Third Party Evaluation Report FY2025
Ministry of Foreign Affairs of Japan

Evaluation of Japan's Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"（FY2016）and Japan's Grant Aid Project to the Kingdom of Cambodia "the Economic and Social Development Programme"（FY2020）

January 2026
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Preface

This report is an Evaluation of the Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"（FY2016） and the Grant Aid Project to the Kingdom of Cambodia “the Economic and Social Development Programme"(FY2020), and was commissioned to INGEROSEC Corporation by the Ministry of Foreign Affairs of Japan (MOFA) in fiscal year 2025.

Since its commencement in 1954, Japan’s Official Development Assistance (ODA) has contributed to the development of partner countries while tackling global issues. Today, the international community acknowledges the necessity to improve the effectiveness and efficiency of ODA. MOFA regularly conducts ODA evaluations, of which most are conducted at the policy-level with two main objectives: to improve the management of ODA, and to ensure its accountability. These evaluations are commissioned to external third parties to enhance transparency and objectivity.

The objective of this Evaluation was to conduct a project-level evaluation of the Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"（FY2016） and the Grant Aid Project to the Kingdom of Cambodia “ the Economic and Social Development Programme"(FY2020), and to produce recommendations based on the review to improve policy planning for the effective and efficient implementation of future assistance by the Government of Japan. For accountability purposes, the results in their entirety are available to the general public.

The Evaluation Team in charge of this study consisted of a chief evaluator (Professor KUWANA Megumi, Faculty of International Studies, Kindai University), and INGEROSEC Corporation. Professor KUWANA supervised the entire evaluation process and provided advice and input on analytical and evaluation processes. In addition, to complete this study, we have received support from MOFA, the Japan International Cooperation Agency (JICA), and local ODA Task Forces, as well as government agencies, project implementation agencies, other donors, non-governmental organizations (NGOs), and private companies in Cambodia. We would like to take this opportunity to express our sincere gratitude to all those who supported this study.

Finally, the Evaluation Team wishes to note that the opinions expressed in this report do not necessarily reflect the views or positions of the Government of Japan.

January 2026
INGEROSEC Corporation

Note: This English version is a translation of the “Third Party ODA Evaluation Report FY2025” written in Japanese on the Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"(FY2016) and the Grant Aid Project to the Kingdom of Cambodia “the Economic and Social Development Programme"(FY2020).

Evaluation of the Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"（FY2016）
<Executive Summary>

Evaluators (Evaluation Team)

Chief Evaluator	Professor KUWANA Megumi, Faculty of International Studies, Kindai University
Consultant	INGEROSEC Corporation
Evaluation Period	June 2025 - January 2026
Field Survey Countries	Cambodia

Facilities of the newly constructed water treatment plant

Background, Objectives and Scope of the Evaluation

This evaluation is a third-party evaluation conducted at the project level for the Grant Aid Project to the Kingdom of Cambodia “The Project for Expansion of Water Supply System in Kampong Thom” (FY2016) (hereinafter referred to as the ‘2016 Project for Expansion of Water Supply System in Kampong Thom’) implemented by the Ministry of Foreign Affairs of Japan (MOFA) (grant amount: JPY 3.271 billion). Access to safe water in Cambodia's provincial cities remains low, and insufficient supply capacity at existing water treatment plants, coupled with increasing water demand as a result of urbanization, has posed serious challenges. This project is characterized by the introduction of the Grant for Supporting Business and Management Rights scheme, a new form of cooperation in which Japanese companies assume responsibility for the Operation and Maintenance (O&M) and development of water supply facilities. This evaluation was conducted to verify the relevance of plans and the effectiveness of results, to obtain recommendations and lessons learned that will contribute to the formulation and implementation of similar projects in the future, and to ensure accountability to the public.

Summary of Evaluation Results

(1) Relevance of Plans

The project's objective has high consistency with the water supply development needs and policy objectives outlined by the Government of Cambodia in its "Rectangular Strategy - Phase III," "National Strategic Development Plan (NSDP 2014–2018)," and "National Strategy for Rural Water Supply, Sanitation and Hygiene," specifically regarding improving access to safe water in provincial cities. It also aligns with the Government of Japan's "Development Cooperation Charter (2015),” "the Country Development Cooperation Policy for Cambodia (2017),” and the "Expanded Partnership for Quality Infrastructure.”

The project scope encompasses the construction of water treatment plants and distribution facilities. It utilizes the Grant for Supporting Business and Management Rights scheme, where Japanese companies form a consortium to undertake O&M with the aim of establishing a sustainable water supply system incorporating technology transfer and human resource development. Furthermore, a flexible project design reflecting local conditions was achieved through demand forecasting and plan revisions. The implementation structure and planning process also

broadly follow the standard operational workflow envisioned by the Government of Japan.

(Rating: Highly Satisfactory)

(2) Effectiveness of Results

Funding disbursement and facility construction for this project were largely implemented as planned, with the new water treatment plant and distribution network established efficiently and appropriately. As a result, the number of household water taps has significantly increased from approximately 4,000 to about 13,000. The newly constructed water supply facilities are actively in use. Beyond alleviating household concerns about water shortages, they have clearly helped to improve public health conditions and living environments by providing a stable water supply to public facilities, including schools and health centers. The stabilized water supply has also driven the activities of small businesses such as restaurants, and positive ripple effects on the local economy have been confirmed. The harnessing of Japanese technology, knowledge, and experience as well as technology transfer through O&M process by Japanese companies is also highly commendable.

(Rating: Highly Satisfactory)

(Note) Rating: Highly Satisfactory / Satisfactory / Partially Satisfactory / Unsatisfactory

Recommendations

(1) Perspective on Post-Project Management Arrangements

While this project involved O&M conducted by Japanese companies for a certain period, the approach to post-project operation is expected to be flexibly determined based on the partner country's implementation capacity and institutional conditions. This framework is positioned to address both the utilization of technology, knowledge, and experience through involvement of the Japanese companies and the establishment of a self-sustaining operational structure by the partner country. While acknowledging this premise, an effective approach in similar projects in the future would be to align understanding of stakeholders on the balance between Japanese corporate involvement and the partner country's ownership and autonomy from the project formulation stage, and to examine the operational approach with a view toward the post-project phase.

(2) Emphasis on the Planning Process Considering Demand Trends and Project Sustainability

The demand forecasts and plan contents under this project were revised and adjusted in response to the urbanization of the target area and the increase in the water supply demand. To ensure sustainability, repeated studies on the tariff system and project profitability were also conducted. For future similar cases, it will be effective to build on these efforts by consistently prioritizing a planning process that thoroughly verifies demand trends and project sustainability through preliminary surveys and coordination with relevant agencies.

Evaluation of the Grant Aid Project to the Kingdom of Cambodia "The Economic and Social Development Programme"（FY2020）
<Executive Summary>

Evaluators (Evaluation Team)

Chief Evaluator	Professor KUWANA Megumi, Faculty of International Studies, Kindai University
Consultant	INGEROSEC Corporation
Evaluation Period	June 2025 - January 2026
Field Survey Country	Cambodia

Deployed Mobile X-ray Unit (Shimadzu)

Background and Objectives and Scope of the Evaluation

This evaluation is a third-party evaluation conducted at the project level for the Grant Aid Project to the Kingdom of Cambodia “The Economic and Social Development Programme” (FY2020) implemented by the Ministry of Foreign Affairs of Japan (MOFA) (grant amount: JPY 2 billion). In the years leading up to the inception of the project, Cambodia faced challenges in responding to emerging and re-emerging infectious diseases due to a fragile public health and medical system, as well as shortages of medical equipment. During the COVID-19 pandemic, difficulties in transferring patients abroad revealed an urgent need to strengthen Cambodia’s domestic response capacity. Enhancing infectious disease response capabilities was crucial both for protecting lives and mitigating impacts on economic activities. This project was implemented to consolidate Cambodia's health and medical systems through the procurement of ambulances, medical equipment, and other resources in response to the spread of COVID-19. This evaluation was conducted to verify the relevance of plans and the effectiveness of results, to obtain recommendations and lessons learned for the effective and efficient implementation of similar projects in the future, and to ensure accountability to the public.

Summary of Evaluation Results

(1) Relevance of Plans

The project objective—strengthening Cambodia's health and medical systems, including COVID-19 response—aligned with the Rectangular Strategy - Phase IV, the National Strategic Development Plan (NSDP 2019–2023), and the Health Strategic Plan. It also aligned with Japan's international health diplomacy policies, the "Development Cooperation Charter (2015)" and the "Country Development Cooperation Policy for Cambodia (2017).” The project plan of equipment combination accurately addressed the urgent needs of medical facilities amid the infectious disease emergency, and the consistency of the planned project scope was evaluated as highly satisfactory. In addition, the implementation structure and workflow utilizing the Procurement Agent Arrangement generally followed the standard implementation structure envisioned by the Government of Japan,

ensuring promptness and effectiveness.

(Rating: Highly Satisfactory)

(2) Effectiveness of Results

The disbursement of funds and procurement of medical equipment were largely implemented as planned. Equipment such as ambulances, ventilators, and high-concentration oxygen generators was swiftly and effectively utilized for the treatment of COVID-19 patients. Much of the equipment has been used for regular medical care and response to other diseases continuously. Leading to development effects such as improved capabilities in infectious disease response, strengthened emergency transport capacities, and upgraded healthcare standards. Moreover, diplomatic impacts were acknowledged in terms of increased trust in Japanese medical equipment and greater visibility of Japan's support. Challenges were identified at the same time, however, such as insufficient systematic monitoring of equipment usage after distribution, and weak follow-up systems. Room remains to further enhance the effectiveness of the results.

(Rating: Satisfactory)

(Note) Rating: Highly Satisfactory / Satisfactory / Partially Satisfactory / Unsatisfactory

Recommendations

(1) Securing Personnel for Medical Equipment Maintenance and Strengthening Repair Capabilities

A shortage of personnel responsible for maintaining medical equipment in the regional hospitals has been observed. This issue leads to reliance on private contractors with insufficient technical expertise for repairs, and increased time and cost burdens on account of the need to subcontract companies based in Phnom Penh. To ensure the long-term and stable use of medical equipment procured under this project, it will be crucial to systematically secure workforce responsible for maintenance and repair at the provincial hospital level and strengthen its capability would be also effective to coordinate with other ODA projects such as Technical Cooperation Projects. Given the current conditions, integration with other projects could be envisioned to improve the operational efficiency of equipment and reduce maintenance costs.

(2) Improving Follow-up for Emergency Projects

This project was implemented swiftly as an emergency initiative to address COVID-19. The ambulances and ICU-related equipment demonstrated high effectiveness in infectious disease response and continue to contribute to general medical service and strengthening Cambodia’s emergency transport capabilities. Some challenges, however, were identified in the follow-up system with respect to the monitoring of use and maintenance of equipment after its deployment. For similar future projects, it will be essential to clearly define and reliably implement monitoring and follow-up activities in the post-project phase while also ensuring swift action.

