Ex-Post Evaluation for Grant Aid Project

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Country Name	The Project for Malaria Control in Myanmar
Republic of the Union of Myanmar	

I. Project Outline

Background

Malaria constitutes a major public health problem in Myanmar with about two-thirds of its population living in malaria endemic areas. In the past years, Myanmar reported the highest malaria morbidity and mortality rates in both the WHO South-East Asia Region and in the Greater Mekong Sub-region. In 2005, all procurement of medical supply for malaria control was discontinued when Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) abruptly withdrew their support to Myanmar due to the economic sanction of USA to the Myanmar government. However, malaria control activities were swiftly restored through support by other development partners; such as Bridge Fund (US$0.53 million), followed by the five-year support of the Three Disease Fund (3DF) in 2006 (US$ 138 million). Still, support for procurement of commodities for malaria control was greatly needed.

Objective of the Project

To strengthen the malaria control programme in the areas of "diagnosis and examination", "treatment" and "prevention" in Bago Region[1] (West Bago Division & East Bago Division), Rhkhine State, and Magway Region in Myanmar by providing necessary equipment and technical assistance for management and the awareness campaign for Long Lasting Insecticide Nets (LLINs) in order to reduce malaria morbidity and mortality rates in the project sites.

Outputs of the Project

I. Project Site: West Bago Division, East Bago Division, Rhkhine State, and Magway Region

II. Japanese side

1) Provision of necessary commodities for the malaria control programme in the areas of "diagnosis and examination", "treatment" and "prevention".

Procured Commodities	Unit	Quantity
Rapid Diagnostic Test	25tests/kit	27,866
Slide glass	100 sheets/box	2,323
Lancet	200 pcs./box	1,163
Giemsa Stain Solution	500ml/bottle	467
Anisole solution	500ml/bottle	467
ACT drug 1:	30 treatments/box	1,246
ACT drug 2		1.860
ACT drug 3		1,860
ACT drug 4		7,432
Chloroquine	1000 tablets/bottle	2,880
Primaquine	1000 tablets/bottle	5,760
Artemether injection	Ample: 12 bottle/box	18,578
Syringe	Individual package: pcs.	111,468
Doxycycline	1000 tablets/sheet	187
Artesunate tab	12tablets/ sheet	18,578
Quinine tab.	1000 tablets/bottle	2,880
Long Lasting Insecticide Net (LLIN):	pcs.	158,000
Sprayer for Indoor Residual Spray (IRS):	Individual package: pcs.	24
Insecticide for IRS	25kg/drum	60

2) Soft component: technical assistance to strengthen capacity of drug management and reporting system of the counterparts.

(i) Development of drug supply management manual

- Japanese consultant conducted the meetings for development of supply management manual
- Three days of meetings, three months prior to the arrival of commodities
- Participants: team leaders of Vector Borne Diseases Control (VBDC) and Japanese experts

(ii) Seminars for drug management and reporting system

- Japanese consultant and local consultant conducted the seminars as below

[1] "Regions" were called "Divisions" prior to April 2011. When the Project for Malaria Control started, Bago Region was consisted of West Bago Division and East Bago Division. Therefore, Bago Region is referred to as West Bago Division and East Bago Division in this Ex-Post Evaluation summary sheet.

	- One-day regional seminars in 4 project areas from August to December 2009. - Participants - Targets: 3 officials from each township, 72 places, total of 216 officials III. Myanmar side: The input from Myanmar side was not confirmed.					
Ex-Ante Evaluation	2008	E/N Date	September 12, 2008	Completion Date	March 10, 2010	
Project Cost	E/N Grant Limit: : 346 million yen, Actual Grant Amount: 270.6 million yen					
Implementing Agency	Vector Borne Disease Control (VBDC), Ministry of Health					
Contracted Agencies	Fujita Planning Inc. and Sirius Consulting Services					

