this evaluation after readjustment)
Overall Goal	Access to public service for water supplies, health (maternal cares) and vocational training is improved in three Darfur states and Blue Nile and Southern Kordofan States.	Measures to improve access to public services for water supplies, health (maternal cares) and vocational education are taken in sustainable manners in three Darfur states and Blue Nile and Southern Kordofan States.	① Water supply: 20% increase in the number and proportion of residents who can access safe water in the target area ② Water supply: 20% increase in the amount of water use by residents in the target areas ③ Health: Reduction of the maternal mortality ratio in target areas ④ Vocational training: Employment rate of 50% or above among the graduates one year after completion of the training
Project Purpose	Capacities of service providers for water supplies, health (maternal health) and vocational training are improved in three Darfur states and Blue Nile and Southern Kordofan States.	The pilot activities are implemented in sustainable manners in cooperation with state governments and relating organizations.	① Water supply: Increase in the amount of water supply/pumping volume of rehabilitated boreholes ② Health: 50% increase in the number of beneficiaries who receive antenatal care by trained VMWs within one year after the in-service training ③ Health: 50% increase in the number of deliveries attended by trained VMWs within one year after the in-service training ④ Vocational training: Improvement in the final examination results at the end of the short-term training courses between the first and third training courses (target level for Darfur is 20%)
Output1	1. Coordination capacities of the state governments are strengthened through management of pilot activities and training programmes.	Appropriate budgets are allocated to implement the Pilot activities in water supplies, health (maternal cares) and vocational training in 3 Darfur states and Blue Nile and Southern Kordofan States.	① Planned costs that are 75% of the actual local cost for the Sudanese side ② A grade of 3.5 or above out of 5 on a self-evaluation of the project management system's improvement by those who are concerned with the project ③ Usage status of the guidelines and monitoring formats developed through the pilot activities in related organizations ④ Status of the periodic submission and sharing of monitoring reports
Output2	2. Human resources for water supplies, health (maternal health) and vocational training are improved through implementation of pilot activities and training programmes.	Skills and knowledge of service providers for water supplies, health (maternal cares) and vocational education are improved.	① Water supply: Assessment results for capacity improvement by the borehole rehabilitation team/management staff at SWC ② Health: Comparison of the pre-/post-test results of the in-service training for VMWs ③ Vocational training: Assessment results from management staff on trainers who received TOT, or self-evaluation results from trainers who received TOT

Source: Compiled based on the existing documents, etc. and the interviews with the former Japanese experts
Remarks: PDM3 was revised from PDM2 in December 2011.

3.2.1 Effectiveness

The indicators of the outputs and the project purpose and its achievement at the time of the ex-post evaluation are shown in Tables 2 and 3. The achievement of Output 1 (strengthening coordination capacities of the state governments through the management of the pilot activities and the training) is low, while the achievement of Output 2 (human resources development in the fields of water supply, maternal health and vocational training) is high. The achievement of the project purpose can be considered neither high nor low, since there is a shortage of data. Therefore, it is assessed to be fair. However, there was difficulty in acquiring data for quality and quantity.

The low level of achievement of Output 1 (strengthening coordination capacities), which includes enhancement of monitoring capacities, became a hindrance to achievement of the project purpose. In case the project implemented especially in a so-called “remote-controlled project,” like this project in which the Japanese experts have difficulty in visiting the target area due to security reasons and stay at the capital city to provide technical support for the project, it is important to strengthen monitoring systems to periodically grasp the progress of the activities and the issues, and to advise and support in a timely manner. For the sake of this, it was planned in the project to develop

and share the monitoring forms, submit and share the monitoring reports and conduct monitoring through organizing various meetings, inviting various stakeholders from the target areas and the related organizations to the capital city. However, the monitoring formats developed were not sufficiently utilized by the organizations, while the monitoring reports cannot be said to have been periodically submitted and shared (Table 2). Also, the accuracy of information was low, and much information was lost, as stated in the project completion report¹⁹.

There are multiple reasons why improvement of the monitoring capacities were not sufficiently achieved, even though the activities to strengthen the monitoring mentioned above had been planned for the project. First, according to the interviews with those who were concerned with the project, monitoring was not customary in the Sudanese implementing organizations, and they were lacking recognition on the importance of monitoring and knowledge on what should be recorded in what way²⁰. Second, according to the terminal evaluation report, there was an opinion²¹ that the guidelines and the formats developed by the project were difficult to use for those who were concerned with the project, since the usage was complicated. Thus, there is a possibility that they were too complicated for the users. Also, as for the allocation of Japanese experts, the system was to dispatch short-term experts, except for the Chief Advisor and Coordinator, and the period when there were no experts in a respective sector was long. A comment²² was obtained that this resulted in an inability to establish a monitoring system. The State Coordination Committee's actions were another cause. This committee had the important role of monitoring pilot activities at the project sites, but after the State Ministry of Local Governance was dissolved, the committee's responsibilities were unclear, and they were not held periodically afterwards. Moreover, the means of communication such as email, telephone and postal service are unstable, and English is not easily understood. Since it was a remote-controlled project, it is regarded to be difficult to provide detailed and prompt guidance, which requires a longer time until the project effect emerges compared with an ordinary technical cooperation project.

In addition to insufficiently enforcing monitoring capacities, the scope of the project was too big to comprehend the whole picture, which involved various organizations and targeted multiple sectors in multiple states, and was also a major cause to make the project management difficult. However, although the project was a "remote-controlled" project under the circumstances where communication infrastructure is poor and English

Table 2 Achievement of Outputs by the project completion (May 2013)

¹⁹ The project completion report, P45-46

²⁰ Interview with those who were concerned with the project

²¹ The terminal evaluation report, P12

²² Peacebuilding Department, JICA

Output	Indicators	Achievement	Level of achievement																		
Output 1: Strengthened coordination capacities of the state governments through management of pilot activities and training programs	① Comparison of the planned and actual local cost by Sudanese side: 75%	<p>*Data on the planned/actual budget throughout the project period were not obtained. Based on the data as of November 2010 (Project Completion Report, p. 47), comparison of the planned and actual cost were: 7.5% for water supply, 19.7% for vocational training, 42.8% for health, and 10.6% tota. This is far below the target of 75%.</p> <p>*The actual local costs borne by the Sudanese side totaled SDG1,594,433 for 4 years (or 35 million yen). This was 3.5% of the total local costs, including the costs covered by JICA (Project Completion Report, p. 120). The implementing agency's budget covered 80% of the project expenditures, while the State Ministry of Finance's budget—which was expected to cover the project's costs—only disbursed 20% of the costs. (Project Completion Report, p. 120).</p> <p>*In the original plan, the pilot activities for the three sectors were planned to be covered by the Sudanese side, but in fact JICA's grant through international organizations (UNICE and UNDP) was utilized for the pilot activities in the the health and vocational training sectors.</p>	×																		
	② A grade of 3.5 or above out of 5 in the self-evaluation on the project management system's improvement by those concerned with the project	<p>*The self-evaluations by the implementing agency's management staff (at three levels; general director, directors, and project managers of the pilot activities) confirmed the improvement of management capacity, based on a practical skill score of 4.2 and a management skill score of 4.3 (5: greatly improved, 4: much improved, 3: improved to some extent, 2: no change, 1: more problematic). This self-evaluation was conducted in December 2012 by rating without comments (Terminal Evaluation Report, p. 19).</p>	○																		
	③ Usage status of the guidelines and monitoring formats developed through the pilot activities by related organizations	<p>*Although the development of monitoring sheets was attempted several times, they have not been established. In addition, guidelines and formats for report writing were distributed during training in Japan in 2009, but there were opinions that the usage method was complicated and could not be used (Terminal Evaluation Report, p. 12).</p> <p>*At the SCC in December 2012, each executing agency agreed to submit a monthly report to SMOF, and the format for the monthly report was introduced (Terminal Evaluation Report, p. 12).</p> <p>*There was no common format for training record at the vocational training institutions, and only fragmentary information was remained. (Project Completion Report p. 45 - 46)</p> <p>*The monitoring sheet format is not utilized in the water supply sector (based on an interview with those who were concerned with the project).</p>	×																		
	④ Status of periodic submission and sharing of monitoring reports	<p>*The training on report writing was conducted after each implementing agency agreed to submit a monthly report regularly at the SCC in December 2012. Monthly reports were submitted from almost all target states in the water supply and health sectors. On the other hand, no reports were submitted at all from the vocational training sector (Terminal Evaluation Report, p. 12).</p> <p>*Even at SWC and SMOH, the information in the reports was inaccurate, and much information was missing. The reports produced were less than ¼ of planned (Project Completion Report, pp. 45-46).</p> <p>*The main monitoring tools were periodic reports and meetings, but they were not sufficiently conducted (Project Completion Report, p. 46).</p>	×																		
Output 2: Improved human resources for water supplies, health (maternal health), and vocational training through the implementation of pilot activities and training programs	① Water supply: Assessment results for capacity improvement by borehole rehabilitation team/management staff at SWC	<p>*In a survey on the capacity to implement borehole rehabilitation conducted at the expert field visit on January 27, 2013 (in West Darfur and North Darfur), the skill of the borehole rehabilitation team was measured through 1) self-evaluation by the borehole rehabilitation team and 2) evaluation by management staff who supervised the borehole rehabilitation team. In both states, the replies showed that the technical skills of the related staff improved at all points of the work process. However, it was also pointed out that equipment management and pump mounting/dismounting skills were insufficient in West Darfur (Terminal Evaluation Report, "Evaluation Grid," pp. 153-154).</p> <p>*In addition, 110 SWC staff participated in training in Sudan during project implementation (Project Completion Report, pp. 55-56).</p>	○																		
	② Health: Comparison of the pre-/post-test results of the in-service training for VMWs	<p>*The pre- and post-test results for the in-service training for VMWs that was conducted in collaboration with UNICEF are shown below. The post-test scores exceeded the pre-test scores in all states.</p> <table border="1"> <thead> <tr> <th>Name of state</th> <th>Pre-test</th> <th>Post-test</th> </tr> </thead> <tbody> <tr> <td>North Darfur</td> <td>24.6</td> <td>59.9</td> </tr> <tr> <td>West Darfur</td> <td>41.6</td> <td>70.0</td> </tr> <tr> <td>South Darfur</td> <td>34.9</td> <td>58.0</td> </tr> <tr> <td>South</td> <td>37.1</td> <td>57.9</td> </tr> <tr> <td>Blue Nile</td> <td>50.0</td> <td>66.8</td> </tr> </tbody> </table> <p>Source: Terminal Evaluation Report, p. 27</p>	Name of state	Pre-test	Post-test	North Darfur	24.6	59.9	West Darfur	41.6	70.0	South Darfur	34.9	58.0	South	37.1	57.9	Blue Nile	50.0	66.8	○
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South Darfur	34.9	58.0																			
South	37.1	57.9																			
Blue Nile	50.0	66.8																			
③ Vocational training: Assessment results by management staff on trainers who received TOT, or self-evaluation by trainers who received TOT.	<p>*Information about management staff evaluations on the participants of TOT was not obtained. On the other hand, according to an interview with the participants of TOT, all four interviewees gave a score of 5 - the highest score possible - regarding sufficient understanding of the training contents as well as the teaching methods of the TOT trainers. For the teaching materials, two of the four interviewees graded them 5, and the remaining two interviewees responded with 4. In addition, all of them responded that the capacity improvement by TOT was 5 (hearing ex-post evaluation). Therefore, the self-evaluation of TOT by the ex-participants was high. However, it is difficult to generalize the results because the sample size is small.</p> <p>*Over 90% of the teachers who attended TOT obtained a score over 70 on the test conducted after the training. However, according to the evaluation by TOT lecturers, some lecturers evaluated that the teachers' basic knowledge had improved but that their practical skills were still low (Project Completion Report, p. 87).</p>	△																			

