

**Ex-Post Project Evaluation 2015:
Package III-5 (Palestine, Sri Lanka)**

September 2016

JAPAN INTERNATIONAL COOPERATION AGENCY

Kaihatsu Management Consulting Inc.

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Palestinian National Authority

FY2015 Ex-Post Evaluation of Technical Cooperation Project
“Project for Improving Maternal and Child Health and Reproductive Health
in Palestine (Phase 2)”

External Evaluator: Hiroko Matsuki, Kaihatsu Management Consulting, Inc.

0. Summary

This project was implemented with the objective of improving maternal and child health and reproductive health throughout the territory of the Palestinian National Authority (the West Bank and the Gaza Strip) through promoting the “Mother and Child Health Handbook” (hereinafter referred to as “MCHHB”), and by providing technical training.

Both at the time of planning and completion of the project, the objective of the project was aligned with the National Health Strategy, which focused on enhancing primary health services and development needs. The project was also highly consistent with Japan’s policy of overseas development assistance of prioritizing humanitarian support at the time of planning. Therefore, its relevance is high. As a result of the project’s interventions, the distribution rate of MCHHB reached 100 percent at facilities of the Ministry of Health, the implementing agency, United Nations Relief and Works Agency for Palestine Refugees (UNRWA) and non-government organizations (NGOs). Information on mothers and children was more likely to be shared between facilities through the use of MCHHB; this contributed to some improvement in continuity of perinatal care in those facilities, as well as in the number of clients who received antenatal, postnatal and child care increased. The project, however, did not implement sufficient activities to engage with private facilities - the project just introduced the MCHHB to private doctors at seminars, and gave them posters on the MCHHB. It is unlikely that these limited interventions led to improved distribution and utilization of the MCHHB in the private sector, which means that the project purpose was achieved only partially. Therefore, effectiveness and impact of the project are fair. Both project cost and period are within the plan, therefore, the efficiency of the project is high. Sustainability is fair, because the Ministry of Health, the implementing agency, does not have a system to distribute and manage the MCHHB for private facilities; there is no major concern on policy, technique, and finance.

In light of the above, this project is evaluated as satisfactory.

1. Project Description



Project Locations

Source: United Nations Geospatial Information Section



A nurse filling in the MCHHB

Source: the evaluator

1.1 Background

The “Project for Improving the Reproductive Health with a Special Focus on Maternal and Child Health in Palestine” (hereinafter referred to as “Phase 1”), which was implemented from August 2005 to July 2008, developed an Arabic version of the MCHHB and its guidelines¹ for managing utilization of the MCHHB. Phase 1 contributed to standardizing services on mother and child health, improving patient satisfaction, and raising awareness of people in the pilot areas.² There were still some issues such as insufficient distribution of the MCHHB in the country and lack of a system to secure sustainability of the MCHHB at the time of completion of Phase 1, as shown in Table 1.

Table 1 : Remaining issues at the time of completion of Phase 1

The MCHHB had not been distributed nationwide.	<ul style="list-style-type: none"> ▪ The MCHHB had not been distributed to hospitals, private facilities or the Gaza Strip. ▪ The MCHHB had been distributed with duplications. ▪ Awareness campaigns, such as home visits and health education seminars for local residents (including men, women and the youth), had only been implemented in communities of the pilot areas.
Health staff did not have enough technical capacity.	<ul style="list-style-type: none"> ▪ Health staff did not have sufficient technical capacity, for example, in perinatal care, ultrasound examinations, screening of high-risk pregnancy, and communication with patients. It is necessary to strengthen their capacity to provide appropriate services, in tandem with using the MCHHB, to improve services on maternal and child health and reproductive health.

¹ The “Palestine National Manual for the MCHHB” developed by NCC in the project was based on the guidelines of Phase 1.

² Pilot areas were Jericho and part of Ramallah.

There was no system to secure sustainability of the MCHHB.	<ul style="list-style-type: none"> The Ministry of Health had not established a system to manage stock and monitor the MCHHB in a sustainable way.
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Source: made by the evaluator based on the Preliminary Survey Report

Based on the above issues, the “Project for Improving Maternal and Child Health and Reproductive Health in Palestine (Phase 2)” (hereinafter referred to as “the Project”) was implemented with the objective of improving services on maternal and child health (hereinafter referred to as “MCH”) and Reproductive Health (hereinafter referred to as “RH”) in the entire area of Palestine.

1.2 Project Outline³

Overall Goal	Health among women and children is improved in the West Bank and the Gaza Strip.	
Project Purpose	Maternal and child health (MCH) and Reproductive Health (RH) services are improved in the West Bank and the Gaza Strip.	
Output	Output 1	Coverage and utilization of MCHHB are improved.
	Output 2	Perinatal knowledge and technical skills of MoH/PHC ⁴ center staff are strengthened.
	Output 3	National Coordination Committee (NCC) is functioning as MCHHB policy making and implementing/supervising body.
	Output 4	Community awareness on MCH and RH is raised.
	Output 5	Enhance project implementation by monitoring and evaluation of Project activities.
Total cost (Japanese side)	319 million yen	
Period of Cooperation	November 2008 - November 2012	
Implementing Agency	Ministry of Health (MoH)	
Other Relevant Agencies / Organizations	UNRWA: Provides basic social services such as education, health and social welfare for Palestinian refugees living in the Middle East. As part of its services, UNRWA manages PHC centers in Palestine, where it distributes the MCHHB. ⁵	
Supporting Agency/ Organization in Japan	None	

³ The PDM used by the ex-post evaluation is the final version revised in November 2009. The PDM was revised twice during the project period: in April 2009, at the first joint coordination committee, and November 2009, at the second joint coordination committee.

⁴ PHC means Primary Health Care. The PHC center is a subsidiary organization of the Ministry of Health, which provides primary health care.

⁵ UNRWA participated in discussions on development of the MCHHB and pilot activities in Phase 1, which led to its decision to start distribution of the MCHHB in the West Bank in 2008, and the Gaza Strip in 2009. UNRWA has expanded its distribution to its facilities in Jordan, Syria and Lebanon since 2010. UNRWA participated in the Project as a regular member of NCC, and continues to distribute and utilize the MCHHB and make a regular report to the MoH.

Related Projects	The Grant Aid Project for Improving the Control of Infectious Diseases Among Palestinian Children: The project supported printing 380,000 copies of the MCHHB in 2008. ⁶
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1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the Time of the Terminal Evaluation

The terminal evaluation, which was implemented in July 2012, concluded that the prospect of achievement of the project purpose was generally high in many aspects by confirming that the Project contributed to integrating the MCHHB into a system of MCH/RH services, and improving continuity of perinatal care. The evaluation, however, identified several issues such as low completion of “Hospital Remarks”,⁷ which is one of the items in the MCHHB that should be filled in by hospital health staff,⁸ and limited distribution of the MCHHB in private facilities.

1.3.2 Achievement Status of Overall Goal at the Time of the Terminal Evaluation

The terminal evaluation anticipated that several indicators of the overall goals, such as the distribution rate of MCHHB to pregnant women, the percentage of children receiving vitamin A and D supplements, and prevalence of exclusive breastfeeding, would be achieved to some extent. The evaluation, however, could not foresee the achievement of some health indicators, such as the prevalence of anemia, maternal mortality rate and infant mortality rate, because there were many factors that influenced women and children’s health in addition to the MCHHB.

1.3.3 Recommendations at the Time of the Terminal Evaluation

The following table shows the recommendations made by the terminal evaluation, and the status of those issues at the time of the ex-post evaluation.

Recommendations made by the terminal evaluation (Summary)	Status of the issues at the time of the ex-post evaluation
(1) The function and the responsibility of the NCC secretariat should be streamlined to MoH and simplified. Procedure for periodic revision of MCHHB contents through NCC should also be elaborated.	The function and the responsibility of NCC was transferred to the Community Health Department (hereinafter referred to as “CHD”) of MoH, which continues to manage the MCHHB and its revision regularly. The

⁶ This Grant Aid was given by the Japanese government through UNICEF, and supported printing 380,000 copies of the MCHHB and 1,500 copies of the monthly report format – these were enough copies until 2013, and underpinned the initial stage of national distribution of the MCHHB.

⁷ The “Hospital Remarks” are divided into examination of mother and examination of newborn. Items of the mother’s examination include date and hour of delivery, mode of delivery, episiotomy, perineal tear, bleeding after delivery, blood transfusion, and diagnosis. Items of newborn’s examination include pregnancy outcome, weight, length, vital signs, Apgar score, starting breastfeeding, congenital malformation, medication, hepatitis B1, and diagnosis.

⁸ Health staff who fill in the MCHHB are obstetricians and gynecologists, midwives and nurses.

Recommendations made by the terminal evaluation (Summary)	Status of the issues at the time of the ex-post evaluation
	department has integrated MCHHB formats into their existing documents to simplify the procedures.
(2) Efforts should be made to increase MCHHB recording by doctors in public hospitals. It is preferable to conduct activities to raise awareness among the doctors about the importance of the MCHHB, together with follow-up activities to increase their compliance.	According to the beneficiary survey (please refer to Table 11) at the time of the ex-post evaluation, data entry was 46 percent, which was lower than other pages, such as those on immunization and child measurement. MoH has not implemented follow-up activities or awareness activities for hospital staff such as obstetricians and gynecologists, midwives and nurses.
(3) Follow-up should be with the training institutions (colleges) to facilitate integration of the MCHHB into pre-service training of doctors, nurses and midwives.	The Project conducted follow-up seminars, which, however, did not lead to introduction of the MCHHB into curricula at schools apart from Ibn Sina Nursing Collage.
(4) The achievements of the Project and its lessons should be compiled and widely shared among stakeholders related to the promotion of the MCHHB, and to MCH and RH.	The Project developed a joint brochure on the MCHHB in cooperation with all seven partner organizations (JICA, MoH, UNRWA, and four NGOs), which were distributed to relevant organizations.
(5) Efforts should be initiated to secure sufficient internal budget for printing and nationwide distribution of the MCHHB after 2014. The roles and responsibilities of the relevant department within MoH for planning, budgeting, printing, distribution, and monitoring of the MCHHB should be clarified.	MoH has secured budgets for printing. There are no issues on the roles and responsibilities as CHD is in charge of planning, budgeting, printing, distribution, and monitoring of the MCHHB as a whole.
(6) Arrangements should be made with NGO partners to initiate the use of MCHHB in their PHC Centers in the Gaza Strip.	The current status could not be checked by the ex-post evaluation.
(7) Continuous training of healthcare providers on effective utilization of the MCHHB should be planned and organized by MoH. Training packages developed by the Project can be used in such training.	Although continuous training has not been planned or organized, MoH uses contents of training for On the Job Training (OJT) of new staff.
(8) Policies, strategies and practical interventions to operationalize use of the MCHHB in the private sector should be elaborated and discussed in NCC. The possibility of including private sector representatives in NCC should be considered to facilitate such a process.	Focal persons from the private sector were appointed as NCC members. NCC, however, has not established any policies, strategies or practical interventions for the private sector.

2. Outline of the Evaluation Study

2.1 External Evaluator

Hiroko Matsuki, Kaihatsu Management Consulting, Inc.

2.2 Duration of Evaluation Study

Duration of the Study: September, 2015 – November, 2016

Duration of the Field Study: January 10, 2016 – January 28, 2016, and
April 13, 2016 – April 20, 2016

2.3 Constraints during the Evaluation Study

The PDM of the Project has several indicators for which the evaluator could not find appropriate data as of the project completion and ex-post evaluation. Additionally, for some indicators the evaluator could not assess the degree of improvement at the time of project completion and ex-post evaluation due to a lack of baseline data. Due to these conditions, the ex-post evaluation filled gaps in quantitative data with qualitative data.

3. Results of the Evaluation (Overall Rating: B⁹)

3.1 Relevance (Rating: ③¹⁰)

3.1.1 Relevance to the Development Plan of Palestine

“The Palestinian Reform and Development Plan” at the time of project planning, and “The National Development Plan” at the time of project completion set the health sector as a prioritized area. At the time of project planning, “The Palestinian National Health Strategy (2008-2010)” included the provision of comprehensive primary health services, including community health, women, and reproductive health, as one of its strategic objectives. “The Palestinian National Health Strategy (2011-2013)” at the time of project completion similarly focused on improving primary health services. The objective of the Project, which was improving MCH/RH services was, therefore, in line with the policies and priorities of Palestine at the time of planning and completion.

3.1.2 Relevance to the Development Needs of Palestine

In Palestine, the movement of women and health staff such as doctors and midwives has been restricted due to conflicts, separation walls or curfews, which has affected the health of women and children.¹¹ At the time of project planning in 2008, the maternal mortality rate, child mortality rate and prevalence of anemia among pregnant women in Palestine was at an equivalent or relatively higher level to that in neighboring countries, as depicted in Table 2. According to the preliminary evaluation report the country faced several challenges to mother and child health, such as insufficient technical and communication capacity among health staff, and a low percentage of postnatal visits - around 30 percent - compared to that of antenatal

⁹ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

¹⁰ ③: High, ② Fair, ① Low

¹¹ MoH confirmed 69 deliveries carried out at checkpoints between 2000 and 2006. (Source: “Health in the Occupied Palestinian Territory 2 Maternal and Child Health in the Occupied Palestinian Territory” (2009) Lancet)

visits of more than 90 percent.

At the time of project completion there were continuing issues relating to MCH, as the child mortality rate had stayed the same, and the prevalence of stunting in children had increased.¹² Because it had been facing MCH/RH-related challenges both at the time of planning and completion, the Project, whose objective was to improve MCH/RH services, was relevant to the needs of Palestine.

Table 2 : Comparisons of health indicators between Palestine and neighboring countries

		Palestine	Jordan	Egypt	Israel
Maternal Mortality Rate /100,000	At the time of the project planning ¹³	59	59	82	7
	At the time of the project completion ¹⁴	53	53	50	5
Child Mortality Rate /1,000	At the time of the project planning	27	20	23	5
	At the time of the project completion	23	19	21	4
Prevalence of anemia among pregnant women	At the time of the project planning	29.4%	29.4%	30.7%	23.1%
	At the time of the project completion	29.2%	27.0%	30.4%	23.9%

Source : The maternal mortality rate comes from data of the United Nations Population Fund (UNFPA), and the child mortality rate from UNICEF’s “State of World Children”. Data on anemia is from the World Bank’s “Health nutrition and population statistics”, except for Palestine, where data comes from MoH annual reports (West Bank only).

Note: Child Mortality rate gives the probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

3.1.3 Relevance to Japan’s ODA Policy

The Japanese Government’s Country Assistance Policies for Palestine (as of January 2005) at the time of project planning focused on humanitarian support for ensuring human security. The Policies highlighted that the Japanese government would show a “peace dividend” in concrete ways by supporting improvements in people’s livelihoods including employment promotion to ensure movement towards peace. The Millennium Development Goals, on which the Japanese government and JICA placed importance, also focused on health improvements among pregnant and parturient women, and children. Because the Project aimed at improving MCH/RH services through distribution of the MCHHB and provision of training, it would contribute to improving people’s livelihood to enjoy a “peace dividend”, and the Project was consistent with Japanese ODA policy.

This project was highly relevant to the country’s development plan and development needs, as well as Japan’s ODA policy. Therefore, its relevance is high.

¹² Source: The National Health Strategy (2011-2013)

¹³ As of 2008

¹⁴ As of 2012

3.2 Effectiveness and Impact¹⁵ (Rating: ②)

3.2.1 Effectiveness

3.2.1.1 Project Output

<Output 1> Achieved Partly

Output 1 was “coverage and utilization¹⁶ of MCHHB are improved”. At the time of project completion, the MCHHB was utilized at all facilities of MoH, UNRWA and four cooperating NGOs,¹⁷ and the effectiveness of distribution and management of the MCHHB had been improved. Output 1, however, had some limitations in that there was no information about the increase of the filling rate or the number of private facilities that had started using the MCHHB. In addition, the involvement of medical and nursing schools had not been increased much. Thus, the evaluator concludes that Output 1 was achieved partly. The status of achievements of indicators are shown as follows:

- Indicator 1 : Distribution rate of MCHHB out of the number of live births is increased.
<Achieved>

The distribution rate¹⁸ of the MCHHB in the West Bank was 163 percent as of 2008, which indicated a high level of duplication and inefficiency. The rate decreased to 116 percent in 2011 by addressing the issue of duplication in distribution through providing orientation training. In the Gaza Strip, UNRWA started distribution of the MCHHB in 2009; this was followed by MoH in 2010, and then achieved the rate of 116 percent in 2011. At the time of project completion in 2012, the rate was 111 percent in the West Bank, and 113 percent in the Gaza Strip. Thus, Indicator 1 was achieved.

Table 3 : Distribution rate of MCHHB per number of live births
(MoH, UNRWA, NGOs)

	2008	2009	2010	2011	2012
West Bank	163%	115%	106%	116%	111%
Gaza Strip	0%	71%	104%	116%	113%

Source: MoH CHD, MoH Gaza, UNRWA

¹⁵ Sub-rating for Effectiveness is to be put with consideration of Impact.

¹⁶ “Utilization” means to utilize the MCHHB as a portable medical record, health education tool, and national common tool according to the Palestine National Manual for the MCHHB.

¹⁷ Four cooperating NGOs are 1) Palestine Red Crescent Society, 2) Palestinian Medical Relief Society, 3) Palestinian Family Planning and Protection Association, 4) Health Work Committees. All of them are humanitarian support agencies.

¹⁸ The distribution rate = numbers of MCHHB / number of live births at all facilities. Indicator 1 aims to increase the distribution rate, which can be interpreted as that the rate should be 100 percent if there is no inefficient duplication of distribution.

- Indicator 2: Filling rate of MCHHB is increased. <Unknown>

The MCHHB evaluation survey,¹⁹ conducted by the Project in 2012, revealed the status of two aspects of filling in the forms in the MCHHB: 1) entry rate, and 2) data entry. The entry rate means the extent to which the necessary items on each page are filled in by health staff; data entry shows the proportion of the MCHHB into which health staff entered some data (regardless of extent). According to the survey the entry rate was between 10.6 percent and 93.4 percent, and data entry was between 19.2 percent and 98.7 percent by item. There was no data, however, at the time of project planning and completion, which prevents the evaluator from assessing improvement in the rates. Thus, the status of achievement of Indicator 2 is not known.

- Indicator 3 : Number of MCH/PHC centers and hospitals of the MoH and Stakeholder which utilize MCHHB is increased. <Achieved>

In the West Bank all health facilities managed by MoH, UNRWA and cooperating NGOs were utilizing the MCHHB as of 2011. Likewise, in the Gaza Strip, all health facilities of MoH and UNRWA were utilizing the MCHHB as of the same year. Because the number of facilities of MoH and stakeholders utilizing the MCHHB increased as depicted in Table 4, Indicator 3 was achieved.

Table 4: Number of health facilities of MoH and stakeholder that utilize the MCHHB

Types of target health facilities	2010		2011	
	West Bank	Gaza	West Bank	Gaza
MoH PHC Centers	356/356 ²⁰	36/36	356/356	36/36
MoH hospitals	0/10	NA	10/10	NA
UNRWA clinics	41/41	20/20	41/41	20/20
UNRWA hospitals	1/1	0/0	1/1	0/0
NGO clinics	21/38	NA	38/38	NA
Combined clinics	23/23	0/0	23/23	0/0

Source : Terminal Evaluation Report

- Indicator 4 : Number of private clinics and hospitals²¹ which use MCHHB is increased. <Unknown>

MoH does not have accurate information on the number of private facilities and the status of distribution of the MCHHB among them at the time of project planning and completion, which meant the evaluator was unable to assess the level of achievement of Indicator 4.

¹⁹ The survey areas were 12 districts of the West Bank. Interviews were conducted with 865 mothers who came to a clinic of UNRWA or MoH for child immunization (1-4 months) and brought the MCHHB on the interview day.

²⁰ 356/356 means that 356 out of target 356 facilities utilize the MCHHB.

²¹ Clinics provide primary health services such as antenatal and postnatal examination, pediatric services, vaccination and family planning, whereas hospitals provide secondary and tertiary medical services. In Palestine, most deliveries are carried out at hospitals (according to MoH annual report 2014, 99.6% of live births are reported at hospitals in the West Bank, and 100% at the Gaza Strip).

Interventions with private facilities were limited in that the Project only held seminars with private doctors to inform them about the MCHHB, and distributed a poster to raise awareness. The Project did not provide training in utilizing the MCHHB or monitor activities. Thus, it is hard to conclude that the Project contributed to increasing the number of private facilities that utilize the MCHHB to a considerable degree. The Project found it difficult to implement enough activities with the private sector, as the MoH did not have an adequate system to guide and supervise private facilities.²²

- Indicator 5 : Supply and stock are controlled by the designated monitoring format.
<Achieved>

The Project developed reporting formats for managing the supply and stock of the MCHHB. MoH facilities and four NGOs have used these formats since 2011 when reporting to CHD of MoH. UNRWA practices stock management using their own system, and reports the results to CHD once a year. As the supply and stock were managed, Indicator 5 was achieved.

- Indicator 6 : Number of medical and nursing schools which introduced benefits and utilization of MCHHB in their curriculum is increased. <Not achieved>

Only the Community Health Worker College managed by the Palestinian Medical Relief Society was using the MCHHB as a health education tool in its curriculum at the time of project planning. Ibn Sina Nursing College of MoH incorporated the benefits and utilization of the MCHHB in its curriculum in 2010. Although the indicator did not have a target figure, the level of achievement was not sufficient as only one school introduced the MCHHB as part of curriculum during the project period. Thus, Indicator 6 was not achieved.

<Output 2> Largely Achieved

Output 2 was “perinatal knowledge and technical skills of MoH/PHC center staff are strengthened”. The Project provided technical training, which improved the knowledge and

²² Private facilities and doctors have to get a license from MoH. All private hospitals are given licenses and MoH has information on the number of private hospitals. At the time of ex-post evaluation (April 2016), there were 52 hospitals in total in the West Bank (14 governmental hospitals, 29 private, 1 UNRWA, and 8 hospitals inside Jerusalem). Private hospitals account for more than half of the total hospitals, and play an important role in the health sector of Palestine.

The proportion of live births by type of hospital is 54.1% in government hospitals, and 45.5% in non-government hospitals in the West Bank, whereas it is 74.5% in government hospitals and 22.8% in non-government hospitals in the Gaza Strip (source: MoH annual report 2014). As non-government hospitals include private and UNRWA hospitals, we cannot identify the number of live births in private hospitals. Considering the larger number of private hospitals mentioned above, it can be said that a sizable number of deliveries are carried out in private hospitals.

Private doctors and clinics similarly are required to get licenses. However, MoH does not know the accurate number of those doctors and clinics because there are a significant number who provide medical services without them. According to MoH reports the total number of private clinics with licenses is 750, including UNRWA and NGOs.

technical skills of PHC center staff of MoH as well as general practitioners. In addition, health staff are able to use the equipment such as ultrasound diagnosis machines and mercury manometers provided by the Project without a problem. It is not known, however, if communication between mothers and staff has improved. Thus, Indicator 2 was largely achieved.

- Indicator 1 : Knowledge and skills of trainees are improved. <Achieved>

The Project provided “Antenatal Care Technical Training” and “Obstetric Ultrasound Training” for PHC center staff and general practitioners respectively. The tests carried out after both training programs indicated improvement in knowledge and skills of participants.²³ Thus, Indicator 1 was achieved.

- Indicator 2 : Patient/client satisfaction is increased.

The evaluator decided to use Indicator 2 as an indicator of the project purpose because satisfaction of patients/clients is more relevant to assess an improvement in services.

- Indicator 3 : Communication between health care staff and patient/client is improved. <Unknown>

The evaluator understood that setting Indicator 3 meant that the Project expected the provision of training to contribute to improving communication between staff and patients or clients. According to the MCHHB evaluation survey in 2012, most visitors (71.3 percent) responded that they had consultations with doctors and/or nurses using the MCHHB at PHC centers. The evaluator, however, could not appraise the extent to which communication had improved due to lack of baseline data. At interviews in the ex-post evaluation survey, a few staff and mothers answered that the frequency of communication increased after starting to use the MCHHB; this, however, was not sufficient to conclude that capacity building through training contributed to improving communication between staff and clients. Therefore, the status of Indicator 3 is not known.

- Indicator 4 : Allocated equipment are used as planned. <Achieved>

At the time of project completion, as expected, PHC center staff of MoH were able to operate equipment allocated by the Project such as ultrasound diagnosis machines and mercury manometers without difficulty. Thus, Indicator 4 was achieved.

