Ex-Post Evaluation for Grant Aid Project

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Country Name	The Project for Infectious Diseases Control Phase III
Republic of Zambia	The Project for Infectious Diseases Control, Phase III

I. Project Outline

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	The shortage of funds has been a constraint for the Government of Zambia (GOZ) in procuring medical											
	drugs and health commodities to the peripheral health facilities. In 2006, the GOZ requested the											
Background	Government of Japan (GOJ) for a grant aid to provide test kits for Tuberculosis and HIV/AIDS, and Health											
Dackground	Centre Kits. However, due to the two-year delay in implementing a preparatory study, the situation of											
	procurement of drugs and the health commodity has changed since 2006. Based on the renewed discussion											
	between GOZ and GOJ, the request was changed to procure only Health Centre Kits.											
	To improve the treatment situation of major infectious diseases by procuring Health Centre Kits* in the											
Objective of the	amount of 8,000 kits for 1,210 health centres in Zambia.											
Project	*Health Centre Kits: The contents of a kit include standardized essential goods for health centres such as											
	treatment drugs, injectable drugs, syringes, gauze, cotton absorbent, gloves and other items.											
	I. Project Site: Entire country											
	II. Japanese side											
	1	.) GOJ procured Hea	lth Centre Kits v	vith below	w iten	ns in order to improve the	he treatment serv	vice for				
	infectious diseases and to improve the quality of health services at the health centres.											
												
	No	Item	Unit	Quanti	26	Phenoxymethylpenicilli	1000tabs/bottle	1				
	**			ty		n Potassium						
	Heal	Ith Centre Kits	Kits	8000	27	Procaine	10ml/vial	20				
	1	Acetylsalicylic Acid	1000tabs/bottle	2	20	Benzylpenicillin	1000.1.1					
	2	Erythromycin	500tabs/bottle	1	28	Salbutamol	1000tabs/bottle	2				
	3	Amoxicillin	1000caps/bottle	4	29	Tetracycline	5g/tube	25				
	4	Benzathine	1 vial	20	-	Hydrochloride	4000 1 4 1					
		Benzylpenicillin			30	Doxycycline Hyclate	1000tabs/bottle	1				
	5	Water for Injection	10ml/ampoule	20	31	Quinine Sulphate	100tabs/bottle	3				
	6	Benzylpenicillin (3mg)	1 vial	10	32	Nitrofurantoin	100tabs/bottle	1				
	7	Benzylpenicillin 1 vial	1 vial	10	33	Drug Dispensing Bag	1000pcs/pack	4				
		(600mg)			34	Bandage	1 roll	50				
	8	Water for Injection	5ml/vial	50	35	Braided Silk Suture	1 reel	1				
Outputs of the Project	9	Chlorpheniramine 100tabs/bottle	1		(3/0)							
		Maleate			36	Braided Silk Suture	1 reel	1				
	$ \begin{array}{c cccc} 10 & D \\ \hline 11 & Fe \\ 11 & Su \\ \hline 12 & Fe \\ \hline 12 & Fe \\ \hline 13 & Fe \\ \hline 14 & Su \\ \hline 14 & Su \\ \hline 15 & Fe \\ \hline 16 & Su \\ \hline 17 & Su \\ \hline 18 & Su $	Diazepam	2ml/ampoule	5		(2/0)						
		Ferrous	1000tabs/bottle		37	Catgut Chromic	l reel	1				
		Sulphate(200mg)	1000.1.41		38	Ballpoint pen	1 piece	3				
	12	Ferrous Sulphate(50mg)	1000tabs/bottle	1	39	Cetrimide	10g/sachet	5				
	13	Folic Acid	1000tabs/bottle	2	40	Chlorhexidine 1000ml/bot		1				
	14	Clotrimazole	20g/tube	20	4.1	Gluconate		10				
	15	Hydrocortisone Acetate	15g/tube	5	41	Condom	1 piece	10				
	16	Lignocaine	10ml/vial				500 / 1	08				
	I —	Hydrochloride				Absorbent Cotton	500g/pack	4				
	17	Magnesium Silicate	500tabs/bottle	1	43	Gauze Absorbent		2				
		Compound	npound		44	Gauze Paraffin	36pcs/pack	1				
	18	Methylergometrine 1ml/ampule		5	45	Gloves(M)	100/box	2				
		Maleate		1	46	Gloves(L)	100/box	2				
	19	Metronidazole	1000tabs/bottle	1	47	Needles(23G)	100/box	2				
	20	Multivitamin	1000tabs/bottle	1	48	Needles(21G)	100/box	2				
	21	Nystatin(Suspension)	30ml/bottle	5	49	Note book pad	1 piece	1				
	22	ORS citrate	20.5g/sachet	200	50	Strapping tape adhesive	1 roll	4				
	23	Paracetamol 500mg	1000tabs/bottle	5	51	Scalpel Surgical Blade	10pcs/pack	1				
	24	Mebendazole	100tabs/bottle	1	52	Swabs Gauze	100pcs/pack	1				
	25	Paracetamol 100mg	1000tabs/bottle	2	53	Syringes(2ml)	100/box	1				
					54	Syringes(5ml)	100/box	2				
					55	Toilet Soap	1 piece	5				
					56	Surgical Gloves	50 pairs/box	1				
	Th-											
	i ine	te was no change in the	types and number	as of coll	uciits	or the meaning Centre All	compared to the	piali.				