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Map of the Target Country (Cambodia)

Kingdom of Cambodia

Area: 181,035 square kilometers
Population: 17.1 million (United Nations Population Fund, 2024)
Capital: Phnom Penh
Language: Khmer
Religion: Buddhism (some ethnic minorities practice Islam)
GDP per capita: US$2,743 (IMF estimate, 2024)

(Source: MOFA website)

(Source: UN Geospatial Information)

List of Acronyms

Acronym	Full Name
A/A	Agent Agreement
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
COVID	Coronavirus Disease
CSDGs	Cambodian Sustainable Development Goals
DBO	Design, Build and Operate
E/N	Exchange of Notes
F/S	Feasibility Study
ICU	Intensive Care Unit
IMF	International Monetary Fund
JBAC	Japanese Business Association of Cambodia
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JICS	Japan International Cooperation System
JV	Joint Venture
KSSWU	Krong Steung Saen Water Utility
KTWW	Kampong Thom Water Works
MEF	Ministry of Economy and Finance
MFAIC	Ministry of Foreign Affairs and International Cooperation
MHD	Municipal Health Department
MIH	Ministry of Industry and Handicraft
MISTI	Ministry of Industry, Science, Technology and Innovation
MOH	Ministry of Health
MOP	Ministry of Planning
MPAC	Master Plan on ASEAN Connectivity
MRD	Ministry of Rural Development
NGO	Non-Governmental Organization
NMCHC	National Maternal and Child Health Center
NSDP	National Strategic Development Plan
O&M	Operation and Maintenance
ODA	Official Development Assistance
PDCA	Plan Do Check Act
PHD	Provincial Health Department
SDGs	Sustainable Development Goals
SPC	Special Purpose Company
UHC	Universal Health Coverage
UNICEF	United Nations Children's Fund
UPS	Uninterruptible Power Supply
WHO	World Health Organization

Chapter 1 Background, Objectives and Evaluation Framework

1. Evaluation Background and Objective

The Japan International Cooperation Agency (JICA) undertakes the necessary implementation procedures for grant projects involving facility construction or equipment procurement requiring detailed studies. For projects requiring flexible implementation or projects closely tied to foreign policy decisions, on the other hand, the necessary implementation procedures are handled by the Ministry of Foreign Affairs of Japan (MOFA). Procurement is carried out by Procurement Agents for governmental organizations in developing countries (under the Procurement Agent Arrangement), international organizations (under the Grant through International Organization Cooperation scheme and Emergency Grant scheme), or non-governmental organizations (NGOs) (under the Grant Assistance for Grassroots Human Security Projects (GGHSP) and Grant Assistance for Japanese NGO projects).

To further strengthen the PDCA (Plan, Do, Check, Act) cycle of Official Development Assistance (ODA) activities, starting with the FY2017 ODA evaluation, third-party evaluations have been conducted for MOFA-implemented grant projects valued at JPY 1 billion or more. In FY 2025, MOFA selected the following projects from among those with Exchange of Notes (E/N) agreements concluded since FY2013 and grant amounts of JPY 1 billion or more, based on the security situation and local conditions for conducting field surveys in the partner countries: the Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"(FY2016) (hereinafter referred to as the '2016 Project for Expansion of Water Supply System in Kampong Thom') and the Grant Aid Project to the Kingdom of Cambodia "the Economic and Social Development Programme"(FY2020) (hereinafter referred to as ‘2020 Economic and Social Development Programme’). This evaluation was conducted to perform a project-level evaluation of the two projects, to derive useful recommendations and lessons learned for similar projects in the future, and to compile the findings in a report and make it public.

2. Scope of Evaluation

Table 1-1 Scope of Evaluation

Project Name	Grant Amount	Contents
2016 Project for Expansion of Water	JPY 3.271 billion	Services related to water treatment plant development (consultants responsible for

Supply System in Kampong Thom		preparing bidding documents, contractors undertaking water treatment plant construction)
2020 Economic and Social Development Programme	JPY 2.0 billion	21 types of medical equipment, including ambulances, portable ultrasound scanners, and high-concentration oxygen generators

3. Evaluation Methodology

This evaluation research/survey was conducted from June 2025 to January 2026.

(1) Evaluation Framework

The "Evaluation Framework" created for the two projects is shown in **Table 1-2** and **Table 1-3**. Two evaluation criteria were set, in accordance with MOFA's "ODA Evaluation Guidelines (January 2025)" and "ODA Evaluation Handbook (January 2025)": "Relevance of Plans" and "Effectiveness of Results."

Table 1-2 Evaluation Framework (Summary Version)

(2016 Project for Expansion of Water Supply System in Kampong Thom)

Evaluation criteria	Evaluation Question	Verification Items
1. Relevance of Plans	1-1 Links with the purpose	1-1-1 Links with Cambodia's development needs and policies
		1-1-2 Links with the Government of Japan's foreign and development cooperation policies
	1-2 Consistency of the planned project details	1-2-1 Consistency with Cambodia's needs, and the Government of Cambodia's development plans and activities, in the water supply sector
		1-2-2 Consistency with the Government of Japan's plans and activities for diplomatic and development cooperation with and for Cambodia
	1-3 Appropriateness of the planned implementation structure	1-3-1 Consistency with the standard implementation structure the Government of Japan envisions
		1-3-2 Appropriateness in light of the implementation structures, capabilities, etc. of the Government of Cambodia in the water supply sector
	1-4 Appropriateness of planning process	1-4-1 Appropriateness compared to the Government of Japan's standard workflow
		1-4-2 Facilitating points to ensure the Relevance of Plans and areas for improvement

2. Effectiveness of Results	2-1 Level of achievement and efficiency of the project	2-1-1 Level of achievement of fund provision (input)
		2-1-2 Level of achievement and efficiency of facility development (output)
		2-1-3 Status of use of constructed facilities (output)
		2-1-4 Development effects through the use of constructed facilities (outcome)
		2-1-5 Diplomatic effects through the use of constructed facilities (outcome)
	2-2 Appropriateness of implementation, monitoring and follow-up processes	2-2-1 Appropriateness compared to the Government of Japan's standard workflow
		2-2-2 Facilitating points to ensure the Effectiveness of Results and areas for improvement

Table 1-3 Evaluation Framework (Summary Version) (2020 Economic and Social Development Programme)

Evaluation criteria	Evaluation Question	Verification Items
1. Relevance of Plans	1-1 Links with the purpose	1-1-1 Links with Cambodia's development needs and policies
		1-1-2 Links with the Government of Japan's foreign and development cooperation policies
	1-2 Consistency of the planned project details	1-2-1 Consistency with Cambodia's needs, and the Government of Cambodia's development plans and activities, in the healthcare sector
		1-2-2 Consistency with the Government of Japan's plans and activities for diplomatic and development cooperation with and for Cambodia
	1-3 Appropriateness of the planned implementation structure	1-3-1 Consistency with the standard implementation structure the Government of Japan envisions
		1-3-2 Appropriateness in light of the implementation structures, capabilities, etc. of the Government of Cambodia in the healthcare sector
	1-4 Appropriateness of planning process	1-4-1 Appropriateness Compared to the Government of Japan's standard workflow
		1-4-2 Facilitating points to ensure the Relevance of Plans and areas for improvement
2. Effectiveness of Results	2-1 Level of achievement and efficiency of the project	2-1-1 Level of achievement of fund provision (input)
		2-1-2 Level of achievement and efficiency of equipment provision (output)
		2-1-3 Status of use of equipment (output)

		2-1-4 Development effects through the provision and use of equipment (outcome)
		2-1-5 Diplomatic effects through the provision and use of equipment (outcome)
	2-2 Appropriateness of implementation, monitoring and follow-up processes	2-2-1 Appropriateness Compared to the Government of Japan's standard workflow
		2-2-2 Facilitating points to ensure the Effectiveness of Results and areas for improvement

(2) Literature Research

The evaluation team carried out an analysis on the relevance and effectiveness of facility development and equipment procurement, based on materials provided by MOFA (request letters, comment sheets from the Embassy of Japan in Cambodia, materials related to the Documents for the Appraisal Process of the Ministry of Finance, Exchange of Notes (E/N), minutes of the Intergovernmental Consultative Committee (hereinafter referred to as the "Committee"), comprehensive agreement documents, quarterly reports and completion reports by the Procurement Agent, etc.), as well as publicly available information on the internet and literature in various fields.

(3) Domestic Survey

The evaluation team conducted a survey using questionnaires and online interviews with MOFA, JICA Headquarters, the Procurement Agent, consultants and contractors involved in the 2016 Project for Expansion of Water Supply System in Kampong Thom, and contractors involved in the 2020 Economic and Social Development Programme.

(4) Field Survey

The evaluation team conducted a Field Survey from August 3 to August 16, 2025. Interviews were organized with the Embassy of Japan in Cambodia, relevant line Ministries of the Government of Cambodia (Ministry of Health (MOH), Ministry of Industry, Science, Technology & Innovation (MISTI), Krong Steung Saen Water Utility (KSSWU), Provincial Health Department (PHD), etc.), the Special Purpose Company (SPC) established for the 2016 Project for Expansion of Water Supply System in Kampong Thom (Kubota Construction Phnom Penh Office), and beneficiaries using the water supply. The evaluation

team also inspected the new water treatment plant and hospitals to confirm the usage status and maintenance of the facilities and equipment.

(5) Examination of Evaluation Results and Recommendations

Based on the results of the Domestic Survey and Field Survey, a four-level rating (Highly Satisfactory / Satisfactory / Partially Satisfactory / Unsatisfactory) was applied to two rating criteria, "Relevance of Plans" and "Effectiveness of Results," in line with the "ODA Evaluation Handbook". Recommendations and lessons learned useful for similar projects were considered as feedback from the evaluation results.

4. Evaluation Team

The team conducting the evaluation survey was composed of the following members.

Table 1-4 Composition of the Evaluation Team

Responsibilities	Name	Affiliation
Chief Evaluator	KUWANA Megumi	Professor, Faculty of International Studies, Kindai University
Chief Consultant	KUMANO Tadanori	INGEROSEC Corporation
Deputy Chief Consultant	OSAWA Nazuna	
Consultant	HINO Aiko	

Chapter 2 Overview of the Evaluation Targets

1. 2016 Project for Expansion of Water Supply System in Kampong Thom

An overview of the 2016 Project for Expansion of Water Supply System in Kampong Thom is presented in **Table 2-1**.

Table 2-1 Overview of the Evaluation Project

(2016 Project for Expansion of Water Supply System in Kampong Thom)

Country/Project Name	The Grant Aid Project to the Kingdom of Cambodia "The Project for Expansion of Water Supply System in Kampong Thom"(FY2016)
Field	Water Supply & Sanitation
Type of Assistance	Grant for Supporting Business and Management Rights
Date of Request Receipt	November 3, 2015
Exchange of Notes (E/N) Date of Conclusion	March 30, 2017

Committee Member of the Other Party	Committee Not Convened
Procurement Agent Agreement	Organization Name: Japan International Cooperation System (JICS) Contract Start Date: June 26, 2017 Contract Completion Date: October 25, 2023
Background and Necessity at the Project Planning Stage	Access to safe water remains low in Cambodian cities outside the capital Phnom Penh, and the quality of water supply services is poor overall. The water supply rate in the provincial capital area of Kampong Thom Province still remains at 41%, chiefly because of insufficient supply capacity at the water treatment plant and inadequate distribution pipeline networks. Expanding the water supply coverage area will be necessary as urbanization progresses. Expansion and improvement are urgently needed, as the supply volume of the existing water treatment plant already exceeds 90% of its capacity.

Objectives and Details of the Project

Objectives and Project Overview

This project aims to establish an efficient and sustainable water supply operation system through the improvement of infrastructure funded by grant and the introduction of the Grant for Supporting Business and Management Rights scheme. This will ensure stable water supply for residents of Kampong Thom Province. The project seeks not only to improve the quality of water services for the local community, but also to promote economically and environmentally sustainable social development.