²³ According to JICA documents, the evaluation points of Antenatal Care Technical Training increased from average 71.0 ± 17.5 to average 88.5 ± 10.2 after the training (total number of participants was 538). Similarly, all 23 participants passed the post evaluation test (both the paper examination and practical examination) after the training in Obstetric Ultrasound.

<Output 3> Achieved Partly

Output 3 was “NCC is functioning as MCHHB policymaking and implementing/supervising body”. As shown in Table 5, NCC was expected to promote and supervise nationwide implementation of the MCHHB, and to coordinate stakeholders in order to improve MCH/RH services through the MCHHB in a sustainable way. At the time of project completion, a management system promoting utilization and supervision of the MCHHB had been established with the development of the “Palestine National Manual for the MCHHB”. On the other hand, NCC was not able to supervise supply and stock management on its own initiative,²⁴ even though this was part of their supervisory role. As NCC functioned below the expected level, Output 3 was achieved partly.

Table 5: Outline of NCC for the MCHHB

Basis of establishment ²⁵	Decision of Minister of Health
Mission of NCC	<ol style="list-style-type: none"> (1) Promote and supervise nationwide implementation of the MCHHB as the national common tool. (2) Coordinate with other national programs related to RH/ MCH within the MCHHB such as antenatal care, postnatal care, continuum care (PHC & Secondary care), family planning, immunization, integrated management of childhood illness, child growth monitoring, maternal & child nutrition, health education & health promotion (community awareness), etc.
Role of NCC	<ol style="list-style-type: none"> (1) Approve the suggested policy, strategy, activities and work plan including financial plan that are prepared by the Taskforce for MCHHB. (2) Strengthen coordination among members and stakeholders (government, non-government, national and international agencies, including donors). (3) Facilitate the Taskforce in order to discuss work on some technical tasks such as development and revision of the MCHHB and related materials.
Role of Taskforce	<ol style="list-style-type: none"> (1) Develop and revise the MCHHB and related materials. (2) Analyze the MCHHB related data and submit the result of the analysis as a report (or minutes of meetings) to the NCC. (3) Based on the analysis, submit the suggested countermeasures to the NCC for approval, if necessary. (4) Execute the tasks assigned by the NCC, such as implementation of the MCHHB related workshops and trainings.
Regular Members	<ol style="list-style-type: none"> (1) Chairperson : Director General of Primary Health Care & Public Health Directorate, MoH (2) Deputy Chairperson : Director General of Women’s Health and Development Directorate, MoH (3) Secretariat : CHD, Primary Health Care & Public Health Directorate, MoH (4) Main members : Primary Health Care & Public Health Directorate, Hospital General Directorate, Director of Nursing Unit, Director of Licensing Unit, UNRWA, four cooperating NGOs, and the Obgyn Society

Source : “The National Coordination Committee for the MCH Handbook Terms of Reference” as of April 6, 2010 and the member list as of April 27, 2012

²⁴ The JICA expert team took the lead in this instead of NCC due to a lack of human resources in CHD. (source: JICA documents)

²⁵ NCC is a committee established through a decision of ministers in order to coordinate activities and opinions of various stakeholders.

- Indicator 1 : Defined coverage criteria (supply/stock, distribution and filling) of MCHHB is complied among different stakeholders. <Achieved>

Indicator 1 means that the NCC knows the status of coverage criteria, which indicates numbers of supply/stock, distribution and filling of forms that are reported by each stakeholder complying with the “Palestine National Manual for the MCHHB”²⁶. The Taskforce of NCC compiled the “Palestine National Manual for the MCHHB”, which was authorized by NCC in April 2010. MoH facilities and NGOs started using the reporting format developed for managing the supply and stocks of the manual from 2011 to make a report to CHD. UNRWA managed stock of the MCHHB using their own system and reported the results to MoH once a year. As NCC received these reports, they knew the status of coverage criteria regularly.²⁷ Thus, Indicator 1 was achieved.

- Indicator 2 : Defined monitoring method of MCHHB is complied for nationwide monitoring and evaluation of MCHHB. Indicator 3 : Compliance of defined coverage criteria and monitoring method is supervised by NCC. <Partially Achieved>

Both Indicator 2 and 3 meant that each stakeholder implements monitoring activities of the MCHHB under supervision of NCC. At the time of project completion, MCH supervisors of each directorate were making regular visits to PHC centers of MoH, in which they checked how staff performed and utilized the MCHHB. It seemed that NGOs and UNRWA similarly monitored utilization of the MCHHB using their own system, whose details, however, were not reported to NCC. Thus, Indicator 2 and 3 were achieved partially.

- Indicator 4 : MCH/RH Services with MCHHB is sustained by securing budget. <Achieved>

In 2008, the Project printed 380,000 copies of the MCHHB and 1,500 copies of the monthly reporting format with a financial support of Grant Aid from the Government of Japan through UNICEF; this number of copies will be enough until 2013. Because budget was secured to sustain provision of MCH/RH services through the MCHHB at the time of project completion, Indicator 4 was achieved,

<Output 4> Not Achieved

Output 4 was “community awareness on MCH and RH is raised”. The original plan was that the Project would subcontract to an NGO to implement intensive awareness campaigns in specific areas. After that, MoH would expand a national health promotion based on experiences

²⁶ It was confirmed by JICA that Indicator 5 of Output 1 is for stakeholders, whereas Indicator 1 of Output 3 is for NCC.

²⁷ It was confirmed by JICA that the “filling” in Indicator 1 means whether the MCHHB has been started to be used at facilities, which was checked by JICA project team directly.

of these campaigns.²⁸ The plan for subcontracting to an NGO, however, was cancelled due to an objection from MoH.²⁹ Furthermore, at the time of the mid-term review, it was decided to put a priority on Output 1 and 2 because project activities had fallen behind schedule.³⁰ This led to scaling down the activities of Output 4, without implementation of intensive awareness campaigns. Instead, the Project developed calendars and brochures related to MCH/RH and distributed these to governmental facilities and other stakeholders. Outcomes of raising awareness and improving knowledge at a community level were not measured. The evaluator concludes that Output 4 was not achieved because the Project neither implemented planned activities fully, nor measured the degree of improvement in awareness and knowledge. As mentioned below, level of achievement of indicators is not known due to lack of information.

- Indicator 1 : Bringing rate of MCHHB to the MoH's MCH/PHC centers, hospitals and high risk clinics is increased. (mothers, children) <Unknown>

The bringing rate of the MCHHB was 97.4 percent and 98.3 percent in 2009 and 2010 respectively. The MCHHB evaluation survey of 2012 revealed the frequency of bringing the MCHHB: “always bring” 69.0 percent and “sometimes bring” 25.3 percent. The evaluator, however, was not able to assess changes in the bringing rate because the definition of the rate and scope of interviews were different between those surveys.³¹

- Indicator 2 : Ownership rate of MCHHB is increased. <Unknown>

The Palestine Family Health Survey, which was conducted by the Palestinian Central Bureau of Statistic nationwide in 2010, revealed that, from women aged 15-49 with experience of delivery within the previous two years, 83.5 percent of the respondents owned an MCHHB in the West Bank, and 62.3 percent in the Gaza Strip. It is not possible to tell, however, if the ownership rate has increased due to lack of either baseline data or data at the time of project completion.

- Indicator 3 : Communication (sharing information related to MCH/RH issues) among family member is improved. <Unknown>

²⁸ The target area, beneficiaries and purpose of the activities were not decided at the time of project planning, as the detailed plan was to be made in the first year of the project.

²⁹ MoH’s reasons for the objection were that 1) MoH has a broader area coverage than an NGO, and 2) MoH should take the initiative as an implementing agency of the Project.

³⁰ The reasons for the delay in activities were that 1) the Project took time to develop a national manual for the MCHHB, and 2) it took time to make a detailed plan of training.

³¹ Data for 2009 and 2010 comes from annual reports of MoH. The scope of the survey was only MoH PCH centers in the West Bank. The bringing rate indicates the proportion of women who receive the MCHHB at clinics and bring it to the following visit. MoH does not collect this data after 2010. On the other hand, the MCHHB evaluation survey in 2012 asked about the frequency of bringing by targeting mothers who visited MoH or UNRWA PHC centers in the West Bank.

In the MCHHB evaluation survey of 2012, most of the pregnant women (64.5 percent) of those owning the MCHHB responded that they had shown the MCHHB to their family members. The evaluator, however, cannot determine whether communication among family members has improved, because showing the MCHHB does not necessarily mean an improvement in communication. In addition, data was not collected at the time of project planning and completion.

- Indicator 4 : Knowledge on MCH and RH is improved. <Unknown>

The MCHHB evaluation survey in 2012 showed that 92.6 percent of pregnant women owning the MCHHB had read the pages on health education and information on pregnancy, which, however, does not necessarily indicate that their knowledge has improved. It is not possible to tell whether knowledge has improved due to lack of data both at the time of project planning and completion.

<Output 5> Not Considered

Output 5 was “enhance project implementation by monitoring and evaluation of Project activities”. The evaluator decided not to consider Output 5 for evaluating achievements of the project purpose. Monitoring and evaluation of activities, holding of joint coordination committees, and recording of minutes of meetings are supposed to be conducted in any technical cooperation project. Though the activities of Output 5 such as recording of minutes of meetings were implemented, these should not be considered as an output.

3.2.1.2 Achievement of Project Purpose

The project purpose of the Project was “maternal and child health (MCH) and reproductive health (RH) services are improved in the West Bank and the Gaza Strip”. The achievements of the project purposes are summarized in the following table:

Table 6 : Achievement of Project Purpose

Project Purpose	Indicator	Actual
Maternal and Child health (MCH) and Reproductive health (RH) services are improved in the West Bank and the Gaza Strip	【Indicator 1】 Continuity of perinatal care among health care providers (the MoH, UNRWA, NGOs and private) is improved. (Referral, feedback rate by utilizing MCHHB)	<Achieved to some extent> • It was not clear what data was supposed to be used to evaluate the indicator, therefore the evaluator selected two kinds of data: 1) the proportion of pregnant women bringing the MCHHB when going to hospital for delivery (bringing rate), and 2) proportion of entry of “Hospital Remarks” in the MCHHB (filling rate). The reason for selecting this data is that sharing information between clinics and hospitals through the MCHHB is essential to improve continuity of perinatal care, which was aimed at by the Project.

Project Purpose	Indicator	Actual
		<ul style="list-style-type: none"> ▪ Data of the bringing rate, however, has not been collected by either the Project or MoH. The filling rate increased from 6.1 percent in 2008 to 18 percent in 2012, although it falls below the level of 50 percent that was anticipated by MoH. ▪ At the time of the ex-post evaluation, the filling rate (e.t., a proportion of data entry) of “Hospital Remarks” was 46 percent (n=116), which had improved from 18 percent in 2012, but remained lower than that of other pages such as “Immunization schedule” (97 percent), “child’s measurements” (90 percent), “postnatal examination” (74 percent), and “newborn assessment” (72 percent). ▪ Although data does not show full achievement of the indicator, the terminal and ex-post evaluation teams were told of several cases that reflected improvement in continuity of perinatal care.³² Thus, the evaluator concludes that Indicator 1 was achieved to some extent.
	<p>【Indicator 2】 Distribution rate of MCHHB to pregnant women is increased.</p>	<p><Achievement cannot be known due to lack of data></p> <ul style="list-style-type: none"> ▪ The Palestine Family Health Survey in 2010 revealed that 46 percent of women owning the MCHHB received those handbooks when they were pregnant. The MCHHB evaluation survey in 2012 showed that 58.7 percent of respondents received the MCHHB when they were pregnant. But the evaluator cannot assess improvement of the rate because those surveys had different scopes: the survey in 2010 targeted women nationwide, whereas that in 2012 targeted only mothers who visited MoH or UNRWA clinics. Additionally, relevant data had not been collected at the time of project completion.³³ ▪ Neither the Project nor MoH has collected data on private facilities, even though the indicator includes distribution rates at both clinics of MoH, UNRWA and NGOs, and private facilities. With insufficient data as well as limited interventions with the private sector, as described in Output 1, it is hard to conclude that the Project contributed to improving the distribution rate at private facilities. ▪ Thus, the status of achievement of Indicator 2 is unknown.

³² The ex-post evaluation team received a report of one case where a mother who had a cardiac disorder was saved with adequate care after showing a doctor her medical records in the MCHHB.

³³ Indicator 2 of the project purpose seems similar to Indicator 1 of Output 1, which was “distribution rate of MCHHB out of the number of live births is increased”. Indicator 2 of the project purpose, however, cannot be replaced with that of Output1 because it targets only pregnant women, considering that it is essential to receive the MCHHB when pregnant to enjoy improvement in continuity of perinatal care by utilizing the MCHHB.

Project Purpose	Indicator	Actual																																																
	<p>【Indicator 3】 Number of Antenatal care, Postnatal care and Child care (Growth monitoring, EPI) visit is increased.</p>	<p><Achieved largely></p> <ul style="list-style-type: none"> • The total number of patients/clients who received antenatal care, postnatal care and childcare has increased in the West Bank as depicted in the following figure. Similarly, the number of patients/clients who received antenatal and postal care has increased in the Gaza Strip; however, the number receiving childcare there has slightly decreased. • Because the number of patients/clients who received antenatal care, postnatal care and childcare has increased as a whole, Indicator 3 was achieved largely. <div data-bbox="770 745 1398 1122" data-label="Figure"> <table border="1"> <caption>Data for Figure 1: West Bank</caption> <thead> <tr> <th>Year</th> <th>Antenatal care</th> <th>Postnatal care</th> <th>Child care</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>180,000</td> <td>40,000</td> <td>380,000</td> </tr> <tr> <td>2009</td> <td>210,000</td> <td>50,000</td> <td>520,000</td> </tr> <tr> <td>2010</td> <td>210,000</td> <td>50,000</td> <td>550,000</td> </tr> <tr> <td>2011</td> <td>210,000</td> <td>50,000</td> <td>540,000</td> </tr> <tr> <td>2012</td> <td>240,000</td> <td>60,000</td> <td>580,000</td> </tr> </tbody> </table> </div> <p>Figure 1: Trend in the number of patients/clients who received antenatal care, postnatal care and childcare in the West Bank Source: MoH West Bank (CHD)</p> <div data-bbox="751 1317 1409 1709" data-label="Figure"> <table border="1"> <caption>Data for Figure 2: Gaza Strip</caption> <thead> <tr> <th>Year</th> <th>Antenatal care</th> <th>Postnatal care</th> <th>Child care</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>100,000</td> <td>10,000</td> <td>620,000</td> </tr> <tr> <td>2009</td> <td>110,000</td> <td>10,000</td> <td>620,000</td> </tr> <tr> <td>2010</td> <td>160,000</td> <td>10,000</td> <td>640,000</td> </tr> <tr> <td>2011</td> <td>170,000</td> <td>10,000</td> <td>610,000</td> </tr> <tr> <td>2012</td> <td>180,000</td> <td>20,000</td> <td>600,000</td> </tr> </tbody> </table> </div> <p>Figure 2: Trend in the number of patients/clients who received antenatal care, postnatal care and childcare in the Gaza Strip Source: MoH Gaza</p>	Year	Antenatal care	Postnatal care	Child care	2008	180,000	40,000	380,000	2009	210,000	50,000	520,000	2010	210,000	50,000	550,000	2011	210,000	50,000	540,000	2012	240,000	60,000	580,000	Year	Antenatal care	Postnatal care	Child care	2008	100,000	10,000	620,000	2009	110,000	10,000	620,000	2010	160,000	10,000	640,000	2011	170,000	10,000	610,000	2012	180,000	20,000	600,000
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Project Purpose	Indicator	Actual
	<p>【Indicator4】 Patient/client satisfaction is increased.</p> <p style="text-align: right;">³⁴ is</p>	<p><Achieved></p> <ul style="list-style-type: none"> • The MCHHB evaluation survey in 2012 indicated that 99.9 percent of women who wanted to become pregnant expressed their preference for using the MCHHB for the next baby. Likewise, the client satisfactory assessment, which was conducted by MoH in 2012, revealed that 91.8 percent of clients who visited PHC centers evaluated MCH services as “excellent” or “good”. • Because the data shows a high degree of satisfaction among clients, Indicator 4 was achieved.

The Project improved the distribution rate and utilization of the MCHHB at facilities of MoH, UNRWA and NGOs, in parallel to strengthening knowledge and technical capacity on perinatal care of MoH staff. As a result, continuity of perinatal care among health care providers has been improved to some extent. The Project also contributed to increasing the number of clients who take perinatal and child care, raising their awareness by using the MCHHB. Additionally, the degree of client satisfaction, especially among women using the MCHHB and health facilities, is high.

On the other hand, due to a lack of data the evaluator cannot confirm to what extent awareness and knowledge of local residents has been improved with the limited intervention of the Project on awareness campaigns on MCH/RH. In addition, the Project did not implement enough activities for private facilities, which was attributed to insufficient capacity in MoH to supervise the private sector, even though the Project aimed at improving MCH/RH services nationwide including private facilities. The evaluator, therefore, cannot conclude that the Project improved the distribution rate of the MCHHB for women who use private facilities. Thus, the Project achieved the project purpose at a limited level only.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

The overall goal of the Project was “health among women and children is improved in the West Bank and the Gaza Strip”.

(1) Achievement of indicators

The overall goal has 7 indicators. From health Indicator 1 to 6, Indicators 3 and 4 show a

³⁴ Although the PDM does not define the meaning of the patient and client, it says that one of the target populations is “women in reproductive age, children under 5 years old and their family members”. The evaluator uses the definition for the patient and client, as these targets are recipients of services on MCH/RH, which were to be improved by the Project.

trend toward improvement, whereas others have not improved. Indicator 7 was “distribution rate of MCHHB to pregnant women is 100 percent”. Though it cannot be indicated by data due to lack of information, it is clear that Indicator 7 has not been achieved, as distribution and usage of the MCHHB had not been fully expanded to private facilities at the time of the ex-post evaluation. Table 7 shows achievement of each indicator.

Table 7: Achievement of Overall Goal

Overall Goal	Indicator	Achievement
Health among women and children is improved in the West Bank and the Gaza Strip.	【Indicator 1】 Prevalence of antenatal and postnatal women and children under 3 years old with anemia is decreased.	<Decreasing in the West Bank, and worsening in the Gaza Strip: Not Achieved> <ul style="list-style-type: none"> • West Bank: The prevalence of anemia among antenatal and postnatal women and children under 3 years has been decreasing. • Gaza: The prevalence of anemia among antenatal women has increased in 2014, which might be caused by the worsening economic situation as a result of conflicts, whereas anemia prevalence among children under 3 years does not have a tangible change. There is no data on that of postnatal women.
	【Indicator 2】 Number of stunting, wasting and underweight children under 3 years old is decreased.	<Not changed in the West Bank, and stunting worsening in the Gaza Strip: Not Achieved> <ul style="list-style-type: none"> • West Bank: The prevalence of stunting, wasting and underweight has not changed. • Gaza: The prevalence of stunting has been worsening, whereas that of wasting has decreased since 2011. The prevalence of underweight has no tangible change.
	【Indicator 3】 Prevalence of children who have completed exclusive breastfeeding during age 0-5 months is increased.	<Increasing in the West Bank and the Gaza Strip: Being Achieved> <ul style="list-style-type: none"> • The prevalence of exclusive breastfeeding has been on the increase in both the West Bank and Gaza Strip, though there are years lacking data.
	【Indicator 4】 Percentage of children aged 0-11 months receiving vitamin A+D supplementation is increased.	<Increasing in the West Bank and the Gaza Strip: Being Achieved> <ul style="list-style-type: none"> • Because data on percent of children aged 0-11 months receiving vitamin A+D supplements was not available, the evaluator used here the number of vitamin A+D supplements distributed. • The number of vitamin A+D supplements distributed has been increasing in the West Bank and the Gaza Strip in the long term.

Overall Goal	Indicator	Achievement
	【Indicator 5】 Number of facility visit of children under 3 years old for diarrhea and respiratory infection is decreased.	<No tangible change in the West Bank, and increasing in the Gaza Strip: Not Achieved> <ul style="list-style-type: none"> • West Bank: There is no data on the number of cases of diarrhea because it has not been considered a public health issue. Instead, the evaluator checked data of intestinal parasitic diseases that cause diarrhea. There is no major change in the number of those cases. Similarly, the number of visits for care of URTI (Upper Respiratory Tract Infection) does not show a big change in these years. • Gaza: The incident rate of diarrhea among children under 3 years has slightly increased. Likewise, the incident rate of influenza and URTI has been rising.
	【Indicator 6】 IMR and MMR are decreased.	<Stagnant or decreasing in the West Bank and the Gaza Strip: Not Achieved> <ul style="list-style-type: none"> • West Bank: Overall, infant mortality rate has stayed the same though it rose slightly in 2011. Maternal mortality rate has been on the decrease. • Gaza Strip: Infant mortality rate has a downward trend, whereas maternal mortality rate remains the same.
	【Indicator 7】 Distribution rate of MCHHB to pregnant women is 100 percent.	<Not known due to a lack of data> <ul style="list-style-type: none"> • Distribution rate of the MCHHB to pregnant women at all types of facilities including private sectors: The Palestine Family Health Survey in 2010 revealed that 46 percent of women owning the MCHHB received those handbooks when they were pregnant. There is no data after 2010 because the following survey in 2014 did not include questions about the MCHHB. • Distribution rate of the MCHHB to pregnant women at MoH or UNRWA clinics: The MCHHB evaluation survey in 2012 showed 58.7 percent of the respondents received the MCHHB when they were pregnant. There is no data after the survey.

(2) Contribution of the Project to Achievement of the Overall Goal

Among the indicators of the overall goal, macro Indicators 1 to 6 may have other contributing factors besides MCHHB-related ones. Table 8 shows how the Project and other factors could contribute to achieving the indicators of the overall goal.

Table 8: Contributing factors to achievement of the Overall Goal

Indicators	Possible contributions of the Project (MCHHB)	Possible contributions of other factors
【Indicator 1】 Prevalence of antenatal and postnatal women and	• The MCHHB has guidance for women to take iron tablets to prevent them becoming anemic.	• MoH has implemented a micronutrient deficiency program since 2006, in which MoH distributes iron tablets for pregnant women and iron drops for infants.

Indicators	Possible contributions of the Project (MCHHB)	Possible contributions of other factors
children under 3 years old with anemia is decreased.	<ul style="list-style-type: none"> • The MCHHB has guidance to practice exclusive breastfeeding. 	<ul style="list-style-type: none"> • MoH implemented a major campaign for 6 months in 2014, and conducted awareness activities and distribution of tablets.
【Indicator 2】 Number of stunting, wasting and underweight children under 3 years old is decreased.	<ul style="list-style-type: none"> • The MCHHB has guidance on breastfeeding and foods for infants. 	<ul style="list-style-type: none"> • Followings are considered as general factors: economic situation, educational level of mothers, inadequate foods, insufficiency of foods, diseases, and unhygienic conditions.
【Indicator 3】 Prevalence of children who have completed exclusive breast feeding during age 0-5 months is increased.	<ul style="list-style-type: none"> • The MCHHB has guidance to practice exclusive breastfeeding. 	<ul style="list-style-type: none"> • MoH has implemented a promotion activity on exclusive breastfeeding since 2006; the activity included publication through media, distribution of brochures, posting notices and provision of guidance at clinics. • Since 2011, a regulation has been applied to prevent early introduction of breastmilk substitutes to promote breastfeeding. • Since 2012, MoH also has implemented a program of “baby friendly hospitals”, which promotes breastfeeding through skin to skin contact.
【Indicator 4】 Percentage of children aged 0-11 months receiving vitamin A+D supplementation is increased.	<ul style="list-style-type: none"> • The MCHHB has guidance to give vitamin A+D tablets to infants. 	<ul style="list-style-type: none"> • MoH has distributed vitamin A and D supplements free of charge for infants of 0-12 months at clinics.
【Indicator 5】 Number of facility visit of children under 3 years old for diarrhea and respiratory infection is decreased.	<ul style="list-style-type: none"> • The MCHHB has an explanation that breastfeeding can prevent children from having diarrhea and respiratory infections. 	<ul style="list-style-type: none"> • The following are considered as general factors: drinking water, sanitation condition, hand-washing practices, breastfeeding, vitamin A and immunization.
【Indicator 6】 IMR and MMR are decreased.	<ul style="list-style-type: none"> • The MCHHB improves continuity of perinatal care, which can lead to decreasing cases of inappropriate treatment and miscarriages. As a result, infant and maternal mortality rate could be decreased. • The MCHHB can increase the number of care visits and 	<ul style="list-style-type: none"> • The medical facilities at hospitals such as ICU (Intensive-Care Unit), blood transfusion and specialized staff can be main factors in maternal deaths because more than 90 percent of deliveries are carried out at hospitals. High rate of caesarean operations could also influence maternal deaths.

