

## Summary

<b>I. Outline of the Project</b>		
<b>Country:</b> Sudan		<b>Project title :</b> Frontline Maternal and Child Health Empowerment Project Phase 2 (Mother Nile Project Phase 2)
<b>Issue/Sector:</b> Health-Maternal and Child Health		<b>Cooperation scheme :</b> Technical Cooperation
<b>Division in charge:</b> Health Division 1, Health Group 1, Human Development Department		<b>Total cost:</b> <u>470 million</u> yen
<b>Period of Cooperation</b>	<b>(R/D):</b> 2011/9~ 2014/9	<b>Partner Country's Implementing Organization:</b> Federal Ministry of Health (FMOH), Sinnar State Ministry of Health (SMOH)
		<b>Supporting Organization in Japan:</b>
<b>Related Cooperation:</b>		
<p><b>1 Background of the Project</b></p> <p>In Sudan, maternal and child mortality and morbidity are high compared to other countries in Middle East region, due to the insecure circumstances of the past decades. Following issues are noted as obstacles to improve Reproductive Health (RH) situation within the country, such as lack of human resources who can provide RH care services with quality, uneven distribution of skilled health workers, high percentage of delivery assisted by village midwives (VMWs) or traditional birth attendants who have limited knowledge and equipment.</p> <p>Considering these issues, the “Frontline Maternal and Child Health Empowerment Project (Mother Nile Project: MNP) I”, was requested and started for three years of duration in 2008. MNPI focused on empowering and organizing VMWs in the Primary Health Care (PHC) context to perform ideal Continuum of Care (CoC) for Maternal and Child Health (MCH) in Sinnar, through strengthening organizational capacity of FMOH and SMOH, strengthening capacity of VMWs, and enhancing activities to expand the network within the parties in the northern states of Sudan.</p> <p>As a result of the MNPI, the roles of VMWs were recognized as one of health providers at community level, and VMW Empowerment Model, which is composed of skill training (in-service training), training follow ups by supportive supervision and creating supportive environment for VMW, was established. In order to ensure and to enhance the result of MNPI and VMW Empowerment Model, it has been acknowledged that the followings are also needed to be improved; 1) health facilities including equipment where VMWs refer for high risk patients, and 2) appropriate knowledge and skills of the health workers at those health facilities. Institutionalization of VMW supporting system has been also recognized as another important</p>		

issue for the model to be sustainable.

In response to these needs, series of discussion between FMOH and JICA were carried out to design the concept and framework of the Project. As the result, the Record of Discussion (R/D) on “Frontline Maternal and Child Health Empowerment Project Phase II: Mother Nile Project II”, hereafter referred as ‘the Project’, was signed in June 2011 between the Government of Sudan and JICA as 3-year project starting from September 2011.

## 2 Project Overview

### (1) Overall Goal

Maternal and infant mortality is reduced in Sudan.

### (2) Project Purpose

More women receive quality cares related to pregnancy and childbirth in Sudan

### (3) Outputs

- 1) Institutional capacity of FMOH and SMOHs in maternal and newborn health is strengthened.
- 2) Capacity of VMWs is strengthened in order to provide quality maternal and newborn care in the 8 states.
- 3) A model of comprehensive approach to improve maternal and newborn health is established in Sinnar state.

### (4) Inputs

#### <Japanese Side>

**Experts :** 19 person      **Equipment :** 896,000 USD

**Construction:** 640,000 USD      **Local cost :** 1,510,000 USD

**Trainees received :** 15 person in Japan      & 7 person in Jordan

#### <Sudanese Side>

**Counterpart:** 33 person (12 federal level, 11 state level) **Local cost :** 248,800 SDG (44,894 USD) and Office space

## II. Evaluation Team (Members of Evaluation Team)

Dr. Akiko HAGIWARA	Team Leader	Senior Advisor, JICA Headquarters
Ms. Yoko KOTOURA	Cooperation Planning	Assistant Director, Health Division 1, Human Development Department, JICA Headquarters
Ms. Mariko HOMMA	Evaluation Analysis	Consultant, INTEM Consulting Inc.
<b>Period of Evaluation:</b> 28/2 / 2014 ~ 20/ 3/ 2014		<b>Type of Evaluation :</b> Terminal Evaluation

