

**Ex-Post Project Evaluation 2012: Package I-5  
(Indonesia, Uzbekistan, Oceania Region)**

**November 2013**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

**Ernst & Young Sustainability Co., Ltd.**

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## Preface

Ex-post evaluation of ODA projects has been in place since 1975 and since then the coverage of evaluation has expanded. Japan's ODA charter revised in 2003 shows Japan's commitment to ODA evaluation, clearly stating under the section "Enhancement of Evaluation" that in order to measure, analyze and objectively evaluate the outcome of ODA, third-party evaluations conducted by experts will be enhanced.

This volume shows the results of the ex-post evaluation of ODA Loan projects that were mainly completed in fiscal year 2010, and Technical Cooperation projects and Grant Aid projects, most of which project cost exceeds 1 billion JPY, that were mainly completed in fiscal year 2009. The ex-post evaluation was entrusted to external evaluators to ensure objective analysis of the projects' effects and to draw lessons and recommendations to be utilized in similar projects.

The lessons and recommendations drawn from these evaluations will be shared with JICA's stakeholders in order to improve the quality of ODA projects.

Lastly, deep appreciation is given to those who have cooperated and supported the creation of this volume of evaluations.

November 2013

Toshitsugu Uesawa

Vice President

Japan International Cooperation Agency (JICA)

## Disclaimer

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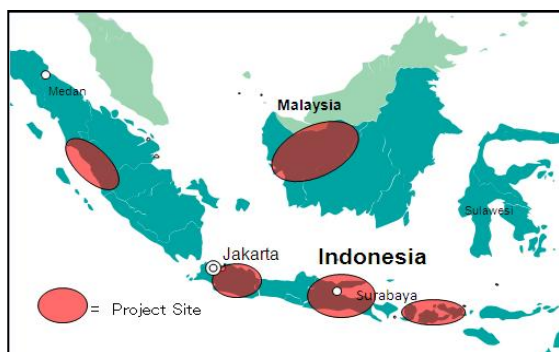
Ex-Post Evaluation of Japanese Technical Cooperation Project  
“Project for Ensuring Maternal and Child Health Service with MCH HB Phase II”

External Evaluator: Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

## 0. Summary

This project was conducted to integrate the Maternal and Child Health (hereinafter referred to as “MCH”) service by utilizing the MCH Hand Book (hereinafter referred to as “HB”) and strengthening a system for sustaining the MCH service through the MCH HB in Indonesia. The project direction was consistent with Indonesian policies and strategies, which have emphasized improving the MCH services, the development needs and Japanese assistance policy, hence the relevance is high. Furthermore, the MCH HB has functioned as an integrated tool for health management in the process of raising children, hence pregnant women who utilize the MCH HB have steadily increased. On the other hand, the expansion of use of the MCH HB among mothers with children under five years old has been limited and challenge still remains in terms of role sharing among the central and local Governments (hereinafter referred to as “LGs”). Therefore the effectiveness and impact is fair when considering the purpose to establish a system to continue the service by utilizing the MCH HB. The efficiency of this project is high since both project cost and period are within the plan. Its sustainability is considered fair, because there is some room to improve in the awareness of Health Volunteers who support the users of the MCH HB and in the operation of the monitoring system, and furthermore there is a concern for securing the printing and distributing budget for the MCH HB in the future, despite the fact that the system to maintain the use of the MCH HB by mothers and medical workers has been developed. In light of the above, this project is evaluated as satisfactory.

## 1. Project Description



(Project Location)



(Mothers and Child who come for health check by using the MCH HB at Posyandu)

## 1.1 Background

The general condition of medical health in Indonesia at the time of the project planning had improved significantly over the past 30 years. The condition of MCH had also improved likewise. Nevertheless, Infant Mortality Rate (hereinafter referred to as “IMR”) and Maternal Mortality Rate (hereinafter referred to as “MMR”) show seriousness of the medical health condition in comparison with those neighboring countries. Such a high figure of MMR can be attributed to three delays, namely in 1) detection of general danger signs to pregnancies, 2) transportation to medical facilities, and 3) the treatment at medical facilities, along with the lack of basic knowledge about pregnancy and delivery by mothers and their family members.

In order to improve the above-mentioned conditions, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) had cooperated with Indonesia with emphasis on MCH in medical health cooperation, and the MCH HB was developed and experimented. Thus, the cooperation to promote the MCH HB for improving MCH had been conducted as shown in table 1. During this period, the MCH HB was introduced as a tool to improve MCH conditions through health awareness and behavior changes. As a result, the MCH HB was disseminated to targeted provinces and various regions of Indonesia. In 2004, the Ministerial Decree on the MCH HB was issued and a de-concentration special fund by the Ministry of Health (hereinafter referred to as “MOH”) was placed in 2006. Following this situation, the expansion of the MCH HB made steady progress.

On the other hand, in order to achieve the broader use of the MCH HB among mothers and healthcare personals, challenges such as developing better utilization of the MCH HB, institutionalizing of the HB into relevant medical health systems, mainstreaming the HB as an integrating tool for MCH services and development of orientation to healthcare personnel remained. In order to grapple with the above-mentioned challenges, the technical cooperation project was launched and the project aimed to improve the use of the MCH HB functions in a qualitative and quantitative manner as a tool to integrate MCH services and a system to sustain MCH services with the MCH HB being strengthened.

Table1 JICA Cooperation for the MCH HB and the Dissemination of MCH HB

1993-1994 Phase 0	“Family Planning and MCH” (extended cooperation): Commenced the development and experiment at Salatiga City of Central Java Province as a pilot area.
1994-1996	Expanded the MCH HB within West Java Province
1997	Expanded the MCH HB to five provinces
1998-2003 Phase I	“Ensuring the Quality of MCH Services through MCH HB”: Expanded the MCH HB quantitatively. Covered area expanded to 23 provinces in 2003.
2004	Ministerial Decree on the MCH HB
2006-2009 Phase 2 (This project)	“Ensuring MCH services with MCH HB”: Ensuring quality improvement and sustainability of the MCH HB

## 1.2 Project Outline

Overall Goal	1. MCH services with MCH HB became available at every health facility. 2. All pregnant women and children under five years old have their own health record.	
Project Objective	MCH HB functions as a tool to integrate MCH services and a system to sustain MCH services with MCH HB is strengthened.	
Output(s)	Output 1	Accessibility to MCH HB by community people is increased.
	Output 2	The system of orientation on MCH HB for relevant healthcare personnel is strengthened.
	Output 3	The system of monitoring and reporting on MCH HB is strengthened.
	Output 4	Models for better utilization of MCH HB are developed.
	Output 5	Results of survey and evaluation of MCH HB on improvement of MCH are reflected in MOH's policy making and implementation process.
	Output 6	The capacity of MOH and relevant LGs to effectively share the experiences of improving MCH services with MCH HB is strengthened.
Inputs	<p>&lt; Japanese Side &gt;</p> <ol style="list-style-type: none"> <li>1) Experts: 5 long-term experts and 8 short-term experts</li> <li>2) Counterpart training in Japan: 35 participants</li> <li>3) Equipment: 3.71 million yen</li> <li>4) Local cost: 96.8 million yen</li> </ol> <p>&lt; Indonesian Side &gt;</p> <ol style="list-style-type: none"> <li>1) Counterparts: 14 persons</li> <li>2) Counterparts expenses</li> <li>3) Others (Project office, Utilities)</li> </ol>	
Total Cost	290 million yen	
Period of Cooperation	October, 2006 – September, 2009	
Implementing Agency	Ministry of Health (MOH)	
Related Projects	“Family Planning and MCH”(1989-1994), “Ensuring the Quality of MCH Services through MCH HB” (1998-2003), “International Training on Strengthening District Health Planning in the era of Decentralization for Improvement of the Health Status of Children and Mothers” (2007-2012)	

## 1.3 Outline of the Terminal Evaluation

### 1.3.1 Achievement of Overall Goal

Regarding the overall goal, 1) MCH services with MCH HB became available at every health facility, and 2) All pregnant women and children under five years old have their own health record, the terminal evaluation judged that it was too early to state

conclusively on the progress of the overall goal, because sufficient data to scale the achievement level was not available and the achievement of the overall goal is expected to appear several years after the end of the project.

### 1.3.2 Achievement of Project Objective

With regard to the second indicator for the project purpose, models for better utilization of the MCH HB had been prepared as the project output. On the other hand, with regard to the first indicator, the terminal evaluation report indicated that the project would not likely reach the goal of 80% of pregnant women antenatal services using the MCH HB by the end of the project since it was only 58%<sup>1</sup> at the time of terminal evaluation.

### 1.3.3 Recommendations

At the terminal evaluation, four recommendations were made as follows: 1) Secure the budget for printing and distribution of the MCH HB, 2) Strengthen the monitoring system for the MCH HB, 3) Strengthen the collaboration and partnership with related institutions, 4) Maintain the institutional memory related to the MCH HB.

In response to each recommendation, the optimal balanced cost sharing between the national (MOH) and region (provincial and district/city offices)<sup>2</sup> through 1), strengthening the monitoring system learning from the experience of difficulties in getting the data at terminal evaluation 2), collaboration within the health sector and partnership with other ministries for the utilization of the MCH HB as an effective tool 3) and developing an institutional memory by sharing and transferring the knowledge and experience of predecessors in Indonesia where frequent changes of personnel has been made, were introduced 4).

#### **【Organization Structure of Health service system in Indonesia】**

In Indonesia, the Provincial Health Offices (hereinafter referred to as “PHO”) at provincial level, and District/City Health Offices (hereinafter referred to as D/CHO) at the district or city level were located depending on LG level. (Currently, there are 33 provinces in Indonesia and 399 districts and 98 cities under provinces. (Basically cities are located in urban area and districts are located outside of urban areas.)) Each village is placed under districts/cities, and have Puskesmas, a health center for medical care activities and preventive health hygiene. Each village has a Posyandu, health clinic, where Kadar, who are elected as Volunteers from each village, support the activities mainly for weight check of infants and child, family planning, classes for pregnant women, etc. (An excerpt from JICA “Professional Challenge Series No.6)

<sup>1</sup> In reality, it indicates the distribution rate of MCH HB, not the ratio of pregnant mothers who receive antenatal services by using the MCH HB. For details, please refer to “3.2.1.2 Achievement of Project Objectives”.

<sup>2</sup> Refer to the “Organization Structure of Health service system in Indonesia” in the box for the details on the organization Structure of Health service system in Indonesia.

## **2. Outline of the Evaluation Study**

### **2.1 External Evaluator**

Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

### **2.2 Duration of Evaluation Study**

Duration of the Study: September, 2012 –November, 2013

Duration of the Field Study: January 6 - 12 and March 12 – April 9, 2013

### **2.3 Constraints during the Evaluation Study**

#### **【Limitation of availability of necessary data】**

In Indonesia where decentralization has proceeded, available data is generally limited. Reporting from LGs to MOH are required but not compulsory, therefore all the necessary data for the evaluation was not available at MOH. Under such circumstances, regarding the data at LG level which was not available at the central level, analysis was made based on the data which the ex-post evaluation mission collected through site visits. In addition to several sections of MOH, LGs as well as many medical institutions were involved in the project. In this ex-post evaluation, it was not realistic to visit all related institutions due to the time limitation, needed information was collected at visited LGs or medical institutions and through the main actors of the project, Directorate of Child Health<sup>3</sup> in MOH.

## **3. Results of the Evaluation (Overall Rating: B<sup>4</sup>)**

### **3.1 Relevance (Rating: ③<sup>5</sup>)**

#### **3.1.1 Relevance to the Development Plan of Indonesia**

Mid-term Development Plan (RPJM 2005-2009), a development policy in place when planning this project, placed the improvement of MCH, part of “Welfare of people,” as one of the five priority goals since it was considered as an area to contribute to quality health services. Accordingly, the planned rate of IMR or MMR were set quantitatively as indicators to show the improvement on undernourished children under five years old. More importantly, “Healthy Indonesia 2010”, which was published in 1999 by MOH as a mid-term policy target of health care, also placed the improvement of reproductive health as a priority area. In addition, MOH issued the “Ministerial Decree on the MCH HB” in 2004 since they recognized the efficacy of the MCH HB. This Decree defined the MCH

<sup>3</sup> Directorate of Child Health, one of the departments of Directorate of Nutrition, Child and Maternal Health in the MOH is the responsible entity of supplying the MCH HB.

<sup>4</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>5</sup> ③: High, ②: Fair, ①: Low



HB as the only tool for maintaining the health record and informed decision making to utilize the MCH HB on MCH services. In addition, the printing budget for the MCH HB was allocated in 2006 in the de-concentration special fund by MOH. These decrees and special budget allocation for the MCH HB were valid at the time of the project completion.

The project was therefore consistent with Indonesia’s policy for improving the MCH services; both at the time of the ex-ante evaluation and the project completion.

### 3.1.2 Relevance with the Development Needs of Indonesia

The condition of MCH service in Indonesia had improved significantly over the past 30 years. For example, IMR improved from 145 per 1,000 live birth in 1967 to 53 in 2000 and 35 in 2003. Though MMR had also improved, both IMR and MMR were still higher than those of other ASEAN countries as shown in table 2 and table 3. Consequently, the improvement in MCH remained to be an imminent issue to be resolved. At the project completion, IMR and MMR were still higher than those of neighboring countries. Accordingly, the needs to improve the MCH service remained high at the time of the project completion.

Table 2 Under Five Infant Mortality Rate (per 1,000 live birth)

	Indonesia	Malaysia	Philippine
2003 (At the time of the project planning)	35	8	29
2009 (At the time of the project completion)	34	8	25

Source: Project documents and documents provided by MOH

Table 3 Maternal Mortality Rate (per 100,000 live birth)

	Indonesia	Malaysia	Vietnam	Philippine
2001 (At the time of the project planning)	307	39	95	204
2008 (At the time of the project completion)	228	27.3	69	162

Source: Project documents and documents provided by MOH

Under these serious circumstances, JICA has cooperated with the development, experimentation and utilization of the MCH HB. As a result, quantitative expansion of the MCH HB has made steady progress. On the other hand, challenges remained in terms of better utilization of the MCH HB as well as stable procurement and delivery of larger numbers of the MCH HB. It was also necessary to develop the utilization model of the MCH HB and facilitate LGs to promote the procurement and delivery of the MCH HB. Afterwards, although at the project completion qualitative expansion of the MCH HB had been made through the projects, the needs to continue activities to promote the effective utilization of the MCH HB still remains in Indonesia which is composed of a number of islands.

### 3.1.3 Relevance to Japan's ODA Policy

In the Japanese Government's Country Assistance Policies for Indonesia at the time of the project planning, improving the basic health and medical services was raised as a priority area to deal with high IMR and MMR. Country specific programs for Indonesia also included the health and medical service in "poverty reduction" which was a priority area, "social development" which was categorized as a development objective, as well as in the "Civil Minimum Millennium Development Goals (hereinafter referred to as MDGs)" for cooperative programs. Furthermore, MCH was placed as one of the priority issues for health and medical system development, regional medical service improvement and measures for infection diseases in assistance strategies of health and the medical sector. Hence, the Project, focusing on improvement of MCH service with utilization of the MCH HB was consistent with Japanese ODA policy.

As mentioned above, this project has been highly relevant with the Indonesia's development plan, development needs, as well as Japan's ODA policy, therefore its relevance is high.

## 3.2 Effectiveness and Impact<sup>6</sup> (Rating: ②)

### 3.2.1 Effectiveness<sup>7</sup>

#### 3.2.1.1 Project Output

Output 1 Accessibility to MCH HB by community people is increased.

*[Indicator 1] MCH HB are printed to cover 75% of the estimated pregnant women by relevant stakeholders such as central and LGs and professional organization by September 2009.*

*[Indicator 2] Distribution of MCH HB at hospitals and private clinics is institutionalized.*

*[Indicator 3] Number of LGs institutionalizes securing the budget to supply MCH HB by LG budget (APBD) is increased by 2009.*

*[Indicator 4] Relevant national committee and working group become set up and held for enhancement of implementation of MCH HB.*

As for output 1, all indicators, except indicator 3, where the accurate picture was not captured due to the lack of information, mostly achieved the target, thus it can be said that the accessibility to the MCH HB by community people has been increased.

<sup>6</sup> Sub-rating for Effectiveness is to be put with consideration of Impact.

<sup>7</sup> Effectiveness is to analyze the achievement level of output and project purpose at the time of the project completion. Under this ex-post evaluation, however, the situations of output at the time of ex-post evaluation are also explained to confirm their contribution to the impact.

At the project completion, printing numbers of the MCH HB to estimated pregnant women was 73%, which was 97% of the target of indicator 1 as shown in table 4. This number included the MCH HB printed by MOH, thus the actual printing rate would be slightly higher than 73% when taking into account the number of HB printed by LGs, Indonesian Midwife Association, etc. It should also be noted that the printing number was zero in 2010 since 30% of the national budget was cut due to the financial conditions of Indonesia and the printing budget not being available<sup>8</sup>. According to the staff of MOH, the printing number of MCH HB is decided depending on the numbers of stock and the budget status of the country for each year.

Table 4 Number of MCH HBs to Estimated Number of Pregnant Women

(Unit: Million)

	2008	2009	2010	2011	2012
Estimated pregnant women	5.0	4.8	4.8	5.0	5.1
Printed number of MCH HB	3.9	3.5	-	6.1	4.0
Printing rate	79%	73%	-	122%	78%

Source: The document provided by MOH.

Prior to the terminal evaluation, Health Minister' Decrees on promoting the use of the MCH HB at hospitals and private clinics were promulgated (indicator 2), committees for revising the MCH HB, working groups and sub-working groups were established and managed to hold meetings to enhance the usage of the MCH HB (indicator 4).

Meanwhile, with regard to increasing numbers of LGs that secure the budget to supply the MCH HB with their own budget (indicator 3), it is difficult to collect reliable data from the LGs across the country at the time of the project completion, as was also the case with the survey /project consultation team and terminal evaluation. Therefore, in this ex-post evaluation, the situations as of the project completion were confirmed at the D/CHO where site visits were conducted. As a result, it was confirmed that LGs also shouldered the burdens to a certain degree at the time of project completion, since the average financial sources were 36% from MOH, 11% from Province, 47% from District/City and 6% from others including professional organizations and Non Governmental Organizations (hereinafter referred to as "NGO", etc. (although the situations are varied from place to place since it would depends on the financial situation of each LGs<sup>9</sup>).

According to the staff of the MOH and LGs, however, the Minister of MOH indicated his intention in 2009 that the central government would print and provide the MCH HB for all pregnant women, thus the number of LGs, which institutionalize securing the

<sup>8</sup>Though MCH HB were printed for 73% of the estimated pregnant women in 2009, budget for delivering MCH HB to each region except Java and Bali islands were not secured, thus MCH HB printed in 2009 were stocked in MCH. In 2010, budget for delivering were secured, thus, MCH HB stocked in MOH were delivered across the country.

<sup>9</sup> The situation varied from regions to regions. For example, DHO of West Lombok in West Nusa Tenggara Province secured all budget for printing MCH HB by themselves, while Bangkalan District relies on all printing budget to MOH.

budget to supply HB by LGs themselves, are currently limited and LGs have tended to rely on MOH compared to the situation at the time of the project completion<sup>10</sup>. Study report prepared by University of Indonesia in 2011<sup>11</sup> also surveyed the presence or absence of LG's budget plan for supplying HB. In the result, 44% of respondents of D/CHO had budget plans for supplying HB in 2009 while it decreased to 34% in 2011.

Output 2 The system of orientation on MCH HB for relevant health personnel is strengthened.

*[Indicator 1] MOH agrees to request Ministry of National Education to include MCH HB into curriculum for midwife academies by 2009.*

*[Indicator 2] Relevant Programs<sup>12</sup> include MCH HB related item(s) by 2009.*

*[Indicator 3] Orientation package for health personnel related to MCH HB is available by 2009.*

Relevant items on the MCH HB were integrated not only in the standard curriculum of approximately 400 nursing schools but also midwife academies (indicator 1). It was confirmed by the terminal evaluation that promotion of using the MCH HB had been integrated in manuals or training programs in all relevant programs of MOH (Indicator 2). The module of Orientation Package for introducing the MCH HB was developed during the project implementation and distributed to all PHO in Indonesia (indicator 3). Hence, all the indicators of output 2 were therefore achieved.

After the terminal evaluation, MCH HB related items in relevant programs or trainings of the MOH and curriculums of midwife academies and nursing schools have continuously been included without deletion. The module of Orientation Package which was developed to standardize the use of the MCH HB by healthcare personnel has also been utilized at each province. Thus, it is considered that the system of orientation of the MCH HB in Indonesia had been strengthened by project completion.

Output 3 The system of monitoring and reporting on MCH HB is strengthened.

*[Indicator] By September 2009, Distribution rate of MCH HB is started to be monitored at national level.*

<sup>10</sup> Regarding the information on the current budget of LGs on MCH HB printing, please refer to the "3.4.4 Financial Aspects of the Implementing Agency".

<sup>11</sup> Center for Family Welfare, Faculty of Public Health University of Indonesia, (2011), "Self-reliance on MCH HB in Indonesia-Study Report".