Indicators	Possible contributions of the Project (MCHHB)	Possible contributions of other factors
	vaccinations, which could lead to decreasing infant and maternal mortality rates.	

The health indicators of the overall goal are being achieved only partially, as shown in Table 7. As depicted in Table 8, though distribution and utilization of the MCHHB could lead to some improvements in the health indicators, these indicators could be influenced more directly by other factors such as improvement in nutritional conditions and hospital facilities. Furthermore, the MCHHB has not been distributed fully to the private facilities, despite the fact that the private sector has an important role in the health sector in Palestine. The evaluator, therefore, concludes that the Project contributed to improving health indicators of the overall goal at a limited level only.

Thus, the Project has achieved the overall goal only partially, as the Project contributed to achieving the overall goal at a limited level, in addition to a failure to achieve Indicator 7.

3.2.2.2 Other Impacts

The Project brought positive impacts as described below. Negative impacts were not found.

(1) Dissemination of the MCHHB in other countries through UNRWA

UNRWA started using the MCHHB at its clinics in the West Bank in 2008, followed using it in the Gaza Strip in 2009. UNRWA expanded the usage of the MCHHB to its clinics in Jordan, Syria and Lebanon in 2010. The results of distribution of the MCHHB in these countries are shown in Table 9. The expansion of the MCHHB through UNRWA reflects the efforts of the Project, in that it had intended to have a series of discussions with UNRWA since Phase 1, and then sent representatives of UNRWA to training in Japan with MoH counterparts.

Table 9 : Distribution of the MCHHB by UNRWA in other countries

	2010	2011	2012	2013	2014
Jordan	30,822	28,758	25,857	25,777	26,634
Syria	8,968	8,611	4,684	N/A	3,600
Lebanon	5,535	5,444	5,418	5,167	5,165
Total	45,325	42,813	35,959	30,944	35,399

Source: UNRWA (using the registered number of pregnant women as a substitute for the numbers of distribution)

Colum 1 : The Mother and Child Handbook, a passport for life, goes across borders

In September 2015 the Huffington Post, an American online news site, reported what Syrian refugees brought when they run for their lives. A mother who escaped with her husband and their 10-month old daughter showed a few personal belongings, in which a Mother and Child Handbook was included in addition to medication and baby foods. The handbook was the first of its kind in Arabic developed by assistance of JICA. The mother probably got the handbook from a UNRWA clinic in Syria. The article implied the mother hoped that her baby could receive appropriate medical care at their destination by showing the handbook, which has important records of the baby such as immunization history.

The Mother and Child Handbook is called “a passport for life” because it is supposed to be distributed to all Palestinian women including refugees. The handbook has a unique usefulness in that all medical history can be recorded in one book, and can be easily kept and carried. Mothers are likely to bring the handbooks when they go across borders. Cases were reported at the ex-post evaluation survey as well. Health staff and mothers said that the handbook was useful for keeping medical records to hand when forced to flee for refuge in the country or overseas. Even if medical records are lost due to demolition of health facilities, mothers can keep alternate records through the handbook, which is significant for mothers and children. The ex-post evaluation could not confirm the kind of impact the handbooks had at destinations of refugees or displaced people, though we expect that the handbooks could help mothers or children to receive appropriate medical care there.

<Reference> JICA webpage http://www.jica.go.jp/english/news/field/archive/2007/071116_2.html



JICA version on the left. The UNRWA version of the MCHHB on the right is almost the same as the JICA version, but has several adjustments for other countries

(2) Change in knowledge and behavior

The beneficiary survey at the ex-post evaluation asked whether the MCHHB brought changes to the knowledge and behavior of mothers and their families. When asked through multiple-choice questions about reasons for the usefulness of the MCHHB, 56 percent of the 108 mothers who recognized usefulness of the MCHHB selected “I am aware of the importance of breastfeeding”, and 49 percent selected “I can get health education about taking care of children”. This shows that the MCHHB has contributed to improvement of mothers’ knowledge.

Regarding changes in their behavior, 40 percent of mothers selected “I am able to talk much more with my husband (or male family members) about maternal and child health and family planning”. This implies that the MCHHB encourages communication between mothers

and their husbands in some cases.

To find out if the MCHHB has an impact from a gender perspective, the survey also included questions on the voice of mothers and husbands’ participation in matters such as maternal health and childcare. The results show that 44 percent of mothers selected “I have become able to make my opinion on maternal and child health, or family planning, known inside my family”, and 29 percent selected “my husband (or male family members) has changed in his attitude or involvement about maternal and child health, childcare, or family planning”. Examples showing changes in husbands’ behavior were “he has become more cooperative on childcare”, “he has come to show his concern about my health and that of our child”, and “he has come to ask me about child development”. These results show that husbands have also changed their behavior or attitude to some degree through communicating with their wives by using the MCHHB.

In short, the results of the beneficiary survey show that the MCHHB has contributed to improving knowledge of mothers and communication with husbands, as well as enhancing the voice of mothers and participation of husbands in matters such as maternal health and childcare.

Column 2: Do mothers think the handbook is useful?

According to the Beneficiary Survey, which had 115 respondents, most of them (74 percent) considered the MCHHB to be very useful, while around 20 percent considered it somewhat useful. When we look at results by area, the West Bank had response of “very useful” of 72 percent, and “somewhat useful” of 20 percent from 85 respondents, whereas the Gaza Strip had responses of “very useful” of 80 percent, and “somewhat useful” of 20 percent from 30 respondents. It indicates the handbook has been accepted by mothers in both areas because of its effectiveness.

Among mothers who responded that the MCHHB was very or somewhat useful, 71 percent of them selected “I can follow up development and growth of children” as a reason for its usefulness. Similarly, 69 percent selected “all of the documents I need are in one record”, and 56 percent selected “I am aware of the importance of breastfeeding”. It shows that mothers recognize the functions of the MCHHB: 1) portable medical/home-based record, and 2) health education tool.

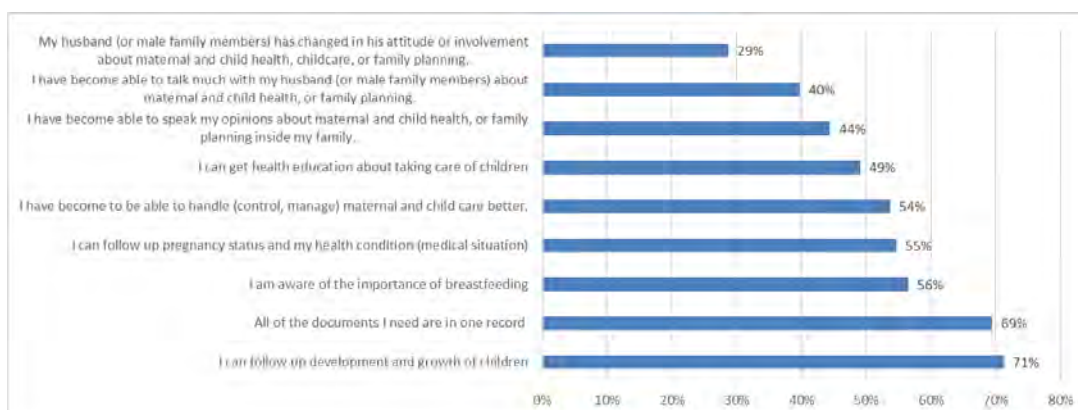


Figure 3 : Mothers’ recognition of usefulness of the MCHHB (Multiple answers possible, n=108)

The Project aimed at improving MCH/RH services in Palestine nationwide. At the time of project completion, the distribution rate of the MCHHB had reached 100 percent at all facilities of MoH, UNRWA and four cooperating NGOs. As a result of the distribution, continuity in perinatal care among health care providers had been improved to some extent, and the number of clients who visit clinics for perinatal and child care had increased, which reflected improvements in MCH/RH services. Those results could possibly contribute to improving health among women and children in the West Bank and the Gaza Strip, which was the overall goal of the Project. The Project had additional positive impacts through distribution of the MCHHB into neighboring countries by UNRWA. The Project, however, could not implement enough activities for private facilities to promote utilization of the MCHHB, even though the private sector plays an important role as MCH/RH service providers in Palestine.

Since the Project has achieved the project purpose and overall goal to some extent, effectiveness and impact of the project are fair.

Colum 3 : Functions of the mother and child health handbook, a Japanese appropriate technology, for improving maternal and child health in developing countries

The origin of the mother and child health handbook in Japan is the “maternity handbook”, developed before the Second World War. In 1948, after the war, the “mother and child handbook” was issued for health management of both mother and child. In 1965, the mother and child health law was established, which changed the name of the handbook into the “mother and child health handbook”, and improved the content to make it easier for mothers to read and understand, as well as adding information on pregnancy, delivery and childcare into medical records (Isahai and Nakamura 2009). As of 1964 the infant mortality rate in Japan fell below that in the USA; it was said that one of the contributing factors was the mother and child health handbook, in addition to the universal health insurance system, and a high prevalence of medical check-ups¹.

Using the Japanese experience, JICA has supported the development of a handbook in Indonesia since 1992; this was followed by projects in Palestine and the Philippines. JICA also has provided assistance on distribution and utilization of the handbook in Mexico, Cambodia, Laos, East Timor, Kenya and Thailand. The handbook is expected to function in various ways, depending on the situation in different countries. The common functions among JICA projects are to provide a technology to assist with: (1) monitoring, (2) health education at home, (3) family members’ participation in childcare, (4) health guidance and communication, (5) referral among facilities, and (6) surveillance. JICA notes that it is important to customize and use the handbook as a tool for improving mother and child health in response to the needs and objectives in developing countries (JICA document 2012).

One of the scientific verifications of outcomes of the handbook is the cluster-randomized controlled trial conducted in Mongolia in 2015². The trial revealed that the intervention of the handbook led to an improvement in the number of antenatal care visits.

The mother and child handbook, which is an appropriate technology developed in Japan, is expected to be distributed and used further as a tool to address various needs on mother and child health in developing countries.

<Reference>

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- Nakamura Yasuhide (2009) “The mother and child health handbook spreading in the world” Japanese Journal of Pediatrics, Vol.62 No.5
- JICA Human Development Department (2012) “Research on utilization of the mother and child health handbook for projects of mother and child health, knowledge, lesson learnt and challenges”
- The Maternal and Child Health Handbook in Mongolia: A Cluster-Randomized, Controlled Trial (2015) Rintaro Mori, Naohiro Yonemoto, Hisashi Noma, Tumendemberel Ochirbat, Emma Barber, Gochoo Soyolgerel, Yasuhide nakamura, Oyun Lkhagvasuren

1) The mother and child handbook is “an appropriate technology developed in Japan for improving mother and child health at economically challenged times after the war”. (Nakamura 2009)

2) A type of randomized-controlled trial in which groups of subjects, rather than individual subjects, are randomized to make a comparison of outcomes between an intervention group and control group.

3.3 Efficiency (Rating: ③)

3.3.1 Inputs

Planned and actual inputs for the Project are as follows:

Inputs	Plan	Actual
(1) Experts	Chief Advisor, Project Coordinator, Maternal and Child Health Service Management, Maternal, Child Health/Partnership Coordination (Total 182.13 MM)	5 long-term experts (119.0 MM) 13 short-term experts (20.5 MM) 18 experts in total
(2) Trainees received	<ul style="list-style-type: none"> • Training in Japan (MCHHB Management, Maternal and Child Health Policy) • Training in third countries (RH regional seminar in Jordan) 	<ul style="list-style-type: none"> • Training in Japan (MCHHB Management): 7 personnel • The International Conference on Mother and Child Health Handbook in Kenya
(3) Equipment	To provide equipment and supplies for improving service at PHC centers (the amount was not stated)	<ul style="list-style-type: none"> • Ultrasound diagnosis machine (set-up type): 1 • Ultrasound diagnosis machine (portable type): 9 • Training equipment such as simulators, pelvis models, fetal heart monitors, mercury manometers and measure tapes for circumference
(4) (Other)	Overseas Activities Costs: 79.8 million yen	Overseas Activities Costs: 125.8 million yen ³⁵
Japanese Side Total Project Cost	370 million yen	319 million yen
Palestinian Side Operational Expenses	<ul style="list-style-type: none"> • Allocation of Palestinian project personnel: Project Director, Project Manager • Personnel expenses of counterpart personnel • The establishment and management of the Joint Coordination Committee • Provision of facilities (such as project office space), vehicles and equipment • Provision of data and material 	<ul style="list-style-type: none"> • Allocation of Palestinian project personnel: 17 (Project Director, Project Manager, Project staff) • Provision of Project office space in the annex facility of MoH in Ramallah • Utility costs for Project office space • Appropriation of operational cost • Provision of operating expenses for project activities

Source: JICA documents, the preliminary survey report, the terminal evaluation report * MM stands for man month.

³⁵ Total amount of 4,316,729 NIS converted by JICA rate of 29.146 yen as of March, 2016.

3.3.1.1 Elements of Inputs

The Japanese experts were dispatched for 139.5 MM, which was within the plan of 182.13 MM. Seven persons were sent to training in Japan. There were three participants from MoH, and two from UNRWA and NGOs respectively. The Project expected to send personnel to training in Jordan at the time of project planning; this was replaced by the “International Conference on Mother and Child Health Handbook” that was held in Kenya in October 2012. The conference was attended by one from MoH and UNRWA respectively. Equipment was provided as planned for improving services at PHC centers. In addition, overseas activity costs covered expenses for training equipment such as simulators, pelvis models, fetal heart monitors, mercury manometers and circumference measuring tapes, which were distributed to each directorate of MoH.

3.3.1.2 Project Cost

The actual total project cost of the Japanese side was 319 million yen, which was within the planned amount of 370 million yen (86 percent). The reason for the reduced cost seems to be suspension of the subcontract to an NGO for awareness campaigns and activities in the Gaza Strip, which, however, cannot be confirmed without information about the planned budget for those activities.

3.3.1.3 Period of Cooperation

The actual period of cooperation was 60 months as planned (100 percent).

Both the project cost and project period were within the plan. Therefore, efficiency of the Project is high.

3.4 Sustainability (Rating: ②)

The evaluator assesses sustainability of the Project by confirming whether there are constraints on policies, institutional systems, organizations of MoH including NCC, and technical capacity of MoH staff, which may prevent MCH/RH services continuing to use the MCHHB effectively in Palestine nationwide.

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

The “National Development Plan” and “Palestinian National Health Strategy” at the time of project completion ensure the sustainability of project effects. The “National Development Plan” (2014-2016) cites strengthening of primary health services (especially MCH/RH) as a priority area in the health sector. Likewise, the “Palestinian National Health Strategy” (2014-2016) is planning a program called “High Quality Primary Health Care Services and

Healthy lifestyles” as one of three main programs, in which MoH aims to ensure sustainability of primary health care and public health through activities such as provision of efficient human resources, and community awareness on health education.

In November 2015, the vaccination card was integrated into the MCHHB by the decision of the deputy minister of MoH. Immunization is obligatory under the public health law, and vaccination status is checked prior to admission to primary school; this has led to achieving a notably high immunization rate that is almost 100 percent. As a result of the integration, it is estimated that the MCHHB will be distributed more extensively as a replacement for the vaccination card, and is certain to be given to women at the time of mandatory vaccinations after delivery regardless of type of facility.³⁶

It is concluded, therefore, that there is no concern on policy and institutional aspects.

3.4.2 Organizational Aspects of the Implementing Agency for the Sustainability of Project Effects

MoH has not held any formal meetings of NCC since the time of project completion, though the main functions of NCC continue to be carried out as regular tasks of CHD. CHD is engaging in management of distribution, stock, revision and printing of the MCHHB without any major issues; this was expected to be executed by NCC. NCC also had a function of facilitating various stakeholders and gathering their opinions to be reflected into improvement of the MCHHB; this, however, does not seem to be fully carried out by CHD currently. For instance, when MoH revised the MCHHB in 2015, it only had a meeting with UNRWA, not with other organizations such as NGOs and the association of obstetricians and gynecologists. The MCHHB has diverse items that are related to many stakeholders such as UNRWA, NGOs, the nutrition department, the health education and promotion department, and private sector. It is, therefore, important for CHD to arrange a meeting of NCC or any joint meeting to meet and share opinions among those stakeholders for further improvement of the MCHHB.

In addition to the constraints on NCC, MoH has a challenge due to not having established a system to supply the MCHHB to private facilities, to supervise and monitor its utilization, as well as lacking accurate information on the current situation on the private sector. It hampers MoH from distributing the MCHHB on a large scale to cover the whole health sector of the

³⁶ Because on the first day after delivery, infants are supposed to get vaccinations of BCG Tuberculosis and Hepatitis B1, the MCHHB has been distributed to all types of hospitals including private hospitals since the integration with the vaccination card. When the evaluator visited two major private hospitals in Ramallah (Palestinian Red Crescent Society Hospital and Arab Care Hospital) in April 2016, it was confirmed that both had already received the MCHHB from the directorate of MoH as a replacement for the vaccination card.

Even before delivery at hospitals, women who use private clinics are able to get the MCHHB from MoH related facilities or UNRWA clinics if they get a vaccination of tetanus during their pregnancy. This, however, does not mean that all pregnant women using private facilities receive the MCHHB, because tetanus is not a mandatory vaccination.

country.

It is concluded, therefore, that the management system of the MCHHB largely functions well at MoH, but there is still a need to facilitate various stakeholders and gather their opinions to improve the MCHHB.

3.4.3 Technical Aspects of the Implementing Agency for the Sustainability of Project Effects

The Project provided MCHHB orientation training, antenatal care technical training, and obstetric ultrasound training mainly to MoH staff in order to improve their knowledge and technical capacity to utilize the MCHHB and provide MCH/RH services. As summarized in Table 10, at the time of the ex-post evaluation the MCH supervisors at each directorate of MoH have been continuing to give technical guidance to PHC center staff based on what they learnt from training when they visit clinics for regular monitoring. Likewise, MoH staff still use the “Palestine National Manual for the MCHHB” and training packages developed by the Project, as well as books provided by the Project for training. Machines and equipment provided by the Project are largely operated and maintained well.

Table 10 : Technical aspects necessary for sustainability, and its current status

Use of the Palestine National Manual for the MCHHB	<ul style="list-style-type: none"> • The manuals have been distributed to all partner organizations (MoH, UNRWA, four NGOs), and health staff refer to the manual when needed.
Use of training packages	<ul style="list-style-type: none"> • Follow-up cooperation, which was implemented by JICA from 2013 to 2014 in the Gaza Strip, used the training packages to maintain quality of training.
Provision of technical guidance by MoH staff trained by TOT	<ul style="list-style-type: none"> • MCH supervisors make regular visits to clinics, and give guidance to PHC center staff as necessary based on what they learnt from TOT (Training of Trainers).
Provision of technical guidance by MoH staff who participated in training	<ul style="list-style-type: none"> • MoH continues to use contents of MCHHB orientation and antenatal technical training for OJT (on the job training) of new staff. • MoH conducted ultrasound training as OJT in five districts in 2015. Several staff who participated in training of the Project played a role of trainers by using knowledge and materials provided by the Project.
Use and maintenance of machines and equipment provided by the Project	<ul style="list-style-type: none"> • One (1) ultrasound diagnosis machine (set-up type): MoH is requesting to repair a prop broken two years ago. This is not a major problem for the hospital as it has two other machines. • Nine (9) ultrasound diagnosis machines (portable type): seven machines function without issues whereas two need maintenance; this is expected to be provided by MoH. • There is no problem on availability of spare parts.

The beneficiary survey (Table 11) revealed that most of the respondents (77 percent) reported receiving an explanation on the MCHHB from staff at clinics (n=116). Among the mothers who received an explanation, 69 percent found the explanation clear, whereas 26 percent considered it clear to some extent. This implies that staff are technically able to give clear explanations to mothers on the MCHHB. It is concluded, therefore, that there is no issue on technical aspects of MoH.

Table 11 : Outline of the Beneficiary Survey

Objective	To assess effectiveness and impact of the MCHHB on the direct beneficiaries (i.e. mothers), especially in terms of the functions of the MCHHB: 1) portable medical/home-based record, and 2) health education tool.
Term	From January 16, 2016 to January 28
Method	Interview with questionnaire with observation to look inside the MCHHB
Place	3 districts in the West Bank (Jericho, Bethlehem, Nablus), and 1 district in Gaza Strip (Gaza)
Sample	Mothers who brought their MCHHB to their visits to the clinics of MoH or UNRWA mainly for postnatal care, assuming that those mothers have experience of using the MCHHB for a certain period.
Sampling method	Non-random selection (Reasons: (1) the evaluator and enumerators had access only to limited areas due to security concerns, and (2) the team had to select relatively bigger clinics that receive many mothers and can cooperate in the survey because of limited budget and interview days).
Sample size	116 ³⁷

3.4.4 Financial Aspects of the Implementing Agency for Sustainability of Project Effects

As shown in Table 12, MoH paid for printing 100,000 copies of the MCHHB from their own budget in 2014, after completion of the Project. In 2015, MoH printed 300,000 copies with financial support from UNICEF. MoH plans to pay for the next printing in 2017 using donor support or budget of the ministry. At the time of the ex-post evaluation the probability of

³⁷ Sample distribution is as follows:

	District	Number of sample	Average age	Average number of children
West Bank	Jericho	28	28.5	3.4
	Bethlehem	28	29.0	2.9
	Nablus	30	27.2	2.1
	subtotal	86	28.2	2.8
Gaza Strip	Gaza	30	27.0	2.7
	subtotal	30	27.0	2.7

securing financial resources for the printing is high, in that the deputy minister had said that MoH would pay for this from its own budget if MoH fails to secure donor funds, because the value of MCHHB has been highly recognized because of its integration with the vaccination card.

Table 12 : Printing of the MCHHB after completion of the Project

year	Financial source	Number of copies	Amount expended (USD)
2014	MoH	100,000	130,000
2015	UNFPA	a few	1,000
2015	UNICEF	300,000	100,000

Source: Told by MoH for data for 2014, which amount was estimated at 1.3 USD per copy, and response of UNICEF for data for 2015

The total amount of budget and expense of MoH have increased as depicted in Table 13. The budget for 2015 and 2016 exceeded 1.7 billion NIS.³⁸ Similarly, the total amount of budget and expense for printing, stationery, training and equipment maintenance at MoH has increased in these years (Table 14). There is no concern about disbursement. It is considered, therefore, that there is no issue on financial aspects of printing the MCHHB or MoH in general, both at present and in the near future.

Table 13 : Trend of total budget and expenditure of MoH

	2010	2011	2012	2013	2014	2015	2016
Budget	1,277,358,982	1,203,463,826	1,558,409,995	1,514,311,450	1,456,970,000	1,745,621,000	1,711,900,000
Expenditure	1,233,976,526	1,106,915,722	1,582,862,176	1,299,581,555	1,356,990,069	-	-

Source : MoH annual reports for data from 2010 to 2014, and finance department for data of 2015 and 2016. Amounts of expenditure for these years are being calculated.

Table 14 : Trend of budget and expenditure of printing, stationery, training and equipment maintenance

	2012	2013	2014	2015
Budget	2,937,324	2,756,027	3,205,615	4,547,259
Expenditure	2,595,164	2,584,712	3,031,179	4,023,574

Source : Finance department, MoH

³⁸ NIS is a currency of Israeli and Palestine, short for New Israel Sheqel.

Although there are no tangible issues on aspects of policies, institutions, techniques and finance, a few challenges have been observed in organizational aspects of MoH. Thus, sustainability of the project effect is fair.

Colum 4: The meaning of follow-up cooperation in a conflict-affected area

The Project aimed at promoting the Mother and Child Health Handbook in Palestine nationwide. The Project, however, could not make direct interventions in the Gaza Strip from November 2009, with the decision to suspend activities in the area, because of the deteriorating situation following the military operation of Israel that started in December 2008. JICA experts could not enter the Gaza Strip and provide training there until the final year of the Project.

JICA implemented a follow-up cooperation project from 2013 to 2014 to make up for insufficient activities in the Gaza Strip in order to complement activities of the Project. The follow-up cooperation provided orientation training on the MCHHB and antenatal care technical training. This was using the same method as that in the West Bank, which was to provide two-level training: TOT (Training of Trainers) and lateral training. To carry out programs of quality equivalent to the West Bank, the follow-up project used the training packages developed by the Project, and asked a local consultant who had engaged in training of the West Bank to manage a session of training.

As a result of those efforts, mothers in the Gaza Strip highly evaluate the effectiveness of the MCHHB (please refer to Colum 2). This case shows that follow-up cooperation can play a meaningful role when projects are forced to discontinue some activities due to inevitable reasons in conflict-affected areas.



