Republic of Sudan
State Government of Kassala

Capacity Development Project for the Provision of Services for Basic Human Needs in Kassala, the Republic of Sudan

Final Report
Volume 4: Health Cluster

April 2015

Japan International Cooperation Agency (JICA)

International Development Center of Japan Inc.
Earth System Science Co., Ltd.
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（as of March 2015）

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SDG 1 = ¥ 20.083
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Capacity Development Project for the Provision of Services for Basic Human Needs in Kassala, the Republic of Sudan (K-TOP)

Final Report
Health Cluster

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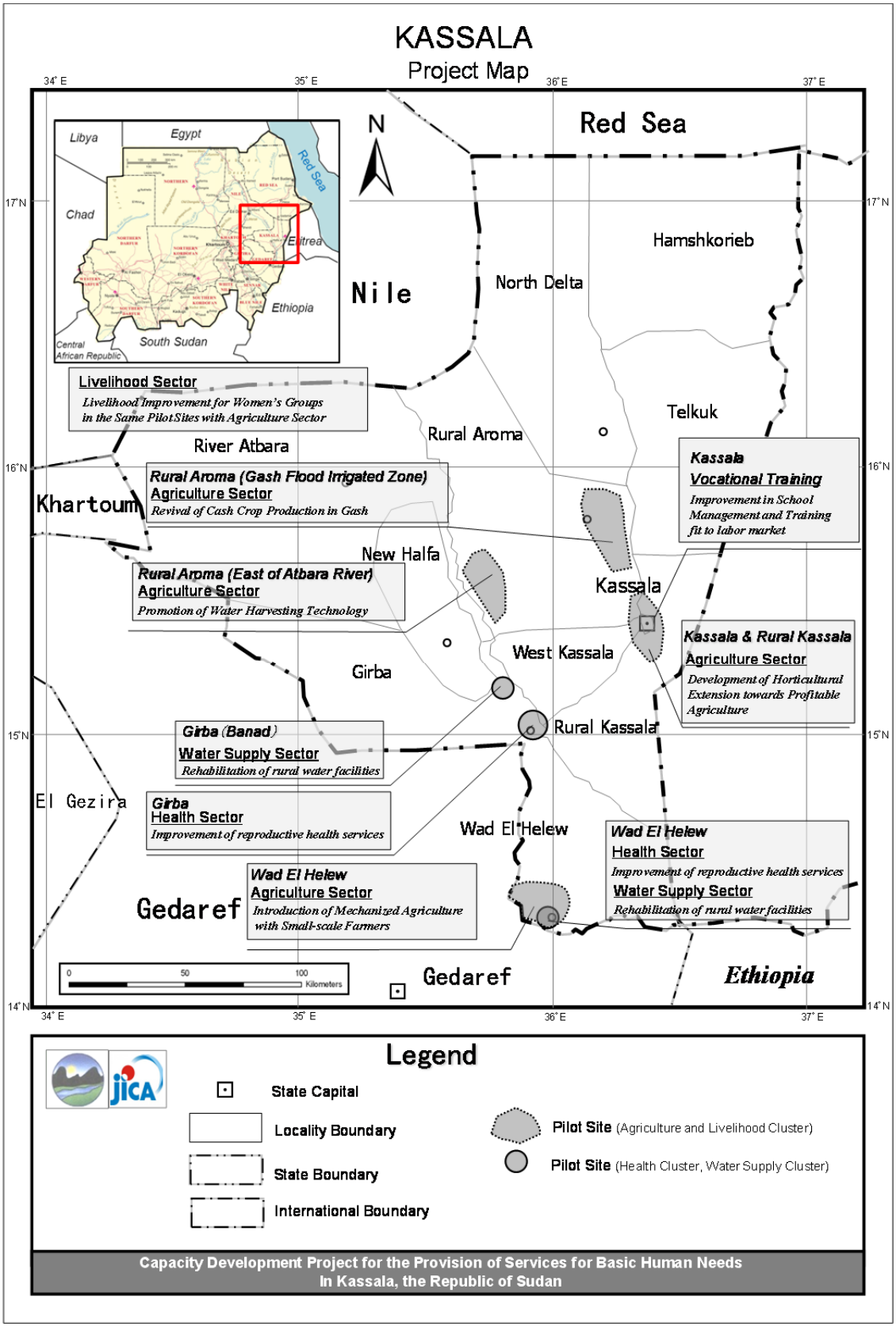
Appendix

Appendix 1 Project Design Matrix Version 4.0

Map of the Project Area
(Location of State of Kassala)



List ofAbbreviations

4P	Physical Workplace Improvement, Process Improvement, People Involvement, Policy Review
5S	Seiri, Seiton, Seisou, Seiketu, Shitsuke (Sort, Set in Oder, Shine, Standardize, Sustain)
ANC	Antenatal Care
BOQ	Bill of Quantities
CMW	Community Midwife
C/P	Counterparts
CQI	Continuous Quality Improvement
CUDBAS	Curriculum Development Based on Vocational Ability Structure
DPD	General Directorate of Economic Planning and Development
EmOC	Emergency Obstetrics Care
EmONC	Emergency Obstetrics and Newborn Care
FGM	Female Genital Mutilation
FPDO	Friends of Peace and Development Organization
HCDG	Higher Council for Decentralized Government
HV	Health Visitor
HIS	Health Information System
ICU	Intensive Care Unit
IEC	Information, Education and Communication
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
KVTC	Kassala Vocational Training Center
MCH	Maternal Child Health
MDTF	Multilateral Donor Trust Fund
MIC	Ministry of International Cooperation
M/M	Minutes of Meeting
MoFNE	Ministry of Finance and National Economy
NHIF	National Health Insurance Fund
OJT	On-the-Job Training
PDM	Project Design Matrix
PHC	Primary Health Care
PO	Plan of Operation
PWC	Public Water Corporation (Drinking Water and Sanitation Unit: DWS (from August 2012))
R/D	Record of Discussion
RH	Reproductive Health
SMoA	State Ministry of Agriculture, Food, Irrigation, Animal Resources and Fisheries
SMoF	State Ministry of Finance, Economy and Manpower
SMoH	State Ministry of Heath
SS	Supportive Supervision
SWC	State Water Corporation (Kassala)
TBA	Traditional Birth Attendant
TF	Task Force
TOR	Terms of Reference
TOT	Trainings of Trainers
TSI	Transitional Solutions Initiative
TQM	Total Quality Management
UNDP	United Nations Development Programme

UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	UN Children's Fund
VC	Visiting Consultant
VMW(s)	Village Midwife /Wives
WEH	Wad El Helew (Locality)
WEH PH	Wad El Helew Primary Hospital
WHO	World Health Organization

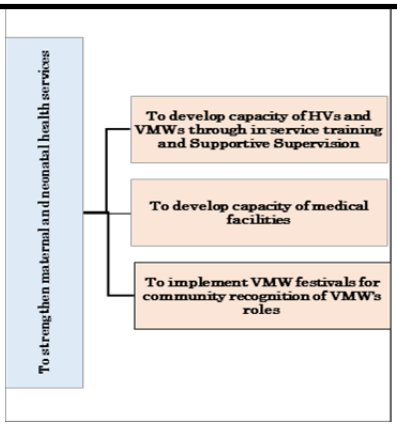
Health Cluster Highlights

Cluster Purpose

Kassala State Government's capacity to provide services for maternal and neonatal health is strengthened through activities of 2 pilot localities (Girba Locality and Wad El Helew Locality)

Maternal Mortality Ratio (MMR) in Kassala State is 1,414 (per 100,000 birth), which is the second highest after Darfur State among 15 Northern Sudan States[1] (the Republic of Sudan, as of 2013), according to the Sudan Household Health Survey 2006.

Since more than 90% of maternal deaths occur at the time of delivery, it is important to provide better access to continuous care (to find irregularity) and Emergency Obstetrics Care (EmOC), to reduce number of maternal deaths. However, in Kassala, access to these care remains very low as about 80% of childbirths are assisted and attended by Village Midwives (VMWs) and Traditional Birth Attendants (TBA) at each home. Further, the capacity of VMWs and TBAs to cope with danger signs is low.



Zone	Issue	Major Activities and Outputs
Village Midwife	●Knowledge and skill of VMWs for maternal and neonatal health services are low in communities.	●The capacity of VMWs improved through VMW trainings (participants; 177VMWs) and refresher trainings (participants; 41VMWs)
	●Coaching to improve effectively the capacity of VMWs was required in in-service trainings since most of VMWs are illiterate.	●The capacity of HVs who are facilitators in in-service trainings improved through coaching trainings and teaching material development workshops. ●Federal Ministry of Health highly appreciated the facilitation manual with flipcharts and endorsed it as a national material to disseminate it to other states.
	●SMoH suspended the Supportive Supervision (SS) which provided technical supports to VMWs in communities.	●Locality health supervisors conducted SS twice a year to each VMW. The SS contributed to the capacity improvement of SMoH, HVs and VMWs and also promotion of trust from VMWs to SMoH.
	●The importance of VMW's roles was not recognized in communities. VMWs had neither confidence nor motivation to their job.	● The Project conducted VMW festivals including health education tour by a drama group in Girba Locality and Wad El Helew Locality. The festival contributed to improving social status of VMW work environment for VMW.
Medical Facility Level	●The condition of facilities and medical equipment for maternal and neonatal services were not in good condition nor sufficient.	● The Project built facilities for maternal and neonatal services in Wad El Helew Primary Hospital. ● The Project procured medical equipment for maternal and neonatal cares to 4 hospitals[2]. And the function of these hospitals was increased to provide better services. Girba Hospital and Kuwait Hospital opened intensive care units with equipment provided by the Project.
	●The capacity of medical staff for maternal and neonatal health services was low. And medical staff was not sufficient in number.	●Maternal and neonatal health services were improved through EmONC training, user trainings for medical equipment and trainings for nurses. ●WEH PH became a facility which could provide the emergency obstetrics and neonatal care. ●SMoH allocated some necessary health cadre to WEH PH.
	●The knowledge and awareness of infection control in 4 pilot hospitals were low.	●Infection control trainings were conducted for four target hospitals. The hospitals established infection control committees, and they demonstrated observable progress especially in Girba Hospital and WEH PH.

[1] Average of the Northern Sudan State is 600 in 2010.
[2] Saudi Hospital, Kuwait Hospital, Girba Hospital and Wed El Helew Primary Hospital (WEH PH)

Highlight of Health Cluster 1

Capacity Development through participatory development of facilitation manual for in-service trainings

(1) Background

In in-service training, facilitators conducted practical trainings and lectures by verbal explanation and in a one-sided manner, which was not a participants-centered training. Especially, facilitators sometimes had arguments on training method or details in front of participants in practical trainings due to a lack of facilitation manual made on the basis of medical evidences and standard working procedures. And since most VMWs are illiterate, the training needed the facilitation manual and teaching materials for VMWs.

(2) Activities

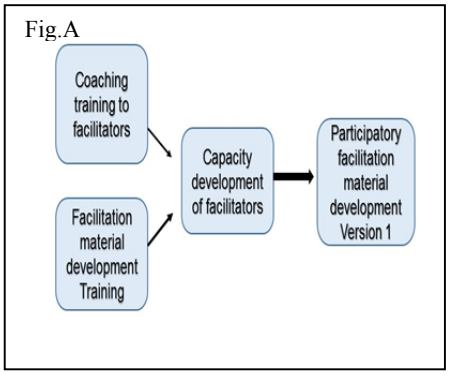
2nd year: 1st Coaching workshop (WS); training how to proceed lectures and practices.
1st Teaching material development WS; development of job sheets, flipcharts, and lesson plans.
2nd Coaching WS; training how to conduct lectures with flipcharts.
2nd Teaching material development WS; confirmation of job sheets, flipcharts, and lesson plans.

3rd year: Endorsement workshop; endorsement of facilitation manual for dissemination to other states.

(3) Outputs

- Developed materials：Flipcharts (subjects) and Facilitation Manual 1:lesson plans (19 subjects), job sheets (10 subjects), a Role-play scenario (1 subject).
- Federal Ministry of Health highly appreciated the facilitation manual with flipcharts and proceeded to disseminate it to other states.
- Repeated implementation of participatory workshops for training material development was effective to develop capacity of facilitators and to standardize the quality of contents of subjects.

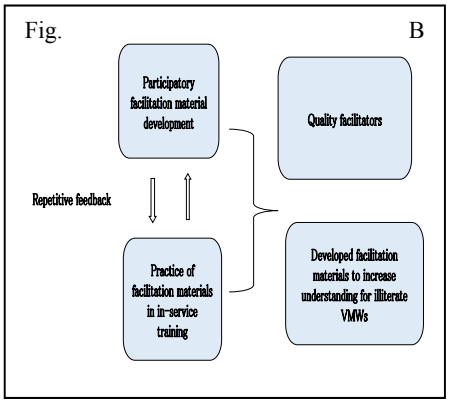
Fig.A



(4) Approaches or models adopted

- The project recorded working procedure conducted by a veteran with video camera and then studied and analyzed it with facilitators in order to standardize the procedure. (job sheets and flip charts) The capacity of facilitators was strengthened through studying and analyzing of key points and reasons each procedure in the training materials development WSs (Fig. A1 ）
- Lesson plans are made to describe all necessary contents to show and specify time allocation and timing. By using the lesson plans, every facilitator can conduct the same quality of trainings.
- Training materials are developed by repeating practicing of in-service training and revising materials. This process contributes to developing effective materials corresponding to the actual situation and improve the capacity of facilitators. (Figure B）

Fig. B



(5) Way forwards and recommendations to the counterparts

- Developed materials should be handed out to other states with facilitation training how to use materials in order to enhance learning effect in accordance with intended purpose.
- Facilitators should study the effects of developed materials based on their practicing in basic trainings and in-service trainings for VMWs. And then the contents of materials should be revised if necessary.

Highlight of Health Cluster 2

Model of maternal and neonatal health service improvement in community

(1) Background

Around 80% of childbirths are assisted and attended by Village Midwives (VMWs) and Traditional Birth Attendants (TBA) at each home. In Kassala, the access to the emergency obstetrics care in the hospital remains very low. And the capacity of VMWs and TBAs to cope with danger signs is low. Furthermore, although VMWs have many roles related to maternal and neonatal health services, their capacity of knowledge and skill is low.

(2) Activities

Based on the above-mentioned situation, the following activities are conducted by the project.

- In-service training (9 times, 177 VMWs) and Refresher training (2 times, 41VMWs)
- Coaching training for in-service training facilitators (2 times)
- Participatory material development workshop (6 times)
- Supportive Supervision (SS) to provide technical support to VMWs by HVs, who are facilitators of in-service trainings. (2 times per VMW a year)
- VMW Festival including the health education tour by the drama group (2 times each in Girba Locality and Wad El Helew Locality).