Implementation Period: Design and Construction, 3 years; O&M, 5 years

Key Points of the "Plan" and "Performance/Projected Results"

	Plan/Detailed Plan	Performance/Projected (Timing)
1) Grant Amount (input)	¥3.271 billion	¥3.271 billion
2) Facility Development and Equipment Procurement (input)	**Planned** [Facilities] ・ Intake facility (8,250 cubic meters/day: Intake pump station, Intake pump facility) ・ Conveyance pipeline (diameter 350 mm, 0.5 km) ・ Water treatment plant	The following points differ from the original plan:

	(7,500 cubic meters /day: Chemical coagulation sedimentation and rapid filtration system) ・ Elevated tank (300 cubic meters) ・ Solar power system for backup power (43.5 kW) ・ Distribution facilities and pipeline (distribution pumping stations and equipment, distribution information system) [Accessories] ・ Water analysis equipment (12 items) ・ Equipment for mechanical facilities (vibration measurement device) ・ Water tap connection equipment for low-income households (socket fusion welders, water meters) [Soft (Non-physical) Components] ・ O&M of maintenance facilities ・ O&M of distribution facilities ・ Production method (Source: Documents for the Appraisal Process of the Ministry of Finance) **<u>Detailed Plan</u>** [Facilities] ・ Intake facility (8,250 cubic meters/day: Intake pump station, Intake pump facility, Conveyance pipeline)	・ At the request of the Cambodian implementing agency, the solar power generation system was changed to a diesel generator. ・ Water analysis equipment (15 items) ・ Procurement of connection kits for 1,606 households

	・ Water treatment plant (5,000 cubic meters/day: chemical coagulation sedimentation and rapid filtration system), Elevated tank ・ Distribution facilities (distribution pumping stations and equipment, water distribution network (151 km), distribution information system) [Accessories] ・ Water analysis equipment (15 items) ・ Equipment for mechanical facilities (vibration measurement device, etc.) ・ Water tap connection equipment (water meters) [Soft (Non-physical) Components] ・ O&M of facilities (Source: Pre-bid briefing materials)	・ 151.5 km of Water distribution network ・ Procurement of connection kits for 1,606 households ・ Additionally, training on water analysis, etc.
3) Purpose of Use and Outcomes (Output/Outcome)	・ Population served: 25,380 → 72,731 ・ Average daily water supply (cubic meters/day): 4,023 → 10,160 ・ Number of household water taps: Approx. 4,182 → Approx. 11,982 *Baseline, 2014; Target, 2024 (Source: Documents for the Appraisal Process of the Ministry of Finance)	[2024 Performance] ・65,208 people ・9,135 cubic meters ・13,286 households
4) Expected Development Impacts as Assistance Impacts and Diplomatic Significance/Effects	**<u>Development Impacts</u>** ・ Improving public health conditions for residents who previously relied on	・ Among beneficiaries connected to the water supply through this project, concerns about water

(Outcome)	rainwater, alleviating concerns about water shortages ・ Promoting access to water for the poor (Source: Documents for the Appraisal Process of the Ministry of Finance) **Diplomatic Significance/Effect** Contribution to the public–private partnership-based infrastructure and systems export strategy through business operations by Japanese companies leveraging Japan's technology (Source: Documents for the Appraisal Process of the Ministry of Finance)	shortages have been alleviated, household and public health conditions have improved, and small businesses such as restaurants have been revitalized. ・ The free provision of connection kits (valves, meters, etc.) by the Kampong Thom Water Works (KTWW) has improved access to safe water for the poor.

External Conditions or Considerations	This project was conducted under the Grant for Supporting Business and Management Rights scheme, a new form of cooperation that promotes the acquisition of business and management rights through facility development and the application of advanced Japanese technologies towards the solution of social issues in developing countries. In this case, Japanese ODA served as a catalyst for a consortium of Japanese companies to secure a series of business rights related to water supply facilities.

2. 2020 Economic and Social Development Programme

An overview of the 2020 Economic and Social Development Programme is shown in **Table 2-2**.

Table 2-2 Overview of the Project Evaluation
(2020 Economic and Social Development Programme)

Country/Project Name	The Grant Aid Project to the Kingdom of Cambodia "The Economic and Social Development Programme"(FY2020)
Sector	Health
Type of Assistance	Grant for the Economic and Social Development Programme
Date of Request Receipt	May 11, 2020
E/N Signing Date	June 5, 2020
Committee Member of the Partner Country	Ministry of Health (MOH)
Procurement Agent Agreement	Organization Name: Japan International Cooperation System (JICS) Contract Start Date: June 30, 2020 Contract Completion Date: April 10, 2024
Background and Necessity at the Project Planning Stage	Cambodia faces challenges due to low public health capacity and shortages of medical equipment, making it vulnerable to public health crises such as preparedness to pandemics of emerging and re-emerging infectious diseases and disaster. While international patient-transfer should be considered when hospitalization is required, the COVID-19 pandemic has made even transfers to neighboring countries difficult. This raises concerns that effective countermeasures are hard to implement, leading to loss of life. Furthermore, containing the spread of infectious diseases and providing appropriate treatment for infected individuals are crucial to mitigate impacts on the country's economy.

Purpose and Details of the Project

Purpose and Project Overview

The project aims to provide funds to procure health and medical equipment, including ambulances and Intensive Care Unit (ICU) Beds, in order to strengthen Cambodia's medical care systems and to contribute to the prevention of the spread of COVID-19 within the country and across the international community.

Key Points on the "Plans" and "Performance/Projected Results"

	Plan/Detailed Plan	Performance/Projected (Timing)
1) Grant Amount (input)	¥2 billion	¥2 billion
2) Equipment （input）	**Detailed Plan** ・ Ambulance ×102 ・ Thermography ×10 ・ Ultrasound scanner (portable ×35, cart-mounted ×1) ・ Oxygen concentrator ×112 ・ Mobile X-ray ×12 ・ Engine generator ×100 ・ Blood pressure meter ×100 ・ ICU bed ×180 ・ Patient monitor (bedside ×178, central ×12) ・ Ventilator ×50 ・ Electrocardiogram ×6 ・ Syringe pump ×10 ・ Incubator ×2 ・ Mobile suction machine ×8 ・ Blood gas analyzer ×5 ・ Folding stretcher ×4 ・ Hospital tent ×4 ・ X-ray protection apron ×2 ・ Generator ×1 ・ Soft components (thermography, portable ultrasound scanner, mobile X-ray, monitor installation and initial training) ・ Additional procurement of equipment previously procured (including accessories) (Source: Minutes of Discussions by the	・ Ambulance ×102 ・ Thermography ×10 ・ Ultrasound scanner (portable ×35, cart-mounted ×1) ・ Oxygen concentrator ×75 ・ Mobile X-ray ×12 ・ Engine generator ×100 ・ Blood pressure meter ×100 ・ ICU bed ×180 ・ Patient monitor (bedside ×178, central ×12) ・ Ventilator ×50 ・ Electrocardiogram ×6 ・ Syringe pump ×10 ・ Incubator ×2 ・ Mobile suction machine ×8 ・ Blood gas analyzer ×5 ・ Folding stretcher ×4 ・ Hospital tent ×4 ・ X-ray protection apron ×2 ・ Generator ×1 ・ Soft components (thermography, portable ultrasound scanner, mobile X-ray, monitor installation and initial training) ・ Additional procurement of equipment previously procured (including accessories) (Source: Project Completion Report)

	Consultative Committee)	
3) Purpose of Use and Outcomes (Output/Outcome)	・ Strengthening medical systems in Cambodia, including COVID-19 response (Source: Embassy Comment Sheet)	・ Strengthening medical systems in Cambodia (nationwide), including COVID-19 response
4) Expected Development Impacts as Assistance Impacts and Diplomatic Significance/Effects (Outcome)	**Development Impacts** ・ Enhanced capacity to treat patients with COVID-19, including Japanese nationals residing in Cambodia ・ Strengthening the capacity to respond to other diseases ・ Strengthening emergency transport capabilities (Source: Embassy Comment Sheet) **Diplomatic Significance/Effect** ・ In the initial phase of the project, amidst China's growing engagement in Cambodia, primarily through port and other infrastructure development, this project enhances Japan's influence in Cambodia (Source: Documents for the Appraisal Process of the Ministry of Finance)	**Development Impacts** ・ Enhanced capacity to treat patients with COVID-19, including Japanese nationals residing in Cambodia ・ Enhancement of general medical treatment capacity during normal times ・ Strengthening emergency transport capabilities **Diplomatic Significance/Effect** ・ Maintaining recognition of Japanese-made medical equipment and supplies

External Conditions or Considerations	As this project was an emergency initiative aimed at responding to COVID-19, it was implemented under circumstances distinct from those of the regular Grant for Economic and Social Development Programme.

Chapter 3 Evaluation Results

1. 2016 Project for Expansion of Water Supply System in Kampong Thom

(1) Relevance of Plans

Regarding the "Relevance of Plans" criterion, this section verifies the objectives, content (costs, design, Operation & Maintenance (O&M) plans, developmental and diplomatic impacts, etc.), implementation structure, and workflow planned for the 2016 Project for Expansion of Water Supply System in Kampong Thom (hereinafter referred to as "this project" in this section).

Table 3-1 Overview of the Evaluation Results for the "Relevance of Plans" Criterion (2016 Project for Expansion of Water Supply System in Kampong Thom)

Relevance of Plans: Highly Satisfactory	
Links with the purpose: Highly Satisfactory	
Evaluation Question	(A) Links with Cambodia's development needs and policies (B) Links with the Government of Japan's foreign and development cooperation policies
Main Rationale	The objectives of this project ("Establishing a water supply management system to ensure stable water supply for residents of Kampong Thom Province" and "Promote economically and environmentally sustainable social development by improving the quality of water services to local communities") align with Cambodia's "Rectangular Strategy - Phase III (2013-2018)," "National Strategic Development Plan (NSDP) (2014-2018)," and the "National Strategy for Rural Water Supply, Sanitation and Hygiene (2011-2025)." The project objectives also align with the Government of Japan's foreign policy, “Expanded Partnership for Quality Infrastructure," and development cooperation policies such as the "Development Cooperation Charter" (2015) and the "Country Development Cooperation Policy for Cambodia (2017)."
Consistency of the planned project details: Highly Satisfactory	
Evaluation Question	(A) Consistency with Cambodia's needs, and the Government of Cambodia's development plans and activities, in the water supply sector (B) Consistency with the Government of Japan's plans and activities for diplomatic and development cooperation for Cambodia
Main Rationale	The Government of Cambodia aims to achieve 100% access to safe water by 2025 under its NSDP and Rural Water Supply Strategy. Under this effort, establishing new water supply facilities in Kampong Thom Province, an unassisted area, was a priority directly linked to the national strategy and the Sustainable Development Goals (SDGs). This project aimed to achieve not only facility construction, but also long-term facility maintenance and human resource development through the "Grant

	for Supporting Business and Management Rights" scheme, complementing related projects of the Asian Development Bank (ADB), building on Japan's accumulated and continuous cooperation to date. The project was consistent with Japan's development cooperation policy and "Expanded Partnership for Quality Infrastructure," in aiming to address regional disparities and promote the export of high-quality infrastructure at the same time.
Appropriateness of the planned implementation structure: Satisfactory	
Evaluation Question	(A) Consistency with the standard implementation structure the Government of Japan envisions (B) Appropriateness in light of the implementation structures, capabilities, etc. of the Government of Cambodia in the water supply sector
Main Rationale	In this project, the Embassy of Japan in Cambodia, the Japan International Cooperation Agency (JICA), and the Procurement Agent collaborated to establish an implementation framework aligned with a standard implementation structure. This scheme ensured fairness and competitiveness while maintaining complementarity with other donor projects. The introduction of a Special Purpose Company (SPC) model further strengthened the project's sustainability by having Japanese companies manage O&M of the facilities, thereby facilitating technology transfer and financial soundness. Regarding profitability concerns, the relevance of the project's plans was ensured by identifying and mitigating risks through preliminary surveys and market soundings. By integrating the utilization of Japanese technology, quality management, and human resource development, the project established a realistic and sustainable operational framework plan.
Appropriateness of planning process: Satisfactory	
Evaluation Question	(A) Appropriateness compared to the Government of Japan's standard workflow (B) Facilitating points to ensure the relevance of plans and areas for improvement
Main Rationale	This project established an appropriate project design and implementation structure, even when compared to the Government of Japan's standard operational workflow. By introducing a mechanism under which Japanese companies were to be responsible for water supply operations for five years, in line with the new "Supporting Business and Management Rights" scheme, technology transfer and human resource development were systematically advanced. This established a framework enabling sustainable operations solely by the partner country even after the project's conclusion. Moreover, the building of cooperative relationships with the partner country's governments, measures to address residents' concerns (minimizing opposing impacts and improving services), transparency in project processes, and flexible schedule

	management during the COVID-19 pandemic reinforced the appropriateness of implementation, even when measured against the Government of Japan's standard workflow. From the perspective of the relevance of plans, key points include design revisions based on changes in water demand and the incorporation of improvements to the tariff system. This enhanced the project's sustainability from both demand forecasting and profitability perspectives. These efforts also resulted in a "realistic and sustainable plan" encompassing both the infrastructure improvement and subsequent O&M. This planning methodology can be positioned as a good practice for future similar projects.

