

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Madagascar Office: September, 2013

Country Name	Project for Development of Maternal and Child Health Complex in Mahajanga Province
Madagascar	(Le Projet d'Amenagement du Complexe Mère et Enfant de la Province Mahajanga)

I. Project Outline

Background	The Mahajanga University Hospital Center (CHUM: Centre Hospitalier Universitaire de Mahajanga) is one of the top referral hospitals in Madagascar. Japan supported CHUM through grant aid and technical cooperation projects in order to enhance its functions as a top referral hospital in the region. These cooperation contributed to improvement of the referral system as well as health services in the region. On the other hand, the needs to improve health services focusing on perinatal care were identified through the implementation of the technical cooperation projects to enhance capacity of CHUM.		
Objectives of the Project	To improve perinatal care* in Boeny Region by construction of maternal and child healthcare facility (CME) at CHUM and installation of medical equipment at CHUM and three health centers** in Boeny Region, there by contributing to improve maternal and child health in Boeny Region. *Perinatal care: Comprehensive and integrated neonatal care, including care for mother's body during the period from late pregnancy to early neonatal period, as well as for unborn and newborn baby in order to protect maternal and child health. ** Target health centers: Basic Health Center of South Mahavoky (CSB: Centre de Santé de Base Mahavoky-sud de Mahajanga), CSB Mahabibo de Mahajanga, and CSB Tamanao-Sotema de Mahajanga.		
Outputs of the Project	<ol style="list-style-type: none"> Project Site: Boeny Region Japanese side <ol style="list-style-type: none"> Construction of the following facilities: CME, including emergency section, delivery section, surgery section, intensive care section, maternity ward, training section, administration and service section Procurement of the following equipment: <u>66 items for CHUM</u> Sonogram, monitor, delivery tables, examination table, incubators, infant warmers, anesthesia apparatus, beds, etc. <u>9 items for 3 CBSs</u> Bandage sets, delivery apparatus sets, weight scale for new born baby, height scale for new born baby, examination and treatment apparatus sets, and thermal sterilizers. Malagasy side: Land preparation, work of electricity in-line, water pipe connection, planting, and procurement of office appliances. 		
E/N Date	January 13, 2006	Completion Date	March 23, 2007
Project Cost	E/N Grant Limit: : 514 million yen, Contract Amount: 502 million yen		
Implementing Agency	Implementing Agency : Ministry of Health and Family Planning (Ministère de la Santé et du Planning Familial) Operating Agency : CHUM and CSB Mahavoky-sud, CSB Mahabibo, and CSB Tanambao-Sotema		
Contracted Agencies	JV of Matsuda Consultants International Co., Ltd. and International Techno Center Co., Ltd, Daiho Corporation, Ogawa Seiki Co., Ltd.		
Related Studies	Basic Design Study: March 2005 – August 2005		
Related Projects	Japan's Cooperation: <ul style="list-style-type: none"> The Project for the Improvement of Mahajanga University Hospital Center (Grant Aid, 1999-2001), The Project for the Improvement of Mahajanga University Hospital Center (Technical Cooperation, 1999-2004) The Improvement of Provincial Mother and Child Health by Utilizing the Function of Mahajanga University Hospital Center (Technical Cooperation, 2005-2006) Project for Improvement of Maternal, Newborn and Child Health Service (Technical Cooperation, 2007-2010) Other Donors' Cooperation: <ul style="list-style-type: none"> Dispatch of Expert to CHUM (France, 2004-2005) Project for Strengthening Health Services in Mahajanga Province (GTZ, 1993-2007) Technical cooperation (Institut Régional de Coopération Développement Alsace, 2005-2011) 		

II. Result of the Evaluation

1 Relevance
This project has been highly consistent with the Madagascar's development policy, such as improvement of maternal and child health specified under "the National Health Policy (1999) (PNS: le Politique National de Santé) and "the Madagascar Action Plan (2007-2012)", and development needs to reduce infant mortality and maternal mortality as well as to increase accessibility of the population to health services in Mahajanga Province, as well as Japan's ODA policy to prioritize the Basic Human Needs (BHN) by assisting improvement of healthcare including mother and child health. Therefore, relevance of this

project is high.