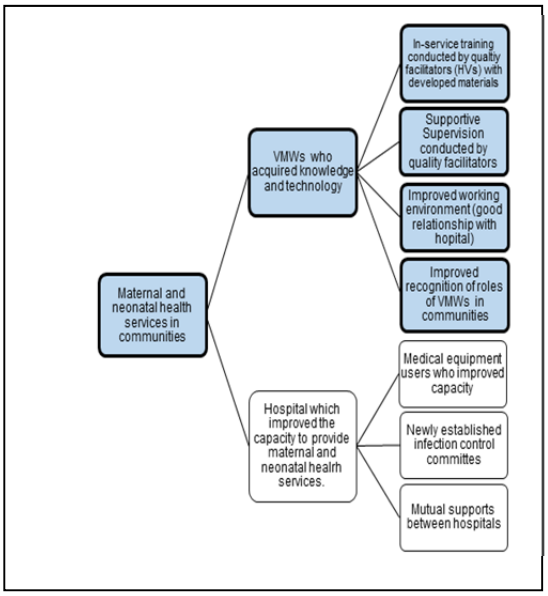
(3) Outputs

- The capacity of VMWs was developed through improved in-service trainings and technical supports implemented steadily by SS.
- The capacity of facilitators was improved through the development of materials. And in-service training became a quality training facilitated by using developed materials.
- VMW Festival contributed improvement of social status and working environment for VMWs in communities.

(4) Approaches or models adopted

Model is composed of the following 3 activities.

(a) In-service training conducted by quality facilitators with developed teaching materials, (b) Implementation of SS, (c) Increase of recognition about VMWs in communities by events of VMW Festival. Interaction between outputs produced by activities of these three items made the maternal and neonatal health services strengthened. SMoH appreciated and called this component "K-TOP Model" (shown in blue in the figure). SMoH showed intention to extend this model to other localities.



(5) Way forwards and recommendation to the counterparts

Although SMoH has intention to extend K-TOP Model to other localities in Kassala, SMoH should consider and secure budget for activities and relevant consumables to be distributed to VMMs.

1. Outlines of the Health Cluster

1.1 Background of the Health Cluster

Maternal Mortality Ratio (MMR) in Kassala State is 1,414 (per 100,000 birth), which is the second highest after Darfur State among 15 Northern Sudan States[1], according to the Sudan Household Health Survey 2006. This shows extremely severe condition for the nursing mothers. This stems from various reasons including lack of number and skills of health personnel, weak health system, and social/cultural factors.

Since more than 90% of maternal deaths occur about the time of delivery, it is important to provide better access to continuous care (to find irregularity) and Emergency Obstetrics Care (EmOC), to reduce number of maternal deaths. However, in Kassala, currently about 80% of childbirths are assisted and attended by Village Midwives (VMWs)[2] and Traditional Birth Attendants (TBAs) at each home; the access to the obstetrics care remains very low[3]. Further, the capacity of these assistants to cope with irregularity is low.

Improving maternal and child health (MCH) is one of the most important health issues in Sudan. The Five-Year's Health Strategic Plan (2012-2016) shows MCH as one of the priority areas. The strategy promotes: (1) Increasing delivery assistance by competent Skilled Birth Attendants; (2) Increasing basic and comprehensive EmOC service; (3) Raising public awareness among individuals, families and communities; and (4) Promoting family planning, as important measure to reduce maternal death

1.2 Objectives of the Health Cluster (Project Purpose and Output)

Against the background delineated above, the Health Cluster sets the Cluster Purpose as 'Kassala State Government's capacity to provide services for maternal and neonatal health is strengthened through activities of 2 pilot localities'. By achieving this Cluster Purpose, the quality health service provision will be improved thus reaching more residents in Kassala State.

The Project target is to achieve three outputs listed below by implementing activities presented in the national strategy.

Output 1: The capacity of Village Midwifes (VMWs) in communities is improved.

Output 2: The system to receive maternal and neonatal emergency patients in pilot localities is prepared.

Output 3: Capacity to support VMWs is strengthened.

1.3 Target People and Target Areas in the Health Cluster

In general, the Project targets the whole areas and populations of about 1.8 million people in Kassala State. The pilot areas of Girba and Wad El Helew Localities had been one locality till four years before. The residents are making living with agriculture and pasturage. There are some refugee camps in both localities. Wad El Helew has four refugee camps and because of improper road infrastructure, the locality is often isolated in the rainy season. The current situation of reproductive health services in both localities are summarized below.

[1] Average of the Northern Sudan State is 600.
[2] The Ministry of Health change the name of Village Midwife (VMW) to Community Midwife (CMW) in 2014. This report use VMW and CMW according to the year that activity was implemented.

Table 1.1: Current Situation of Reproductive Health Service in Pilot Areas

Locality	Population	Reproductive age	No. of Villages	No. of Hospitals	No. of Health Centre	No of Basic Health Unit[4]	No of Village Mid Wives	Village covered by RH service
Girba	101.395	24.8%	85	1 (74 beds)	8	11	67	45%
WEH	86,806	24.8%	69	1 (16 beds)	6	16	20	30%

Sources: 2008 Census, from Final report of the Capacity Development Project for the Provision of Services for Basic Human Needs in Kassala (Preparation Phase)

1.4 Sudanese Counterparts for the Health Cluster

The counterpart organization of the Health Cluster is Reproductive Health (RH) Unit of SMoH and the counterpart will provide advice and support to the stakeholders of staff of RH Unit, HVs, health staffs in pilot hospitals, village midwives in pilot and selected localities.

1.5 Organization for Implementation of the Health Cluster

(1) Joint Implementation Team

The counterparts for the Project are State Ministry of Finance, Economic and Manpower (SMoF), State Water Corporation (SWC), State Ministry of Agriculture, Forestry, Irrigation, Animal Resources and Fishery (SMoA), State Ministry of Health (SMoH) and Kassala Vocational Training Center (KVTC) in Kassala State Government. As federal level, Higher Council for Decentralized Governance (HCDG) is the coordinator for the Project, and other relevant Federal Ministries/Organizations, Ministry of Finance (MoF), Ministry of Agriculture (MoA), Ministry of Health (MoH), Public Water Corporation (PWC), and Supreme Council for Vocational Training and Apprenticeship (SCVTA) provide necessary technical support to the Kassala State Government counterparts.

In order to facilitate the capacity development of the Sudanese counterparts, the Project needs to be implemented jointly by the counterparts (C/P) and the JICA Expert Team. Figure 1.1 shows the Joint Implementation Team between the Sudanese counterparts and the JICA Expert Team in the five clusters, who plans, implements, monitors and evaluates the Project, based on the Sudanese counterparts' initiative and ownership.

[4] Basic Health Unit (BHU) is the health facility located under the health center. The population of 5000 should have a BHU. A nurse or a medical assistant is assigned BHU and conducts activities such as EPI (Expanded Program on Immunization), DOTS (Directly Observed Treatment, Short course) and Malaria rapid test.

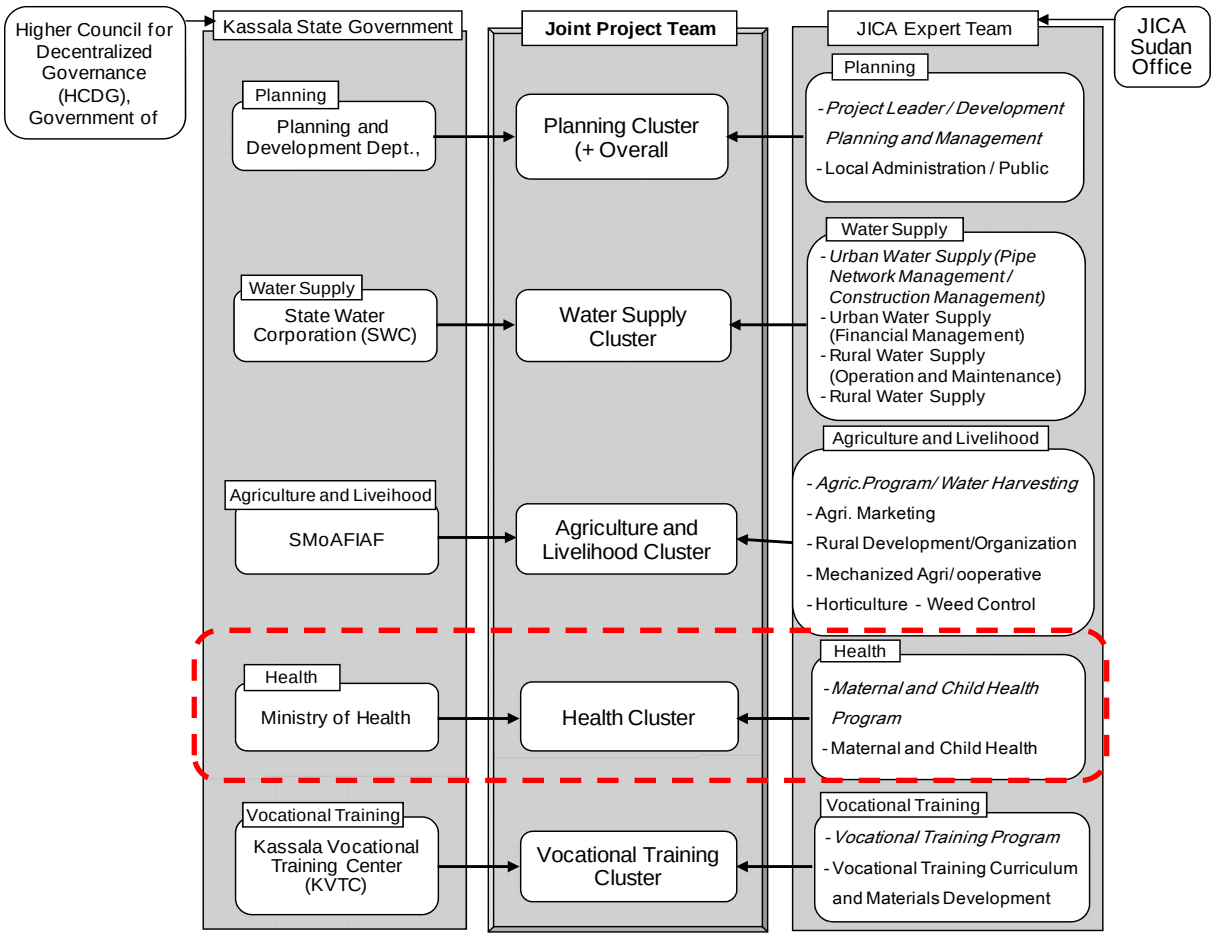


Figure 1.1: Joint Implementation Team for the Project

(2) Regular Meetings

Since the Project covers five clusters and operates from five different offices, it is important for the Project to have a good coordination among the five clusters to have synergy effects. So the regular meetings, in which all counterparts from the five clusters participate, are organized to facilitate the joint monitoring of the Project and exchange of ideas to promote collaboration among various clusters.

(3) Joint Coordinating Committee (JCC)

At the Kassala State level, Joint Coordinating Committees (JCC) are organized to coordinate and make necessary decisions for the Project. The major roles of JCC are as follow:

1) To discuss and approve the annual work plan and the report of the Project.
2) To understand the progress of the Project based on the Joint Implementation Team's reports, and make necessary actions to solve problems, if any. (JCC will also discuss the possible change of the work plan and revision of the PDM of the Project.)
3) To share the achievements of and lessons from the Project and arrange activities to disseminate them to the whole Kassala state.
4) To coordinate the Kassala State Government to secure the local component budget for the Project and arrange timely disbursement of it to the counterparts

Members of JCC are shown in Table 1.2, which are the same as in the Preparation Phase of the Project. JCC were organized two or three times a year when the Project submits the report. The JCC meetings

held during project implementation are summarized in Table 1.2.

Table 1.2: Members of Joint Coordinating Committee (JCC)

Chairperson of JCC		Director General (DG), State Ministry of Finance (SMoF), Kassala
Members of JCC	Kassala State Government	- Director, Directorate of Planning and Development (DPD), SMoF - Representative(s) of State MoH - Representative(s) of SMoA - Representative(s) of Kassala Vocational Training Center (KVTC) - Representative(s) of State Water Corporation (SWC) - Others appointed by SMoF
	Federal Government	- Representative(s) of Ministry of Finance and National Economy (MoFNE) - Representative(s) of Higher Council for Decentralized Governance (HCDG)
	Japanese Members	- JICA Expert Team - Representative(s) of JICA - Others appointed by JICA

Table 1.2: JCC Meetings during the Implementation Phase of the Project

Project Year	JCC	Date	Main issues
First Project Year	1st JCC	June 5, 2011	Discussion of the work plan for the 1st project year
	2nd JCC	November 3, 2011	Discussion on the progress of the Project based on the draft Progress Report No.1
	3rd JCC	March 6, 2012	Discussion of the progress in the 1st project year based on the draft Progress Report No.2
2nd Project Year	4th JCC	June 26, 2012	Discussion of the work plan for the 2nd project year
	5th JCC	December 20, 2012	Discussion of the results of Mid-Term Review
	6th JCC	March 14, 2013	Discussion of the progress in the first half of the 2nd project year based on the draft Progress Report No.3 and report of Mid-Term Review to the Federal Government
	7th JCC	July 3, 2013	Discussion of the progress of in the second half of the 2nd project year based on the draft Progress Report No.4
3rd Project Year	8th JCC	September 29, 2013	Report of activities until 2nd project year and discussion of the work plan for the 3rd project year
	9th JCC	January 20, 2014	Discussion of the results of Terminal Evaluation
	10th JCC	April 28, 2014	Discussion of the outputs of K-TOP based on the draft Progress Report No.5

2. Basic Principles to Implement the Health Cluster

2.1 Technical Principles to Implement the Health Cluster

The Project adopts the following principles during the implementation of the Project.

(1) Respect and foster Kassala State Government's ownership and initiatives for the Project

(2) Bring visible impacts of the Project at the early stage of the Project, so that the local population can enjoy the "fruits of the peace"

(3) Improve the C/Ps' primary works through the Project, so that they can use their improved capacity sustainably and self-reliantly in their work

In addition to these, the Health Cluster employ the following principles to facilitate the implementation of the Project in technical aspects.

(1) Conduct training for capacity development for relevant stakeholders describe in 1.4.

(2) Build infrastructure to support service provision

(3) Strengthen practical skills and capacity through the implementation of pilot activities

2.2 Administrative Principles to Implement the Health Cluster

The Project follows the following two principles in administrative aspects.

(1) Strengthen communication among the Project team members to generate a synergy effect among sectors

(2) Implement the Project in close cooperation with the JICA Headquarters and Sudan Office after sufficient consultation for the purpose of smooth and efficient implementation.

2.3 Key Points for Implementation of the Health Cluster

Throughout the implementation period, especially the latter half of it, the Project gives due consideration to the following.

