

Summary of Terminal Evaluation

1. Outline of the Project	
Country: Democratic Socialist Republic of Sri Lanka	
Project: Project for Enhancement of Non-communicable Diseases Management	
Issue/Sector: Health	Cooperation scheme: Technical Cooperation Project
Division in charge: Health Team 4, Health Group 2, Human Development Department	Total cost: 361,473 thousand yen
Project Period: February 2014 – January 2018 (Four years)	Partner Country’s Implementing Organization: Ministry of Health, Nutrition & Indigenous Medicine
<p>1.1 Background of the Project</p> <p>In Democratic Socialist Republic of Sri Lanka, due to the aging population and changes of dietary habits and lifestyle, according to the health statistics of 2006/2007, all of the top five causes of deaths are attributed to Non-communicable Diseases (NCDs). While the NCDs management is prioritized as the key policy in Sri Lanka, Japan International Cooperation Agency (JICA) implemented the technical cooperation project of “Project on Health Promotion and Preventive Care Measures of Chronic NCDs” from 2008 to 2013. Based on the experience of this project, Government of Sri Lanka (GOSL) developed the national policy and guidelines on NCDs in 2009 to improve secondary prevention by early detection and treatment in addition to primary prevention.</p> <p>Concerning the medical facilities implementing the NCDs measures, maintenance and refurbishment of the primary and secondary-level hospitals are insufficient due to limited provincial budgets. The insufficiency of facilities, equipment and medical specialists at secondary-level hospitals are serious issues especially in rural and poor areas, which makes it impossible to support the primary hospitals sufficiently. For the appropriate prevention and treatment of NCDs, it is urgently required to improve the secondary-level hospitals and to strengthen their referral systems. As the increase of NCDs patients is boosting the demand for pharmaceutical supplies, strengthening the production of medicines for treating NCDs is also a national priority issue.</p> <p>In these circumstances, “the Project for Improvement of Basic Social Services Targeting Emerging Regions” (hereafter referred to as “the yen loan project”) based on the Loan Agreements (L/A) between the GOSL and JICA signed in March 28, 2012 was launched to improve medical services in the selected regions and safe and quality essential drug production. To maximize the effectiveness of the yen loan project, by developing NCDs management models, including strengthening linkages among secondary hospitals and Healthy Lifestyle Centre (HLC), a technical cooperation project was requested by GOSL.</p>	

1.2 Project Overview

Overall Goal	Enhancement of the national NCDs programme
Project Purpose	Strengthening of NCDs management at the 4 target BHs and primary care institutions in their catchment areas as clusters
Outputs	<p>Output 1: Improved monitoring of NCDs patients in the catchment areas of the 4 target BHs</p> <p>Output 2: Improved availability of laboratory services for NCDs clients of primary care institutions in the catchment areas of the 4 Base Hospitals (BHs)</p> <p>Output 3: Enhanced pharmaceutical supply management at the 4 target BHs</p>

1.3 Inputs

<Japanese Side>

Total amount of cooperation: 361,473 thousand yen

Dispatch of experts: 8 personnel

Training in Japan: 6 personnel

Equipment: 4,660 thousand yen

Local operation cost: 1st year 9,197 thousand yen, 2nd year 9,407 thousand yen, 3rd year 10,333 thousand yen, 4th year Jan – Jun 5,271 thousand yen (estimate)

2. Members of the Mid-Term Evaluation Team

Name	Assignment	Occupation
Dr. Kaname Kanai	Leader	Executive Technical Advisor to the Director General, Human Development Department, JICA
Ms. Yumiko Inoue	Evaluation Planning	Associate Expert, Health Team 4, Health Group 2, Human Development Department, JICA
Mr. Hajime Sonoda	Evaluation Analysis	Senior Consultant, Global Group 21 Japan, Ltd.

Period of Evaluation	Aug 9, 2017 – Aug 27, 2017	Type of Evaluation	Terminal Evaluation
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3. Results of Evaluation

3.1 Achievements

3.1.1 Achievement of Outputs

(1) Output 1: Improved monitoring of NCDs patients in the catchment areas of the 4 target BHs: Partially achieved.

Indicator 1-1: Availability of a set of tools for a patient survey of Medical and Diabetes clinics.

- Indicator 1-1 is achieved.

- A set of drafted tools for the patient survey has been modified with the several trial surveys and the patient survey for the 4 original target areas has been completed. Region-wide surveys for the 4 regions are being implemented in view of future island-wide survey (the survey for Kurunegala region was completed). Data compilation and analysis is planned to be finished by the end of the Project.