2 Effectiveness/Impact

The project has largely achieved its objectives, “to improve perinatal care in Boeny Region” as a result of establishment of CME and procurement of necessary medical equipment to CHUM and 3 CSBs.

At CME/CHUM, the number of deliveries increased 983 cases in 2003 to 1,457 cases in 2012. Also, the number of caesareans increased from 144 to 533 for the same period. In addition, the perinatal care at CME/CHUM was improved: the number of cases of treatment for diseased newborn babies went up 244 in 2007 to 405 in 2012 whereas the number emergency obstetric care expanded from 183 to 496. Also, the number of cases of treatment for high risk pregnancy at CME/CHUM reached to 518 cases in 2012. At the target CSBs, the number of normal deliveries at Mahabibo increased to 722 in 2012. The number of normal deliveries at Mahavoky and Tanambao kept mostly same level since 2007. The number of cases referred to CME/CHUM from the target CSBs tended to decrease since the perinatal care activities, including the Evidenced-Based Medicine and the Humanized care introduced by the technical cooperation project supported by JICA, at the target CSBs were improved. According to the CME/CHUM, it was because the number of inadequate referral cases from the target CSBs caused by the CSB staff's inaccurate diagnoses tends to go down due to the improved perinatal care by the JICA's cooperation for improvement of medical facilities and equipment as well as capacity of the medical and health staff. In fact, not only the medical and health staff of CME/CHUM and the target CSBs but also the mothers¹ interviewed for the field survey of this ex-post evaluation have been highly satisfied with improved facilities and equipment by this project. Furthermore, the project contributed to human resource development of health staff. The practical trainings utilizing the facilities and equipment of CME/CHUM have been delivered for student of the University Mahajanga and a nurse school. As a result of improvement of perinatal care in Boeny Region, the project also contributed to improvement of infant mortality rate at CSBs and District Hospital (Centre Hospitalier de District) in the region from 62.74 per 1,000 live births in 2007 to 36.57 per 1,000 live births in 2012².



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Therefore, effectiveness/impact of this project is high.

Quantitative Effects

Indicators	(Before the project) 2003 Actual	(After the project) 2007 Planned	2007 Actual	(Ex-post Evaluation) 2012 Actual
Indicator 1 No. of deliveries at CME/CHUM	983	Increase	756 (from June to December)	1,457
Indicator 2 No. of caesareans at CME/CHUM	144	Increase	378 (from June to December)	533
Indicator 3 No. of normal deliveries at the target CSBs	(2004) Mahabibo:180 (May-September) Tanambao-Sotema: N.A. Mahavoky: 385	Increase	Mahabibo:623 Tanambao-Sotema: 435 Mahavoky: 306	Mahabibo:722 Tanambao-Sotema: 404 Mahavoky: 411
Indicator 4 No. of cases referred to CME/CHUM from the target CSBs	5,547 cases in total at CHUM*	Increase**	221 (only pregnant women)	147 (only pregnant women)

Note : * The number of hospitalized patients included at both of the Obstetrics and Gynecology Section and the Pediatric Section.

** It should be noted that the increase in the number of referral cases from the target CSBs to CME/CHUM does not necessarily indicate improvement of the perinatal care at the target CSBs because the Basic Design Study Report mentioned the number of referral cases to CHUM included normal deliveries and low risk symptoms.

Source : Basic Design Report, Monthly reports from CME/CHUM and from CSBs

3 Efficiency

The outputs of the project have been changed at minor portions but were appropriate, and both the project cost and the project period were within the plan (ratio against the plan: 97.7%, 94.1%). Therefore, efficiency of this project is high.

4 Sustainability

The operation and maintenance of facilities and equipment in CME/CHUM installed by the project have been carried out by CME/CHUM, the operating agency.

¹ Since it was difficult to directly contact with mothers who had delivered at CHUM and the target CSBs, the interviews were conducted with hospitalized or outpatient mothers at CHUM and the target CSBs at the time of site visit for this ex-post evaluation. Due to the time constraint, the number of samples for the interviews was as follows: 6 hospitalized mothers at CME/CHUM and 9 outpatients mothers at the CSBs.