Source: Compiled based on review of the documents

Remarks: The marks in the Level of Achievement mean as follows; ○ high △ medium × low
— not applicable

Table 3 Achievement of Project purpose by the project completion (May 2013)

Project purpose	Indicator	Achievement	Level of achievement																																																																					
To improve the capacities of service providers for water supplies, health (maternal health), and vocational training in three Darfur states and the Blue Nile and Southern Kordofan states.	① Water supply: Increased water supply/pumping volume of rehabilitated boreholes	<ul style="list-style-type: none"> The pumping capacity of 43 out of 49 boreholes rehabilitated by pilot activities in the three Darfur states increased (about 88%). Data on the pumping capacity of boreholes in South Kordofan and Blue Nile states were not obtained. This is because the project covered the renovation of related facilities such as fences and control houses surrounding the boreholes, but the rehabilitation of boreholes was not covered in South Kordofan and Blue Nile states. No information was obtained on which services improved at each facility due to the rehabilitation of the related facilities in those states at the time of the project completion. Reliable data on water supply volume was not available. 	Δ																																																																					
	② Health: 50% increase in the number of beneficiaries who received antenatal care by trained VMWs within one year after the in-service training	<ul style="list-style-type: none"> According to an interview with the targeted State Ministry of Health conducted during the ex-post evaluation study, the data on the number of beneficiaries who received antenatal care by trained VMWs by the project's completion are as follows. Only South Darfur state was able to obtain data throughout the project period. Based on the data from South Darfur state, the number of beneficiaries has decreased annually since 2009, the project start year, and the indicators on the left have not been achieved. <p style="text-align: center;">Number of beneficiaries who received antenatal care by trained VMW (Unit: persons)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> </tr> </thead> <tbody> <tr> <td>South Darfur</td> <td>36,321</td> <td>31,654</td> <td>21,438</td> <td>13,267</td> <td>11,124</td> </tr> </tbody> </table> <p style="text-align: center;">Source: Interview at South Darfur State Ministry of Health</p> <ul style="list-style-type: none"> On the other hand, according to the Project Completion Report (p. 70), the number of antenatal checkups conducted by VMWs in the target area (excluding West Darfur) in 2012 increased by 29% on average, compared to 2011. However, this number does not represent just the care by VMWs trained in the project. Although it is difficult to say whether the indicator was achieved from the data, it is also difficult to say that they have not been achieved because the available data and their reliability were insufficient. Therefore, the degree of achievement was medium. 		2009	2010	2011	2012	2013	South Darfur	36,321	31,654	21,438	13,267	11,124	Δ																																																									
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③ Health: 50% increase in the number of deliveries attended by trained VMWs within one year after the in-service training	<ul style="list-style-type: none"> Insufficient data on the number of deliveries with trained VMW were obtained. Although the data were not limited to the VMWs trained by this project, the total number of deliveries with VMWs in the target area (excluding West Darfur state) was 55,439 in 2011 and 60,251 in 2012, for an increase of about 8.6% (Terminal Evaluation Report, p. 27). While it is hard to believe that the indicator was achieved based on the data, it cannot be said that the indicator was not achieved because of the small amount of data whose reliability was not always sufficient. Therefore, the level of achievement was set to medium. 	Δ																																																																						
④ Vocational training: Improved final examination results at the end of the short-term training course: comparison among the 1st - 3rd training courses (target level for Darfur is 20%)	<ul style="list-style-type: none"> Although the final test results improved for all of the three courses implemented in South Darfur state, the average increase of the three courses was 11.4% and 1.1%, respectively, which was much lower than the target value of 20%. The third training in South Kordofan state was unable to be carried out due to the deterioration of security. The scores of the second test exceeded the scores of the first test in all six courses carried out, with an average increase of 4.7%. The average increase was low, except for the automobile course. <p style="text-align: center;">Final test results of the TS short-term training course in South Darfur</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">Score</th> <th colspan="2">Increase/Decrease (%)</th> </tr> <tr> <th>1st</th> <th>2nd</th> <th>3rd</th> <th>1st→2nd</th> <th>2nd→3rd</th> </tr> </thead> <tbody> <tr> <td>Automobile</td> <td>67.5</td> <td>76.5</td> <td>78</td> <td>13.3</td> <td>1.9</td> </tr> <tr> <td>Electrical</td> <td>67.5</td> <td>73</td> <td>78.5</td> <td>8.1</td> <td>0.7</td> </tr> <tr> <td>Machinery/Welding</td> <td>65</td> <td>73.5</td> <td>74</td> <td>13.1</td> <td>0.7</td> </tr> <tr> <td>Average</td> <td>66.7</td> <td>74.3</td> <td>75.2</td> <td>11.4</td> <td>1.1</td> </tr> </tbody> </table> <p style="text-align: center;">Source: Interview at Nyala Technical School</p> <p style="text-align: center;">Result of the final test of short-term training course in TS of South Kordofan</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Score</th> <th>Increase (%)</th> </tr> <tr> <th>1st</th> <th>2nd</th> <th>1st→2nd</th> </tr> </thead> <tbody> <tr> <td>Automobile</td> <td>80</td> <td>92</td> <td>15.0</td> </tr> <tr> <td>Electrical</td> <td>90</td> <td>91</td> <td>1.0</td> </tr> <tr> <td>Carpentry</td> <td>75</td> <td>80</td> <td>6.7</td> </tr> <tr> <td>Machinery/Welding</td> <td>85</td> <td>87</td> <td>2.4</td> </tr> <tr> <td>Construction</td> <td>90</td> <td>92</td> <td>2.2</td> </tr> <tr> <td>Tailoring</td> <td>92</td> <td>94</td> <td>2.2</td> </tr> <tr> <td>Average</td> <td>85</td> <td>89</td> <td>4.7</td> </tr> </tbody> </table> <p style="text-align: center;">Source: Interview at Nyala Technical School</p>		Score			Increase/Decrease (%)		1st	2nd	3rd	1st→2nd	2nd→3rd	Automobile	67.5	76.5	78	13.3	1.9	Electrical	67.5	73	78.5	8.1	0.7	Machinery/Welding	65	73.5	74	13.1	0.7	Average	66.7	74.3	75.2	11.4	1.1		Score		Increase (%)	1st	2nd	1st→2nd	Automobile	80	92	15.0	Electrical	90	91	1.0	Carpentry	75	80	6.7	Machinery/Welding	85	87	2.4	Construction	90	92	2.2	Tailoring	92	94	2.2	Average	85	89	4.7	×
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Remarks 1: The marks in the Level of Achievement mean as follows; ○ high Δ medium × low — not applicable

Remarks 2: Although the number of the rehabilitated boreholes is 50 in the completion report, it is 49 in the data provided by a former expert, which is regarded to be the original data for it.

is not well understood, the project was implemented with a target of implementing organizations in 3 sectors in 7 states (3 states at the time of commencement), in collaboration with the counterpart organization at the federal level, 2 international organizations, 3 JICA technical cooperation projects, and other local organizations. It is understandable that implementing this project was much more difficult compared with ordinary technical cooperation projects.