A. Links with the Purpose

(A) Links with Cambodia's Development Needs and Policies

(i) Consistency with Cambodia's National Strategy

The Government of Cambodia has outlined key development agendas and corresponding strategies in the "Rectangular Strategy - Phase III (2013–2018),” the "NSDP (2014–2018),” and the "National Strategy for Rural Water Supply, Sanitation and Hygiene (2011–2025)," as follows.

Figure 3-1 Overview of the Government of Cambodia's Key Development Policies

(Source: Prepared by the evaluation team based on publicly available materials)

At the planning stage, this project aimed to strengthen Cambodia's rural water supply capacity by expanding facilities and resilient pipeline networks, in response to the country's insufficient rural water supply infrastructure. This aim aligned with the strategies outlined by the Government of Cambodia.

(ii) Consistency with Cambodia's SDGs

This project was closely linked to not only Sustainable Development Goal (SDG) 6 (Access to Safe Water), but also Cambodian Sustainable Development Goals (CSDGs) 4 (Quality Education) and 6 (Access to Safe Water and

Sanitation). More than half of Cambodia's population consists of young people under 30, representing significant potential for future economic growth. However, inadequate sanitation facilities in schools, insufficient sanitation conditions among residents, and the occurrence of waterborne diseases were impeding improvements in educational opportunities and health standards.

This project aimed to improve learning environments and educational outcomes by enhancing sanitation conditions in school settings. Simultaneously, it seeks to promote sanitation for local residents and reduce waterborne diseases, thereby creating ripple effects for both education and health. In this regard, the objective of this project aligns with the practical needs of Cambodian society and the objectives that CSDGs aim to achieve.

(B) Links with the Government of Japan's Foreign and Development Cooperation Policies

(i) Relevance to Japan's Foreign Policies

The Government of Japan announced the "Expanded Partnership for Quality Infrastructure" at the 24th Meeting of the Management Council for Infrastructure Strategy held prior to the G7 Ise-Shima Summit in May of 2016. This initiative is a policy framework seeking to promote infrastructure exports through Private-Sector Investment Finance Projects using ODA loans, while also improving the systems and operations of grant. The project's planned "water supply facility development using grant" and the scheme of "Japanese companies in acquiring project and operational rights through the introduction of advanced Japanese technologies to ensure sustainable project operation" were consistent with the direction of this initiative.

At the summit meeting with then Prime Minister Hun Sen which was held during the Asia-Europe Meeting in July of the same year, then Prime Minister ABE Shinzo announced Japan's policies to support Cambodia through the export of "high-quality infrastructure," strengthened connectivity in the Mekong region, and human resource development. This project is positioned to concretize these aspects of Japan's foreign policies and aid policies for Cambodia.

(ii) Relevance to the Government of Japan's Development Cooperation Policies

The Government of Japan outlined the following policies in its "Development Cooperation Charter (2015)" and the "Country Development Cooperation Policy for Cambodia (2017)." Assistance for "Safe Water and Sanitation" was positioned

as one of the key programs within these policies.

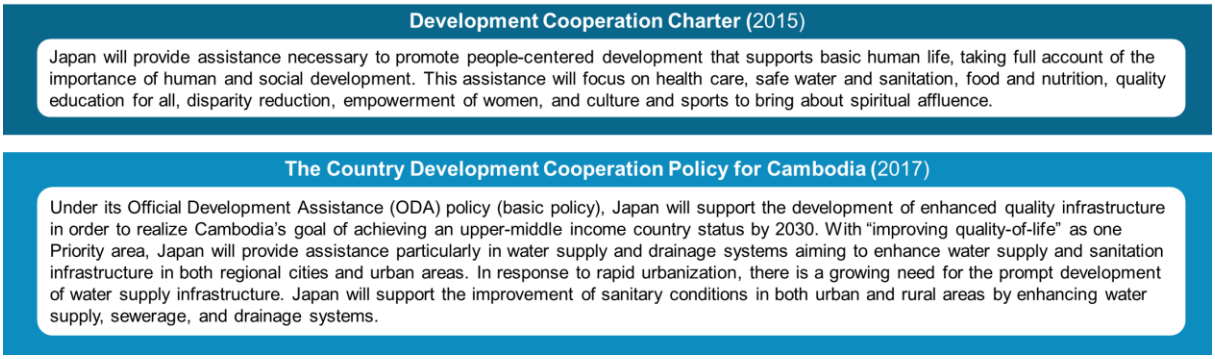


Figure 3-2 Japan's Development Cooperation Policies

(Source: Prepared by the evaluation team based on publicly available materials)

This project was planned not merely for the improvement of water supply infrastructure, but in alignment with policy objectives such as high-quality infrastructure improvement, promotion of sustainable development, and poverty reduction.

B. Consistency of the Planned Project Details

(A) Consistency with Cambodia's Water Supply Sector Needs and the Government of Cambodia's Development Plans and Activities in the Sector

(i) Consistency with National Strategy

With the cooperation of Japan and other donors, 24-hour water supply was achieved in the capital Phnom Penh following the end of the civil war, and the water service coverage had improved to 85% by 2012. As of 2015, however, the coverage rate in provincial cities remained at 55%, with the water supply system lagging behind that in rapidly urbanized areas. To address these issues, the Government of Cambodia formulated the "National Strategy for Rural Water Supply, Sanitation and Hygiene," a rural development program covering the period 2011-2025. This strategy set the goal of enabling access to improved water supply for 50% of the rural population by 2015, and 100% by 2025.

The project was planned with the objective of strengthening the rural water supply system, a key focus of this national strategy, and directly contributed to achieving Cambodia's SDG 6.1 (access to safe and affordable drinking water). At the time of planning, the Ministry of Industry and Handicraft (MIH, currently the Ministry of Industry, Science, Technology & Innovation (MISTI)) was promoting the development of water supply facilities in provincial cities as a priority issue. As such, this project essentially accorded with the national

strategy while also contributing to enhanced social development effects in the provinces.

(ii) Complementarity with Other Donor Projects

During FY2018-2019, the ADB planned a rehabilitation project for existing water treatment plants and water distribution networks in nine provincial cities, including Kampong Thom. As the ADB project only targeted existing facilities in this context, the scope of its project differed from that of Japan’s project which targets the construction of new water supply facilities. It was therefore confirmed, during the study phase of the ADB project, that the two projects would not overlap but would be mutually complementary. Thus, the planning of this project proceeded while considering consistency with other donor projects and clarifying the division of roles.

(B) Consistency with the Government of Japan's Plans and Activities for Diplomatic and Development Cooperation for Cambodia

(i) Consistency with Infrastructure Development and Social Development Policies

The Master Plan on ASEAN Connectivity (MPAC), which was in the process of being formulated in 2016, aimed to improve living standards through sustainable infrastructure development, and to thereby promote the reduction of regional economic disparities and social stability. This project sought to improve the water service infrastructure and establish maintenance management systems in a provincial city. Consequently, the objective and the nature of this project consist with the "sustainable infrastructure development" framework advocated by the Master Plan. Over a period when China's presence in large-scale infrastructure sectors in Cambodia was steadily growing, Japan was continuously engaged, from the institutional design phase, in supporting the water supply sector, the healthcare sector, and other sectors directly linked to resident livelihoods in the country. This project can be positioned as a concrete initiative that aligned Japan’s development cooperation policy with Cambodia’s infrastructure development and social development needs.

(ii) Consistency with the Country Development Cooperation Policy for Cambodia

MOFA's Country Development Cooperation Policy for Cambodia (2017) identifies "Improving Quality of Life" and "Strengthening Social and Economic

Infrastructure" as priority areas. The improvement of water supply infrastructure directly contributes to the improvement of the living environment and health of local residents, while also serving as an accelerator that leads to poverty reduction and revitalization of the local economy. The infrastructure support in this project has a clear development theme: improving the living environment of residents through the construction of water supply facilities and management of the services. It also helps to reduce regional disparities and support the sustainable development of a Cambodian provincial city. In this regard, the project is consistent with the Country Development Cooperation Policy for Cambodia.

C. Appropriateness of the Planned Implementation Structure

(A) Consistency with the Standard Implementation Structure the Government of Japan envisions

(i) Standard Implementation Structure Envisioned by the Government of Japan

The “Grant for Supporting Business and Management Rights” scheme, a new form of ODA cooperation announced by MOFA in December 2015, aims to promote the acquisition of operating and management rights by Japanese companies in the premises built up within grant schemes. This mode of cooperation is presumed to utilize Japan's advanced technology and know-how in developing countries by providing grant for public works projects in which private companies take part in comprehensive implementation from facility construction to O&M.

(ii) Project Implementation Structure

The Domestic Survey and Field Survey have identified that the ODA funds disbursed by grant in this project were allocated for the development of water intake/treatment/distribution facilities at the project site. When the Government of Cambodia was preparing to request support for this project from the Government of Japan, it sought advice on the drafting of the request letter from a Japanese local government that had long-standing involvement in Cambodia's water supply sector. Following project approval, the consultant was selected through a procurement agency agreement with the Government of Cambodia to conduct technical and project case studies. This consultant reviewed and evaluated the project outlined in the request, which led to the creation of a draft implementation policy document confirming the project's feasibility.

Subsequently, the SPC's investor companies formed a consortium and invested in the project implementation, and have carried out the integrated design of the facilities, construction and O&M.

The project planning process was framed as a seamless structure generally adopting the standard operational workflow prescribed by the Government of Japan, in order to adapt to the "Grant for Supporting Business and Management Rights" scheme. Specifically, preliminary surveys, consensus-building among parties of interest, consultations with stakeholders, and transparent bidding and contracting procedures were appropriately executed to ensure the robustness and relevance of the plan.

Regarding the implementation structure on MOFA side, Country Assistance Planning Division I within the International Cooperation Bureau serves as the lead division and the Embassy of Japan in Cambodia serves as the contact point for the project in the country. A collaborative framework was established involving organizations in the government of Cambodia, a Procurement Agent responsible for project supervision, a consultant conducting project implementation design, and an SPC undertaking design, construction, and O&M. This structure aligns with the standard "Grant for Supporting Business and Management Rights" implementation structure envisioned by the Government of Japan.

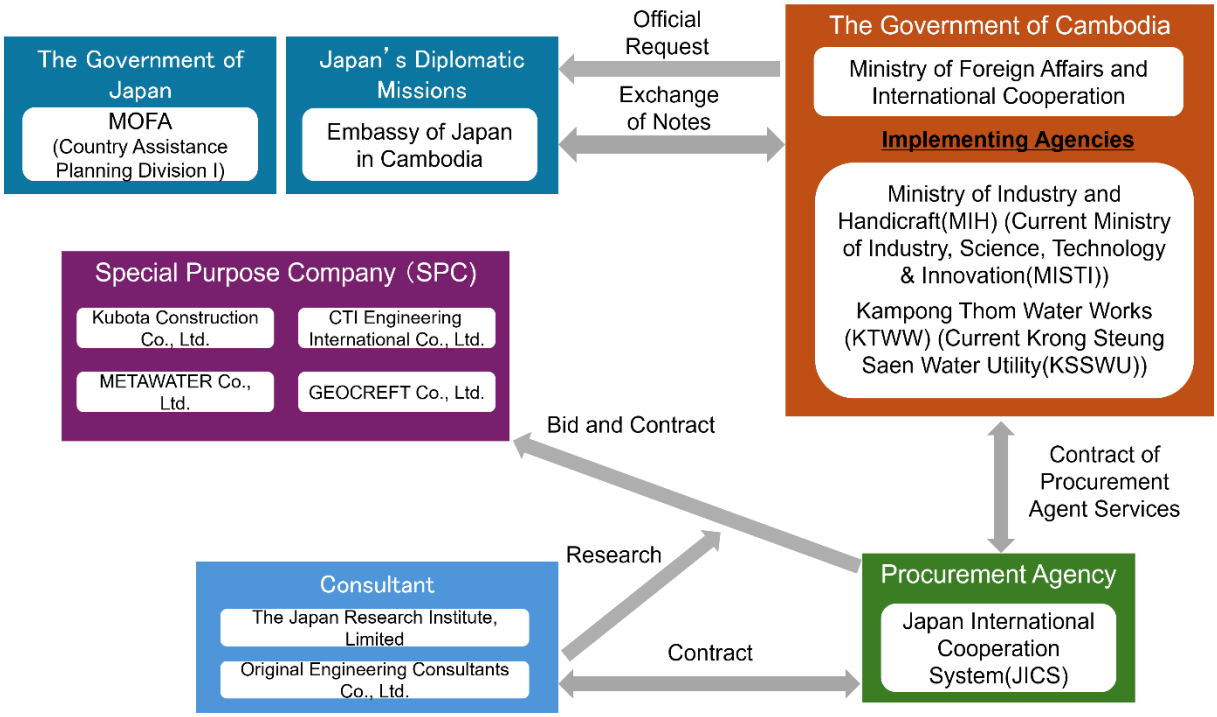


Figure 3-3: Implementation Structure for 2016 Project for Expansion of Water Supply System in Kampong Thom (Source: Prepared by the survey team based on survey results)

