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.

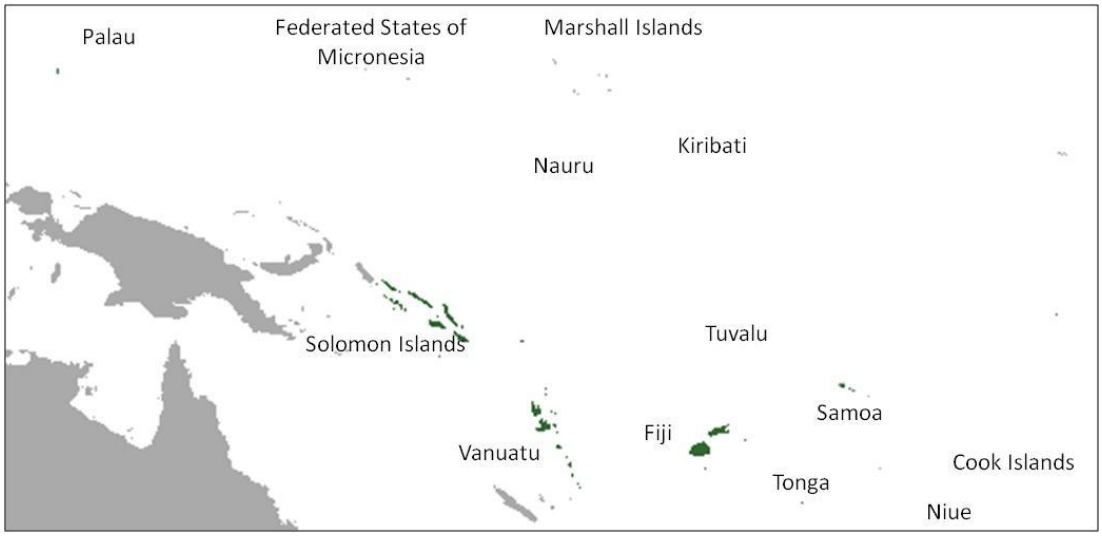
0. Summary

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[1] 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.

[1] (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 Haemophilius 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		<Japanese Inputs> 1. Dispatch of 6 Experts 4 Long-term Experts and 2 Short-term Experts 2. Training in the region 119 participants for EPI training, and 72 for cold-chain training 3. Training in Japan 659 participants 4. Equipment 184 refrigerators, 14 freezers, 3 vehicles, 3 incinerators 5. Local Project Costs 102 million JPY <Inputs by the 13 Pacific governments> 1. Assignment of counterpart personnel 2. Land, building and facilities necessary for the project
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) [2], 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

[2] 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[3] 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.)[4]

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

[3] 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.

[4] 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[5])

3.1 Relevance (Rating: ③[6])

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[7].

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

[5] A: Highly Satisfactory, B: Satisfactory, C: Partially Satisfactory, D: Unsatisfactory
[6] ③: High, ②: Fair, ①: Low
[7] 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[8], 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[9] (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:

[8] According to the ODA Country Databook (2004) by the Ministry of Foreign Affairs

[9] 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.

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

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.

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[10]. 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

[10] 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[11], and also improving immunization coverage rates of all vaccines, except BCG, to exceed the target of 80%.

[11] 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[12], 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

[12] 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[13]. 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

[13] 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 Advisor14.1MM（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)