Indicator 1-2: Number and percentage of Primary Care Institutions (PCIs) in the catchment areas of the 4 target BHs tracking their clients referred to Medical/Diabetes Clinics (MCs/DCs) in each Project site.

- Indicator 1-2 is partially achieved.
- Among the 4 target areas, the indicator has been achieved as of June 2017 for the 3 areas except for the Kaluwanchikudy area where referral monitoring started late due to the delays in new hospital building construction and assignment of a Visiting Physician (VP). Full achievement is not certain based on the slow progress of operationalization of the referral monitoring in other three areas which took more than a year.
- Through receiving the back reporting form, it was confirmed that some 80% of the referred clients has visited the referral destination in the 3 areas where referral monitoring was installed. Referral completion ratio has been improved to 95-100% in the target areas though non-target areas without the forms have only 70 % as a result of introduction of referral form and back reporting form.

Indicator 1-3: Availability of documents on resource requirements and steps to be taken for instituting similar system developed under the Project in other areas of the country.

- Indicator 1-3 is likely to be achieved by the end of the Project.
- The documents will be completed by December 2017.

(2) Output 2: Improved availability of laboratory services for NCDs clients of primary care institutions in the catchment areas of the 4 BHs: Partially achieved.

Indicator 2-1: Percentage of new HLC clients at PCIs who had blood tests for Total Cholesterol (TC) or lipid profile at the target BH's laboratory through the laboratory network system established/ strengthened by the Project in each Project site

- Number of clients for HLC has been increased due to an increased convenience with availability of free TC tests. Among the 4 target areas, the indicator has been achieved for the 3 areas as of June 2017 except for the Kaluwanchikudy area where lab-network was introduced late. Based on the experiences in the 3 areas, it is likely to be fully achieved by the end of the Project.

Indicator 2-2: Number and percentage of PCIs' Medical Clinics that send to the target BH's laboratory at least 1 specimen in a month for any kind of laboratory tests through the laboratory network system established/strengthened by the Project in each Project site.

- Level of achievement is low in all the target areas. Although improvement is expected for the remaining period of the Project, full achievement of the indicator is difficult. Main reasons for the non-achievement of the indicator include that the laboratories prioritized the blood samples from HLCs because their capacity had been limited due to non-assignment of Medical Laboratory Technologists (MLTs) and restricted availability of reagents, and that the doctors of MC are too busy to draw blood due to congestion. The former restrictions are being improved. As for the later, some institutions could solve the problem by setting other occasion, for example the HLC days, to draw blood from MC patients.

Indicator 2-3: Availability of documents on resource requirements and steps to be taken for instituting similar system developed under the Project in other areas of the country.

- Indicator 2-3 is likely to be achieved by the end of the Project.
- The documents are being revised in order to institute similar system in other provinces and prefectures and will be completed by December 2017.

(3) Output 3: Enhanced pharmaceutical supply management at the 4 target BHs: Likely to be achieved.

Indicator 3-1: Number of the target Base Hospitals using Medical Supply Management Information System (MSMIS) for their pharmaceutical supply management.

- Indicator 3-1 is likely to be achieved by the end of the Project.
- The indicator is not achieved at the time of terminal evaluation, as MSMIS is not operational at any target BHs. While progress of preparation differs, preparation for installation of MSMIS at each BH. Were there no major delays, it is expected that MSMIS becomes operational in all the BHs and the indicator could be achieved.
- Installation of MSMIS started after completion of the new hospital building construction, transfer of hospital functions to the new building, transfer and/or expansion of medicine storehouses, etc. However, delays in such works affected the performance of this output.

Indicator 3-2: Availability of documents on resource requirements and steps to be taken for instituting similar system developed under the Project in other areas of the country.

- Indicator 3-2 is likely to be achieved by November 2017.
- The indicator will be achieved. However, revision of the documents based on practical experiences on operation of MSMIS at each BH would not be carried out, as the system could be put into operation just before the end of the Project.

3.1.2 Achievement of Project Purpose

(1) Project Purpose: Strengthening of NCDs management at the 4 target BHs and primary care institutions in their catchment areas as clusters: Almost achieved.

Indicator P-1: Percentage of patients referred from PCIs i.e. (i) from HLC@PCI to MC/DC@PCI, (ii) from HLC@PCI to MC/DC@BH and (iii) from MC/DC@PCI to MC/DC@BH, who completed the referral at the institutions specified.