(B) Appropriateness in light of the Implementation Structures, Capabilities, etc. of the Government of Cambodia in the Water Supply Sector

(i) Japan's Sustained Cooperation in Cambodia

Japan has provided continuous cooperation to Cambodia in the water supply sector since 1993. Kampong Thom has been one of the areas targeted under the two phases of the Technical Cooperation Projects implemented by Japan whose objective is to enhance the capacity of provincial public water supply departments since 2007. The Japanese side has gained a thorough understanding of the actual challenges facing Cambodia's water supply sector through strong relationship of trust built up between stakeholders in Japan and Cambodia under this long-standing cooperation. This project, moreover, was formulated based on this accumulated cooperation. The evaluation team gathered numerous insights and views from MIH (currently MISTI) project stakeholders that the long-lasting relationships “ensured smooth communication, a clear understanding of Japan's policies and intentions among Cambodian counterparts from the planning stage, and seamless project formation”. Thus, supported by years of cooperative and trusting relationships, the implementation structure for this project was established smoothly. The implementation structure on the Cambodia side clearly demonstrates that the project plan was appropriately designed in consideration of Cambodia's implementation capacity and institutional arrangements.

D. Appropriateness of Planning Process

(A) Appropriateness Compared to the Government of Japan's Standard Workflow

The cooperation model adopted in the Grant for Supporting Business and Management Rights scheme specifies a workflow premised upon public-private partnership. At the project implementation phase, the operating method is determined by the maturity level of a proposed project. If a project is deemed insufficiently mature and requires further surveys/studies to strengthen the proposal, the Grant project is undertaken by JICA. When a project is recognized as having a certain level of maturity, it proceeds only through project appraisal and is implemented under the Procurement Agent Arrangement. This project adopted the Procurement Agent Arrangement, with the Japan International Cooperation System (JICS) overseeing project management. In this regard, the planning process for this project can be evaluated as appropriate, aligning with the standard operational workflow of the Government of Japan in adopting the

Grant for Supporting Business and Management Rights scheme.

(B) Facilitating Points to Ensure the Relevance of Plans and Areas for Improvement

(i) Plan Revisions Addressing Increased Water Demand and Project Site Characteristics

The rapid urbanization of Kampong Thom Province led to increased tap water consumption, with seasonal demand projected to exceed the supply capacity of existing facilities. This project developed a distribution plan to supply the amount of shortfall from the new water treatment plant for existing facilities. Analyzing multiple factors of consumption growth, it would be plausible to point out the following as prominent: changes in resident lifestyles, reduced rainwater harvesting, and decreased well usage. This project estimated population growth and water demand up to 2040 based on population statistics from 2009 to 2016 obtained from MIH and the Kampong Thom Water Works (KTWW, currently the Krong Steung Saen Water Utility (KSSWU)). Adopting a time factor of 1.94, the project formulated a long-term sustainable water supply plan that would accommodate future demand growth.

The plan was assessed during the design phase to realign new and existing water supply zones by excluding four out of ten target communes and anticipating future restructuring of the commune block, revising the plan to install a transmission pipeline conveying water from the new water treatment plant to the existing plant. In addition, another flexible revision was made by relocating the intake point 200 m in the upstream direction in response to a request made by the implementing agency for landscape reasons. While the new supply zone has relatively low population density, commercial and residential development is progressing around the existing water supply plant. Therefore, the design also prioritized areas where increased water demand is anticipated.

(ii) Coordination Among Relevant Agencies

The Embassy of Japan in Cambodia and the JICA Cambodia Office were closely sharing information on the progress of the project. The appropriate sharing of the outcomes of the Technical Cooperation Projects " Project on Capacity Building for Urban Water Supply System in Cambodia (Phases 2 & 3)" and the utilization of insights gained during this project created synergy effects in project implementation. Furthermore, Japan and other donors (particularly France) have established a division of roles in the water supply sector.

Coordination has progressed in the construction of new facilities in surrounding areas where water supply plants were developed by France. This division of roles has effectively facilitated the efficient improvement of infrastructure while avoiding duplication.

(iii) Challenges and Approaches in Planning

A traditional grant primarily covers the design and construction phases, whereas the Grant for Supporting Business and Management Rights scheme enables integrated implementation extending to post-construction O&M. This has expanded opportunities for the direct and continuous transfer of Japanese know-how. A certain degree of uncertainty regarding the profitability and sustainability of the project remained, however, at the planning stage. The available information on Cambodia's water supply business (such as fee collection, taxation, and legal affairs) was incomplete, and the domestic laws and regulations governing the operation of SPCs were still under development. Risks were also pointed out with regard to the emphasis on profitability in a private sector project design, such as excessive reliance on foreign companies and the potential for costly facilities with excessive specifications. Ultimately, however, the project adopted a scheme in which companies themselves verified profitability from the design stage while designing the SPC business scheme, thereby enhancing the feasibility and sustainability. This recognition of challenges and the resulting adjustments demonstrate that the project planning process was continuously refined to ensure relevance.

(2) Effectiveness of Results

The "Effectiveness of Results" criterion evaluates the performance of the actual outcomes (results) compared to the planned inputs, outputs, and outcomes for this project, as well as the cause-and-effect relationship between the inputs and outputs (efficiency).

Table 3-2 Overview of the Evaluation Results for the "Effectiveness of Results" Criterion (2016 Project for Expansion of Water Supply System in Kampong Thom)

Effectiveness of Results: Highly Satisfactory	
Level of achievement and efficiency of the project: Highly Satisfactory	
Evaluation Question	(A) Level of achievement of fund provision (input) (B) Level of achievement and efficiency of facility development (output) (C) Status of use of constructed facilities (output) (D) Development effects through the use of constructed facilities (outcome)

	(E) Diplomatic effects through the use of constructed facilities (outcome)
Main Rationale	Funding was disbursed appropriately based on the new "Grant for Supporting Business and Management Rights" scheme following coordinated efforts between both governments. Water intake/water treatment plants and water distribution networks utilizing Japanese technology were built with residential service connections, as planned, and the pipelines were expanded to establish an efficient water supply network. After construction, technical quality assurance and user outreach were conducted through inspections, minor repairs, and briefings for the target communes, expanding water supply services from 42 to 68 villages. Development effects were significantly realized in alignment with Japan's development cooperation policy, with improved resident hygiene, enhanced quality of education and medical services, and revitalization of the local economies. Through diplomatic engagement such as the completion ceremony, Japan's cooperation was widely communicated externally, making an impact on Cambodia's national strategy and strengthening Japan's presence in the ASEAN region.
Appropriateness of implementation, monitoring follow-up processes: Satisfactory	
Evaluation Question	(A) Appropriateness compared to the Government of Japan's standard workflow (B) Facilitating points to ensure the effectiveness of the results and areas for improvement
Main Rationale	The effectiveness of the results was observed in the bilateral diplomatic framework, technology transfer, human resource development, efforts by the SPC to ensure project sustainability, and the appropriateness of the publicity effects and fund management. At the same time, however, the following were identified as problems: inadequate legal and regulatory frameworks for SPC operations, the taxation on SPC revenues, and the operational capacity of the local water utility after project completion. To further enhance the sustainability and effectiveness of similar projects moving forward, it will be crucial to thoroughly examine potential institutional and regulatory problems during the preparatory phases and to strengthen the capabilities of personnel responsible for water supply operations.

A. Level of Achievement and Efficiency of the Project

(A) Level of Achievement of Fund Provision (input)

The ministries and agencies in charge reported that the funding was disbursed promptly and efficiently after the signing of the Exchange of Notes (E/N) on March 30, 2017.

(B) Level of Achievement and Efficiency of Facility Development (output)

(i) Utilization of Japanese Technology and Social Considerations

This project adopted Japanese water treatment technology, which excels in energy and cost savings. This adoption made it possible to provide affordable water service while establishing a water treatment facility capable of handling seasonal fluctuations in Cambodia's river water levels. Facility construction proceeded in accordance with the consortium's proposal. The water treatment plant and water distribution network were completed largely according to the detailed design, with only minor design modifications. Even when the existing facility reaches its treatment/distribution capacity limit, the new plant is able to transfer water to the former and guarantee a stable supply. The incorporation of Japanese expertise into the setting of chemical usage levels and the dosing schedule in the purification process has made treatment more efficient and potent. The "National Drinking Water Quality Standards (2004)" designated by Cambodia's Ministry of Industry, Mines and Energy are applied at the new water treatment plant as water quality management standards. The turbidity of Cambodian river water fluctuates between the rainy and dry seasons, posing significant challenges to water quality maintenance. This project addressed these characteristics by introducing an economical water treatment system leveraging Japanese technology and experience, highly durable/power-efficient pumps, and real-time monitoring and control via a SCADA (Supervisory Control and Data Acquisition) system. Additionally, multiple diesel generators were installed as emergency power sources to guard against lightning strikes and power outages.

The project implementation was carried out with adequate social and environmental consideration and there were no serious accidents at the site. The flexibility of schedule management was amply demonstrated during the COVID-19 pandemic, when decentralized working schemes and other countermeasures kept construction delays to only about two months. At the stage of water service connection, accommodations were put in place for vulnerable groups by making pipes, meters, and valves freely available. Likewise, low water rates were also set (approximately US$0.30 for up to 3 cubic meters). Overall, the project was able to systematically expand access to water services while keeping the cost burdens to residents low.

Left photo: Water treatment plant (filtration and sedimentation unit)
(Source: Photographed by the evaluation team during the Field Survey)

Right photo: Water treatment plant (pump group)
(Source: Photographed by the evaluation team during the Field Survey)

(ii) Promotion of Residential Service Connection

In addition to facility development, efforts were made to expand residential connections for the direct benefit of local residents. On top of the equipment procured by KTWW for 806 households, the consortium sourced additional sets for another 800 households. Household connections thus progressed across the entire target area, establishing a foundation for the provision of stable water supply services.

(C) Status of Use of Constructed Facilities (output)

Whereas the baseline value in 2014 was 4,812 households, the number of domestic water outlets targeted for 2024 was approximately 11,982 households. Outlets were in service in 13,286 households as of October 2024, and KSSWU (formerly KTWW) projects that 13,703 households will be reached by 2025.

The facilities constructed under the Grant for Supporting Business and Management Rights scheme are operated and managed by Japanese companies for a set period so that the Cambodian personnel can accumulate knowledge and experience in both operation and management through joint working arrangements. Among the 19 local staff employed by the SPC as of August 2025, 7 have been involved in this project since the facility construction phase and another 2 had joined the project with prior experience in water service

operations. These 19 individuals are expected to be transferred to KSSWU upon project completion. A key advantage for the Cambodian implementing agencies will be the opportunity to continue operating the water treatment plant sustainably under this arrangement even after the project is completed.

Left photo: Water treatment plant (Water Quality Management Room)

(Source: Photographed by the evaluation team during the Field Survey)

Right photo: Water treatment plant management building with ODA stickers on equipment

(Source: Photographed by the evaluation team during the Field Survey)

(D) Development Effects through the Use of Constructed Facilities (outcome)

(i) Expansion of Water Supply Service Coverage

In Steung Saen City, Kampong Thom Province, the initial target for water supply was 42 villages. Currently, 68 villages have access to the services. The coverage area has continued to expand since the facility's completion, attesting to the steadily increasing outcome of the project. The facilities constructed under this project are leading to direct improvements in the living environment across the entire area.