## III. Results of Evaluation

## **1. Project Performance**

### **(1) Achievement of the Project Purpose**

- It is expected that the Project achieve the Project Purpose by the end of the Project period based on the analysis of the indicators. It was recognized that a comprehensive approach in Sinnar was effective in providing quality Maternal, Newborn and Child Health (MNCH) services at various levels and MNCH services are expected to be improved as the VMWs empowerment progress.
- According to the baseline and endline survey (PDM indicator survey) conducted by the Project, the number of the Antenatal Care (ANC) conducted by VMWs increased ( $p=.001$ ) in Sinnar. This figure shows that establishment of relationship between VMWs and health services and/or Health Visitors (HVs) / Assistant Health Visitors (AHVs) resulted in encouragement of more ANC services conducted by VMWs in Sinnar. Although the number of delivery conducted by VMWs does not show significant change, it can be interpreted that the number of delivery conducted by VMWs was already high in Sinnar at the baseline as all the VMWs received in-service training before the baseline survey during the first phase of the Project.
- On the other hand, VMW's in-service trainings were newly conducted in phase 2 of the Project and the training follow-ups were not completed in Gezira and North Kordofan. Therefore, the improvement of the number of services provided by VMWs did not increase significantly in the model localities in these states, except number of delivery in Gezira. It, however, is expected to be improved in accordance with the implementation of follow-up system of VMW.

### **(2) Achievement of the Outputs**

- 1) Output 1 has been almost achieved as planned in terms of fulfilling the indicators. However, the most of achievements owe to the initiatives and leadership of FMOH and SMOHs.
  - Based upon the achievement of MNP1 in Sinnar, VMWs became recognized as one of the core health providers at the community and VMWs' roles and responsibilities were clearly stated in their policy and strategic plan, such as "the National Strategy Document for Scaling-up Midwifery 2010" and "PHC Expansion Project 2012-2016"
  - Information about VMWs was collected through in-service training conducted by the Project and under JICA/UNICEF contract. Additionally, SMOHs conducted research and compiled lists in all the eight target states. Moreover, apart from the Project intervention, lists of VMWs were developed in other states.

- The percentage of the VMWs who receive either salary or incentives from SMOH or localities was increased from 3% in 2010 to 23% in 2012. As a part of initiatives of strengthening supporting system of VMWs, the Sudan government declared to provide salary to one VMW per village through the PHC Expansion Project.
- The Project provided 258 VMW Kits in total to the VMWs, HVs and AHVs who participated in in-service training in Gezira and North Kordofan and graduates of VMW schools in Sinnar. VMWs Kit was also provided to 1963 VMWs who received in-service training conducted under JICA/UNICEF contract. The Sudan government also decided to supply 5,000 VMWs of VMW Kits through the PHC Expansion Project.
- Maintenance system for the medical facilities and equipment in FMOH and SMOH are to be established by the end of the Project. Medical Equipment Working Group (ME-WG) was established. The members have already completed four activities out of five actions in the Action Plan developed by the group.

2) Output 2 has been almost achieved as planned.

- 82 HVs were qualified as facilitators and 26 HVs /AHVs were qualified as co-facilitators of in-service training.
- The Project conducted in-service training in ten batches (five batches in each locality) and 215 VMWs in total received in-service training in the two model localities. In accordance with the modification of the curriculum of in-service training by FMOH, the participants in the fifth batch received training under the new curriculum for 12 days although the others received training based on the curriculum for seven days. Post-test of in-service training indicated that over 90 % of the participants improved their knowledge compared to the pretest.
- In Gezira, 52.8 % of VMWs in average participated in monthly meeting which was utilized as a tool to follow up in-service training. The SMOH is seeking for the sustainable solutions to encourage more VMWs to participate in monthly meeting. In North Kordofan the Project introduced follow up activities newly and supported SMOH to pay incentives for VMWs to participate in the follow up workshop. In total 80 VMWs (78.4%) participated in the workshop. SMOH is searching for the feasible and sustainable measures for periodical follow up of VMWs.