Moreover, according to the terminal evaluation report, other factors hindered the achievement of the project purpose as follows: deterioration of security (discontinuance of the pilot activities in the fields of water supply and vocational training in the Protocol Area), restructuring the 3 Darfur states into 5 Darfur states (problems occurred on who should take responsibility to bear the cost since the boreholes to be repaired belonged to new states), the limited use of equipment because the SWC was passive to bring the equipment to suburbs due to the risk that the expensive equipment in the water supply field (such as a probe) might be confiscated at the inspection by the government army. These also became impediments to achieving the project purpose²³.

In the meantime, being unable to strengthen the project monitoring became an obstacle when acquiring the data for the indicator of the project purpose.

<Aspect of Project Evaluation in Conflict-affected Country and Area >

To reduce influence, in case the important assumptions and preconditions are not met, the training and the meetings, where related organizations assembled, were held in Khartoum, the capital city, inviting them.

When a conflict reignited in South Kordofan state and Blue Nile state in 2011, measures were taken to reduce the risk by improving facility construction and rehabilitation of and equipment provision to the Obeid Vocational Training Center (OVTC) in North Kordofan state²⁴, which is next to South Kordofan state but outside the target states, to secure the environment for receiving the students from these two states in the field of the vocational training. However, it is not clear to what extent the reinforcement of the OVTC with its facility and equipment covered the suspension of activities in the two states, because the data of the number of participants targeted by the project and received by the OVTC was not confirmed.

²³ The terminal evaluation report, P37

²⁴ According to JICA Sudan Office (then), the facility and equipment support to the OVTC was completed in less than a year from the official request until implementation. A comment was heard that JICA was told by the Sudanese side, "A support of such a volume had never been implemented within such a short period in Sudan so far."

Table 4 Achievement of Overall goal by the time of ex-post evaluation (March 2017)

Overall goal	Indicator	Achievement	Level of achievement																																																																																													
Improved access to public services for water supplies, health (maternal care), and vocational training in three Darfur states and Blue Nile and South Kordofan states.	① Water supply: 20% increase in the number and proportion of residents who can access safe water in the target area	<p>• Insufficient data were obtained regarding access to safe water at the district (locality/village) level where the pilot activities (rehabilitation of boreholes and water yards) were done.</p> <p>• The following information was obtained regarding trends in the use of improved drinking water sources. Although there were variations by state, the average of the target states increased by 3.3%. Figures by gender were not obtained.</p> <p>• It is difficult to assess the achievement level of this indicator itself, but the achievement level for access to water is considered to be moderate, based on the ratio of the population that can use improved drinking water sources.</p> <p style="text-align: center;">Percentage of population who can use improved drinking (Unit: %)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th></th> <th>2010</th> <th>2014</th> <th>+/-</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>South Darfur</td> <td>69.4</td> <td>46.6</td> <td>-22.8</td> </tr> <tr> <td>2</td> <td>North Darfur</td> <td>59.8</td> <td>50.6</td> <td>-9.2</td> </tr> <tr> <td>3</td> <td>West Darfur</td> <td>44.5</td> <td>67.5</td> <td>23.0</td> </tr> <tr> <td>4</td> <td>East Darfur</td> <td style="text-align: center;">/</td> <td>45.1</td> <td>-</td> </tr> <tr> <td>5</td> <td>Central Darfur</td> <td style="text-align: center;">/</td> <td>50.6</td> <td>-</td> </tr> <tr> <td>6</td> <td>South Kordofan</td> <td>49.7</td> <td>60.1</td> <td>10.4</td> </tr> <tr> <td>7</td> <td>Blue Nile</td> <td>39.9</td> <td>71.3</td> <td>31.4</td> </tr> <tr> <td></td> <td>Average</td> <td>52.7</td> <td>56.0</td> <td>3.3</td> </tr> </tbody> </table> <p>Source: Based on Sudan Household Health Survey (SHHS-II) 2010, Sudan Multiple Indicator Cluster Survey, Final Report (2014) Note: East Darfur and Central Darfur states did not exist in 2010 because East Darfur state was isolated from South Darfur state, and Central Darfur state was separated from West Darfur State in January 2012.</p>			2010	2014	+/-	1	South Darfur	69.4	46.6	-22.8	2	North Darfur	59.8	50.6	-9.2	3	West Darfur	44.5	67.5	23.0	4	East Darfur	/	45.1	-	5	Central Darfur	/	50.6	-	6	South Kordofan	49.7	60.1	10.4	7	Blue Nile	39.9	71.3	31.4		Average	52.7	56.0	3.3	△																																																
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② [Water supply] 20% increase in water use by residents in the target areas	<p>• Reliable data regarding the boreholes rehabilitated by pilot activities or amount of water usage covering the target areas were not obtained.</p> <p>• The results of the interview survey with residents living near the boreholes rehabilitated by the project during the ex-post evaluation (12 households in South Darfur, 10 households in South Kordofan, 22 total households) are as follows. Although the whole trend was difficult to summarize due to the small sample size, many residents responded that their water use had increased, as all 12 households responded "greatly increased" in South Darfur state, while 8 out of 10 households responded either "greatly increased (1 household) or "increased" (7 households) in South Kordofan state. When asked about the amount of currently available water, many residents in South Darfur state responded that the amount of water available was sufficient (11 out of 12 households responded "very satisfactory"), but the residents in South Kordofan State responded that it was moderate or insufficient; thus, the trend was divided.</p> <p style="text-align: center;">Changes in amount of water consumed by household</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Question</th> <th colspan="5">South Darfur</th> <th colspan="5">South Kordofan</th> <th colspan="5">Total</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> </tr> </thead> <tbody> <tr> <td>How has the amount of water consumed by your household changed compared to before 2009?</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>12</td> <td>0</td><td>1</td><td>1</td><td>7</td><td>1</td> <td>0</td><td>1</td><td>1</td><td>7</td><td>13</td> </tr> </tbody> </table> <p>Legend: 1 Greatly decreased, 2 Decreased, 3 No change, 4 Increased, 5 Greatly increased, 9 I don't know</p> <p style="text-align: center;">Is the amount of currently available water sufficient?</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Question</th> <th colspan="5">South Darfur</th> <th colspan="5">South Kordofan</th> <th colspan="5">Total</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th> </tr> </thead> <tbody> <tr> <td>Is the amount of currently available water sufficient?</td> <td>1</td><td>0</td><td>0</td><td>0</td><td>11</td> <td>1</td><td>4</td><td>5</td><td>0</td><td>0</td> <td>2</td><td>4</td><td>5</td><td>0</td><td>11</td> </tr> </tbody> </table> <p>Legend: 1 Very insufficient, 2 Insufficient, 3 Medium, 4 Sufficient, 5 Very sufficient, 9 I don't know</p>	Question	South Darfur					South Kordofan					Total					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	How has the amount of water consumed by your household changed compared to before 2009?	0	0	0	0	12	0	1	1	7	1	0	1	1	7	13	Question	South Darfur					South Kordofan					Total					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Is the amount of currently available water sufficient?	1	0	0	0	11	1	4	5	0	0	2	4	5	0	11	△
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Is the amount of currently available water sufficient?	1	0	0	0	11	1	4	5	0	0	2	4	5	0	11																																																																																	
③ Health: Reduced maternal mortality ratio in the target areas	<p>• Although the maternal mortality rate in Sudan was 216 against 100,000 birth in 2010, formal data have not been obtained since then. Therefore, it is difficult to measure the level of achievement of the overall goal in the health sector with this indicator.</p>	-																																																																																														
④ Vocational training: Employment rate of 50% or higher among the graduates within one year after completing the training	<p>• At the time of the ex-post evaluation, none of the graduates had obtained a fixed job in Blue Nile state, and the target schools in the remaining four states did not obtain employment rates or the number of graduates employed. The target school in Blue Nile state responded that no graduates had obtained a fixed job because of limited employment opportunities in the labor market. However, the situation in the other states is not necessarily the same because activities were discontinued in Blue Nile state due to the recurrence of conflict in 2011.</p>	-																																																																																														

Source: Compiled based on review of the documents, documents provided by the former experts and interviews with the former experts

Remarks: The marks in the Level of Achievement mean as follows; ○ high △ medium × low

— not applicable

Based on this, the project purpose was partially achieved in regards to water supply and health, but it was not achieved for vocational training. Failing to sufficiently achieve the monitoring capacities included in Output 1 hindered the timeliness of periodic comprehension of progress and improved guidance by analyzing it. Hence, the project purpose (i.e., improvement of capacities of the service providers) was not sufficiently accomplished. It is also regarded that the scope was too big for one project due to the various stakeholders and the multiple target areas and sectors. This is also a reason why accomplishment of the project purpose remained medium. Thus, the project achieved at a limited level its project purpose because of the above reasons.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

The achievement of the overall goal (improvement of access to public services in the three target sectors) at the time of the ex-post evaluation was medium, as shown in Table 4.

As for the achievement of the 4 indicators, 2 were medium, and information for the other 2 did not exist²⁵. Thus, the indicators in the field of vocational training have not been achieved because the data did not exist. However, according to the impact assessment report²⁶, which was commissioned to a local consultant firm and implemented in July - August 2012, the graduates acquired jobs, and the income levels increased in some cases. It is possible that the project's effects also emerged at the ex-post evaluation. The achievement of the overall goal (improvement of access to public services), therefore, is assessed to be medium.