Antenatal care technical training in the Gaza Strip



A brochure made by the follow-up cooperation

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented with the objective of improving maternal and child health and reproductive health throughout the territory of the Palestinian National Authority (the West Bank and the Gaza Strip) through promoting the MCHHB and by providing technical training.

Both at the time of planning and completion of the project, the objective of the project was aligned with the National Health Strategy, which focused on enhancing primary health services and development needs. The project was also highly consistent with Japan's policy of overseas development assistance of prioritizing humanitarian support at the time of planning. Therefore, its relevance is high. As a result of the project's interventions, the distribution rate of the MCHHB reached 100 percent at facilities of the Ministry of Health, the implementing agency,

UNRWA and NGOs. Information on mothers and children was more likely to be shared between facilities through the use of MCHHB; this contributed to some improvement in continuity of perinatal care in those facilities, as well as in the number of clients who received antenatal, postnatal and child care increased. The project, however, did not implement sufficient activities to engage with private facilities - the project just introduced the MCHHB to private doctors at seminars, and gave them posters on the MCHHB. It is unlikely that these limited interventions led to improved distribution and utilization of the MCHHB in the private sector, which means that the project purpose was achieved only partially. Therefore, effectiveness and impact of the project are fair. Both project cost and period are within the plan, therefore, the efficiency of the project is high. Sustainability is fair, because the Ministry of Health, the implementing agency, does not have a system to distribute and manage the MCHHB for private facilities; there is no major concern on policy, technique, and finance.

In light of the above, this project is evaluated as satisfactory.

4.2 Recommendations to the Implementing Agency

4.2.1 Recommendations to the Implementing Agency

(1) Provision of training to improve the rate of filling in “Hospital Remarks” of the MCHHB

The MCHHB cannot contribute enough to improving continuity of perinatal care unless hospital staff write important information on delivery and the newborn in the form of “Hospital Remarks” of the MCHHB. At the time of the ex-post evaluation, however, one shortcoming is still that the “Hospital Remarks” is not filled in fully at either governmental hospitals or private ones. This is attributed to lack of understanding among management staff and insufficient human resources at hospitals. Although the Project provided a one-day training about utilization of the MCHHB for staff of governmental hospitals, MoH has not continued to conduct similar training since the completion of the Project. This shows insufficient activity of MoH to address the issue of the low filling rate at hospitals. The CHD, therefore, should resume training and awareness activities for staff of governmental hospitals in consultation with the Hospital General Directorate of MoH, which is in charge of managing governmental hospitals. With regard to the private hospitals, MoH will be able to incorporate relevant training to improve the filling rate as part of activities to promote the MCHHB in the private sector, which is explained below.

(2) Promotion of the MCHHB to the private sector

The private sector plays an essential role as providers of MCH/RH services in Palestine, as private hospitals account for more than half the total number of hospitals in the country. Thus, the MCHHB should be promoted in both governmental facilities and private ones, in order to

improve MCH/RH services nationwide. Nevertheless, MoH has not developed a system to supply and manage the MCHHB for private facilities, and it is unlikely to be established soon considering the limited human resources of the ministry. Given this situation, it is better to select a few leading private hospitals or clinics, for which MoH should provide orientation training, and pilot activities to manage and monitor utilization of the MCHHB, so that MoH and private facilities can jointly develop a success story. The good practice should be published for other private facilities or doctors, to motivate them to utilize the MCHHB on their own initiative.

(3) Improvement of MCHHB through discussion among various stakeholders

NCC was responsible for managing and monitoring the MCHHB, and facilitating coordination of stakeholders. Of these basic functions, management and monitoring of the MCHHB was being carried out by CHD without a problem at the time of the ex-post evaluation, whereas coordination among stakeholders is not fully facilitated by NCC or CHD. The MCHHB has diverse items that are related to many stakeholders such as UNRWA, NGOs, nutrition department, health education and promotion department, and private facilities. CHD should strengthen coordination of these stakeholders and arrange a meeting of NCC or any other joint meeting for them to meet to share their opinions and improve the content of the MCHHB prior to the next printing of the MCHHB.

4.2.2 Recommendations to JICA

As mentioned above, the MCHHB has not been distributed fully to the private facilities. JICA should provide MoH with assistance in getting the private sector involved further in activities of the MCHHB by sharing case examples or good practices, if any, based on its experience of similar projects in other countries.

4.3 Lessons Learned

4.3.1 Setting a clear target and designing necessary activities for the private sector

The Project aimed to improve MCH/RH services nationwide by targeting both governmental and private facilities. Nevertheless, interventions with the private sector were limited in that the Project did not implement any training or monitoring activities for private facilities, but just held seminars for medical practitioners and distributed a poster to share information on the MCHHB. At the time of project planning, completion and the ex-post evaluation, MoH did not have information about the total number of private facilities, and status of distribution and usage of the MCHHB in the private sector.

When JICA designs a project to improve health services at facilities including private ones, it is important to confirm whether the implementing agency has enough information about the private sector, as well as a system to train and manage those facilities at the time of project

planning or the early stages of the project. If any shortcoming is found in the capacity of the agency to intervene in the private sector, the project should include necessary activities such as capacity-building to collect information and strengthen the management system.

4.3.2 Confirming availability of data and designing necessary activities to collect data

The PDM of the Project has several indicators that could not be measured due to a lack of data, because neither baseline survey nor follow-up survey had been implemented.

At the time of project design, it is important to confirm carefully the availability of data and not use any indicators that are not likely to have relevant data. The project can include an activity to support the implementing agency to collect necessary data as part of regular tasks of the agency, which can lead to an institutional capacity development. Similarly, if the PDM has indicators that are expected to show whether a project causes some positive changes, the project should conduct a survey to collect data before and after project interventions.

4.3.3 Facilitating various stakeholders

The Project needed to strengthen a system to encourage cooperation between MoH, UNRWA and NGOs in order to improve MCH/RH services nationwide, as UNRWA and NGOs play a substantial role in providing health services along with MoH in Palestine.³⁹ When Phase 1 developed the MCHHB, the project team had a series of discussions with UNRWA and NGOs to build a cooperative relationship. Following Phase 2 cooperation was enhanced by setting up NCC, which was made up of representatives from each stakeholder, so that the Project could compile the national manual, and revise the MCHHB jointly with those stakeholders. These efforts through the two phases made it possible to foster coordination among stakeholders and their ownership of the MCHHB, and to encourage their continuous utilization of the MCHHB.

When a project has various important stakeholders, it is important to get them involved in the project in an early stage through activities such as pilot programs and development of manuals, in addition to arranging a system to share opinions and coordinate activities among stakeholders.

(End)

³⁹ 47 percent of antenatal care is carried out at governmental facilities, whereas UNRWA, NGOs and private facilities account for 53% of that in the West Bank (source: MoH annual report 2014).

Democratic Socialist Republic of Sri Lanka

FY2015 Ex-Post Evaluation of Technical Cooperation Project
“Project on Health Promotion and Preventive Care Measures of Chronic-NCDs”

External Evaluator: Tomoko Tamura, Kaihatsu Management Consulting, Inc.

0. Summary

This project was implemented with the aim of developing effective and efficient implementation models to prevent and control non-communicable diseases (NCDs¹) in Sri Lanka.

Prevention and control of NCDs was an important policy target of the country at the time of planning and completion of the project. The number of deaths by NCDs was increasing in the country as a result of aging of the population and changes in eating habits and lifestyle. There was a strong necessity and urgency for the country to establish a system for preventing and controlling NCDs; this would be in addition to the existing health and medical services, which were mainly for prevention and treatment of communicable diseases. The objective of the project was consistent with Japanese assistance policy to Sri Lanka at the time of project planning, which placed an importance on assistance for enhancing social welfare services giving consideration to the aging population. Therefore, relevance of the project is high.

At the time of project completion, implementation models for prevention and control of NCDs had been developed based on the trial programme in the project pilot areas, as expected in the project. However, efficiency of the health check-ups and effect of the health guidance were not exactly up to the expected level. At the time of the ex-post evaluation, health check-ups and guidance had been implemented all over the country according to the above-mentioned implementation models. Healthy Lifestyle Centers (HLCs)² had been established in every district of the country as planned. However, HLCs are not utilized adequately, and it is not known if the high-risk groups and patients identified in the health check-ups are receiving necessary treatment and guidance. Therefore, effectiveness and impact

¹ NCDs is an abbreviation for an inclusive term for non-communicable diseases, which include cardiovascular diseases, cancers, diabetes mellitus, chronic respiratory diseases. These diseases are also called lifestyle diseases, because they can be prevented by improving one’s lifestyle. In a broad sense, NCDs sometimes include all diseases except communicable diseases, such as injury through accidents, burns, poisoning and others, which are called acute NCDs.

² Healthy Lifestyle Centers. They are the centers for carrying out NCD health check-ups and guidance. The Ministry of Health instructed primary health care institutions all over the country to establish HLCs, based on the outcome of the project. HLCs are located on the premises of primary healthcare institutions. Usually one of the rooms in the institution is renovated and used as an HLC. Sometimes, independent buildings were established for HLCs. There are no dedicated staff for HLCs. They are only open on the days of the health check-ups and guidance (once a week, approximately); staff of the medical institutions, such as medical officers and nursing staff, work for the clinic.

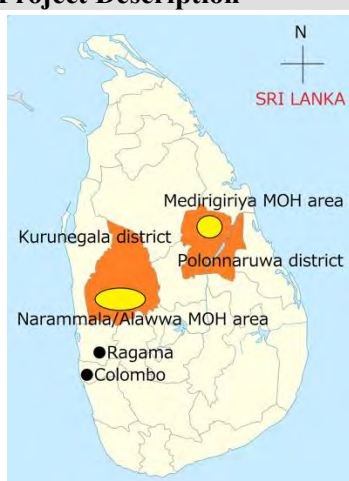
of the project is fair.

Efficiency of the project is fair because project cost exceeded the plan, although the project period was within the plan.

The policies and systems to implement prevention and control of NCDs are continuing. Institutional arrangements for the implementation have been made among the relevant institutions, including the implementing agency. There is no problem with regard to the technical capacity of staff members and the financial situation of relevant institutions. Therefore, sustainability of the effect of this project is high.

In light of the above, the project is evaluated to be satisfactory.

1. Project Description



Project Location



Group Health Guidance for NCD Prevention at an HLC

1.1 Background

The Government of Sri Lanka has provided free health and medical services to the people according to their policy of placing an emphasis on social welfare. As a result, basic health indicators of the country, including maternal death rate, average life expectancy and others, have been as high as those of developed countries. However, NCDs were increasing from 80s in the country due to an aging population and changes in lifestyle.³ The health and medical system of the country, however, placed an emphasis on the prevention and treatment of communicable diseases, which was necessary earlier. A system for promoting prevention and control of NCDs had not been established properly.

³ Japan will have the highest ratio of population above 65 (29.47 per cent) by 2025 among the Asian countries. Sri Lanka will have 13.75 per cent and is in 7th place. (P.10, Table 2A, *Aging in Asia: Trends, Impacts and Responses*, Working Paper Series on Regional Economic Integration No. 25, Asian Development Bank, February 2009). The background for an aging population in Sri Lanka is the low newborn and infant mortality rate, longer average life expectancy, lower fertility rate caused by prevalence of birth control, and the influence of popularization of higher education.

JICA has provided cooperation to the health sector of the country for a long time, and also provided assistance to the Ministry of Health on control of NCDs. The Health Master Plan of 2007 – 2016, which was issued in 2007 with assistance from JICA, stated the importance of control of NCDs. A Technical Cooperation for Development Planning of JICA named “The Study on Evidence-Based Management for the Health System”, which was carried out from 2005 to 2007, conducted a study on the present situation of NCD control and risk factor analysis. Consequently, the Ministry of Health and JICA recognized the need to develop effective and efficient implementation models for NCD prevention, and therefore implemented this project.

1.2 Project Outline⁴

Overall Goal		Effective and efficient implementation models to prevent and control NCDs (diabetes mellitus, hypertension and hypercholesterolemia) ⁵ are implemented in all districts in Sri Lanka
Project Purpose		Effective and efficient implementation models to prevent and control NCDs are developed.
Outputs	Output 1	Risk factors of cardiovascular diseases are identified by the Ragama Health Study ⁶ based on the evidence.
	Output 2	Intervention guidelines and manuals are formulated based on available evidences and related literatures.
	Output 3	Institutional and technical feasibilities of the Consolidated Intervention Guideline are assessed for development of the NCD prevention models in pilot areas. ⁷
	Output 4	Expansion plan for health check-ups/ guidance and health promotion for prevention of cardiovascular diseases is finalized for island-wide implementation.

⁴ In the project outline of the project in Japanese language, “prevention and control NCDs” in the overall goal and the project purpose was described as “prevention of NCDs”. “Ragama Health Study” in Output 1 was described as “Ragama Study”. There was no “and related literatures” in Output 2. There was no “for prevention of cardiovascular diseases” in Output 4”

⁵ As mentioned in footnote 1, NCDs sometimes include all diseases apart from communicable diseases. The Ministry of Health in Sri Lanka and JICA Expert Team had a series of discussions and concluded that the NCDs to be prevented by the project were diabetes mellitus, hypertension and hypercholesterolemia. These are the causes for diseases such as cancer and cardiovascular diseases.

⁶ Ragama Health Study was conducted in 2007 by the medical faculty of Kelaniya University of Sri Lanka in the area of Ragama Medical Officer of Health (MOH) in Gampaha district, with the aim of identifying the prevalence of metabolic syndrome and developing a diagnosis standard. The study conducted a questionnaire survey on the risk factors (age, sex, BMI, injuries and diseases), body measurement, blood tests and others for 3,000 people aged between 35 to 64 in the Ragama MOH area. A follow-up investigation study was conducted in this project for three years, from 2008 to 2010, in order to identify social and medical evidence in relation to prevention and control of cardiovascular diseases.

⁷ There were two pilot areas, that were, Narammala and Alawwa MOH areas in Kurunegala district, and Medirigiriya MOH area in Polonnaruwa district (See map on page 2).

Total Cost (Japanese Side)	438 million yen
Project Period	May 2008 – March 2012
Implementing Agency	Ministry of Health
Other Relevant Agencies / Organizations	None
Supporting Agency/ Organization in Japan	Global Link Management, Inc.
Related Projects	<ul style="list-style-type: none"> • JICA, “Master Plan Study for Strengthening Health System in Sri Lanka (Development study), 2002 - 2003 • JICA, “The Study on Evidence-Based Management for the Health System” (Technical Cooperation for Development Planning), 2005 - 2007 • JICA, “Project for Improvement of Basic Social Services” (ODA loan project), 2012 - 2017 • JICA, “Project for Enhancement of NCD Management”, 2014 - 2018 • WHO, programme based on “Country Cooperation Strategy”, 2012- 2017⁸ • World Bank, “Sri Lanka Health Sector Development Project: HSDP”, 2004 - 2010 • World Bank “Sri Lanka Health Sector Development Project II” (HSDP-II), 2013 - 2018⁹

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the Time of the Terminal Evaluation

There were several indicators of the project purpose that had not been achieved up to the expected levels, such as: a) coverage ratio of health check-ups at the pilot areas, b) participation rate of people identified as having high risk in the follow-up clinics, and c) participation rate in the necessary medical treatment of the patients identified as having hypertension or diabetes mellitus in the health check-ups. However, it was anticipated that these indicators would be met by the completion of the project because related activities had been carried out.

⁸ The activities include development of a holistic plan for NCD named, “Package of Essential NCD intervention for primary health care in low-resource setting (PEN)”, and healthy lifestyle promotion for an aging society.

⁹ Introduction of regulations for usage of tobacco, alcohol, salt and sugar content, trans-fatty acid; establishment of HLCs, enhancement of laboratory facility and others.

1.3.2 Achievement Status of Overall Goal at the Time of the Terminal Evaluation (including other impacts)

There was no specific statement about the achievement status of the overall goal at the time of the terminal evaluation. One of the indicators, “100 per cent of districts have implemented check-ups/ guidance and health promotion activities, which were developed by the project”, was expected to be achieved earlier than planned, by the time of project completion. Achievement level of another indicator, “the annual incidence of cardiovascular diseases (coronary vascular diseases and cerebral stroke) starts to decline in the project area by 2018” was unknown, as there was no usable data relating to this.

1.3.3 Recommendations at the Time of the Terminal Evaluation

Table 1 shows a summary of recommendations at the terminal evaluation of the project, and status of implementation of the recommendations at the time of the ex-post evaluation.

Table 1 Recommendations provided at the Time of Terminal Evaluation and Status of Implementation at the Time of Ex-post Evaluation

Recommendations	Status of Implementation at the Time of Ex-post Evaluation
(1) Collection of data for indicator 2 of the project purpose “coverage of follow-up guidance for the people in the high-risk group”.	The project team collected relevant data in Kurunegala and found the coverage was 50 per cent. The team could not do information collection and analysis in Polonnaruwa as there was no data. The Ministry of Health was trying to collect the data in the technical cooperation project of JICA named “Project for Enhancement of NCD Management”, at the time of the ex-post evaluation.
(2) Study versatility and ways of utilization of Ragama Health Study and implement a longer term cohort study ¹⁰ and analyze the result.	The Ministry of Health concluded that the result of the Ragama Health Study was not appropriate for application nationwide because it was conducted in a limited area and period, and had limited versatility as social and medical evidence. The University of Peradeniya in Sri Lanka was conducting a longer-term cohort study at the time of the ex-post evaluation.

¹⁰ A study to observe secular changes of target groups is called a cohort study.

Recommendations	Status of Implementation at the Time of Ex-post Evaluation
(3) Develop a mechanism to treat all cases found to have diseases through health check-ups, while giving attention to the importance of the quality of treatment for patients.	The Ministry of Health was enhancing facilities for health check-ups and initial treatment in the technical cooperation project “Project for Enhancement of NCD Management”, and ODA loan project of, “Project for Improvement of Basic Social Services” of JICA.
(4) For island-wide expansion of HLCs, define detailed plans for HLCs, which include necessary budget allocation, distribution system of medicine, TOR (terms of reference) of staff members, assignment of necessary staff, development of human resources and monitoring system.	The Ministry of Health decided on the necessary facilities, equipment, human resources and activities and informed health institutions nationwide. ¹¹ The ministry also decided on and informed a guideline on essential drugs for NCDs at the health institutions. ¹²
(5) Design a long-term strategy to enhance health promotion activities.	The Ministry of Health developed “National Health Promotion Policy and Strategic Framework” in 2014.

2. Outline of the Evaluation Study

2.1 External Evaluator

Tomoko Tamura, Kaihatsu Management Consulting, Inc.

2.2 Duration of Evaluation Study

Duration of the Study : September, 2015 - November, 2016

Duration of the Field Study : January 4th – 25th, 2016 and April 18th – May 4th, 2016

¹¹ *Guideline for the establishment of Healthy Life Style Centers in healthcare institutions*, Ministry of Health, Sri Lanka, July 31st, 2013.

¹² *Guidelines on ensuring availability of essential drugs for the management of Non Communicable Diseases (NCD) at healthcare institutions*, Ministry of Health, Sri Lanka, November 2013.

3. Results of the Evaluation (Overall Rating: B¹³)

3.1 Relevance (Rating: ③¹⁴)

3.1.1 Relevance to the Development Plan of Sri Lanka

Both at the time of planning and completion of the project, the medium- and long-term national development plan of the country (2005 - 2016),¹⁵ emphasized the increase of NCDs due to aging of population and changes in lifestyle, and the importance of implementing prevention and control of NCDs. Improvement of quality of life by prevention of NCDs and promoting a healthy lifestyle was one of the important objectives in the *Health Master Plan* of the ministry, which continued from the time of planning to the completion of the project.

As mentioned above, the objective of the project was consistent with the development plan of the country.

3.1.2 Relevance to the Development Needs of Sri Lanka

From the 1980s, NCDs became a more common cause of death than communicable diseases in Sri Lanka as a result of aging of the population and changes in eating habits and lifestyle. The increase in NCDs had led to serious socio-economic problems, such as sudden death or the breadwinner of a family being unable to work at the age of 40 - 50. It was also a problem because NCDs need longer-term treatment, and increase the burden of health expenditure for the government. In this manner, the increase in NCDs was a serious problem for the socio-economic situation of ordinary people and health finance of the country. However, there was no established system for implementing prevention and control of NCDs at the time of project planning, and the existing health services of the country were mainly for prevention and treatment of communicable diseases. As at the time of project completion, NCDs caused 75 per cent of deaths in the country;¹⁶ and social problem and burden to health finance was still a serious issue for the country.

In this manner, the increase of NCDs was a serious problem for Sri Lanka at the time of project planning and completion, and therefore this project, which aimed at prevention and control of NCDs, was consistent with the development needs of the country.

3.1.3 Relevance to Japan's ODA Policy

The *Country Assistance Policy of Sri Lanka* (April 2004) of Japan at the time of project

¹³ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

¹⁴ ③: High, ② Fair, ① Low

¹⁵ “*Mahinda Chintana*”. The first version was issued in 2005 and the revised version was issued in 2010.

¹⁶ NCDs Country profile of WHO, 2014, stated that 75 per cent of the causes of death was NCDs. http://www.who.int/nmh/countries/lka_en.pdf (accessed on June 17th, 2016)

planning listed the health sector as an important area of assistance, according to the plan of assistance focused on the middle- and long-term development vision. The plan had a policy direction for carrying out assistance for enhancing social welfare services giving consideration to the aging population. Therefore, the objective of the project was consistent with Japanese ODA policy at the time of project planning.

This project was highly relevant to the country’s development plan and development needs, as well as Japan’s ODA policy. Therefore, its relevance is high.

3.2 Effectiveness and Impact¹⁷ (Rating: ②)

3.2.1 Effectiveness

3.2.1.1 Project Outputs

<Output 1>

Output 1 was “Risk factors of cardiovascular diseases are identified by the Ragama Health Study based on the evidence”. As shown in Table 2, the indicator of Output 1 had been achieved. The analysis from the study was utilized in the process of risk analysis and setting up standards for screening, which were conducted for development of implementing models for NCD check-ups in the project pilot areas. The analysis from the study was an important document for the activities of the project, because this was the only cohort study on NCDs at the time of implementation of the project. It was planned at the time of project planning that the results of the study would be utilized as a national standard for screening. However, this was not realized. The Ministry of Health concluded that the results from the study were not appropriate for applying nationwide because it had been conducted in a limited area and period. The ministry adopted the cardiovascular diseases risk prediction chart in “WHO-Package of Essential NCD (WHO-PEN)”, which had more versatility and could create comparable results with other countries.

Table 2 Achievement of Output 1

Indicator for Output 1	Status of Achievement of the Indicators at the time of Project Completion
<u>Indicator 1</u> : At least one scientific paper with regard to risk factors identified in the Ragama Health Study is accepted by an authorized peer-reviewed journal. <Achieved>	Ragama Health Study identified risk factors for cardiovascular diseases based on evidence obtained in the study. It was accepted by an authorized peer-review journal. ¹⁸

¹⁷ Sub-rating for Effectiveness is to be put with consideration of Impact.

¹⁸ *Journal of Gastroenterology and Hepatology*, Volume 28, issue 1, Page 142-147, January 2013.

<Output 2>

Output 2 was “Intervention guidelines and manuals are formulated based on available evidences and related literatures”. As shown in Table 3, all three indicators were achieved by completion of the project.

Table 3 Achievement of Output 2

Indicators for Output 2	Status of Achievement of the Indicators at the time of Project Completion
<u>Indicator 1</u> : The Consolidated Intervention Guideline (for health check-ups, health guidance and health promotion) is approved by September 2012 <Achieved>	Guideline for health check-ups, health guidance and health promotion was approved by JCC ¹⁹ in July 2012.
<u>Indicator 2</u> : The Consolidated Intervention Guideline is adopted by Ministry of Health by March 2013. <Achieved>	Intervention guideline for health check-ups, health guidance and health promotion was compiled as an NCD prevention guideline and approved by the Ministry of Health in July 2012, and thereafter printed and distributed.
<u>Indicator 3</u> : Cost analysis results of interventions assessed and disseminated among provincial and national decision-makers by December 2011. <Achieved>	A seminar on results of the cost analysis was held in November 2011 with participation of 68 provincial and national decision-makers in health sector. The report was distributed to the participants.

As mentioned in the section on Output 3 in this report, the intervention guideline was finalized based on the conclusion of verification of the available evidence, which was the feasibility of the two health check-up activity models tested in the pilot areas; and was thereafter approved by the Ministry of Health in July 2012 as planned. Therefore, the intervention guidelines and manuals were formulated based on available evidence; and Output 2 was achieved.