(ii) Improved Quality of Public Services

The constructed water treatment plants provide stable water supplies not only to local residents, but also to healthcare facilities and school premises. The sanitary conditions in public institutions have thus improved, enhancing the quality of public services. Well water often contains high levels of arsenic and iron in the region, posing issues with the taste of water and public health. Health risks are also heightened during the dry season, when declining water levels

lead to higher mineral concentrations. The expansion of tap water access has provided a safer and more convenient environment for residents by substantially mitigating these risks.

(iii) Ripple Effects on the Local Economy

The water supply project, promoted under the slogan "Water for All," also helps to strengthen the foundations of the local economy. A safe and reliable water supply benefits daily life for residents while supporting business continuity and improving productivity by stabilizing operating conditions for commerce, the service sector, and small-scale industries. The ripple effects of the project continue to support both livelihoods of residents and the local economies.

Left photo: The Sen River, a source of raw water, and the intake facility
(Source: Photographed by the evaluation team during the Field Survey)

Right photo: Safe water produced at the water treatment plant
(Source: Photographed by the evaluation team during the Field Survey)

(E) Diplomatic Effects through the Use of Constructed Facilities (outcome)

(i) Significance of the Grant for Supporting Business and Management Rights Scheme

This project represents an uncommon case where a Japanese company initially obtained a contract for design and construction under Japan's ODA grants in the water supply infrastructure sector and continued with a contract for facility O&M as part of its business activities. The scheme, under which the Japanese company conducted technology transfer over a five-year period from

the project start and ultimately transferred the facility and its O&M to the Cambodian side, is highly regarded as a model case. Whereas conventional grant focuses solely on facility construction, this project realized a pioneering form of preemptive investment that also aimed to secure operational rights. This scheme served as an initiative contributing to long-term market entry and investment by Japanese companies.

(ii) Understanding and Cooperation from Local Stakeholders

The Cambodian government repeatedly expressed its appreciation for Japan’s cooperation at bilateral meetings, and Japan’s assistance was thoroughly understood and broadly supported.

Approximately 300 participants attended the "Japan-Cambodia Water Supply and Sanitation Seminar" held in Phnom Penh in 2018, confirming high interest in, and a cooperative stance toward, these projects. This cooperative foundation with local stakeholders supported the smooth implementation of the project and remains the basis for maintaining the current positive cooperative relationship. Initiatives built on this trust are one factor contributing to the elevation of Japan-Cambodia relations to a "Comprehensive Strategic Partnership" in 2022.

(iii) Ripple Effects to Japanese Companies and Industry

The Japanese companies taking part in this project promoted the dissemination of Japanese products and water treatment technologies by utilizing their own technologies and directly engaging in facility operations. This aligns with the "Expanded Partnership for Quality Infrastructure" pursued through public-private partnerships and contributed to the enhancement of Japan's presence in the water sector in Cambodia.

(iv) Public Relations and Access to Information

Although the public relations plan and the setting of effectiveness indicators were not entirely sufficient, the signing of the E/N was published on the website of MOFA.as an announcement. The public solicitation for the Procurement Agent and the ex-ante evaluation report based on the Policy Evaluation Act were also made public, as with other projects. This afforded a certain level of transparency, and the accountability required for an ODA project was mainly ensured.

(v) Diplomatic Event through Completion Ceremony

The project held a joint completion ceremony on May 22, 2023, coinciding with the completion of the new Siem Reap Water Treatment Plant. Officials from the Government of Cambodia, including then Deputy Prime Minister Tea Banh, attended, along with approximately 1,500 government workers and residents, providing a significant platform to showcase Japan's cooperation outcomes. Information spread through media coverage and government publicity, directly contributing to increased awareness of Japan's ODA. Japan's cooperation model of "facility development + human resource development" was also widely shared through the project, and the scheme has spread to other projects as a model case (such as the Ta Khmau Water Supply Expansion Project and the Phum Prek Water Supply Expansion Project).

(vi) Ripple Effects for Continued Cooperation

Multiple projects in the water supply sector have been established since FY2016. This demonstrates that this project is recognized as an important initiative within the context of bilateral cooperation and forms part of the ongoing cooperative relationship in Cambodia.

Photo: Monument for 2016 Project for Expansion of Water Supply System in Kampong Thom
(Source: Photographed by the evaluation team during the Field Survey)

B. Appropriateness of Implementation, Monitoring and Follow-Up Processes

This part of the evaluation is conducted to verify whether the implementation, monitoring, and follow-up operations of the projects were appropriate compared to the initially planned processes and standard operational workflows. In its final phases, it aims to organize how these processes contributed to the project results (input, output, outcome) and identify areas requiring improvement.

(A) Appropriateness Compared to the Government of Japan's Standard Workflow

(i) Fund Management and Cost Efficiency

The ratio of the grant amount to the expenses incurred for facility construction in this project was generally appropriate. Cost efficiency was

secured as a whole, as the bid submission results led to a lower winning bid price than initially anticipated. Costs for modified works also remained within the budget and are assessed as reasonable. With respect to fund administration, the flow of funds was appropriately tracked and managed through regular reporting and the submission of bank account statements. This ensured transparency in fund usage and is deemed to have helped enhance the reliability of the project results.

(ii) Multi-layered Monitoring System

The Procurement Agent (JICS) collaborated with the implementing agencies during the project period to establish a multi-layered monitoring system. Specifically, the project was monitored at the following three levels:

- Monthly Site Monitoring
  Advisory consultants and local representatives from the implementing agencies (MISTI and KTWW) participated in the project to confirm the progress of construction and technical supervision status.
- Monthly Progress Meetings (Domestic)
  The Procurement Agent, Advisory Consultant, and Consortium held meetings in Japan to share issues and discuss response policies and technical supervision matters.
- Final Inspection
  At completion, the client (MISTI), Procurement Agent, and advisory consultant attended and conducted the final inspection.

The progress and quality of the construction work were verified in a multifaceted and continuous manner through these monitoring activities. An effective and efficiently functioning supervision system was thus shown.

(iii) Quality Assurance and Inspection System

A one-year defect liability period was set after the facility's completion, and the Advisory Consultant conducted an inspection at the end of this period. The implementing agency and Procurement Agent attended the inspection, and the consortium was confirmed to have adequately carried out repair work for the minor defects identified. Thus, a system was established to ensure the quality and reliability of the facilities through the defect liability period and the inspection at its conclusion. This system can be considered appropriate from a quality

assurance perspective.

(B) Facilitating Points to Ensure the Effectiveness of Results and Areas for Improvement

(i) SPC-driven Operational Sustainability and Risk Mitigation for the Project

In contrast to typical ODA projects, where completion occurs upon facility construction and handover, this project stipulated that the SPC undertake O&M for five years. This scheme enabled routine technology transfer to local staff through daily water treatment production and sales. Specifically, it enhanced overall operational capabilities, including residual chlorine concentration management and O&M record-keeping. Additionally, extending SPC responsibility beyond the defect liability period reduced the operational risks associated with immediate post-construction transfer. In practice, the SPC achieved cumulative profitability from the third year of operation onward, confirming the viable level of profitability and a sustainable business model.

The operational rights are programmed to be transferred to the Cambodian side (KSSWU) during the planned period. This scheme, linked with support for the municipal water utility in Kampong Thom Province, enables a smooth transfer of management authority to the local utility after project completion. It also holds significant meaning for Japanese companies by securing a local operational base for a certain period, making it a cooperative scheme beneficial to both Japan and Cambodia.

(ii) Contract and Quality Management System

A consortium selected through bidding conducted the basic and detailed design, with a contract clearly stipulating the conditions for submitting the output and payment terms. For construction quality management, the project referred to examples of domestic DBO (Design, Build and Operate) projects in Japan and established a system where the consortium itself assumed responsibility for quality control. The technical consultant undertook the core role in this process as the As-Built Engineer (one company within the consortium). Monthly progress reports and meetings ensured that the stakeholders shared the quality management status and issues amongst themselves. On top of that, the Procurement Agent and advisory consultant reviewed these reports to thoroughly ensure quality. The As-Built Engineer also handled on-site supervision duties with Japanese and Cambodian teams collaborating on

progress reporting and approval procedures, and on-site inspections and safety patrols conducted with the cooperation of KTWW strengthened the system in terms of both quality control and safety management.

(iii) Activities to Promote Water Service Use for Residents

Resident information sessions were held in various locations throughout the project period. Awareness campaigns were organized to promote the use of tap water among residents who had previously relied mainly on well water and rainwater as their primary water sources. Previously, applications for water service use required physical visits to the KSSWU (formerly KTWW) office. This project extensively improved convenience by establishing a system to accept resident applications at the commune level. Applications for the use of water services increased as a result, leading to the expansion and stabilization of water supply service usage in the target area.

(iv) Lack of a Well-defined Public Relations Strategy

It is difficult to assert that a sufficiently shared public relations strategy existed among the Government of Japan, the Government of Cambodia, and relevant agencies during the project's formulation and implementation phases. The diplomatic synergy effects were not fully realized, as opportunities to communicate the significance and outcomes of Japan's cooperation domestically and internationally were limited. While some publicity took place at key milestones such as aid commitment and the signing of the E/N, it fell short of strategic and consistent information dissemination. Going forward, it will be essential that both governments discuss publicity policies in advance at project formulation stages, clearly define targets and messages, and formulate and implement strategic and continuous publicity plans.

(v) Linking Regulatory Framework Development and Project Implementation

While MISTI holds authority over the development of legal and regulatory frameworks related to the investment, economic, and technical dimensions of the water supply project, direct linkage with this project was not adequately realized. Even among project stakeholders, the perception that legal and regulatory development directly enhanced the cooperative effects of this project was not commonly shared. Although the SPC establishment process may have contributed to some advancement in relevant legal and regulatory development,

these results did not noticeably translate into project outcomes. Going forward, it will be necessary to forge a mechanism whereby improvements in the institutional framework directly translate into project effectiveness by ensuring closer coordination between the institutional design / legal and regulatory framework development and the implementation of individual projects from the planning stage.

(vi) Operational Challenges after Completion of the SPC Business

After the SPC's operational phase concludes, the newly established KSSWU (public corporation) will take over the integrated O&M of both old and new water treatment plants where different systems and engineering models are installed. Challenges to the sustainability of the project may arise if the capacity to manage the different technologies in an integrated manner is lacking. Further capacity building for KSSWU staff through JICA Technical Cooperation Projects would be one way to enhance the integrated water supply operation capabilities of both new and old facilities in the future.

[Beneficiaries Voices]

Health Center Director
 Illnesses, diarrhea, and cold symptoms have significantly decreased in our patients since the introduction of tap water. We used to treat about 20 diarrhea patients per month; now it's down to 4 or 5. We are especially pleased that children's illnesses have decreased. We no longer use well water, and having access to clean tap water is a major reassurance. We have noticed an increase in handwashing by our staff, as well as a rise in hygiene awareness among surrounding residents. Tap water has also helped to improve the quality of treatment and services at the center, and the water supply interruptions we experience are now brief.
Housewife
 The well water and stored rainwater we used before the water supply became available has an odor and color that often makes it difficult to use. Now that tap water has been introduced, we are very satisfied with its high-quality and no longer worry about water shortages. I feel that my own health and the health of those around me have considerably improved. My family visits the hospital less often, which helps our household finances. Eliminating the need to fetch well water is a major improvement that has made domestic chores much easier. Our water bill is about $2 USD per month, which I think is reasonable and we can pay for it. The color of our clothes after washing has improved and we have the hygiene conditions within the village. I was grateful that the connection fee could be paid in installments and that we could start using the water immediately. Learning that this is Japanese support, I am grateful to everyone in Japan.

Elementary School Principal

Previously, we relied on water from nearby ponds, wells, and rainwater. These sources would sometimes dry up during the dry season, causing great inconvenience. Water shortages particularly affected toilet hygiene. We even tried digging another well, without success. Sometimes we dug down as far as 80 meters without finding water.