II. Result of the Evaluation[2]

1 Relevance

Malaria constitutes a major public health problem in Myanmar with about two-thirds of its population living in malaria endemic areas. In the past years, Myanmar reported the highest malaria morbidity and mortality rates in both the WHO South-East Asia Region and in the Greater Mekong Sub-region. Under these conditions, reducing malaria morbidity and mortality rates was identified as the priority challenge in the National Health Plan (2006-2010)(2011-2016). The National Malaria Plans (2006-2010 and 2011-2016) were formulated to focus on improving the geographical gaps in malaria control, raising awareness of local residences against malaria, scaling up malaria prevention, and expanding early case detection and treatment of malaria patients. Therefore, this project was highly relevant to the national health policy in the country during both ex-ante and ex-post evaluation. In 2005, when GFATM abruptly terminated its financial assistance due to the economic sanction of USA to the Myanmar government, this project was implemented in order to fill the gap in the blank period of assistance for procurement of medical supply for malaria control with the Grant Aid Project. Needs for malaria treatment drugs and other commodities for malaria prevention are still high at present. Therefore, It was also consistent with the development needs to combat malaria even during both ex-ante and ex-post evaluation and it is still so at present. This project was also highly consistent with Japan's ODA policy for improving the lives of people in Myanmar; poverty alleviation for ethnic minorities assisting in the areas of medical/health services, disaster prevention/management and agriculture, agricultural development and regional development, which are specified under the country-specific plan of the Japanese government. Therefore, **Relevance** of this project is high.

2 Effectiveness/Impact

It is difficult to accurately determine the degree of **Effectiveness** only from commodities such as drugs and test kits, toward improvement of disease conditions since in general, commodities are only one of the inputs of disease control programmes, which normally consists of multiple activities such as prevention, treatment, and health education for behavioural changes of the people.

However, since the Grant Aid Project was conducted in the same project sites along with the JICA Technical Cooperation Project (Major Infectious Diseases Control Project Phase I) (2000-2005), it was possible for the malaria component of the JICA Technical Cooperation Project to conduct regular monitoring on the commodities and distribution of the Grant Aid Project as a part of their regular monitoring and evaluation activities. Furthermore, since there was no other donor distributing the same types of commodities over a certain period of time in the same project sites, it was possible to evaluate **Effectiveness** and **Impact** of the Grant Aid Project as well as the synergistic effects for both projects.

A) Effectiveness

Since both performance and effect indicators were not clearly written in the Basic Design Report, they were proposed at the time of ex-post evaluation. Since the commodities of this project were distributed to the health facilities and households as planned and numbers of malaria positive cases and prevalence rates reduced in the project sites, this project is highly effective. The following shows the analysis of **Effectiveness** of this project based on the achievements of the performance and effect indicators.

【Performance Indicators】

The necessary anti-TB treatment drugs for adults were distributed to rural health facilities within the planned period.

(1) The number of years covered with a sufficient provision of the malaria commodities (diagnosis and treatment drugs) at the

[2]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 those indicators and the projects is not necessarily clear. It may be possible to evaluate **Effectiveness,** when the direct causal relationship between the procured commodities 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 in the same geographic areas during the same time periods as the projects. The evaluation of **Effectiveness** and **Impact** for the individual nine Grant Aid Projects of Project for Health Commodity Provisions is explained in each Ex-Post Evaluation Report. This Ex-Post Evaluation Study conducts the overall evaluation for each project in terms of Relevance, Effectiveness and Efficiency.

health facilities in the project sites
(2) The amount of sprays and insecticides for Indoor Residual Spray (IRS) distributed in each VBDC in the project sites as planned
(3) The number of LLIN distributed to the residences in 12 priority townships according to the plan (generally two LLIN per family)

As mentioned below, it was confirmed that the malaria commodities from this project were distributed to both health facilities and households as planned:

Results

Indicator (1): According to the " *Accomplishment Report of Malaria Control Programme in Bago, Magway Regions, and Rakhine State*" produced by JICA Technical Cooperation Project in 2012, JICA Technical Cooperation team monitored distribution of malaria commodities with the Grant Aid Project and confirmed that a sufficient number of malaria commodities were distributed to the project sites. The Evaluation team confirmed that all Rural Health Centres (RHC) they visited kept records for drugs and supply for the year of 2009. The receipts of the commodities of the Project were confirmed during the field survey. The Grant Aid Project covered malaria commodities for two years between 2009 and 2010.