<sup>12</sup> Village alert program, Normal birth module, preparation for childbirth and complication, Emergency obstetric and neonatal care, Comprehensive measure for neonatal infant, Birth asphyxia measure, Measure for infant of low birth weight, Program for promotion of child development, Emergency measures for obstetric and neonatal care, Training for communication of midwife and counseling.

MOH started monitoring the distribution rate of the MCH HB at the national level in 2008, thus output 3 had also been achieved. Specifically, the distribution rate of the MCH HB was integrated in Regional Monitoring System on MCH (hereinafter referred to as “PWS-KIA”), and some question items on bringing the rate of the MCH HB was included in Basic Health Research (hereinafter referred to as “RISKESDAS”) too. PWS-KIA is implemented once a year and RISKESDAS once in three years, hence the monitoring and reporting system had been enhanced. The distribution rate is important information for understanding the printing number and then budget allocation for the next year, therefore, understanding the data on the MCH HB highly contributes to the development of the system for continuing MCH services. However, reporting responsibilities from LGs to MOH have not been fully enforced under the current environment of decentralization and there are cases where the data of LGs are not reported to MOH. As mentioned in the recommendations of the terminal evaluation report, strengthening the operation of the monitoring system is considered as a challenge for the future.

**Output 4 Models for better utilization of MCH HB are developed.**

*[Indicator 1] Model to utilize MCH HB for child health is available by 2009.*

*[Indicator 2] Model to facilitate other programs such as birth registration to utilize MCH HB is available by 2009.*

*[Indicator 3] Model to utilize MCH HB during pregnancy and post partum is available by 2009.*

*[Indicator 4] Model to introduce MCH HB to health volunteers is available by 2009.*

*[Indicator 5] Model to utilize MCH HB at hospitals and private clinics is available by 2009.*

“Models for better utilization of the MCH HB” were all developed through the project activities in five model provinces<sup>13</sup> and they were available for use by project completion, hence the project accomplished output 4. In addition, facilitator and trainers who utilize these models were fostered, and trainings for “Kadar”, health volunteers who support the activities at Posyandu, were also conducted. Some models are now utilized even outside the model provinces and contribute to promoting the use of the MCH HB as shown in table 5. Meanwhile, those models cannot be copied and used as they are, since the life style, culture and customs differ from island to island or region to region in Indonesia.

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<sup>13</sup> Model provinces for each model are West Java Province for the model to introduce the MCH HB to health volunteers (indicator 4), East Java for the model to facilitate other programs such as birth registration (indicator 2 and 5), West Smatra Province for the model to utilize the MCH HB for child health (indicator 1), West Nusa Tenggara Province for the Model to utilize the MCH HB during pregnancy and post partum for indicator 3, West Kalimantan Province for the Model to utilize the MCH HB at hospitals and private clinics (indicator 5).

For example, the cover pages of most of the MCH HB use photos which naturally fit into each region. In the process to continue activities for promoting the MCH HB in the future, it is hoped that they will be with modifications as necessary.

Table 5 Cases for Using Developed Model

Each Model and Their Status of the Utilization of each Model at the time of Ex-post Evaluation	
<p>[Model to utilize MCH HB for child health] Classes for mothers with children are planning to be commenced across the country as one of the national programs, though there are regions which have not introduced them yet. Guidance for the necessary information on hygiene, nutrition, immunization, etc are provided in the classes. Classes conducted in Tanah Datar District, a model area, are taken as a model case, so D/CHO visit for study tours, and kit for conducting classes have been distributed to all Puskesmas in West Sumatra Province.</p>	 <p>Class for mothers with children</p>
<p>[Model to facilitate other programs such as birth registration to utilize MCH HB] Page for filling the necessary information for birth registration has been inserted to promote the use of the MCH HB for birth registrations. Some districts/cities including Lumajang District in East Java Province, Salatiga City of West Java Province, and Bukittinggi City in West Sumatra Province have made registration free in cooperation with the Ministry of Home Affairs, which administers birth registration, if pregnant women use the MCH HB. In some regions, an effort to cooperate with the Ministry of National Education has been started, such as making bringing the MCH HB a requirement in order to enter nursery schools.</p>	 <p>Page of MCH HB for Birth Registration</p>
<p>[Model to utilize MCH HB during pregnancy and post partum] A class for “pregnancy and partum women” as one of the national programs has been conducted and utilized across the country as Classes for “mothers with children.” Now they are important places to provide information on the MCH HB. Since it is difficult to offer the classes to all pregnant women, women with high risk pregnancies or for their first child would be prioritized at the moment. The Directorate of Maternal Health in MOH plans to start the promotion of activities to encourage the classes since they also recognize its importance.</p>	 <p>Poster prepared for dissemination of class for pregnant women</p>
<p>[Model to introduce MCH HB to health volunteer (Kadar)] Kadar is a health volunteer group who supports activities for health checks of children and some education activities at Posyandu which is under the jurisdiction of the Ministry of Home Affairs. Since they are not healthcare personnel, training for areas such as how to fill in the information for the HB are necessary. In this model, orientation packages for Kadar were developed and a modified guideline for using the MCH HB for Kadar was also confirmed at the ex-post evaluation in West Kalimantan Province. Now the orientation for Kadar is conducted as a part of Health Promotion (Family Planning) activities which was planned by the Directorate of Health Promotion in MOH.</p>	 <p>Teaching materials for Kadar</p>
<p>[Model to utilize MCH HB at hospitals and private clinics] This model was developed at the model area, Madiun city in East Java Province and Singkawang City in West Kalimantan Province. Therefore the cases where this model is utilized were not confirmed except in the model area and dissemination of MCH HB to private hospitals is one of the biggest challenges hereafter, according to the MOH. In Singkawang City which has two private hospitals in total, both private hospitals used MCH HB. One of them even plans to print and distribute the MCH HB with their own budget for the next year since occasionally there were not enough numbers of the MCH HB available from CHO.</p>	 <p>Midwife who explains MCH HB in private hospital</p>

Source: The results of a questionnaire survey and interview survey to D/CHO of each model province.

Output 5 Results of survey and evaluation of MCH HB on improvement of MCH are reflected in MOH's policy making and implementation process.

*[Indicator 1] The impacts of MCH HB on health indicators such as Ante Natal Care (hereinafter referred to as "ANC") rate (K1 and K4), delivery attended by trained health personal are collected.*

*[Indicator 2] MCH HB is revised incorporating the evidences from the field by the end of 2008.*

*[Indicator 3] Advocacy tools of MCH HB for LGs and relevant ministries are prepared based on the evidences from the field by 2009.*

Output 5 has been achieved as follows.

With regard to the health indicators on MCH services such as the ANC rate, delivery attended by trained health personnel (indicator 1) as well as the bringing rate of the MCH HB were integrated with RISKESDAS in 2007 during the project implementation and in 2010 after the project completion. Furthermore, the usage of the MCH (P4K card attached to MCH HB) service and MCH HB was surveyed at Garut District in West Java Province during the project, accordingly the result was introduced in the leaflet of the MCH HB. The MCH HB is required to be revised every five years, and when the HB was revised in 2009, results of needs surveys to HB users and professional organizations as well as good practices of utilization of the MCH HB were reflected, thus the target indicator 2 was also achieved. For example, a revised Health Card (modified card for growth curve,<sup>14</sup> hereinafter referred to as "the KMS card") has been inserted into the MCH HB based on the opinions raised from users and health personnel. Information on nutrition, including recipes, were added and the illustrations and design of HB were also modified based on the reports which were summarized by regions. A "P4K card"<sup>15</sup> for safe delivery was also added at the time of modification.



Since MOH recognized that the MCH HB is an efficient integrated tool to keep the health record for all information from the antenatal care to delivery and post-partum, a

<sup>14</sup> KMS is a card for recording the growth curve of height and weight of a child.

<sup>15</sup> P4K card is a sticker attached to the MCH HB. Basic information of pregnancies, such as the mother's name, estimated delivery date, person who will attend the delivery, the medical institution for delivery, the name of midwife, etc.), are written in the P4K card and put into on the entrance of the house. The P4K card is widely utilized since neighbors or the community can get the situation of the pregnant woman and they can help her even if family members are out of the house just by looking at this sticker.

delivery insurance called Jampersal<sup>16</sup> has been introduced. To receive this insurance, it is required to submit the copied page which has needed information in the MCH HB. Thus it can be said that the importance of the MCH HB has been reflected in the health system in Indonesia.

Output 6 The capacity of MOH and relevant LGs to effectively share the experiences of improving MCH services with MCH HB is strengthened.

*[Indicator 1] Experiences of improving MCH services with MCH HB are reflected in the materials of TCTP with ICTP, and relevant meeting.*

*[Indicator 2] In the second TCTP with ICTP, satisfaction rates of the participants are more than 80% in average.*

*[Indicator 3] By September 2009, experiences of improving MCH services with MCH HB are shared in national meetings of MOH.*

Three TCTPs/ICTPs were conducted during the project in the model provinces<sup>17</sup>. Training courses to share the experiences were included, such as the cooperation with women's association for having mother's classes, the cooperation with the Ministry of Home Affairs for utilizing the birth registrations, and examples for utilizing the MCH HB at non public medical institutions (Indicator 1). 80% of participants of trainings answered that they were "highly satisfied" or "satisfied" with the training on average, thus the satisfaction rates were more than the planned rate (Indicator 2). In addition, the number of national evaluation meetings was larger than planned (Indicator 3) which has contributed a place to share cases and experiences effectively to strengthen the system and capacity for better utilization of the MCH HB, thus the output 6 has been achieved.

As described above, places were set up to share cases of experiences for better MCH HB utilization during the project implementation. It was confirmed, however, that the places are currently limited since only representatives selected by the MOH from provinces have gathered for these. Therefore, in the interview survey, many D/CHO and Puskesmas requested to PHO or MOH to provide them with opportunities to share the good practices, ideas or experiences of activities for effective usage of the MCH HB or examples such as those written in the [Column] in this report for dissemination.

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<sup>16</sup> Jampersal is the Indonesian insurance system for delivery. It is applied to the delivery at the public health institutions or affiliated maternity center. To take this insurance, submitting a copy of the MCH HB which has the record of antenatal services is required.

<sup>17</sup> Contents and places for each training are as follows; 1. Integrated Maternal and Child Health service with MCH HB in the Era of Decentralization (East Java province", 2. Inter Sectoral Support in MCH through MCH HB Implementation (West Java), 3. LG Support and Intersectoral Collaboration in MCH Program Through MCH HB in Indonesia (West Sumatra).



### 3.2.1.2 Achievement of Project Objectives

Project Objective MCH HB functions as a tool to integrate MCH services and a system to sustain MCH services with MCH HB is strengthened.

*[Indicator1] By September 2009, at least 80% of pregnant women receive antenatal services using the MCH HB.*

*[Indicator2] The model(s) for better utilization of MCH HB is reflected in MOH's policy.*

To confirm the attainment level of the project purpose, the evaluation team clarified what “functions of MCH HB as a tool to integrate MCH services” exactly means. According to the staff of MOH, it was related to the background of introduction of the MCH HB in Indonesia.

Before the MCH HB was introduced to Indonesia, there were more than 10 varieties of MCH related cards including growth cards prepared by donors, pregnancy cards, immunization cards, cards developed by MOH or some regions and etc. Cards were used depending on who used, which donors supported, regions or places, etc. Then, the MCH HB integrated one card for “recording the health of pregnant women and their child” and “information of health education for mothers”, has been introduced on a trial basis with the purpose of managing them continuously. Thus, the “MCH HB functions as a tool to integrate MCH services” shown in the project purpose which indicates that one MCH HB can be utilized as an integrated tool to manage mother and child health continuously for 6 years from the time of pregnancy to the time when the child turns 5 years old.

Under this project, the ratio of pregnant women who took the ANC was taken as the indicator to see the achievement level of the project purpose. In reality, however, the data to show the rate was not available in a detailed manner, therefore the distribution rate which indicates the rate of pregnant women who received the MCH HB was confirmed in this ex-post evaluation since it was done in the same manner in the terminal evaluation. Since the distribution rate was 56% at the terminal evaluation, it was expected that the project purpose would not be achieved by the project completion. At the time of project completion, it went up to 67%, which means that it went up to 80% of the planned ratio though it was not fully achieved. On the other hand, the distribution rate showed a great improvement, a 43 points increase compared to the time of the project start as shown in table 6<sup>18</sup>. Regarding the five models which were developed at each model area to promote the MCH usage, except the one to facilitate other programs such as birth registration to utilize the MCH HB, they were all reflected in some letters, guidelines and integrated into national programs.

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<sup>18</sup> It should be noted that these data did not cover all provinces, and the information of private medical institution were not fully included. (Information of private medical institutions are written in the next section of Impact.)

Table 6 Distribution Rate of MCH HB

	Before the project (2005)	Terminal evaluation (2008)	Planned	Project completion (2009)
Distribution rate	24%	56% <sup>Note 1</sup>	80%	67% <sup>Note 1</sup>
Attainment rate	-	70%		84%

Note 1: Based on the data from 12 provinces which answered the questionnaire of a total 33 provinces in Indonesia.

Source: The project documents and documents provided by MOH.

As described above, access to the MCH HB has been increased and MCH HB has been utilized as an integrate tool of MCH service. In addition, models developed for better usage of the MCH HB have been reflected in the policy of Indonesia. On the other hand, some vulnerabilities were identified in terms of the supply system of the MCH HB by LGs and the monitoring and reporting system from the perspective of establishing a system to sustain MCH services with MCH HB. Thus, this project has somewhat achieved its objectives.

### 3.2.2 Impact

#### 3.2.2.1 Achievement of Overall Goal

##### Overall Goal

1) MCH services with MCH HB became available at every health facility.

2) All pregnant women & children under 5 years old have their own health record.

*[Indicator 1] Coverage of MCH services with MCH HB at health facilities is increased.*

*[Indicator 2] Distribution rate of MCH HB among pregnant women and mothers with child under 5 years is improved to 80%.*

*[Indicator 3] Relevant output indicators, including ANC access rate (K1, K4) , delivery attended by trained health personnel, exclusive breastfeeding rate, are improved.*

Two overall goals were set and accordingly three indicators were given to measure the degree of their achievement.

As for the indicator 1, “Coverage of MCH services with MCH HB at health facilities is increased”, reliable data was not available at MOH. However, it was confirmed that 97% of Puskesmas<sup>19</sup> provided MCH services with the MCH HB in the terminal evaluation. In addition, it was observed during the site visits of ex-post evaluation that most of the Puskesmas and other public health facilities have provided the MCH service with the MCH HB, hence it can be judged that coverage at major public health facilities<sup>20</sup>

<sup>19</sup> This data does not cover two thirds of the total provinces in Indonesia.

<sup>20</sup> Public health facilities indicate nonprofit health facilities which receive the support of government, religious institutions, etc while health facilities for profit with no subsidies are categorized as private health facilities. Currently, there are 9,321 Puskesmas, 1,545 public hospitals and 585 private hospitals in Indonesia.

have increased compared to the situation before the project. However, it should be noted that this data of the terminal evaluation did not include information from private hospitals and clinics. Even in the interview survey conducted for ex-post evaluation, the fact that there is a low utilization rate of the MCH HB in private health facilities was pointed out. MOH explained that the MOH cannot force private facilities to use the MCH HB. Also, one challenge to be addressed is that sufficient numbers of the MCH HB cannot be ensured to cover all medical facilities, including private ones, despite there being some LGs that are spreading the MCH HB to private health facilities.

The distribution rate of the MCH HB (indicator 2) has increased among pregnant women, especially after the introduction of Jampersal in 2011 as shown in table 7. On the other hand, the rate among mothers with children under 5 years<sup>21</sup> went no further than 62.7%<sup>22</sup> because the priority of its distribution went to pregnant mothers in the area where the number of the HB is not enough, while other mothers do not fully understand the importance of the MCH HB. In fact, there were some Posyando where use of the MCH HB by pregnant mothers and the KMS card for mothers with a child under five was occurring in West Java Province during the site visit of ex-post evaluation. In addition, the above mentioned survey report by the University of Indonesia indicated that a portion of pregnant mothers did not understand that the MCH HB would be utilized until the child reached the age of five. According to MOH, there are some mothers with a child under five who use a KMS card under the current situation. However, it can be expected that the bringing rate of the MCH HB would be increased spontaneously in the future if pregnant mothers keep using the MCH HB after giving birth.

Table 7 Distribution Rate of the MCH HB to Pregnant Mothers

2009	2010	2011	2012
67%	68%	81%	87%

Source: Document provided by MOH

Through the MCH HB, relevant output indicators on MCH have been increased as shown in table 8 (indicator 3). For example, K4 and deliveries attended by trained health personnel have improved. Even in the interview survey to the Puskesmas, many people stated that pregnant women who receive K4 have increased due to the MCH HB. In addition, while it was common to have a delivery with a Dukun Bayi<sup>23</sup> who is the traditional supporter who uses spiritual prayer or herbs in rural areas, there have been

<sup>21</sup> MCH HBs are distributed during pregnancies, therefore, technically the distribution rate for mothers with children under 5 years indicates the bringing rate.

<sup>22</sup> Based on the data from RIAKESDAS in 2010.

<sup>23</sup> Since Dukun Bayi are very familiar especially in rural areas, the families of pregnant women often ask a Dukun Bayi to attend the delivery. Recently, some efforts, such as conducting seminars for hygiene and attendance of both a midwife and Dukun Bayi for the delivery, have been made.

problems from a hygiene and medical/technical perspective. Therefore, recently, pregnant mothers who learned basic knowledge from the MCH HB tend to desire a safe and clean delivery. On the other hand, the exclusive breast feeding rate has been decreasing partly because some mothers considering powdered milk to be richer in nutrients than breast feeding because of advertisements for powder milk, and also because working mothers tend to rely on powdered milk due to a lack of freezing technology.

Table 8 Improvement of related Output on MCH

	Before the project	2009	2010	2011
K1	98%	94%	95%	96%
K4	79%	87%	86%	87%
Delivery attended by trained health personnel	76%	84%	85%	87%
Exclusive breastfeeding rate	64%	61%	62%	48%

Source: The documents provided by MOH.

Regarding each indicator for overall goals, achieving coverage of MCH service with the MCH HB at public health facilities though usage in private hospitals remains a challenge (Indicator 1). In addition, the distribution rate of the MCH HB to pregnant women has achieved its target, however the rate of mothers with a child under five was below the target (indicator 2). Although the overall goal was somewhat achieved for target indicator 1 and 3, the achievement of indicator 2 was lower than the plan. Therefore, the overall goal was partially not achieved.

### 3.2.2.2 Other Impact

In this project, other positive impacts were confirmed mainly in model areas thanks to various activities that are outlined below. Negative impacts were not found.

#### (1) Improvements in knowledge about pregnant mothers through MCH HB usage

Thanks to the MCH HB, knowledge of users and families for the health of pregnant mothers and infants has been enhanced. Results of the beneficiary survey<sup>24</sup> conducted in ex-post evaluation shows that 85% of responding pregnant mothers and mothers with a child under five answered that knowledge on health conditions of pregnant mothers and recommended dietary and immunization for infants has been increased by the MCH HB, and they would purchase it even if the MCH HB came at fee<sup>25</sup>. According to the midwives at Puskesmas in the interview survey, there were many cases of serious situations resulting in miscarriage because many pregnant mothers previously did not understand

<sup>24</sup> In ex-post evaluation, a beneficiary survey was conducted to capture the effect of utilizing the MCH HB at 6 districts/cities in 4 provinces out of 10 districts/cities in 5 provinces. The details of responding beneficiaries are 61 health personnel, including doctors, midwives and nurses, and 43 users of MCH HB including pregnant mothers and mothers with a child under five years.

<sup>25</sup> MCH HB is basically free of charge.

that bleeding is one of the symptoms of miscarriage and would ignore it. Using the MCH HB with illustrations for easy understanding made it possible to learn how to deal with each symptom, which resulted in improving pregnant mother's and family's knowledge on MCH.

(2) Increase of family and community support

It has been stipulated that the MCH HB has to be read not only by pregnant mothers but also family, especially husbands at home. During the site visits, the support of husbands or family of pregnant mothers, including attending checkups, and the cooperation of community leaders, who knew the importance of the MCH HB, to promote the use of the MCH HB in their communities, was confirmed.

(3) Promoting the MCH HB's usage in each region

Before this project started, it was decided to promote use of the MCH HB by replacing the cover page of the MCH HB with familiar photos, such as a person from that particular region. In ex-post evaluation, in some cases, modifying the HB to meet the nature of the region or communities and conducting original activities, was reported. It is prohibited to change or delete the original contents of the MCH HB but adding some content when PHO or D/CHO print the MCH HB is



(High Score Card which is inserted into the HB in East Java Province)

allowed. With that, some examples such as inserting a card called a "High Score Card" to help for checking the risks to pregnancies in East Java Province, and putting the teaching of Islam on the back of the cover page, were observed. In addition, some Puskesmas have been conducting activities for more pregnant mothers to understand the contents of the MCH HB as shown in the Column.