We use a water treatment system now installed in our school compound when utilizing well water. At the same time, we are extremely grateful that tap water is now supplied. Thanks to the improved water sanitation, fewer students complain of illness from diarrhea, more students attend school energetically, and we feel that the quality of education has markedly improved. It also greatly helps maintain the cleanliness of the drinking water and toilet and water areas in our school. We are also focusing on handwashing instruction and striving to raise hygiene awareness. Recognizing that this water supply has been realized through support from Japan, we have our teachers at school teach students about the importance of that support.

Laundry Shop Owner

We use a lot of water for our business. The odor and discoloration of our well water negatively affected the quality of the laundry service. White and light-colored clothes often turned light brown. Now more of our customers are expressing great satisfaction with the quality of our service. When using well water, the washing machine pipes were sometimes clogged easily. Now that problem has been resolved and the efficiency of our operations has dramatically improved. We used to have to fill our washing machines with well water using buckets, and now we simply open the tap. We can now wash 90 items altogether, whereas before we were limited to no more than 50. The improved water quality enables us to use less detergent per wash, which greatly reduces costs. Since we also incurred electricity costs to run the pump when using well water, our electricity expenses remain roughly the same after the switch to tap water. A Japanese flag displayed near the water intake facility reminds us that this water supply comes through support from Japan.

2. 2020 Economic and Social Development Programme

(1) Relevance of Plans

Regarding the "Relevance of Plans" criterion, this section verifies the objectives, content, implementation structure, and operational flow outlined in the 2020 Economic and Social Development Programme (hereinafter referred to as "this project" in this section).

Table 3-3 Overview of the Evaluation Results for the "Relevance of Plans" Criterion (2020 Economic and Social Development Programme)

Relevance of Plans: Highly Satisfactory	
Links with the purpose: Highly Satisfactory	
Evaluation Question	(A) Links with Cambodia's development needs and policies (B) Links with the Government of Japan's foreign and development cooperation policies
Main Rationale	The objectives of this project ("Enhancing the capacity to treat patients with COVID-19, including Japanese nationals residing in Cambodia," "Strengthening the capacity to respond to other diseases," and "Improving emergency transport capabilities") were consistent with the content of Cambodia's "Rectangular Strategy - Phase IV," "NSDP 2019-2023," and "Health Strategic Plan 2016-2020." They were also consistent with the Government of Japan's foreign policy initiatives such as the "Japan's Strategy on Global Health Diplomacy" and the "Basic Design for Peace and Health," as well as development cooperation policies such as the "Development Cooperation Charter" (2015) and the "Country Development Cooperation Policy for Cambodia" (2017).
Consistency of the planned project details: Highly Satisfactory	
Evaluation Question	(A) Consistency with Cambodia's health and medical needs and the Government of Cambodia's development plans and activities in the sector (B) Consistency with the Government of Japan's plans and activities for diplomatic and development cooperation for Cambodia
Main Rationale	This project was planned for the procurement of ambulances and 22 types of medical equipment. The procurement aligned with the challenges and priority strategies in the healthcare sector outlined in the Government of Cambodia's "Health Strategic Plan 2016-2020." They also addressed the serious issues of aging and malfunctioning equipment prevalent in healthcare settings at the time. Furthermore, the direction of this project was consistent with the cooperation policies in the healthcare sector set forth by the Government of Japan in its "Basic Design for Peace and Health" and the "Japan-ASEAN Health Initiative."
Appropriateness of the planned implementation structure: Highly Satisfactory	
Evaluation Question	(A) Consistency with the standard implementation structure the Government of Japan envisions

	(B) Appropriateness in light of the implementation structure, capabilities, etc. of the Government of Cambodia in the healthcare sector
Main Rationale	The implementation structure for this project was established in accordance with the standard implementation structure of the Grant for Economic and Social Development Programme. Although the Cambodian committee members were solely from the Ministry of Health (MOH), it can be assessed that the structure was effective in facilitating swift and smooth consultations and decision-making under the emergency environment at the time. In practical terms, the Ministry has a track record of properly managing and maintaining facilities developed and equipment procured by Japan in the past. The Ministry can be judged to possess sufficient capacity to similarly undertake the maintenance and management of the equipment procured for this project.
Appropriateness of planning process: Satisfactory	
Evaluation Question	(A) Appropriateness compared to the Government of Japan's standard workflow (B) Facilitating points to ensure the Relevance of Plans and areas for improvement
Main Rationale	The planning process for this project was generally consistent with the standard operational workflow for the Grant for Economic and Social Development Programme. Although some procedures differed from the standard workflow—such as the Government of Japan's consideration of support prior to receiving the request from the Government of Cambodia and MOH 's formulation of the distribution plan after equipment procurement—these were measures aimed at rapid commencement of support and effective equipment delivery. Therefore, they are not considered problematic.

A. Links with the Purpose

(A) Links with Cambodia's Development Needs and Policies

(i) Relevance to the Government of Cambodia's Development Strategy

The Government of Cambodia has outlined key challenges in the healthcare sector and corresponding strategies in the "Rectangular Strategy - Phase IV" (2018), the "NSDP 2019-2023," and the "Health Strategic Plan 2016-2020," as follows.

Rectangular Strategy Phase IV (2018)

Improving the quality of health services is one of the priority issues. It will be essential to uplift the quality, safety, and effectiveness of health services through investment in medical infrastructure and technology.

National Strategic Development Plan 2019-2023

While new epidemics or new pop-ups continue to threaten regional and international security, the provision of quality health services faces resource constraints, especially in human resources, diagnostic capacity, and the availability of medicines and medical tools.
It will be necessary to reduce the gaps in the delivery of safe, and efficient health services to all geographies, and to continue to promote equity.

Health Strategic Plan 2016-2020

In keeping with the ideal that "All people in Cambodia have better health and wellbeing, thereby contributing to sustainable socio-economic development," the Health Strategic Plan 2016-2020 sets strategic objectives such as the following: "the population will have access to comprehensive, safe and effective quality health services," and "public health facilities have adequate and up-to-date medical equipment."
Meanwhile, buildings, equipment, and other basic infrastructures are in poor condition, and health facilities lack adequate diagnostic capacity. Some communes and villages with small populations face geographical constraints that make it difficult to transport patients to district towns.
In addition to the vulnerability of public health capabilities, the health system lacks adequate capacity to deal with chronic diseases (CDs) and non-communicable diseases (NCDs). It is also vulnerable in terms of response to emerging and re-emerging infectious disease pandemics and natural disaster preparedness and response. HIV/AIDS, tuberculosis, malaria, dengue, etc. are recognized as specific health needs that must be addressed as priority areas to maintain the health of the people.

Figure 3-4 Overview of the Government of Cambodia's Development Strategy

(Source: Prepared by the evaluation team based on publicly available materials)

This project aimed to strengthen Cambodia's capacity to respond to COVID-19 and other diseases, as well as its emergency transport capabilities, through the provision funds to procure medical equipment for the country's fragile healthcare system. The aim of this project was aligned with the Health Strategic Plan outlined by the Government of Cambodia.

(ii) Relevance to the Government of Cambodia's Countermeasures for COVID-19

The Government of Cambodia formulated the "National Action Plan: Preparing for and Responding to Novel Coronavirus (COVID-19) in the Kingdom of Cambodia" and requested assistance from donors to address diverse needs in the healthcare sector. The need for emergency action was promptly recognized, as a strengthened COVID-19 response capacity prevents loss of life and helps to minimize economic impacts.

This project was planned with the objective of preventing the large-scale spread of COVID-19 in order to curb loss of life and economic impacts, which tied in with the policies of the Government of Cambodia on COVID-19.

(B) Links with the Government of Japan's Foreign and Development Cooperation Policies

(i) Relevance to the Government of Japan's Foreign Policy

The Government of Japan's foreign policy in the healthcare sector is

outlined in documents such as "Japan's Strategy on Global Health Diplomacy" (2013) and the "Basic Design for Peace and Health" (2015), adopting the policy direction shown in the figure below.

Figure 3-5: Foreign Policies of the Government of Japan

(Source: Prepared by the evaluation team based on publicly available materials)

In addition to the above policies, at the Special ASEAN + 3 Summit on COVID-19 (Video Conference) held on April 14, 2020, then Prime Minister ABE announced a policy to strengthen support for the ASEAN region based on three pillars: "enhancing infectious disease countermeasure capabilities," "the ASEAN Center for Infectious Disease Control," and "supporting economic resilience."

This project primarily aims to contribute to the strengthening of medical systems, including COVID-19 response measures, and is recognized as relevant to the Government of Japan's foreign policies in the healthcare sector and COVID-19 response. As of 2019, 388 Japanese companies had established operations in Cambodia, and approximately 4,000 Japanese nationals resided in the country. Support for Cambodia's COVID-19 response was therefore thought to link directly to the protection of Japanese nationals residing in Cambodia.

(ii) Relevance to the Government of Japan's Development Cooperation Policies

The Government of Japan explicitly stated the following principles in its "Development Cooperation Charter" (2015) and its "Country Development Cooperation Policy for Cambodia" (2017).

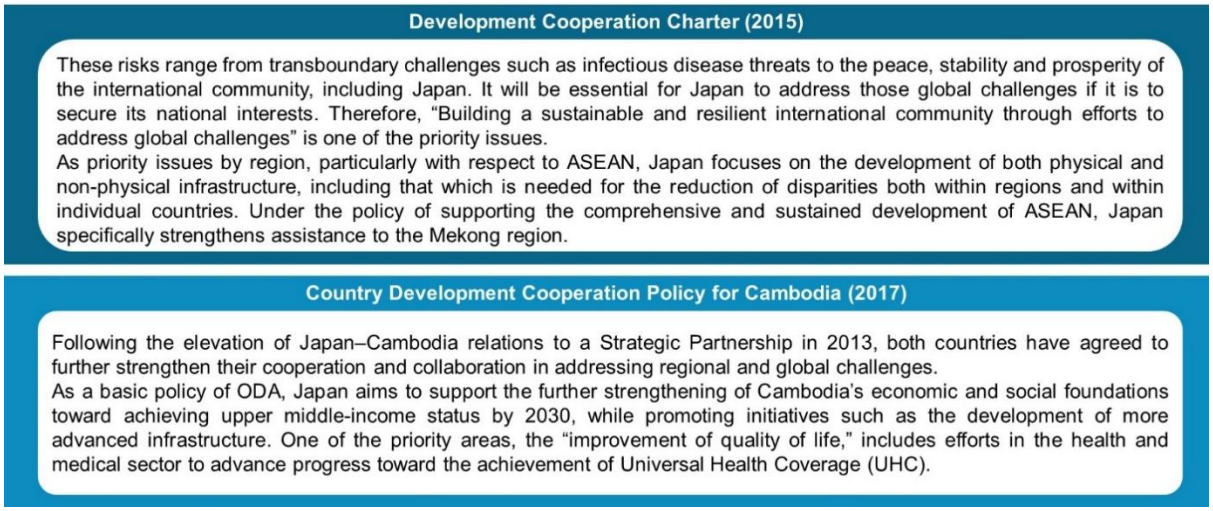


Figure 3-6 Policies of the Government of Japan on Development Cooperation

(Source: Prepared by the evaluation team based on publicly available materials)

Preventing the spread of infection in developing countries with fragile healthcare systems was not only directly linked to the protection of the health and safety of Japanese nationals residing in Cambodia, but also critically important from the perspective of preventing and mitigating the further spread of infection to Japan. The COVID-19 pandemic was an urgent crisis that threatened to affect the economies and societies of all countries, including Japan. This project supported the strengthening of Cambodia's healthcare system and was therefore related to the development cooperation policies of the Government of Japan.

B. Consistency of the Planned Project Details

A committee made up of the Embassy of Japan in Cambodia, the implementing agencies, and the Procurement Agent agreed upon the procurement of medical equipment listed in the table below for this project.