<Output 3>

Output 3 was “Institutional and technical feasibilities of the Consolidated Intervention Guideline are assessed for development of the NCD prevention models in pilot areas”. As shown in Table 4, all three indicators of the output were achieved.

¹⁹ Short form of Joint Coordination Committee.

Table 4 Achievement of Output 3

Indicators for Output 3	Status of Achievement of the Indicators at the time of Project Completion
<u>Indicator 1</u> : Health check-up activities are conducted in 90 per cent of target health institutions by June 2012. <Achieved>	Health check-up activities were conducted in all the target health institutions (100 per cent).
<u>Indicator 2</u> : Standard registries and formats for health check-ups are utilized by December 2011. <Achieved>	Standard registries and formats for health check-ups were utilized in the pilot areas. Information management, including data collection, was also conducted.
<u>Indicator 3</u> : A model of training mechanism for health promotion activities is developed by June 2012. <Achieved>	A “Resource book for facilitators of health promotion activities” was compiled and distributed nationwide. A training programme on health promotion was conducted for Medical Officers in charge of NCDs (MO-NCDs) in the office of Regional Director of Health Services (RDHS).

The ex-post evaluation team studied the process of assessment of institutional and technical feasibility of the Consolidated Intervention Guideline, which was the aim of this Output, along with the study on status of achievement of the indicators.

There was no system for conducting NCD check-ups for the general public by staff of Provincial Director of Health Services (PDHS) and RDHS in the country before the implementation of this project. The project implemented three types of health check-ups in the pilot areas as trials for validating NCD check-ups that would be institutionally and technically feasible (Figure 1). Firstly, in the first year of the project, a “three-step model” (Figure 1: left side) was tested in the two pilot areas, in which two screenings were carried out (the 1st and the 2nd steps), at the maternal and child health (MCH) clinics locally; those who were categorized as being in the high-risk group were instructed to visit medical institutions for receiving necessary treatment or being referred for further investigations (the 3rd step). The Ministry of Health and the project team studied the results of this trial, and found that a simpler model was needed.

In the second year, a “two-step model” (Figure 1: middle) was conducted in Medirigiriya MOH area in Polonnaruwa district, in which a screening was conducted (the 1st step), by measuring blood pressure, at MCH clinics located in villages and towns; those who were categorized as being in the high-risk group were instructed to visit medical institutions in the region for receiving another screening, including investigations of fasting capillary blood glucose and thereafter received necessary treatment or were referred for further investigations

(the 2nd step).²⁰ In Narammala and Alawwa MOH areas in Kurunegala district, a “one-step model” was conducted (Figure 1 : right), in which people first visited a primary medical institution and had detailed screening, including investigation of fasting capillary blood glucose, without having an earlier screening at the clinics in villages and towns, and thereafter received necessary treatment or were referred for further investigations.²¹ Public midwives and public health inspectors recruited local people aged between 40 to 75 for the health check-ups in both pilot areas.

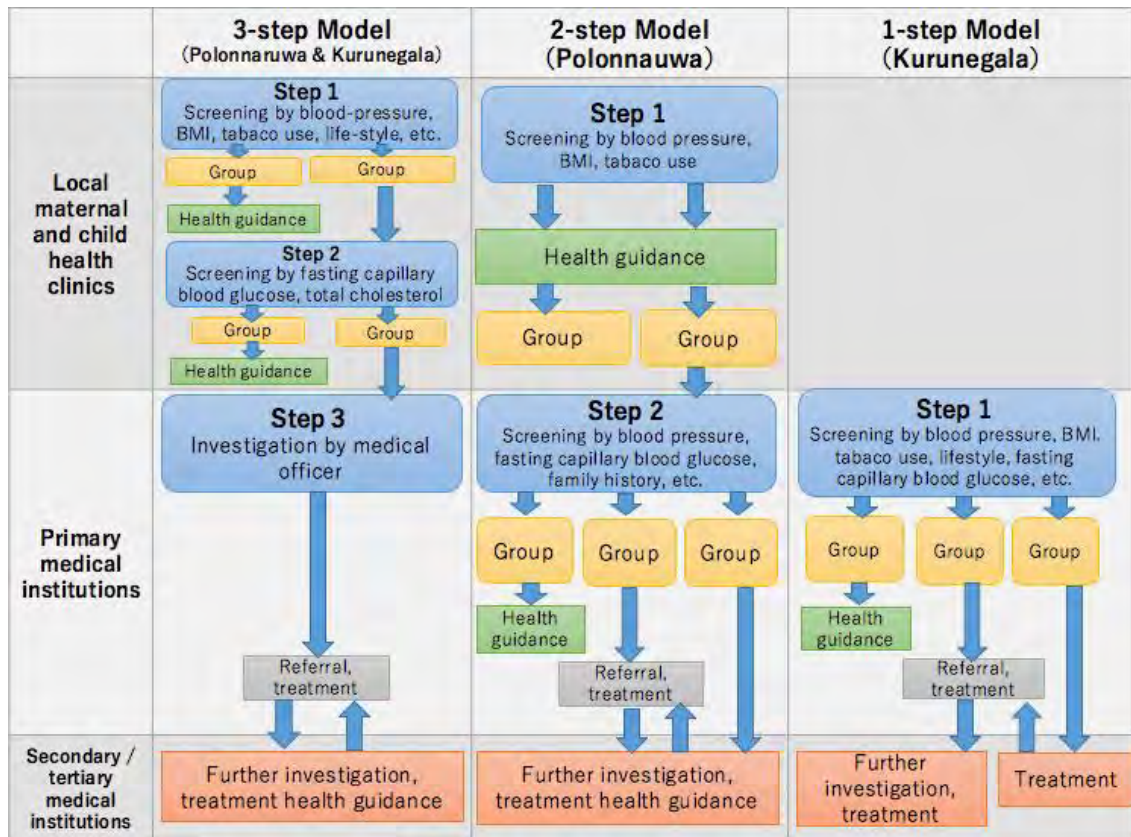


Figure 1 Health Check-up Model Tested in the Pilot Areas

Source: Illustrated by the external evaluator based on the documents provided by JICA.

The Ministry of Health studied these test models from the aspects of institutional and technical feasibility, and adopted the one-step model as the one to be applied nationwide. There were mixed opinions in the ministry about the two-step model, which was not adopted as the one for nationwide dissemination. The concerns about the two-step model were: a) measurement of blood pressure does not fall into the job specification of the public midwives,

²⁰ In Polonnaruwa district, the screening was conducted at 24 MOH clinics under the purview of Medirigiriya MOH, which was the pilot area of the project, and had a target population for health check-ups of 11,610.

²¹ In Kurunegala district, health check-ups were conducted at 8 primary medical institutions in Narammala and Alawwa MOH areas, which were the pilot areas of the project, and had a target population for health check-ups of 25,666.

but is a task of the medical officer; b) there was a concern about conducting a health check-up activity locally because blood pressure meters might not be accurate and midwives might not have adequate competency, and also because it is a “single-approach” that does not consider accumulated risks caused by several risk factors (total risk), as the screening at Step 1 of the two-step model was conducted without considering blood glucose level and others;²² and c) public midwives would have a heavier workload and might not carry out MCH activities properly as a result. On the other hand, the two-step model had the following advantages: a) it is easier for people to participate in the health check-ups, as they can be done at local clinics; b) a constant number of participants can be expected for the health check as public midwives, who work closely with the local community, recruit the people;²³ c) tracing the participants of the health check is easier; and d) health-check activity can be conducted without much difficulty even in an area with limited resources and medical staff. Therefore, it was decided that the two-step model can also be adopted by PDHS and RDHS when necessary.

The Intervention Guideline was first compiled drawing on documents used at the time of conducting the three-step model; this was modified and finalized by reflecting the experience of trial implementation of the one-step and two-step models, and was finally approved by the Ministry.

All the three indicators were achieved, three models for health check-ups were tested in the pilot areas, and the intervention guideline was validated for institutional and technical feasibility according to the result of the tests. Therefore, Output 3 was achieved.

<Output 4>

Output 4 was “Expansion plan for health check-ups/ guidance and health promotion for prevention of cardiovascular diseases is finalized for island-wide implementation”. As shown in Table 5, both two indicators for the output were achieved by the time of completion of the project.

²² The project and the Ministry of Health were promoting a “total risk approach”, which evaluates the total risk, not individual diseases, at the health check-ups, because the risk for cardiovascular diseases could become higher when various risks are accumulated.

²³ In the one-step model, it is a usual practice that nursing officers explain about the risks of NCDs in the waiting room in the outpatient department in the hospital, and invite them to participate in health check-ups.

Table 5 Achievement of Output 4

Indicators for Output 4	Status of Achievement of the Indicators at the time of Project Completion
<u>Indicator 1</u> : Steps for expansion, stakeholders and their roles, and necessary resources are identified by September 2011. <Achieved>	The Ministry of Health issued a circular in August 2011 instructing PDHS and RHDS to establish HLCs nationwide for carrying out health check-ups and guidance. ²⁴
<u>Indicator 2</u> : The cost for island-wide expansion is estimated by September 2012. <Achieved>	The cost analysis study was completed in 2010. Additionally, a model was developed which shows necessary equipment and cost of human resources for health check-up activities, when one inputs target population and period of health check-ups.

As the above table shows, the Ministry of Health decided to establish HLCs, to conduct NCD health check-ups and guidance, in primary health institutions nationwide. It was also decided to set up at least three HLCs in an MOH area; each HLC conducts an NCD prevention health check-up clinic at least once a week for people aged between 35 and 65. Around 20 people will receive health check-ups and guidance at a time. The medical officer working for the primary health institution works for the HLC in his/her institution, and other medical staff will assist with activities at the HLC, such as health check-ups and health guidance, as needed. Necessary resources for HLCs, such as furniture, equipment and various forms were also decided by the circular. Around 580 HLCs were established nationwide at the time of project completion.

Output 4 had been achieved from the fact that all the indicators were achieved, and a system and plan for expansion of health check-ups and guidance and health promotion for island-wide expansion was finalized at the time of project completion.

²⁴ *Guideline for the establishment of healthy Lifestyle centers in healthcare institutions*, NCD/41/2011, August 15, 2011, Ministry of Health



A HLC at Ridigama District Hospital in Kurunegala district



Health check-up being conducted at the HLC at Ridigama District Hospital

Source: Photographed by the ex-post evaluator (January 2016)

3.2.1.2 Achievement of Project Purpose

Project purpose was “Effective and efficient implementation models to prevent and control NCDs are developed”. Table 6 shows status of achievement of the indicators for project purpose.

Table 6 Achievement of Project Purpose

Indicators	Status of Achievement of Project Purpose at the time of Project Completion
<u>Indicator 1</u> : 20% of target population is screened annually. <Achieved to a great extent>	Annual coverage rate of health check-up in the pilot area in Kurunegala district was 18%, and that in Polonnaruwa district was 17% at the time of project completion. ²⁵
<u>Indicator 2</u> : 70% of people identified as high-risk receive follow-up guidance by December 2012. <Not achieved>	Participation rate of the follow-up guidance in the pilot area in Kurunegala district was 50%. The rate in the pilot area in Polonnaruwa district was unknown as there was no data. There was not enough time to collect necessary data in the pilot area as it took some time for the ministry to define “high-risk group”. ²⁶ The project completion report of the project stated that the indicator was considered not to be achieved in Polonnaruwa, because a system for ensuring the high-risk group participate in follow-up guidance was still being established in the area.

²⁵ In the pilot area in Kurunegala district, 12,479 people participated in the health check-ups out of the target population of 24,000 during the period from August 2009 to October 2012. In the pilot area in Polonnaruwa district, 4,455 people participated in health check-ups out of the target population of 11,600 during the period from August 2009 to October 2011.

²⁶ There were various opinions in the Ministry of Health about the definition of “high-risk”. As a result, it was defined as “the group that has more than 20 per cent possibility of having a cardiovascular event within the next 10 years” in May 2012, and informed to the relevant staff.

Indicators	Status of Achievement of Project Purpose at the time of Project Completion
Indicator 3: 90% of newly identified patients have received necessary treatment by December 2012. <Partly achieved>	The percentage of patients who were continuing treatment was 100% in the pilot area in Kurunegala district. This figure included those who completed treatment according to the decision of medical officer. It was 75% in the pilot area in Polonnaruwa district. The majority of those who stopped the treatment by themselves stated “I did not feel a need for treatment” as a reason. ²⁷

As mentioned in the above table, of the three indicators, the first one, “annual rate of coverage of health check” had been achieved to a great extent. However, the second indicator, “participation rate of the high-risk groups to the follow-up clinics” had not been achieved, and therefore it is understood that an efficient system for carrying out continuous guidance was not established completely at the time of project completion. Indicator 3, “percentage of newly identified patients in the health check-ups, who were receiving necessary treatment”, was not achieved in Polonnaruwa district, which meant the NCD health check-ups and guidance conducted in the area were not as effective as had been expected.

An implementation model for NCD prevention was developed, and health check-ups and guidance was implemented. It is clear that an implementation structure was formed; however, efficiency of the health check-ups and effect of the health guidance did not reach exactly up to the expected level. Therefore, the project achieved its project purpose at a limited level.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

Overall goal of the project was “Effective and efficient implementation models to prevent and control NCDs are implemented in all districts in Sri Lanka”. Table 7 shows the status of achievement of the two indicators of the overall goal.

²⁷ Source: Document provided by JICA

Table 7 Achievement of Overall Goal

Indicators	Status of Achievement at the time of Project Completion
<p><u>Indicator 1:</u> 100 % of districts have implemented the check-up/ guidance and health promotion activities. <Achievement level remains moderate></p>	<p>HLCs were established in every district in the country. Health check-ups and guidance was carried out at HLCs. Coverage of the health check-ups exceeded the target. However, status of utilization of the HLCs was not as high as initially expected, and people’s recognition about the HLCs was low. It was unknown whether health promotion activities were implemented in every district.</p>
<p><u>Indicator 2:</u> The annual incidence of cardiovascular diseases (coronary vascular diseases and cerebral stroke) starts to decline in the project area by 2018. <Achievement level is unknown></p>	<p>Status of achievement was not known as there was no usable data.</p>

<Indicator 1>

Status of achievement of Output 1, “100 per cent of district in the country has implemented the check-ups/ guidance and health promotion activities” was found as follows:

At the time of the ex-post evaluation, 711 HLCs had been established in total in the districts of the country as a result of an effect of this project and assistance of other donor agencies²⁸ (as of end June 2015). An integrated intervention guideline, registry for health check-ups, various formats, tools for health guidance and others developed by the project were utilized at the HLCs. It was found through a visitor satisfaction survey of HLCs conducted by a staff member of the Ministry of Health that the level of satisfaction of visitors to HLCs was high.²⁹ Health check-ups were conducted not only at HLCs, but also at mobile clinics, workplaces and MOH clinics. Accumulated health-check coverage was 7.7 per cent in 2014, which exceeded the target for the year set by the ministry, which was 6 per cent.³⁰

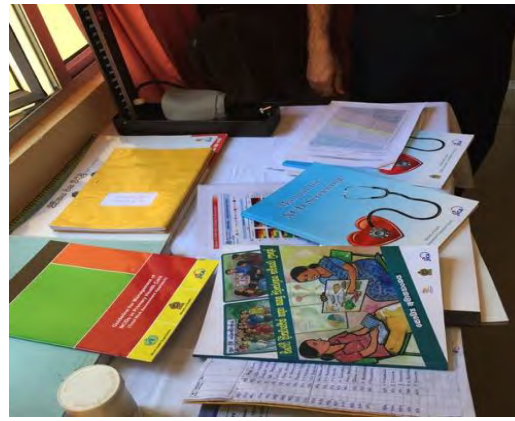
²⁸ Funding from HSDP II (2013 – 2018) provided by the World Bank was utilized for setting up clinic rooms for HLC and purchasing necessary tools and equipment for HLCs.

²⁹ 21% of the visitors answered “very much satisfied”, and 79% answered “satisfied”. Source: ‘Evaluation of the Healthy Life Style Clinics (HLCs) in primary health care institutions in the District of Matara’, A P R S Chandrasena, *Sri Lanka journal of health policy and management* (date of issue unknown). This was the study conducted by a staff member of the ministry working in the district in 2013 of the 17 HLCs in the district. Sample size of the study was 280.

³⁰ Source: *Annual Health Bulletin 2012*, Ministry of Health and reply to the evaluation questionnaire distributed at the time of the ex-post evaluation (document provided by the NCD Unit). Target population for the health check-ups was entire population aged from 40 to 65. The ministry set an annual target for the health check-ups, applicable every year from 2012, as 2 per cent of the target population without overlapping. The target figure of 2012 was 2 per cent and that of 2013 was 4 per cent.



A medical officer conducting health guidance using a flip-chart developed by the project



The guidelines and formats developed by the project

Source: Photographed by the ex-post evaluator (January 2016)

The number of HLCs increased as mentioned above. However, status of utilization of HLCs was lower than what was planned initially. The Ministry of Health conducted a utilization study of HLCs all over the country in 2015.³¹ The notice circulated by the ministry, which instructed establishment of HLCs, proposed a plan that each HLC conduct health check-up activity at least once a week, and carry out health-check-ups for at least 20 people at once. The utilization study investigated the number of participants in health check-ups at all HLCs. The study defined the status of utilization as 100% if an HLC conducted health-check activities as mentioned in the above-mentioned plan, that was for 80 people per month. Then, the total number of visitors to the HLCs was collected and analyzed to identify the status of utilization of HLCs in the country. As a result, it was found that there was only one MOH area where the utilization rate of HLCs was more than 100 per cent. There were four MOH areas where the utilization rate was between 50 per cent to 99 per cent. There were 12 MOH areas where the rate was from 30 per cent to 50 per cent. There were 6 MOH areas where the rate was less than 30 per cent. (3 MOH areas did not reply.) From this data, it can be said that the number of participants in health check-ups at the HLCs was much less than planned; therefore, status of utilization of the HLCs was not adequate.

However, annual health check-up coverage was more than the target set by the ministry, as mentioned in the previous page. The reason that the health check-up coverage met the target although status of utilization of the HLCs was poorer than the plan are: a) health check-ups are conducted at mobile clinics, workplaces and MOH clinics in all over the country that are contributing to achievement of the rate of health check-up coverage, b) there are a lot of HLCs

³¹ A Study on Utilization Pattern of Healthy Lifestyle Centers (HLC), Policy Analysis and Development, Ministry of Health, 2015. The study on utilization was conducted for the period from January to September, 2014.

in the country, which are contributing to the health check-up coverage rate in total, although each HLC is not adequately utilized.³²

Recognition of HLCs was also not adequate. Only 25 per cent of the respondents knew about HLCs in the beneficiary survey³³ conducted as a part of the ex-post evaluation (Figure 2). When those who knew about HLCs were asked how they heard about it, they replied mostly as “from friends and neighbors” and “TV programme and public advertisements”. From these replies, it is understood that awareness about HLCs was created among the local people to a certain extent by personal communication and mass media (Figure 3). The officers in-charge of the NCD unit in the ministry, PDHS and RDHS were also of the opinion that recognition of HLCs was not enough. Staff of PDHS and RDHS were making various efforts to create awareness among the local people to visit HLCs and have health check-ups. For example, the nursing officers in charge of health education explain about NCDs to people in the waiting room of the outpatient department in primary medical institutions, where the HLCs are located, and invite them to the HLCs; and public midwives are giving invitation cards to HLCs to the local people when they make home visits for MCH activities. The NCD Unit of the ministry are also conducting programmes for awareness creation of NCD prevention and for increasing recognition of HLCs, by posting newspaper articles, carrying out campaigns and so on. However, it seems that recognition of HLCs among the local people was still not adequate.

It was also found that only 14 per cent of those who heard about the HLCs had visited HLCs (Figure 4). When they were asked about the reasons they did not visit the HLCs, the most

³² According to the calculation made by the external evaluator, the target number of people supposed to have health check-ups, that was 2% (see footnote 30), is 120,000. The necessary number of HLCs to complete health check-ups of this target population is 125, if each HLC conduct health check-ups for 80 people every month of the year as planned by the ministry (80 people x 12 months x 125 HLCs = 120,000). However, there were 711 HLCs in the country at the time of the ex-post evaluation (June 2015). This larger numbers of HLCs were established probably because the ministry encouraged establishment of HLCs by giving a target to open at least 3 HLCs in each MOH area (there are 338 MOH areas in total in the country) as mentioned in “3.1.1.4 Output 4” of this report; and the necessary financial resources, which was provided by the World Bank, were available for opening the HLCs.

³³ Street interviews were conducted in six local government areas of the country with an objective of identifying the level of awareness about NCD check-ups and HLCs of the local people. The local government areas were selected through stratified random selection method of two steps by using a random number table. Firstly, 3 districts were selected out of all the 25 districts in Sri Lanka. Secondly, one UC (Urban Council) and one PS (Pradeshiya Sabha) were selected from each of the selected three districts randomly from the list of local governments in the district. As a result, 6 local government areas were selected for the locations of the survey, namely, Chilaw UC and Puttalam PS in Puttalam district, Gampola UC and Kundesale PS in Kandy district, Talawakele UC and Kothmale PS in Nuwara Eliya district. Street interviews were conducted from January 30th to February 1st 2016 for around 30 people including males and females in each location, whose ages were between 40 to 65, and obtained 172 valid responses in total. The characteristics of the samples were: 56% male and 44% female; 41% was the 40s, 55% was the 50s, and 3% was 60s; 38% self-employed, 24% working for private sector, 21% housewives, 9% government officers, 4% retired and 2% unemployed. As mentioned above, locations of interview were selected randomly, but respondents were purposely selected on the streets. There could be a potential for bias in the samples, as only those who were on the streets and were willing to participate in a 10-minute interview were selected. The sample size was small, compared with the target population of the age (around 6 million). Therefore, the result of this beneficiary survey cannot be generalized.

frequent answer was “Because I believe I am healthy” and the next was “I have no time/ am busy”. It is understood from these replies that local people do not have appropriate awareness about the importance of having an NCD health check-up. (Figure 5)

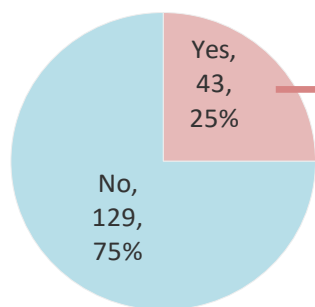
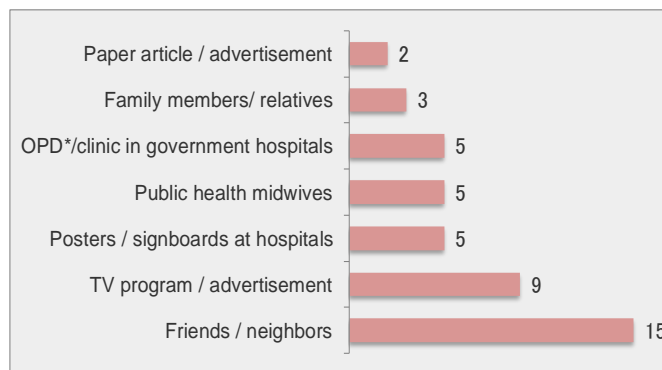


Figure 2 Do you know HLC?
(N=172)



(*OPD: Outpatient Department)

Figure 3 How did you hear about HLC?
(N=43, multiple answers allowed)

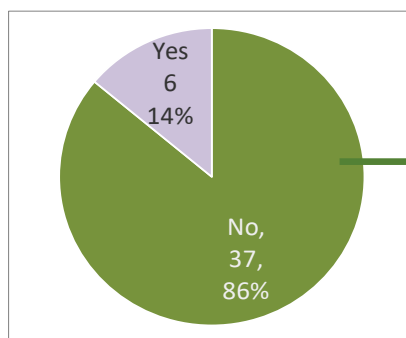


Figure 4 Have you visited HLC?
(N=43)

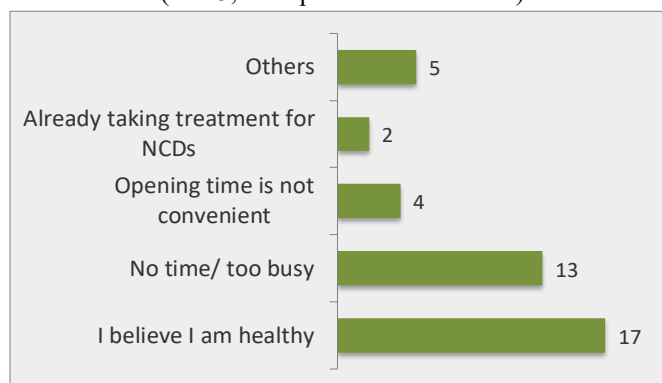


Figure 5 What was the reason you did not visit HLC?
(N=37, multiple answers allowed)

Source: Beneficiary Survey

The following results of the beneficiary survey also tells about insufficient motivation to have an NCD check-up and insufficient understanding about NCDs among the general public. It was found that 60 per cent and 40 per cent of the respondents replied “yes” and “no” respectively to a question “Have you ever had a health check-up for NCDs?” (Figure 6)³⁴ Subsequently, those who had not had a health check-up for NCDs were asked if they think they need a check-up. Then, only 28 per cent replied “yes” and 72 per cent in total replied negatively as “No”, “No need for the time being” or “Do not know”. (Figure 7) When respondents who had replied negatively were asked “what are the reasons for not having a check-up?”, the most common

³⁴ It included those who had had a test of blood glucose level or cholesterol, which is not an integrated NCD health check-up or a risk assessment.

answer was “Because I believe I am healthy”. (Figure 8) It was found important to create more awareness among the general public about the fact that NCDs can become advanced without noticing any symptoms, and that even those who do not notice any symptoms of NCDs should have a check-up.