**【Column: Case of activity for promoting better understanding of MCH HB – 10 Minute activity at Puskesmas Kopo -】**

Puskesmas Kopo which is located at Bandung City in West Java Province started doing "Ten Minutes Activity" in the morning in its waiting room in 2012 to promote better utilization of the MCH HB. The head of the Puskesmas Kopo, who visited Nagano Prefecture in Japan for training, was inspired by the fact that all pregnant women have a MCH HB and vouchers for taking the ANC.



She then thought that Bandung City can also do something to contribute for better MCH services which resulted in starting this activity. In this activity, a nurse or midwife will, after planning in advance, explain a few pages of the MCH HB for about ten minutes to waiting pregnant mothers in the waiting room. For busy pregnant mothers it is difficult to have time for mother classes, however, it is essential to have activities for understanding the importance and contents of the HB by pregnant mothers. Thus, ten minutes activities are utilized for explaining and answering the issues in the MCH HB by utilizing the time before or after examination. This activity was introduced to neighboring Puskesmas and will be spread to all Puskesmas in Bandung City in 2013, according to the head of CHO.

In addition, it has been decided that any organization which supports printing the MCH HB are not required to print the Logo of JICA on the front page in order to spread the MCH HB further<sup>26</sup>. It is even free for Midwife Associations or private companies supporting the printing of the MCH HB, as a part of Corporate Social Responsibility (hereinafter referred to as “CSR”), to add their logo mark. Thanks to this flexibility, various institutions, International Organizations, including the United Nations Children's Fund, World Bank and Global Fund, Bilateral organization, including the US Agency for International Development, European Union and the Australian Agency for International Development, and professional organizations such as the Midwife Association, International Non Government Organization, Religions organization, etc., provided support during the project. After the terminal evaluation, some private companies also offered support<sup>27</sup>.

(4) Contribution to the improvement of IMR and MMR

At the time of the project planning, IMR and MMR were expected to be improved by the project implementation. As shown in table 9, IMR and MMR improved after the project. Since various factors are related to the change of IMR and MMR, it is difficult to measure the causal correlation with this project. Midwives or users at Puskesmas and Posyandu, however, explained that “Risks to pregnancy were acknowledged”, “Pregnant mothers who take ANC increased”, “Knowledge on immunization and a variety of diseases of infants were enhanced” along with the spread of the MCH HB. In the beneficiary survey, all responding midwives, nurses and doctors answered that MCH HB are useful tools for pregnant mothers, and 96% answered that MCH HB has contributed to the improvement of mother and infant health. Surveys conducted before the project described the lack of basic knowledge of mothers on pregnancy and delivery as a challenge to improving the IMR and MMR, hence, it can be considered that enhancing the knowledge of pregnant mothers by promoting MCH HB use have contributed to improving IMR and MMR to a certain degree.

Table 9 IMR and MMR

	2005	2006	2007	2008	2009	2010	2011
IMR (per 1,000 birth)	42	40	38	37	35	33	32
MMR (per 100,000 birth)	270	—	—	240	—	220	—

Source: World Data Bank, *World Development Indicators* (<http://data.worldbank.org/>)

<sup>26</sup> However, it is always noted that in the back of the front page that the MCH HB was developed with the support of JICA. In addition, in case private companies support the printing of the MCH HB, they are allowed to seal the company’s logo but are not allowed to insert any advertisement.

<sup>27</sup> According to MOH and LGs, a large food related company, car production company as well as palm company, etc. support or supported the printing and supplying of the MCH HB as a part of CSR activities.

As mentioned above, this project has somewhat achieved its objectives, therefore its effectiveness is fair. Regarding the project purpose, there are some problems with establishing a system to sustain MCH services with the MCH HB while the MCH HB functions as a tool to integrate MCH services. As for the overall goal, though the ratio of pregnant mothers who have a health record has increased, the ratio of mothers with a child under five with a health record has remained within a limited range. Use of the MCH HB in private hospitals has been confirmed in certain areas but further improvement is expected.

### 3.3 Efficiency (Rating: ③)

#### 3.3.1 Inputs

Planned and actual inputs for the project are shown in Table 10.

Table 10 Plan and Actual Inputs

Inputs	Plan	Actual Performance (As of terminal evaluation)
<b>Japanese Side</b>		
1. Experts	Long term expert: 3 Short term expert: 2-3/year	Long term expert: 5 Short term expert: 8
2. Trainees received	C/P training 5 per year for two weeks ×4year	Training in Japan : 35 Training in Indonesia:42
3. Equipment	Not stated	3.71 million yen
4. Local cost	Daily expense, special project cos	96.84 million yen
5. Project total cost	320million yen	290million yen
<b>Indonesian Side</b>		
1. C/P personnel	Not stated	14 C/P
2. C/P budget	Conference cost, traveling cost, trainers fee	C/P expenses
3. Others	Office for JICA experts with utilities	Office for JICA experts with utilities

Source: Terminal evaluation report

#### 3.3.1.1 Elements of Inputs

##### (1) Japanese Side

##### 【Dispatch of experts】

Long term experts: Chief advisor, MCH advisors, Coordinator  
Short term experts: Survey design, Education material, Third country training

Japanese experts were dispatched as planned<sup>28</sup>. Experts who were dispatched for this project used to also be members of Phase 0 and Phase II, as long or short term experts,

<sup>28</sup> 3 long term experts of the original plan increased to 5 in total. This includes the people who changed their status and were counted twice, hence the actual input of man/month can be considered as planned. The short term experts were dispatched as originally planned.

JOCVs, as well as Senior Volunteers. Thus, this made project implementation more efficient.

#### **【Counterpart Trainings】**

35 C/Ps received trainings in Japan<sup>29</sup> which exceeded the original plan because trainings needed to cover a broad area. This increase was judged as appropriate since C/Ps need to take trainings for all areas when considering the nature of the project which has plural institutions as C/Ps. The details of participants are 14 from MOH, 2 from the Ministry of Home Affairs, 5 from PHO and 5 from D/CHO and 9 from professional institutions<sup>30</sup> and hospitals. In addition, 42 participated in ICTP and TCTP to share their experience of utilizing the MCH HB and further promote it.

#### **【Equipment】**

15 sets of equipment, personal computers, printers, related software, and desktop computers, monitors and projectors, needed for collecting data relevant to the MCH HB, and developing and conducting model activities, were provided to five model provinces.

#### **【Local Cost】**

The local cost occupied 30% of Japanese input. It contained 60% of operation costs which include the activities for promoting the MCH HB, the printing cost for the materials, guidelines and publicity leaflets.

### **(2) Indonesia Side**

#### **【Counterpart assignment】**

14 counter personnel were assigned from the Department of Child Health in the MOH and other departments. Unlike regular projects which have one department as a C/P, this project was implemented with 3 of 4 directorates of MOH as C/Ps. Apart from MOH, 5 PHO and 10 D/CHO were also included as C/Ps for the activities to develop models for utilizing MCH HB.

#### **【Counterpart budget】**

The budgets for having workshops, seminars, orientations and trainings in Indonesia and for travelling costs were covered by the Indonesian side.

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<sup>29</sup> Trainings for MCH HB utilization and an MCH HB symposium were held once a year in Japan.

<sup>30</sup> It includes the Indonesian Obstetrician, Indonesian National Nurse Association, Indonesian Obstetrician and Gynecologist Association, and Family Welfare Movement.



### 【Project office and utilities】

The Project office and utilities were covered as planned by the Indonesian side.

#### 3.3.1.2 Project Cost

The planned cost to the Japanese side totaled 320 million yen, and the actual total project cost was 290 million yen, within the plan (91%).

#### 3.3.1.3 Period of Cooperation

The actual cooperation period was 36 months as planned.

As described above, input was appropriate to produce the output, and both project period and cost were within the planned scope, therefore the efficiency of the project is high.

### 3.4 Sustainability (Rating: ②)

#### 3.4.1 Related Policy towards the Project

The Indonesian Development Plan, as of ex-post evaluation, clearly mentioned the strategy of placing importance on MCH improvement synonymous with that mentioned at the time of the project planning. In RPJM (2010-2014), accelerating the improvement of MMR and IMR is raised as a strategy to achieve the International development goals, Millennium Development Goal (hereinafter referred to as “MDG”), with the one of basic purpose of “Improvement of welfare”. In the Health sector, “Goal 1. Eradicate extreme poverty and hunger<sup>31</sup>”, “Goal 4. Reduce child mortality”, and “Goal 5. Improve maternal health,” as outlined within the 8 MDGs, are taken as priority areas of Indonesia’s “MDGs 145”. “A Roadmap to Accelerate Achievement of the MDGs in Indonesia” published in 2010 also shows concrete numerical targets, as shown in table 11, as issues to be managed continuously.

Table 11 Target and Actual Data related to MCH in Indonesia

	Original (1991)	At the time of preparing report(2007)	Target (2015)
Goal 1: Rate of child under 5with serious malnutrition	7.2% <sup>note1</sup>	5.4%	3.6%
Goal 4: IMR (per 1,000 birth)	68	34	23
Goal 5: MMR (per 100,000 birth)	390	228	102
Rate of delivery attended by health personnel (%)	40.7 <sup>note2</sup>	77.3 <sup>Note 3</sup>	Increase

Note 1: Data in 1998 Note2 : Data in 1992 Note 3 : Data in 2009

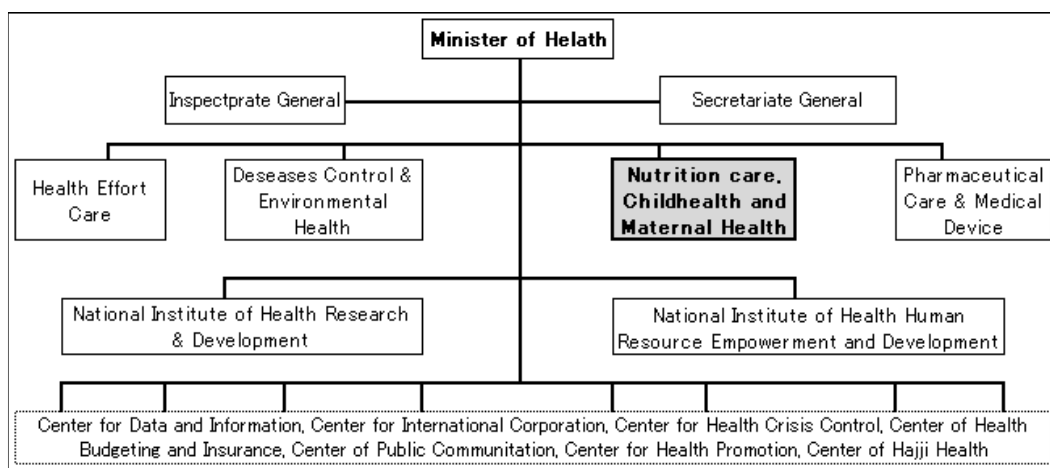
Source: Extracted from Ministry of National Development Planning/National Development Planning Agency (2010), “A Roadmap to Accelerate Achievement of the MDGs in Indonesia”

<sup>31</sup> Since it includes the indicator on nutrition for infants, executing agency of this project is the one to look after.

In addition, Jampersal was introduced in 2011 and made bringing the MCH HB mandatory and promoted the improvement in the bringing rate of the MCH HB. The MCH HB's usage has been integrated into various health sector programs in letters and notices, guidelines and manuals which were formulated during the project implementation. Not only in the systems of the health sector, MCH HB related items were integrated in the curricula of midwife academies and nursing schools for ensuring the capacity of health personnel, thus it has contributed to ensuring the sustainability of the project effect as of ex-post evaluation.

### 3.4.2 Institutional and Operational Aspects of the Implementing Agency

The Department of Child Health, Directorate of Nutrition, Child Health and Maternal Health in MOH is in charge of all the activities including revision, printing and supplying of the MCH HB (Refer to Figure 1). In the department of Child Health, 6 staff are involved in the MCH HB. After project completion, 2 staff and 4 administrative staff were assigned additionally, however, sufficient numbers of staff are not assured since they are assigned work other than that of the MCH HB. Furthermore, D/CHO have the responsibility to procure the MCH HB for Puskesmas and other health facilities, and in case of a lack of MOH HB, health facilities would ask for the support of PHO or MOH through D/CHO. The majority of PHOs have very little direct involvement with printing, distribution and awareness activities but mainly have responsibilities with coordinating between D/CHO and MOH, as well as with monitoring works. The main actors for activities disseminating and promoting the MCH HB use is done by D/CHO, Puskesmas and Posyandu.



Source: Website of MOH <http://www.depkes.go.id/en/>

Figure 1 Organization Chart of MOH (excerpt)

Future challenges in terms of institutional aspects are raised with the operation and implementation of a monitoring system. As indicated in output 3, a reporting system from

LGs to MOH has not been strengthened under decentralization and the issue, that appropriate information on output has not been collected, was made clear during this evaluation. In the future, measures and efforts have to be made to strengthen the monitoring system in order to report the appropriate data between MOH and LGs.

#### 3.4.3 Technical Aspects of the Implementing Agency

The project enhanced the capacity for promoting better utilization of the MCH HB through trainings for all stakeholders including the staffs of MOH, PHO, D/CHO, health personnel, Kadar, etc. Even after the project completion, it was confirmed that MOH has been able to continue the revision of the MCH HB, hence there are no major issues on the technical capacity of the implementing agency as well as at the LG level. As for health personnel, items related to the MCH HB have been integrated in the curriculums of educational institutions, therefore, midwives and nurses who fill in the information for the MCH HB do not have any issues with their capacity.

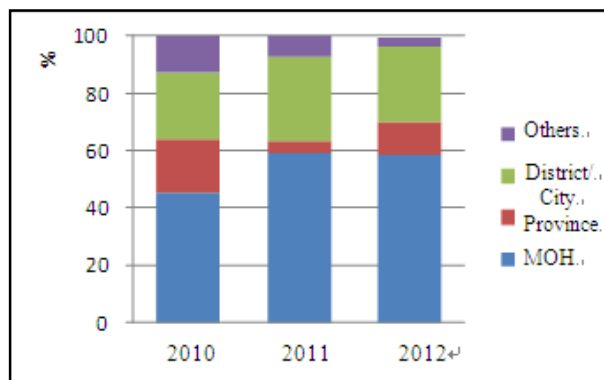
On the other hand, there is the issue of users not familiar with reading the HB at home, despite bringing the HB for their checkup, in some regions. Beneficiary survey results also showed that 70% of responding doctors, nurses and midwives answered that not all mothers read the MCH HB<sup>32</sup>. According to an interview to D/CHO, Puskesmas and Posyandu, a concern on the lack of capacity of some Kadars, who were assigned after the project completion, to utilize the MCH HB was mentioned. Currently, the orientation of MCH for Kadars was included in the activities conducted by the Directorate of Health Promotion in the MOH and the situations of monitoring differ from region to region. Hence, the level of understanding by Kadars also varies widely and continuous trainings or activities for awareness as well as proper monitoring to capture the current situation are needed.

#### 3.4.4 Financial Aspects of the Implementing Agency

The Terminal Evaluation Report explained that the responsibility to supply MCH HBs falls on LGs. However, since the Minister of MOH declared in 2009 that the MOH would print and supply MCH HBs to all pregnant women, the portion covered by the MOH has been increased, as shown in Figure 2. Currently, MOH firstly provides the MCH HB to LGs, then filling the gap by the budgets of LGs and the support of CSR or professional institutions. Meanwhile, the sharing of the responsibility of supplying the MCH HB, in financial terms, is not clear so far and remains a concern for future sustainability.

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<sup>32</sup> According to the result of the beneficiary survey, 23% of the responding health personnel answered that all pregnant mothers read the MCH HB, 68% of them answered that not all pregnant mothers read the MCH HB and only 9% answered almost of all pregnant mothers do not read the MCH HB.



Source: Prepared based on the interview survey results conducted at 11 D/CHO.

Figure 2 Proportion of Sharing the Budget for Printing the MCH HB

Table 12 shows the recent printing budget for the MCH HB by MOH. The printed number was decided based on stock from the previous year and the budget allocated for each year. In 2013, the MOH decided to cover 80% of estimated pregnant mothers, however, MOH would like to examine a gradual reduction in the share of MOH following discussion with LGs. To do so, MOH needs to coordinate with LGs to adjust the burden adequately, any clear ideas for financial cooperation with NGOs and CSR activities as measures to print and supply the MCH HB, however, have not been shown. Since MOH cannot tell until when the budget can be continuously allocated, it is urgently necessary to consider the future budget plan.

Table 12 Printed Number and Budget for MCH HB Allocated by MOH

	2009	2010	2011	2012	2013 <sup>Note 1</sup>
Printed Number	3,548,498	0	6,166,670	4,000,000	4,000,000
Budget(Mil. Rupiah)	12,420	0	21,583	14,000	14,000

Note 1 : Data in 2013 is an estimate.

Source : Data provided by MOH.

On the other hand, LGs which were visited during ex-post evaluation expressed that the MCH HB will become absolutely insufficient if they do not get a supply from MOH. Furthermore, MOH and many LGs did not capture the budget and the number of the MCH HB correctly, thus LGs remain an issue for printing and supplying the MCH HB autonomously (Refer to Table 13).

Table 13 Current Situation Future Prospect of Shearing Budget between MOH and LGs by Provinces

West Java Province	Many D/CHO rely on the budget allocated by MOH. According to PHO, MOH shared 80% of the printing budget and the remaining 20 % is shared by districts or cities.	West Nusa Tenggara Province	Though the situation varied by districts and cities, 90% of the budget was allocated by MOH and the remaining 10% was managed by LGs on average. In 2012, the ratio changed to 70% from MOH and 30% by LGs. PHO would aim to be independent, but it would be difficult to do so completely by considering
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			the current financial situation
West Sumatera Province	In 2013, Governors of provinces and districts/cities exchanged an agreement which reduced the burden of MOH to 10% and 90%, to be covered by LGs. In interview survey, all visited LGs, Tanah Datar District, Solo City and Bukittinggi City, have shared this idea and plan to propose the budget to achieve this goal.	East Java Province	65 % of MCH HBs were supplied by MOH, 9% by Provinces and 26% by districts /cities on average among D/CHO visited during the ex-post evaluation. Among them, there are cases like Lumajang District where 20% of MCH HBs were supplied with the support of NGOs and Communities, while there are also cases where 100% of MCH HB rely on MOH.
West Kalimantan Province	According to PHO, if no supply was made by MOH, only 2 or 3 can self sustain among 14 districts/cities in this province.		

Source: The interview survey and responses of the interview survey

As mentioned, no major problems were observed in terms of policy background and the technical aspect while some concerns still remain on the structural and financial aspect of the implementing agency, hence the sustainability of the project effect is fair.

#### **4. Conclusion, Lessons Learned and Recommendations**

##### **4.1 Conclusion**

This project was conducted to integrate the MCH service by utilizing the MCH HB and strengthening a system for sustaining the MCH service through the MCH HB in Indonesia. The project direction was consistent with Indonesian policies and strategies, which have emphasized improving the MCH services, the development needs and Japanese assistance policy, hence the relevance is high. Furthermore, the MCH HB has functioned as an integrated tool for health management in the process of raising children, hence pregnant women who utilize the MCH HB have steadily increased. On the other hand, the expansion of use of the MCH HB among mothers with children under five years old has been limited and challenge still remain in terms of role sharing among the central and LGs. Therefore the effectiveness and impact is fair when considering the purpose to establish a system to continue the service by utilizing the MCH HB. The efficiency of this project is high since both project cost and period are within the plan. Its sustainability is considered fair, because there is some room to improve in the awareness of Health Volunteers who support the users of the MCH HB and in the operation of the monitoring system, and furthermore there is concern for securing the printing and distributing budget for the MCH HB in the future, despite the fact that the system to maintain the use of the MCH HB by mothers and medical workers has been developed. In light of the above, this project is evaluated as satisfactory.

## **4.2 Recommendations**

### **4.2.1 Recommendations to the Executing Agency**

#### **【Balance of cost sharing on MCH HB printing for the future】**

Currently, the cost of printing and distributing the MCH HB depends heavily on MOH, however, MOH is assuming that LGs will take the burden gradually. While cost sharing is not defined among MOH and LGs, LGs which can secure the budget are limited and many LGs expect that MOH will continuously provide the support. The MOH is required to inform the necessity of balance in cost sharing to LGs, and discuss and consider the realistic balance of cost sharing.

#### **【Strengthen the implementation and operation of a Monitoring System】**

As is the case with the terminal evaluation, a great deal of data for the indicators was not available for ex-post evaluation. During the project implementation, data related to the MCH including the distribution and bringing rate of the MCH HB were included in PWS-KIA and RISKSDAS, however, there was no obligation for LGs to report data to MOH, and thus, it remains a difficult situation for MOH to collect the data from all provinces. Sharing of information between MOH and LGs is essential to continuously promote the MCH HB usage. In this case, Country Countdown, which is confirming the progress status of Goal 4 and 5 of MDGs, may be one option to be used for sharing the data and information. Also, including budget information, following up the data through sharing the updated data once a year would be preferred.

#### **【Set up a place for sharing cases of good practices】**

To promote the MCH HB's use, each region has taken its own approach. There is, however, currently no place to share each practice, so staff of D/CHO, Puskesmas and Posyandu have requested places be set up for sharing the good practices from each region. Though it is not realistic to set a gathering place only for the MCH HB, it is desirable to set up a place or system by incorporating existed meetings for MCH and MDGs, then the information would be distributed from D/CHO level to Provincial level and then to MOH, then finally the information would be given back to the sites.