(1) Conduct monitoring of Project activities to ensure sustainability of Project outcome together with SMoH. (Output 3)

(2) Enhance the efficacy of the implementation by ensuring linkage and collaboration among activities. (Output 1 and 2)

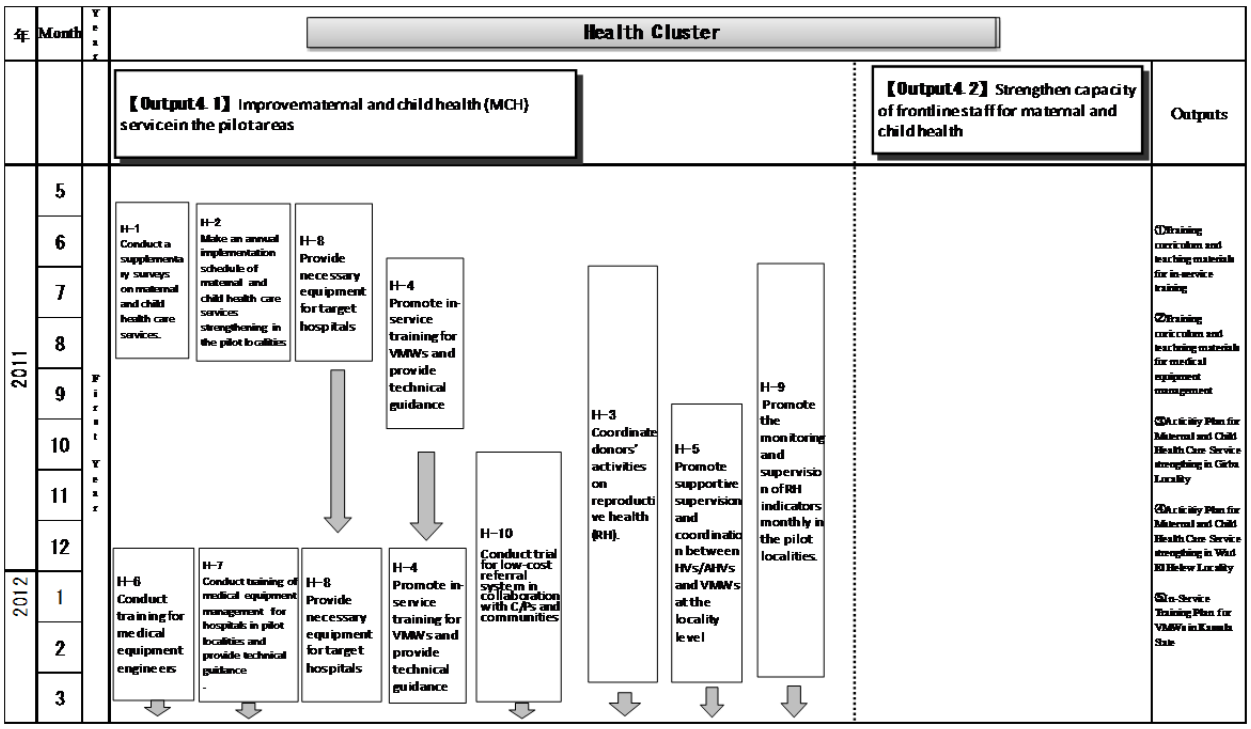
(3) Support SMoH to formulate the 5-year hospital management plan and its implementation of WEH PH. Upon preparation, ensure the plan to pay enough attention to the role of the pilot project (Output 2)

(4) Make necessary personnel and budgetary arrangements through collaboration with SMoH (Output 1 -3)

3. Report of Activities in the Health Cluster

3.1 Flow of Activities in the Health Cluster

The flow of activities of the Health Cluster is presented in the following Figure 3.1. The flow of activities is extended to the next page.



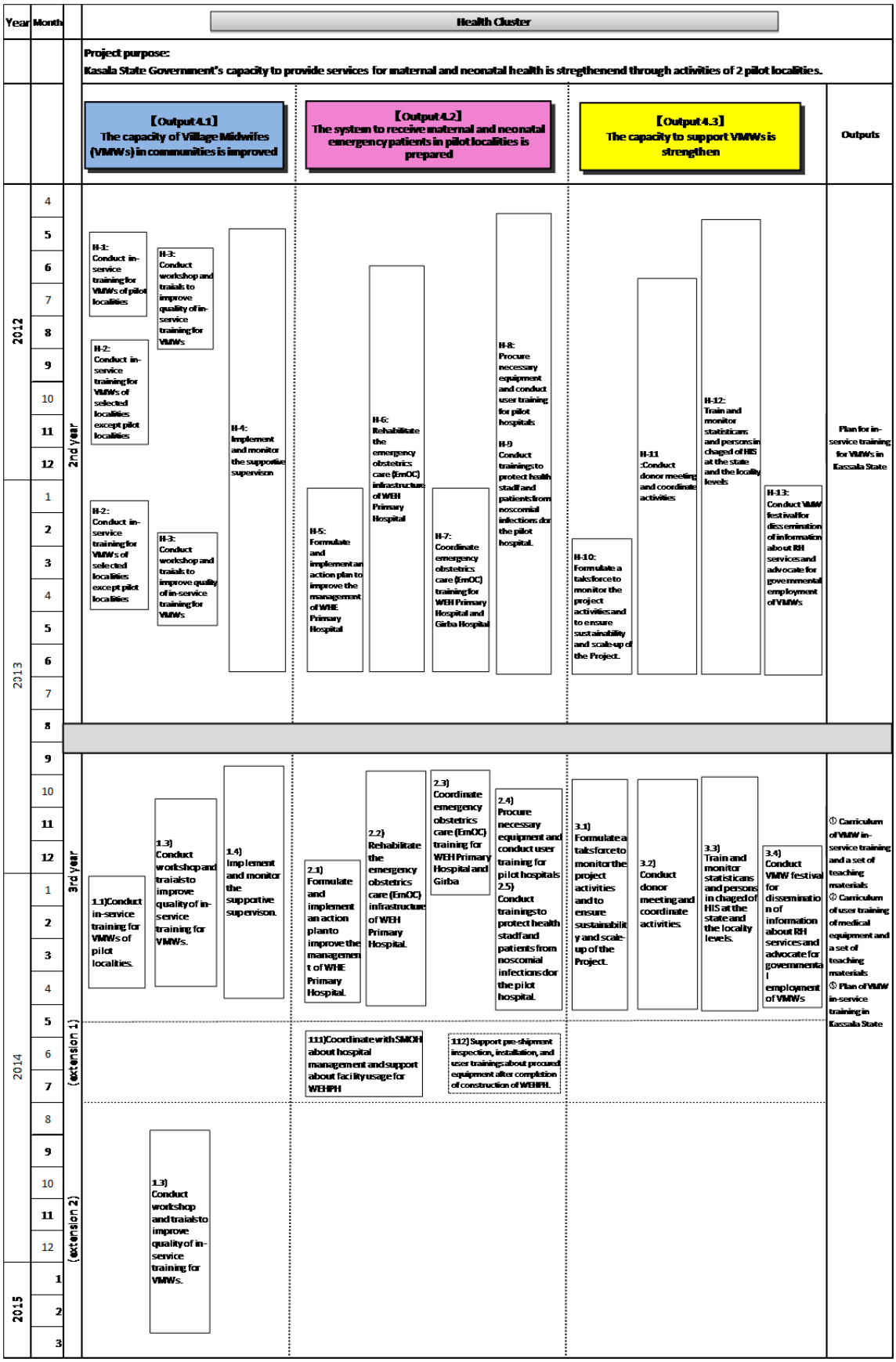


Figure3.1: Flow of Activities of Health Cluster

3.2 Summary of Activities in the Health Cluster (from May 2011 to March 2015)

The activities implemented based on the PDM Ver.4 in the Health Cluster from May 2011 to March 2015 are summarized in the following Table 3.1.

Table 3.1: Activities Implemented

<table>
<tr><th colspan="2">Output/Activity</th><th>Summary of Activities</th></tr>
<tr><td colspan="3">Output 1：The capacity of Village Midwifes (VMWs) is improved.</td></tr>
<tr><td>1.1</td><td>Conduct in-service training for VMWs of pilot localities</td><td>➢ No. of VMWs in in-service training
<table>
<tr><th>No</th><th>Month/ Year</th><th>Participants</th></tr>
<tr><td>1st (Detailed Design Study)</td><td>17th-24th Mar., 2011</td><td>19VMWs</td></tr>
<tr><td>2nd</td><td>2nd-8th Oct., 2011</td><td>13</td></tr>
<tr><td>3rd</td><td>6th-12th Feb., 2012</td><td>25</td></tr>
<tr><td>4th</td><td>28th Feb.-3rd Mar., 2012</td><td>20</td></tr>
<tr><td>5th</td><td>11th-17th Jun., 2012</td><td>8</td></tr>
<tr><td>6th</td><td>8th-14th Oct., 2012</td><td>3</td></tr>
<tr><td>1st Refresher training</td><td>11th-13th Feb., 2014</td><td>21</td></tr>
<tr><td>2nd Refresher training</td><td>23rd-25th Feb., 2014</td><td>17</td></tr>
</table></td></tr>
<tr><td>1.2</td><td>Conduct in-service training for VMWs of selected localities except pilot localities</td><td>➢ No. of VMWs in in-service training
<table>
<tr><th>No</th><th>Month/ Year</th><th>Participants</th></tr>
<tr><td>5th</td><td>11th-17th Jun., 2012</td><td>13VMWs</td></tr>
<tr><td>6th</td><td>8th-14th Oct., 2012</td><td>17</td></tr>
<tr><td>7th</td><td>5th-11th Nov., 2012</td><td>21</td></tr>
<tr><td>8th</td><td>20th-26th May, 2013</td><td>21 (including 2 HVs)</td></tr>
<tr><td>9th</td><td>10th-16th Jun., 2013</td><td>21 (including 2 HVs)</td></tr>
</table>
・ Training management skill transferred on 8th and 9th training</td></tr>
<tr><td>1.3</td><td>Conduct workshop and trials to improve quality in-service training for VMWs.</td><td>➢ 2011
・ Compiled VMW Handbook (draft) and standardized the contents of lectures.
・ Introduced the supplementary practice of blood pressure measurement at nights
・ Introduced a preparation/feedback workshop before/after VMW in-service training for facilitators in order to consider and discuss improvement of the training.
➢ 2012
・ Introduced a check sheet of the contents of each lecture in order to confirm whether the necessary contents are covered by a facilitator.
・ Made audio-visual training aids and introduced them to training in order to further deepen the understanding of illiterate VMWs.
・ Introduced a two-way lecture method learned in the coaching training to elicit VMW’s opinions (voluntary by facilitators).
・ Introduced the practice of how to fill in the blank of the form in the lecture of health information (voluntary by facilitators).
・ Used a blackboard to write down key points of the lectures (voluntary by facilitators).
・ Distributed leaflets and materials as a reference in the lectures</td></tr>
</table>

		(voluntary by facilitators) ・ Prepared and conducted lectures by the lesson plans. ➢ 2013 ・ Conducted 1st material development workshop (15th-18th and 21st-25th of Apr., Training of material development for facilitators and demonstrate how to use the materials) ・ Introduced "Job Sheet" into the training ・ Introduced a new Power Point Slide which was developed in the material development workshop ・ Introduced IEC (Information Education Communication) materials into the training ・ Improved the urine test method ・ Developed and introduced model lesson plans ・ Introduced a new-style weight measurement bag for neonatal babies ・ Training of facilitators (4 new HVs participated in the training) ・ Training of facilitators (4 new HVs participated in the training) ・ Conducted 2nd coaching workshop: 11th-14th Nov. (14 HVs) ・ Conducted 2nd material development workshop:1st-4th Dec. (14 HVs) ・ Developed training manual (job sheets and lesson plans) and flipchart materials ➢ 2014 ・ Conducted SS follow-up workshop ・ The Facilitation Manual for Community Midwives Training (7day's training) was endorsed by FMoH in the Endorsement Workshop held jointly by FMoH and SMoH on 14th Apr. ・ Conducted a draft job sheet workshop from 29th Aug. to 3rd Sep. to 9 in-service facilitators ・ Made a presentation of the manual to UNICEF in Khartoum on 21st Sep. ・ Collected information and confirmed current situation in the additional subjects from headmaster and teacher of midwifery school from 26th to 27th Sep. ・ Conducted a workshop to discuss the additional lesson plans and job sheets from 28th to 30th Oct. ・ Conducted trainings with the manual to check its quality to 18 CMWs from Wad El Helew and Girba from 7th to 18th Dec. ➢ 2015 ・ The manual was endorsed in the Endorsement Workshop held by FMoH on 23rd Feb. and is to be utilized in all the states in Sudan. ・ Conducted a TOT workshop on the utilization of the manual to HVs in Khartoum from 1st to 5th Mar.
1.4	Implement and monitor the Supportive Supervision. (SS)	➢ 2011 ・ 21st-22nd Sep.: Study Tour to Gadaref State. ・ Mid Oct.: Procurement of Vehicle for SS. ・ 16th-20th Nov.: Training by lecturer invited from FMoH. ➢ 2012 ・ Jan-Mar. Provided Support to make an action plan. ・ SS Implementation Started in Apr. 2012. Pilot areas are Girba Locality and WEH Locality. Every month in 2012. ・ Started SS Monitoring Workshop (results of the previous month)

		From May to Dec, 2012 ➢ 2013 ・ SS Implementation (Jan., Feb., Apr., May ・ Monitoring workshop of SS (for results of the previous month) Jan. Feb. Apr., May, Jun. ➢ 2014 ・ SS Implementation Feb.
Output 2：The system to receive maternal and neonatal emergency patients in pilot localities is prepared.		
2.1	Formulate and Implement an action plan to improve the management of WEH Primary Hospital.	➢ 2012 ・ Checked changes in circumstances WEH PH is facing. ・ Checked changes in external factors of expected scenario. ・ Exchanged opinions with the WEH Commissioner. ・ Re-established trust with the WEH community. ➢ 2013 ・ Jan.: Tested collection of monitoring data. ・ Feb.: SMoH notified the WEH Commissioner of its decision to build a WEH PH building. Established Hospital Management TF. Started preparation of WEH PH 5-year Strategic Plan. Collected trial data (statistics) underway. ・ Mar-Apr.: Drafted WEH PH 5-year Strategic Plan; ・ 28th Mar.: Held First Visiting Consultant (VC). ・ 28th-30th Apr.: Statistics training. ・ May: Drafted WEH PH 5-year Strategic Plan. ・ 18th Jun.: Held WEH PH Staff Meeting. ・ 26th Jun.: Held Second VC. ・ (5th Jul.: DG of WEH PH resigned) ➢ 2014 ・ 14th Jan.: Drafted Pre-completion Preparation Work Plan. ・ 19th-20th Jan.: Re-trained WEH PH statistics representative. ・ 22nd Jan.: Selected consultants for Third VC. ・ 23rd Jan.: Held TF on staffing plan and budget request. ・ 29th Jan.: Held Third VC. ・ 30th Jan.: Drafted action plan to be enforced prior to hospital completion. ・ 2nd Feb.: Drafted WEH PH Workshop Plan. ・ 8th Mar.: Conducted a workshop on community-participatory hospital management to 25 community leaders ・ 25th-27th Mar: Nurses at Girba Hospital conducted a routine work training to nurses and four medical assistants at WEH PH ・ 15th-16th Apr.: An operation theatre manager at Girba Hospital conducted a cleaning workshop to cleaners at WEH PH ・ 15th-16th Apr.: Nurses at Girba Hospital conducted an on-site training to nurses at WEH PH ・ 18th Apr.: Conducted an awareness raising training to hospital staff ・ 3rd Jun.: Medical Equipment Management Expert conducted a simulation training on the facility utilization to staff in charge of operations
2.2	Rehabilitate the emergency obstetrics care (EmOC) infrastructure of	➢ 2013 ・ Jan.: Made drawing and BOQ. ・ 12th Feb.: Conducted Steering Committee ・ Feb.-May: Discussed the drawing and material procurement with the JICA Headquarter