3) Output 3 has been almost achieved the target as planned

- A model of comprehensive approach was an attempt to improve MNCH by giving maximum support for VMWs with multiple sources which included 1) rehabilitation of health facilities, 2) improved health services at the facility, 3) promotion of active participation of

communities, VMWs and health facilities.

- Maintenance system was established and introduced to the target hospitals. ME-WG developed “Checklist for Preventive Maintenance of Building and Services” and introduced it to the two target hospitals. ME-WG introduced and pre-tested a guideline for management and maintenance and user manuals (SOP) to the target hospitals.
- SMOH assigned a civil engineer as a person in charge of facilities development and maintenance. It also newly employed three biomedical engineers and assigned them to the Directorate of Curative Medicine in Sinnar SMOH.
- Capacity of health workers at target hospitals for obstetric care was also strengthened through EmONC training. 28 General Practitioners (GPs) and 14 Nurse Midwives (NMWs) participated in the training separately. The post-test indicated that 95.8 percent of GPs who participated in the training improved their knowledge.
- By the community activities, all the eight target villages started pregnancy registration and seven of them established emergency referral fund. Community awareness was raised through the awareness raising workshops conducted by HVs, AHVs, VMWs, community health volunteers and some health workers with the close supervision of RH Coordinator and Community leaders.

### **(3) Prospects of the achievement of the Overall Goal**

Prospect for achieving the Overall goal is relatively high.

- The Project has contributed to establish the foundation to decrease MMR by focusing on the importance of VMW.
  - It produced 82 facilitators and 26 co-facilitators of in-service training and provided the training in the target states.
  - It collected good practices through the establishment of a model of comprehensive approach in Sinnar.
  - It developed capacity of FMOH and SMOH to support VMWs, such as development of database of VMWs, provision of administration support and implementation of supervision of VMWs.
- Some impacts of the Project would be connected to the reduction of IMR, such as coverage of HBB in the new curriculum of in-service training.
- CoC adopted by the Project as the comprehensive approach for providing MNCH promoted early detection of high risk cases and early referrals to the hospitals. CoC could minimize the high risk delivery cases at community and reduce maternal and early neonatal death in the long run.

## **2. Summary of Evaluation Results**

### **(1) Relevance**

The Project was highly relevant.

- Improvement of quality of health services related to MCH was needed particularly at the rural areas because access to health facilities was limited and majority women give birth with the assistance of VMWs at home. It also met the needs of FMOH and SMOHs which were required to strengthen MNCH with equity.
- It matched with the policy of the Sudan Government which focuses on VMWs as providers of health service at the community level and strengthens the capacity to support them to achieve MDGs. JICA also considered improvement of health services as one of the important development issues in Sudan.
- Sinnar was selected as a target area in order to maintain the efficiency of the activities by utilizing the existing resources developed in MNP1. The Project also selected 8 states to expand the impact of in-service training.
- Japanese experiences were shared and effectively utilized by the Project.

### **(2) Effectiveness**

Effectiveness of the Project implementation was relatively high.

- The Project Purpose is expected to be achieved by the end of the Project period.
- The approaches adopted in the Project were effectively functioning. Three Outputs were closely related with each other and produced synergy effects.
- It was a challenge to include maintenance of equipment and medical facility and equipment in project design as one component. Also maintenance of the equipment and facility were not the same issue and it was not easy to work on two issues at one working group: ME-WG. It was even more difficult to coordinate the soft and hard components in one project. However, it was more efficient than to run two independent projects at the same time and pursuit coordination between them.