#### **【Strengthen of awareness activities for MCH HB users】**

Though the printing and distribution rate of the MCH HB has been improved, some issues, such as some users not having a custom to read the MCB HB, and mothers who do not utilize the MCH HB, were confirmed in the user's side. In order for users to utilize the MCH HB effectively, to prevent cases where the HB is not sufficiently read by users,

its importance has to be informed to everyone. Guidance is necessary to strengthen the advocacy activities for users to utilize HB correctly from MOH to LGs and then LGs to Puskesmas or Posyandu. In this case, it should be effective to conduct trainings for not only pregnant mothers but also for Kadars who do not fully understand its importance.

**【Measures for utilization of MCH HB in private health facilities】**

Staffs of PHO and D/CHO which were visited by site surveys at the ex-post evaluation expressed the future challenge of utilization of the MCH HB in private health facilities. For the MCH HB to function as a referral tool, various types of health facilities need to use the MCH HB. In Indonesia, where improvement of MCH care, including a referral service, is an important issue, it is necessary to figure out the factors resulting in a lack of full dissemination and use of the MCH HB at private health facilities.

### **4.3 Lessons Learned**

#### **4.3.1 Lessons Learned to JICA**

**【Considerations which meet the local situation】**

When printing and revising the MCH HB, it is prohibited to change and modify the contents, however, it is permissible to add some contents as attachment and replace the front page with contents relevant to each region. In fact, each region makes distinct front pages which have a sense of closeness for those using. In addition, putting the logo of JICA on the front page is not compulsory (though it is necessary to put that the MCH HB was developed with the support of JICA) and UNICEF and other private companies were able to easily support printing as a part of CSR activities. As such, the making of various efforts and ideas for dissemination of MCH is considered to have contributed to the spreading of the MCH HB.

**【Impact caused by the involvement of many stakeholders】**

Apart from the main C/Ps, the Department of Child Health in MOH, various stakeholders, including the Department of Maternal Health, Regional Nutrition, Regional Health, Medical Services, each model province and district/city, as well as professional institutions, religious organizations, and women's associations were involved in the project activities. Also when conducting the trainings, not only health facilities or ministries, but also health volunteers who are closest to users, were included. In this way, involving various institutions and actors resulted in each of them playing an important role to promote utilization of the MCH HB. Meanwhile, a high capacity for coordination is essential in the case where various factors are involved. A lack of coordination among various stakeholders may adversely cause confusion. In this project, almost of all experts

have experience in joining the activities of the MCH HB either in Phase 0 or 1, thus experiences and networks accumulated from Phase 0 resulted in this success. For future projects where many stakeholders are involved, it is essential to ensure an implementation structure which has sufficient function and experience. In this case, rather than following this Project, making a plan after examining the implementation structure, considering the function of coordination, the capacity of C/Ps, experience of experts, and based on the individual situation is recommended.

(End)



Republic of Uzbekistan

Ex-Post Evaluation of Japanese Technical Cooperation Project  
“The Nursing Education Improvement Project”

External Evaluator: Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

**0. Summary**

This project was conducted to establish a new nursing education model based on the concept of “Client-Oriented Nursing”<sup>1</sup> (hereinafter referred to as “CON”) in Uzbekistan. The project direction was consistent with Uzbekistan’s strategy, which emphasizes reforming the healthcare system, and Japanese assistance policy, which prioritized reconstruction of the healthcare system and medical personnel education. It also met the needs to enhance the quality of medical workers in Uzbekistan, hence the relevance is high. The project introduced new nursing education via the model Medical College (hereinafter referred to as “MC”), by modifying the curriculum and teaching material, and developing facilities and medical equipment to disseminate the CON concept. The nursing education model based on the CON concept has been introduced at all MCs in Uzbekistan at the time of the ex-post evaluation, therefore its effectiveness and impact are both high. The efficiency of this project is moderate since more input than planned was required as the cost to improve understanding of the new CON concept exceeded the original estimate. Its sustainability is considered high, because new nursing education has been disseminated and implemented steadily at all MCs nationwide, despite minor concern over the future role of Nursing Education Center (hereinafter referred to as “NEC”), which has responsibility for retraining MC teachers.

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

**1. Project Description**



(Project Location)



(Clinical Practical Classes for Child Health Nursing at MC)

<sup>1</sup> Client-Oriented Nursing involves providing nursing and life support based on the needs of each patient’s life cycle stage, such as childhood, puberty, adulthood and elderly stages.

## 1.1 Background

The government of the Republic of Uzbekistan (hereinafter referred to as “Uzbekistan”) introduced reform of the healthcare system to differentiate the medical service which was established during the former Soviet Era and practiced till the country’s independence in 1991. Uzbekistan issued “the Decree of the President”<sup>2</sup> in November 1998, since which time the health and medical system have both been comprehensively reformed. In 1999, efforts started to improve the nursing education system as one of the priority areas; namely “advancing education for healthcare personnel” to promote the upgrade of nursing and contribute to better medical services for people in Uzbekistan. By analyzing healthcare systems in developed countries, Uzbekistan, where nursing work was considered a subsidiary duty of doctors, recognized that technical trained nurses could play key roles in national healthcare and that the nursing education system had to be improved to enhance medical services. As part of this improvement, the Ministry of Health of Uzbekistan (hereinafter referred to as “MOH”) decided that all medical institutions should be turned into three-year medical colleges by 2005. Moreover, nursing faculties were also annexed onto the faculties of medicine of universities for advanced training after medical college.

Under these circumstances, Uzbekistan requested technical cooperation on nursing education and nursing management from the Government of Japan, which had conducted technical assistance by dispatching short-term experts in the nursing field. Subsequently, the Government of Japan commenced the project from July 2004 with MOH and the Ministry of Higher and Secondary Specialized Education (hereinafter referred to as “MOHSSE”) in Uzbekistan as counterpart organizations.

## 1.2 Project Outline

Overall Goal	Nursing education, based on “Client-Oriented Nursing (CON)” is innovated in medical colleges throughout the country.	
Project Objective	An educational model based on CON is established.	
Outputs	Output 1	Concept of CON is introduced into in-school education at First Republic Medical College (FRMC).
	1-1	Teaching plan and teaching program based on CON for FRMC are approved by MOH and MOHSSE.
	1-2	Teaching guidelines for 7 subjects are prepared based on CON.
	1-3	Teaching method of CON is understood by the nursing teachers.
	Output 2	CON practice teaching is introduced in the model hospital.
	Output 3	Standard of nursing education (teaching plan and teaching program) is proposed.
Inputs	Japanese Side: 1. 108 Experts	

<sup>2</sup> Presidential Decree No. 2107, issued on November 10, 1998.

	<p>5 for Long-Term 103 for Short-Term</p> <p>2. 39 Trainees received</p> <p>3. Equipment 33.30 million yen</p> <p>4. Local Cost 58.73 million yen</p> <p>Uzbekistan Side:</p> <p>1. 6 Counterpart(s)</p> <p>2. Land and Facilities (Renovation of NEC) 3.6 million yen</p> <p>3. Operation Cost for NEC 20.2 million sum (As of December, 2008 at the exchange rate of 1US\$=1,362.43 sum)</p>
Total cost	591.7 million yen
Period of Cooperation	July, 2004 – June, 2009
Implementing Agency	Ministry of Health, Ministry of Higher and Secondary Specialized Education
Cooperation Agency in Japan	Oita University of Nursing and Health Science
Related Projects	(Technical Assistance) Short-Term Experts: Nursing (1999), Nursing Advisors (2000 and 2001), Nursing Management, Community Health Nursing and Emergency Nursing (2002) (Grant Aid) The Project for Improvement of Nursing Education System(Exchange of Notes: April 2003)

### 1.3 Outline of the Terminal Evaluation

#### 1.3.1 Achievement of Overall Goal

It was mentioned that MOH intended to disseminate CON education step by step<sup>3</sup> and complete it by 2012 since the project targeted “100% of MCs starting education based on CON by 2012” as an indicator to be achieved. The terminal evaluation report in 2009 pointed out that MOH had to make considerable effort, e.g. such as upgrading nursing teachers, developing teaching materials and renovating MCs to disseminate the integrated Teaching Plan to all MCs by 2012.

#### 1.3.2 Achievement of Project Objective

The project set verifiable indicators for project purposes, such as “70% of First Republic MC (hereinafter referred to as “FRMC”) graduates passing a comprehension test on CON”. Though the comprehension test was scheduled for June 2009, test and questionnaire surveys were conducted at the time of the terminal evaluation to capture the student’s comprehension. Consequently, only 25% of students received a pass mark, but it was pointed out that the project purpose would be achieved by the end of the project, considering conditions such as “the comprehension test was implemented without

<sup>3</sup> Since it was difficult to implement upgrading of the nursing teachers and prepare practical equipment for all MCs at the same time, MOH intended to first disseminate CON education to MCs in Tashkent city, followed by those in Tashkent province and core MCs in each areas, and finally all MCs.

advance notice,” or “students were unfamiliar with paper-based and multiple choice methods.” Furthermore, it was also noted that each output progressed as planned, teacher’s comprehension on CON improved, and the development of facilities of MC also progressed.

### 1.3.3 Recommendations

Recommendations were made to the NEC<sup>4</sup>, MOH and JICA. Those for NEC involved continuing the comprehension test or questionnaire for MC teachers and holding seminars. MOH was recommended to provide human resources and financial support to NEC. Finally monitoring and following up on the NEC management situation was recommended to JICA.

Following the above recommendations, NEC has conducted comprehension tests for MC teachers who take the upgrading training. When CON was introduced to MCs, a seminar for the director of each MC was held with the support of MOH. MOH also has continued supporting NEC, for example, by arranging the dispatch of teachers from medical universities to NEC, and providing financial support. Regarding JICA, a follow-up survey for medical equipment was conducted.

## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

### 2.2 Duration of Evaluation Study

Duration of the Study: September, 2012 – August, 2013

Duration of the Field Study: November 20-December 4, 2013 and February 18-23, 2014

## 3. Results of the Evaluation (Overall Rating: A<sup>5</sup>)

### 3.1 Relevance (Rating: ③<sup>6</sup>)

#### 3.1.1 Relevance to the Development Plan of Uzbekistan

As for the project planning, a sectoral development plan was placed to follow since there was no integrated development policy based on mid and long-term perspectives in Uzbekistan<sup>7</sup>. At that time, the President’s “National Health Reform Program” Decree was issued and “reforming nursing education” was promoted as a goal of one of the 12

<sup>4</sup> NEC is the executing agency established at the beginning of this project, which adopts the role of implementing the re-training program for teachers of MCs based on the CON concept.

<sup>5</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>6</sup> ③: High, ②: Fair, ①: Low

<sup>7</sup> Source: “Country Specific Evaluation Report for Uzbekistan and Kazakhstan (2004)”

priority plans, namely to improve training quality.

Presidential Decree No.3923 ,“Main directions of further deepening the reform and implementation of the National Healthcare Development Program”, adopted in 2007 also prioritized reform of medical personnel education and promotion of reform on retraining. Thus, the importance of promoting reform of the healthcare system and medical personal education, including nursing education, was confirmed, even at the time of project completion. In addition, a Welfare Improvement Strategic Paper (2009-2010), which was formulated with the support of development partners including World Bank, Asian Development Bank and United Nations Development Programme, etc., also emphasized integrated development, quality improvements on public services such as, health and education as well as equitable income distribution, and clearly stated that the plan aimed to improve the quality of medical services.

The project was therefore consistent with Uzbekistan’s health policy for improving the quality of medical personnel; both at the time of the ex-ante evaluation and project completion.

### 3.1.2 Relevance to the Development Needs of Uzbekistan

In Uzbekistan, the role of nurses was limited to assisting doctors at the time of the project planning and they were not required to engage in nursing on their own initiatives. Nursing education also focused on teaching knowledge and techniques for nurses in their subsidiary role to doctors. Accordingly, reform of nursing education was set as a super goal in “improving the quality of training for medical personnel” of the National Health Reform Program, hence training and upgrading of medical personnel were required. Meanwhile, it was crucial to retrain MC teachers because most were originally doctors without nursing education<sup>8</sup>. Most importantly, a lack of CON concept the international tendency stresses and Primary Health Care (hereinafter referred to as “PHC”) in medical services had been previously pointed out by short-term experts dispatched by JICA and the need to resolve these circumstances was recommended to MOH in the report.

In the terminal evaluation report, the result of the questionnaire survey for NEC teachers, MOH staff and chief nurses in model hospitals showed an interest in CON among staff working at hospitals, students and MC teachers, which was reflected in answers describing desired nursing as “high quality care which meets each patient’s needs, good communication, clear explanation, gentle consideration, easing anxiety, explanation

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<sup>8</sup> Teachers in MCs of Uzbekistan must be university graduates. At the time of project planning, it was common for doctors to become teachers of MCs since very few nurses met the requirements. Under current circumstances, nursing departments have been set up at several medical universities and there is an increasing trend for teachers with nursing education to become qualified as teachers in MCs.

to family”. Since this was the first attempt to introduce CON-based nursing education in Uzbekistan, retraining of teachers in MCs as venues for nursing education was clearly essential to disseminate this new nursing education to all MCs in Uzbekistan. Accordingly, the needs to retrain teachers in MCs, and develop environmental arrangement remained high at the time of project completion.

### 3.1.3 Relevance to Japan’s ODA Policy

In the JICA country operation plan for Uzbekistan at the time of project planning, reforming medical and education service was one of three priority pillars. Among them, “fostering and strengthening the role of nurses” was focused on as a priority assistance area for preventive care and dissemination of the concept and PHC service. Hence, the Project, focusing on retraining teachers of MCs, was consistent with Japanese ODA policy.

As mentioned above, this project has been highly relevant with the Uzbekistan’s development plan, development needs, as well as Japan’s ODA policy, therefore its relevance is high.

## 3.2 Effectiveness and Impact<sup>9</sup> (Rating: ③)

### 3.2.1 Effectiveness

Through the project activities, nursing education was revised by introducing a new “CON” concept in Uzbekistan, where nursing education was originally conducted basically for doctors. In particular, the curriculum, which was originally formed by specialties such as internal medicine, surgery, dermatology, etc., was revised to a new curriculum on seven nursing subjects<sup>10</sup> based on each stages of each patient. Accordingly, the curriculum was revised to teach the knowledge and techniques to provide nursing based on the CON concept, whereupon teaching guidelines and nursing practice guidelines were also revised in line with the new curriculum to introduce revised nursing education in MCs. In terms of effectiveness, the achievement of the outputs and project purposes, and contribution of outputs in achieving the project purpose upon project completion were usually analyzed. In this ex-post evaluation, however, it is necessary to analyze the effectiveness from the institutional side to ascertain whether the new revised nursing education model has been established after introducing the new concept through

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<sup>9</sup> Sub-rating for Effectiveness is to be put with consideration of Impact.

<sup>10</sup> 1. Fundamental nursing, 2. Maternal health nursing, 3. Child health nursing, 4. Adult health nursing, 5. Gerontological nursing, 6. Psychiatric nursing including Mental health nursing, 7. Community health nursing. Among these seven subjects, Gerontological nursing, Psychiatric nursing and Community health nursing were newly introduced in Uzbekistan.

the project. Therefore, to verify the current institutional situation, some of the verified indicators to output and project purpose at the time of the ex-post evaluation were also examined as well as reviewing the current situation at the time of project completion.

### 3.2.1.1 Project Output

#### Output 1

Concept of CON is introduced into in-school education at FRMC.

At the time of planning, the original indicator was set as a CON concept introduced into in-school education, but divided into three outputs 1-1, 1-2 and 1-3 to clarify the contents. Accordingly verified indicators were also newly set up respectively.

Output 1-1 Teaching plan and teaching program<sup>11</sup> based on CON for FRMC are approved by MOH and MOHSSE.

*[Indicator 1] Authorized person of MOH and MOHSSE sign to approve the draft Teaching Plan by September 2006.*

*[Indicator] Authorized person of MOH sign to approve the draft Teaching Program based on CON for the FRMC by September 2008.*

Both the teaching plan and teaching program by seven nursing subjects were prepared during the project and approved in 2006 by MOH and 2007 by MOHSSE respectively. Accordingly, the ex-post evaluation confirmed that output 1-1 had been achieved, although it was slightly delayed. The teaching plan and teaching program as project outputs were developed by Japanese Experts, Counterpart (hereinafter referred to as “C/P”) of the Uzbekistan side and a member of each Working Group, which comprised teachers from MC, NEC, etc. Under current circumstances, these project outputs, namely the teaching plan and teaching program, are the basis of nursing education introduced at all MCs in Uzbekistan. Therefore, developing the teaching plan and teaching program helped establish an educational model based on CON in the country.

Output 1-2 Teaching guidelines<sup>12</sup> for 7 subjects are prepared based on CON.

*[Indicator] Teaching guidelines are accredited through the third party by March 2009.*

Under the project, teaching guidelines and nursing practice guidelines of seven subjects

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<sup>11</sup> In the course of project implementation, some concepts were shared among all stakeholders. The curriculum was translated into a teaching plan (time schedule) and teaching program. The teaching plan specifies the subjects and number of classes required for graduation, while the teaching program shows details of the syllabuses.

<sup>12</sup> The concept of the teaching material is also shared among stakeholders and translated into teaching guidelines and nursing practice guidelines respectively.

were newly prepared as part of the arrangement required to introduce a revised nursing education based on the CON concept in Uzbekistan. Teaching materials were also developed by Working Group of each subject, whereupon teaching guidelines and nursing practice guidelines for all seven subjects were translated into both English and Russian in October 2008. Subsequently, all outputs were carefully re-examined by Japanese experts and approved by MOH and MOHSSE in April 2009. Although slightly behind schedule, output 1-2 was therefore also achieved.

After the project completion, MOH distributed teaching materials and teaching guidelines to all MCs, nursing departments of universities and related institutions to facilitate understanding of nursing education based on the CON concept. Subsequently, MOH revised the curriculums to increase the proportion of practical lessons, followed by teaching guidelines in 2011.

Output 1-3 Teaching method of CON is understood by the nursing teachers.  
*[Indicator]80% of C/P, staff, teachers of nursing practice teaching and retraining members of FRMC pass the comprehension test on the teaching guideline by March 2009.*

The nursing education method based on the CON concept was firstly instructed to C/Ps, NEC teachers who will provide retraining courses and nursing teachers at FRMC, which is the model MC of the project. Subsequently, all C/Ps and teachers who learned nursing education based on CON took the comprehension test on April 10, 2009 and 82% received a pass mark. Output 3 was also therefore achieved, although slightly behind schedule.

Even after the project completion, NEC<sup>13</sup> continued providing retraining courses for nursing teachers of MCs by province. 2,904<sup>14</sup> nursing MC teachers had received retraining courses by the end of 2012 and NEC keeps monitoring the level of understanding among

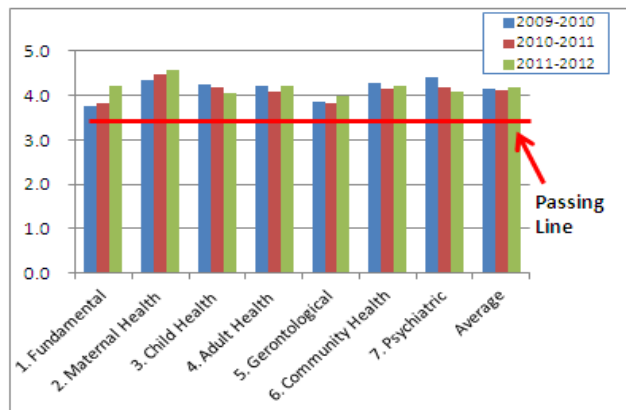


Figure 1 Comprehension test result for MC teachers

Source: Prepared by the Evaluation Team based on documents provided by NEC.

<sup>13</sup> After the project was completed, “Nursing Education Centers” (NECs) were renamed “Nursing Teachers Upgrading Centers”. In this report, both “Nursing Education Center” and “Nursing Teachers Upgrading Center” are described as “NEC”.

<sup>14</sup> This figure is equivalent to 90% of all teachers in charge of nursing education.



nursing teachers by conducting comprehension tests after the retraining courses. The test conducted during the project was paper style, however, an observation test during practical lessons and an interview are now added to the comprehension test. During these years, all teachers passed the tests, which were conducted by the end of 2012, by obtaining a mark of around 4 points, with the average pass mark exceeding 3 points out of 5, as shown in Figure 1.

Output 2 CON practice teaching is introduced in the model hospital. .  
*[Indicator]The minimum requirements of CON practice are fulfilled in the clinical practices at model hospital and FRMC's practice hospitals by June 2009.*

Before the CON concept was introduced, very few classes were taken for clinical practices nursing, so prior training by utilizing nursing practice guidelines was held to introduce the new clinical practice lessons. In addition, the project stipulated four minimum requirements<sup>15</sup> for conducting clinical practice lessons at model hospitals, which were then set as verifiable indicators to be achieved for output 2. Each requirement and the status of achievement on project completion are shown as below.