The following two points are regarded as major impediments. First, the improvement of implementing organizations' capacities of service delivery (the project purpose) remained at a medium level, which did not sufficiently lead to better access to public services. Second, the project to improve access to public services included pilot activities in the respective fields (rehabilitation of boreholes, in-service training of Village Midwives (hereinafter, VMWs) and short-term vocational training) and TOT, equipment provision required for the pilot activities, as well as enforcement of coordination activities expected by Output 1. However, components to enhance capacities, skills and institution-building of implementing organizations, other than those mentioned above, were not included. Therefore, the overall goal was not achieved.

²⁵ As mentioned in the initial part of the Effectiveness and Impact (3.2), the indicators of the overall goal were sorted because they could be hardly utilized for this evaluation study as they were inappropriate. They were sorted based on the indicators established at the time of ex-ante evaluation, as well as on the "reference indicators" proposed by the project at the time of terminal evaluation and agreed by the Sudanese side.

²⁶ JICA Technical Cooperation Project on: Human Resources Development for Darfur and Three Protocol Areas Impact Assessment Report (Partners in Development Services, 2012)

Regarding the effects of the project's outputs and purpose, the operation rate of the boreholes in the water supply field varies depending on the state in which the well is located. The operational rate has not increased; however, the number of boreholes has increased (Table 5). In the health field, the interviews were conducted with pregnant and parturient women who received services from VMWs trained by the project (26 persons) in South Darfur and South Kordofan. According to the interview results, the frequency of receiving prenatal care has increased, and their recognition of safety at delivery attended by VMW has been enhanced (Table 6). Even though these results are limited in terms of small sample size and of the number of target states where the interviews were conducted, it is opined that the in-service VMW training by the project contributed to the women's levels of safety recognition. In the vocational training filed, short-term training courses, which are informal courses, have been conducted if there is a request from donors, etc. (Table 7). It is believed that the training equipment provided to the target technical schools contributed to receiving request by donors, etc. for implementing the short-term training²⁷. However, implementation of short-term training is irregular.

Table 5 Operation rate of the boreholes

South Darfur state						South Kordofan state					
	2012	2013	2014	2015	2016		2012	2013	2014	2015	2016
Number of boreholes	161	166	176	179	181	Number of boreholes	N/A	372	416	455	460
Number of functioning boreholes	116	112	115	118	120	Number of functioning boreholes	N/A	352	391	413	429
Operation rate (%)	72	67	65	66	66	Operation rate (%)	N/A	94	93	91	92
North Darfur state						West Darfur state					
	2012	2013	2014	2015	2016		2012	2013	2014	2015	2016
Number of boreholes	360	360	360	362	376	Number of boreholes	75	80	85	95	110
Number of functioning boreholes	252	251	250	251	251	Number of functioning boreholes	50	59	60	65	75
Operation rate (%)	70	70	69	69	67	Operation rate (%)	67	74	71	69	68

Source: Interviews with SWCs

²⁷ Interview with the target technical school

Table 6 Interview results of the pregnant and parturient women who received care from VMWs trained by the project

Change in the frequency of receiving prenatal care (unit: persons)						Change in the recognition of safety at delivery (unit: persons)					
	Significantly decreased	Decreased	No change	Increased	Significantly increased		Significantly worsened	Worsened	No change	Improved	Significantly improved
SD	0	0	0	2	12	SD	0	0	0	1	13
SK	0	0	3	7	2	SK	0	0	3	6	3
Total	0	0	3	9	14	Total	0	0	3	7	16

Source: Interviews with the pregnant and parturient women at the time of the ex-post evaluation in South Darfur (14 persons) and South Kordofan (12 persons), 26 persons in total

Remarks: SD indicates South Darfur, and SK indicates South Kordofan

Table 7 Number of participants in short-term training after project completion

Name of state	2013	2014	2015	2016
South Darfur	210	20	3	-
South Kordofan	140	-	50	55
North Darfur	130	130	130	-
West Darfur	80	100	60	310
Blue Nile	75	150	150	140

Source: Interviews with the target technical school in the 5 states above

As stated, the achievement level of the overall goal was medium in the respective field, because improvement of the implementing organizations' capacities (the project's purpose) was medium, and the components for improvement of their capacities, skills and institution-building, other than the pilot activities in the respective field (rehabilitation of boreholes, in-service training of VMWs and short-term vocational training) and the TOT, equipment provision necessary for the activities, as well as improvement of coordination capacities were not included. Based on the above, the project has achieved a limited level of its overall goal.

3.2.2.2 Other Positive and Negative Impacts

The impact on the natural environment and the land acquisition and resettlement were not observed. Some positive impacts were observed, such as an enhanced trust among the residents toward the government and a strengthened trust²⁸ of the Sudanese government toward JICA, etc.

Interviews were conducted in Khartoum, the capital, with the Sudanese state government staff from the implementing organizations (6 persons) who participated in the project, and have been participating in The Project for Strengthening Peace through the

²⁸ JICA Sudan Office (then)

Improvement of Public Services in 3 Darfur States (March 2015–March 2019), which virtually succeeded the project. According to the interviews, some comments concerning the changes brought by the project included at an individual level, “technical capacity was enhanced,” “management capacity was improved,” and “capacities to find out problems and to prioritize tasks were improved” through the TOT and overseas training. At an organizational level, some pointed out as impacts that a “the number of high-quality staff increased through the TOT,” “staff worked more enthusiastically,” and “satisfaction with work increased.” Regarding vocational training, some comments were made such as “The high-level equipment provision of the project made the technical school attractive to NGOs and international organizations as an institution for them to commission vocational training.” Also, “The number of students increased. There were 900 applicants while the capacity is 400, and our school received 503 students as the result of selection.” The increase in the number of students is regarded as a positive impact caused by the equipment provision and the TOT. On the other hand, it brings about a risk of negative impacts from the aspect of training quality to accept an excessive number of students compared with the school’s capacity. However, this point could not be confirmed.

Thus, some positive impacts have been pointed out such as an enhanced trust among the residents toward the government and a strengthened trust of the Sudanese government toward JICA, etc. However, detailed information could not be acquired. Also, the increase in the number of students at the target technical school is regarded as a positive impact.

<Aspect of Project Evaluation in Conflict-affected Country and Area >

According to the terminal evaluation report, the project brought about an indirect positive impact on the conflict factor by changing the recognition of HCDG (currently FGC) and of the residents toward the government, as well as strengthening the relationship between HCDG and the state governments²⁹. Sufficient information could not be obtained on the specific status of these points at the time of the ex-post evaluation. No negative impact caused by implementation of the project was observed.

As stated above, implementation of this project brought about effects to some extent. Therefore, effectiveness and impact of the project have been assessed as fair. As for the project purpose, its achievement is fair, since strengthening of monitoring capacities included in Output 1 was not sufficiently achieved and the project targeted multiple sectors and states and various organizations, despite it being a remote-controlled project (the project’s purpose was partially achieved in the fields of water supply and health, but not achieved in the field of vocational training). Also, achievement of the overall goal in

²⁹ The terminal evaluation report, P38-39

the fields of water supply, health and vocational training is fair, because achievement of the project purpose was insufficient. There was a lack of project components to enhance capacities, skills and institution-building of the implementing organizations concerning better access to public services—except for the pilot activities in the respective fields and the TOT and equipment provision necessary for the activities—as well as the component to enhance coordination capacities expected by Output 1.

3.3 Efficiency (Rating: ①)

The achievement of the outputs was stated in the chapter on Effectiveness. Also, the major activities implemented during the project duration are shown in appendix. The inputs are explained below.

3.3.1 Inputs

The inputs until project completion are as follows.

Inputs	Plan	Actual (at the project completion)
(1) Experts	Long-term: 34MM Short-term: 13MM (TQM/5S) Total: 47MM	Long-term: 49.8MM Short-term: 76.8Mm Total:126.6MM
(2) Trainees received	Training in Japan: Project management and monitoring	(Training in Japan: country based, group training Project management, etc. Total: 30 persons
(3) Third-country Training	Management of technical and vocational training, Medical Health by 5S・TQM method	Morocco, Egypt, Rwanda and Malaysia. Peacebuilding such as DDR, Water supply, Health, Vocational Training Total: 30 persons
(4) In-country Training	Project management and monitoring, Budget management, Report-making and analysis, Maintenance and management of boreholes, Technical training of electricity, machinery and vehicles and school management, Improvement of medical health administration	Project management, Water supply, Health and Vocational training Total: 489 persons
(5) Equipment	Equipment for maintenance of boreholes, Equipment for Courses of Electricity, Machinery and Vehicles, Equipment for Health facilities and Office furniture, etc. Approx. 130 million Japanese yen	Equipment for the fields of Health, Water Supply, Vocational Training and Management. (Equipment for Water supply field such as vehicles and generators, etc. shares 58% of the total amount of equipment, which is the largest. Equipment for health field is midwifery kit set, etc.) 694 million yen
(6) Local cost support	18 million Japanese yen	216 million yen
(7) Local staff		9 persons (increased since 2012)
(8) Construction and rehabilitation of facility (OVTC)		Workshops, Accommodations for Trainers, Dormitory USD353,374
Japanese Side Total Project Cost	374 million Japanese yen in total	1,436 million yen in total
Sudanese Side Total Project Cost	Allocation of counterpart staff Project office space Project operational cost	Allocation of counterpart staff 83 persons Project office space

		Project operational cost Total: 35 million Japanese yen
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Remarks 1: MM stands for man month.