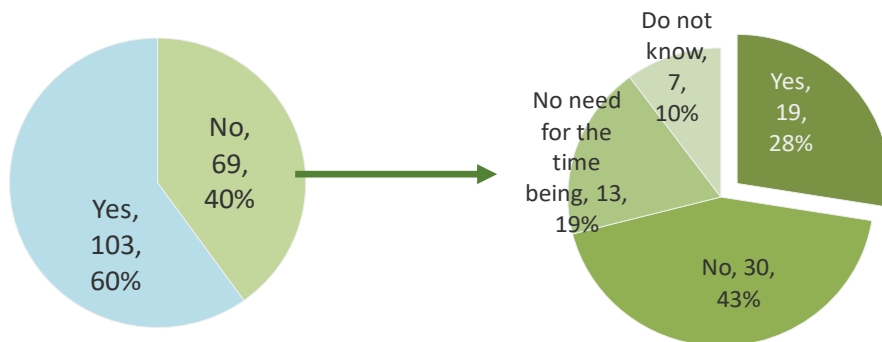


Figure 6 Have you ever had a health check-up for NCDs? (N=172)

Figure 7 Do you think you need a health check-up for NCDs? (N=69)

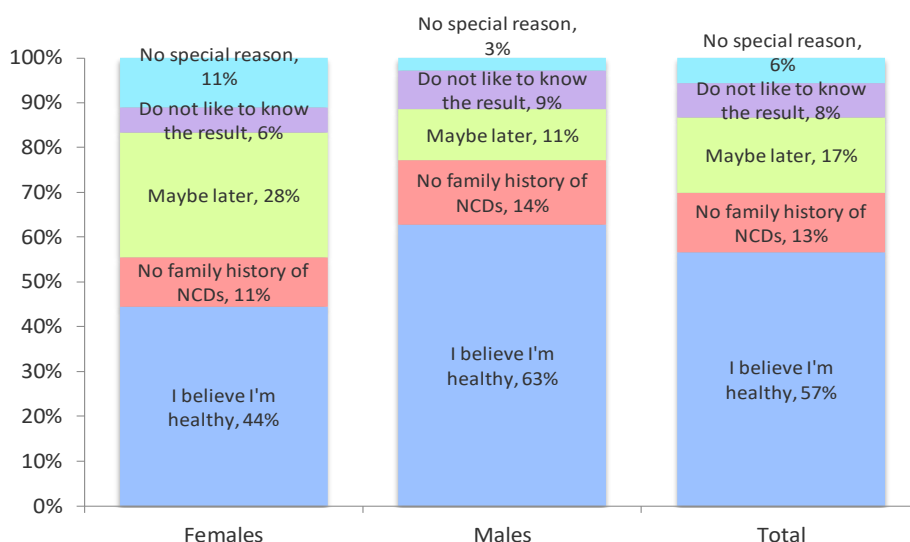


Figure 8 What are the reasons for not having a NCD check-up? (N=53)

Note: Total percentages sometimes does not become 100, as the percentage of each item was rounded.

Source: Beneficiary Survey

There was a tendency that more males than females stated “Because I believe I am healthy” as a reason for not feeling the need for a health check-up, among those who had not participated in a health check-up. (Figure 8) It seems that awareness creation activity about the need to have a check-up even there is no symptom should target males more. Staff of PDHS and RDHS recognized the problem of less participation of males in health check-ups. Seventy-three per cent of the participants to the NCD health check-ups in 2014 in Kandy RDHS area were female,

for example (source: document provided by Kandy RDHS).

The percentage of those who were continuously participating in follow-up clinics among those who were identified as having high-risk as a result of health check-ups, and the percentage of those who were receiving treatment among those who identified as patients, were not available, because a system for tracing the participants of health check-ups had not been established at the time of the ex-post evaluation.³⁵ Therefore, it was not sure whether the health check-up activities actually led them to have treatment at an early stage.

As for health promotion activities, the Ministry of Health, Ministry of Sports, Ministry of Education and others were facilitating activities according to the “National Health Promotion Policies and Strategic Framework”. The external evaluator was able to observe several examples of these activities during the ex-post evaluation (see photos below). However, it was unknown whether activities were conducted in every district as the Ministry of Health was not collecting information, such as on venue of activities and number of participants, as these activities were self-motivated ones by nature.



People Walking in a Park



An Aerobics Class Organized by Ministry of Sports

Source: Photographed by the external evaluator (January 2016, Colombo)

Kurunegala district, where the pilot areas were located, played a leading role in nationwide expansion of HLCs by accepting visitors from other districts. At the time of the ex-post evaluation, there were 126 HLCs in the district (as of September 2015) - many more than the number in other districts, which were between 6 and 48. Annual health check-up coverage of the pilot areas (Narammala and Alawwa MOH areas) in recent years, up to June 2014, was 17 per cent,³⁶ which was much higher than the national average of 7.7 per cent. Therefore, it is

³⁵ A tracing system was under development at the time of the ex-post evaluation by a technical cooperation project of JICA named, “Project for Enhancement of NCD Management”.

³⁶ Source: Replies provided by the NCD Unit, Ministry of Health, to the questionnaire developed for the ex-post evaluation.

clear that the district and the pilot areas were still playing a leading role in NCD prevention and control in the country at the time of the ex-post evaluation. There were 17 HLCs in Polonnaruwa district, another district where the pilot area was located. Annual health check-up coverage of the pilot area in the district (Medirigiriya MOH area) was 7 per cent, which was nearly same as the national average.³⁷ The reason that the district and the pilot area were not expanding NCD health check-up activities, although it started activities earlier than other districts, was probably because of frequent replacement of directors and key staff at the RDHS, who were taking leadership in NCD prevention and control in the district during project implementation.³⁸ The pilot areas in both districts did not have active health promotion activities, like the ones implemented during the project, at the time of the ex-post evaluation.

<Indicator 2>

There was no usable data for investigating indicator 2, “The annual incidence of cardiovascular diseases starts to decline in the project area by 2018” at the time of the ex-post evaluation of the project. The situation was the same at the time of the terminal evaluation. The Ministry of Health and PDHS/ RDHS had no system to receive information about the number of annual incidences of cardiovascular diseases, as it is difficult for them to collect such statistics.³⁹ The Ministry of Health stated in the *National Policy & Strategic Framework for Prevention and Control of Chronic NCDs*, that it aimed to reduce the number of premature deaths (below 60 years old) caused by NCDs by 2 per cent annually over the next ten years, starting from 2009. This aim could be set as an overall aim of the project instead of the existing one. However, currently there was no usable data for this indicator, either.

As explained above, the project has achieved its overall goal at a limited level.

3.2.2.2 Other Impacts

None.

Implementation models for NCD prevention and control had been developed, and health check-ups and guidance were carried out; however, efficiency of the implementation structure and effect of the health guidance had not reached the expected levels at the time of completion

³⁷ Source: Replies provided by the NCD Unit, Ministry of Health, to the questionnaire developed for the ex-post evaluation.

³⁸ Source: Document provided by JICA

³⁹ The Ministry of Health maintains statistics about the number of patients hospitalized in public hospitals after cardiovascular incidents. However, the ministry has no way to obtain numbers of those who were treated in outpatient departments or hospitalized in private hospitals. Therefore, it is not possible for the ministry to maintain statistics of the number of cardiovascular events.

of the project. Therefore, the project achieved at a limited level its project purpose. Activities for NCD prevention and control were carried out nationwide after the project completion by utilizing the outputs of the project. However, HLCs, which were supposed to play an important role in NCD prevention and control, were not fully utilized; status of continuous participation with health guidance by the high-risk groups identified in the health check-ups was unknown; and whether patients who were identified in the health check-ups were receiving necessary treatment had not yet been studied. Therefore, the project has achieved at a limited level its overall goal.

By considering the above findings, it was evaluated that the project had achieved the project purpose and overall goal to a certain extent, and effectiveness and impact of the project are fair.

3.3 Efficiency (Rating : ②)

3.3.1 Inputs

Table 8 shows main inputs and outputs of the project.

Table 8 Planned and Actual Inputs of the Project

Inputs	Planned	Actual at the Time of Project Completion
(1) Experts (There was no distinction in long- and short-term as it was a corporate contract)	Number and man-months of experts were not indicated in the plan. 6 specialities (team leader, NCD prevention, clinical epidemiology, health promotion, health information system management and cost analysis)	11 experts in 8 specialties (team leader, NCD prevention, clinical epidemiology, health promotion, health information system management, health finance, cost analysis and training coordination)
(2) Trainees received	Number of trainees was not indicated in the plan. Training in Japan – Observation tour for NCD prevention programme and others	13 trainees Training in Japan – Observation tour for NCD prevention programme and others
(3) Equipment	Amount for equipment was not indicated in the plan Equipment for health check-ups, computers, equipment for health promotion, vehicles and others	Equipment for health check-ups, audio-visual equipment, vehicles and others
Japanese Side Total Project Cost	380 million yen	438 million yen

Inputs	Planned	Actual at the Time of Project Completion
Sri Lankan Side Operational Expenses	1. Assignment of counterpart officers 2. Provision of office space for JICA Experts 3. Expenses for the office (utilities and others) 4. Payment of taxes for vehicles and equipment to be provided by JICA	1. Assignment of counterpart officers 2. Provision of office space for JICA Experts 3. Expenses for the office (utilities and others) 4. Payment of taxes for vehicles and equipment provided by JICA 5. Consumables used for health check-ups in the pilot areas of the project

3.3.1.1 Elements of Inputs

The number of JICA experts and trainees to be sent to Japan and amount of equipment to be provided were not indicated in the plan. Therefore, a comparison of planned and actual quantity of these items could not be conducted. As for content of inputs, it was confirmed that the actual was same as the plan in general.

3.3.1.2 Project Cost

Planned and actual project cost were 380 million yen and 438 million yen respectively, and the actual was higher than planned (115 per cent vs. plan). Main reasons for the actual exceeding the plan were: training programme in Japan and procurement of vehicles were carried out in additional numbers according to necessity, and a JICA consultation team was dispatched by JICA twice during the project.⁴⁰ Other reasons were, for example, necessary furniture, tools, equipment for health check-ups and others were procured by the project for the 50 and 18 HLCs, total 68, which were established in Kurunegala and Polonnaruwa districts respectively. Originally, one or two HLCs were planned to be established in each pilot area. However, it was decided by the ministry to establish more HLCs as the activities on health check-ups and guidance progressed earlier than expected.

3.3.1.3 Project Period

Actual project period was same as planned - four years and eleven months from May 2008 to March 2012. (100 per cent vs. plan)

Although the project period was same as planned, the project cost exceeded the plan. Therefore, efficiency of the project is fair.

⁴⁰ JICA consultation team was dispatched twice to help the Ministry of Health and JICA to agree on the objective of the Ragama Health Study, as there was no adequate consensus between these parties at the beginning of the project.

3.4 Sustainability (Rating : ③)

Under the item of sustainability, the following was analyzed: if the necessary policy and programme were formulated; establishment of institutional arrangements in the Ministry of Health, PDHS and RDHS; adequate technical capacity of the officers of PDHS and RDHS who are implementing and facilitating implementation of the models; and any problems in terms of finance, at the time the models of NCD prevention, such as on health check-up, guidance and health promotion activities are carried out efficiently and effectively in every district in Sri Lanka.

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

Health Master Plan (2007 – 2016) clearly stated the importance of NCD control; the Ministry of Health formulated the *National Policy and Strategic Framework for Prevention and Control of Chronic NCDs* in 2009 and *National Health Promotion Policy and Strategic Framework* in 2010. The ministry is implementing the “National NCD Screening Programme”, including health check-ups and guidance at HLCs, mobile clinics, workplaces and MOH clinics, with the aim of implementing NCD prevention and control all over the country.

In this manner, the necessary policies and institutional arrangements for sustaining the effect of the project are in place.

3.4.2 Organizational Aspects of the Implementing Agency for the Sustainability of Project Effects

The Ministry of Health formed policy-level committees for NCD prevention and control: the National NCD Steering Committee, which has directors of the ministry as members, and National NCD Advisory Committee, which has representatives of the health ministry, and other related ministries and NGOs. These committees hold several meetings a year and carry out policy recommendations and monitoring of the related programme of NCD. There is an NCD Unit in the head office of the ministry. The unit is implementing planning of programmes for NCD prevention and control, monitoring activities on NCD prevention and control in the country, publicity programme for general public and others. A MO-NCD is assigned in every RDHS office, who conducts facilitation and monitoring of health check-ups, guidance and others carried out at the HLCs and MOH areas under the preview of the directors of PDHS and RDHS. A cabinet decision was made in December 2015 to establish an NCD Bureau under the Ministry of Health, with the aim of further strengthening the above-mentioned activities.⁴¹

⁴¹ The NCD Bureau is planning to implement a holistic programme of prevention and control, not only for NCDs that were targeted by the project, including diabetes mellitus, hypertension and hypercholesterolemia, but also others coming under the wider definition of NCDs, such as cancers, liver ailment, diseases of eyes and ears, as well as accident injuries, poisoning and others.

Seven hundred and eleven (711) HLCs were established in total in the country at the time of the ex-post evaluation. The ministry is currently working on establishing at least two HLCs in each MOH area (there are a total of 338 MOH areas in the country). Seventy-five MOH areas had met this target as of the end June 2015. HLCs were started to be set up around four years ago. Currently, the ministry recognizes several issues about the HLCs, and is taking steps to overcome these issues. For example, there are some primary medical institutions, in which HLCs were established, that have only one medical officer. It was found that these institutions find it difficult to conduct an NCD health check-up at the HLC once a week. To overcome this issue, the ministry has been increasing the number of medical officers at these institutions. The ministry is also taking steps to introduce equipment to measure cholesterol levels at HLCs to meet the demand of the general public.

The ministry and JICA were implementing the ODA loan project of “Project for Improvement of Basic Social Services” from 2012, and technical cooperation project of “Project for Enhancement of NCD Management” from 2014. These projects are carrying out a programme in order for people who were identified as high-risk or patients at the health check-ups to be provided appropriate treatment and control. The programme includes activities for improving facilities and equipment at the secondary medical institutions; enhancing production capacity of medicines; developing a tracing system after people participated in health check-ups; enhancing systems for NCD patients to receive necessary treatment, and others. These projects were implemented with the prospect that need for treatment would increase after nationwide expansion of health check-ups as a result of this project. The implementation supports sustainability of the effect of this project.

As described above, related organizations of the project, such as the Ministry of Health, PDHS and RDHS have the necessary systems for supporting the sustainability and further expansion of the effect of the project.

3.4.3 Technical Aspects of the Implementing Agency for the Sustainability of Project Effects

The NCD Unit of the Ministry of Health holds a meeting for monitoring progress of activities on NCD prevention and control once every three months. MO-NCDs of RDHS participate in the meetings, report progress of activities in their area, discuss issues, and share their experience.

PDHS and RDHS conduct training programmes on NCD prevention and control for medical officers, public midwives, public health inspectors and other staff with the aim of enhancing their knowledge and programme management capacity. These staff conduct awareness creation activities with local communities. They use flipcharts and references developed by the project, and tools developed by the programme funded by WHO and others. These references and tools help standardize the quality of their programme.

Currently, there is no problem in carrying out the programme of NCD prevention and control due to the technical capacity of the staff members.

The staff of the ministry, PDHS and RDHS have the necessary technical capacity to sustain the effect of the project.

3.4.4 Financial Aspects of the Implementing Agency for the Sustainability of Project Effects

NCD Unit of the ministry has obtained a budget allocation of 20 - 30 million Sri Lankan Rupees (LKR) (around 17- 26 million yen) every year for carrying out the training programme and other activities. For years where there is a plan to conduct awareness creation campaigns, the budget allocation is sometimes 45 - 60 million LKR (around 39 - 52 million yen).⁴² There is a plan for increasing budget allocation of the NCD Unit in 2017 and 2018. The director of the unit explained that they do not have a financial problem for carrying out necessary activities.

PDHS and RDHS were allocated budget from the respective provincial government for carrying out NCD activities, including a programme for awareness creation, training, improvement of equipment and facilities. PDHS and RDHS were also obtaining funding from WHO. This funding was utilized for establishment and purchasing necessary equipment for HLCs. Expenses of HLCs, such as costs of health check-ups, were spent out of the budget allocated to the primary medical institution in which the HLC is located. According to the directors of PDHS/ RDHS and MO-NCDs, the status of operation and maintenance of the equipment provided by the project, such as equipment for health check-ups, audiovisual equipment and vehicles was satisfactory, and there was no financial problem in this regard.

In this way, there was no financial problem observed for sustaining the effect of the project.

No major problems have been observed in the policy background and the organizational, technical, financial aspects of the implementing agency. Therefore, sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented with the aim of developing effective and efficient implementation models to prevent and control NCDs in Sri Lanka.

Prevention and control of NCDs was an important policy target of the country at the time of planning and completion of the project. The number of deaths by NCDs was increasing in the

⁴² Source: Replies provided by NCD Unit, Ministry of Health, to the questionnaire developed for the ex-post evaluation. Exchange rate in the JICA website (1LKR=0.859JPY in December 2015) was used for the currency conversion.

country as a result of aging of the population and changes in eating habits and lifestyle. There was a strong necessity and urgency for the country to establish a system for preventing and controlling NCDs; this would be in addition to the existing health and medical services, which were mainly for prevention and treatment of communicable diseases. The objective of the project was consistent with Japanese assistance policy to Sri Lanka at the time of project planning, which placed an importance on assistance for enhancing social welfare services giving consideration to the aging population. Therefore, relevance of the project is high.

At the time of project completion, implementation models for prevention and control of NCDs had been developed based on the trial programme in the project pilot areas, as expected in the project. However, efficiency of the health check-ups and effect of the health guidance were not exactly up to the expected level. At the time of the ex-post evaluation, health check-ups and guidance had been implemented all over the country according to the above-mentioned implementation models. HLCs had been established in every district of the country as planned. However, HLCs are not utilized adequately, and it is not known if the high-risk groups and patients identified in the health check-ups are receiving necessary treatment and guidance. Therefore, effectiveness and impact of the project is fair.

Efficiency of the project is fair because project cost exceeded the plan, although the project period was within the plan.

The policies and systems to implement prevention and control of NCDs are continuing. Institutional arrangements for the implementation have been made among the relevant institutions, including the implementing agency. There is no problem with regard to the technical capacity of staff members and the financial situation of relevant institutions. Therefore, sustainability of the effect of this project is high.

In light of the above, the project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

(1) Necessary arrangement of statistical data for identifying level of achievement of the policy objective of NCD prevention and control.

The Ministry of Health stated in the National Policy of NCD Prevention and Control that it aimed to reduce the number of premature deaths (below 60 years old) caused by NCDs by 2 per cent annually for ten years starting from 2009. However, there is no baseline data for this. The statistics of the number of deaths in public hospitals that are reported in the Annual Report of the Ministry of Health can be used to represent the above-mentioned number in the policy

objective.⁴³ At present, the number of hospital deaths is collected according to age groups from a standpoint of reproductive health, that is ages 1 - 4, 5 - 16, 17 - 49, 50 - 69 and over 70. Therefore, “number of deaths caused by NCDs at an age below 60” cannot be collected. In order to collect the number of deaths caused by NCDs at an age below 60, it is necessary to change the age groups in data collection. In addition to that, to identify a death caused by NCDs, it is more appropriate to collect the numbers by the secondary causes of death, not by the primary or direct causes.⁴⁴ It is a good opportunity for the ministry to change the data collection method to that of the target age groups and by secondary causes of death, so that the level of achievement of the policy objectives can be investigated, as currently, the ministry is working on computerized data collection for health statistics.

(2) Enhancement of activities for motivating the general public to participate in NCD health check-ups

It was found in the beneficiary survey of the ex-post evaluation that a substantial portion of the general public had not heard about HLCs, and did not feel a need to participate in NCD health check-ups because they believed they were healthy. There is a survey to show under-utilization of the HLCs, although they were established nationwide. It is recommended that the Ministry of Health, PDHS and RDHS consider the above-mentioned facts and enhance activities for improving the level of understanding about NCDs among the general public, creating more awareness among them about the importance of participating in health check-ups, and giving more publicity to HLCs.

4.2.2 Recommendation to JICA

None.

4.3 Lessons Learned

(1) Importance of implementing necessary programmes so that the required treatment will be given to the people, while developing a system for carrying out NCD health check-ups and

⁴³ The mortality statistics maintained by the Ministry of Health is the number of deaths in public hospitals and does not include number of deaths in private hospitals and at homes. Therefore, it is not statistically perfect, but has continuity as it is published every year. Statistics maintained by the Register General’s Department have the number of all deaths. However, those after 2009 were not published due to a delay in summarizing information. Therefore, it has low potential to be used as a baseline data.

⁴⁴ For example, in the case of colonic NCDs such as (a) diabetes mellitus, hypertension and hypercholesterolemia, one dies by (b) heart attack or cerebral hemorrhage - (a) is the secondary cause, while (b) is the primary or direct cause. It is important to identify deaths according to the (a) secondary causes, which are the root causes of the death, when collecting the numbers of deaths of those aged below 60 for the purpose of investigating the level of achievement of the policy objective.

guidance.

Implementing models for NCD prevention and control were developed by this project, and a plan for carrying out nationwide NCD health check-ups was formulated at the time of project completion. The need to provide necessary treatment to the high-risk groups and patients who were identified in the health check-ups will certainly increase when health check-up activities are implemented all over the country according to the plan. The Ministry of Health and JICA have started an ODA loan project and a technical cooperation project with the aim of enhancing the capacity of secondary medical institutions to provide treatment and control for NCDs during this project in order to meet the above-mentioned need without an interruption. It was found in the ex-post evaluation that this timely implementation of the projects was ensuring sustainability of the effect of this project. It is important for JICA when it assists a developing country to enhance NCD prevention and control that it implements a programme in time to meet the increasing need for treatment for high-risk groups and patients, who were identified in the health check-ups, while developing a system for health check-ups and guidance.

(2) A reference to similar kind of project about the method and process for developing implementation models for NCD prevention and control adopted by this project

This project is one of the pioneering projects for JICA on NCD prevention and control. NCDs are becoming a serious problem as a result of changes in lifestyle and an aging population in a lot of developing countries. Therefore, the importance of JICA's assistance for NCD prevention and control will further increase in future. The method of trial implementation of NCD prevention and control programme, guidelines and formats developed in the project are useful for similar kind of projects in the same sector, which would be implemented by JICA in future.

Democratic Socialist Republic of Sri Lanka

FY2015 Ex-Post Evaluation of Japanese Grant Aid Project
“Project for the Improvement of Central Functions of Jaffna Teaching Hospital”

External Evaluator: Tomoko Tamura, Kaihatsu Management Consulting, Inc.

0. Summary

This Project was implemented to improve the health and medical services of the Jaffna Teaching Hospital in Sri Lanka by constructing a building for Central Functions and providing facilities for a central operating theater complex and others, thereby contributing to improvement of the health of local residents.

This project has been highly relevant to both the development plan of Sri Lanka, which aims to provide people in the country with access to medical services of high quality and using the latest technology, and to the development needs of the country, by improving the medical services of Jaffna Teaching Hospital through upgrading its facilities, which were decrepit and seriously damaged. The project was also highly relevant to Japan’s ODA policy, which placed importance on the prompt implementation of humanitarian and reconstruction assistance at the time the conflict in the country ended. The plan of the project was highly appropriate as a kind of assistance that was implemented in a conflict-affected country/area. Therefore, its relevance is high.

Construction of the building and procurement of equipment was conducted as planned, and the project cost was within the plan. However, the project period exceeded the plan. Therefore, the efficiency of the project is fair.