	III. Zambia side: It was not confirmed through the evaluation carried out by JICA Zambia office in 2012 if the Zambia side undertook all necessary and agreed actions such as bearing the cost of custom clearance, appropriate storage and quality control, provision of transportation to deliver the kits, and reporting monitoring results of delivering kits. The ex-post evaluation team decided not to look into the situation further because it was expected to be more difficult to get information compared to the situation of 2012.								
Ex-Ante Evaluation	Feb-March 2007	E/N Date	3 November, 2007	Completion Date	October 2008				
Project Cost	E/N Grant Limit: : 345 million yen, Actual Grant Amount: 338 million yen								
Implementing Agency	Ministry of Health, Medical Stores Limited (MSL), District Health Management Team (DHMT)								
Contracted Agencies	Japan International Cooperation System, Toyota Tsusho Corporation								

II. Result of the Evaluation¹

1 Relevance

Continuous provision of Health Centre Kits is the priority issue along with the county's developmental objectives such as "to reduce the under-five mortality" and "to reduce the morbidity and mortality of infectious diseases", which were addressed in both the 5th National Development Plan (2006-2010) and the 6th National Development Plan (2011-2015) during the ex-ante and ex-post evaluations. In addition, the revised 6th National Development Plan (2013-2016), which emphasizes the improvement of the Maternal and Child Health (MCH) and infectious diseases control situations, aims to solve the problem of drug shortage at the peripheral health facilities through strengthening the drug supply management system and increasing the financial mechanism for procuring the essential drugs.

During the ex-ante as well as ex-post evaluations, Zambia continued to have high mortality due to infectious diseases. In order to overcome the problem, it was inevitable to improve the treatment service at the peripheral health facilities with the reliable supply system of essential drugs. Furthermore, as the GOZ introduced free health care service policy at the primary level hospitals and health centres, the Dutch government, who was the main financial supporter for providing drugs and kits, shifted their assistance to the basket fund cooperation in 2006. Under these circumstances, the GOZ was not able to procure a sufficient number of Health Centre Kits. Therefore, it was timely that the GOJ provided 8,000 Health Centre Kits out of 18,000 required kits in the year of 2009 for the entire country.

This project was also highly consistent with Japan's ODA policy to Zambia for promoting cost-effective health care services in Zambia during the ex-ante evaluation. Therefore, **Relevance** of this project is high.

2 Effectiveness/Impact

A) Effectiveness

JICA Zambia office carried out an evaluation in 2012 (hereinafter referred to as the 2012 evaluation) and it was confirmed through the field survey that 8,000 Health Centre Kits procured by GOJ were distributed to 1,210 health centres and 73 DHMT offices in 2009 and that the kits were utilized in these health facilities. In the same 2012 evaluation, it was confirmed through interviews with the health centre staffs and DHMT officials that essential medicines and necessary health commodities for the health service becomes stably available by this project and the treatment of major infectious diseases was improved.

According to the responses to the questionnaire survey in the ex-post evaluation, it was confirmed that the amount of Health Centre Kits provided by GOJ was sufficient for a year supply of drugs as well as buffer stocks in health centres. Therefore the aid by this project in 2009 contributed toward improving infectious diseases treatment services. It was also confirmed that the remaining 10,000 kits required in order to cover the entire nation in 2009 was procured through the health basket fund. Therefore, **Effectiveness** of this project is high.