Remarks 2: The Sudanese side total project cost was SDG1,594,433. It was converted based on; SDG 1=JPY 22.305 (JICA monthly exchange rate for May 2013).

3.3.1.1 Elements of Inputs

Especially, local cost, equipment provision and dispatch of experts significantly increased compared with the plan. The comparison of costs is shown as follows. Out of the total cost for equipment provisions, the water supply field shares the biggest amount (approx. 58%), followed by the vocational training field (approx. 31%).

Elements of Inputs	Plan	Actual	Comparison
Local cost support ³⁰	18 million Japanese yen	216 million Japanese yen	1,200%
Equipment provision	130 million Japanese yen	694 million Japanese yen	534%
Dispatch of Experts	34M/M	126.59M/M	372%

In this project, two states in the Protocol Area (South Kordofan and Blue Nile) were included in the target locations after project commencement. The required amount of inputs can increase for the additional states.

However, it has not been assessed if the increased costs borne by the Japanese side counterbalance the increase of outputs caused by the inclusion of the additional target areas for the following reasons:

- 1) The cost for the pilot activities were to be borne by the Sudanese side, while the cost for TOT and the equipment were to be borne by the Japanese side with local cost support.
- 2) Out of the total equipment costs, which showed a significant increase, the water supply field shared 58%. However, large equipment was provided only for the 3 Darfur states.
- 3) Due to the reignited conflict in 2011, the activities in water supply and vocational training in the Protocol Area were suspended.

However, the large equipment in the water field provided to the 3 Darfur states³¹ was utilized for the pilot activities (the rehabilitation of boreholes), contributed to the capacity development of the water supply personnel (Output 2) and conducted TOT. Also, it

³⁰ Major items of expenditure were general operational cost, contracted work (local consultant), honorarium, airfare, etc. (JICA internal document).

³¹ Major equipment includes borehole cameras, air compressors, water pumps, generators, etc., which are required for rehabilitation of boreholes by airlift system, as well as crane trucks for conveying equipment and materials. This equipment provision cost was about 100 million yen for each SWC in Darfur (The project completion report, P62).

contributed to achievement of the project purpose, as the pump volume (an indicator for the project purpose) increased at 88% of the all the rehabilitated boreholes in Darfur.

On the other hand, since specific content and the targeted level of human resource development by Output 2 are not clear, it is unknown whether fostering personnel who can rehabilitate boreholes utilizing large equipment in the water supply field had been planned. Also, without revisions following the project's commencement, the objectives and the indicators remain unclear. It is regarded that the amount of input costs has increased, leaving clarification of the objectives and modification of the plan insufficient.

The drastic increase of the local cost support by the Japanese side makes it appear that the project was planned and implemented without being able to sufficiently grasp the problems and specify the countermeasures, because on-site information collection at the target areas could not be conducted due to security reasons at the time of planning. In the meantime, the emergency assistance³² (170 million Japanese yen) provided in the fields of water supply, agriculture and income generation contributed to the increase in project costs on the Japanese side in 2012. This assistance was implemented from the framework of this project to cope with the reignited conflicts in Blue Nile and South Kordofan. In the water supply field, in regard to emergency assistance, repair and rehabilitation of water supply facilities were conducted in Blue Nile in collaboration with Blue Nile SWC. In the agriculture field, emergency assistance provision of improved seed and agricultural tools to ex-combatants was implemented in Blue Nile and South Kordofan, while in the income generation field, training for IDPs and distribution of starter kits³³ were conducted in both states. In both fields, assistance was provided in collaboration with FAO and the Japan International Volunteer Center (JVC)³⁴. The emergency assistance mentioned above lacked direct connection with the outputs of this project as mentioned in the chapter for Relevance. The assistance was not connected with the output or the project's purpose and, therefore, further decreased efficiency.

Meanwhile, TOT in the 3 fields was conducted with the cooperation of other JICA technical cooperation projects that were being implemented during the same period³⁵.

³² The details are as stated in 3.1.4 Appropriateness of the Project Plan and Approach in the chapter of Relevance.

³³ As for the specific items of the assistance in the field of income generation in collaboration with FAO, fishery kits, fishery nets, fish-processing sets, etc., were provided in Blue Nile, where fishery is flourishing, while cheese-making kits were provided in South Kordofan, where dairy farming is a major industry. In respective states, training was conducted on fish processing, cheese production, marketing, etc. (JICA internal document).

³⁴ JICA internal document

³⁵ In water supply field, TOT was conducted for the SWC staff by the "Public Water Corporation Training Center (PWTC)" with the cooperation of the "Human Resources Development for Water Supply Project". Currently, PWTC is renamed as the "Drinking Water and Sanitation Unit Training Center (DWST)". In the health field, TOT was implemented for Health Visitors (HV) and Assistant Health Visitors (AHV) for the sake of in-service training for VMW, with the cooperation of the "Frontline Mother and Child Health Empowerment Project in Sudan". In the vocational training field, TOT was conducted at the Khartoum 2 Vocational Training Center, etc., and received technical advice from the Supreme Council for Vocational

Since the beginning of the project’s planning stage, the intention was to collaborate with other existing projects from a program point of view for the sake of larger effects and better efficiency. It is believed that this was aimed at raising the efficiency of the overall assistance, from JICA to Sudan, by making the best of the human resources of JICA in Sudan. However, at the implementation stage, there was an opinion³⁶ that this goal led to the delay of project activities because the time and labor of the project experts were consumed with coordinating the schedule, which changed among respective projects since each had its own project plan. Another comment was heard that the situation was improved after JICA began to dispatch the experts of other projects with clear terms of references for this collaboration; although, the terms of reference were not clear for them at the initial stage³⁷.

The idea of aiming at achieving the outputs in collaboration with the other projects was excellent. However, at the implementation stage, it led to a delay in the activities, etc., and the project did not proceed as planned. This was caused because each project was not planned to coordinate with related projects, but support from other projects was sought after the project commencement. Also, the JICA local office did not take a role in coordinating these projects, but the project experts did.

3.3.1.2 Project Cost

The planned and actual amount of the cost borne by the Japanese side is 384% compared with the plan shown below. The actual amount borne by the Sudanese side was SDG1,594,433. Thus, the project cost from the Japanese side was significantly higher than planned.

Plan	Actual	Comparison
374 million Japanese yen	1,436 million Japanese yen	384%

3.3.1.3 Project Period

The project duration was extended by 1 year, which was 133% compared to the plan shown below. The extension was to allow for technical review and reexamination of the content of the pilot activities, which were behind schedule, for each state based on the difference in actual situations and capacities among the states³⁸, which were clarified until

Training and Apprenticeship (SCVTA) with the cooperation of the “Project for Strengthening Vocational Training”.

³⁶ Interview with those who were concerned with the project

³⁷ Interview with those who were concerned with the project

³⁸ Documents provided by JICA

then, as well as sorting out the activities and the project contents in preparation of the Phase 2 project³⁹.

As mentioned in 3.2.1.1, the project was planned to receive cooperation from JICA's other technical cooperation project, being implemented at the same period in all of the three fields. It is regarded that this is also a cause of the extension of the project, as much time was needed for coordination among the projects. According to interviews with those concerned with the project on the Japanese side, there was information that the Japanese experts were dispatched sporadically before the extension, and the coordination and collaboration among them was not sufficient⁴⁰. There is a possibility that this led to the delay of the activities and, thereby, leading to one of the causes of the extension.

Plan	Actual	Comparison
36 months	48 months	133%

<Aspect of Project Evaluation in Conflict-affected Country and Area >

Security instability significantly influenced the plan and the implementation of the project. At the planning stage, the project was planned based on information that could be acquired in the capital only, because information collection at the sites could not be conducted. Since the project commenced without clarification of specific needs, the cost (equipment, facility, dispatch of expert, etc.) significantly increased after commencement. At the implementation stage, the risk in terms of security was significant for conveying the need for large equipment in water supply fields to the 3 Darfur states. As a result, conveyance by air cargo became necessary, which increased transportation costs. Moreover, when the pilot activities in the vocational training field were suspended in the Protocol Area due to deteriorated security, construction and rehabilitation of facilities as well as equipment provisions were conducted in the amount of 34.57 million Japanese yen⁴¹ in order to mitigate the effect on the suspension, so the short-term training courses could be conducted at the OVTC in North Kordofan state, which is next to South Kordofan but the outside the target states. This led to a significant increase in costs. Although the increased cost for transporting equipment by air to the 3 Darfur states does not directly contribute to the increase in output; this cost increase is regarded as necessary, taking into consideration the risk of theft of the expensive equipment.

On the other hand, although the facilities and equipment were enforced at the OVTC, it could not be confirmed to what extent implementation of the short-term vocational

³⁹ Interview with the JICA Sudan Office (then)

⁴⁰ Interviews with and questionnaire through email to those who were concerned with the project on the Japanese side

⁴¹ USD353,374 (JICA monthly exchange rate of May 2013)

training courses were covered, since the record after the project completion could not be obtained at the OVTC⁴².

Based on this information, the project cost and project period significantly exceeded the plan, and the excess does not match with the increase of the target area during implementation and that of outputs due to modification of the plan. Therefore, efficiency of the project is considered low.