- The indicator (referral completion ratio $\geq 80\%$) was achieved in the 3 among the 4 target areas, except for the Kaluwanchikudy area (Galgamuwa = 91%, Warakapola = 89%, Teldeniya = 96%). Based on the experiences in the three areas, the indicator is likely to be fully achieved by the end of the Project.
- According to a survey during April – June 2017, referral completion ratio of the target areas was almost 100%, making large difference compared to the same for non-target areas which was 70%. It is possible that handing out a new referral format to the clients has enhanced their awareness to an importance of visiting the referral destination.

Indicator P-2: Availability of data on patients of Medical and Diabetes clinics at the MoH hospitals in the 4 project sites.

- The indicator was achieved through the clinical survey conducted in 2016.

Indicator P-3: Availability of a package of tools for NCDs management at primary and secondary institutions as a cluster in the 4 target districts.

- The documents are under development and will be completed by October 2017.

3.2 Analysis based on the Evaluation Criteria

(1) Relevance: high

Needs for the NCDs management are clearly illustrated in the National Health Master Plan 2016 - 2025 which envisages reorientation of curative and preventive services to deal with an increasing burden of NCDs. NCDs management is related to several Sustainable Development Goals (SDGs) which GOSL is focusing its development efforts. In view of an importance of concerted efforts of relevant sectors, GOSL also prepared a “National Multi-sectoral Action Plan for the Prevention and Control of Non communicable Diseases 2016-2020”. Moreover, “The National Policy & Strategic Framework for Prevention and Control of Chronic Non-Communicable Diseases” developed in 2011 particularly for the prevention and the management of NCDs includes which correspond to the objectives of the Project; cost-effective screening of NCDs (key strategy No.2), optimal NCDs care (key strategy No.3), and national health information system including disease and risk factor surveillance (key strategy No.6).

On the other hand, Japan’s Country Assistance Policy to Sri Lanka in 2015 aims at reducing vulnerability of the population and assisting the maintenance of facilities and capacity building in the health and medical sector to support the social services infrastructure. Thus, the Project corresponds to the cooperation policy of Japan.

(2) Effectiveness: fairly effective

Almost all indicators for Output 1 and 2 have been achieved at the time of terminal evaluation and Output 3 will be achieved by the end of the Project. Since the indicators of the project purpose are likely to be achieved by the end of the Project, it is judged that the Project is fairly effective. Concrete contribution of the Project to an achievement of the project purpose “Strengthening of NCDs management at the 4 target BHs and primary care institutions in their catchment areas as clusters” as well as some issues related to this are explained below.

- Introduction of the lab-network for HLC screening increased convenience for the clients and resulted in an increase of clients. While TC level became available, it is not utilized for the total risk assessment. Therefore, the results of TC test should be thoroughly referred according to the established risk assessment procedures.
- High risk clients identified through HLC screening are referred to MC of the same or higher institutions. After the introduction of referral monitoring, referral completion ratio has been increased enabling more prompt treatment for the high risk clients. In view of enhanced sustainability, the Project is planning to simplify the referral monitoring system during the remaining period
- The clinical data obtained through the Project can be compiled by institutions as well as by the residence of patients, and could be utilized for such purposes as policy making for NCDs management, planning at region or district levels, etc. Introduction of MSMIS would contribute to reliable provision of laboratory services and medical treatment for NCDs by means of appropriate stock management of medicines, reagents and other medical supplies.
- General scarcity of human resources in Sri Lanka and unstable supply of some important consumables hampered the effectiveness of the Project.
- While synergistic effects with the yen-loan project have been expected, delays in execution of the yen-loan project brought about an important influence to the Project, for which risks had not been carefully examined at the time of planning.

(3) Efficiency: moderate

Inputs for the Project have been mostly as planned and project management through Joint Coordinating Committee (JCC) and the four working groups (WG) has been adequate. However, shortage of human resources as well as limited availability of personnel at medical institutions and medical administrations in Sri Lanka were the major constraints for the Project activities. Through revision of the Project Design Matrix (PDM) at the beginning of the Project generated 3 - 4 months delay in starting full-fledged activities. Delays in new hospital building construction by the yen-loan project, delays in assignment of Medical

Laboratory Technologists (MLTs) and a Visiting Physician (VP) in Kaluwanchikudy BH affected the production of outputs. While most of the inputs were properly utilized, some of the vehicles procured for transporting blood specimens are not fully utilized at the time of Terminal Evaluation due to delayed delivery to the BH, non-assignment of a driver, and long delays in repairing defects developed. In view of the above, efficiency of the Project is judged to be moderate.