Indicator (2): The Evaluation team confirmed that the sprays and insecticides for IRS were distributed as planned and the sprays are stored and still used during malaria outbreaks by the township VBDCs in the project sites the Evaluation team visited during the field survey.[3]

Indicator (3): According to the 2012 accomplishment report supported by JICA Technical Cooperation Project, it was confirmed that all LLINs were distributed as planned to Rural Health Centres (RHCs) and Sub-Centres (SCs) at the seminars on the utilization and their effects of LLIN. Directors distributed LLINs to each household in the high-risk areas. The 12 priority townships for LLIN distribution were located: one in Bago West Division, six in Rakhine State, and five in Magway Region. Evaluators could not visit villages to see how LLINs had been used during the field survey. VBDC Rakhine conducted a Community Based Survey to confirm that LLINs have been used in the community. Since the life-time of LLIN is generally around three years, LLINs of this project were most likely no longer in use during the time of the ex-post evaluation.

【Effect Indicators】
(1) Numbers of Malaria case detection and treatment increase in the public health facilities in the project sites, compared to the baseline in 2006: 19,841 cases in East Bago Division, 18,631 cases in West Bago Division, 28,289 cases in Magway Region, and 172,495 in Rakhine State.
(2) Numbers of Malaria examinations (microscopic exam) increase in the public health facilities in the project sites, compared to the baseline in 2006: 18,133 in East Bago Division, 5,325 in West Bago Division, 16,780 in Magway Region, 224,421 in Rakhine State.
(3) Numbers of malaria outbreaks in the project sites decrease from 6 times during the period of 2001-2006.

Results

Indicator (1): The effect indicators were set as ***Numbers of Malaria case detection and treatment increase in the public health facilities in the project sites.*** However, as Table 1 shows the numbers of malaria examinations increased and malaria prevalence rates decreased in all target Region/State/Divisions between 2010 and 2011, when the malaria commodities were distributed by this project. Therefore, the effect indicators should be ***Numbers of malaria positive cases and prevalence rates decrease in the public health facilities in the project sites*** in order to measure the effects of this Project. In all project sites, the numbers of malaria positive cases and prevalence rates decreased in 2010 and 2011, compared to 2006. Therefore, this project contributed toward producing effects on prevention and treatment for malaria.

Table 1: Number of Malaria Examination, Malaria Positive Cases and Prevalence Rate

Area	2006		2010			2011		
	Exams by Rapid Test kits (RTK) & Microscope	Positive cases *(p.f)*[4]	Exams by Rapid Test kits (RTK) & Microscope	Positive cases *(p.f)*	Prevalence rate (%)	Exams by Rapid Test kits (RTK) & Microscope	Positive cases *(p.f)*	Prevalence rate (%)
Bago East	18,133	19,841	38,839	18,074	46,54%	40,380	17,530	43.42%
Bago West	5,325	18,631	27,170	10,086	37.12%	27,238	7,122	26,15%
Magway	16,780	28,289	53,423	24,572	46.00%	40,682	14,680	36.08%
Rakhine	224,421	172,495	167,771	62,902	37.49%	177,749	62,710	35.28%

(Source: Accomplishment Report on Malaria Control Programme in Bago, Magway Regions and Rakhine State, bilateral collaboration between Japanese Government and Myanmar Government supported through Japan Grant Aid and JICA Technical Assistance, 2012)

[3] Source: Mr. Thein Nyunt, VBDC Malaria Assistant, Rakhine state, Dr. Kyi Thar Swe, VBDC Malaria Team leader, Magway Region, Mr. Mya Soe Kywe, VBDC Malaria Assistant, Bago Region
[4] Plasmodium falciparum malaria

Indicator (2): ***Numbers of Malaria examinations (microscopic exam) increase in the public health facilities in the project sites*** compared to the baseline in 2006. Data for ***Malaria examinations (microscopic exam)*** was not available. Instead, numbers of Malaria examination by raid test kits and microscopic exams are available as shown in Table 1. The numbers of examinations by RTK & Microscope increased between 2010 and 2011 in all project sites.

Indicator (3): Number of malaria outbreaks in the project sites is shown in Table 2. The malaria outbreaks obviously declined in all project sites. It was confirmed that the Grant Aid Project along with JICA Technical Cooperation Project contributed toward prevention of malaria outbreaks.