3.4 Sustainability (Rating: ②)

3.4.1 Related Policy and Institutional Aspects for the Sustainability of Project Effects

At the time of the ex-post evaluation, the “25-Year Strategic Plan for Water Sector” (2003–2027) in the water supply field, and the “25-Year Strategic Plan for Health Sector” (2003–2027) in the field of health have remained. Thus, a stable supply of water and promotion of maternal health improvement are given importance in terms of the Sudanese policy, even at the time of the ex-post evaluation. On the other hand, the midterm and long-term policies on technical education from midterm and long-term perspectives are not clear, even though enhancing a trainer’s capacity is pursued. In 2013, the “Policy for Technical and Vocational Education and Training” of the Ministry of Labor was compiled with the support of donors such as UNESCO, etc. However, at the time of the ex-post evaluation, it had not been approved by the cabinet. It is because of the difficulty of making consensus among the Ministry of Labor, which oversees vocational training, the Ministry of Education, which oversees technical education at the technical schools and the Ministry of Higher Education, which is responsible for the technical college. Thus, sustainability from a policy perspective in the field of vocational training is medium. Since policy support toward continuation of the activities conducted by the project will be unchanged in 2 out of 3 sectors, sustainability from policy and institutional aspects is generally high.

3.4.2 Organizational Aspects for the Sustainability of Project Effects

The change in the number of counterpart staff at the section in charge at the service providers (implementing organizations in the states) during the implementation period, as

⁴² The pilot activities at the OVTC (implementation of the short-term training courses) were planned twice, and the 1st course was conducted with 55 participants from December 23, 2012 to February 9, 2012. The 2nd course was planned for the duration from March 3, 2013, until March 31, 2013, and the recruit of participants was conducted. However, implementation of the 2nd training course had not been completed until the Japanese expert left the country. The cause of the delay is regarded that those who were concerned with the project concentrated on the construction and rehabilitation of the facilities, while the Japanese experts were out of the country, which led to a delay in producing equipment inventory for improvement of equipment management and in preparation of TOT for the OVTC trainers (JICA internal document). Although data on the implementation, including actual number of participants, was requested when the OVTC was visited, the data from the OVTC could not be obtained.

well as that after project completion are shown in Table 8. Out of the 17 target organizations, data for project duration and after-project completion could be attained on 9 organizations through interviews. A comparison between the number of staff during the project duration and after the project completion, showed that the number of staff increased at 2 organizations, decreased at 1, and remained almost unchanged at 6 others. Although accurate analysis is difficult due to the limited number of organizations for which data are available, it is agreed that the number of staff, in general, has been static. Therefore, it can be expected that stability will be maintained to a certain extent from the perspective of staff allocation in the organizations. However, information on the clarity of responsibility assignment could not be obtained.

On the other hand, the number of counterpart staff at the responsible organization to supervise the target states during project duration (the Federal Ministry of Local Governance at the project commencement, which was taken over by HCDG and then by FGC by the time of the ex-post evaluation) has been the same. However, 3 personnel is too few to conduct monitoring while coping with other broad-range work at the federal level, since the size of this project is large, covering 17 target organizations in 3 sectors in 7 states. The shortage of manpower has continued from project duration until the time of the ex-post evaluation, while this section does not have staff with expertise in the 3 sectors due to the inherent nature of the organization. With the reasons mentioned above, there is no organization on the Sudanese side that comprehends the status of continuing activities, securing budgets, emergence of effects and the transition of the project after the completion. Therefore, sustainability from an organizational perspective is assessed to be fair.

Table 8 Number of counterpart staff at the implementing organizations

(Unit: person)

	Project implementation period (June 2009 - May 2013)					After the Project completion			Trend
	2009	2010	2011	2012	2013	2014	2015	2016	
1.State Water Corporation									
South Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
North Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
West Darfur	3	3	3	3	3	6	6	6	↑
South Kordofan	11	11	11	11	11	4	4	4	↓
Blue Nile	8	8	8	9	9	8	9	9	→
2.State Ministry of Health									
South Darfur	2	2	2	2	2	2	2	4	→
North Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
West Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
East Darfur	↘	↘	↘	5	8	11	11	9	↑
Central Darfur	↘	↘	↘	N/A	N/A	N/A	N/A	N/A	↘
South Kordofan	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
Blue Nile	5	5	5	6	6	6	6	6	→
3.State Ministry of Education									
South Darfur	8	8	8	8	N/A	8	8	N/A	→
North Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↘
West Darfur	2	3	3	3	2	2	2	2	→
South Kordofan	8	8	8	N/A	N/A	N/A	N/A	N/A	↘
Blue Nile	30	30	30	29	29	29	30	29	→

Source: Based on the interviews with SWC, SMOH and SMOE

Remarks 1: The result of interviews on the change in the number of counterparts at respective organizations, as well as that of the same section after project completions are mentioned above. As for SWC, the number of technical staff, which was obtained most, was utilized because other staff numbers were not sufficiently obtained. Thus, it is possible that the number differs from the actual number of the counterpart.

Remarks 2: East Darfur and Central Darfur were separated from South Darfur and West Darfur, respectively, in January 2012. Since only the health sector included these 2 states in their target areas, the project targeted 5 states in the 3 sectors until 2011, while targeting 7 states in the health sector and 5 states in the water and vocational training sector since January 2012.

Remarks 3: The “trend” in the above table shows the increase/decrease between the number of counterpart staff members during project duration and that of the post-project completion with an arrow.

↑ means increase, ↓ means decrease, and → means almost no change.

Table 9 The number of counterpart staff members at the responsible organization at the federal level

(unit: persons)

	Project duration (2009.6–2013.5)					After the project completion			Trend
	2009	2010	2011	2012	2013	2014	2015	2016	
The Federal Ministry of Local Governance/ HCDG /FGC	3	3	3	3	3	3	3	3	→

Source: Questionnaire to FGC

Remarks: The trend in the above table shows the increase/decrease between the number of counterpart staff members during the project duration and that of the post-project completion with an arrow.

↑ means increase, ↓ means decrease, and → means almost no change.

3.4.3 Technical Aspects for the Sustainability of Project Effects

It is difficult to analyze the technical aspects for the sustainability as a whole, since information on the technical aspects of the implementation organizations in respective fields at the time of the ex-post evaluation is difficult to obtain due to security reasons in the target areas. According to an interview with stakeholders, the technical capacity of the SWC staff differs depending on each individual, which makes it difficult to assess the technical capacities of the SWC staff in general. Similarly, in an interview with the Drinking Water and Sanitation Unit Training Center (DWST), which conducted the TOT for the SWC in Khartoum and has been conducting training for SWC staff across the country, it was pointed out that the knowledge and skills of the participants of TOT significantly differed from person to person, making it difficult to compare with other states. Additionally, although information collection was conducted through interviews in the fields of health and vocational training, reliable information could not be sufficiently obtained. Thus, although the technical capacities in each field are not high, there is no reason to assess them as low. Therefore, sustainability from technical aspect is assessed as medium.

3.4.4 Financial Aspects for the Sustainability of Project Effects

As the result of interviews with each implementing organization in the target states, the transition of budgets of the organizations of which data from both project implementation and after completion are shown below. In the water supply field, data were obtained from 4 out of 5 states, and the surplus has been increasing in West Darfur (Table 10). Blue Nile experienced a deficit after project completion; although, financial balances are not known for the rest of the states due to a lack of information. In the field of health, information from 2 out of 7 SMOHs were obtained, and the 2 states are in deficit (Table 8). Also, in the field of vocational training, information regarding target technical schools from 3 out of 5 states were received. Among the 3 states, North Darfur's revenue and expenditures have been kept in equilibrium, as well as those for South Kordofan, except in 2011 and 2012. Thus, there seems to be no problem for these 2 states. As for Blue Nile, the balance between revenue and expenditure could not be analyzed due to a lack of data. It is difficult to grasp overall trends, as information is lacking in all the fields; although, there will be fewer concerns in the water supply field because of revenue from water fees, an independent financial source of SWC. As far as the data obtained, the vocational training field had the fewest organizations in deficit followed by the water supply field, and sustainability from a financial perspective was the lowest in the health field. There are, however, many target organizations from which data could not be

obtained or partially obtained in all of the three fields, which left concerns on the financial data management and financial management.

Some organization in water supply and health fields are in deficit and others show negative expenditures (Tables 10–12). These organizations compensate for deficits with donor support, and there is concern about the continuation of activities if these external supports are suspended. According to the United Nations Development Assistance Framework (hereinafter, UNDAF) for Sudan, \$842 million US dollars is expected to be provided to the social services field, which includes maternal health and water supply, and \$105 million US dollars to the field of economic development and poverty mitigation, which includes improvement of unemployment rates between 2018 and 2021, as shown as the target amount of donors' support by international organizations, as for the donor's future support. Thus, a certain amount of support is expected to be maintained⁴³. The sustainability from financial perspective is not high, but there is insufficient information to judge it is low. Therefore, sustainability from a financial perspective is low as a whole.

Some minor problems have been observed with the organizational, technical, and financial aspects. Therefore, sustainability of the project's effects is fair.