² The data in 2007 refers “Annuaire des Statistiques du Secteur de Santé (Annual Health Sector Statistics) and the data in 2012 refers Gestion du Système des Informations Sanitaires (Health Information Management System)

The organizational structure for health care system has not been so much changed in Boeny Region: CHUM is a top referral medical institution and CBSs are primary healthcare institutions. In terms of the perinatal care, the referral system between CME/CHUM and the target CBSs has been well-established through the installation of facilities and equipment for CME/CHUM and 3 CSBs as well as the technical cooperation project to introduce the humanized care. In addition, CME/CHUM enhanced their function through the establishment of the integrated Perinatal Care Unit composed of the Clinical Research Unit and the Training Unit. As for the technical aspect, the perinatal care at CME/CHUM and the target CBSs using the facilities and equipment installed by the project have been delivered by the medical and health staff of CME/CHUM and the target CSBs with sufficient knowledge and technical skills. The technical cooperation project supported by JICA ("Project FAMI"³) contributed to improvement of capacity for the adequate perinatal care through delivering trainings for the health staff of CBSs in Boeny Region. Even after the Project FAMI, the trainings of perinatal care including the humanized care and the Evidence-Based Medicine (EBM) for the health staff in Mahajanga I, Mahajanga II and other districts have been delivered. On the other hand, the maintenance staff of CHUM may not have sufficient skills to repair equipment because some equipment (e.g. doppler auscultation, air conditioner) have not been adequately repaired or not been repaired despite that the technical manuals and the trainings were delivered to the technicians. In addition, the malfunctioning or break down of the equipment may attribute to the insufficient knowledge of health staff about how to carefully utilize the equipment, including preventive maintenance. Although the budget has been allocated to CHUM by the Ministry of Health and CHUM has own revenue source including payment from the patients for the medical services, the budget has not been sufficient to cover the operation and maintenance cost. Therefore, CME/CHUM has not been able to purchase sufficient spare parts. As a result, although most of the facilities and equipment installed in CME/CHUM have been in good conditions, some equipment have been malfunctioning or broken down. Also, equipment such as doppler auscultation provided for the target CBSs remain broken down. Furthermore, some equipment of CME/CHUM and the target CSBs have been utilized even after their expected lives expired due to the insufficient budget for replacement.



The Maternal and Child Health Complex at CHUM constructed by the project

Therefore, there are some problems in the technical and financial aspects as well as the current status of operation and maintenance and the sustainability of this project effect is fair.

5 Summary of the Evaluation

The project has largely achieved its objectives, "to improve perinatal care in Boeny Region" by constructing facilities for CME and providing medical equipment to CHUM and 3 CSBs, as the number of deliveries at CME/CHUM and the target CSBs and the number of cases of treatment for high risk pregnancy and emergency obstetric increased, and the referral cases from the target CSBs to CME/CHUM has been improved. Positive impacts were also identified, such as the quality of perinatal care at CME/CHUM and the target CSBs and contribution to improvement of infant and maternal mortality in Boeny Region.

As for sustainability, the CME/CHUM has no problem in the structural sustainability due to the well-established referral system between CME/CHUM and the target CSBs. However, there are some minor problems observed in terms of the technical skills of the maintenance in CHUM, the budget for the operation and maintenance of the facilities and equipment as well as some malfunctioning or broken equipment.

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

III. Recommendations & Lessons Learned

Recommendations to operating agency:

[for CHUM and the target CSBs]

It is necessary to consider training seminars for maintenance staff in order to enhance their skills for proper maintenance and repair of equipment. Also, for preventive maintenance of medical equipment, trainings for health staff at the CBSs should be organized for adequate use of medical equipment such as doppler auscultation. In addition utilization of existing manuals is need to be promoted,

[for CHUM and the Regional Direction of Boeny]

Sufficient budget allocation to CME/CHUM and the target CSBs is essential for timely and adequate maintenance of the equipment.

Lessons learned for JICA:

- Synergy effects of grant aid and technical cooperation project enables to establish a model of perinatal care including adequate referral system between the top referral medical institution and primary health institutions through effective utilization of facilities and equipment installed by grant aid project with appropriate knowledge and skills of medical and health staff enhanced by technical cooperation project.
- For further improvement of sustainability, it is better to address not only technical capacity of maintenance staff but also capacity of preventive maintenance of medical equipment including adequate use of equipment by medical and health staff by the project.

³ "The Improvement of Provincial Mother and Child Health by Utilizing the Function of Mahajanga University Hospital Center" (2005-2006)