	WEH Primary Hospital	・ Jun.: JICA Sudan Office discussed the WEH PH construction again with the JICA Head Office ・ Jul.: Upon finalization of the discussion, formulated tender document, inquiry and proceeded with pre-qualification appraisal ・ Aug.: Conducted a bidding to select a contractor ・ Oct.: Started the construction and select a supervising consultant ➢ 2014 ・ 23rd Mar.: Unveiling Ceremony of new buildings of WEH PH with attendance of the Japanese Ambassador H.E. Mr. Horie ・ 15th Apr.: Conducted a final inspection ・ 29th Apr.: Conducted a Handover Ceremony of new buildings of WEH PH ・ 20th Oct.: Conducted a defect inspection. Requested necessary repair and confirmed the completion.
2.3	Coordinate emergency obstetrics care (EmOC) training for WEH Primary Hospital and Girba Hospital.	➢ 2013 ・ 3rd Feb.: the first discussion of EmOC Training (C/P, UNFPA, JICA Expert Team) ・ Early March: the second discussion of EmOC (C/P, UNFPA, Saudi Hospital, JICA Expert Team) ・ Late March: the 3rd discussion of EmOC (C/P, UNFPA、JICA Expert Team) ・ Early June: Preparation of EmOC ・ 10th Nov.-5th Dec.: EmOC training implementation ➢ 2014 ・ 10th Mar.: EmOC onsite training for EmONC team in Girba Hospital
2.4	Procure necessary equipment and conduct user training for pilot hospitals (Kuwait Hospital, Saudi Hospital, Girba Hospital, WEH Primary Hospital).	➢ 2011 ・ Jun.-Jul.: Study on procurement plan of medical equipment ・ Oct.~ Dec.: Preparation of tender and procurement ➢ 2012 ・ Jan.- Mar.: Procurement of equipment and initial training; Installed 30 kinds and 174 number of equipment in 4 pilot hospitals (delivery rooms, neonatal rooms, operation theatres, sterilization rooms and laboratories). ・ Jun.: 1st User training on medical equipment (1day, 22 participants) ・ Sep.- Oct.: Survey on the condition of procured equipment ・ Nov.: 2nd User training on medical equip. (2 days, 23 participants) ➢ 2013 ・ Apr.: 3rd User training of medical equipment (4 days, 18 participants) ・ May: 1) Needs survey on medical equipment, costs, electricity, water supply and generator for new building in WEH PH 2) Monitoring and on-site coaching of medical equipment at the targeted hospitals 3) Troubleshooting of defibrillator ・ Jun.: Monitoring and on-site coaching of medical equipment at the targeted hospitals ・ Sep.: Troubleshooting of aspirator ・ Oct.:

		1) Troubleshooting of phototherapy 2) Finalization of procurement equipment plan for WEH PH ➢ 2014 ・ Jan.-Feb.: Preparation of equipment specifications and quotation. Inspection of expected equipment to be procured ・ Mar.: 1) 4th User training on medical equipment (4 days, 20 participants) 2) Support of the procurement contract and pre-delivery of the inspection report on equipment to be procured for WEH PH 3) Made quick reference cards for basic & laboratory equipment ・ Apr.: 1) Make quick reference cards for basic & laboratory equipment 2) 29 different types of equipment numbering to 230 numbers of equipment to be installed in the new building of WEH PH and its initial training ・ 26th-29th May: Installed medical equipment which had been tentatively stored at appropriate sites and conducted an on-site training for 32 persons in charge ・ 1st Jun.: Conducted training on sterilizer and operation equipment to 7 participants ・ 2nd Jun.: Conducted training on operation equipment to 10 participants ・ 4th Jun.: Conducted training on equipment at the neonatal room to 10 participants ・ 5th Jun.: Conducted training on equipment at the recovery room and post-delivery room to 13 participants ・ 9th Jun.: Conducted training on equipment at the laboratory to 3 participants ・ 10th Jun.: Conducted training on equipment at the neonatal room to 3 participants ・ 11th Jun.: Conducted training on equipment at the blood bank to 4 participants
2.5	Conduct trainings to protect health staff and patients from nosocomial infections for the pilot hospital.	➢ 2012 ・ Jan.: 5S training. ・ Nov.: 1st Workshop on hospital infection control (1 day, 23 participants) ➢ 2013 ・ May: 2nd Workshop on hospital infection control and creation of the Action Plan for 2013 (2 days, 25 participants) ・ Jun.: Monitoring and on-site coaching in 4 targeted hospitals ・ Nov.-Dec.: Monitoring and on-site coaching in 4 targeted hospitals ➢ 2014 ・ Jan.: Monitoring in 4 targeted hospitals ・ Feb.: 3rd Workshop on hospital infection control and creation of the Action Plan for 2014 (4 days, 20 participants) ・ Mar.: 1) Infection control campaign in WEH PH (2 days, approx. 20 hospital staff and 20 public cleaners participated) 2) Monitoring and on-site coaching in Girba and WEH PH
Output 3：Capacity to support VMWs is strengthened.		
3.1	Formulate a taskforce to monitor the project activities and to ensure	➢ 2011 ・ 25th-26th Jul.: Held PCM Workshop (analysis of issues and objectives) (Girba: 12 participants, Wad El Helew: 13 participants) ➢ 2012

	sustainability and scale-up of the Project.	・ Jun.: Obtained agreements from the Ministry of Health, WEH PH and Girba Hospital on the RH referral system plan for the two hospitals. ・ Jun.: Held First Hospital Management TF, team formation and kick-off meeting. ・ Oct.: Checked circumstances concerning the Ministry of Health, WEH PH and Girba Hospital. ・ Reconfirmed the RH referral system agreement plan concerning the Ministry of Health and the new DG of Girba Hospital due to changes in circumstances. ・ Held Second Task Force Meeting. ・ Dec.: Tested monitoring on operations of WEH PH and Girba Hospital. ➢ 2013 ・ 28th Feb., 2013: Held Third Task Force Meeting. ・ 1st May, 2013: Held Fourth Task Force Meeting. Submitted scenario on future plan (including alternative plan). ・ Jun. 2013: Held Fifth Task Force Meeting. Held meeting on medical waste and collaboration with NHI. ➢ 2014 ・ 20th Jan.: WEH commissioner met with community leaders (on collaboration between the community and SMoH). ・ 23rd Jan.: Held Sixth Task Force Meeting. (Budget allocations, medical staff allocation, VC support, etc.)
3.2	Conduct donor meeting to coordinate activities.	➢ 2011 ・ 14th Jul.: UNFPA, UNICEF, MDTF, K-TOP, GOAL, FPDO ・ 2nd Dec.: WHO, UNFPA, UNICEF, MDTF, K-TOP, GOAL ➢ 2012 ・ 27th Feb.: WHO, UNFPA, UNICEF, MDTF, K-TOP, GOAL, Italian Cooperation ・ 22nd May: UNFPA、K-TOP (individual l meeting) ・ 10th Jul.: UNFPA, MDTF, K-TOP (individual meeting) ・ 3rd Oct.: WHO, UNFPA, UNICEF, MDTF, K-TOP ➢ 2013 ・ 3rd Feb.: C/P, UNFPA, K-TOP (individual meeting) ・ 11th Mar.: C/P, UNFPA, K-TOP (individual meeting) ・ End Mar.: C/P, UNFPA, K-TOP (individual meeting) ・ 7th Nov.: C/P, UNFPA, UNICEF, Italian Cooperation ➢ 2014 ・ 13th Feb.: C/P, UNFPA, UNICEF, Italian Cooperation, WHO
3.3	Train and monitor statisticians and persons in charge of HIS at the state and the locality levels.	➢ 2011 ・ Jun. - Aug.: Situation Study of health data. ・ 21st-22nd Sep.: Study Tour to Gadaref State. ・ 27th Sep.: CUDBAS workshop in order to specify TOR of data collector. ・ 26th Nov., 2011 - 12th Jan., 2012 Conducted computer training and made soft format of RH data. ➢ 2012 ・ Jan.: Made soft format of RH data ・ Feb.: Started to monitor RH data collection: Feb., Mar., Apr., May, Jun., Jul., Aug., Sep., Oct., Nov., Dec. ➢ 2013 ・ Jan. Feb. Mar. May ・ Feb. Study new system (introduced the new system in Jan. by FMoH)

		・ Mar. Modify the monitoring format ➢ 2014 ・ Jan. Feb.
3.4	Conduct VMW festival for dissemination of information about RH services and advocate for governmental employment of VMWs.	➢ 2011 ・ Oct.-Nov.: Established the festival committee, started preparation and coordination. ・ 4th Dec.: Implementation of VMW festival in Girba Locality. ・ 8th Dec.: Implementation of VMW festival in WEH Locality. ➢ 2012 ・ 21st-23rd Jan.: feedback study for WEH Locality ・ 24th-26th Jan.: feedback study for Girba Locality ➢ 2013 ・ End of Jan.: Established a festival committee, started preparation and coordination. ・ 4th Mar.: VMW festival in Girba Locality. ・ Feb. and Mar. Dissemination of information of RH by mobile cinema and drama in 10 communities in Girba Locality.

3.3 Activities Implemented in Health Cluster from May 2011 to March 2015

The main activities implemented in the Health Cluster from May 2011 to March 2015 were as follows.

Output 1: Capacity of village midwives (VMWs) in communities was improved

(Activity 1.1/1.2) Conducted in-service training for VMWs of pilot localities (Activity 1.1) and other selected localities (Activity 1.2)

The JICA Expert Team and C/P implemented in-service trainings nine times to provide knowledge and skill. In total 177 village midwives (VMWs) have attended to the trainings. Breakdown by locality of those participants are shown in the following table. The participants from Girba and Wad El Helew, the pilot localities, totaled to 88. All the target VMWs in both localities have completed the in-service training.

Table 3.2: Breakdown of the participants by locality

Locality	Number of VMWs who participated in the in-service training
Girba	54
Wad El Helew	34
New Halfa	49
River Atbara	35
West Kassala	5
Total	177

The First VMW in-service training

The JICA Expert Team and C/P conducted the first VMW in-service training during the detailed design survey in 2011. The training from second to ninth is as described below.

The Second VMW in-service training

Date	2nd-8th October, 2011
Participants	Girba Locality: 8, Wad El Helew Locality: 5
Test scores	The average score of the pre-test and post-test were 72% and 90%, respectively. The score improvement was 28%. Two (2) participants obtained full scores. Some of them doubled their scores from 48% to 96% by actively attending the training and always taking notes.

The Third VMW in-service training

Date	6th-12th February, 2012
Participants	Girba Locality: 20, Wad El Helew Locality:
Test scores	The average score of the pre-test and post-test were 48% and 85%, respectively. The score improvement was 37%. The improvement is supposed to come from actively attending the training and taking notes. The participants seem to lack of basic knowledge of infection.

The Fourth VMW in-service training

Date	26th February - 3rd March, 2012
Participants	Girba Locality: 16, Wad El Helew Locality: 4
Test scores	The average score of the pre-test and post-test were 74% and 87%, respectively. The participants obtained lower scores in "care before being pregnant" of the pre-test. They, however, got much higher scores, more than 90%, in the post test. The facilitators explained risk of FGM and marriage at younger age.

The Fifth VMW in-service training

Date	11th-17th June, 2012
Participants	Girba Locality: 7, Wad El Helew Locality: 1, New Halfa Locality: 2, West Kassala Locality: 5, River Atbara: 6
Test scores	The average score of the pre-test and post-test were 67% and 88%, respectively. The participants obtained lower scores in "care before being pregnant" of the pre-test. The VMWs are obligated to conduct health education. It is, however, found that they do not realize the role or they do not regard the role as an important one.

The Sixth VMW in-service training

Date	8th-14th October, 2012
Participants	Girba Locality: 3, New Halfa Locality: 10, River Atbara Locality: 7
Test scores	The average score of the pre-test and post-test were 67% and 89%, respectively. The scores have gone up every time due to improvement of the coaching method and use of visual materials/ handout document. The participants got lower scores in "health information" and "infection" of the pre-tests.

The Seventh VMW in-service training

Date	5th-11th November, 2012
Participants	New Halfa Locality: 15, River Atbara Locality: 6
Test scores	The average score of the pre-test and post-test were 76% and 97%, respectively. The participants got scores of more than 90% in every subject of the post-tests, thereby having obtained knowledge by the VMW in-service training.

The Eighth VMW in-service training

Date	20th-26th May, 2013
Participants	New Halfa Locality: 9, River Atbara Locality: 10
Test scores	The average score of the pre-test and post-test were 76% and 97%, respectively. Some of the participants came from remote areas, thereby having a fewer

	opportunities to attend training. They got lower scores in 'infection', 'maternal feeding' and 'health information system', as being same as in other trainings.

The Ninth VMW in-service training

Date	10th-16th June, 2013
Participants	New Halfa Locality: 13, River Atbara Locality: 6
Test scores	The average score of the pre-test and post-test were 61% and 92%, respectively. The participants got scores of more than 84% in every subject of the post-tests, thereby having obtained knowledge, especially in 'maternal-newborn care' by the VMW in-service trainings.

After nine training sessions, refresher training was conducted in February 2014. VMWs were selected as participants in accordance with the following criteria: (1) they have not received supportive supervision (SS) after in-service training, (2) their post–test result of in-service training was below 70 points and (3) their locality supervisor considered their skills to be insufficient. Twenty-two VMWs from Girba Locality and 17 VMWs from WEH Locality participated. All VMWs earned over 78% on the post-test and no one failed in the practice evaluation, which clearly showed that their knowledge and skill had improved

Eighty-nine VMWs participated in the in-service training from batch 5 to 9 from localities, except for the pilot locality. As shown in Figure 3.2, improvement of VMWs skills was confirmed since the average post-test result was 88% - 97%.

Less than 10% of participants failed the practice evaluation and most acquired appropriate skills during training. Participants who failed were requested to have locality supervisors' follow-up through SS to continue improvement of their skill.

In in-service trainings, facilitators checked each VMW kit to see if consumables were distributed and medical items were replaced when needed. Some VMW's equipment had never been replaced since their graduation from midwifery school many years before. Old rusty scissors and forceps were replaced in order to provide safe MCH services.