Table 1 Requirements for Clinical Practice Classes and the Status of Achievement

	Requirements	Status of Achievement
1.	Health facilities assign suitable nurses for 80% of students in clinical practice when practicing commences.	A contract letter was exchanged between MCs and hospitals, which specifies the nurses assigned for students. 100% achieved as nurses were assigned to all students for clinical practices.
2.	To prepare patients who will be attached to 80% of students when practicing commences.	Though some cases involved two or three students taking care of a patient, all students were attached to patients for clinical practice.
3.	80% of students can obtain information from patients' records within the first 2 days of the practice period.	According to the survey conducted by Japanese experts, 98.7% of students obtained information within the first 2 days of the practice period.
4.	80% of conferences with head nurses are conducted.	Only 5 out of 363 conferences were conducted without head nurses.

Source: Prepared by the evaluator based on the "Experts Completion Report" of the project

These four criteria were selected to meet the minimum CON concept requirements. MC and hospitals for clinical practices have exchanged contracts which clarify that these four requirements must be met. In addition, it was confirmed by interviewing hospital

<sup>15</sup> At the start of the project, these minimum requirements for clinical practices were not imposed given the lack of experience in conducting CON-based clinical practices in Uzbekistan at that time. There was therefore a need to examine criteria which would be the basis for clinical practices in the country. When introducing clinical practices, the project examined the necessary requirements based on actual circumstances on the ground and finally set four minimum requirements.

teachers of for clinical practices that these minimum requirements were appropriately implemented. Therefore, output 2 has been achieved as shown in table 1. As mentioned, setting clear requirements and then specifying them in the contract made it easier to introduce CON-based clinical practices to hospitals. According to leading nurses for clinical practices, they monitored how students treated patients and advised them if needed, although this was not included in the minimum requirement.

Output 3 Standard of nursing education (teaching plan and teaching program) is proposed.

*[Indicator] MOH accepts the proposal prepared by the projects by June 2009.*

Under this project, the teaching plan and teaching program were revised and it was proposed that this revised CON-based nursing education would be the nursing education standard in Uzbekistan. MOH and MOHSSE accepted this new nursing education standard in April and June 2009 respectively, meaning output 3 has also been achieved.

As mentioned in “Relevance”, promoting CON-based nursing education was consistent with President Decree No. 3923 and reflected the same direction as adopted by MOH. This consistency strongly encouraged the dissemination of this new standard of nursing education nationwide with the strong initiative of MOH without any institutional impediments. MOH initially planned to introduce CON-based nursing education in stages, but it was actually started at all MCs nationwide the following year, in 2010. Furthermore, it was confirmed that NEC, which was established at the start of the project, would exist as a retraining education center, and that members of C/P would be used as NEC teachers.

### 3.2.1.2 Achievement of Project Objectives

Project Objective An educational model based on CON is established.

*[Indicator] 70% of graduates of FRMC in 2009 pass a comprehension test on CON.*

This project aimed to improve understanding of the CON concept by introducing CON-based nursing education to FRMC first as a model MC. At the time of terminal evaluation, a test on CON concept for students at FRMC was conducted to determine the comprehension level. Consequently, only 25.3% of them gained over 60%. At that time, it was expected that the test or understanding level would improve by the project completion, considering that students were unfamiliar with the paper-based method and the questionnaire survey was implemented without any advance notice. However, only 25% of students obtained the passing rate for the comprehension test on project completion in 2009, which was lower than the target score. Conversely, it was clarified that the indicator, 70% of FRMC graduates passing a CON comprehension test in 2009,

was not shared among stakeholders in an interview survey conducted during the ex-post evaluation. In addition, it remained unclear why the target score was set at 70%, despite our interview survey. Furthermore, stakeholders including the FRMC teachers and NEC and MOH staff questioned the validity of this indicator, since they insisted that “the comprehension level of students should be scaled not only by the result of a paper test but also by qualitative aspects through observation by nursing teachers at clinical practices” and “some time will be needed until the new nursing education reflects students’ understanding and the test result.”

In addition, it was confirmed that 60% of respondent (students) answered that nursing means “independent tasks as a nurse” after they had experienced clinical practices for all seven subjects in a questionnaire survey on CON, which was conducted simultaneously with a comprehension test. On the other hand, 60% of them responded answered that nursing means “the subsidiary role of doctors” after they took only two subjects (fundamental nursing and adult health nursing) based on revised nursing education as shown in Figure 2.. Referring to this result, the perception of students toward nursing and comprehension of the CON concept are considered to have improved. In MCs, a unified examination is conducted on

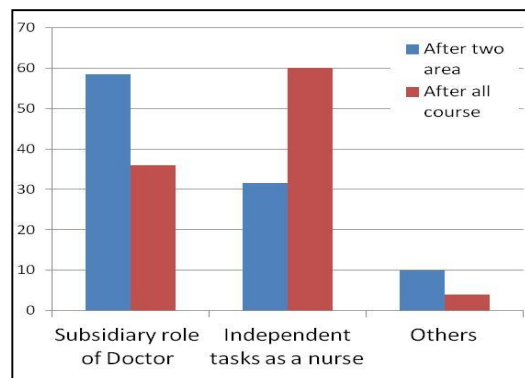


Figure 2 Result of comprehension test on CON  
Source: Project completion report.

graduation, which included subjects related to CON education<sup>16</sup>. As to the test score for the past three years, the average for subjects related to CON education has improved to over four of a possible five<sup>17</sup> as shown in table 2. According to MC teachers and MOH staff, this is due to enhanced comprehension among MC teachers given greater experience in teaching CON education with the improved teaching methods.

Table 2 Test Result of students on CON Subjects at FRMC after the Project Completion

2009-2010	2010-2011	2011-2012
4.09	4.24	4.30

Source: Documents provided by FRMC

As mentioned above, students’ comprehension deepened thanks to the output produced by the project, despite some minor concerns over sharing information among project-related people, and the setting and appropriateness of indicators. This project is

<sup>16</sup> Subjects related to CON education mean seven nursing subjects, namely Fundamental nursing, Maternal health nursing, Child health nursing, Adult health nursing, Gerontological nursing, Psychiatric nursing including Mental health nursing and Community health nursing.

<sup>17</sup> The test result was scored from one to five. The pass score was three and above.

thus considered to have achieved its objectives and its effectiveness is high.

### 3.2.2 Impact

#### 3.2.2.1 Achievement of Overall Goal

Overall Goal	Nursing education, based on CON is innovated in MC throughout the country.
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[Indicator]	100% of MCs starts the education based on CON by 2012.
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Initially, MOH intended to disseminate CON-based nursing education to MCs nationwide step by step<sup>18</sup>. However, MOH invited Directors of all MCs and held a seminar on CON education in 2009. Afterwards, CON education was introduced to 33 of 78 MCs the same year and to the remaining MCs the following year, with new curriculum introduced and MC's facilities renovated earlier than planned in the indicator. In Uzbekistan, the promotion of CON-based nursing education was recognized as part of the "National Program of Reforming the Healthcare System". Accordingly, this program pushed MOH to introduce a new curriculum and develop facilities and teaching materials to disseminate CON education in 2010. These arrangement was planned done by 2012 originally, however, initiative of MOH was able to accelerate the schedule. Furthermore, NEC has now conducted retraining on CON education for nursing teachers in all MCs, and 90% of nursing teachers have taken a retraining program<sup>19</sup>. Each MC implements CON-based nursing education in line with the teaching guidelines and under MOH guidance at the time of the ex-post evaluation. In the ex-post evaluation, the lack of any critical problems in terms of teacher's sufficiency was not confirmed through an interview survey at visited MCs.

In Uzbekistan, if the government deems any issues as important, activities are swiftly executed. Since the project purpose matched the direction of national health reform in Uzbekistan, MOH, as the executing agency, recognized the importance of revised nursing education and this consistency enabled to the CON-based nursing education to be disseminated nationwide earlier than planned.

#### 3.2.2.2 Other Impact

##### (1) Enhanced CON awareness and comprehension among doctors and nurses

Under the project, seminars for healthcare professionals were held in addition to those

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<sup>18</sup> Based on the initial schedule, it was planned to start by disseminating CON education in Tashkent city, followed by Tashkent Province and core MCs and finally all MCs in Uzbekistan.

<sup>19</sup> The reason why around 90% of teachers took the retraining program was that about 5% of MC teachers left and returned due to maternity leave or nursing care of family members every year on average. There is thought to be a need to continue the retraining program for these teachers in the future.

for MC teachers. These seminars, new nursing concept and seven CON-based subjects were introduced, featuring the participation of approximately 2,000 people, including observers. As well as MC teachers, doctors and nurses of hospitals in Uzbekistan also became interested in the CON concept through these seminars. The result of a beneficiary survey<sup>20</sup> conducted at this ex-post evaluation also showed that the 96% of doctors and nurses who responded stated that understanding of CON had improved among doctors and nurses at hospitals for practice nursing. This enhancement of concerns and comprehension also pushed the promotion of CON introduction in line with the direction of nursing education in Uzbekistan. Also when asking the same respondents about “nursing works” in the beneficiary survey, there were some changes in perception from the “subsidiary role of doctors” to “independent tasks or nurses” or “support of patients and families” as shown in Table 3. This result shows that as well as nursing teachers and students of MC, as direct project beneficiaries, doctors and nurses have also enhanced their understanding of nursing based on CON.

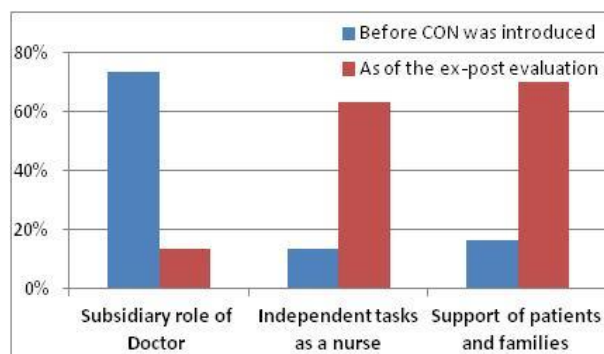


Figure 3 Perception of Nursing Works (Result of the Beneficiary Survey)

In addition, more than 70% of respondents replied that they had some difficulties in conducting practice nursing because MC teachers failed to fully understand the concept at the beginning of the project, but there were no issues or concerns under current circumstances because MC graduates or teachers increased their experiences (Please refer to Figure 4). According to respondents, understanding of CON has been enhanced over time and experience, even after project completion, which further spurred confidence to conduct CON-based nursing education.

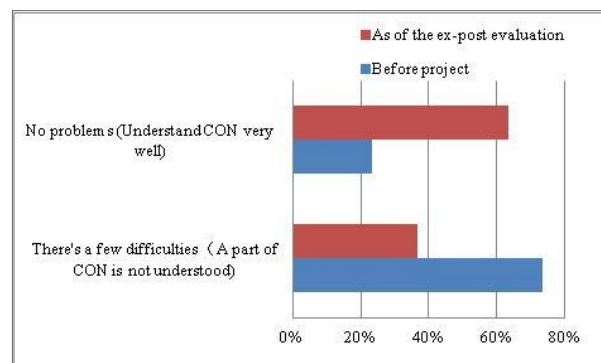


Figure 4 Implementation of CON-based Nursing Education (Beneficiary Survey result)

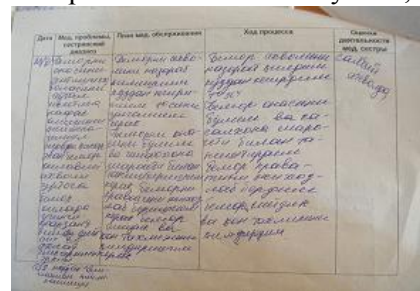
<sup>20</sup> In the ex-post evaluation, a beneficiary survey was conducted to capture the effect of the implementation of CON-based nursing education and changes before and after the project. The respondents were 96 MC teachers or staff and nurses at hospitals for practice nursing.

(2) Changes caused by the implementation of the CON-based nursing education

An interview survey conducted at MOH, MC and hospitals for practice nursing showed that various changes were confirmed at all MCs and hospitals by implementing CON-based nursing education of MC teachers and students as well as nurses in hospitals for practice nursing. In addition, the result of the beneficiary survey also indicated that 97% of respondents thought the quality of nursing works at hospitals for practice nursing had increased through project activities. The major changes are explained as follows:

**【Improved status of nursing works】**

Students for practice nursing and some nurses in practice nursing hospitals have started acting independently compared to before since they engaged in nursing more positively, rather than doing subsidiary works on behalf of doctors. For example, a nursing record was started being kept for each patient in major hospitals in Tashkent city, which had never previously been done. Under these circumstances, students and nurses who learned nursing education with the new curriculum experienced the new system, whereby a nurse was assigned to each patient. It is thought that both experiences prompted them to strive to improve care for patients. As such, assigning these responsibilities helped encourage their pride in the work they did as nurse. In addition, some doctors also started to accept the new role of nurses, which helped boost their social status.



(Photo) Nursing record

**【Increase of dialogues and development of a trusting relationship with patients】**

Before the project implementation, it was very rare for nurses to communicate with patients. Conversely, revised nursing education was based on the CON concept, which means “client- (patient-) oriented nursing” and “providing nursing and life support based on the needs of each patient’s life cycle stage”. Thus, under this concept, practical nursing guidance on how to treat patients and provide meal assistance as well as attention to hygiene, etc. are also included, which boosts efforts to increase dialog and develop trusting relationships between patients and nurses as impact of the project. There are sign books for patients to comment on services in each hospital and recently, words of appreciation for caring are often written, which were never previously seen before the introduction of the CON concept. This writing can thus be said to reflect changes between patients and nurses.



(Photo) Words of appreciation from patients to nurses

### 【Improved family support for patients】

According to the results of a beneficiary survey, 98% of respondents answered that the introduction of the CON concept had helped improve family support for patients. In Uzbekistan, it is culturally common for family members to take care of patients in hospitals. In CON-based nursing education, nurses guide family members on how to administer personal care, including meal assistance or changing sheets, which helps improve the care given by families to patients.

As mentioned, this project introduced a new concept, CON. Through the project activities at the model college, the project purpose, namely to establish a model for new CON-based nursing education, was mostly achieved. Upon project completion, a revised curriculum based on nursing education around the CON concept was introduced as Uzbekistan's new nursing education system through a strong MOH initiative. At the time of the ex-post evaluation, it was confirmed the revised nursing education had been actually conducted at MCs in Uzbekistan, and that the overall goal was achieved for its target indicators, therefore its effectiveness and impact is high.

### 3.3 Efficiency (Rating: ②)

#### 3.3.1 Inputs

Planned and actual inputs for the project are shown in Table 3.

Table 3 Plan and Actual Inputs

Inputs	Plan	Actual Performance (As of terminal evaluation)
<b>Japanese Side</b>		
1. Experts	• Long term expert: 15 • Short term experts: 50	• Long term expert: 5 • Short term experts: 103
2. Trainees received	25 trainees	39 trainees (Training in Japan)
3. Equipment	16 million yen (Equipment for audio-visual, material preparation, printing, etc.)	27.5 million yen (Equipment for audio-visual, material preparation, printing, etc.)
4. Local cost	36 million yen	57.7 million yen
Project total cost	390 million yen	590 million yen
<b>Uzbekistan Side</b>		
1. C/P personnel	Not stated	6 C/Ps
2. Land and facilities	Office for JICA experts with utilities	36 million yen (Renovation of NEC)
3. Others	Not Stated	20,213,000 sum (NEC operation cost)

Source: Terminal evaluation report.

### 3.3.1.1 Elements of Inputs

#### (1) Japanese Side

##### **【Dispatch of experts】**

Long term experts: Chief advisor, Nursing education, Coordinator

Short term experts: Project management, Training supervisor, Fundamental nursing, adult health and gerontological nursing, Maternal and child health nursing, Maternal nursing, Child health nursing, Psychiatric nursing and Community health nursing

As shown in Table 3, over 100 short-term experts were dispatched during the project implementation. This is because revising the teaching program and teaching materials for all seven subjects as well as retraining the teachers required the involvement of this many short term experts. The Uzbekistan side also admitted that the purpose of introducing the new CON concept would not have been realized without this many experts and their various areas of expertise. While the needs were confirmed, certain factors, namely the lack of long term experts<sup>21</sup> to coordinate numerous short term experts and difficulty in sharing information among project-related people were confirmed. These circumstances led to a situation whereby the project purpose was not recognized by C/Ps and some Japanese experts. Accordingly, it can be said that these factors partly impede the efficiency of project implementation.

##### **【Trainees received】**

39 nursing educators and administrative officials took the training courses for “nursing educators<sup>22</sup>” or “nursing management<sup>23</sup>” in Japan. According to the interview survey for the trainees, the opportunities to expose how nurses cared for patients and nursing practices in hospitals in Japan were new and exciting experiences, which also triggered increased interests in CON<sup>24</sup>. Administrative officials also stated how these experiences have helped boost commitment for disseminating CON across countries and retaining the project sustainability.

##### **【Equipment and local cost】**

Audio-visual equipment for training, equipment for preparing teaching materials and

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<sup>21</sup> Under this project, the duration of each stay of short term experts was about one week on average. At the latter part of the project, short term experts who relatively stayed longer (about a half of year) also dispatched due to the large amount of duties.

<sup>22</sup> The course provided mainly practical training based on the CON concept or CON-based nursing education.

<sup>23</sup> The course was for training in nursing management.

<sup>24</sup> Training was conducted at academic institutions, hospitals, institutions for elderly people, healthcare centers, home-visit nursing stations and working facilities for psychotic patients and so on.



printing and medical equipment for demonstrations needed for nursing practice were procured to NEC, FRMC and Center of Emergency Medical Care, which were the model hospitals in this project. The scope of local cost included the operating cost of training, while each input was admitted to produce each output. However, a lack of translators and interpreters impeded the smooth implementation of the project and required additional input at an early stage. Later, interpreters and translators gradually enhanced their capacities with the guidance of Japanese experts and efforts, including accompanying training to Japan. Conversely, the importance of interpreters and translators had to be appropriately taken into account at the planning stage with the nature of the project in mind.

## (2) Uzbekistan Side

### 【Counterpart assignment】

Six counterpart personnel were assigned and joined the project activities from MOH and MC. These six C/Ps were assigned to Working Groups in each subject to revise the curriculum<sup>25</sup>.

### 【Land and facilities】

As originally planned, part of the building in FRMC located in Tashkent city was renovated and provided to NEC as the main venue for the project activities.

### 【NEC operation cost】

The total of 20,213,000 sum<sup>26</sup> was paid as the NEC operation cost to retrain MC teachers.

#### 3.3.1.2 Project Cost

The planned cost of the Japanese side totaled 390 million yen, but the actual total project cost was 590 million yen, namely higher than planned (150%). One of the reasons was the need for frequent travel, due to special circumstances whereby numerous short term experts in all seven nursing subjects were involved. In addition, costs exceeding the forecast level were also incurred with additional translation cost.

#### 3.3.1.3 Period of Cooperation

The actual cooperation period was 60 months as planned. During the early stages of

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<sup>25</sup> There were 6 C/P personnel since a C/P was in charge of two subjects.

<sup>26</sup> It included the cost for salaries and operation cost at the time of the terminal evaluation (as of December, 2008 at exchange rate of 1sum=0.066 Japanese yen.)

the project, there was some delay due to a lack of understanding of the importance and the appropriate number of translators and interpreters. However, additional input for translators was made and efforts made to enhance their capacity, whereupon activities could subsequently be conducted as planned.

As described above, although the cooperation period was within the planned scope, the project cost exceeded the forecasts due to the frequent dispatch of short term experts and additional input of interpreters and translators, therefore the efficiency of the project is fair.

### **3.4 Sustainability (Rating: ③)**

#### **3.4.1 Related Policy towards the Project**

Since there was no integrated national socioeconomic development plan in Uzbekistan even at the time of the ex-post evaluation, a sectoral development plan is counted. In the health sector, “On measures to further deepen the healthcare reform for 2012-2015” which was formulated in 2011 presented the continuation of the “National Health Reform Program”. A Presidential Decree<sup>27</sup>, which was issued in 2012, also mentioned that a further improvement of training/retraining for professional college teachers, including MCs, would be made. In addition, the CON-based nursing education concept has currently penetrated among MCs nationwide. Accordingly, the sustainability of the output whereby the nursing education model is established under the project is high in terms of related policy aspects.

Furthermore, Presidential Decree No. 3923 (refer to 3.1 Relevance for the details) was valid as of the ex-post evaluation, as with the ex-ante and terminal evaluation and continuation of the National Health Reform Program and the importance of education for medical personnel was maintained.

#### **3.4.2 Institutional and Operational Aspects of the Implementing Agency**

##### **【The operational role of CON-based nursing education】**

Various institutions, including MOH, MOHSSE, NEC, etc., were involved in this project. Even upon project completion, each of the institutions adopted the role of disseminating the CON-based nursing education nationwide and promoting its effects as shown in Table 4. In addition, MOH provided the necessary support by issuing an official letter to each provincial health office when NEC conducted retraining programs, etc. Coordination among each institution was also adequate. There were therefore no major issues concerning institutional and operational aspects under current circumstances.