After this project, the number of operations, major operations, and laboratory tests at the hospital increased. More types of operations and laboratory tests became available at the hospital. Medical staff at the hospital appreciated that the efficiency of work and the working environment was improved because of the project. The community of the area also appreciated that the project contributed to improvement of the medical services of the hospital and the health of people in the area. They felt that the project provided them with a sense of safety and encouragement at a time when they were making an effort to rehabilitate and reconstruct their lives. This project has largely achieved its objectives. Therefore, the effectiveness and impact of the project is high.

No major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore, sustainability of the project effects is high.

In light of the above, this project is evaluated to be highly satisfactory.

1. Project Description



Project Location



Central Functions of Jaffna Teaching Hospital

1.1 Background

Jaffna Teaching Hospital was the only tertiary care institution in the Northern Province of Sri Lanka. It also functioned as a teaching hospital for the Medical Faculty of Jaffna University. The hospital also played the role of a primary and secondary health care institution because many hospitals in these categories in the region were not functioning at the time of project planning as a result of damage caused during the conflict in the country.

The facilities of the hospital, some of which were constructed in the 19th century, had not always been constructed with a proper plan. Fourteen of the twenty-four buildings in the hospital premises were more than forty years old, and were seriously damaged and decrepit. Most of the medical equipment was very old. However, these facilities and equipment had not been repaired or replaced properly due to financial problems faced by the government during the conflict. It was difficult to improve health and medical services of the hospital under these circumstances. This project, which aimed to improve the central functions of the hospital, was proposed in view of this difficulty. JICA conducted a basic design study and detailed design study in 2005 and in May 2006 respectively. However, after the detailed design study, implementation of the project was postponed as a result of deterioration in public security in the Jaffna area due to the conflict.

JICA conducted an implementation review study for the project in October 2009,¹ soon after the end of the conflict in May 2009, so that the project could start immediately with the aim of assisting rehabilitation of the conflict-affected area. This immediate action was taken because this project was identified as one of the most important types of assistance JICA could provide

¹ The Implementation Review Study was conducted with the aim of reviewing previous studies and project cost and re-confirming agreement between the two countries, as it had been several years since the Basic Design Study was conducted.

to promote peacebuilding in the Northern area of the country. An Exchange of Notes (E/N) was signed in March 2010, a Grant Agreement was signed, and the project commenced. The project was completed in December 2012, three and half years after the end of the conflict.

1.2 Project Outline

The objective of this project is to improve health and medical services at Jaffna Teaching Hospital in Sri Lanka by constructing a building for central functions and providing facilities of a central operating theater complex and others, thereby contributing to improved health of the local residents.

E/N Grant Limit or G/A Grant Amount / Actual Grant Amount	2,298 million yen / 1,641 million yen
Exchange of Notes Date /Grant Agreement Date	March 2010 / March 2010
Implementing Agency	Ministry of Health and Jaffna Teaching Hospital
Project Completion Date	December 2012
Main Contractors	The Joint Venture of Wakachiku Construction Co., Ltd. (Japan) and Sato Kogyo Co., Ltd. (Japan)
Main Consultants	The Consortium of Yamashita Sekkei Inc. (Japan) and International Total Engineering Corporation (Japan)
Basic Design	August 2005
Implementation Review Study	March 2010
Detailed Design	May 2006
Related Projects	None

2. Outline of the Evaluation Study

2.1 External Evaluator

Tomoko Tamura, Kaihatsu Management Consulting, Inc.

2.2 Duration of Evaluation Study

Duration of the Study : September, 2015 - November, 2016

Duration of the Field Study : November 16th - 21st, 2015 and April 4th - 8th, 2016

3. Results of the Evaluation (Overall rating: A²)

3.1 Relevance (Rating ③³)

3.1.1 Relevance to the Development Plan of Sri Lanka

Both at the time of planning and completion of the project, the medium- and long-term national development plan of the country, *Mahinda Chintana* (2006-2017), emphasized a policy of ensuring access to health services of high quality and using the latest technology for all the people in the country. The new government established in 2015 has the same policy.⁴ The Health Master Plan of the Ministry of Health of Sri Lanka, which states that one of the most important strategies in the plan is to deliver comprehensive medical services to the people, covers the period to 2016. This project aims to ensure access to medical services of high quality using the latest technology, and to deliver comprehensive medical services to the people in the Northern area by improving the facilities at the Jaffna Teaching Hospital. Therefore, the aim of the project was highly consistent with the development plan and health sector strategies at the time of planning, completion and ex-post evaluation of the project.

3.1.2 Relevance to the Development Needs of Sri Lanka

At the time of planning and completion of the project, several hospitals of lower categories in the Northern Province and Jaffna District were not functioning as a result of damage to their facilities during the conflict; some were closed as they were in high security zones under the control of the Sri Lankan security forces. Therefore, the number of patients at Jaffna Teaching Hospital greatly increased.⁵ However, facilities and equipment of the hospital had been damaged and were decrepit, and therefore the hospital was not able to take proper care of the large number of patients and to provide the medical services that a tertiary medical institute is supposed to offer. For example, some facilities, such as X-ray diagnoses, were often out of order as they were very old; medical staff could not complete all the tests they planned to carry out each day and needed to postpone some to the next day. There was also a problem with the working environment of the staff of the hospital and location of facilities: for example, the ICU and the operating theater were 100 m apart, and therefore patients suffered when they were

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

³ ③: High, ② Fair, ① Low

⁴ “Health- Modern Healthcare”, Budget Speech – 2016, Ministry of Finance, Sri Lanka

⁵ At the time of project completion in December 2012, 18 out of a total of 102 medical institutions, including 6 Divisional Hospitals and 12 Primary Medical Care Centers, were not functioning in the Northern Province. 7 out of 38 institutions, including 2 Divisional Hospitals and 5 Primary Medical Care Centers, were not functioning in Jaffna District. At the time of the ex-post evaluation of the project in October 2015 the situation had improved, and only 6 Primary Medical Care Centers were not functioning in Northern Province and 1 in Jaffna District. (Sources: Documents provided by the offices of Northern Provincial Director Health Services and Jaffna Regional Director of Health Services.)

transferred between these two facilities under the scorching sun.⁶ Due to this, there was a strong need to update the medical equipment and improve the environment surrounding the medical services of the hospital. Furthermore, urgent attention was needed for improvement.

At the time of the ex-post evaluation, too, the hospital is the only tertiary care institution in the Northern Province of Sri Lanka and is functioning as a teaching hospital. The hospital is playing an important role in advanced medical care and clinical training in the region

Therefore, this project, which aimed to improve medical services at the hospital by updating the facilities, was highly consistent with the development needs of the country throughout the period from the planning to the ex-post evaluation of the project.

3.1.3 Relevance to Japan's ODA Policy

The Country Assistance Policy of Sri Lanka (2004) at the time of project planning listed peacebuilding and rehabilitation as an important area of assistance. Improvement to the living environment through projects for improving public health and rehabilitation of medical facilities were mentioned as examples of humanitarian and rehabilitation assistance. It had a policy of continuing cooperation to the health and medical sector, on the basis of the previous achievements in cooperation to the sector. In this way, the project had relevance with Japanese cooperation policy.

3.1.4 Appropriateness as a Project Conducted in a Conflict-affected Country/Area

This project was assistance in the conflict-affected area; and therefore, appropriateness of timing of implementation is also important when evaluating relevance of the project. The decision to postpone implementation of the project a short while after planning the project, due to deteriorating public security during the time of the conflict, was appropriate with consideration to the safety of the stakeholders of the project. The decision to re-start the project soon after the end of the conflict was also important and appropriate, as this was a project for assisting rehabilitation and reconstruction of the project area. In this manner, timing of implementation of the project was appropriate with consideration to public security and need for rehabilitation. The project was also highly appropriate as assistance for rehabilitation and reconstruction since it assisted the health sector, which provides a public good and brings benefit to the people in the target area equally and widely.

This project has been highly relevant to the development plan and development needs of Sri Lanka, as well as Japan's ODA policy. The plan of the project was highly appropriate in terms of one implemented in a conflict-affected country/ area. Therefore, its relevance is high.

⁶ Report of the Implementation Review Study.

3.2 Efficiency (Rating ②)

3.2.1 Project Outputs

Major outputs of the project in terms of construction of facilities, procurement of equipment and soft components were according to the plan as mentioned below.

< Construction of Facility >

Construction of a Building for Central Functions (Floor area in total: 6,870m², four levels above ground)

Departments	Main Facilities
Operating theater Complex	Operating rooms including those for infectious diseases, and recovery rooms
Central Supply & Sterilizing Department	Rooms for washing and sterilization, and clean storeroom
Intensive Care Units (ICUs)	Medical and surgical ICUs, and isolation ICUs for infectious diseases
Central Laboratory Complex	Laboratories for histopathology, hematology, chemical pathology, and micro pathology
Central Facilities for Diagnostic Imaging	X-ray rooms, endoscope rooms, and physiological laboratory
Administration-related rooms	Offices and machine rooms

< Procurement of Equipment >

Procurement and installation of necessary equipment for the Central Functions

Departments	Main Items of Equipment
Operating theater Complex & Central Supply & Sterilizing Department	Anesthetic apparatus, ventilators, surgical instrument sets, operation lamps, operation monitors, operation tables, C-arm X-ray units, autoclaves, automatic instrument washer, etc.
ICUs	Central monitor, ICU beds, patient monitors, ventilators, etc.
Central Laboratory Complex	Automatic biochemistry analyzer, blood gas analyzer, ELISA reader, microscope, automatic blood cell analyzer, hemoglobin monitor, etc.
Central Facilities for Diagnostic Imaging	X-ray systems, ultrasound scanner, endoscope, EEG, ECG, etc.

<Soft component>

- Improvement of the maintenance system for medical equipment
- Capacity enhancement of the technical staff in charge of maintenance of medical equipment and improved working environment for staff.
- Provision of training on concept of preventive maintenance of medical equipment and organizing working environment based on 5S concept.⁷

There were some revisions and additions to the amount of equipment actually procured by the project compared to what was planned at the time of detailed design study and implementation review study.⁸ The layout of the facility was changed to have separate rooms for mammography and dental X-ray, with consideration of privacy for women.



Laboratory
(At the time of project planning)



Laboratory
(At the time of ex-post evaluation)



ICU (At the time of project planning)



ICU (At the time of ex-post evaluation)

⁷ 5S is a method for rationalizing and improve efficiency by using the concepts of Sort, Set in Order, Shine, Standardize and Sustain. It is often utilized for improving workplace environment in manufacturing and service industries.

⁸ Major revisions to equipment were, for example: number of operation lamps of complete type was increased from four to eight and the operation lamps of simple type not provided as a result; electrolyte measurement function was added to the automatic biochemistry analyzer; number of semi-automated coagulation analyzers was increased from one to two; five-type leukocyte classification function was added to the automatic blood cell analyzer; and number of automatic X-ray film processors was increased from one to two.



Operating theater
(At the time of project planning)



Operating theater
(At the time of project completion)



Facilities for Diagnostic Imaging
(At the time of project planning)



Facilities for Diagnostic Imaging
(At the time of project completion)

Source : The photos at the time of project planning and those at the time of project completion were taken in October 2009 and October 2012 respectively. Documents provided by JICA were the source of these photos. The photos at the time of the ex-post evaluation were taken by the external evaluator in November 2015.

3.2.2 Project Inputs

3.2.2.1 Project Cost

The project cost was planned as Japanese Yen (JPY) 2,877 million in total, which included JPY 2,298 million from the Japanese side and Sri Lankan Rupees (LKR) 672 million, equivalent to around JPY 579 million,⁹ from the Sri Lankan side. Actual cost was JPY 1,890 million, including JPY 1,641 million and LKR 289 million, equivalent to around JPY 249 million. The actual cost was lower than planned (66 per cent against the plan). The actual cost from the Japanese side was less than planned as a result of tenders received.

3.2.2.2 Project Period

Project period was planned as 29 months from April 2010 to August 2012. It was actually 33 months from March 26th, 2010 to December 24th, 2012, and was longer than planned (114 per cent against the plan). The period exceeded the plan because it took more time than planned to

⁹ Project cost from the Sri Lankan side included cost of demolishing the existing building, land preparation, preparatory work for building construction and others. The planned and actual costs from the Sri Lankan side were converted into Japanese yen by using the exchange rate at the time of planning (1 LKR = 0.8624 JPY in October 2009, Report of the Implementation Review Study).

sign a contract with a consultant after signing of the Exchange of Note, and also for construction of the facility, procurement and installation of equipment.

Although the project cost was within the plan, the project period exceeded the plan. Therefore, efficiency of the project is fair.

3.3 Effectiveness¹⁰ (Rating : ③)

3.3.1 Quantitative Effects (Operation and Effect Indicators)

<Operation Indicators>

At the time of planning, operation indicators of the project proposed were improvement in utilization rate of the operating theaters,¹¹ bed occupancy rate of ICU¹², number of tests conducted per diagnostics imaging unit per year,¹³ reduction of traveling distance and time for medical staff and patients in the hospital, and improved work efficiency of medical staff, including those working in the operating theater complex.¹⁴

These indicators were studied in the ex-post evaluation. Utilization rate of the operating theaters was not available as the hospital did not record the total hours the operating theaters were used per year. Bed occupancy rate of ICU was almost 100 per cent at the time of planning and was slightly improved to 91 per cent for surgical ICU and 98 per cent for medical ICU at the time of the ex-post evaluation (2014).¹⁵ Number of tests conducted per year and that per unit were increased for all diagnostics imaging facilities, including ultrasonic diagnostics, X-ray diagnostics, EEG and ECG two years after project completion (Table 1). This shows that the equipment provided by the project was utilized; problems with the old equipment at the time of planning, such as inefficiency and frequent breakdowns, had been solved; and tests were conducted efficiently. The number of tests were reduced three years after project completion, probably because the demand for diagnostics imaging concentrated in this hospital had settled down after equipment for the same purpose had been installed in lower category hospitals in Jaffna districts.¹⁶

¹⁰ Sub-rating for Effectiveness is to be put with consideration of Impact.

¹¹ Utilization rate of the operating theaters = Total hours the operating theaters were used per year/ total hours the operating theaters can be used x 100

¹² Bed occupancy rate of ICU = Number of patients-days per year/ (number of beds x 365 days) x 100

¹³ Number of tests conducted per diagnostics imaging unit = Number of tests conducted per year / number of units of diagnostics imaging facility

¹⁴ Report of the Implementation Review Study.

¹⁵ According to the medical officer in charge of ICU at Jaffna Teaching Hospital, all ICU beds were always occupied (100%) at the time of project planning, and therefore there was a problem as the ICU often could not admit patients immediately as needed. The reduction (improvement) of ICU bed occupancy rate after the project shows that this problem had been solved to some extent as a result of the number of ICU beds being increased by the project.

¹⁶ Explanation made by Director - Planning of Jaffna Teaching Hospital.

Table 1 Number of Diagnostics Imaging Tests Conducted per Year per Unit

Items		Baseline		Actual	
		2007	2011	2014	2015
		Baseline Year	1 Year Before Completion of the Project	2 Years After Completion of the Project	3 Years After Completion of the Project
Ultrasonic diagnostics	No. of units available	2	5	7 (2)	7 (2)
	No. of tests conducted per year	4,084	11,315	21,535	14,442
	No. of tests/ unit/ year	2,042	2,263	3,076	2,063
X-ray diagnostics	No. of units available	2	3	6 (3)	6 (3)
	No. of tests conducted per year	49,950	82,125	183,230	156,076
	No. of tests/ unit/ year	24,975	27,375	30,538	26,013
EEG	No. of units available	2	2	2 (1)	2 (1)
	No. of tests conducted per year	2,428	2,673	2,845	2,286
	No. of tests/ unit/ year	1,214	1,337	1,423	1,143
ECG	No. of units available	2	2	4(2)	4 (2)
	No. of tests conducted per year	26,124	28,836	59,495	41,909
	No. of tests/ unit/ year	13,062	14,418	14,874	10,477

Note : 1) All of the above-mentioned items were expected to be increased after the project and there were no particular target figures set at the time of project planning.

2) Number of units shown in brackets are the ones provided by this project.

Source: Documents provided by the Implementing Agency

As described in “Background” of this report, there was around 100 m between the ICU and the operating theater, and the patients suffered while being transferred between these two facilities under the scorching sun at the time of project planning. After the project, the operating theater complex and ICU were located on the second and the third floors respectively in the same building of Central Functions. Therefore, patients can be transferred between these facilities by an elevator within two or three minutes. This is a typical example of reducing travelling time and distance for patients and medical staff.

At the time of project planning, medical staff of the hospital, such as medical officers, nursing staff, hospital assistants, and staff of the operating theater complex, were working many hours as they had to engage in overtime work to provide services to the crowd of patients. Their work burden was expected to be reduced as a result of improvement in working efficiency and environment after the project. Quantitative information about the reduction was not available, because there was no data on working hours of the medical staff at either the time of planning or ex-post evaluation of the project. In the beneficiary survey¹⁷, which was conducted as a part

¹⁷ Beneficiary survey to the medical staff was conducted in November 2015 as a part of this ex-post evaluation. The survey was conducted with all staff working at the Central Functions, including ICU, central laboratory, central operating theater complex and central facilities of diagnostics imaging. Questionnaire forms were distributed through the head of the units to all the 221 staff, including 62 staff in ICU, 31 in central laboratory, 88 in the operating theater complex, and 40 in the central facilities of diagnostics imaging. 175 responded in total (the responding rate was 79%), including 65% of the staff of ICU, 100% of the central laboratory, 78% of the operating theater complex, 88% of

of this ex-post evaluation, 89 per cent of the respondents who work as medical staff at Central Functions answered “efficiency of the work has improved”; and 85 per cent answered “working environment has improved” (Figure 1). However, only 35 per cent responded “need for overtime work was reduced”. Need for overtime work was not reduced even though working efficiency and environment of the workplaces had been improved, probably because the work volume increased significantly as a result of the number and kind of operations being increased, as described in <Effect indicators> in the next section of this report.

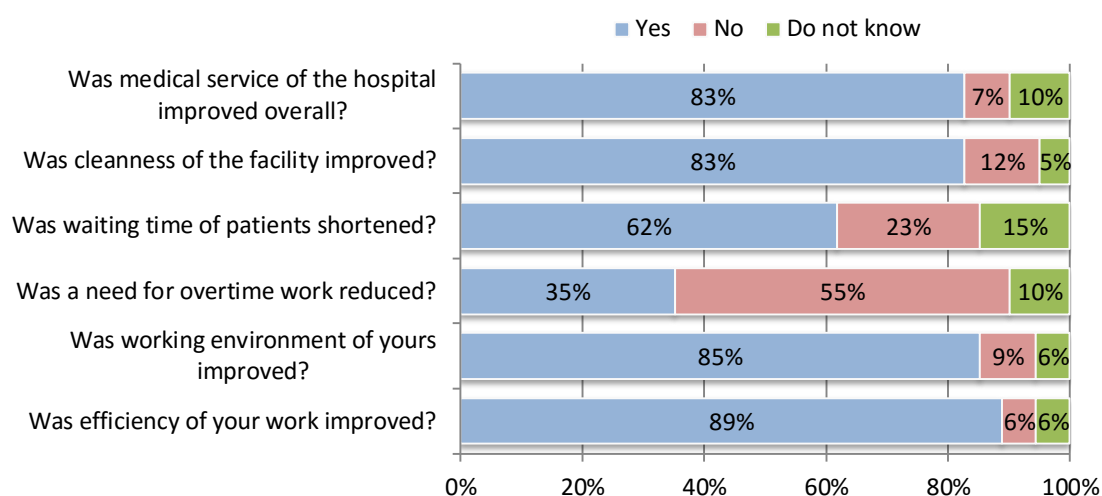


Figure 1 Answers to Questions about the Improvement Caused by Project Effect Asked to Medical Staff Working at the Central Functions of the Hospital (N=175)

Source: Beneficiary Survey

< Effect Indicators >

An increase in the number of operations, laboratory tests¹⁸ and outpatients, and a decrease in the number of patients transferred to the tertiary medical care facilities in Colombo metropolitan area, were identified as effect indicators of the project. Baseline, target and actual figures of these indicators are shown in Table 2.¹⁹

central facilities for diagnostics imaging. These samples contained 49% of females and 51% of males. Breakdown of the samples in their job categories were, medical officers (31%), nursing staff and midwives (31%), technicians (13%) and hospital assistants (25%). The samples contained staff of ICU (23%), central laboratory (18%), central operating theater complex (39%) and central facilities for diagnostics imaging (20%). The main reasons for not responding to the questionnaire were being absent from the workplace due to being abroad or on leave.

¹⁸ Number of blood, tissue and other tests conducted at the central laboratory of the hospital.

¹⁹ Ex-ante Project Evaluation Report.

Table 2 Baseline, Target and Actual Figures for Effect Indicators

Items	Baseline	Target	Actual		
	2007	2015	2011	2014	2015
	Baseline Year	3 Years After Completion of the Project	1 Year Before Completion of the Project	2 Years After Completion of the Project	3 Years After Completion of the Project
1. No. of operations per year <Major operations out of the above numbers>	23,229 <5,786>	To be increased	33,282 <7,727>	35,495 <8,940>	36,691 <10,109>
2. No. of laboratory tests per year	434,706	To be increased	624,575	924,164	1,116,026
3. No. of outpatients per year	448,325	To be increased	282,946	316,865	265,987
4. No. of patients transferred to tertiary medical care facilities in Colombo metropolitan area per year	506	To be decreased	2,741	2,274	2,563

Sources: Baseline and target figures were from the Ex-ante Project Evaluation Report; actual figures were from the documents provided by the Jaffna Teaching Hospital

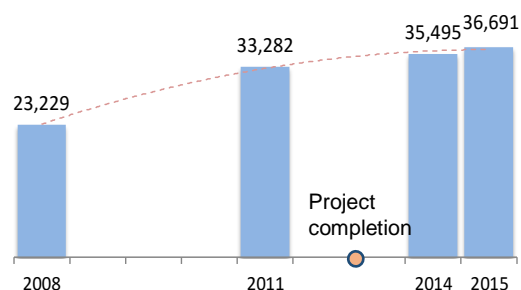


Figure 2 Number of Operations Per Year

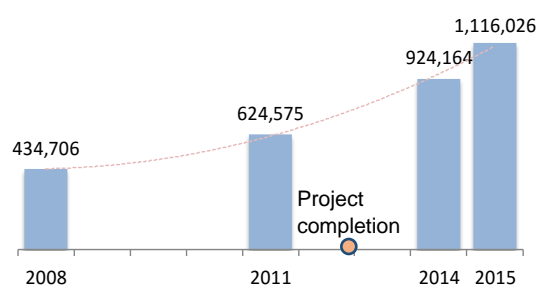


Figure 3 Number of Laboratory Tests per Year

Source: Same as Table 2

The number of operations and major operations per year increased as shown in Table 2 and Figure 2. Operations, including plastic surgery, neuro surgery, genitourinary surgery, oro-maxillary facial surgery and others, which were not available in the hospital at the time of project planning, became available after the project; as a result, patients in the Northern area did not need to visit hospitals in Colombo for these operations. The number of laboratory tests per year also increased as shown in Table 2 and Figure 3. Laboratory tests, such as histopathology tests, serum protein electrophoresis tests and others, which were not available in the hospital at

the time of project planning, became available after the project. Therefore, the hospital does not need to send samples for these tests to hospitals in Colombo, and obtained results for these tests quicker. In addition to the effect of this project, the appointment of consultant medical officers for several specializations to the hospital contributed to the above-mentioned improvement in medical services.

An increase in the number of outpatients was also identified as one of the effect indicators of the project; however, it has not been increased compared with the figure of baseline year. (Table 2). This was because lower category medical facilities in Jaffna District started functioning again after the conflict; and therefore patients were able to receive outpatient department services in these facilities (see footnote 5). This is a reasonable movement. This project did not conduct any activities to improving the facilities of the outpatient department of the hospital. Therefore, the number of outpatients and effect of the project did not have much relationship, and it can be said that this indicator was not appropriate as an indicator of this project.

One of the effect indicators of the project was a decrease in the number of patients transferred to tertiary medical care facilities in Colombo metropolitan area. However, this figure was increasing after the end of the conflict (Table 2). At the time of project planning, the national highway that connected Jaffna and Colombo was closed, and the hospital transferred a maximum of fourteen patients once a week using a small plane provided by the International Red Cross. In this way, there was a limit to the number of patients that could be transferred at the time of project planning. The above-mentioned national highway was opened after the end of the conflict, and the hospital could transfer any patients who needed more specialized and higher levels of treatment to hospitals in Colombo metropolitan area using fourteen ambulances owned by the hospital. This is the background to the increase in the number of patients transferred. An external factor - a change in the road environment - had a significant impact on the number of patients transferred, which did not have a close relationship with the effect of this project.