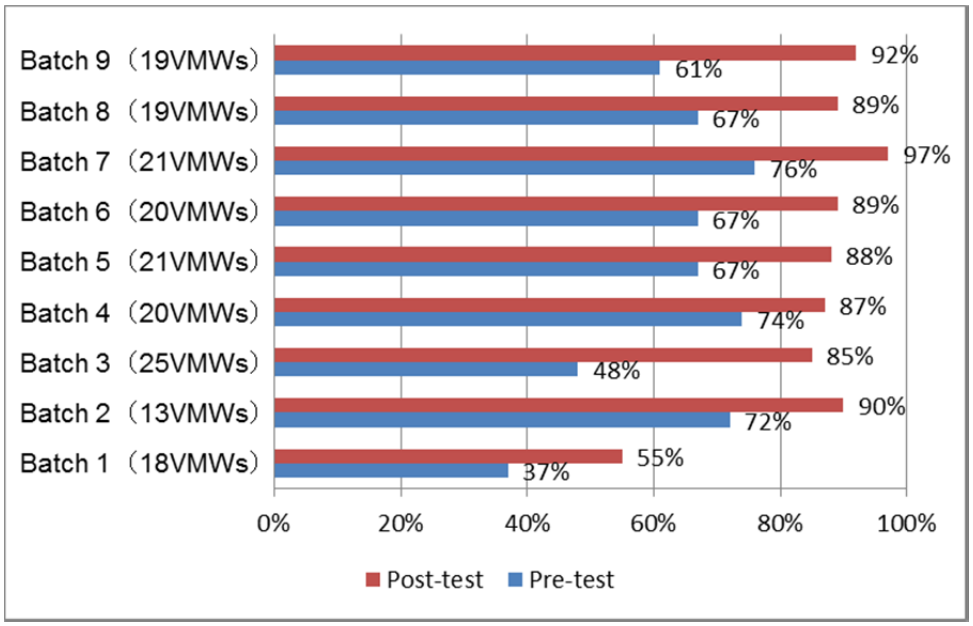


Figure 3.2: Comparisons of Pre and Post-Test

(Activity 1.3) Conducted workshop and trials to improve the quality of in-service training for VMWs

In January 2011, during detailed project design study, in collaboration with the frontline strengthening maternal and child health project JICA implemented with FMoH, TOT trained all 19 HVs and nine were certified as facilitators for in-service training. Since one of them declined, eight facilitators started the in-service training. After that, 11 HVs were trained as facilitators and, as described below, training was conducted for capacity-building of facilitators and teaching materials were developed.

The first coaching workshop for facilitators was conducted in July 2012. By making use of lessons learned from the workshop, the lesson plan and lecture evaluation sheet were introduced from batch 6 of the in-service training to improve facilitators' coaching skills. Facilitators prepared their lectures beforehand and taught following the lesson plan, though it was confirmed that the contents of the plan need to be improved.

The first materials development workshop was conducted for VMW in-service training facilitators from 14th to 25th April, 2013. Five topics (blood pressure measurement, urine test, preparation for delivery, conducting delivery, and post-delivery cleaning [including equipment sterilization]) of the job sheets were developed in the workshop. Flipchart-style teaching materials were also developed based on the job sheets.

Job sheets were introduced in batch 8 and 9 of in-service training and facilitators began to follow them in teaching the technical procedures. However, there were some points on which not all facilitators agreed so the job sheets needed further discussion. The flipchart-style materials were modified to what the current materials are. Through the IEC (flipchart-style) materials, the lecture became interactive, but the usage of materials and timing needed to improve. The further challenges of improving quality of the training were clarified through the training.

The second coaching workshop was conducted from 11th to 14th November, 2013. Issues on job sheets were discussed and facilitators were taught effective use of teaching materials. Some points of the procedures on job sheets and lesson plans made by each facilitator needed to be confirmed with FMoH, but the facilitators agreed on almost all procedures and contents of the model lesson plan.

The second material development workshop was conducted with Dr. Nasr, a consultant of FMoH national reproductive health programme, from 1st to 4th December, 2013. Contents of job sheets, lesson plans and flipcharts materials were discussed to see whether they were in accordance with the FMoH guideline and were applicable in practice. Lesson plans for all 15 topics for in-service training, five topics of job sheets and flipchart materials were developed.

Through a participatory workshop, facilitators learned new knowledge of RH and correct contents and points that should be taught in the training. The developed materials (facilitator manual [lesson plan and job sheets] and flipchart materials) were used in the VMW refresher training conducted in February 2014.

The Facilitation Manual for Community Midwives Training (7-day training)[5] was endorsed by FMoH in the endorsement workshop held by FMoH on 14th April, 2014. In the meantime, FMoH had changed the curriculum for the VMW in-service training from 7 days to 12 days in 2013, which brought a recommendation in the workshop to upgrade the manual suitable for 12-day training. Based on the request by FMoH, JICA decided to extend its activities until March 2015 to develop a manual for the 12-day training.

The JICA Expert Team and the C/P conducted workshops from 29th August to 3rd September, 2014 and

[5] According to a regulation of FMoH, Village Midwife (VMW) has been called Community Midwife (CMW) since 2014.

from 28th to 30th October, 2014 to collect data and information to upgrade the manual. The Team also conducted a 12-day in-service training with a draft upgraded manual to 18 CMWs from WEH and Girba localities.

The Team examined points to be modified in the manual and took more appropriate photos in the training. 2 participants scored 100% while 3 scored under 70% at the post-test, which showed the same tendency with the previous. It is, in particular, notable that facilitators' facilitation skills were remarkably improved, and they became more active with the ownership strengthened by the motivation generated by the instruction of training management.

After the training, the JICA Expert Team modified and edited the contents in consideration of advices from Dr. Nasr. The contents of the one of the additional sessions, Helping Babies Breath (HBB), was completed with advices and verification by Dr. Abdelmoniem, a consultant for FMoH as well as a director of the HBB program. The manual was endorsed by FMoH in the endorsement workshop held on 23rd February, 2015. FMoH started to utilize this manual to disseminate the 12-day training to all the states with a TOT training to 20 HVs in Khartoum for ten days from 24th February, 2015. The JICA Experts attended the second half of the training from 1st to 5th March, 2015 to instruct how to utilize the manual.

In addition to the development of the teaching materials, the JICA Expert Team and the C/P modified some of the existing methods in order to improve the quality of the training. In particular, the new method of urine test was introduced from the eighth batch training to make the test faster and more accurate. Moreover, a new baby-weight-measurement bag was also developed and introduced. In the old measurement system, the baby had to sit, but now he/she can be weighed safely and comfortably while lying down in the new measurement bag.

In terms of a training management, a plan-do-see cycle was introduced in all the training activities such as meetings before/after an in-service training and daily briefing held twice a day during the training, in order to promote facilitators to have awareness and ownership. As for the contents, teaching method, program and cooperative framework were improved gradually at every training.

The workshops, in-service trainings and refresher trainings contributed to improvement of facilitators' coaching ability and training quality, as well as formulation of good teamwork among facilitators.

		
1st coaching workshop: Group work for the development of lesson plan	Facilitator uses IEC materials at trainings	Facilitators are confirming the procedure of demonstration by the job-sheet

(Activity 1.4) Implemented and monitored supportive supervision (SS)

According to the definition of FMoH, Supportive supervision (SS) is a series of processes in which HVs of the locality supervisor in the pilot localities manage and instruct on skills and actions necessary for VMWs. The HVs then report the progress to the state supervisor. The state supervisor provides advice for handling issues, as well as some consumables. SMoH is able to understand what VMWs are experiencing, recognize the current situation and issues in communities, and provides the

necessary support for the VMWs. Through SS, the VMWs has been building trust in the Ministry.

The JICA Expert Team and C/P conducted a preparatory study tour to Gadaref State from 21st to 22nd September, 2011. While Kassala State did not implement SS due to shortage of budget, vehicle and health cadre, Gadaref State implements SS. So that the object of this tour was learning experiences from Gadaref State and exchanges of persons. The team invited a lecturer from the Federal Government from 16th to 20th November to offer training for HVs. The team also formulated a training implementation plan for the pilot localities to begin SS in April 2012 and begin monitoring in May. The team also supplied the SMoH with a vehicle for monitoring.

The HVs went to see 10 VMWs every month in Girba Locality and five VMWs in Wad El Helew Locality, totaling the number given in the following table. The Federal Government recommends conducting SS for all VMWs no less than once a year. The two pilot localities had already conducted SS twice a year due to project activities, which demonstrated a good level of performance. After that, SS was suspended due to the rainy season or non-payment of activity expenses from the local component. SS has, however, been resumed since February 2014.

Table 3.3: SS implementation ratio (as of May 2013)

	VMWs having received the SS	Total number of VMWs in the locality	SS implementation ratio
Girba Locality	116	64	181%
Wad El Helew Locality	63	31	203%

The JICA Expert Team and C/P held an SS feedback workshop on February 5, 2014 to share information on the current SS and in-service training. The state supervisor, pilot locality supervisors and C/P attended. They agreed that SS was essential for empowering the VMWs and was necessary to revise the monitoring items in the Federal Government's format, which has more than 100 items, shown in the following table. Main reasons for the revision are 1) it is difficult for VMWs to concentrate a long time for questions and answers due to a large number of questions, 2) it is difficult for VMWs to understand teaching contents due to extensive questions, 3) it is difficult for a locality supervisor to secure time to listen to VMW's problems and solve them due to a great deal of time for questions, and 4) the outdated contents of questions make VMWs confused. They concluded that the format was consistent with the VMW training contents and only technical matters needed to be revised for use, thus avoiding elimination of the existing advantages of the current format.

Table 3.4: Monitoring items

	Monitoring contents	Number of monitoring items
1	General information of VMWs who received SS management and supervision	—
2	VMW working environment: cleanness in houses, function, delivery equipment situation, record status	72
3	Knowledge and actions of care for pregnant women	39
4	Knowledge and actions of delivery care	49
5	Knowledge and actions of care for mothers and newborn babies	28
6	Knowledge and actions of reproductive health (RH) activities and primary health care	12
7	Satisfaction survey (Appraisal of VMWs' performance by mothers who received the VMW's delivery assistance)	—
8	Satisfaction survey (Appraisal of VMWs' performance by community leaders)	—

Output 2: The system to receive maternal and neonatal emergency patients in pilot localities is prepared.

(Activity 2.1) Formulated and implemented an action plan to improve the management of WEH Primary Hospital (WEH PH)

The JICA Expert Team conducted the feasibility study on rehabilitation of WEH PH from October 2011 and determined the validity of construction for a minor operation theatre, a delivery room and female wards (16 beds) in February 2012. The JICA Expert Team and C/P established the taskforce and continued discussion about strengthening cooperation between WEH PH and Girba Hospital, the possibility of cooperation with NHIF, and the concept of local medical services from June 2011 to April 2013. In January 2014, the Team and C/P formulated action plans described below and carried out the plans in order to start the hospital operation in April 2014.

Table 3.5: Improvement of hospital management

Plan	Actions taken	Outcome
1). Review organizational structure and increase staff	Organizational structure outlined by TF on 23rd Jan. based on five-year plan	SMoH has started to assign staff based on organizational structure. Nurses and lab assistants have been assigned.
2). Effectively change opinions amongst WEH PH staff and community leaders	First workshop held at WEH PH on 8th Mar. Second workshop held for WEH PH officers on 18th Apr.	25 people from WEH PH took part in the First workshop and discussed how to change behaviour of hospital staff in order to restore trust in the hospital. The Commissioner attended and pledged cooperation such as transportation and accommodation for VC, negotiation of NHIF, and recruitment of doctors in front of all those present.
3). Instruct routine work to nurses and medical assistant in the operation room and delivery room	Instructions provided at Girba Hospital on 25th and 27th Mar.	Following a visit from the DG of Girba Hospital on March 8, the interaction between nurses at Girba Hospital and those assigned to WEH PH started.
4). Organize on-site training to nurses	Training provided by nurses of Girba Hospital at WEH PH on 15th and 16th Apr.	
5) Organize cleaning training at operation room and delivery room for cleaning staff	Training provided at Girba Hospital on 15th and 16th Apr.	On-the-job training took place at Girba Hospital.
6). Organize basic training for statistics staff (on-site and additional visits)	Training provided at WEH PH on 19th and 20th Jan.	Technical transfer was still insufficient. On-the-job training for filling in the format to staff in WEH PH

		was conducted.
7). Request increase in budget	Request filed with DG via TF on 23rd Jan.	The DG has pledged to allocate a monthly budget of)) 7,000 SDG (in line with rural hospitals) once work on the hospital has been completed.
8). Coordinate with community leaders and steering committee	Consultation with Commissioner on 20th Jan. Community representatives also attended workshop on 8th Mar.	Community leaders also took part in consultation and pledged to assist with hospital management. Pledges were also made regarding the collection of medical waste.
9). Organize promotional activities to restore trust amongst local people	Workshop held at WEH PH on 8th Mar.	The workshop was attended by community representatives and focused on improvements in hospital capabilities.
10). Recommendation on medical waste	Consultation with Commissioner on 20th Jan.	A pledge has been made to designate a storage location onsite at the hospital. The community will then collect waste and transport it to a disposal site.
11). Establish cooperative relationship between NHIF and WEH PH	Consultation with SMoH, the locality commissioner and NHIF on 20th Jan. and 21st Apr.	Discussion that a health centre of NHIF will be transferred to WEH PH for efficient health service was made. SMoH received particular conditions from NHIF.

(Activity 2.2) Rehabilitated emergency obstetrics care (EmOC) infrastructure of WEH Primary Hospital (WEH PH)

The Project decided to construct two buildings to enable the WEH PH to again function as an RH center in Wad El Helew. One is an operation and delivery block, while the other is female wards. The former aimed to conduct normal delivery and caesarian section as well as a general surgery, while the latter aimed to have four rooms accommodating four patients or newborn babies in each room.

Facility Outline	
Operation and delivery block	Ferroconcrete, one floor with 418 square meter
Female ward	Ferroconcrete, one floor with 315 square meter
Construction Outline	
Construction period	October 2013 - April 2014
Owner and managed by	JICA Sudan Office
Designed by	K-TOP Project
Contractor	Khawarig Contracting and Construction Co. Ltd
Supervised by	K-TOP Project/ Chris for Contracting Co. Ltd

The unveiling ceremony was held with attendance of Japanese Ambassador H. E. Mr. Horie on March 23, 2014, followed by completion inspection on April 15 and the hand-over to Kassala SMoH with attendance of JICA Sudan office and FMoH on April 29. Defect inspection was conducted on October 21, a half year later from the completion. The JICA Expert Team confirmed a completion of necessary repairs claimed to the contractor after the inspection.

(Activity 2.3) Coordinated Emergency Obstetrics Care (EmOC) training for WEH PH and Girba Hospital

One of the measures to reduce maternal death is to enable women in pregnancy, delivery and postpartum to have access to the EmOC facility, where they can receive medical treatment in response to complications. The C/P and the JICA Expert Team organized an EmOC facilitator team composed of an obstetrician, anesthetist, pediatrician, nurse and midwife in Saudi Hospital and conducted EmOC training from 10th November to 5th December, 2013 for EmOC teams composed of a general practitioner, assistant anesthetic technician, theater attendance, and midwife in WEH PH and the Girba Hospital. However, 2 VMWs attended the training from WEH PH due to no assistant anesthetic technician. The participants, excluding a VMW at WEH PH, obtained scores of over 75% in the post-test. The VMWs and theater attendant at WEH PH acquired a great deal of knowledge.