### **(3) Efficiency**

Efficiency of the Project was fair.

- The extension of the first year and gap of project period affected implementation and efficiency of the project activities. It even affected motivation of the stakeholders and the tight schedule for each activity.
- ME-WG members at FMOH level considered some equipment provided to the target hospitals were inappropriate for the users while the members in Sinnar consider them appropriate.

- Cooperation with UNICEF for implementation of in-service training and other JICA projects promoted the efficiency of the Project, although FMOH thinks that it would be more efficient to conduct in-service training directly with their own human resources in the future.
- Frequent turnover of Japanese Experts and Counterparts in the first year of operation might have reduced productivity and mutual understanding, which affected smooth implementation of the Project.

#### **(4) Impact**

Several impacts were observed through the evaluation study.

- The Overall Goal is expected to be achieved. The PHC Expansion Project of FMOH will accelerate the achievement of the Overall Goal.
- VMW Empowerment Model was recognized as effective by various stakeholders including other development partners.
- Some activities introduced by the Project have already been disseminated to others or produced additional fruits.
- Multi-sector cooperation was promoted in Sinner between SMOH and State Water Board through the construction and repair work of water facility in the target hospital.
- The Project has not caused any negative impact so far. However, provision of incentive to VMWs for participating follow up workshop may negatively affect their motivation for future participation in meeting conducted by SMOH in North Kordofan.

#### **(5) Sustainability**

Sustainability is high in terms of technical and organizational aspects, while the financial sustainability is moderate.

- The Project is designed to secure the sustainability through the achievement of the Outputs, such as establishment of Management and maintenance system of medical equipment, utilization of existing monthly meeting for upgrading knowledge and skills of VMWs as well as to collect monthly reports for HIS.
- The PHC Expansion Project is considered to function to sustain (or even expand) the achievement of the Project.
- FMOH and SMOHs gained institutional capacity to manage both community health services and facility medical services and to strengthen the CoC of MNCH services through their interventions to VMWs. It is expected that FMOH and SMOHs continue to support VMWs,

scale up CoC of MNCH and accelerate the achievement of MNCH in Sudan by utilizing the successful experiences in Sinnar and other states with the Project.

### **3. Factors promoting sustainability and impact**

#### **(1) Factors concerning to Planning**

- The Project is designed based on the experiences and achievements of MNP1. Some counterparts and stakeholders have continuously worked for the Project since the first phase started. Their deep understanding about the Project and the approaches enhanced smooth implementation of the Project.

#### **(2) Factors concerning to the Implementation Process**

- Implementation of the PHC Expansion Project (2012-2016) accelerated the achievement of the Outputs and the Project Purpose and is expected to contribute to achieve the Overall Goal.
- Consultation visits of a JICA Senior Advisor contributed to improve the situation and provided technical advices.
- Training curriculum for in-service training was modified by the initiatives of FMOH. FMOH its commitment and ownership by providing additional budget for extended training period.

### **4. Factors inhibiting sustainability and impact**

#### **(1) Factors concerning to Planning**

- Some confusion was caused by the modification of curriculum of in-service training, such as provision of the equipment required for additional topics, facilitator's skills about the additional topic, and difference in learning among the participants, because the Project was planned based on the seven-day curriculum.

#### **(2) Factors concerning to the Implementation Process**

- There was a problem in communication between Sudanese counterparts and Japanese experts.
- Although Japanese experts were a part of the technical committee about the modification of curriculum of in-service training, they provided little advice from technical and practical perspectives based on the field experiences.
- Delay of implementation of the Project activities in the first year and unexpected interruption for about six months between the first and the second year affected the Project activities planned in the second year.

### **5. Conclusion**

MNP1 demonstrated the effectiveness and importance of VMW's empowerment through in-service training, follow-up supervision and institutional support for improvement of MNCH in Sinnar. MNP2 scaled up VMW in-service training beyond Sinnar and expanded quality of cares

related to pregnancy and childbirth in Sudan. Achievement of the Project Purpose and Output 3 clearly showed that a comprehensive approach in Sinnar was effective in providing quality MNCH services at various levels.