The indicators set in the basic design study were as follows (project targets: 1,210 heath centres)

Performance Indicators

(1) <u>The Japanese Grant Aid project would contribute toward the stable supply of Health Centre Kits required to cover all health</u> <u>centres in the entire country in 2009.</u>

According to the 2012 evaluation by JICA Zambia office, 8,000 Health Centre Kits procured by GOJ was sufficient for a year's supply of drugs as well as buffer stocks in 1,210 health centres and 73 DHMT offices. Also, all 8,000 Health Centre Kits were

¹ As a characteristic of Project for Health Commodity Provisions, since the procured commodities had already been consumed at the time of ex-post evaluation, there are limitations to obtaining information about said commodities. While **Sustainability** examines "whether the effectiveness by the project is likely to continue after the project completed", in the case of Projects for Health Commodity Provisions, it is difficult to judge the sustainability of the effects of commodities because the health commodities are consumed in a short time period. Furthermore, since the beneficiaries (patients) take such commodities (drugs, test kits and/mosquito nets) only during a specific time period, their effects are only apparent within that limited time. Thus, it is not possible to evaluate **Sustainability** of effects of the procured commodities at the time of ex-post evaluation. The Effectiveness of Projects for Health Commodity Provisions should instead be evaluated with confirmation of delivery status, utilization of the procured commodities, and the status of relevant disease control programs. The conventional Grant Aid Projects measure performance and effects indicators a few years after the completion of the projects during ex-post evaluation. However, in principal, it is not possible to conduct the same type of ex-post evaluation to measure **Effectiveness** and **Impact** for Projects for Health Commodity Provisions, since the causal relationship between these indicators and the projects are defined and the indicators are set according to the available data. It may also be possible to evaluate to some degree **Impact** for Projects for Health Commodity Provisions, in cases where there are no other projects of Projects of Project for Health Commodity Provisions is explained in each Ex-Post Evaluation Report. This Ex-Post Evaluation for each project in terms of Relevance, Effectiveness and Efficiency.

distributed and used in all health centres. Therefore, it was concluded that the indicator was achieved.

Effect Indicators

(1) <u>The people in Zambia (10.5 million) could receive appropriate treatment services in the case of contracting infectious diseases.</u> The 2012 evaluation by JICA Zambia office conducted interviews with the health staffs and pharmacists working in the Lusaka DHMT Office, Chillenge Health Centre, Chibonbo DHMT Office, Chikobo Health Centre, and Chibonbo Health Centre. The interview results confirmed that most essential drugs and health commodities that are required for providing health services in the health centres, such as antibiotics, painkillers, bronchodilators, anti-malaria drugs, disposal surgical knifes, disposable syringes, and others became stably secured by the provision of Health Centre Kits through this project and contributed to a significant improvement on treatment of diseases. Therefore, this project contributed toward increasing the opportunities to treat patients suffering from infectious diseases.

B) Impact

Regarding Impact of this project, the indicators shown below, which were developed in the basic design study, were not relevant and measureable. Furthermore, there was no causal relationship between the single year procurement of drugs and improvement of mortality and morbidity rates due to the infectious diseases. It was not possible to evaluate Impact of this project.

- (1) Growth of children under five is expected to be improved by treatment of major infectious diseases
- (2) Quantity and productivity of labour forces are expected to improve by treatment of major infectious diseases.

■ (1) Growth of children under five is expected to be improved by treatment of major infectious diseases

According to the preliminary report of Zambia Demographic and Health Survey (2013-14), 45% of children under five were stunting (height-for-age is lower than the growth standard) in 2007 and 40% in the 2013-14 survey. Thus stunting, which represents the long term and chronic malnutrition, was slightly improved over the years. However, wasting (weight-for-height is lower than the growth standard) showed no change during the same period. This means that wasting, which is an indicator for the short-term nutritious status due to illness or temporary unavailability of foods, remained the same.







(Source : 2013-14 Zambia Demographic and Health Survey, Preliminary Report, September, 2014)

However, there are many factors between treatments of major infectious diseases and improvement of nutritional status of children, such as the production of agriculture products, household income, and also some cultural factors like men and boys being allowed to eat more of the limited food available than women and girls. Thus, there is no causal relationship between this project and data for the indicators. Therefore, this indicator was not relevant to measure the **Impact** of provision of Health Centre Kits.

■ (2) Quantity and productivity of labour forces are expected to improve by treatment of major infectious diseases

The data of the quantity and productivity of labours do not exist and the causal relationship between them and this project was not established. Therefore, this indicator is not adequate to measure the **Impact**.

C) Other negative impact

According to the 2012 evaluation, no negative impacts on the natural environment were confirmed. Also, the responses in the questionnaires from the relevant officials in Zambia in this ex-post evaluation indicated that no negative impacts on the natural

environment were recognized and medical wastes were treated properly. Therefore, it was concluded that there were no negative impacts on the environment by implementation of this project.

3 Efficiency

Health Centre Kits were procured as planned. The project expenditure was lower than what was initially planned (ratio to the plan: 98%).

Project period was also within the planned period (ratio to the plan: 92%). Therefore, Efficiency of this project is high.

4 Summary of the Evaluation

The project was designed to procure Health Centre Kits for the entire country in the amount of 8,000 kits that contained 56 items of essential drugs and health commodities such as gauze, absorbent cotton, and syringes, etc. The ex-post evaluation assessed **Relevance, Effectiveness, Impact** and **Efficiency** of this project. Since Health Centre Kits procured by this project were consumed in a short time period **and** their effects were only apparent within that limited time, this Ex-Post Evaluation Study could not evaluate **Sustainability**.