Table 3.6: EmOC training result

Profession	Hospital	Pre-test (%)	Post-test (%)	Increase (%)
Doctors	Girba Hospital	73	76	3
	WEH PH	80	88	8
VMWs	Girba Hospital	69	80	11
	WEH PH (1)	56	64	8
	WEH PH (2)	60	85	25
Theater attendance	Girba Hospital	75	92	17
	WEH PH	62	90	28
Assistant Anesthetic Technician	Girba Hospital	79	83	4

The Federal Government conducted an impact survey on doctors of the EmONC training in several states including Kassala States in 2012. The EmONC training of Federal Government was 11 day's curriculum and not sufficient to acquire necessary skill for rural hospital staff.

Based on the recommendation of the impact survey, the JICA Expert Team revised the curriculum to address the issues in Kassala State through discussion with C/P and UNFPA, a major donor for SMoH. The new curriculum is 4 weeks training and composes of EmONC basic lectures (neonate, obstetrics, and anesthetics) and practice. The curriculum focuses on practices. The C/P decided to take the new curriculum as Kassala standard. SMoH and other donors therefore will conduct EmONC under this curriculum.

(Activity 2.4) Procured necessary equipment and conducted user training for pilot hospitals (Kuwait Hospital, Saudi Hospital, Girba Hospital, WEH PH)

Procurement of medical equipment, user training on medical equipment, monitoring and onsite coaching at targeted hospitals, and creation of the Quick Reference Cards (QRCs) of selected medical equipment were conducted.

(1) Procurement of medical equipment

The following medical equipment was procured for the four targeted hospitals. Details are outlined in Table 4.3 in Chapter 4.

Table 3.7: Medical Equipment Procured

Date	Items	Target areas
March 2012	30 types of equipment 174 in total	Delivery rooms, operation theaters, ICU, neonatal rooms, sterilization rooms and laboratories in the 4 target hospitals.
April 2014	29 types of equipment 230 in total numbers of equipment including furniture, surgical cloth and generator.	New buildings of "Operation Theater & Delivery block" and "Female Ward" in WEH PH

The JICA Sudan Office procured the above equipment under an agreement with a local supplier in Sudan. A JICA Expert supported the needs survey, equipment planning, producing tender specifications, price checks, tender evaluation, pre-delivery inspection, and supervision of installations related to the procured equipment. The Expert also implemented operation tests at installation of equipment for new buildings at WEH PH.

(2) User Training on medical equipment

The user trainings for the four target hospitals were carried out as described below.

1st User Training

Date and Place	June 7, 2012, 1 day at Saudi Hospital, Kassala City
Participants	22 participants comprising of medical doctors, nurse technicians and ordinary nurses
Facilitators	A biomedical engineer, nurse technician from the local supplier, and Mr. Kimura as a JICA expert
Target equipment	1 item: Infant incubator
Test results	Not implemented

2nd User Training

Data & Place	November 6-7, 2012, two-days at Kuwait Hospital, Kassala City
Participants	23 participants comprising of nurse technicians, ordinary nurses, midwifes and a biomedical engineer
Facilitators	3 facilitators including an ICU senior graduated nurse of Children Hospital in Khartoum, a biomedical engineer and a JICA Expert
Target equipment	4 items: Infant warmer, Oxygen inhalation set, Phototherapy unit and Infant Incubator
Test results (Full score: 100 points)	The average score was 39.4 points on the pre-test and 66.3 points on the post-test registering an improvement of 27 points. There was a significant increase in the number of participants who scored 60 points and above; from 4 participants on the pre-test to 16 passing on the post-test judging from the results.

3rd User Training

Data & Place	April 28, 2013 – May 1, 2013, 4 days at Kuwait Hospital, Kassala City
Participants	18 participants comprising of medical doctors and nurse technicians
Facilitators	6 facilitators including a senior graduated nurse from Continuous Professional Development Center (CPDC) of Federal Ministry of Health, an anesthesiologist at Saudi Hospital, three biomedical engineers of Kassala residence and a JICA Expert
Target equipment	6 items: Syringe pump, Infusion pump, Suction pump, Defibrillator, Pulse oximeter and Patient monitor.
Test results (Full score: 100 points)	The average score was 44.8 points on the pre-test and 87.2 points on the post-test registering an improvement of over 40 points . There was a significant increase in the number of participants who scored 60 points and above; from 1 pass on the pre-test to 100% passing on the post-test, their knowledge and skills were improved by this training.

4th User Training

Date and Place	March 3-12, 2014, 4 days at Kuwait Hospital, Kassala City
Participants	20 participants consisting of medical doctors, nurse technicians, theater attendants and biomedical engineers who had not participated in former training
Facilitators	4 facilitators including a senior graduated nurse from the Continuous Professional Development Center (CPDC) of the Federal Ministry of Health, an anesthesiologist from the Saudi Hospital, a biomedical engineer of the Kassala residence and a JICA Expert
Target equipment	9 items: Oxygen inhalation set, defibrillator, infant incubator, infant warmer, phototherapy unit, patient monitor, pulse oximeter, syringe pump and infusion pump
Test results (Full score: 100 points)	The average score was 42.9 points on the pre-test and 77.5 points on the post-test, marking an improvement of over 30 points. There was a significant increase in the number of participants who scored 60 points and above; four participants on the pre-test to 16 passing on the post-test judging from the results.

The number of participants by hospital and personnel category from the above training is shown below.

Table 3.8: Number of Participants to User Trainings by Hospital

Personnel Categories	The number of participants by hospital and category					Total
	WEH Hospital	Girba Hospital	Kuwait Hospital	Saudi Hospital	Others	
Medical Doctor	2	5	6	9	0	22
Nurse Technician (Diploma)	2	8	18	10	2	40
Theater Attendant Ordinary Nurse	5	6	3	4	0	18
Biomedical Engineer	0	1	1	1	0	3
Total	9	20	28	24	2	83

Training Scene


Pre-test


Lecture


Practice (Suction pump)


Practice (Defibrillator)


Group work and making of QRC


Memorial photo

(3) Monitoring and on-site coaching at the target hospitals

The JICA Expert Team and the facilitators carried out the periodical monitoring and the individual on-site coaching at the target hospitals. The major activities are as follows.

Table 3.9: Monitoring and On-site Coaching

Date	Sites	Major Activities
October 2012	4 target hospitals	・Monitoring of the existing equipment and training on equipment management ・Grasp on the level of staff's skill
May 2013	4 target hospitals	・Post training assessment and follow up coaching
June 2013	4 target hospitals	・User training on basic equipment and creation of Quick Reference Cards ・Troubleshooting of Defibrillator (Update software)
October 2013	Kuwait hospital	・Troubleshooting of Suction pump and Phototherapy
	Saudi hospital	・Troubleshooting of Pulse oximeter
February 2014	4 target hospitals	・Monitoring and on-site training of existing equipment
March 2014	WEH hospital	・Operation check of the procured equipment ・On-site training of the theater equipment, and repair of the sockets and equipment plugs in operation theater
	Girba & WEH hosp.	・Post training assessment and follow up coaching
	4 target hospitals	・Creation and promotion of QRCs on laboratory equipment & commonly used medical equipment
April 2014 (Planned)	WEH hospital	・User training at WEH hospital

(4) Development of Quick Reference Cards (QRC) of selected medical equipment

Twenty-six (26) kinds of QRC were developed through users training and the follow-up visit to the target hospitals.

Table 3.10: Development of Quick Reference Cards

Date	Number of QRCs	Name of medical equipment
November 2012	4 kinds	Oxygen inhalation, Infant incubator, Phototherapy unit, Infant warmer
May 2013	6 kinds	Syringe pump, Infusion pump, Suction pump, Defibrillator, Pulse oximeter, Patient monitor
June 2013	6 kinds	Weighting scale, ICU bed, Resuscitation bag, Sphygmomanometer, ECG machine, Safety box for needles
Mar.-Apr. 2013	10 kinds	Operation light, Operation table, Delivery table, Ultrasound apparatus, Examination lamp, Autoclave, Microscope, Bilirubin meter, Hemoglobin meter, Wheelchair

Under the results of Activity 2-4, necessary medical equipment was procured in the targeted hospitals and many medical cadres have received operational and basic maintenance training on medical equipment. Accordingly, the JICA Expert Team concluded that part of the maternal and neonatal emergency care in Kassala State was strengthened through the improvement of the medical cadres' knowledge, skills and awareness.

(5) Support of medical equipment and facilities after completion of the WEH PH construction

The Japanese Expert Team conducted following on-site training after making verification of adjustment of the medical equipment installed in the new buildings. The trainings were provided not only for the direct users but also for all the staff at the installation sites. It intended a smooth taking over of jobs in case of resignation of staff in charge. Those who were trained in the trainings, even if they were not direct users, are expected to take continuously over the know-how.

In addition, the Team attached equipment quick reference card at each installation site together with staff in charge of medical equipment. They were instructed always to return equipment to an original place after usage in order to secure usage at the appropriate site.

In the meantime, the Team conducted simulation trainings on facility and equipment in caesarian sections and normal deliveries for the following purposes.

(1) Hospital staff understands simple regulations of equipment usage including patients' flow and clean/dirty areas, and acts in accordance with the regulations.
(2) Hospital staff understands their jobs each other, and cooperates effectively.

Table 3.11: User training on medical equipment and facility

Date	Sites	Participants	Major Activities
May 27th	Sterilization room, Operation theatre	10	- Verified performance of installed equipment - Trainings on usage and troubleshooting
May 28th	Operation theatre	9	- Verified performance of installed equipment - Trainings on usage and troubleshooting
May 29th	Operation theatre, Delivery room	10	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 1st	Sterilization room, Operation theatre	7	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 2nd	Operation theatre	10	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 3rd	Operation block	27	- Checked frequency of usage of the facility

			- Simulation training
June 4th	Neonatal room	10	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 5th	Recovery room, Post-delivery room, Generator	13	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 9th	Laboratory	3	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 10th	Neonatal room	3	- Verified performance of installed equipment - Trainings on usage and troubleshooting
June 11th	Blood bank	4	- Verified performance of existing equipment - Trainings on usage and troubleshooting
June 12th	Operation theatre	5	- Verified performance of installed equipment - Verified appropriate usage by observation of Caesarean section

Simulation Training


Guiding Patients


Preparation Room


Transfer to Operation Table


Operation 1


Operation 2


Recovery Room

(Activity 2.5) Conduct trainings to protect health staff and patients from nosocomial infections at the pilot hospital

The workshops on hospital infection control, monitoring & on-site follow up coaching and an infection control campaign at WEH PH were conducted.

(1) The workshops on hospital infection control

The three workshops for the four targeted hospitals were implemented as described below.

1st Workshop

Date & Place	November 5, 2012, 1 day at Kuwait Hospital, Kassala City
Participants	23 participants comprising of nurse technicians, ordinary nurses, midwifes and a biomedical engineer
Facilitator	A Saudi Hospital director who participated in the JICA Egypt "Management of hospital infection" training

Program	・Outline of Infection Control and Standard Precautions ・Concept of Medical Waste

2nd Workshop

Date & Place	May 15-16, 2013, 2 days at Kuwait Hospital, Kassala City
Participants	25 participants comprising of medical doctors, nurse technicians, theater attendants, midwifes, laboratory technicians and a biomedical engineer
Facilitators	3 facilitators including a Saudi hospital director, a graduated nurse, and a lecturer of high-level nursing school
Program	・Three Basic lectures: Hospital Infection Control, Standard Precautions, and Medical Waste ・Group discussion: Problem analysis and presentation of results ・Establishment of Infection Control Committee and their roles ・Distributed "A Guideline for Hospital Infection Control by section" in Arabic ・Creation of Action Plan 2013 by each hospital

3rd Workshop

Date & Place	February 10-13, 2014, 4 days at Kuwait Hospital, Kassala City
Participants	20 participants comprising of medical doctors, nurse technicians, theater attendants, midwifes and biomedical engineers
Facilitators	3 facilitators including a Saudi hospital director, a senior graduated nurse from CPDC of FMoH, and a graduated nurse of Police hospital
Program	・Lecture on "What is infection control" and "Why it is important" ・The Guideline for operation theater and neonatal room ・Finding good & bad practice by photo slide-show ・Lecture on Responsiveness and Positive Attitude ・Self-evaluation of Action Plan 2013 and its presentation ・Creating Action Plan 2014 using with Kaizen method ・Role of Infection Control Committee and monitoring of Infection Control

Workshop Scene


Lecture


Group work (WEH hospital)


Presentation of Action Plan

(2) Onsite coaching and monitoring at targeted hospitals

The JICA Expert Team and the facilitators conducted periodical monitoring and individual onsite coaching at the target hospitals. The Infection control committee members of all 4 target hospitals put hand-made posters about hand washing and waste segregation on the walls. While the team work of committee members in Saudi Hospital is weak, the committee members in Kuwait Hospital have regular meetings and attach problems with their creativities. The committee members in Girba Hospital put many posters such as segregation of injectors and infectious wastes on the walls for advocacy. In addition, the strong support for their activities by the hospital administrator resulted in a big improvement in Girba Hospital. The committee members of WEH PH cleared scattered needles of injectors out the hospital site and have maintained clearness. It is indispensable for SMoH and hospital

director to conduct regular monitoring in order to keep cleanness, which is a challenge.

The major activities were as follows.

Table 3.12: Monitoring and On-site Coaching

Date	Sites	Major Activities
May 2013	4 target hospitals	・Monitoring of Action Plan and on-site coaching
November 2013	Saudi & Kuwait hosp.	・Monitoring of Action Plan and on-site coaching
December 2013	WEH & Girba hosp.	・Monitoring of Action Plan and on-site coaching
January 2014	4 target hospitals	・Survey of the activities progress
March 2014	WEH & Girba hosp.	・Post workshop assessment and on-site coaching

(3) Infection control campaign at WEH PH

The JICA Expert Team supported WEH PH staff in covering the campaign mentioned above from 4th to 5th March, 2014. The major activities are (i) rectify the mess of infected needles around the hospital compound, (ii) clean, disinfect and rearrange the delivery room, and (iii) sort, set up and clean the storage. In addition, a campaign team strove to promote visual materials as part of 5S-*kaizen* activities. The JICA Expert Team can conclude that staff's awareness of infection control was improved and through this campaign they realized the importance of medical waste segregation and periodical cleaning.

Cleaning and picking up the needles around hospital

Promotion poster for waste segregation

Community volunteer cleaners

Storage (Before cleaning)

Storage (in progress)

Storage (After cleaning)

Delivery room (After cleaning)

Well organized pharmacy

Repairing equipment plugs

Output 3: Capacity to support VMWs is strengthen

(Activity 3.1) Formulate a taskforce to monitor the project activities and to ensure sustainability and scale-up of the Project.-

The JICA Expert Team discussed with the C/P to establish task forces (TF) to proceed with:

1) Empowerment of VMWs
2) Establishing a hospital management task force (TF)
3) Medical equipment management

These task forces will also discuss how to sustain the Project outputs.