Table 2: Number of malaria episodes in the target areas from 2007 to 2013

Region/State	2001-2006	2007	2008	2009	2010	2011	2012	2013
West Bago	6 times malaria outbreaks	0	0	0	0	0	0	0
East Bago		0	0	0	0	0	0	0
Rakhine		0	1	0	1	0	0	0
Magway		0	1	0	0	0	0	0

(Source: Programme Manager of Malaria control to the ex-post evaluation questionnaire)

Therefore, the Evaluation team confirmed the effectiveness of this project toward reducing the malaria positive cases and prevalence rates in the project sites produced as expected.

◆ Effectiveness of other component（Qualitative Effects）

The effectiveness of the following soft components.

Soft Component 1:

Drug Management and Reporting System

The Results of Questionnaire survey targeted BHS[5] (521 staffs)

Did you receive explanations from the officials of township VBDC on the new Drug Management and Reporting System?	Yes: 99.81%
Did you understand the importance of new Drug Management and Reporting System?	Yes:100%

(Source：Completion inspection report)

Soft Component 2:

Utilization and・Awareness/ Management LLIN

The Results of Questionnaire survey targeted BHS (521 staffs)

Were the knowledge and skills of persons in charge of Utilization and Awareness/ Management LLIN at the township level improved?	Yes: 99.81%
Do you understand the difference between LLIN and impregnated bed nets?	Yes:100%
Are you confident enough to convey the knowledge of LLIN to the community people?	

(Source：Completion inspection report)

As shown in Completion inspection report of this project, two soft components aimed at strengthening the drug management and reporting system, and deepening the understanding of importance of utilization and awareness/management of LLIN were implemented as planned, and has continued to be effective during the ex-post evaluation field survey.

Elements contributed to the production of effects

Shortage of malaria treatment drugs for a certain period at the peripheral health facilities due to delay of delivery of drugs was a big problem for the malaria treatment. In order to solve this problem, the JICA expert who was sent to Myanmar in early 2000s introduced a “pull system” of drug management in 2004. In the “pull system”, health workers at the peripheral health facilities bring the drug management documents to VBDC office at the township level and then pick up drugs to replace the amount of consumed drugs in the previous month along with some buffers, instead of waiting for drugs to be distributed in some arbitrary amount. This pull system was effective in solving the problem of drug shortage. Therefore, at the beginning of each month, the peripheral health facilities are able to keep a sufficient amount of drugs and other supplies. The soft components of the Grant Aid Project also conducted the seminars for the new drug management system (pull system) and trained the health workers, and it resulted in securing malaria treatment drugs procured by this project at the frontline health facilities. Each month when the health staffs at the peripheral health facilities come to their VBDC office at the township level to receive their salary, they bring the drug management documents. In this way, it is certain that the health facilities receive all necessary drugs and supply at the same time.

In the field survey, the evaluators confirmed that each RHC has a month worth of drugs for treatment along with a month of buffers, and that SC has enough drugs for a month as well as a half-month worth of buffers to respond anytime to the outbreaks of malaria.

[5] Basic Health Staffs (BHS)

Also, the new reporting system for malaria examination and treatment data was first developed and introduced in the pilot sites of the malaria component of the JICA Technical Cooperation Project (16 townships). Then through the Grant Aid Project, this new reporting system was expanded to 72 townships and is used to collect information on examination and treatment of malaria cases regularly in the project sites of this project. Furthermore, the database developed by the malaria component of the JICA Technical Cooperation Project makes it possible to aggregate the reporting data and to extract the data for each indicator. Therefore, the necessary data are available to evaluate the **Effectiveness** of this project. In this regard, it was concluded that this is a good example of synergistic effects between Grant Aid Projects for Health Commodity Provisions and JICA Technical Cooperation Project and these synergistic effects achieved greater effects. It is possible to determine that they are linked to the visualization of achievements. These synergistic effects expand continuously even beyond the project sites and a big **Impact** was observed, as mentioned in the **"Impact**" section.

B) Impact

Although the number of malaria positive cases increased around 2010 due to the increase of number of malaria examinations, soon after the number of malaria positive cases continued to decrease. It can be determined that synergistic effects along with the JICA Technical Cooperation Project highly contributed toward producing the **Impact.** Furthermore, the tools and approaches developed by the Technical Cooperation Project became accepted to the National Malaria Control Strategy (2010-2015) through the implementation of this project and they are now adopted nationally for the malaria control in Myanmar. Therefore, it can be said that both projects produced positive **Impacts** for the malaria control in Myanmar.