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<sup>27</sup> Presidential Decree No. 1761, issued on May 28, 2012.

Table 4 The Role of Each Institution on Operating CON-based nursing education

	Role
MOH	Introduction of New Curriculum, support for retraining operations
MOHSSE	Support for the introduction of a new curriculum, approving the revision of programs and teaching materials, securing the quality of education
NEC	Retraining of MC teachers
MC	Introduction and implementation of CON education

Source: Prepared based on an Interview Survey.

### 【Positioning of NEC】

After completing the project, NEC conducted a retraining program for nursing teachers of MC to implement the new nursing education in all MCs nationwide. Under current circumstances, the Director, who currently serves as FRMC director, and three staff members, are assigned in NEC. Since one staff member who used to be a C/P of the project resigned, one teacher for one nursing subject of seven was dispatched from the Tashkent Medical Institute for a CON education retraining program. In addition, FRMC also provided the necessary support for conducting the retraining program, as required. NEC staff have conducted a retraining program for each block by provinces in sequence supported by the Tashkent Medical Institute and FRMC. The retraining program thus proceeded without any serious issues such as shortage of staff numbers.

By project completion, NEC planned to conduct a retraining program based on the CON concept for nursing teachers of all MCs. This plan was already achieved in 2012 by conducting the program for MCs in all provinces. Subsequently, the Ministry of Finance (hereinafter referred to as “MOF”) did not allocate the budget to NEC in 2013 because the difference in function between the upgrading center in Tashkent Medical Academy and NEC was unclear. Meanwhile, the MOH insisted on the need for the continuing existence of NEC because NEC has an important role in retraining returners and revising the curriculum for the future (Please refer to 3.4.4 regarding detailed information on budgetary issues.) The role and position of NEC upon project completion had to be clarified at the time of planning or during project implementation, since it was assumed that a retraining program for all MCs would be completed within a certain period.

### 3.4.3 Technical Aspects of the Implementing Agency

The technical capacity to conduct retraining of nursing education was maintained, as C/Ps of the project were assigned as NEC staff upon project completion. In addition, by conducting classes repeatedly, NEC staff and MC teachers increased their confidence, while some Japanese experts also visited Uzbekistan upon project completion to follow their activities, utilizing university research funds. These efforts also supported their

attempts to enhance their technical capacity. The knowledge and experience gained from this project have thus been fully utilized and there are no serious issues over technical aspects in terms of planning and operating the retraining program. Upon project completion, MC teachers prepared textbooks on the seven subjects for students, meaning the MC teachers involved in this project C/P are considered to have acquired sufficient capacity.



(photo) Textbook for students prepared by MC teachers after the project completion

Conversely, medical equipment required for nursing practice in the revised curriculum was lacking. To ensure sustainability, the situation would need to be improved, since 24 of a total of 78 MCs<sup>28</sup> had the most basic medical equipment, despite the fact classrooms required for nursing practices in seven nursing subjects had already been installed into all MCs. The situation is now expected to improve because funding for installing facilities and equipment to professional colleges was announced by Presidential Decree<sup>29</sup> in 2011. In addition, medical equipment valued at 15 million yen was procured as a follow-up project with JICA support in 2012, and MOH plans to install medical equipment in 8 of 24 MCs in 2013.

#### 3.4.4 Financial Aspects of the Implementing Agency

CON-based nursing education, whose attempts were made to deploy in this project, has been disseminated to all MCs nationwide and now actually implemented. Before dissemination, the required medical equipment and facilities were developed and a retraining program for MC teachers was conducted, meaning basically no additional budget will be needed to continue nursing education in the future. The MOH budget has shown a tendency to increase, as shown in Table 5, and MOH staff also mentioned that a certain degree of sustainability in financial terms to continue CON-based nursing education had been secured at this time.

Table 5 Budget of MOH  
(Unit: billion Sum)

2010	1,704 (81,461)
2011	2,232 (106,715)
2012	2,820 (134,818)

Note : ( ) shows in Japanese yen in million yen  
Source: Documents provided MOH

One concern for the future has to be highlighted, that is, securing the NEC budget, when NEC needs to be restarted the retraining program. Up to 2012, from the time when the project started, the NEC budget for the retraining program was allocated from MOF.

<sup>28</sup> At the time of project commencement (2004), there were 54 MCs in Uzbekistan. However, the figure increased to 78 at the time of project completion (2009) in response to the population surge at the age of 15. Since the procurement of medical equipment started for the original 54 MCs, minimum equipment was procured for the remaining 24 MCs.

<sup>29</sup> Presidential Decree No. 1645 (2011)

However, since the retraining program was conducted for nursing teachers in almost all MCs in 2012, the MOF did not allocate a budget in 2013. The MOF explained that this was because the retraining function could be found at the upgrading center at Tashkent Medical Institute, eliminating the need for an NEC budget. However, according to MOH, it is difficult to conduct CON-based nursing education in this center, since the program offered by the Institute is mainly theory and methodology, and there is no facility for CON-based nursing education there. Although an official letter was issued to MOF from MOH to highlight the importance of NEC's role and function, there is no response for future allocation to NEC, even if there is a need to restart the retraining program. The average annual NEC budget over the past three years was 1.7 million yen, therefore, MOH is considering countermeasures, even if MOF does not allocate the budget when the retraining program has to be restarted, for example securing the NEC budget with the MOH budget, or integrating the function of NEC within the upgrading center.

As mentioned, no major problems were observed in terms of the policy background, or the structural, technical or financial aspects of the executing agency, hence the sustainability of the project effects is high.

#### **4. Conclusion, Lessons Learned and Recommendations**

##### **4.1 Conclusion**

This project was conducted to establish a new nursing education model based on the concept of "Client-Oriented Nursing" (CON) in Uzbekistan. The project direction was consistent with Uzbekistan's strategy, which emphasizes reforming the healthcare system, and Japanese assistance policy, which prioritized reconstruction of the healthcare system and medical personnel education. It also met the needs to enhance the quality of medical workers in Uzbekistan, hence the relevance is high. The project introduced new nursing education via the model MC, by modifying the curriculum and teaching material, and developing facilities and medical equipment to disseminate the CON concept. The nursing education model based on the CON concept has been introduced at all MCs in Uzbekistan at the time of the ex-post evaluation, therefore its effectiveness and impact are both high. The efficiency of this project is moderate since more input than planned was required as the cost to improve understanding of the new CON concept exceeded the original estimate. Its sustainability is considered high, because new nursing education has been disseminated and implemented steadily at all MCs nationwide, despite minor concern over the future role of NEC, which has responsibility for retraining MC teachers.

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

## **4.2 Recommendations**

### **4.2.1 Recommendations to the Executing Agency**

#### **【Installation of sufficient medical equipment in MCs】**

Revised CON-based nursing education was conducted in MCs nationwide. However, only minimum medical equipment to conduct CON-based nursing education was provided in rural areas. In a revised nursing education curriculum, since more time is dedicated to practical nursing lessons, a lack of medical equipment could prevent students from improving their understanding. Therefore, there is a need to install appropriate medical equipment to conduct practical lessons in all MCs, including the option to obtain overseas funding if impossible to secure the budget in Uzbekistan.

### **4.2.2 Recommendations to Implementing Agency and JICA**

#### **【Securing the NEC budget】**

No budget for the operation of NEC was allocated from MOF in 2012. MOF explained that this was because a retraining program for CON education had been conducted for MCs nationwide and compartmentalization between the upgrading center in the Tashkent Medical Institute and NEC was also unclear. Conversely, the importance of the continuing existence of NEC was stressed by MOH for MC teachers to catch up to the revised curriculum in future on a regular basis and engage in retraining retirees. In this regard, MOH is required to confirm the significance of the existence and scope of their role and demonstrate the same to MOF and related institutions. Actually the same issue on budget allocation emerged in 2009. Accordingly, JICA sent a letter to obtain cooperation of MOF, which then reconsidered the budget allocation at that time. It may therefore be effective that JICA offers support on this financial matter by issuing a letter which would appeal to MOF.

## **4.3 Lessons Learned**

### **4.3.1 Lessons Learned to JICA**

#### **【Appropriate plan for input of translators and interpreters】**

At the beginning of the project, the smooth implementation of activities was affected by a lack of translators and interpreters. In Uzbekistan, CON was a new concept and the project undertook an important role, targeting an improved nursing education system based on this new nationwide concept. Under such circumstances, the importance of a translator who express the concept accurately was not recognized, hence an appropriate amount of input was not made. For similar projects, appropriate input should be ensured by thoroughly examining the project purpose and its process to achieve it with project features at the planning stage.

**【Planning for support considering upon project completion】**

As of the ex-post evaluation, the role of future activities, positioning and financial resources of NEC remained unclear. According to MOH and related people, the future need for the retraining program is high for MC teachers to respond to and improve the curriculum in future on a regular basis, and provide training for returners having once retired for maternity leave or family care. Thus, a clear idea of the future sustainability of main institutions for continuing activities must be established and confirmed at the planning stage or during the project implementation.

**【Coordination and information sharing among project-related persons】**

A verifiable indicator was modified in the course of the project. However, it was confirmed at the ex-post evaluation that the modified parts and indicators had not been fully shared among stakeholders. This was because of difficulties in ensuring sufficient coordination due to a lack of key players, although many experts were involved in the short term. For similar projects in future, it is recommended to assign long term experts capable of coordinating all stakeholders or persons as central figures of the project. This will make it possible to establish the system to share information more easily among all stakeholders.

(End)

The Pacific Region

Ex-Post Evaluation of Japanese Technical Cooperation Project  
“The Project for Strengthening Expanded Programme on Immunization  
in the Pacific Region”

External Evaluator: Keisuke Nishikawa, Ernst & Young Sustainability Co., Ltd.

## **0. Summary**

The Project for Strengthening Expanded Programme on Immunization in the Pacific Region aimed to develop the capacity to carry out the Expanded Programme on Immunization (“EPI programme”) by individual governments of the 13 countries<sup>1</sup> in the Pacific region. The significance of immunization policy and the needs for immunization were consistently observed. In addition, since the project was in line with the Japanese government’s ODA policy, the relevance of this project can be judged as high. During the project implementation, various technical assistance activities were provided to tackle a number of issues associated with EPI activities in the Pacific region, of which the technical assistance relating to the capacity development of vaccine logistics and establishment of a cold chain proved quite effective. However, some issues remain outstanding, such as disposal of medical waste and further improvement of EPI outreach activities, hence the overall effectiveness and impact of the project is judged as fair. Both the project cost and periods were within the plan, therefore the project efficiency is high, while the sustainability is fair, given the considerable financial issues observed in many countries, mainly a lack of budget to support training and/or immunization activities.

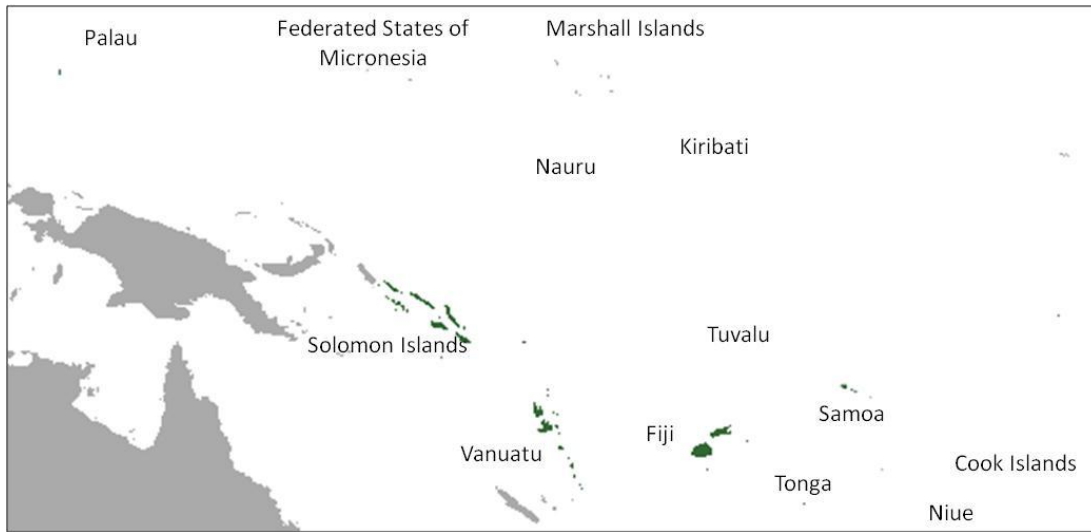
In light of the above, this project is evaluated to be satisfactory.

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<sup>1</sup> (Micronesia region) Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau  
(Melanesia region) Fiji, Solomon Islands, Vanuatu  
(Polynesia region) Cook Islands, Niue, Samoa, Tonga, Tuvalu (Japanese government has not recognised Niue as a state. However, in this report, Niue is described as a country for the sake of expedience.)



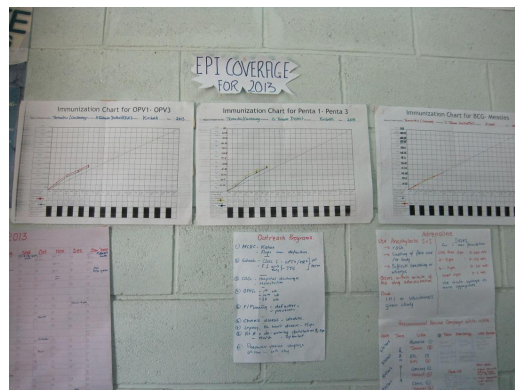
# 1. Project Description



Project Location (the whole Pacific Region: 13 countries)



Ice-lined refrigerator provided under this project (Tonga)



Charts indicating the improved immunisation coverage rate (Health Centre in Kiribati)

### Abbreviations

Abbreviation	Official appellation
AD	Auto-Disable
BCG	Bacille de Calmette et Guérin
CDC	Centers for Disease Control and Prevention
DTP	Diphtheria and Tetanus toxoid with Pertussis vaccine
EPI	Expanded Programme on Immunization
HepB3	Third dose of Hepatitis B vaccine
Hib3	Third dose of Haemophilus Influenza type B vaccine
HPV	Human Papillomavirus
MCV	Measles-containing vaccine

ODA	Official Development Assistance
OJT	On the Job Training
PIPS	Pacific Immunization Programme Strengthening
Pol3	Third dose of Polio vaccine
RCV	Rubella-containing vaccine
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WPRO	Western Pacific Regional Office of WHO

### 1.1 Background

An Expanded Programme on Immunization (EPI) has been implemented in the Pacific region since 1977 under the technical support of the Western Pacific Regional Office of WHO (WPRO) to improve maternal and child health. One of the EPI achievements was eradicating polio in the region in 2000, with Measles and Hepatitis B the next EPI priority diseases based on the WPRO in 2003. Conversely, to further improve immunization rates, vulnerabilities of vaccination logistics, such as calculating the amount of vaccination required, procuring vaccines at the appropriate time and storing them at the right temperature, as well as operating and maintaining the cold chain were pointed out. Moreover, disposal of medical waste, such as used syringes and sharps, was also identified as a new challenge.

To tackle these challenges, the governments of the Pacific region, multilateral organisations, including the WHO and UNICEF, and bilateral organisations of Australia, New Zealand, the United States and Japan issued a joint statement on the Pacific Immunization Programme Strengthening (PIPS) initiative to accelerate immunization programmes at the WHO/UNICEF Joint Workshop in March 2004. In response, JICA commenced this technical cooperation project to implement regional training programmes on vaccine logistics, cold chain maintenance and safe injection, provide support to improve the EPI policies of the 13 countries, as well as develop human resources engaged in EPI activities.

### 1.2 Project Outline

Overall Goal		All children in the target areas have access to potent vaccines according to the schedule.
Project Objective		All countries and areas have the capacity to independently manage the EPI programme, including cold chain maintenance, vaccine logistics, as well as safe injection and safe disposal of EPI wastes in line with the Pacific Immunization Programme Strengthening (PIPS) concept.
Outputs	Output 1	Capacity of the Ministry of Health in each country / area of the Pacific region in the planning and monitoring of EPI programme is

		improved.
	Output 2	The regional training system on vaccine, cold chain and injection safety management is established and is functional within the Pacific.
	Output 3	Vaccine forecasting, management and cold chain systems are improved in each country / area.
	Output 4	Injection safety and medical waste disposal management capabilities are improved in each country / area.
	Output 5	EPI outreach activities are improved in each country / area
Inputs		<p>&lt;Japanese Inputs&gt;</p> <ol style="list-style-type: none"> <li>1. Dispatch of 6 Experts 4 Long-term Experts and 2 Short-term Experts</li> <li>2. Training in the region 119 participants for EPI training, and 72 for cold-chain training</li> <li>3. Training in Japan 659 participants</li> <li>4. Equipment 184 refrigerators, 14 freezers, 3 vehicles, 3 incinerators</li> <li>5. Local Project Costs 102 million JPY</li> </ol> <p>&lt;Inputs by the 13 Pacific governments&gt;</p> <ol style="list-style-type: none"> <li>1. Assignment of counterpart personnel</li> <li>2. Land, building and facilities necessary for the project</li> </ol>
Total Cost		650 million JPY
Period of Cooperation		February, 2005 – February, 2010
Implementing Agency		Ministry of Health in 13 countries in Pacific Region
Cooperation Agency in Japan		Institute of Tropical Medicine, Nagasaki University
Related Projects		System Improvement of Expanded Programme on Immunization in the Pacific Region (February 2011 – February 2014) <sup>2</sup> , The Project for Construction of the New Pharmaceutical Services Center (June 2002 – March 2004)

### 1.3 Outline of the Terminal Evaluation

#### 1.3.1 Achievement of Overall Goal

At the time of terminal evaluation, the chance of achieving the overall goal was estimated as high, as the EPI immunization coverage rates in 10 of the 13 target countries had already exceeded the target rate (80%), as well as the immunization rate

<sup>2</sup> As a follow-up project, this project has been implemented to provide regional cold chain training programmes for the relevant officers in 13 countries, as well as conducting intensive training programmes to develop capacity for the officers in charge of EPI management and cold chain management in certain countries identified having issues with self-sustaining development of the EPI programme (Solomon islands, Vanuatu, Kiribati, Samoa, Micronesia, and the Federated States of Micronesia).

of DTP1 and the drop-out rate between DTP1 and DTP3<sup>3</sup> being steadily improved according to a joint WHO/UNICEF report.

### 1.3.2 Achievement of Project Objective

Five indicators were set to verify the achievement of the project objective. Very few countries met all indicators. Of these, only four countries achieved one of the indicators that specified a target coverage rate for two doses of measles vaccine exceeding 95%. However, it was observed that the overall immunization activities were steadily improved, as was the management capacity to independently implement the EPI programme.

### 1.3.3 Recommendations

It was highlighted that there was a need for individual countries to formulate respective country-level exit strategies based on their experiences of technical cooperation at a regional level, so that they would be able to continuously implement immunization programmes. In addition, raising awareness of the importance of implementing EPI activities within the respective governments was considered important in each country. As for the PIPS framework, it was suggested that promoting the framework at a regional level after evaluating the PIPS framework itself, by adopting strategic approaches to obtain further commitments by the government of Fiji that has been playing a key role, and strengthening the secretariat functions, would be important.

## **2. Outline of the Evaluation Study**

### **2.1 External Evaluator**

Keisuke Nishikawa (Ernst & Young Sustainability Co., Ltd.)<sup>4</sup>

### **2.2 Duration of Evaluation Study**

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

Duration of the Study: September, 2012 – September, 2013

Period of the Field Study: January 11 – 26, 2013 / May 25 – June 13, 2013

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<sup>3</sup> The drop-out rate indicates the difference between the coverage of first and third DTP doses. It is a measure of the immunisation rate that demonstrates the potential to reach children with the third dose in a series.

<sup>4</sup> Joined the evaluation team of Ernst & Young Sustainability Co., Ltd. as a team member from the Japan Economic Research Institute Inc.

### 2.3 Constraints during the Evaluation Study

The indicators used to evaluate the effectiveness of the project were not necessarily defined quantitatively, meaning that achievement of the project effects was mostly judged at the project teams' discretion at the time of mid-term and terminal evaluation studies. In this ex-post evaluation study, the achievements of the indicators were basically verified during the field studies after the Ministry of Health in each country had implemented their self-evaluation. However, as this project covers many countries, the field survey could not be conducted in four countries (Palau, Tuvalu, Solomon Islands, and Niue). These countries were thus evaluated based on responses from their Ministries of Health.

## 3. Results of the Evaluation (Overall Rating: B<sup>5</sup>)

### 3.1 Relevance (Rating: ③<sup>6</sup>)

#### 3.1.1 Relevance to the Development Plan of the Pacific Region

An Expanded Programme on Immunization (EPI) has been implemented in the Pacific region since 1977 under the technical support of the Western Pacific Regional Office of WHO (WPRO). In 2004, when this project was being developed, governments of Pacific island countries and donors that had extended support for EPI activities decided to commence an initiative called Pacific Immunization Program Strengthening (PIPS), targeting efforts to improve existing EPI activities to establish and maintain a self-sufficient vaccine management system, improve immunization rates and lower vaccination loss rates. PIPS meetings have been held yearly since 2005, to review the progress of vaccination activities, share experiences, and reach agreements on the action plan for the following year.