Table 10 The balance of budget of State Water Corporation

(Unit: Thousand SDG)

	Project implementation period (June 2009 - May 2013)					After the Project completion		
	2009	2010	2011	2012	2013	2014	2015	2016
Revenue								
South Darfur	N/A	N/A	18,052	N/A	N/A	29,341	38,156	51,316
North Darfur	N/A	14	14	23	21	38	45	49
West Darfur	5,600	8,750	11,800	15,950	18,000	19,200	21,250	26,500
Blue Nile	N/A	N/A	N/A	4,527	6,669	7,926	11,400	14,085
Expenditure								
South Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
North Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West Darfur	600	1,750	2,800	950	-7,000	-10,800	-23,750	-31,500
Blue Nile	N/A	N/A	N/A	6,147	10,439	16,678	N/A	21,891
Balance								
South Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
North Darfur	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West Darfur	5,000	7,000	9,000	15,000	25,000	30,000	45,000	58,000
Blue Nile	N/A	N/A	N/A	-1,620	-3,770	-8,752	N/A	-7,806

Source: Based on the interviews with SWC

⁴³ Sudan United Nations Development Assistance Framework (UNDAF) 2018–2021, P3–13, P16-19. In the UNDAF Results Matrix, which shows the overview of UNDAF's plan, improved maternal morality ratio as well as the increased ratio of households that can utilize improved water sources are set as the indicators for the field of social services, while an improved unemployment rate is set as the indicator for the field of economic development and poverty mitigation.

Remarks 1: As for the part where the amount of expenditure or balance is in red, it is actually compensated by support from donors, according to the interviews to SWC.

Table 11 The balance of budget of State Ministry of Health

(Unit: Thousand SDG)

	Project implementation period (June 2009 - May 2013)					After the Project completion		
	2009	2010	2011	2012	2013	2014	2015	2016
Revenue								
South Kordofan	27,366	24,973	27,204	31,428	36,720	N/A	N/A	N/A
Blue Nile	3,229	460	415	413	1,149	1,310	1,347	299
Expenditure								
South Kordofan	65,557	69,903	75,617	52,558	57,660	N/A	N/A	N/A
Blue Nile	16,347	19,395	23,518	25,509	39,475	18,684	50,685	49,929
Balance								
South Kordofan	-38,190	-44,930	-48,413	-21,130	-20,941	N/A	N/A	N/A
Blue Nile	-13,118	-18,935	-23,103	-25,096	-38,326	-17,373	-49,338	-49,630

Source: Based on the interviews with SMOH

Remarks 1: East Darfur and Central Darfur became separated from South Darfur and West Darfur, respectively, in January 2012.

Remarks 2: As for the part where the amount of expenditure or balance is in red, it is actually compensated by support from donors, according to the interviews to SMOH.

Table 12 The balance of budget of target technical schools

(Unit: Thousand SDG)

	Project implementation period (June 2009 - May 2013)					After the Project completion		
	2009	2010	2011	2012	2013	2014	2015	2016
Revenue								
North Darfur	40	45	47	49	70	80	119	180
South Kordofan	20	20	20	20	20	20	20	20
Blue Nile	N/A	N/A	N/A	15	15	17	21	35
Expenditure								
North Darfur	40	45	47	49	70	80	119	180
South Kordofan	20	20	N/A	35	20	20	20	20
Blue Nile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Balance								
North Darfur	0	0	0	0	0	0	0	0
South Kordofan	0	0	N/A	-15	0	0	0	0
Blue Nile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: Based on the interviews with TS

Remarks: The increase of revenue at the technical school in North Darfur in 2015 and 2016 is due to an increase in wages for staff as well as support from international organizations (UNDP, UNHABITAT, SAG and DDR) and international NGOs (Plan Sudan, Save the Children).

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented to improve the service delivery capacity of related organizations in water supply, health and vocational training sectors in Darfur states and the Protocol Areas in Sudan, thereby contributing to residents' enhanced access to public services. Although the development of conflict-affected areas as well as improvement of water supply, maternal health and vocational training sectors are generally consistent with the country's policy and are highly consistent with the development needs and Japan's Official Development Assistance policy, there are some issues with appropriateness in project planning and approach. Therefore, the relevance is fair. While the project purpose was partially achieved in the water supply and health sectors, it was not achieved in the vocational training sector. This is because monitoring capacity was not sufficiently improved, and the project targeted multiple sectors and states although it was so-called "remote-controlled project." Therefore, achievement of the project purpose is fair. The achievement of the overall goal remained to be medium because achievement of the project purpose was fair and, as for access to public services, the components to improve capacities, technologies and institutional buildings were not included, except for those concerned with the pilot activities, training of trainers (TOT) for the pilot activities, equipment provision and coordination capacity enhancement intended through Output 1. As a result, effectiveness and impact are fair. On the other hand, even though the project cost and the project period significantly exceeded the plan, the excess does not match the increase of the target area and the increase of outputs through modification of the project plan during the implementation period. Thus, efficiency is low. There are partially some problems regarding sustainability, since sustainability from organizational, technical and financial aspects depends on the target states, although sustainability in terms of policy and institutional aspect is high, so sustainability is fair. In light of the above, this project is evaluated to be unsatisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

None.

4.2.2 Recommendations to JICA

Since the monitoring capacities were not sufficiently enforced by the project, it is important to observe the progress of enforcement of monitoring capacities of the State Ministry of Finance (SMOF), which is being undertaken by the phase 2 project ("The Project for Strengthening Peace through the Improvement of Public Services in Three

Darfur States”) to support its further promotion⁴⁴.

4.3 Lessons Learned

Measures to be taken when information collection at the project site is difficult for project planning due to security restriction

In this project, the cost borne by the Japanese side significantly increased compared with the plan due to lack of information necessary for sufficient analysis of problems and for planning coping measures as the detailed planning study was conducted at the capital city due to security reasons. After the project commencement, as the needs became clearer, inputs such as human resources, equipment and facility were added as required, which resulted in a significant increase in cost from the Japanese side compared with the initial plan. Among others, some of the inputs, such as large equipment in water supply fields provided to 3 Darfur states, were observed to have contributed to the output and the project purpose. However, it is an issue of this project that the inputs were added without clarifying the aim of respective modification of the plan as well as being shared among project stakeholders, while leaving the concreteness of the plan insufficient. If conducting an ex-ante evaluation of a technical cooperation project in the target area is difficult due to security reasons, planning based on sufficient information collection and analysis by applying “step-by-step planning system” (commonly known as two-step method)⁴⁵, etc. is desirable. Also, when there is a significant change in the project plan compared with the initial one, it is desired to make a record of the change for keeping it, and clarify the aim of modification as well as the revised plan, including its objectives, etc., after revision so that they can be shared.

Clear setting of objectives and indicators and appropriate reflection of modification of project plan into PDM

In this project, there were some problems in terms of concreteness of the objectives and setting of the indicators of the PDM from the initial planning stage. However, these problems did not improve during the project duration. Additionally, in spite of the repeated changes in the project plan, the changes have not been reflected by the PDM. It is probable that these changes hindered common understanding of the project plan and its modification among those who were involved in the project. When designing a PDM, it is

⁴⁴ The project which succeeded this project (virtually the phase II of the project [March 23, 2015–March 31, 2019]). It targets the same sectors with almost the same implementing organizations, while it targets only 3 Darfur states (North, South and West.).

⁴⁵ In a JICA technical cooperation project, surveys and activities are conducted based on the temporary PDM in the former half of the project duration, and the project plan is determined with setting indicators of PDM (1st stage). For the rest of the duration, the project is implemented based on the temporary PDM. There is an example in which survey is conducted in the target area in the 1st year, and the indicators of the PDM is determined within 1 year after project commencement, while activities, etc. are revised if needed.

important to set objectives and the indicators appropriately, by sufficiently considering, for example, “What do we perceive as ‘the coordination capacity’ specifically?” and “What should become what condition in order for us to think that ‘the coordination capacity’ has been enhanced?” Whose method should we adopt, and in what way, for us to identify and assess. In case there is a problem in terms of clarity and logic of PDM, it is important to revise it during the implementation period to sufficiently analyze and examine the change, thereby revising the PDM appropriately.

Effects and points to be kept in mind during implementing activities in collaboration with other technical cooperation projects

The TOT of this project was conducted with the cooperation of the other JICA Technical Cooperation Projects, which were being implemented at the same period. In this project, it was intended to enhance effects and efficiency in collaboration with existing projects from the program point of view since its planning stage. However, there was a complicated allocation of experts, in the form of adding TOR to the experts of the other existing technical cooperation project. When a schedule change occurs at other related projects, much time and labor were required for the coordination made by the project experts, which resulted in the delay of activities. Thus, it did not sufficiently reach the enhanced effects and efficiency by collaboration as planned. However, the situation was improved since JICA started dispatching the experts with clarified terms of reference after sorting out the tasks of the project to be shared by the projects concerned. As for the reason why the excellent idea of maximizing effects and efficiency by collaboration with other projects did not produce sufficient effects as expected, it is believed that supports from other projects were pursued after the other projects were already planned, rather than planning all of the projects together under this concept. Also, it is considered as a cause to have chosen a system in which experts of this project take on coordinator roles, rather than members of the local JICA office. When a project is implemented in collaboration with other technical cooperation projects, it is essential to plan the program simultaneously with the whole group of projects, to examine how to interact with other projects, secure the terms of reference for the project and time required by other projects experts, and allocate a program officer who is responsible for monitoring the whole projects as a program and making coordination during implementation at the JICA local office.

Establishment of monitoring system and setting of project scope of a remote-controlled project

This project is a so-called remote-controlled project due to security restrictions. At the

time of the ex-post evaluation, no Sudanese organization specifically comprehended the transition of the activities as a whole after the project completion, and the access to the implementing organizations at state level was quite limited. Hence, there was difficulty in fully understanding activities completed by the implementing organization at the state level after project completion. This fact also means there are some concerns about sustainability from an organizational perspective, concerning the management of activities by the Sudanese side. This is due to insufficient achievement of monitoring capacity made during the implementation period, and also because this project had multiple concerned stakeholders as it targeted multiple sectors in multiple areas. Further, it is supposed that the project exceeded the scope able to be covered by one project. When a project, especially a remote-controlled project, is planned and implemented, it is desired not to broaden the target area and sector too much, but to focus instead on a size compatible with the counterpart organizations' post-project management.