3.3.2 Qualitative Effects

Improved quality of clinical training at the Medical Faculty of Jaffna University and promotion of peacebuilding were expected as other impacts of the project at the time of project planning.

During an interview by the external evaluator, one of the lecturers of the Medical Faculty of the Jaffna University mentioned as an example of improvement in quality of clinical education that medical students can now learn to carry out more kinds of operations, as operations that were not available at the hospital at the time of project planning have become available after the project.

A beneficiary survey to the general public who were using this hospital was conducted as part

of the ex-post evaluation in addition to the earlier-mentioned beneficiary survey to medical staff.²⁰ As a result of the survey, it was found that 71 per cent of the respondents, the users of the hospital, knew that the project was implemented through assistance from the Japanese government (Figure 4).²¹ Then, the survey team asked those who know this project “Do you think this project had created any impact as it was implemented soon after the end of the conflict?”, and 91 per cent of them replied “Yes, there was an impact” (Figure 5). Most of them mentioned “Sense of safety and security was created among the local community” and “encouragement for rehabilitation and reconstruction effort of society” as the kind of impact. According to these results, it can be said that this project was effective as an assistance for reconstruction after the end of the conflict.

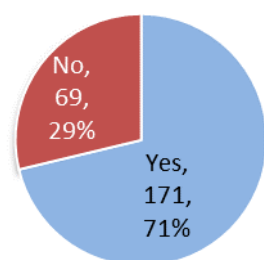


Figure 4 Do you know that this project was implemented through assistance from the Japanese government? (N=240)

Source: Beneficiary Survey

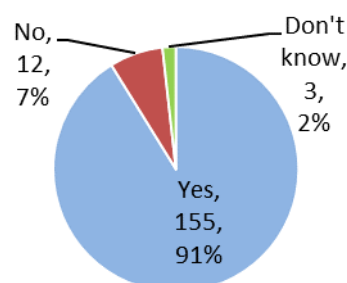


Figure 5 Do you think this project had created any impact as it was implemented soon after the end of the conflict? (N=170)

3.4 Impact

3.4.1 Intended Impacts

The ex-post evaluation team asked the 170 users of the hospital who were aware that this project had been implemented through assistance from the Japanese Government, out of total 240 people who were interviewed in the beneficiary survey, whether they think medical services

²⁰ The beneficiary survey to the users of the hospital was conducted in November 2015. Face-to-face structural interviews were conducted with 240 local people who were at the six major facilities of the hospital - 40 each at the clinics of consultant medical officers, the outpatient department, the inpatient wards, the ICU, the central laboratory, and the central facilities for diagnostics imaging. Those who were using or visiting the facilities at the day of interview, such as patients, attendants of patients and visitors, were interviewed in the survey. This was an intercept type of interview with judgement sampling method, where those who are at the interview site are interviewed, because a list of the users of these facilities was not available. It was considered at the time of sampling the sample was 50% male and 50% female, and that age distribution of the samples is proportionate to the age distribution of the adult population in Jaffna district.

²¹ The users knew this project was implemented through assistance from the Japanese government as there were sign plates at the entrance of the building of Central Functions explaining that the facility was donated by the Japanese government; and there were reports in newspapers and on TV at the time of project completion that explained about JICA assistance to the project.

of the Jaffna Teaching Hospital had been improved as a result of this project. 98 per cent of the respondents answered “Yes, improved” (Figure 6). Similarly, the evaluation team asked them if they think the improvement in medical services at the hospital and this project had contributed to an improvement in their health and that of their family members. To this question, 98 per cent answered “Yes, improved” (Figure 7). The objective of the project was to improve health and medical services of the hospital, thereby contributing to improvement of health of the local residents. The above-mentioned result shows that most of the local residents consider that this objective has been met.

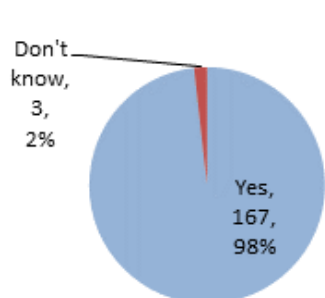


Figure 6 Do you think medical services of the Jaffna Teaching Hospital were improved as a result of this project? (N=170)

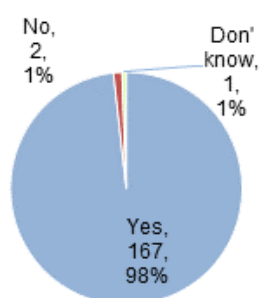


Figure 7 Do you think the improvement in medical services of the hospital and this project contributed to improve your health and that of your family members? (N=170)

Source: Beneficiary Survey

3.4.2. Other Impacts

There was no impact to the natural environment by the project, and no involuntary resettlement or land acquisition due to the project.

This project has largely achieved its objectives. Therefore, effectiveness and impact of the project are high.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

The organizational structure of Jaffna Teaching Hospital has been expanding. Quality Management Unit and Cost Accounting Unit were added to the organization recently. Treatment units, plastic surgery, gastroenterology, pediatric surgery, and vitreoretinal surgery units have recently been established.

The number of staff at the hospital was increasing due to appointment of consultants and medical officers after the end of the conflict (Figure 8). However, there has been a shortage of

nursing staff in this hospital. The shortage has not been solved yet, although the number of nursing staff has increased recently. The Planning Director of the hospital explained that the hospital needs around 800 nursing staff, considering there are 1,330 beds in the hospital; however there was currently only 500.²² It was observed that part of the equipment in the ICUs and the Central Facilities of Diagnostics Imaging, which were provided by the project, was not utilized fully due to the shortage of nursing staff at the time of the ex-post evaluation.²³ The hospital had requested and negotiated with the Ministry of Health about the need to increase nursing staff. The Ministry was working on solving the shortage as a priority issue.²⁴

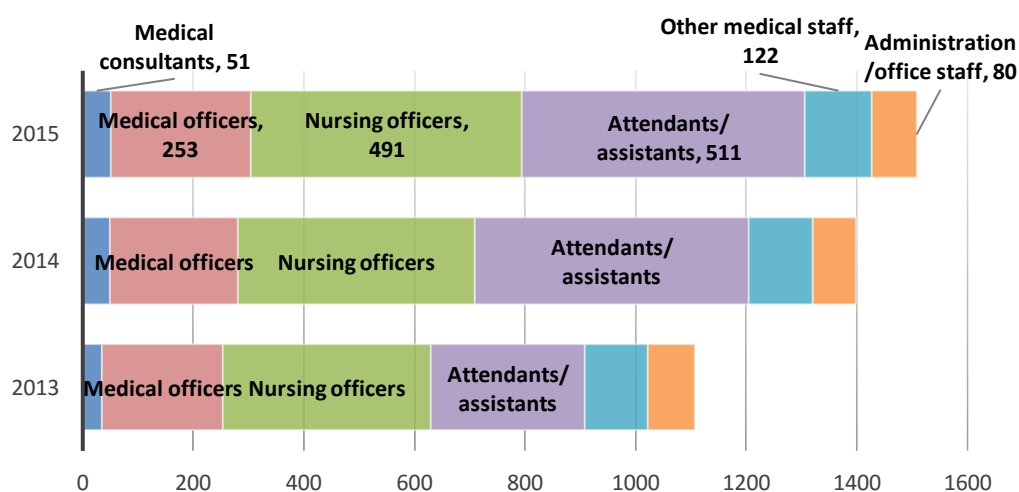


Figure 8 Number of Staff at Jaffna Teaching Hospital in Recent Years

Source: Document provided by Jaffna Teaching Hospital

The institutional arrangement for maintenance of the facility of the hospital is in accordance with the original plan. Roles and responsibility of the parties involved in maintenance is clear. As for the maintenance of the equipment and facilities provided by the project, daily maintenance of air conditioners, generators and an elevator are conducted by the Maintenance

²² Source: Information provided by Jaffna Teaching Hospital (The hospital made a calculation according to the guideline of norms for number of nursing staff for government hospitals).

²³ For an example, 22 beds and related equipment, which were provided by the project, were installed and ready to use in ICU; however only 14 out of 22 beds can be used at a time because the nursing staff working at the ICU are able to take care of a maximum of 14 patients. Similarly, there are two endoscopy systems installed in the Endoscopy Unit; however, they cannot be used at the same time because there are not enough nursing staff working in the unit.

²⁴ Shortage of nursing staff has been an enduring problem of the health sector of the country. There are especially serious shortages in the least developed areas of the country, such as northern and eastern areas and estate areas. One of the reasons for the shortage of nursing staff in these areas is that there are less people who meet the entry qualification of the nursing schools, which is pass marks for the A-level examinations (entrance exams to be qualified for entering universities) in science and mathematics stream, due to unsatisfactory high school education in the stream in these areas. Senior management of Jaffna Teaching Hospital also mentioned as a cause of the shortage that there was a reluctance to become nursing staff, as the profession has a negative social image - that it is hard work but not adequately paid.

Department of the hospital. Central Engineering Consultancy Bureau, CECB, which has resident staff at the hospital, is undertaking a contract from the hospital for repairing, renovation, demolition and new construction of buildings in the hospital. The hospital contracts out to a private company maintenance work of the water purification system, which is supplying water to the building of Central Functions. Production and maintenance of furniture and simple medical tools is conducted by the maintenance section at a workshop attached to the Orthopedics Unit.

Maintenance of medical equipment, including simple repairs, is undertaken by the branch of Biomedical Engineering Services (BES) at the Jaffna Teaching Hospital.²⁵ The BES Jaffna branch sends the equipment to the BES head office if the branch cannot do the repairs. BES signs an annual maintenance contract with the agents of the relevant manufacturers for medical equipment that requires maintenance by manufacturers.

As explained above, the institutional arrangements for operation and maintenance of the hospital is appropriate in general, and is facilitating sustainability of the effect of this project.

3.5.2 Technical Aspects of Operation and Maintenance

At the time of the project planning, it was mentioned that the number of staff and technical capacity of BES Jaffna branch, which was in charge of the maintenance of the medical equipment of the hospital, was not adequate. For example, the way the BES branch conducted maintenance was reactive, not preventive - reacting only after problems were found with the equipment.²⁶ To facilitate solving this issue, a software component of the project, including provision of advice for computerizing the inventory of equipment and formats for works, and introduction of the concept of preventive maintenance for medical equipment to avoid problems before they happen, was carried out by a Japanese expert for the benefit of the Jaffna branch of BES.

At the time of project planning, there were two technical staff²⁷ and three support staff in BES Jaffna branch. This staff allocation continued even after completion of the project, until one more technical staff was allocated to the branch in December 2015.²⁸ The Jaffna branch sent their support staff one by one to the in-service training program conducted by BES head office for a period of around six months. The branch also conducted on-the-job training.²⁹ The head of the branch explained that technical knowledge and skill level of staff at the branch was

²⁵ BES is one of the institutions under the Ministry of Health and in charge of maintenance of medical equipment at public hospitals. The head office is in Colombo and there are branches all over the country.

²⁶ Report of the Implementation Review Study of this project.

²⁷ Two technical staff were a technical officer and a biomedical assistant.

²⁸ One technical officer was recently allocated.

²⁹ There is no university or technical college to teach technical knowledge (biomedical engineering) for maintenance of medical equipment in Sri Lanka. Therefore, BES are enhancing their capacity by providing training to existing staff who have skills in mechanical and electric fields; they send existing staff who have practical experience to the in-service training.

improving as a result of the increased number of technical staff and participation to the training and OJT.

According to senior management of the hospital, medical staff who are working in the treatment units have adequate knowledge and technical skills necessary for operation of the medical equipment, including those provided by the project. Accordingly, there was no problem observed at the time of the ex-post evaluation with the status of operation and maintenance of the medical equipment provided by the project.

Computerization of the inventory and formats, concept of preventive maintenance, organizing workspace using the 5S concept, and others were advised to be introduced to the branch in the software component of the project, with the aim of improving the maintenance system for medical equipment. BES Jaffna branch was not able to implement the above-mentioned advice as they were busy carrying out their tasks with a limited number of staff. The branch started introducing preventive maintenance work after December 2015, when an additional technical staff member was added to the branch. At the time of the ex-post evaluation, they were working on preparing an inventory, master files, routine checklists, and job cards for repair of the equipment provided by the project. There will be no particular technical problem for them to carry out this initiative, because the Director of the hospital has a good understanding about the importance of preventive maintenance and concept of 5S, and the technical staff member in charge of introduction of preventive maintenance in the BES Jaffna Branch has experience in the same tasks from her previous job assignment.

3.5.3 Financial Aspects of Operation and Maintenance

Jaffna Teaching Hospital operates with a budget provided by the Ministry of Health. As Figure 9 shows, budget allocation and actual expenditure of the hospital were increasing year by year. Status of utilization of the budget allocation was also satisfactory. Actual expenditure of the hospital for the year 2015³⁰ was LKR 1.8 billion.³¹ Figure 9 shows budget allocation and actual expenditure of the hospital for the last four years. Capital budget/ expenditure was used for new construction of buildings and facilities and new procurement of equipment. Eighty per cent of the current budget/ expenditure was personnel cost, and the remainder was cost of purchasing medicine and medical consumables, maintenance of equipment, and others.

³⁰ Annual budget of Sri Lankan government institutions starts from January and ends in December.

³¹ Around JPY 1.5462 billion when converted at the exchange rate of 1LKR = 0.859 JPY in December, 2015, JICA exchange rate in the JICA website.

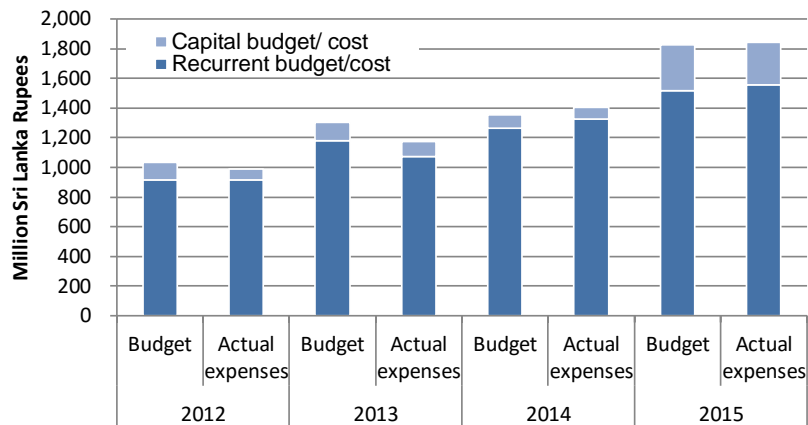


Figure 9 Budget and Expenses of Jaffna Teaching Hospital in Recent Years

Source: Document provided by Jaffna Teaching Hospital

The hospital is taking steps for renewal of medical equipment and new construction of buildings for medical facilities, with an aim of providing better health services to the people. As for the Central Functions, medical equipment, such as a blood analyzer and others, were procured and wash basins for test tubes were installed additionally to the central laboratory after the project was completed. The hospital has a plan to commence expansion of the central laboratory (see details in the next section), construction of new buildings for department of obstetrics and gynecology, and cardio surgery, improvement of laundry facilities and procurement of some items of medical equipment in 2016. Special budget allocation of LKR one billion³² was provided by the Ministry of Health to the hospital in 2016 for the purpose of implementing the above-mentioned plan.

As mentioned above, necessary budget was allocated to the hospital for sustaining and expanding the effect of the project, as well as further expanding functions of the hospital. There has been no financial problem with regard to the operation and maintenance of the facility and equipment provided by the project.

Necessary budget allocation was provided to the Ministry of Health from the Ministry of Finance. The budget and expenditure of the ministry has been increasing. There was 17 per cent of increase to the budget in 2016 when compared to the previous year. There is also no problem with the budget disbursement and utilization.

As explained above, the financial status of the hospital and that of the ministry is satisfactory.

3.5.4 Current Status of Operation and Maintenance

The ex-post evaluation team studied the current status of operation and maintenance of the facilities and equipment provided by the project, and found that they were utilized in effective ways;

³² Around JPY 859 million when converted at the exchange rate of 1LKR = 0.859 JPY in December, 2015, JICA exchange rate in the JICA website.

there was no problem in general for maintenance.³³

The hospital is preparing to transfer the CT scan, a fluoroscopy and a ceiling-mounted X-ray facility from the old building to the Central Functions, which was built by the project, at the time of the ex-post evaluation. After implementation of the transfer, all the functions of diagnostic images will be centralized, and further improvement of work efficiency and services of the unit is expected.

The hospital was expanding the function of the central laboratory after the completion of the project by procuring test equipment with funds of the ministry and WHO (World Health Organization) according to the needs. As a result, the amount of equipment in the laboratory, as well as number of staff and tests they are handling, was increased. Consequently, the space of the laboratory has become inadequate. The laboratory testing unit has five sections, including hematology, chemical pathology, micro pathology, histopathology and night lab. Histopathology and night lab were still in the old building that was used before the project.³⁴ Currently, handing and taking over blood samples, and monitoring of the work progress, cannot be conducted efficiently because the sections of the laboratory are in two different buildings. The working environment in the old building needs to be improved as the rooms are dark with no air conditioning. To solve this problem, the hospital proposed an expansion of the space of the central laboratory to the Ministry of Health, by way of constructing another storey to the building of the Central Function.³⁵ The Ministry of Health allocated LKR 120 million³⁶ of budget to the hospital in 2016 for implementing this proposal. The hospital has already developed architectural drawings and cost estimates for the construction, and was planning to start the work very soon.

It was found as a result of the beneficiary survey of medical staff that many of them thought that the number of changing and rest rooms in the Central Functions was not enough, and that the space in these rooms was not adequate. The size of these rooms became inadequate as a result of the increase in the number of staff. A common practice in this area is that medical officers, nursing staff and hospital assistants have their own separate changing rooms. At the time of the ex-post evaluation, the nursing staff of the hospital had to work continuously for two shifts, once a week, due to staff shortages; usually they work for 8 hours by taking turns in 3 shifts for a day. It was due to having to work for longer hours that they would like to have more rest rooms.³⁷ Senior

³³ As mentioned in footnote 23, equipment provided by the project for ICU and endoscopy room was not fully utilized due to shortage of nursing staff. However, the equipment was maintained well and can be used as soon as the nursing staff is increased.

³⁴ Histopathology laboratory was not included in the original plan of the project, as there was no such specialization in the hospital at the time the Basic Design Study was conducted in 2005. There was a request from the hospital at the time of the Implementation Review Study conducted in 2010 to include a histopathology laboratory to the building of Central Functions, as other laboratories were in the building. The request was considered by JICA, however, it was not realized probably because the floor area allocated to the project was limited.

³⁵ The building of Central Functions, constructed by the project, has three storeys. It was designed to be able to be expanded by one more storey if needed in future. This was supposed to be for classrooms of medical students, for example, at the time of project planning. The expansion will now be carried out for setting up rooms for the laboratory, which is more urgent and important.

³⁶ Around JPY103.08 million when converted at the exchange rate of 1LKR = 0.859 JPY in December, 2015, JICA exchange rate in the JICA website.

³⁷ One rest room was constructed by the project for ICU nursing staff. After completion of the project, there was an opinion that separate rest rooms were needed for female and male nursing staff. Therefore, another rest room was

management of the ministry and the hospital understood these needs and intend to consider increasing the facility in future according to the needs.

In this manner, the current status of operation and maintenance was satisfactory in general. It is also expected that the hospital will utilize the facilities and equipment provided by the project more in future.

No major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore, sustainability of the project effects is high.

The ex-post evaluation paved the way for further utilization of the facilities and equipment provided by the project

It was found that several facilities and equipment provided by the project were not utilized for the original purpose at the time the external evaluator first visited the hospital during the course of the ex-post evaluation. For examples, the isolation ICU rooms for patients with infectious diseases were used as rest rooms for nursing staff. One of the endoscopy rooms was used as a store room. As soon as the external evaluator explained about these issues to the senior management of the hospital, they recognized the need for improvement and took an initiative to join the inspection of each unit of the Central Functions together with the external evaluator. They also studied the original drawings and plans of the project, and exchanged ideas actively about the need and modality of improvement.

Thereafter, they engaged in activities for improvement with the target of completing them by the time the external evaluator visited the hospital again. As a result the external evaluator, on her second visit, observed that most of the issues had been solved during the four months since her first visit. For examples, the isolation rooms of ICU and endoscopy room were used for their original purpose. For providing a better environment with respect to infection control, a steel shelf with glass covers was installed instead of an old wooden shelf in the operating theater complex; and a glass partition was installed between the washing space for medical tubes and the space for preparation of liquid food in ICU (see the photo). A technical officer was newly allocated to the BES, a female radiology technician was made available for operating mammography, an arrangement was



A glass partition was installed between the washing space for medical tubes and the space for preparation of liquid food, with an aim of improving hygiene in ICU

arranged by converting a room from another purpose. This arrangement, too, was needed because of the long working hours and common practice of the area.

made for installing excess anesthetic gas scavenging systems in the operating theaters, and repair of a UPS (uninterrupted power supply system) in the operating theater was completed. The workshop of the BES was neatly arranged according to the 5S concept.

In this manner, the ex-post evaluation paved the way for the hospital for further utilizing facilities and equipment provided by the project.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This Project was implemented to improve the health and medical services of the Jaffna Teaching Hospital in Sri Lanka by constructing a building for Central Functions and providing facilities for a central operating theater complex and others, thereby contributing to improvement of the health of local residents.

This project has been highly relevant to both the development plan of Sri Lanka, which aims to provide people in the country with access to medical services of high quality and using the latest technology; and to the development needs of the country, by improving the medical services of Jaffna Teaching Hospital through upgrading its facilities, which were decrepit and seriously damaged. The project was also highly relevant to Japan's ODA policy, which placed importance on the prompt implementation of humanitarian and reconstruction assistance at the time the conflict in the country ended. The plan of the project was highly appropriate as a kind of assistance that was implemented in a conflict-affected country/area. Therefore, its relevance is high.

Construction of the building and procurement of equipment was conducted as planned; and the project cost was within the plan. However, the project period exceeded the plan. Therefore, the efficiency of the project is fair.

After this project, the number of operations, major operations, and laboratory tests at the hospital increased. More types of operations and laboratory tests became available at the hospital. Medical staff at the hospital appreciated that the efficiency of work and the working environment was improved because of the project. The community of the area also appreciated that the project contributed to improvement of the medical services of the hospital and the health of people in the area. They felt that the project provided them with a sense of safety and encouragement at a time when they were making an effort to rehabilitate and reconstruct their lives. This project has largely achieved its objectives. Therefore, the effectiveness and impact of the project is high.

No major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore, sustainability of the project effects is high.

In light of the above, this project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendation to the Implementing Agency

Introduction of a system for preventive maintenance, to prevent failure and problems with medical equipment from happening, is one of the important tasks for the hospital in order to utilize the equipment provided by the project for a longer period. BES of Jaffna Teaching Hospital has commenced activities for introducing a system for preventive maintenance, such as organizing several forms and files. However, it seems that a considerable volume of work needs to be conducted for the actual implementation of the system. Close cooperation with other units and departments is also needed. Therefore, it is recommended that the senior management of the hospital set target dates to introduce the series of tasks, and conduct progress monitoring, so that a preventive maintenance system will be definitely introduced and implemented at an early date.

4.2.2 Recommendation to JICA

It is advisable for JICA to keep engaging in monitoring progress of improvement status of the above-mentioned recommendation by obtaining reports from the Ministry of Health from time to time or visiting the hospital, for examples.

4.3 Lesson Learned

- Designing facilities with due consideration of future needs for expansion and change in medical services

This project was implemented during a changing environment for the hospital just after the end of the conflict, to fulfill the needs of medical services. At the time of the ex-post evaluation it was found that the medical services at the hospital had been expanded as planned, as a result of the project and the appointment of consultant medical officers and additional procurement of medical equipment, which were conducted by the Ministry of Health. It was, however, found that the space available in the building of Central Functions, which was built in the project, became insufficient three years after its completion, as a result of the increase in medical staff and content of services. The hospital is going to expand the room for Central Laboratory by adding one more storey on the roof of the building this year, to solve this problem.

When a rapid expansion of medical services is expected in a changing environment, as happened with this project, it is recommended to design the facilities with due consideration of future needs for expansion, however, without making it over-designed. For example, it is useful to design the building so that one more storey can be added on the roof of the building if needed, similar to the arrangement made in this project. To sustain and expand project effects it is also useful to have spare rooms and multi-purpose rooms in the building, so that the hospital will be able to accommodate additional medical equipment and any increase in staff after the project completion.