As for the impact, it was identified that malaria morbidity and mortality have been continuously declining in the project sites as shown below in Table 3 to Table 5:

Table 3: Rakhine State (2009-2013)

2009		2010		2011		2012		2013	
Malaria cases	Malaria deaths	Malaria cases	Malaria deaths	Malaria cases	Malaria deaths	Malaria cases	Malaria deaths	Malaria cases	Malaria deaths
115,799	97	122,988	58	101,018	43	63,365	23	36,954	15

(Souce: Rakhine State VBDC)

Table 3 shows that the malaria cases decreased by 68% from 2009 to 2013, and malaria deaths decreased by 85% in the same period of time. Therefore, malaria mortality dropped more significantly than malaria morbidity.

Table 4 Magway Region

Indicators	Mean (2009-2912)	2013
Malaria OPD cases	38,874	10,857
Malaria OPD cases /1000 pop	8	2.24
Malaria deaths	54	8
Case Fertility Rate	1.31%	0.41%

(Source: Magway Region VBDC)

Table 5 Bago Region (2009-2013)

Magway Region (2009-2013)2009		2010		2011		2012		2013	
Malaria positive case	Malaria mortality rate	Malaria positive case	Malaria mortality rate	Malaria positive case	Malaria mortality rate	Malaria positive case	Malaria mortality rate	Malaria positive case	Malaria mortality rate
33,476	1.09%	40,663	0.56%	20,053	0.37%	13,311	0.16%	7,371	0.22%

(Source: VBDC Annual Report 2013, Bago Region)

All tables show that numbers of malaria positive cases and mortality rates declined in the project sites during the period of 2009 to 2013. Particularly Bago and Magway Regions show a drastic decline of malaria mortality rates and both regions are now in the malaria free stages. In Rakhine State, both malaria morbidity and mortality rates were the highest in the country, but now Rakhine's malaria morbidity rate is ranked number three from the highest and malaria mortality rate is ranked number eight from the highest. Between 2009 and 2010, only this project provided the malaria rapid test kits and treatment drugs in the area, therefore, it can be said that these improvements were results of synergistic effects of this project and JICA Technical Cooperation Project in the area. (Source: Interview with the malaria programme manager and questionnaire)

Other positive Impact

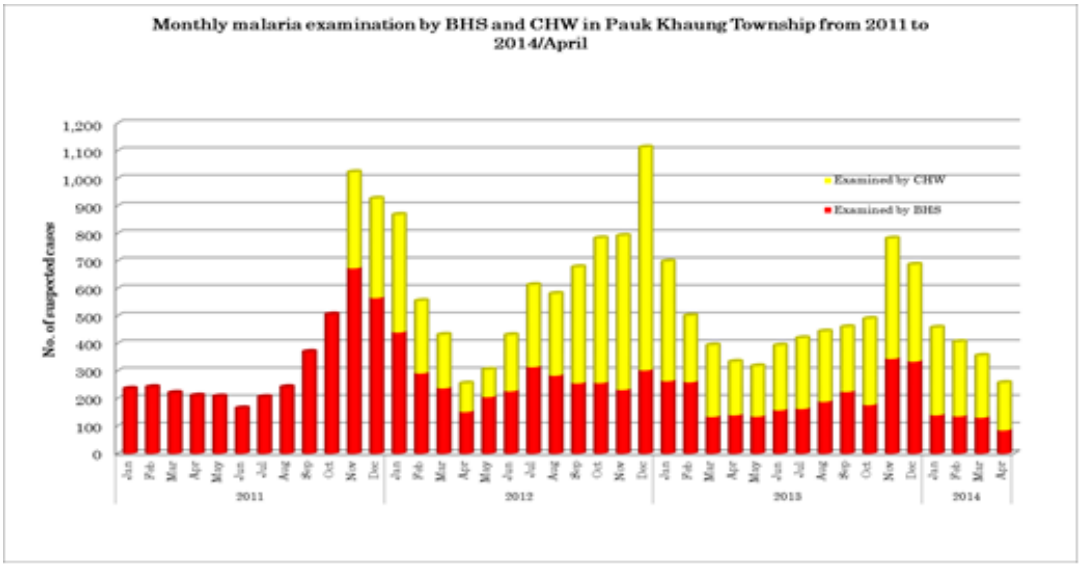
Through the interviews with the VBDC malaria programme managers, the Evaluation team confirmed that the new drug management system (pull system) was introduced to 72 townships in the project sites and now the system is operated in the whole nation by GFATM fund. The Evaluation team also confirmed through the interviews, with the VBDC malaria programme managers

and health staffs at the health facilities visited during the field survey, that the new reporting system for malaria examination and treatment was introduced to the project sites and now GFATM uses it across the whole nation as a malaria surveillance system.