(4) Impact: contribution to achievement of the overall goal is expected

The Project is expected to contribute to achievement of its overall goal “an enhancement of the national NCDs programme” through diffusing its outputs to other area or to the entire nation. As for “number and percentage of health regions using the tools developed under the Project” (indicator 1 for the overall goal), at the time of terminal evaluation, only the HLC supervision checklist has been used nationwide on trial basis, and no other diffusion has been made. The referral monitoring system and the lab-network system of the Project are expected to be introduced in other areas and the tools are being prepared such diffusion in mind. However, its specific outlook is not clear. As for MSMIS, Ministry of Health, Nutrition & Indigenous Medicine (MoH) is planning to introduce it to all the regional hospitals, but its specific schedule is not fixed. As for the “availability of national data on patients attending medical and diabetes clinics of MoH hospitals” (indicator 2 for the overall goal), MoH is planning to carry out an island-wide clinical survey as early as 2018, and its prompt achievement is expected. As an impact other than the overall goal, it can be pointed out that the lab-network introduced by the Project are useful for non-NCDs patients and can contribute to strengthening of medical care capacity of PCIs in general.

(5) Sustainability: moderate

Based on the following analysis, sustainability of the Project is judged to be moderate.

- Sustainability in political aspect is very high. MoH puts an importance on NCDs management. While MoH plans to review the current NCDs management strategy, the importance of early detection and treatment of NCDs high-risk individuals and NCDs clinical information, which the Project has been working on, will remain unchanged.
- Sustainability in financial aspect is fairly high. Financial resources required in order to continue the activities initiated by the Project are not huge; mainly personnel and administrative expenses. In order to diffuse to other areas, investment may be required in laboratory, vehicles, MSMIS license fee, etc., and MoH does not have restrictions in its budget to fund them. Regional Directorate of Health Services (RDHS) as well, reflecting the importance of NCDs management, is expected to secure necessary funds.
- Sustainability in technical aspect is fairly high. Simplification of referral monitoring is expected to lead to an enhanced sustainability. Knowledge and know-how gained through

the Project would be useful in diffusing the Project to other areas. Technical support for MSMIS is provided by a private firm contracted by MoH, and sustainability would be assured when the regional medical institutions are covered by the contract.

- As for organizational/administrative aspects, there is a concern that general shortage of human resources in medical institutions and medical administration would affect the sustainability of the Project. In addition, improvement is needed for time consuming procedures at various levels for procurement of important supplies. Influence of the shortage of MLTs can be alleviated by placing additional supporting staff who handle data entry and other clerical works. On the other hand, nation-wide deployment of Health Promotion Officers and Community Health Nurses planned by MoH would ease the human resource restriction for referral monitoring.

3.3 Contributing factors

(1) Planning

- None

(2) Implementation Process

- Project management including periodical monitoring and troubleshooting have been carried out efficiently through such mechanisms as JCC, Working Group (WG), periodical monitoring visits by the JICA team, and daily communication and close coordination between Japanese and Sri Lankan sides.

3.4 Constraining Factors

(1) Planning

- The strengthening of hospital functions through the yen loan project was important external conditions of the Project. However, this was not explicitly stated in the Project Design Matrix (PDM), and when the Project was designed, less attention was paid to the impact of any possible delays in the implementation of the yen loan project on the Project. As a result, laboratories and new wards at the target BHs constructed through yen loan project delayed the progress of the Project activities.
- The original version of the PDM (ver. 1) was greatly modified due to the many developments from the project planning and the Project was fully started 3 to 4 months later than planned at first. Thereafter, in response to the recommendations made by the Mid-Term Review, clarification of the indicators of PDM Ver. 2 and setting of target values were done and formalized at the 7th JCC which adopted the PDM Ver. 3 with the above incorporated.
- The following important assumptions shown in the PDM did not always prevail, and had certain adverse influences on project activities and outputs;

- GOSL is able to continuously supply necessary reagents / test kits: non-availability of reagents and test tubes in some laboratories / institutions affected the operation of lab-network.
- The target BHs are equipped with fully automated and well-maintained biochemical analysers and sufficient number of MLTs: delays in completing the new laboratories in the BHs affected the start of fully operational lab-network.
- PCIs have skilled personnel to draw blood for testing: there is such personnel in almost all the institutions but they are too busy to perform this at MC.

(2) Implementation Process

- Though major modifications of PDM delayed the start of full-scale activity, it enabled both Japanese and Sri Lankan sides to better understand the specific situations with recent developments in the target areas and strengthen their commitment to working together on the Project.
- The completion of BHs under the yen loan project has been delayed. As a result, some activities under Output 1, 2 and most of the activities under Output 3, which require certain components under the yen loan project to be in place, have experienced major delays.
- Since assignment of a Visiting Physician (VP) and additional MLTs of Kaluwanchikudy BH was delayed, the applicable indicators were not fully achieved at the time of the terminal evaluation.
- Overall, shortage of human resources is serious not only in medical institutions but also in health administration. For this reason, there were cases in which the tasks related to the Project were not sufficiently handled especially if they were not included in the original job description of the Counterpart (C/P).
- Difficulties in handing over process cause disruption of system when staff changes occur.