At the time of project planning, five countries were preparing, or going to prepare, the immunization policy, and one country was applying a WHO/UNICEF guideline. As of project completion, 11 countries had formulated a policy to propel immunization activities, by formulating 'immunization policy', preparing an 'immunization handbook', or positioning the immunization programme as part of the Ministry of Health's operational strategy. Improving the EPI management capacity and establishing a cold chain, which were the main activities in this project, were also identified as priority immunization challenges in 11 countries<sup>7</sup>.

Since the commencement of PIPS initiatives, they have functioned effectively as cooperative mechanisms among the relevant entities striving for improved

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<sup>5</sup> A: Highly Satisfactory, B: Satisfactory, C: Partially Satisfactory, D: Unsatisfactory

<sup>6</sup> ③: High, ②: Fair, ①: Low

<sup>7</sup> Eleven Pacific island countries, excluding Samoa and Niue, formulated individual policies on immunization. As of the project completion, Samoa, in the process of formulating its own policy, was using the WHO/UNICEF guideline. Niue did not have a separate policy and was utilising a handbook on immunization developed by New Zealand.

immunization, through annual meetings among the relevant governments in all regional countries and donors, and meetings among donors held every month or so in the capital of Fiji. This project was also very much in line with the regional orientation to strengthen immunization systems by developing the capacity of EPI staff and cold-chain technicians.

### 3.1.2 Relevance to the Development Needs of the Pacific Region

In the Pacific region, immunization rates for DTP and Polio vaccines have exceeded 80% since 1995. When this project was planned, all countries in the region recognised that the immunization coverage rates should be further improved. In order to improve the immunization coverage rates, the requirements to overcome the vulnerability of vaccine logistics and maintain cold-chain equipment were highlighted in the regional workshop. Furthermore, a safe system of disposing of immunization-related medical waste emerged as a challenge for the entire region.

In addition to the implementation of this project, several cooperation projects by other donors were provided. Consequently, the immunization coverage rates in the Pacific region were greatly improved. Upon completion of this project in 2010, the coverage rates for many vaccines exceeded 90% in most countries (refer to Table 1). However, certain immunization coverage rates failed to meet the targets in some countries. Many countries and the project team highlighted the need to cope with the following challenges (or development needs) to further improve immunization coverage at the time of completion of the project.

- The maturity of the healthcare system and the status of EPI activity vary in the region. In certain countries, the execution of smooth and efficient EPI activities is hampered by management deficiencies caused by shortages in terms of funding and/or human resources.
- Many countries are still having problems with EPI-related medical waste disposal.
- Further improvement of immunization coverage rates could be considerably difficult as the countries, comprising small isolated islands, are scattered widely throughout the region, and may include some relatively inaccessible island areas.

Table 1 Immunization coverage rate in the Pacific Region (2010)

(Unit: %)

		BCG	DTP1	DTP3	HepB3	Hib3	MCV	Pol3
Micronesia	Kiribati	87	97	91	91	91	89	95
	Marshall Islands	99	99	94	97	92	97	95
	Federated States of Micronesia	70	90	85	88	70	80	85
	Nauru	99	99	99	99	99	99	99
	Palau	-	99	69	80	66	39	68
Melanes	Fiji	99	99	99	99	99	94	99
	Solomon Islands	85	85	79	79	79	68	78
	Vanuatu	81	78	68	59	-	52	67
Polynesia	Cook Islands	99	99	99	99	99	99	99
	Niue	99	99	99	99	99	99	99
	Samoa	91	97	87	87	87	61	86
	Tonga	99	99	99	99	99	99	99
	Tuvalu	99	99	89	89	89	85	89

Note: Estimated figure by WHO/UNICEF (2011)

Source: “Immunization Summary”, 2013 edition

Even once the immunization coverage rates have been improved, there are always needs to immunise children aged under five, as well as the need to develop capacity for healthcare officers and service providers, which is always documented. These days, certain additional needs have also been identified, e.g. to cope with the threat of emerging infectious diseases, as well as improve staff capacities in association with the introduction of new vaccines.

As explained above, the needs to achieve and maintain high immunization coverage rate remained high at the time of project planning and completion. As this project aimed to develop the capacity of individual governments in the region to implement the Expanded Programme on Immunization by helping improve the operation, maintenance and management capacity of EPI-related officers, the project met those needs, both at the times of project planning and completion.

### 3.1.3 Relevance to Japan’s ODA Policy

The Japanese government has been holding the Pacific Islands Leaders’ Meeting (PALM) every three years since 1997 to strengthen relationships with the Pacific island countries. During the third PALM in 2003, “The Okinawa Initiative: Regional Development Strategy for a More Prosperous and Safer Pacific”, which identified ‘better health and sanitation’ as one of the five priority objectives, was adopted. At the same time, the Japanese government stated with other donors that it would provide

assistance for immunization programmes in the joint statement of cooperation.

Japan's ODA policy toward the Pacific region, announced in 2004, identified developing and improving social infrastructure, including healthcare services, as one of the five priority areas of cooperation<sup>8</sup>, and this regional project can be considered to have been highly consistent with Japan's ODA policy toward the entire Pacific region at that time.

In light of the above, the project has been highly relevant with the Pacific countries' development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

### **3.2 Effectiveness and Impact<sup>9</sup> (Rating: ②)**

#### 3.2.1 Effectiveness

The effectiveness of this project was evaluated comprehensively by examining the achievement status of Outputs 1 to 5 with the relevant indicators. For some items, the achievement statuses evaluated by EPI officers were changed after actually examining the project status and information collected during the field study.

The Project Design Matrix (PDM) was revised during the mid-term evaluation. It emerged that some indicators needed to be redefined or replaced by eliminating quantitative goals after examining the available data to judge their achievement status. Consequently, the achievement statuses of many outputs are examined qualitatively.

##### 3.2.1.1 Project Output

1) Output 1: Capacity of the Ministry of Health in the planning and monitoring of the EPI programme performance is improved.

*Indicator 1: By 2010, all countries have a national EPI Plan of Action that addresses campaigns, self-management of routine EPI activities including measles elimination and hepatitis B control.*

*Indicator 2: By 2010, all countries have immunization policies addressing vaccine management, cold chain management, safe injection and safe disposal.*

*Indicator 3: Quality of immunization and disease data at district level is improved in some target countries.*

At the time of project completion, the achievement status of each indicator in relation to Output 1 was as summarised in the following table:

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<sup>8</sup> According to the ODA Country Databook (2004) by the Ministry of Foreign Affairs

<sup>9</sup> Rating was assigned based on the evaluation by judging the effectiveness and impacts,



Table 2 Achievement status of indicators in relation to Output 1  
(At the time of project completion: 2010)

Output 1	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	92%
Indicator 2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	92%
Indicator 3	Y	Y	Y	NA	N	Y	N	Y	Y	NA	N	Y	Y	73%

Note: Y=Achieved, N=Not Achieved, NA=Not Available (The same for Tables 3~6)

Abbreviations: FSM= the Federated States of Micronesia, KIR= Kiribati, RMI= Marshall Islands, NRU= Nauru, PLW= Palau, FIJ= Fiji, SOL= Solomon Islands, VAN= Vanuatu, COK=Cook Island, NIU= Niue, SAM= Samoa, TGA= Tonga, TUV= Tuvalu (the same for Tables 3~6)

Source: Based on the answers from the Ministry of Health of each country and the judgment of an external evaluator (the same for Tables 3~6)

As in 3.1.1 “Relevance with the Development Plan of the Pacific Region”, 11 countries formulated their own immunization policies or prepared immunization handbooks. In addition, all countries except Samoa prepared EPI action plans, based on which regular immunization activities were conducted. However, it emerged that the governments do not necessarily link the plan and budget: In most countries, budget was allocated only to procure vaccines, but not necessarily for project-related expenses such as transportation costs. In Samoa meanwhile, where a comprehensive policy or plan is yet to be developed, a regular immunization plan was formulated.

About the annual EPI activities, all countries formulate their EPI plans as announced at annual PIPS meetings. However, only seven countries have multi-year plans for their EPI activities.

In relation to Indicator 3, the quality of immunization has been improved, even at district level, with the improved immunization coverage rate. The accuracy of disease data has also been improved in all countries, but some countries still face data management issues. It was also observed that several countries still do not share information between the disease surveillance system and immunization activities.

2) Output 2: The regional training system on vaccine, cold chain and injection safety management is established and is functional within the Pacific.

*Indicator 1: By 2010, EPI coordinators and cold chain coordinators in the region are trained in the relevant subject areas.*

At the time of project completion, the achievement status of Indicator 1 in relation to Output 2 was as summarised in the following table. 92% of countries answered that they had achieved the output.

Table 3 Achievement status of indicators in relation to Output 2  
(At the time of project completion: 2010)

Output 2	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	92%

\* Note and source: the same as in Table 2

In this project, regional training sessions were held once a year. The total number of participants in the EPI training was 119, and 72 for the cold chain equipment management. Most countries replied that the turnout for the training courses was sufficient compared to the ideal number of participants. Some countries replied that the participation in the training courses for cold chain technicians was insufficient, but the total of participants from those countries did not deviate significantly from the ideal number. Therefore, it could be judged that the size of training sessions conducted was sufficient.

During the domestic training sessions conducted (24 times in total, 1 to 4 times per country) in the course of this project, the capacities of EPI officers were developed by assigning participants of regional specialised training sessions as trainers. No standard was set to evaluate their capacity, but the Ministry of Health in each country stated that the domestic training brought beneficial and valuable opportunities for many EPI officers. During the ex-post evaluation study and the outreach activities in villages, the smooth and efficient activities of nurses who had taken the domestic courses were confirmed. For the above reasons, the framework used to penetrate the contents of regional specialised training sessions through domestic training sessions could be judged as working effectively in general.

In the Pacific region, an exodus of medical specialists overseas in the Micronesian or Polynesian regions who find it relatively easy to migrate to the States (including Hawaii and Guam) or New Zealand has become a social issue. Against this backdrop, the exodus of trainees of this project to countries within or outside the region was always a concern. At the time of project completion, although all trainees remained in the four countries of Fiji, Nauru, Samoa and

Tuvalu and participated in health-related activities there, several trainees in other countries had already left their jobs. In Palau, it was reported that the training effectiveness was seriously impaired as all trainees, including five EPI trainees and two cold chain trainees, had already left their jobs.

However, over the last three years between the project completion and the ex-post evaluation study, the further exodus of the trained personnel has been stopped to some extent. No further employees left their jobs in seven countries, including the Marshall Islands, the Federated States of Micronesia, Niue, Samoa, Tonga, Tuvalu, and Vanuatu.

3) Output 3: Vaccine forecasting, management and cold chain systems are improved in each country /area

*Indicator 1: By 2010, provinces/districts experiencing stock-outs are reduced to zero.*

*Indicator 2: By 2010, vaccines are supplied without interruption in all countries.*

At the time of project completion, the achievement status of Indicators 1 and 2 in relation to Output 3 is summarised in the following table:

Table 4 Achievement status of indicators in relation to Output 3  
(At the time of project completion: 2010)

Output 3	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	92%
Indicator 2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100%

\* Note and source: the same as in Table 2

Vaccine management capacity has greatly improved after this project was implemented. It was confirmed that vaccines were supplied without interruption in almost all countries. The rate of countries with an uninterrupted vaccine supply is thus 100% and greatly improved from the 30.8% recorded at the time of project planning (2004), and 69.2% at the time of terminal evaluation (2009). This project provided training sessions and equipment to improve vaccine logistics and cold chain management intensively, and activities intended to establish and strengthen the cold chain were highly evaluated by all countries. Hence, it can be judged that this project helped improve safe vaccine management and the promotion of outreach activities, and facilitated stock management.

Vaccine management capacity has greatly improved throughout the region, and the immunization coverage rates were also improved. However, not all countries were able to resolve the issue of exhausted vaccine stocks, due mainly to the delay in order placement caused by incomplete records on vaccine stocks.

UNICEF has also been extending cooperation in establishing a cold chain and procuring vaccines in the region. In Melanesia and Polynesia, UNICEF makes a lump-sum purchase, while all countries engaged in this project also use the calculating formula developed by UNICEF to compute the vaccine demand forecast (In Micronesia, vaccines except BCG are procured through CDC). The coordination among donors under the PIPS framework enabled the capacity of EPI officers in the region to be further developed by materialising regular training sessions for each country and procuring the required facilities, equipment and materials.

4) Output 4: Injection safety and waste disposal management capabilities are improved in each country / area.

*Indicator 1: By 2010, all countries use AD syringes.*

*Indicator 2: By 2010, all countries have a work plan including injection safety and waste disposal.*

At the time of project completion, the achievement status of Indicators 1 and 2 in relation to Output 4 is summarised in the following table:

Table 5 Achievement status of indicators in relation to Output 4  
(At the time of project completion: 2010)

Output 4	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	N	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	77%
Indicator 2	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	85%

\* Note and source: the same as in Table 2

It emerged that three countries in the Micronesia region (Palau, Federated States of Micronesia, and Marshall Islands) that are receiving vaccines from CDC used regular disposal syringes after they had used up all AD syringes, or there were even several cases observed where AD syringes were not used at all in those countries. The main reason was due to the higher versatility of regular syringes to be used for other injections on top of vaccinations. However, this practice is

incompatible with the preset performance indicator of this project. Besides the three countries above, AD syringes were used for immunization in all other countries.

77% of countries formulated activity plans regarding safe injections and medical waste disposal of used syringes and sharps. However, even though the activity plans that stipulated the disposal method were formulated, this does not necessarily mean that countries with those plans disposed of the medical waste properly. Most countries regarded the disposal of EPI-related waste as a challenge. Only in Niue were all used syringes and sharps collected and incinerated, a task which was facilitated by the small size of the country. Elsewhere, e.g. in Tonga and Samoa, medical waste was transported to incinerating facilities from rural and remote locations. In other countries, few incineration plants for medical waste were built within a certain area; hence the medical waste was incinerated not in the appropriate plants but either elsewhere, openly burned, or dumped with other medical waste, particularly in remote islands. In general, in locations far from the capital or hub medical institutions, disposal methods for medical waste are not necessarily appropriate, and little progress has been made due to transportation problems between remote islands, budget shortages to procure incinerators and difficulties in securing the land to build the incineration plant.



Photo: Medical waste incinerator provided under this project (Federated States of Micronesia)

5) Output 5: EPI outreach activities are improved in each country / area.

*Indicator 1: By 2010, all provinces / districts are covered with scheduled immunization services.*

*Indicator 2: By 2010, percentage of drop-out rate between DTP1 and DTP3 is decreased to <10% in all countries.*

At the time of project completion, the achievement status of Indicators 1 and 2 in relation to Output 5 is summarised in the following table:

Table 6 Achievement status of indicators in relation to Output 5  
(At the time of project completion: 2010)

Output 5	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100%
Indicator 2	Y	Y	Y	Y	N	Y	Y	N	Y	Y	N	Y	N	69%

\* Note and source: the same as in Table 2

All countries in the Pacific region have formulated immunization schedules in individual countries, and have been conducting “outreach activities” to perform immunization activities in village meeting houses or community churches through their regular visits to the areas overseen by medical officers, as well as regular immunization services at hospitals or clinics. As seen in the generally high immunization coverage rates, outreach activities have been conducted sufficiently and effectively. As for Indicator 1, it could be judged that the Ministry of Health in each country, despite some issues, provides immunization services mostly as scheduled.

Most countries highlighted that access to remote islands is an issue that hampers outreach activities<sup>10</sup>. In villages close enough to hub medical institutions, visits for immunization activities can be made as scheduled. However, to visit remote islands, the number of services by air or ship remains insufficient. Moreover, the cost of air transport is relatively high, which also hampers further improvements in the immunization coverage rates, as visits to places only accessible by air are too infrequent given the tight budgets of each government. In remote islands where only a few children live, total costs and the immunization costs per person become very expensive. As most governments have difficulties allocating a budget for the operation of the projects except for purchasing vaccines, an early improvement of services in this area is considered difficult.

As for the drop-out rate between DTP 1 and DTP 3, most countries recorded improvement. As of 2010, when the project was completed, there was only one country in which the rate exceeded 10%. There were three countries in which the rate was exactly 10%, but it improved the following year in all these countries. The major reasons for the drop-out included the access issue for remote island residents and parents lacking understanding of the importance of immunization. All

<sup>10</sup> There is no remote island in Nauru and Niue. Also, Samoa does not virtually possess any remote islands.

countries have been taking measures to improve their immunization services as much as possible by conducting follow-up activities by phone, or making door-to-door visits.

### 3.2.1.2 Achievement of Project Objective

In order to measure the project objective, “All countries and areas have the capacity to independently manage the EPI programme, including vaccine, cold chain and injection safety and safe disposal of EPI waste systems in line with the Pacific Immunization Programme strengthening”, five indicators were set in this project. The achievement status of these indicators is summarised below in the same format as Outputs 1-5.

Table 7 Achievement status of indicators in relation to the Project Objective  
(At the time of project completion: 2010)

Output 5	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	N	Y	Y	Y	N	N	Y	Y	N	Y	N	N	Y	54%
Indicator 2	N	N	Y	N	N	Y	N	Y	N	Y	N	Y	Y	46%
Indicator 3	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	Y	77%
Indicator 4	N	Y	Y	Y	N	Y	N	N	Y	Y	Y	Y	Y	69%
Indicator 5	N	N	Y	Y	N	N	N	N	Y	Y	N	Y	N	38%

\* Note and source: the same as in Table 2

*Indicator 1: By the end of the Project, all countries develop Multi-Year Plan.*

Most counties formulated immunization policies, but there were only seven countries that developed multi-year plans as explained in Output 1. The understanding of the Multi-Year Plan varied significantly. Some countries prepared the planning document focusing on immunization activities, but other countries placed immunization activities as part of the overall health sector programmes, which hampered judgment in this study.

*Indicator 2: By the end of the Project, all countries are accurately reporting and utilising vaccine wastage rates.*

Even though the data in relation to immunization and vaccine stocks have been improved, data collection is still regarded as “better than before but needing further improvement”. For example, only a few countries actually record data on vaccine wastage rates and several countries have not developed or improved the

data collection system. To understand the actual situation correctly, a data collection system needs to be developed as soon as possible in all countries.

*Indicator 3: By the end of the Project, all countries/areas have cold chain inventory systems that are annually updated.*

Through this project, 198 refrigerators were provided as cold chain facilities with different cooling systems, and guidance for recording inventories on cold chain equipment. Other donors, including UNICEF, also promote the improvement of a cold chain that is physically indispensable to manage vaccines appropriately by providing refrigerators. Thanks to this assistance, daily records of temperature in the refrigerator were observed. However, while the percentage of countries keeping inventory books on cold chain equipment always updated is 77%, which is relatively higher than other indicators, it still needs to be improved further as the equipment in some countries is poorly maintained.

*Indicator 4: By the end of the Project, fully immunised children are maintained at >80% in all countries/areas.*

Immunization coverage rates were improved in most countries. The percentage of countries with more than 80% of fully immunised children was 69% of the total, and these countries matched those with relatively higher immunization coverage rates as in Table 1. Countries that failed to meet the 80% goal recorded low immunization rates, particularly for Hib and measles vaccines.

*Indicator 5: By the end of the Project, coverage rate on two doses of measles vaccine is maintained at >95% in all countries/areas.*

Some countries expressed the views that the target rate of 95% was very high during the terminal evaluation survey of this project. At this ex-post evaluation, only 38% of countries had achieved this target. In Vanuatu, two doses of measles were not implemented due to budget shortages. As some countries have just recently introduced the second dose of measles, it is assumed that establishing an appropriate management system might have taken some time.

Among the five indicators to examine the project objective, the goals set in Indicators 3 and 4 have been achieved in most countries. As for Indicator 4, some improvements have been observed even among the countries that did not attain the goal. For Indicator 1, not many countries have prepared multi-year mid-term plans even though all countries have prepared EPI plans and annual schedules, due to staff shortages or the busyness of officers with other tasks. In relation to Indicator



2, about half the countries have established an accurate reporting system for vaccine wastage rates, and additional personnel with specialised relevant knowledge would be required. This project included some activities to improve the capacity for vaccine management, but was unable to provide sufficient guidance to establish a collection system for related data. Regarding Indicator 5, the achievement rate was low even though the original goal was set quite high.

Table 8 summarises the achievement of each indicator to judge the project objective at the time of ex-post evaluation.

Table 8 Achievement status of indicators in relation to Project Objective  
(At the time of ex-post evaluation: 2013)

	Micronesia Region					Melanesia Region			Polynesia Region					(% of achieved countries)
	FSM	KIR	RMI	NRU	PLW	FIJ	SOL	VAN	COK	NIU	SAM	TGA	TUV	
Indicator 1	N	Y	Y	Y	N	Y	Y	Y	N	Y	N	N	Y	62%
Indicator 2	N	N	Y	Y	Y	Y	N	Y	N	Y	N	Y	Y	62%
Indicator 3	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	Y	77%
Indicator 4	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	77%
Indicator 5	N	N	Y	Y	N	N	N	N	Y	Y	N	Y	Y	46 %

\* Note and source: the same as in Table 2

During the three years after the completion of the project, all indicators except for Indicator 3 recorded slight improvement. It was also confirmed that the indicators that had already met the goal by 2010 never fell below the target. Only Indicator 5 had an accomplishment rate of less than 50%. Of all seven countries that did not meet the goal of Indicator 5, none recorded a drop in immunization coverage rates; all maintained or improved the rates. Therefore, it can be judged that all countries are clearly oriented toward maintaining high levels of, or even improving on the achieved project objective, even after the completion of this project.