Relevance of this project is high. Zambia is still suffering from the major infectious diseases that are top causes of deaths in the country. The mortality rates of children under age five and infants continuously remain high. In order to reduce mortality due to infectious diseases, the GOZ makes this issue a priority and promotes adequate treatment at peripheral health facilities. Therefore, securing essential drugs at health centres is a priority issue in the national development plans and policies during both ex-ante and ex-post evaluations of this project. As the government introduced free health care service policy in 2006, the demands for health services increased. At the same time, the Dutch Government decided to shift their assistance to the health basket fund. Therefore, the gap between supply and demand of such Health Centre Kits became significant. 8,000 Health Centre Kits procured by GOJ were a timely input to fill this gap.

Efficiency of this project is high. The health centre kits were procured as planned. The output of this project was implemented as planned, and both the project cost (98%) and period (92%) were within the planning.

Effectiveness of this project is high. The 2012 evaluation carried out by the JICA Zambia office confirmed that 8,000 Health Centre Kits procured by this project were distributed to 1,210 health centres in 73 DHMT offices in 2009 and that these 8,000 Health Centre Kits were consumed at health centres all over the country. Also in the 2012 evaluation, the interviewed medical personnel at peripheral health offices and facilities recognized the improvement in the availability of drugs and health commodities as well as the improvement in the treatment of infectious diseases due to this project.

Impact of this project was not measured because the indicators set in the basic design study were not relevant and the causal relationships between this project and impact indicators were not confirmed.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

• None

Recommendations to JICA:

GOZ has been trying to establish a most effective and efficient essential drug supply management model with the active involvement of development partners. Therefore, the Evaluation team recommends JICA to carefully watch the development of this model and to consider possible cooperation to expand the established model to the whole nation. Possible cooperation would include the capacity development of the computer system for drug management at the central medical store, strengthening of monitoring system of delivery, improvement of facilities and equipment for cold chain systems and warehouses, and trainings of the health personnel for effective and efficient utilization of drugs.

Lessons learned

Selection of Indicators

When the indicators are influenced by the activities and elements that are out of the scope of the projects, the causal relationships between the indicators and the projects are not found. Thus, the indicators selected to measure **Effectiveness** and **Impact** are not relevant. The indicators selected for this project, such as "nutrition status of the children", "growth of the children", and "labour and productivity" were not relevant. They had weak causal relationships with the project since there are many other factors that affect the situation.

Column

Ensuring the Adequate Stocks of Essential Drugs at Peripheral Health Centres.

In Zambia, the Health Centre Kits that are essential for health services at the health centres contain drugs, injectable drugs, gauze, absorbent cotton, gloves, syringes etc., and are still being used since they were introduced in the 1980s. Health Centre Kits are

delivered from the Central Warehouse in Lusaka to the district storages, and then delivered to the health centres. Delivering Health Centre Kits from the district storages to the peripheral health facilities takes longer periods of time. As a result, health centres frequently run out of stock. The frequent stock-out is caused by an insufficient capacity of drug supply management at the district level, lack of communication means between health centres and district offices, and/or underdeveloped access roads to the periphery areas.

In response to this challenge, the World Bank together with USAID, DFID and some other development partners supported GOZ to develop Essential Medicines Logistics Improvement Programme (EMLIP) aiming to establish a most effective and efficient essential drug supply management model.

EMLIP implemented a 12-month study in 24 districts from April 2009; 16 districts were pilot sites and 8 districts were control sites. The study compared two different models for distribution. Model A was implemented in 8 districts that had a commodity planner at the district level who was responsible for collecting the orders from each health centre and for submitting the bulk order to the Central Medical Stores Limited (MSL) at the monthly basis. After receiving the bulk drugs from the MDL, the commodity planners put the ordered drugs and health commodities into packages for each health centre and distributed them to the health centres. Model B was implemented in 8 districts, where each health centre submitted its order directly to the Central MSL and MSL packed the ordered drugs and health commodities and distributed them directly to each health centre. The study concluded that Model B showed better effects on reducing days of stock-out of drugs than Model A. Model B was implemented in 16 districts out of 50 districts in total. However, in late 2012, the delays of procurement at the central level caused stock-outs at the Central MSL, affecting all Model B districts. In order to compensate the activities in Model B districts, an EMLIP "hybrid" system that distributed some health consumables, such as plasters and syringes packed as a kit, was developed and rolled out in 2013.

(Source : from Evidence to Policy, The World Bank, November 2010, Abstract Template Zambia, 7th health Supply Chain Summit (GHSCS) 2014)