1) Empowerment of VMWs

Agenda	Activities
VMW training materials developed by the Project for lecturers	・SMoH explained the textbook, as a standard textbook of the Kassala State, to FMoH in November 2013. ・Upon request by FMoH, the JICA Expert Team conducted a workshop jointly with the Ministry in December 2013 to finalize the training material formulation. ・SMoH and FMoH agreed to hold an Endorsement workshop jointly in April 2014.
In-service training	・SMoH assigned a facilitator who has the strongest leadership and management ability for the in-service training to sustain the same quality of training as one of the Project in February 2014.
Supportive Supervision (SS)	・The JICA Team realized usefulness and continuation necessity of the SS in the feedback workshop in February 2014 and studied how to maintain the SS after the Project end. ・The JICA Expert Team will hold the second workshop in April 2014 to discuss how to maintain the SS after the Project end.

2) Establishing a hospital management task force (TF)

The TF was established in May 2012 and has held a total of seven meetings since then (as of April 2014). Discussions have focused on the following points.

(1) Scale of hospital renovations
    ① Small-scale operating room, medical ward (16 beds), blood bank, maternity ward
(2) Current condition of WEH PH and its role in local medical services
(3) Plans for the future (WEH PH revitalization plans): Personnel plans, budget plans
(4) SMoH's role and cooperation with WEH PH
(5) Cooperation between the local community and WEH PH
(6) Preparations ahead of the completion of work on the hospital
(7) Medical Waste Management at WEH PH

3) Medical equipment management

Activities involved with medical equipment management will be conducted in April 2014.

(Activity 3.2) Conduct donor meeting to coordinate activities.

The JICA Expert Team assisted the C/P to hold a quarterly meeting with donors involved with the RH activity as described below. Donors reported their activity and its progress to avoid duplication with other donors and coordinate these activities to solve health issues efficiently. The meeting has generated an environment to enhance a communication and cooperation among donors. The donors and C/P reached consensus that SMoH should take strong leadership in the meeting dated November 2013, and SMoH acted as Chairman of the meeting on February 2014.

Table 3.13: Donor Meetings

Year 2011	Year 2012	Year 2013	Year 2014
14th July 14, 2nd November	27th February, 22nd May, 10th July, 3rd October	3rd February, 11th March, 7th November	13th February

(Activity 3.3) Train and monitor statisticians and persons in charge of HIS at the state and the locality levels.

The following figure shows a reporting flow of reproductive health data from Kassala State to FMoH. The Project has empowered officials of statistics officials in RH Department of SMoH and localities and locality supervisors.

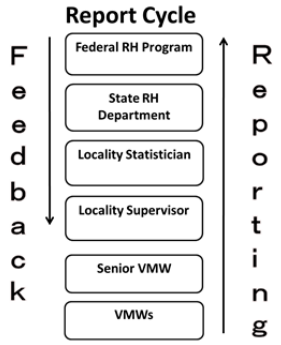


Figure 3.3: Data Flow on HIS

In September 2011, the JICA Expert Team and C/P conducted a study tour to Gadaref State, which has high-quality data management expertise in Sudan. The team also conducted a CUDBAS (Curriculum Development Based on Vocational Ability Structure) workshop to clarify terms of reference (TOR) for the state government staff in charge of RH statistics.

In addition, the team supplied computers to the state statistics department and offered computer skill training from 26th November, 2011 to 12th January, 2012. The department started data input into the computers in January 2012.

In February 2012 the JICA team and C/P started monitoring to empower locality staff in charge of statistics. The monitoring results from October 2013 to February 2014 are shown in the following tables. While some careless mistakes were found in the Girba Locality, mistakes due to insufficient knowledge have reduced at both pilot project localities.

Table 3.14: Monitoring results of RH data in Girba Locality

	Antenatal care (5 items)			Conduct Delivery (9 items)			Postnatal care (6 items)		
Month	No mistakes	Minor mistakes[6]	Important[7] mistakes	No mistakes	Minor mistakes	Important mistakes	No mistakes	Minor mistakes	Important mistakes
10	✔			✔			✔		
11					✔			✔	
12		✔		✔			✔		
1	✔			✔			✔		
2	✔			✔			✔		

Table 3.15: Monitoring results of RH data in WEH Locality

	Antenatal care (5 items)			Conduct Delivery (9 items)			Postnatal care (6 items)		
Month	No mistakes	Minor mistakes	Important mistakes	No mistakes	Minor mistakes	Important mistakes	No mistakes	Minor mistakes	Important mistakes
10	✔			✔			✔		
11	✔			✔			✔		
12	✔			✔			✔		
1	✔			✔			✔		
2	✔			✔			✔		

The JICA team and C/P confirmed the project outputs and agreed to finalize the project activities with the monitoring workshop on 5th February, 2014. The state official in charge of statistics has mastered data input/output with computers, becoming a leader in monthly monitoring workshops targeting the locality staff in charge of statistics. These workshops have empowered the staff mostly to eliminate mistakes in major health data input/output including pre-delivery care, delivery assistance and post-delivery care. The UNFPA activity plan in 2014-2017 includes empowerment of staff in charge of statistics. The output from the project can, therefore, be sustained after the project ends.

(Activity 3.4) Conducted VMW festival for dissemination of information about RH services and advocated for governmental employment of VMWs

The JICA team and C/P conducted VMW festivals twice in each of the Girba and Wad El Helew localities to encourage VMWs, disseminate their role in communities, disseminate reproductive health knowledge and build good relations between hospital staff and VMWs. Over 700 people participated including VMWs, state officials in charge of health, locality officials and residents.

The festivals have raised awareness of VMWs' roles in the locality offices and communities. A short drama that was presented was effective for spreading reproductive health instruction in remote areas and communities with a low ratio of receiving antenatal care. A professional drama group visited to convey health instruction. Some VMWs have also come to be continually stationed in WEH PH, strengthening relations with the hospital. Before the project, VMWs were not allowed to go inside the Girba Hospital. Now they attend regular meetings there to share information and knowledge with the hospital staff, showing a much-improved relationship with the hospital. The hospital staff has come to realize the importance of the VMWs' role. However, the government employment rate of VMWs is only 14% in Girba Locality and 29% in WEH Locality. Although the employment rate is low, the Ministry has increased the incentive for VMWs from 10 to 100 SDG a month since October 2013, thereby improving the environment to support VMWs.

[6] Minor mistakes: mistakes such as calculation mistakes.
[7] Important mistakes: mistakes made by a person who does not have basic knowledge about data.

VMW Festival

Marching into the festival site

Quiz (school competition)

Drama

Participants from communities

Health education song is sung by VMWs

Lecture on danger signs and antenatal care

Drama Play

Audiences appreciate with hearty laughing. At last they understood the message the Project wanted to convey.

Since it is indispensable to involve husbands in health education, the drama started from early-evening when man could come to watch the drama.

Drama player involved audience when he asked some questions to the audience while playing drama.

3.4 Progress of actions for recommendations in the final evaluation

The JICA Expert Team and C/P have coped with the recommendations to implement some countermeasures which should be done by the Project end.

Table 3.16: Progress of actions for Recommendation

Recommendations	Actions
1) To complete technical training at WEH PH on user maintenance of the medical equipment.	The following actions were taken. March 2014: A) The procured equipment including stored equipment were inspected and electrified B) The broken plugs of theater equipment and the

	damaged wall outlet in the theater were repaired C) User training at Kuwait hospital was carried out. 5 members of WEH PH participated in this training. D) A half day's user training and monitoring of former training was performed at WEH PH. April 2014: A) User training at WEH PH was implemented after returning the equipment back from Saudi hospital. B) Initial operation training for necessary equipment was provided after procured new equipment May 2014 Installed equipment which had been tentatively stored in the new buildings. Conducted an on-site training to staff in charge. June 2014: 1st-11th Jun.: Conducted equipment trainings by rooms
2) Provide training for hospital staff using facilities at WEH PH	3rd Jun.: Conducted a simulation training on facility usage to hospital staff in charge of operations
3) Establish bare minimum framework before completion of work on the hospital, including (a) securing staff and budget, (b) appointing a unit chief and improving communication within the hospital, (c) holding regular meetings and coordinating with Girba Hospital, and (d) working with the community to hold regular meetings, etc.	(a) A pledge was made to assign one lab assistant and four nurses at a TF meeting in January. Two nurses were assigned to WEH PH in February. (b) Members of staff were shown examples of communication at Girba Hospital during the workshop on March 8. (c) The DG of Girba Hospital visited WEH PH on 19th February. Possibilities are being explored with regard to a cooperative framework for the future. (d) The Commissioner was consulted regarding cooperative relationships in the future during a meeting on 20th January. There was also an exchange of opinions regarding cooperative relationships between the hospital and the community during the workshop on March 8.
4) Complete procedure to connect WEH PH to water and power supplies	Dr. Omar (Director of Human Resource and Planning) has been appointed as coordinator on behalf of SMoH. Dr. Omar will coordinate with all relevant government agencies, with the ultimate aim of getting the state (although not SMoH) to send a letter to the power company.
5) To support neonatal related equipment, which were procured for WEH PH but currently in use at the Saudi Hospital, to be returned to WEH PH.	February 2014: A) Discussions between the director and SMoH, SMoH and the JICA Expert Team were held. March 2014: A) Minster and the Director General of SMoH agreed to return the equipment back. B) Returned the equipment back before the early April in 2014.

6) Establish task forces (TF) to discuss how to sustain and spread the Project outputs	The Project established task forces (TF) and discussed how to sustain the Project outputs of 1) Empowerment of VMWs, 2) Management of WEH PH, 3) Management of medical equipment.
7) Conduct reviews of SS outputs and functions to spread them to other states	In the feedback workshop in February 2014, the above 1) TF members took an initiative to review current SS progress and discuss how to spread SS to other localities.
8) Formulate a road map of the VMW in-service training so that the Ministry of Finance and development partners could use.	The Project together with the RH department formulated a VMW list to check participations to trainings in April 2014.
9) Share the EmONC training curriculum and learning with the Federal Government	The Project shared the results of the EmONC training with FMoH on 21st Sep., 2014.
10) SMoH shall complete the VMW training materials to disseminate them to other states.	"Facilitation Manual for Community Midwives Training (for 12-day training)" and the flipcharts developed by the Project were endorsed by FMoH on 23rd Feb., 2015. FMoH will utilize the manuals for further dissemination of TOT training for CMW's in-service training to other states.
11) Summarize learning from the SS to send its feedback to the Federal Ministry of Health.	The Project sent feedback of the learning from the SS to FMoH on 21st Sep., 2014.

3.5 Progress to achieve the Overall Goal, Project Purpose and Outputs

The Cluster Purposes and Outputs mentioned in the PDM Ver. 4 are:

Cluster Purposes: Kassala State Government's capacity to provide services for maternal and neonatal health is strengthened through activities of 2 pilot localities.
Output 1: The capacity of Village Midwifes (VMWs) in communities is improved.
Output 2: The system to receive maternal and neonatal emergency patients in pilot localities is prepared.
Output 3: Capacity to support VMWs is strengthened.

Progress to achieve the purposes and outputs as of February 2015 is as described below.

Overall Goal:

Objectively Verifiable Indicators (Baseline Value in 2010 and Target Value in 2013)	Progress to achieve the Overall Goal	Means of Verification
(Overall Goal) 1. Reported maternal death rate in Kassala State (from 1,414/100,000 (2006) to 244.9 (2010), 233 (2014), 221 (2018))	1. According Sudan Household Health Survey, the maternal death rate in 2010 is 244.9/100,000, which shows decreasing trend. The trend is expected to accelerate with achievements done by the	1. Sudan Household Health Survey

	Project.	

Project Purpose:

<table>
<tr><th>Objectively Verifiable Indicators (Baseline Value in 2010 and Target Value in 2013)</th><th>Progress to achieve the Project Purpose</th><th>Means of Verification</th></tr>
<tr><td>(Project Purpose)

1. No. of expectant women and nursing mothers who received services (e.g. antenatal care, delivery, post-natal care) either in improved medical facility in the pilot area or from trained village midwives (from N/A to 80%)</td><td>1. To know any changes in hospitals（%）
<table>
<tr><td></td><td>Girba</td><td>WEH PH</td></tr>
<tr><td>Anti-natal care</td><td>35</td><td>49</td></tr>
<tr><td>Delivery care</td><td>31</td><td>26</td></tr>
<tr><td>Postnatal care</td><td>29</td><td>16</td></tr>
<tr><td>Good changes</td><td>97</td><td>95</td></tr>
<tr><td>Intention of use</td><td>97</td><td>92</td></tr>
</table>
2. To know changes of VMWs（%）
<table>
<tr><td></td><td>Girba</td><td>WEH</td></tr>
<tr><td>Anti-natal care</td><td>57</td><td>47</td></tr>
<tr><td>Delivery care</td><td>41</td><td>33</td></tr>
<tr><td>Postnatal care</td><td>29</td><td>28</td></tr>
<tr><td>Good changes</td><td>100</td><td>100</td></tr>
<tr><td>Intention of use</td><td>89</td><td>87</td></tr>
</table>
Most respondents evaluated changes of health service as good changes. Percentage of intention of use exceeded 85%.</td><td>Qualitative survey</td></tr>
<tr><td>2. Satisfaction degree of expectant women, nursing mothers and community leaders for services provided by VMWs (from N/A to 80%)</td><td>2.
<u>Satisfaction of pregnant women</u>
Regarding the service provided by VMWs
Girba 93.91%
WEH 100%
<u>Satisfaction of community leader</u>
Regarding quick response taken by VMWs
Girba 96.5%
WEH 76.1%
Regarding services provided by VMWs
Girba 96.1%
WEH 76.1%
Satisfaction of community leader for VMWs above was described excellent in 4 scores (excellent, medium, weak, I don’t know). Community leaders in Girba put excellent to almost VMWs and in WEH put excellent and medium to VMWs except 1 VMW who received weak.</td><td>SS reports</td></tr>
</table>

Outputs:

Objectively Verifiable Indicators (Baseline Value in 2011 and Target Value in 2014)	Progress to achieve the Outputs	Means of Verification
(Outputs) 1.1 Percentage of VMWs who passed post-test among VMWs taking in-service training (from N/A to 70%, 2014)	1.1 89% (Mar. 2014) Almost 90% of VMWs passed post-test and other 10% did not pass but at near an acceptable level.	1.1 Training record
1.2 No. of new training materials and introduction of new ideas accepted to be added to in-service training for quality improvement. (0, 2011 to 6, 2014)	1.2 9 (Nov. 2012)/ Teaching materials 6, checklist 2, teaching method 6 14 (Jun. 2013) Check list 2, training methods 6, Flipchart material 5, Manual 1 (job sheets 5, lesson plan 15, role play scenario 1) (Mar. 2014) The capacity of HVs was strengthened through activities, and the developed manual and flipchart material were endorsed by FMoH and will be disseminated to all the states.	1.2 Training record
1.3 No. of facilitators fostered for in-service training (8, 2011 to 12 persons, 2014)	1.3 10 (Nov. 2012) 11+4 facilitator candidate（2014） Over half of all HVs in Kassala were trained as facilitators of VMW in-service training.	1.3 Training record
1.4 Percentage of VMWs in pilot localities who received the supportive supervision conducted by HVs. (from N/A to 80%, 2014)	1.4 Implementation rate of SS per VMW and per year. 181% in Girba, 203% in WEH (at May 2014) Most VMWs received HVs for technical support twice a year.	1.4 Monitoring paper
2.1 Percentage of participants who could complete the EmOC training in WEH PH and Girba Hospital respectively (from N/A to 80%, 2014)	2.1 6 out of 8 scored more than 80% at the post-test, which means 75% of participants completed the training.	2.1 Activity report
2.2 No. of Quick reference cards*1 for procured medical equipment (from 0 to 20, 2014)	2.2: 26 cards in total 4 (Nov., 2012) 6 (May, 2013) 6 (Jun., 2013) 10 (Mar., 2014) There are over 20 kind of reference cards for equipment in operation room, delivery room neonatal room and ICU.	2.2 Activity report