### 3.2.2 Impact

#### 3.2.2.1 Achievement of Overall Goal

In order to measure the overall goal, “All children in the target areas are reached with potent vaccines according to the schedule”, the following single indicator was set:

*Indicator 1: By 2015, coverage of EPI immunization is maintained at stable level of >80% (with two doses of measles-containing vaccine, three doses of Hepatitis B vaccine including the first dose within 24 hours of birth)*

This indicator is highly correlated with Indicator 4 of the project objective, namely, “By the end of the Project, fully immunised children are maintained at >80% in all countries/areas”. As in the WHO-UNICEF report, immunization coverage rates have steadily improved in recent years. The immunization coverage rates for all countries in 2011 are summarised in the following table:

Table 9 Latest status of Immunization Coverage Rates (2011)

Country		Overall Status
Micronesia	Kiribati	Rates of all immunizations including HepB3 exceed 80%
	Marshall Islands	Rates of all immunizations including HepB3 exceed 90%
	Federated States of Micronesia	Immunization rates for BCG and Hib3 remain at 70% level. Other immunizations including HepB3 is more than 80%
	Nauru	Rates of all immunizations including HepB3 are 99%
	Palau	Rates of all immunizations including HepB3 exceed 80% (No data available for BCG)
Melanesia	Fiji	Rates of all immunizations including HepB3 exceed 90%
	Solomon Islands	Immunization rate for MCV remains at 70% level. Other immunization rates including HepB3 exceed 80%
	Vanuatu	Except for BCG that recorded 81%, rates of all immunizations are less than 80%. HepB3 is 59%. 1 dose for MCV.
Polynesia	Cook Islands	Rates of all immunizations exceed 90%. Other immunization rates including MCV1 and RCV1 exceed 80% (according to the Joint Reporting Form submitted to WHO/UNICEF, 2011).
	Niue	Rates of all immunizations including HepB3 exceed 90%
	Samoa	Rates for MCV coverage is 67%. Others, including HepB3, exceed 90%
	Tonga	Rates of all immunizations including HepB3 are 99%
	Tuvalu	Rates of all immunizations including HepB3 exceed 90%

Source: Prepared by the evaluator based on “Immunization Summary”, 2013 edition and some country-specific data provided by individual countries.

As shown in the table above, there were nine countries with immunization coverage rates for all vaccines exceeding 80%. The Federated States of Micronesia, Solomon Islands and Samoa could achieve the project objective by improving one or two coverage rates by 10 to 20 %. Conversely, Vanuatu may need some time to attain the project objective by providing the second dose of measles vaccine<sup>11</sup>, and also improving immunization coverage rates of all vaccines, except BCG, to exceed the target of 80%.

<sup>11</sup> The Solomon Islands has been engaged in an effort to improve the second dose immunisation rate for MCV intensively through Supplementary Immunisation Activities (SIA) once in almost three years since 2001.

Most countries with remote islands in the Pacific region need to improve immunization coverage rates and the procurement of new vaccines such as HPV. However, Tonga<sup>12</sup>, with a number of remote islands, attained exceptional immunization coverage rates by formulating a systematic method of improving immunization under the leadership of the EPI coordinator. Thanks to the technical and financial assistance of PIPS donors, immunization statuses in each country have been improving and these improvements are expected to be maintained and further enhanced.

However, even though implementation structures and systems for immunization activities exist in most countries, the prospects of each country achieving the goal vary according to the role of the coordinators, the development status of the immunization system and the budget allocation conditions. The Solomon Islands and Vanuatu face fundamental structural issues in comparison to the status of other countries in the sense that the significant manpower and costs are required, with the low level of population concentration in the capital and main islands.

As the target year for the overall goal is 2015, 11 countries are expected to achieve the indicators set for the same. It is hoped that Vanuatu will improve its immunization coverage rates by introducing the second dose of MCV.

The differences in the achievement status of each output clearly specify the priority issues that each country will need to tackle. The project impacts will also be further enhanced with additional self-help efforts by each country, as well as detailed external assistance based on the individual circumstances of the countries.

### 3.2.2.2 Other Impacts

#### 1) Impacts on the Natural Environment

At the time of project planning, it was expected that the environmental impact would be diminished by establishing an EPI-related medical waste disposal system in member countries in the region. Furthermore, the appropriate disposal of general medical waste was also expected as one of the spill-over effects. In fact, this project introduced a general standard in relation to the medical waste proposal and provided related training sessions as well as three additional incinerators.

As stated in the evaluation of Output 4, at the time of ex-post evaluation, no proper incineration of EPI-related medical waste was being conducted, particularly

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<sup>12</sup> It was observed that the chief nurse was also in charge of immunisation activities as an EPI officer and was utilising her knowledge on vaccine management and cold chain management learned during regional training when she convened maternal and child health training sessions and organised training courses on immunization in the capital and local hub medical institutions several times a year.

in rural areas or remote islands<sup>13</sup>. The number of incinerators provided under this project remained three. Considering the geographic dispersion of the countries comprising remote areas or islands that are inaccessible from major cities where the incinerators are located, there is an overall lack of incinerators. In areas without incinerators, measures such as burning material up in a drum or transporting syringes and sharps in safety boxes to the capital are striven for as far as possible. Thanks to these efforts, no cases of harm to the natural environment were recorded, compared to the pre-project period, but disposal methods such as open dumping without incineration were not necessarily a desirable form of disposal, either.

## 2) Coordination with other donors

Under the PIPS initiative, a framework to strengthen immunization programmes in the Pacific region, Japan extended its assistance by implementing regional training sessions to improve capacities for vaccine management, cold chain operation and maintenance, and safe injection, as well as assist in formulating EPI policies and programmes. There was no multi-year plan among PIPS partners with a clear demarcation of work by donors, but donors offering assistance on immunization-related activities coordinated their activities by exchanging information to avoid duplication and maximise the effectiveness of their individual assistance. This project was evaluated as an effective project among PIPS donors, thanks to frequent communications among relevant officers and donors. In other words, the fact that various donors cooperated and collaborated to improve immunization through sufficient communication and coordination among members at regular meetings led by WHO is praised, as well as the fact that this arrangement ultimately improved the overall efficiency and output of the assistance. After the completion of this project, the PIPS monthly meetings became less frequent, but after 2013, the PIPS framework is scheduled to be reconstructed, and the coordination and information sharing structure is being strengthened.

Based on the above, certain effects have been observed by implementing this project; hence the effectiveness and impacts are evaluated as fair. In relation to the project objective, the level of accomplishment for Indicator 5 is low and although some issues were observed for the achievement of Indicators 1 to 4, Indicators 3 and 4 were accomplished relatively well. At the time of ex-post evaluation, the accomplishment

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<sup>13</sup> In Nauru, there was only one combustion plant, which broke down several years ago; hence no combustion plant has been operated in the country for years.

statuses of most indicators had improved since the project completion. The project objective can be regarded as mostly achieved as at least 85% of countries will have fulfilled their indicators by 2015.

### 3.3 Efficiency (Rating: ③)

#### 3.3.1 Inputs

Inputs	Plan	Actual Performance
(1) Experts	4 long-term Experts (Chief Advisor, Coordination and planning for trainings, vaccine logistics, cold chain operation and maintenance) 2 short-term experts (medical waste disposal, epidemiology, and other areas where appropriate)	4 long-term Experts (vaccine logistics 52.07MM (1 person) , cold chain operation and maintenance 51.3MM (1 person) , planning for trainings 52.1MM (1 person)) 4 short-term experts (Chief Advisor 14.1MM (1 person)、 Sub leader/epidemiology 16.1MM (2 persons)、 medical waste disposal 4.73MM (1person))
(2) Trainees Received	N/A	N/A
(3) Third-Country Training Programmes	N/A (regional trainings for relevant officers, and domestic trainings are to be conducted)	Regional trainings : EPI program management and cold chain operation and management (Participants : 191 people) Domestic trainings: EPI, cold chain, medical waste disposal, hospital infection (Participants : 659 people)
(4) Equipment	Equipment for cold chain, training and safe disposal of EPI-related waste, etc.	Equipment for cold chain (198 vaccine refrigerators, 3 combustion plants and 3 vehicles)
Total Project Cost	Total 650 million JPY	Total 649.96 million JPY
Total Local Cost	Not defined	Not identified

##### 3.3.1.1 Elements of Inputs

In relation to the inputs from Japan, including the number of experts, the length of experts' stay, equipment and training sessions, most countries replied that those

inputs were sufficient. The team members and their expertise were also highly appreciated.

Many people, including the project counterparts in each country - 191 participants in regional training sessions and 659 participants in domestic training sessions in each country, were involved in this project. After the representatives from each country participated in regional training sessions every year, these participants then conducted training sessions in each county under the guidance of the project team. Through this training mechanism, the activities were implemented effectively. However, due to a large number of member countries (13), training sessions were limited to the capitals only, and the number of training sessions held was 24 over the four-year period.

As for the equipment, many refrigerators were provided as far as the project budget allowed, which contributed to the project. However, as seen in Indicator 4 of the Output 4 in 'Effectiveness', many issues remained with regard to EPI-related medical waste disposal. Therefore, it may have been desirable to provide more incinerators.

Regional training courses were conducted in Fiji every year. The new Fiji Pharmaceutical Services Centre built as a Japanese grant aid project was used as a hub for the project team and deemed appropriate, as Fiji was considered the most appropriate location to coordinate with other donors extending PIPS support, as they were also stationed there. Moreover, air traffic accessibility was optimal in Fiji. Each country approved of the project being based in Fiji.

Regarding the inputs by 13 governments, it was difficult to gain a complete picture as the governments did not record the costs incurred for domestic training courses and the installation of equipment

Through this project, the intention was that member countries would gradually increase the responsibilities and burdens for the cost of domestic training sessions, so that those countries would be able to implement training courses unaided upon completion of this project. However, in reality, many countries were unable to cover any of the costs of domestic training sessions as the EPI project was not well funded to begin with. There were some cases where the entire training expenses were covered by the project budget.

### 3.3.1.2 Project Cost

The project was originally expected to cost 650 million yen and the actual amount spent was also 650 million yen, as expected. Of this sum, expenses for local activities were 103 million yen, consisting of hiring project staff, holding regional specialised

training sessions and domestic training sessions and purchasing expendable office supplies.

#### 3.3.1.3 Period of Cooperation

The planned project period was five years from February 2005 to February 2010. The project was actually implemented from March 2005 to February 2010, due to a slight delay in concluding the contract. This aside, the project was implemented smoothly, and completed in February 2010 on schedule. The duration of the actual project period was 98% of the original plan.

Both the project cost and period of cooperation were mostly as planned; therefore the efficiency of the project is high.

### 3.4 Sustainability (Rating: ②)

#### 3.4.1 Related Policy toward the Project

Immunization is recognised as one of the fundamental healthcare issues in each country. Even though around half the countries had formulated multi-year medium-term policies, it was confirmed that the formulation of immunization policies, including vaccine management, cold chain operation and maintenance, safe injection and medical waste disposal had been enhanced in 11 countries.

In most countries, programs based on the immunization policies and plans were also implemented. Some countries revised their policies after the completion of this project; reflecting the demands for new vaccines. Other countries have yet to take related measures, but it was confirmed that the governments recognise the importance of revising their policies.

Each donor participating in the PIPS initiative understands that steady implementation of immunization is a key part of their cooperation activities. Accordingly, support for immunization activities among donors has been provided in a collaborative and mutually complementary manner. After the completion of this project, there was a period when PIPS partner meetings were held less frequently, namely only once every several months. However, it was confirmed during the ex-post evaluation that donors were reinforcing the cooperative structure by resuming annual PIPS meetings.

#### 3.4.2 Institutional and Operational Aspects of the Implementing Agency

Immunization is one of the main health sector activities. Accordingly, the implementing structure of EPI activities has always existed, and EPI officers have been

aware of the importance of sustaining and improving the structure. In some countries, officers specialising in EPI and cold chain management were deployed to strengthen the structure.

In the Pacific region, the exodus of people who received the training course is frequently highlighted as an issue. However, except for some countries, few regional training participants in this project left their jobs and most continued working in the EPI or medical-related fields in their countries. Most countries replied that the number of officers engaged in EPI and cold chain activities was sufficient. In this project, there were many cases observed in which the trainees of the regional training courses conducted domestic training sessions, as officers who were expected to take the leadership roles were actually selected as trainees for the regional training sessions.

One of the challenges in terms of the implementation structure is the lack of officers who are dedicated solely to EPI activities. Currently, most nurses and technicians have to be multi-tasked and perform various medical activities due to the shortage of medical professionals. There are many cases observed that a single medical professional is simultaneously in charge of clinic management, maternal and child health awareness activities, immunization, outreach activities, etc. Considering this situation, it is important to provide training sessions to all nurses on immunization, and also secure personnel capable of conducting various works. As new employees and displaced workers are inevitable, it is also important to raise the overall capacity of medical professionals engaged in EPI activities through continuous training sessions.

#### 3.4.3 Technical Aspects of the Implementing Agency

At the time of project planning, it was intended that the capacity development mechanism would take root in the region, by establishing and then implementing a mechanism through Output 1, to enable trainees of regional training sessions to conduct in-country training through Outputs 3 and 4.

As planned, the capacity of health care specialists was enhanced through regional training sessions and onsite instructions by experts, as well as the guideline developed under this project. In particular, capacities for forecasting and ordering vaccines, proper vaccine management and recording system were confirmed to have improved. Also, through in-country training sessions in addition to OJT, the capacities of EPI officers not directly involved in this project were also confirmed to have developed.

In relation to cold chain equipment, it was confirmed during the ex-post evaluation study that they were operated and maintained properly in countries where field studies were conducted. No country highlighted any problem regarding the capacity of technicians to operate and maintain equipment such as refrigerators. However, there



might be budgetary constraints to replace end-of-life equipment. For the cold chain equipment, UNICEF has been extending continuous support.

As there are new demands, e.g. to introduce HPV or pneumococcal vaccines, there is a need to provide training sessions in each country for new hires etc., as well as continuous technical guidance in full coordination with PIPS partners. The techniques and know-how of EPI officers have significantly improved. Henceforth, one issue will be how to share these techniques and this know-how with other relevant officers in the countries. As most countries are subject to fiscal constraints, the continuous support of donors will be necessary.

#### 3.4.4 Financial Aspects of the Implementing Agency

When the project was formulated, it was deemed that this project would bring financial sustainability as efficient financial management was anticipated through activities to enhance immunization operation and management. This project was also intended to establish a mechanism to allow the project team and member country to share the costs of capacity development training sessions so that the beneficiary countries could conduct training activities even after the completion of this project.

The ex-post evaluation revealed that vaccines had been procured efficiently. Three countries in the Micronesia region (Palau, Federated state of Micronesia, and Marshall Islands) purchased most vaccines from CDC, while other countries procured them through UNICEF. Some countries, where vaccine wastage rates are accurately recorded, reported and utilised, procured vaccines even more efficiently. The budget for vaccine procurement has been secured in most countries to attain a higher immunization coverage ratio. In some countries, the immunization budget is funded through general revenue, while other Micronesian countries utilise budget support from the United States. This budget support from the States for three Micronesian countries is expected to end in the 2020s; hence there is a concern over budgetary sustainability. It is uncertain whether immunization activities will be fully funded once the US support ceases.

With regard to the overall immunization activities, excluding the procurement of vaccines, most activities such as training sessions and outreach were implemented within tight budget conditions in most countries. Countries with remote islands cannot allocate sufficient budget to implement outreach and training activities, which considerably hindered efforts to reach the goal of 100% immunization coverage rates. During the implementation of this project, there were several cases where the cost of domestic training sessions in some countries was covered entirely by this project as those countries were unable to share any costs. Many countries still face severe fiscal

constraints, and are having difficulties in securing the budget for these activities.

As immunization is a basic and fundamental activity of health administration, budgets for purchasing vaccines were preferentially allocated in all member countries. However, severe budget constraints meant an inability to secure the budget for managing and operating related activities, such as providing continuous training sessions and purchasing equipment, meaning most countries rely on support from donors. Accordingly, some issues remain in terms of financial sustainability.

Based on the above, there were some concerns remaining in terms of the institutional, technical and financing aspects due to the differences in circumstances between the countries. However, the effects which emerged from implementing this project are expected to continue, hence the sustainability of the project effect is fair.

## **4. Conclusion, Lessons Learned and Recommendations**

### **4.1 Conclusion**

This project aimed to develop the capacity to carry out the Expanded Programme on Immunization by individual governments of the 13 countries in the Pacific region. The significance of immunization policy and the needs for immunization were consistently observed. In addition, since the project was in line with the Japanese government's ODA policy, the relevance of this project can be judged as high. During the project implementation, various technical assistance activities were provided to tackle a number of issues associated with EPI activities in the Pacific region, of which the technical assistance relating to the capacity development of vaccine logistics and establishment of a cold chain proved quite effective. However, some issues remain outstanding, such as disposal of medical waste and further improvement of EPI outreach activities, hence the overall effectiveness and impact of the project is judged as fair. Both the project cost and periods were within the plan, therefore the project efficiency is high, while the sustainability is fair, given the considerable financial issues observed in many countries, mainly a lack of budget to support training and/or immunization activities.

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

### **4.2 Recommendations**

#### **4.2.1 Recommendations to the Implementing Agency**

##### **4.2.1.1 Securing budgets other than for procurement of vaccines**

At the time of ex-post evaluation, the immunization rate had improved to some extent by developing the capacity for vaccine logistics and establishing a cold chain, as well as ensuring a budget allocated for purchasing vaccines. Conversely, most

countries impose tight budgets on training sessions to improve the capacities of EPI officers, and support outreach activities. Conducting continuous capacity development activities for EPI officers for the security of children living in remote areas or islands inaccessible through regular immunization activities will help effectively solve social issues and also have a substantial positive impact on EPI activities in the medium to long term. To effectively implement immunization activities that will not be achieved just by purchasing vaccines but also by conducting training sessions, it is crucial to promote and enhance overall activities and develop the capacity of relevant officers by securing the budget for training and outreach activities.

#### 4.2.1.2 Proper disposal for EPI-related medical waste

It emerged that in most countries, particularly remote islands, medical waste including syringes and sharps was incinerated not in appropriate incinerators but elsewhere, or dumped with other medical waste. Enforcing appropriate medical waste disposal in all small and sparsely located islands is unlikely to work in the short term. However, it is desirable to seek the possibilities to install as many incinerators as possible for the safe disposal of syringes, sharps and other medical waste under cooperation with other ministries.

### 4.2.2 Recommendations to JICA

#### 4.2.2.1 Continuous assistance to develop EPI-related capacities

This project was called “J-PIPS” among EPI officers in the Pacific region, as it was well recognised as the Japanese contribution to the PIPS framework. The project activities and the outline of training programmes were shared among donors and relevant organisations in the PIPS partner meetings. They helped promote donor coordination and also avoid the duplication of activities.

After the completion of this project, no donors provided systematic assistance to improve the capacity to implement EPI-related activities region-wide. At this moment, JICA provides regional training courses for officers from 13 countries, as well as domestic courses in five priority countries, including the Solomon Islands, Kiribati, Samoa, the Federated States of Micronesia and Vanuatu provided by JICA establishing a cold chain. In this ex-post evaluation, it was confirmed that few countries have conducted sufficient domestic training sessions in recent years. Hence, it is desirable to assess the potential for extending continuous support to provide domestic training courses to improve data collection capacity, promote outreach activities, as well as enhance appropriate disposal for EPI-related medical waste in

cooperation with other donors.

### **4.3 Lessons Learned**

The role of donors has been streamlined under the PIPS framework to improve immunization activities in the Pacific region. This project brought great significance to the PIPS framework by extending assistance in areas other donors and each country were unable to tackle, such as developing the capacity of EPI officers and fostering cold chain technicians, by implementing the project in coordination with other donors, e.g. the WHO in relation to policies, and with UNICEF to help establish a cold chain. Consequently, the capacity development of officers engaged in EPI activities was confirmed to have improved both quantitatively and qualitatively, and outreach activities were also confirmed to have improved. These activities could not be achieved without close coordination with other donors and member countries. Therefore, conducting EPI activities in coordination with the relevant officers and donors over the years was significant in improving immunization coverage rates, as well as constructing a human network among the EPI offices engaged in the activities. It was also quite difficult to set up the project, as the individual 13 member countries comprising small and sparsely located islands were hampered by budget and human resource constraints. Under these circumstances, JICA formulated and conducted this regional project efficiently and effectively to support the activities of all member countries.

Therefore, under a framework in which various stakeholders, including other donors, conduct their activities, it is crucial to plan the project by positioning the values added by the JICA component, and also through close coordination and exchange of information with other stakeholders.

(End)