The evaluators also confirmed that the drug supply management manuals developed by this project along with the counterparts are now revised, and the manuals and reporting forms have been reprinted and distributed nationwide since 2014 to every peripheral level health facilities regularly with other malaria commodities by GFATM fund. During the field survey, the evaluators confirmed the revised manuals.

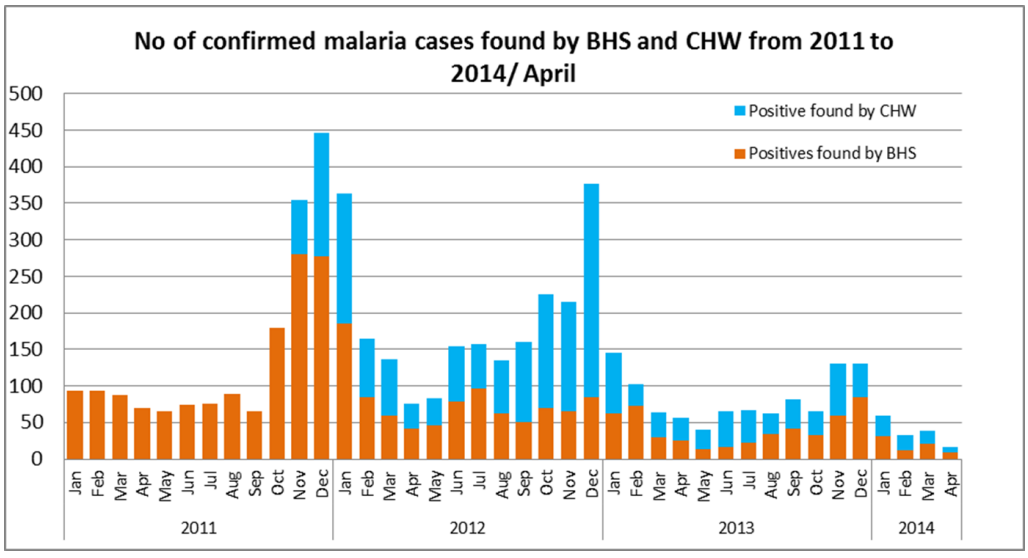
One of the strategies the malaria component of the JICA Technical Cooperation Project adopted along with this project was "Community Based Malaria Control". As shown in Figure 1 and 2, Community Health Workers (CHW) play an important role in detecting malaria cases earlier in their communities and immediately providing malaria treatment drugs. Now, the approach of "Community Based Malaria Control" is also adapted nationwide. According to the ex-post questionnaire, around 2,000 volunteers are actively involved in the malaria control activities in the project sites. The Evaluation team learned that the community volunteers are working for their communities without monetary rewards and this voluntary work concept is feasible to expand nationwide.

Fig.1：Trends of case findings by BHSs* & CHWs**（January 2011-April 2014）



(Source: Adopted from Accomplishment Report of Major Infectious Disease Control Project Phase 2 Presentation, Dr Thaung Hlaing, Deputy Director/Program Manager of National Malaria Control Program, 30 Oct, 2014)

Figure 2: No of confirmed malaria cases found by BHS and CHW (January 20011 - April 2014)