2.3 No. of health cadre who received user training for procured medical equipment (from 0 to 60, 2014)	2.3 83 cadres in total 22 (Jun. 2012) 23 (Nov. 2013) 18 (May, 2013) 20 (Mar. 2014) 32 (May 2014) 50 (Jun. 2014) The result exceeds largely the goal. And participants of trainings include 22 doctors and 40 nurse technicians who have a bachelor degree.	2.3 Activity report, interim report
3.1 Percentage of mistakes in RH data reports in pilot localities .(from N/A to 5%, 2014)	3.1 Girba: antenatal care (minor 0%, major 0%), conducting delivery (minor 0%, major 0%), postnatal care (minor 0%, major 0%) (April 2014) WEH: antenatal care (minor 0%, major 0%), conducting delivery (minor 0%, major 0%), postnatal care (minor 0%, major 0%) (April 2014) No mistakes were made in Girba Locality and WEH Locality.	3.1 Activity report
3.2 Number of VMWs who are governmental employees in pilot localities. Girba: (15, 2011 to 20, 2014) WEH (4, 2011 to 10, 2014)	3.2 Girba, 9 of 64VMWs (14%, 2014), WEH 9 of 31VMWs (29%, 2014) Although the Project could not achieve the goal, the local government increased incentive to 100SDG for unemployed VMWs.	3.2 Activity report

3.6 Coordination with Other Donors in the Health Cluster

1) Training program of EmONC

The EmONC training curriculum formulated by the Federal Government had some issues in actual practice. The JICA Expert Team therefore revised it to address the issues in Kassala State through discussions with C/P and UNFPA, a major donor for SMoH. SMoH and all donors currently use the revised version as a Kassala standard for EmONC.

2) Facilitators of in-service training

Eleven HVs empowered by activities in the project conducted were selected as facilitators and conducted in-service training financed by UNFPA.

3) Manuals

The manuals developed in the Project were used in the VMW trainings conducted by UNFPA in 2013 and 2014 in Kassala.

FMoH endorsed the “Facilitation Manual for Community Midwives Training (for 12-day training)”

and the flipcharts at the endorsement workshop on February 23, 2015, to utilize them in all the other states in Sudan.

4. Reports of the Training in Japan, Third Country Training, Procurement of Equipment, and Facility Construction

4.1 Training in Japan

Since the Project was started, a total of 12 C/Ps participated 7 training courses in Japan. Name of training courses and number of participants are shown in Table 4.1 as following.

Table 4.1: Counterpart training in Japan

Year	Name of Training course	No. of participants
2011	Health/ Maternal and Child Health/ Reproductive Health/ Maternal and Child Health Management Course	1
	Health Policy Development in Japan	2
2012	Enhancement of Regional Health and Medical Systems -Focusing on islands/remote health care in Japan	2
	Health Policy Development in Japan	2
2013	Medical Equipment Maintenance	1
	Health System Management	1
	Maternity and Child Health and Public Health Administration	1
2014	Maternity and Child Health and Public Health Administration	1
	Rural Community Development	1
	Total	12

4.2 Third Country Training

Since the Project was started, a total of 18 C/Ps participated 7 training courses in third countries. Name of training courses and number of participants are shown in Table 4.2 as following.

Table 4.2: Counterpart training in third countries

Year	Name of Training course	No. of participants
2012	Control of Cross Hospital Infection for Middle East Countries i*n Egypt*	2
	Women's Health across Life span for African Nurse Leaders (Cairo University) *in Egypt*	2
2013	Infectious Diseases: Updates in Laboratory Diagnosis *in Egypt*	1
	Study visit on medical equipment management *in Jordan*	7
	Women's Health across the Lifespan *in Egypt*	1
2014	Training for bio-medical engineering *in Jordan*	1
	Women's Health across the Lifespan *in Egypt*	1
	Training for Kaizen approach trainer *in Tanzania*	2
2015	5S-CQI-TQM *in Sri Lanka*	1
	Total	18

4.3 Procurement of Equipment in Health Cluster

Equipment procured by March 2015 by the Health Cluster is presented in Appendix 5 attached to the volume 1 of the report.

4.4 Facility Construction

The project has decided to construct two buildings to enable the WEH PH to again function as an RH center in Wad El Helew. One of them is an operation and delivery building, while the other houses women's wards. The former aimed to conduct normal delivery and caesarian section as well as a general surgery, while the latter have four rooms accommodating four patients or newborn babies in each room.

Facility outline
Operation and delivery building: Ferroconcrete, one floor with 418 m^2
Women's ward building: Ferroconcrete, one floor with 315 m^2

Construction outline
Construction period (October 2013 - April 2014)
Ordered and managed by JICA Sudan Office
Designed by K-TOP Project
Contractor: Khawarig Contracting and Construction Co. Ltd

Supervised by K-TOP Project, Chris for Contracting Co. LtdThe WEH PH completed final inspection on April 15, 2014, followed by the hand-over of the buildings to SMoH on April 29 and defect inspection on October 20, 2014. There were light damages such as cracks of the walls and nothings to affect construction. Necessary repairs were implemented by the contractor.

5. Conclusions and Way Forward

5.1 Conclusions

The project has been applying a comprehensive approach to enhancing VMWs' ability and to improve the environment surrounding them in Girba and WEH localities. A series of (a) in-service training for VMWs provided by quality facilitators and materials, (b) implementation of SS and (c) awareness raising of VMWs in communities through VMW festivals is highly appreciated as "K-TOP model" by SMoH.

The fruits of the Project "Facilitation Manual for CMWs Training" and the flipcharts were endorsed by FMoH on 23rd February, 2015, followed by dissemination to all the states in Sudan by FMoH. It was considered as a good practice for a state (on site) to provide feedbacks to the federal (policy).

The Project has also been providing a series of equipment and trainings to the hospitals with a purpose of enhancing medical facilities accepting patients from communities. Opening neonatal ICU at Girba Hospital, opening pediatric ICU at Kuwait Hospital and upgrading of maternal and neonatal ICU at Saudi Hospital contributed a lot to maternal and neonatal care in Kassala.

Meanwhile, current frequency of usage of the operation theater, delivery block and female ward built for the purpose of promoting maternal service in WEH, an isolated area in a rainy season, is quite low. SMoH and WEH Locality need to realize fundamental solutions to improve working conditions and environments for hospital staff.

5.2 Way Forward

(1) Continuation of quality VMW training

A quality training was realized by an interaction of facilitators' enhanced coaching ability and accumulated experiences of management cycle (planning, preparation, implementation and evaluation). It is essential for SMoH to emphasize activities and trainings to enhance facilitators' ability in order to maintain the training quality.

(2) Teaching material development for VMW in-service training

The materials developed in the Project was endorsed by FMoH in February 2015 and became a national training materials. Correct usage of the manual and the flipcharts could improve the effectiveness of trainings. It is expected that those who comprehend the usage of the manuals instruct those who don't to make a full utilization.

The materials were developed for VMW in-service trainings. However, they could be utilized in basic training.

The materials are the first edition. It is expected for facilitators to evaluate the effectiveness after using them in VMW in-service trainings or basic educations, discuss and modify the contents of necessity.

(3) Continuation of effective supportive supervision (SS)

HVs, SMoH and JICA Expert Team all agree that implementation of SS contribute to safe delivery and thus needs to be continued. It leads to maintenance and improvement of VMW services, confidence building between SMoH and VMWs through HVs and ensuring delivery of consumables. The local component covered the implementation cost for SS, however, SMoH should consider financial sustainability for further implementation in the two localities and expansion to other states. In addition,

SS implementation system needs to be enhanced from the standpoint of practicality and efficiency, including modification of the current format.

(4) Collaboration with SMoH, Hospital and National Health Insurance Fund (NHIF)

Since March 2014, there seems no progress in the current discussion between WEH Locality and NHIF Kassala office on collaboration between WEH PH and NHIF. It is recommended for SMoH immediately to make an agreement with NHIF on effective facility usage of WEH PH.

Technical assistance by Girba Hospital to WEH PH staff was a mutual assistance system formulated through the Project, which contributed reasonable capacity building of the staff.

(5) Measures to secure stability of doctors and nurse technicians

A large number of doctors going to work abroad is one of the major problems in Sudan. Even in our target hospitals, the increasing number of career changes or retirements of doctors and nurses is a serious problem. The JICA team recommended that FMoH and SMoH work together to tackle the outflow of medical staff in ways such as improving employment conditions and work environment.

(6) Continuation of fulfilling maternal and neonatal care services in Kassala State

JICA Expert Team has been recommending to establish a management system of medical equipment since the beginning of the Project. The level of the maternal and neonatal care services has improved by equipment the Project provided such as the newly established adult and neonatal ICU in the Girba Hospital, newly opened pediatrics ICU in the Kuwait Hospital, and the upgraded maternal and neonatal ICU in the Saudi Hospital. In addition, new Operation Theater and Delivery Block, and the Female Ward were constructed in WEH PH. To continue their healthcare services, operation and maintenance are needed. It is recommended that SMoH will establish a management system for medical equipment although it is a big challenge.

(7) Continuous activities of the infection control committee

The JICA Expert Team supported the activities of hospital infection control through workshops, monitoring, and on-site coaching. To continue these activities, it is important to strengthen the infection control committee, as well as a commitment from SMoH and hospital directors. For example, JICA team recommends continuing a campaign activity where wider people of hospital staffs and communities can attend is highly effective.

添付資料

Appendix

1-4: Project Design Matrix (PDM ver. 4.0) – Health Cluster

Name of the Project: Capacity Development Project for Provision of the Services for Basic Human Needs in Kassala, Sudan (K-TOP Project)

Duration: May 2011 – April 2014 (3 years)

Target Area: Girba Locality and Wad El Helew Locality
Kassala State

Target Group : RH staff in Kassala, Girba, Wad El Helew and VMWs in Girba, Wad El Helew, West Kassala, New Halfa, Nahr Albara

Date: 20 Dec. 2012
PDM Version 4.0

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
OVERALL GOAL			
Basic Human Needs of the people in Kassala State are ensured by enabling them to access quality public services by the State.	1 Reported maternal death rate in Kassala State (from 1,414/100,000 (2006) to 244.9/100,000 (2010) 233/100,000 (2014), 221/100,000 (2018))	Sudan Household Survey	Kassala State Government is willing to support non-pilot areas, utilizing the capacity improved by the project. Other donors continue to conduct same activities in their pilot areas.
PROJECT PURPOSE			
Kassala State Government's capacity to provide services for maternal and neonatal health is strengthened through activities of 2 pilot localities.	1 Realizing, recognition, willingness and use of pregnant women and nursing mothers to take antenatal care and delivery either in improved medical facility or from trained village midwives in 2 pilot localities.	Survey (qualitative survey)	Economic situation of Kassala State is not worsened sharply. Population growth of Kassala State does not exceed the assumption. Kassala State Government continues to allocate budget and personnel.
	2 Satisfaction of services by VMWs for pregnant women and nursing mothers and community leaders in pilot localities (from N/A to 80%, 2014)	The SS reports	
OUTPUTS			
1 The capacity of Village Midwifes (VMWs) in communities is improved.	1.1 Percentage of VMWs who passed post-test among VMWs taking in-service training (from N/A to 70%, 2014)	Training reports	Socio-economic and political situation in Kassala State is not worsened.
	1.2 No. of new training materials and introduction of new ideas accepted to be added to in-service training for quality improvement. (0, 2011 to 6, 2014)	Training reports	
	1.3 No.of facilitators fostered for in-service training (8 , 2011 to 12 persons, 2014)	Progress report	
	1.4 Percentage of VMWs in pilot localities who received the supportive supervision conducted by HVs.(from N/A to 80%, 2014)	Progress report	
2 The system to receive maternal and neonatal emergency patients in pilot localities is prepared.	2.1 Percentage of participants who could completed the EmOC training in WEH Primary Hospital and Girba Hospital respectably (from N/A to 80%, 2014)	Progress report	
	2.2 No. of Quick reference cards*1 for procured medical equipment (from 0 to 20, 2014)	Activity report	
	2.3 No. of health carders who received user training for procured medical equipment (from 0 to 60, 2014)	Activity report	

3 Capacity to support VMWs is strengthen.	3.1 Percentage of mistakes in RH data reports in pilot localities .(from N/A to 5%, 2014) 3.2 Number of VMWs who are governmental employees in pilot localities. Girba: (15, 2011 to 20, 2014) WEH (4, 2011 to 10, 2014)	Activity report Activity report	
ACTIVITIES	INPUTS		
1-1 Conduct in-service training for VMWs of pilot localities 1-2 Conduct in-service training for VMWs of selected localities except pilot localities 1-3 Conduct workshop and trials to improve quality in-service training for VMWs. 1-4 Implement and monitor the Supportive Supervision. 2-1 Formulate and Implement an action plan to improve the management of WEH Primary Hospital. 2-2 Rehabilitate the emergency obstetrics care (EmOC) infrastructure of WEH Primary Hospital 2-3 Coordinate emergency obstetrics care (EmOC) training for WEH Primary Hospital and Girba Hospital. 2-4 Procure necessary equipment and conduct user training for pilot hospitals (Kuwait Hospital, Saudi Hospital, Girba Hospital, WEH Primary Hospital). 2-5 Conduct trainings to protect health staff and patients from nosocomial infections for the pilot hospital. 3-1 Formulate a taskforce to monitor the project activities and to ensure sustainability and scale-up of the Project. 3-2 Conduct donor meeting to coordinate activities. 3-3 Train and monitor statisticians and persons in charge of HIS at the state and the locality levels. 3-4 Conduct VMW festival for dissemination of information about RH services and advocate for governmental employment of VMWs.	A. Inputs from Japanese side: 1)Assignment of experts 2)Counterpart training in Japan and other countries 3)Provision of equipment 4)Operational expenditure B. Inputs from Sudanese side: 1)Assignment of Sudanese counterparts 2)Local Component budget 3)Facilities		Sudanese counterparts of the Project are not shifted frequently. Participants of the trainings provided by the Project continue taking charge of the present work. Deliveries of the Equipment planned to be procured by the Project do not delay largely. Completion of rehabilitation of WEH does not delay. (Or rehabilitation of WEH is completed on time) PRECONDITIONS

*1.Quick reference cards:A card written a brief instruction how to operate medical equipment.


JICA