Points to be kept in mind on the implementation of emergency assistance-utilizing framework of a technical cooperation project

When emergency assistance is provided, utilizing the budgetary framework of the ongoing project, it is necessary to be consistent between the logic of the “Input–Output–Outcome–Impact” of the plan of the ongoing project and the emergency assistance. There are two possible ways for coping with this: 1) Focus the scope of the emergency assistance by coordination with other donors, etc., to make its contents and areas align with the direction of the outcome and the impact of the existing project; or 2) Revise the plan to expand the target area or project component of the existing project to make the emergency assistance as a part of the existing project. However, in case the need for emergency assistance is not consistent with the existing project from the nature of the emergency assistance, careful decision-making is necessary after clarifying the difference between the existing project and the emergency assistance based on the objectives, contents, and the targets, etc.

Appendix Actual main activities

1. Water supply sector

(1) TOT : Training for staff

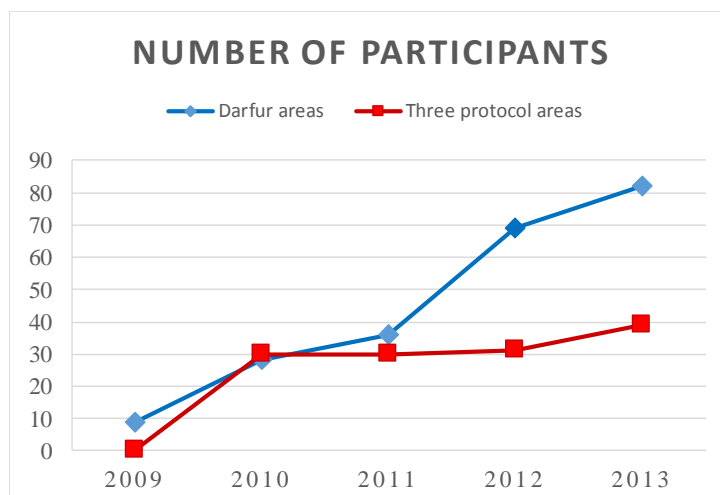


Figure 1 Number of participants from SWC in Darfur and the Protocol Areas (the total number)

Source: Project completion report P55

Note: Training in Japan and training in third country are included

(2) Pilot activities: Borehole rehabilitation work (project implementation period)

Table 1 Achievement of borehole rehabilitation work by May 2013

States / Areas	Target and level of achievement				
	Actual	Target (Original plan)	Level of achievement (%)	Target (Revised plan)	Level of achievement (%)
North Darfur	14	18	78	14	100
West Darfur	16	18	89	16	100
South Darfur	20	18	111	19	105
Sub total	50	54	93	49	102
South Kordofan	16	72	22	24	66.7
Blue Nile	6	5	120	5	100
Sub total	21	77	27	29	72
Total	71	131	54	78	91

Source: Based on the project completion report P51

(3) Pilot activities: Borehole rehabilitation work (after the project completion)

Table 2 Status of borehole rehabilitation work (after the project completion)

States		2014	2015	2016	Total
North Darfur	Borehole rehabilitation	N/A	14	1	N/A
	Rehabilitation of related facilities around boreholes	32	5	4	41
West Darfur	Borehole rehabilitation	N/A	N/A	N/A	N/A
	Rehabilitation of related facilities around boreholes	N/A	3	3	N/A
South Darfur	Borehole rehabilitation	N/A	N/A	N/A	N/A
	Rehabilitation of related facilities around boreholes	N/A	N/A	N/A	N/A
South Kordofan	Borehole rehabilitation	N/A	N/A	N/A	N/A
	Rehabilitation of related facilities around boreholes	16	11	16	43
Blue Nile	Borehole rehabilitation	0	0	0	0
	Rehabilitation of related facilities around boreholes	7	4	2	13

Source: Interview with SWC in each state at the time of ex-post evaluation

2. Health sector

(1) TOT : Actual training of trainers conducted during project implementation period

Table 2 Actual training of trainers of the in-service training for midwives during the project implementation period

	ND	WD	SD	BN	SK	Total
Number of HV/AHV	42	16	23	28	56	165
Number of HV/AHV attended the training for trainers (HV/AHV)	14	9	14	9	10	56
Attendance rate	33%	56%	14%	32%	18%	34%
Number of HV /AHV who conducted in-service training as a trainer	14	5	16	12	10	57

Legend: ND North Darfur, WD West Darfur, SD South Darfur, BN Blue Nile, SK South Kordofan, HV Health Visitor, AHV Assistant Health Visitor

Source: Project completion report P70

(2) Pilot activities: Number of VMW who attended in-service training by Grant Aid Project (cooperation with UNICEF) (from the project implementation period to the project completion)

Table 3 Number of attendees who attended in-service training for Village Midwives (VMW) conducted by the Grant aid in cooperation with UNICEF (reference figures)

Name of state	Number of VMW (2012) ¹	Number of trained VMW					Number of remaining VMW	Remarks
		2010~2011 Grant	2012 Supplement	Total number during	2013 Direct contract	Total number after the		

		Aid Project ²	ary budget ³	the project implementation period	by JICA ⁴	project implementation		
North Darfur	1,045	560	294	854	215	1,069	0	
South Darfur East Darfur	653 305	280	354 63	697	235 147	1,079	0	South Darfur State was divided into South and East Darfur states during the project period.
West Darfur Central Darfur	332 276	220	41	261	147 147	555	53	West Darfur State was divided into West and Central Darfur states during the project implementation period.
South Kordofan West Kordofan	954	231	436	667	126	793	161	South Kordofan state was divided into South and West Kordofan during the project implementation period.
Blue Nile	520	165	203	368	147	515	5	
Total	4,085	1,456	1,391	2,847	1,164	4,011	74	

Source: Based on the document provided by JICA (November 2013)

Remarks:

1. Health Map 2012, Federal Ministry of Health. However, many VMWs retire and are hired every year. In addition, neither Federal Ministry of Health nor State Ministry of Health have information about the exact number of VMWs. Therefore, the number of VMWs mentioned above is a reference figure, as the exact number of current active VMWs is unknown.

2. Regarding the training from 2010 to 2011, it was conducted as a part of the Grant Aid Project, the "Project for Infectious Diseases Prevention for Children", through the international organization with signing of MOU between JICA and UNICEF. In-service training of 7 days curriculum as well as replacement of delivery support kits were carried out in Darfur states, South Kordofan, and Blue Nile states.

3. Regarding the training in 2012, in-service training of 7 days curriculum as well as replacement of delivery support kits were carried out in Darfur states, South Kordofan and Blue Nile states, by the Grant Aid Project through the supplementary budget of international organization.

4. Regarding the training in 2013, in-service training of 12 days curriculum for 1,964 VMWs (including 1,164 VMWs in Darfur states, South Kordofan, and Blue Nile) as well as replacement of delivery support kits were implemented in Darfur states, South Kordofan, Blue Nile, Gezira, North Kordofan, Northern, Red Sea, White Nile, River Nile, Gadaref, and Khartoum, by the direct contract between JICA and UNICEF (completed at the end of October 2013). However, it is considered that in-service training for 2013 (project completion report P70) that was scheduled during the technical cooperation project was not in time for the planned period as this technical cooperation project ended in May 2013.

3. Vocational Training sector

(1) TOT : Training of trainers (project implementation period)

Table 5 Number of attendees of TOT in vocational training sector

Name of the course	Number of courses	ND	WD	SD	BN	SK	Total	Proportion
Machinery	5 courses	2	2	2	12	11	29	24.4%
Automobile	4 courses	6	2	2	3	1	14	11.8%
Electric	5 courses	2	2	2	4	0	10	8.4%
Carpentry	3 courses	0	0	0	8	7	15	12.6%
Dressmaking	3 courses	0	0	0	13	12	25	21.0%
Food Processing	2 courses	0	0	0	11	15	26	21.8%
	22 courses	10	6	6	51	46	119	100%

Legend: ND, North Darfur; WD, West Darfur; SD, South Darfur; BN, Blue Nile; SK, South Kordofan

Source: Project completion report P87

Note: Trainers of the OVCT are not included

(2) Pilot activities: Short-term training course (during the project implementation period)

Table 6 Number of attendees of vocational training by states

	ND	WD	SD	BN	SK	Total	Proportion
1. Automobile	58	60	60	28	32	238	21.2%
2. Electric	57	59	57	22	17	212	18.9%
3. Carpentry	0	0	0	29	25	54	4.8%
4. Machinery/Metal work, Welding	60	60	59	43	4	226	20.1%
5. Building	0	0	0	8	5	13	1.2%
6. Dressmaking	0	0	0	139	96	235	20.9%
7. Food processing	0	0	0	43	103	146	13.0%
(Total by states)	175	179	176	312	282	1,124	100%
(Planned figure)	180	180	180	475	320	1,335	-
(Level of achievement)	97.2%	99.4%	97.8%	65.7%	88.1%	84.2%	-
(Level of achievement by areas)	98.2%			74.7%		84.2%	-

Legend: ND, North Darfur; WD, West Darfur; SD, South Darfur; BN, Blue Nile; SK, South Kordofan

Source: Project completion report P86

Note: Attendees in SK and BN are included people who received training at the OVTC.