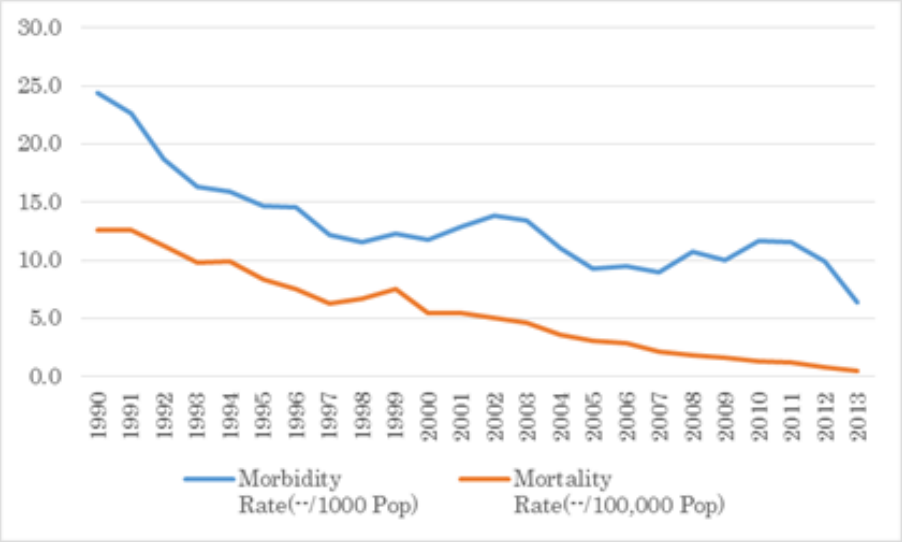


(Source: Adopted from Accomplishment Report of Major Infectious Disease Control Project Phase 2 Presentation, Dr Thaung Hlaing, Deputy Director/Program Manager of National Malaria Control Program, 30 Oct, 2014)

As mentioned above, the approaches and tools developed and piloted in the project sites in collaboration with Grant Aid Projects

for Health Commodity Provisions and JICA Technical Cooperation Project were proved to be effective and were adopted in the National Malaria Strategic Plan (2011-2015) and expanded throughout the country by GFATM. The following Figure 3 shows the overall trend of malaria morbidity and mortality rates in the country.

Figure 3: Overall Malaria Trend in the Country (1990-2013)



(Source: VBDC)

3 Efficiency

The malaria commodities of this project in the areas of "diagnosis and examination", "treatment" and "prevention" were distributed as planned and the soft components were also implemented as planned. The project cost for the commodities was 71% of the plan and the cost of soft component was 100% of the plan. The overall project cost was 74% of the plan. Although, the overall project cost was 74% of the plan, the output was not reduced and it was implemented as planned. The project period was slightly longer than the planned period (ratio to the plan: 102%) due to difficulties of physical access in Myanmar. Therefore, **Efficiency** of this project is fair.

4 Summary of the Evaluation

The project targeted East and West Bago Divisions, Magway Region and Rakhine State and provided malaria control commodities such as malaria rapid test kits, treatment drugs, spray and insecticide for IRS, and LLINs (around three hundred million Japanese yen worth).

This ex-post evaluation measured only relevance, efficiency, and effectiveness/Impact. Since malaria control commodities procured by this project were consumed in a short time period, it is not possible to evaluate **Sustainability** of effects of the procured malaria control commodities during ex-post evaluation. Thus, this Ex-Post Evaluation Study did not evaluate **Sustainability**. The following is the Summary of the Evaluation based on those four evaluation criteria:

Relevance of this project is high. Malaria is one of the three highest priority diseases in the country and is articulated in the national development policy documents. Since this project targeted high malaria risk areas, it was highly consistent with the development needs of Myanmar.

Effectiveness and **Impact** of this project is high. This project achieved its objectives; along with the synergistic effects of this project and JICA Technical Cooperation Project, which were implemented in the same project sites during the same project period. It is determined that collaboration of both projects produced high effects and impacts. Necessary malaria control commodities, such as malaria rapid test kits, treatment drugs, spray and insecticide for IRS, and LLINs were provided and utilized in four Divisions/State/Region as planned, in order "to strengthen the malaria control programme in Myanmar. As the result of the synergistic effects of both projects, the malaria morbidity and mortality rates continue to be drastically reduced in the project sites. According to the interviews with the peripheral health facilities and the BVDC malaria programme managers, the drug management system as well as the reporting system, both introduced as the soft components of this project, worked well to avoid the shortage of treatment drugs at the peripheral level, and establish the malaria surveillance system. Furthermore, these positive effects were also identified and adopted in the National Malaria Strategic Plan (2010-2015) and expanded throughout the country by GFATM.

Efficiency of this project is fair. The project cost was within the planned cost. However, the project period exceeded the planned period (ratio to the plan: 102%), probably because it took time to receive travel permits for when the Japanese consultants conduct the soft component of this projects, such as conducting the seminars.