3.5 Conclusions

Relevance of the Project is very high. Effectiveness is fairly high as the Project enhanced identification of high-risk clients and prompt provision of necessary treatment for them, making contribution to the overall goal. Efficiency is moderate as part of output indicators will not be achieved as planned and some inputs have not been well utilized. Sustainability is high in policy, financial and technical aspects, while concerns remain in organizational / administrative aspects. Therefore overall sustainability is moderate. In view of the above, it is expected that the Project would be completed satisfactory.

3.6 Recommendations

Recommendations to the Project

- The Project should put MSMIS into fully operational before the conclusion of the Project and support that the MoH modifies the manual reflecting the operational experiences after the Project.
- In order to complete the on-going 5th pilot survey of the medical clinics in Kegalle, Kandy and Batticaloa districts, the RDHSs should mobilize all the resources necessary to complete the local operation and assign dedicated personnel for coordination.
- The Project should carefully simplify the referral follow-up system for the sake of sustainability, with due attention not to jeopardize the high referral completion rate achieved.
- So that the TC values obtained through the laboratory network are properly utilized, Medical Officers of HLCs should be specifically instructed to do the risk assessment when a client comes back for the TC result. It is also recommended to have this instruction explicitly stated in appropriate tools being produced by the Project.
- In order to systematize the experiences and knowledge gained through experimental operations in each area and share them with the stakeholders, the Project integrates in the final tool package to be produced useful information such as practical tips, possible options for different circumstances and good practices related to various phase of implementation including planning, monitoring and supervision.
- In order to fully utilize the scooters and the three-wheeler provided for the laboratory network Provincial Directorate of Health Services (PDHS) /RDHS need to carry out prompt repairs and regular maintenance, deployment of designated and authorized personnel to ride them. If necessary, reassignment of a vehicle to another institution where it is best utilized for the purpose with consent of JICA.

Recommendations to MoH

- In view of multiple tasks to be performed by Medical Officer (MO) /NCDs, MoH/PDHS/RDHS should consider strengthening regional NCDs interventions by placing additional personnel and necessary mechanism to function as a team.
- In preparation for the planned island-wide clinical data collection exercise, MoH needs to consider a functional organizational set up by reviewing all the related tasks and human and other resources necessary to carry them out efficiently for the sake of quality data. In this regard, it is important to assure the know-how and capacity obtained through the Project are maintained and utilized to the extent possible. In addition, the MoH is encouraged to

explore various ways to analyze and utilize the data obtained, also in combination with other available data from routine reporting and other surveys.

- Medical Officers of HLCs need to be re-oriented and supervised to use TC test results for the Cardiovascular Disease (CVD) risk assessment when they become available either through setting up laboratory networks or provision of Point-of-Care Test (POCT) facilities as planned by MoH.
- When revising the HLC registers, consider integrating relevant aspects of the referral tracking and laboratory test registers introduced by the Project.
- As for the lab-network;
 - In order to keep the lab-network fully functional, MoH should further strengthen its capacity to ensure proper maintenance and effective utilization of automatic analyzers, appropriate assignment of MLTs and laboratory assistants, sufficient and continuous supply of consumables including reagents and test tubes, and assignment of authorized transporters.
 - As MoH considers different options to avail laboratory investigations to clients of peripheral institutions, including POCT, use of private courier services and laboratory network similar to those set up by this Project, comparative advantages and applicability of each option should be clarified in view of different local conditions before making decision.
 - In order to ensure smooth, continuous and quality operation of laboratories including the laboratory networks established, a designated position may be required to properly oversee laboratory-related operations in each region, coordinating necessary resources with relevant sections of regional and central health administrations.
- MoH may need to revisit the scope of the current service agreement for MSMIS with the contractor, to ensure that necessary support is also provided to the institutions under provincial management. Also, consider purchasing additional user licenses to ensure the institutions' access to the system.
- In order to efficiently address the challenges of NCDs, MoH should take active steps to integrate relevant aspects of their prevention and treatment in basic training of doctors, nurses and other relevant paramedics.

3.7 Lesson Learnt

Progress of yen loan project is an important external condition of technical cooperation project which is implemented together with yen loan project. Therefore, impact of any possible delays in the implementation of the yen loan project should be paid more attention when the technical cooperation project is designed.