- Based upon the achievement of MNP1 in Sinnar, VMWs became recognized as one of the core health providers at the community and VMWs' roles and responsibilities were clearly stated and supported in Sudan National Health Sector Strategic Plan II 2012-16, National Strategy Document For Scaling-up Midwifery in the Republic of the Sudan 2010, Sudan National Acceleration Plan for Maternal and Child Health 2013-2015, and PHC Expansion Project. These strategies accelerated more investment and more support for the community health workers including the VMWs.
- VMWs in-service training was successfully scaled up to other states by the initiatives of FMOH policies and the Project. 82 facilitators and 26 co-facilitators were trained in addition to the 55 facilitators trained in MNP1 for VMW in-service training. 772 VMWs received in-service training with MNP1 and MNP2. Additional in-service trainings for VMWs were conducted at 12 states and 1963 VMWs completed in-service training through the contract with UNICEF. Total number of VMWs completed in-service training was 2,735 out of 13,260 VMWs in Sudan. In-service training of VMWs was also conducted in Kassala and Darfur within the related JICA projects conducted in those areas by the facilitators trained by the Project.
- A model of comprehensive approach to improve MNCH was established, which included 1) institutional support from SMOH, 2) improved health services at the facility, 3) promotion of active participation of the community and 4) promotion of linkage among communities, VMWs and health facilities.
- FMOH and SMOHs gained institutional capacity to manage both community health services and facility medical services and to strengthen the CoC of MNCH services through their interventions to VMWs.

## **6. Activities to be recommended during and after the Project period**

### **(1) Action to be taken by the Project before the end of the Project**

- To document step by step procedure of VMW in-service training and monthly facility based meeting (training follow-ups) as guidelines for a package.
- To document and share the procedure, the modules and the results of EmONC training with FMOH so that the lessons learned can be fully utilized in the revising process of EmONC training guidelines at the federal level.
- To document the procedure, the result and the lessons learned from the community intervention activities, so that FMOH and other SMOHs are able to upscale it.

- To complete user manual of medical equipment and disseminate it in Sinnar.
- To complete endline survey and compile the result.

**(2) Action to be taken after the end of the Project by FMOH and SMOHs**

- To continue to empower VMWs through providing continuous support by regulation, payment, necessary equipment and supplies, in-service training and supportive supervision.
- To consider (1) a means of monitoring by locality level and (2) measure of keeping motivation of community volunteers, in order to continue the community activities.
- To sustain monitoring of communities activities, through allocation of adequate budget and vehicles.

**(3) Recommendation for the future Program**

- To provide basic training and bridging training for VMW and Community Midwives.
- To strengthen the community referral system.
- To strengthen partnership among FMOH, SMOHs and development partners (DPs) to accelerate the improvement of MNCH.
- To share achievement and lessons learned of the Project.

**7. Lessons Learned**

Following lessons were collected.

- Effectiveness of comprehensive approach as CoC of MNOH at various levels,
- Effectiveness of comprehensive approach to strengthen institutional capacity of SMOH and FMOH,
- Importance of capacity building of managerial personnel at state and locality level to promote CoC of MNOH,
- Effectiveness of VMW Empowerment Model to strengthen health system,
- Effectiveness of study visit to Sinnar by stakeholders in other states to promote the Project activities,
- Effectiveness of community intervention to change service seeking behaviors among women,
- Effectiveness of provision of equipment to PHC centers to promote ANC at centers,
- Efficiency to conduct in-service training with own resources of FMOH and SMOHs,
- Impact and effectiveness of in-service training under JICA/UNICEF contract,
- Effectiveness of training in Japan for achievement of the Project Purpose,
- Necessity to state expected outputs for ME maintenance in the Project design, and
- Difficulty of grouping of maintenance of equipment and facilities in one group (ME-WG).