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

III. Recommendations & Lessons Learned

Recommendations to implementing agency:

- None

Recommendations to JICA:

According to the interviews during the field survey of ex-post evaluation, issues and problems in the national drugs supply management system, such as prolonged procedure of clearance of commodities at the ports, were identified. Thus, distribution of commodities to the townships and the peripheral health facility are not implemented in a timely manner. Also, it takes a prolonged period of time to deliver the Central Warehouse to the peripheral health facility. Drugs and health commodities are not stored properly at the peripheral health facilities and the proper cold chain system of Expanded Programme for Immunization (EPI) programmes are not established at all. During ex-post evaluation study, the Evaluation team found that USAID is implementing the "Supply Chain Management System (SCMS)" and that the nationally unified "Logistic Management Information System (LMIS)" has just been introduced. However, there are many more areas that need to be strengthened in the supply management in the country. Therefore, since the drug management system significantly affects the overall quality of health care services, it is recommended that JICA considers cooperation to strengthen the logistic management system.

Lessons learned

Collaboration of* Grant Aid Projects for Health Commodity Provisions *and JICA Technical Cooperation Project

The effectiveness and impact of this project greatly attributed to the synergistic effects along with the JICA Technical Cooperation Project. More specifically, while this project was conducted in Bago and Magway Regions and Rakhine State, the JICA Technical Cooperation Project was implemented, targeting Bago Region from the year of 2005 along with Vector Born Disease Control (VBDC), Ministry of Health in order to strengthen the capacity of malaria control. The Technical Cooperation Project expanded the malaria examination and treatment services and developed the new drug management system and new reporting system in order to avoid the stock-out of drugs and supplies. It also developed the data management system in order to improve the accuracy of monitoring activities as well as transparency for patient records. Those products of the Technical Cooperation Project were also applied to this project. Consequently, the number of malaria treatment increased due to the increased number of malaria examinations. Thus they were able to respond earlier to the malaria patients in the remote areas and as the result, both malaria morbidity and mortality rates decreased drastically in the project sites. Furthermore, these strategic approaches and tools were adopted at the national level and expanded by GFATM. Therefore, the collaboration between the technical cooperation projects, which develop the approaches and tools, and the Grant Aid Projects for Health Commodity Provisions, which utilize and expand those approaches and tools, is very effective.

Column

The urgent need to improve improve the infrastructure of peripheral health facilities in Myanmar

Although the improvement of peripheral health facilities is not subject to matters of this evaluation and whether or not the health system of counterpart agencies (BVDC and MOH) are well-equipped for implementing similar projects in the future, this Ex-Post Evaluation Study attempted to study and analyze the capacity of peripheral health facilities, such as local drug storages, RHCs and SCs. The following is the identified challenges.

Among the three Regions/States visited during the field survey, only the Regional Storage in Magway region, which was constructed by the Japanese government in 2010, is in good storage condition. The other two Regional Storages (Bago Region and Rakhine State) are very old and there is neither electricity nor proper shelves for storing the commodities. Every Rural and Sub-Rural Health Center that the field survey team visited was very old and most of them do not have electricity. Equipment, such as shelves for commodities, is also in very poor condition and there is no budget to purchase stationary and new equipment. Without such basic supplies, it seems difficult to maintain or improve qualities of drugs and health services.

Therefore, improvement of the infrastructure of rural health facilities and Regional Storages is to be the most urgent issue. Along with the rapid economic development in Myanmar, it is highly expected for the decentralization accompanied with the finances and budgeting for planned infrastructure improvement to be realized. However, it might require some time before this realization. In the meantime, it is recommended that the Japanese government provide technical assistance to the Myanmar government in order to develop a national health facility improvement plan. Although the development partners, such as World Bank, Three Millennium Development Goal Fund (3MDGF) and others have been conducting studies for improving the infrastructure of rural health facilities, their studies are geographically limited to certain areas and there is no overall national health facility improvement plan yet. Overall, it is unclear which geographical areas have gaps in terms of available health resources and which geographical areas are of high priority. JICA's technical assistance will specify the high priority geographical areas from the epidemiological views and will make efficient medical/health facility allocations possible in terms of rural healthcare services. It will also support the Myanmar government to develop a master plan of comprehensive health facility improvement. Under this comprehensive master plan, health facility improvement is expected in Myanmar.