Table 3-4 Procurement Items Agreed Upon by the Committee

Equipment \ End-user	Quantity		
	MOH	Banteay Meanchey PHD	Siem Reap PHD
Ultrasound Scanner	1		
Thermography	10		
Mobile X-Ray	10		2
Ambulance	100	2	
Portable Ultrasound Scanner	25	10	
Oxygen Concentrator	100	4	8
Blood Pressure Meter	100		
Engine Generator	100		
ICU Bed	150	10	20
Bedside Patient Monitor	150	20	8
Central Patient Monitor	12		
Ventilator	50		
Electrocardiogram		6	
Blood Gas Analyzer		4	1
Syringe Pump		10	
Hospital Tent		4	
Folding Stretcher		4	
Incubator		2	
Generator		1	
Uninterruptible Power Supply (UPS)		1	
Mobile Suction Machine			8
X-Ray Protection Apron			2

(Source: Prepared by the evaluation team based on the minutes of the 1st to 4th committee meetings)

(A) Consistency with Cambodia's Healthcare Sector Needs and the Government of Cambodia's Development Plans and Activities in the Sector

(i) Consistency with the "Health Strategic Plan 2016-2020"

The "Health Strategic Plan 2016-2020" identifies the following as key health needs in Cambodia: addressing diseases such as HIV/AIDS, tuberculosis, malaria, and dengue fever; responding to traffic accidents and injuries; and preparing for and responding to disasters. The plan explicitly states that countermeasures include expanding investment in medical equipment and technology in hospitals and utilizing information technology. It also emphasizes the importance of establishing a 24-hour referral system encompassing emergency transport services and coordinated information-sharing between healthcare facilities.

While the equipment selected for this project aligns with the objective of preventing the spread of COVID-19, all items broadly contribute to the strengthening of the overall healthcare system (e.g., tuberculosis screening using X-ray equipment). The content of this project was therefore consistent with the development plans of the Government of Cambodia in the healthcare sector.

(ii) Consistency with Health and Medical Needs Related to COVID-19

Photo: Ambulance deployed under this project
(Source: Photographed by the evaluation team during Field Survey)

A limited number of ambulances were in service throughout Cambodia around 2020, and some of the vehicles were breaking down as a consequence of years of use. As some ambulances were used to transport test samples to laboratories, particularly during the early stages of the pandemic, the number available to transport infected patients to hospitals in Phnom Penh decreased, leading to a sharp increase in the demand. Many infected patients were transferred from district hospitals and health centers to provincial hospitals over the same months, resulting in extremely high ambulance dispatch frequencies both within provinces and between regions.

Medical equipment was also becoming increasingly outdated, necessitating replacement. A significant increase in demand was confirmed for equipment essential for treating patients with COVID-19, such as ventilators, oxygen concentrators, ICU beds, and patient monitors.

Given these conditions in the medical field, this project provided funds to procure the equipment necessary for responding to COVID-19 patients, addressing an urgent need during the pandemic.

(B) Consistency with the Government of Japan's Plans and Activities for Diplomatic and Development Cooperation

(i) Consistency with Foreign Policy in the Healthcare Sector

The "Basic Design for Peace and Health" (2015) outlines a comprehensive cooperation approach combining hardware support measures, such as hospital construction and the provision of pharmaceuticals and medical equipment, with software initiatives focused on areas such as operational management, human resource development, and institutional strengthening. The "Japan-ASEAN Health Initiative" (2014) explicitly promotes cooperative action on measures such as "strengthening health service systems from regional (main) hospitals to the local level," "equipping hospitals with medical devices," and "supporting the establishment of referral systems."

This project aligned with the Government of Japan's foreign policies in the healthcare sector by arranging ambulances and medical equipment not only in Phnom Penh, but also for Provincial Health Departments (PHD) and hospitals.

(ii) Consistency with the Country Development Cooperation Policy for Cambodia

The Country Development Cooperation Policy for Cambodia (2017) identifies "Improving Quality of Life" as one of its priority areas explicitly through the promotion of initiatives in the healthcare and social security sectors to achieve Universal Health Coverage (UHC).

This project, which provides funding for the provision of ambulances and medical equipment, contributes to quality-of-life improvements for the Cambodian people and is consistent with the Country Development Cooperation Policy.

C. Appropriateness of the Planned Implementation Structure

(A) Consistency with the Standard Implementation Structure the Government of Japan Envisions

The Grant for Economic and Social Development Programme provides funds for the provision of equipment and other items necessary for implementing projects for economic and social development in developing countries. Typically, an agency acting as a procurement agent under an Agent Agreement (A/A) concluded with the partner country's government carries out procurement activities on behalf of that government.

Country Assistance Planning Division I within the International Cooperation Bureau of MOFA served as the lead division in this project. The Embassy of Japan in Cambodia functioned as the local contact point while coordinating with MOH, the responsible and implementing agency on the Cambodian side. This structure interlinked with the standard implementation structure for the Grant for Economic and Social Development Programme.

While the MOH was the sole Cambodian Committee member in this project, the Ministry’s participation as the focal point of contact under the urgent circumstances at the time proved to be effective in facilitating swift and smooth communication and decision-making.

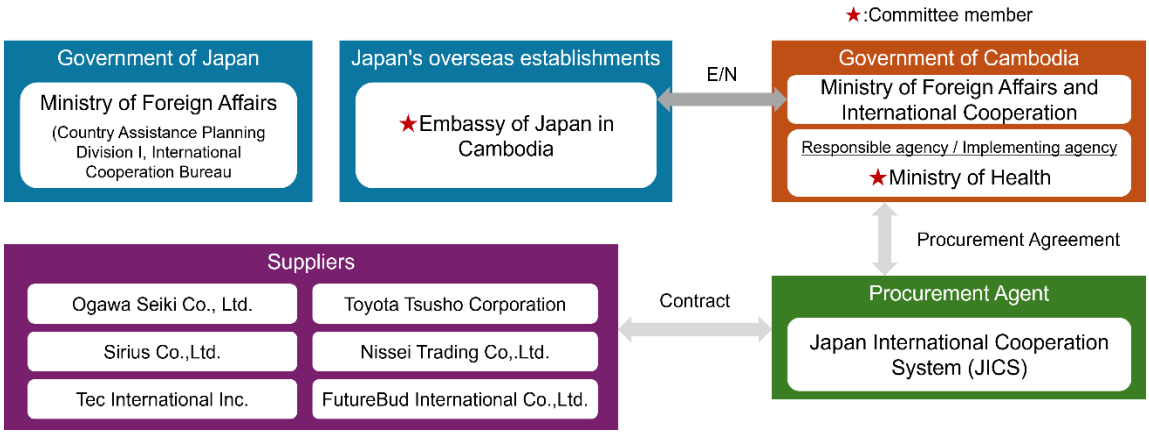


Figure 3-7 Implementation Structure for the "2020 Economic and Social Development Programme"

(Source: Prepared by the evaluation team based on publicly available information and materials provided by MOFA)

(B) Appropriateness in light of the Implementation Structures, Capabilities, etc. of the Government of Cambodia in the Healthcare Sector

Japan has previously supported Cambodia through ODA and Dispatch of JICA Experts in the areas of hospital construction, procurement of medical equipment, and human resource development. The equipment procured and facilities constructed through these projects are being properly maintained and managed by the MOH. The Ministry will also be responsible for managing the equipment procured under this project. Given the implementation structure encompassing usage and maintenance, no particular issues or concerns were identified regarding the MOH's role or capacity. The implementation structure for this project can therefore be assessed as appropriate in light of the Government of Cambodia's implementation structure and capacity in the healthcare sector.

D. Appropriateness of Planning Process

(A) Appropriateness Compared to the Government of Japan's Standard Workflow

The planning process for this project was as shown in the figure below.

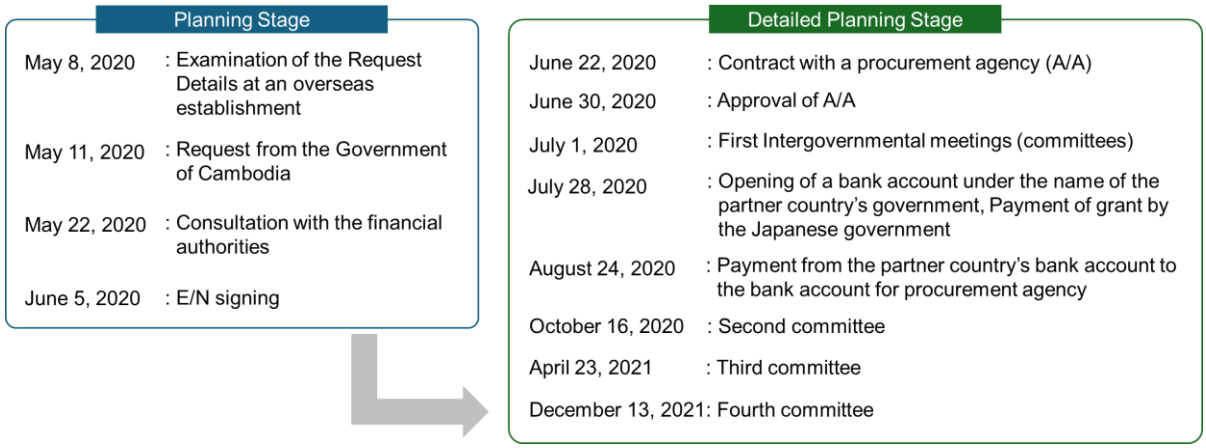


Figure 3-8 Planning Process for the "2020 Economic and Social Development Programme"

(Source: Prepared by the evaluation team based on materials provided by MOFA)

The planning process for the Grant for Economic and Social Development Programme is divided into two stages: the initial planning stage spanning from the acceptance of the request to the conclusion of the E/N, and the detailed planning stage when the procurement items are finalized through the Committee. The planning in this project generally followed the standard process. After the E/N was concluded based on the request from the Government of Cambodia, the procurement items were selected in the Committee, primarily through the deliberations of JICS and the MOH as the Procurement Agent.

(i) Appropriateness of Planning Processes

Following the FY2020 supplementary budget approval in April 2020, the Embassy of Japan in Cambodia sent a Note verbale and initiated discussions with the Ministry of Foreign Affairs and International Cooperation of Cambodia (MFAIC) regarding COVID-19 countermeasure support. Upon receiving a request from a host country government, Japan's diplomatic missions customarily perform a thorough review. In light of the urgency of this case, however, the deliberations proceeded in parallel with the formal request process.

The Government of Cambodia requested the procurement of equipment and materials, as well as training implementation, as shown in the list above. In the meantime, the research equipment in the request was ultimately excluded from procurement. Presumably, this item was left out because it did not appear in the equipment list presented by the Government of Japan.

An estimated cost was calculated based on the request. The E/N was concluded on June 5, 2020, after the total amount of 2 billion yen was approved during the Appraisal Process of the Ministry of Finance.

Although the procedures for scrutinizing the request differed from the standard workflow, the planning process was deemed appropriate in light of the need to expedite procedures in response to the special and urgent circumstances posed by the COVID-19 pandemic.

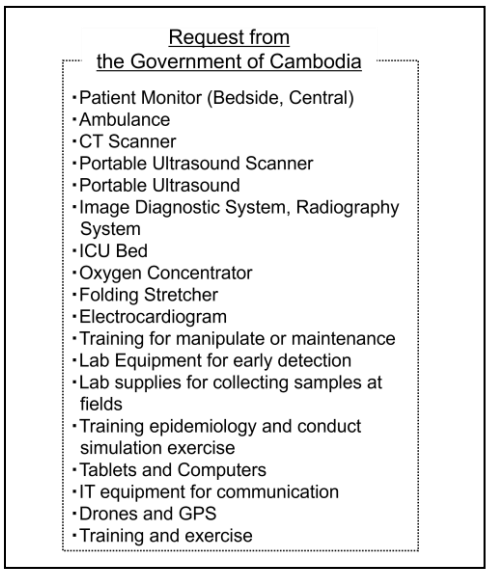


Figure 3-9 Request Details
(Source: Request Letter)

(ii) Appropriateness of the Detailed Planning Stage Processes

The A/A for procurement agency services was signed seventeen days after the conclusion of the E/N and approved in the following week. The procurement items were selected in the first Committee meeting, which was held the very next day. Four Committee meetings were held in total, during which additions and revisions to items based on specifications and conditions were agreed upon as needed. The Committee selected and agreed upon the procurement items in stages in the course of the four meetings and adopted a sequential procurement approach that enabled expeditious delivery for high-urgency items. Overall, therefore, the detailed planning stage processes can be evaluated as effective.

(B) Facilitating Points to Ensure the Relevance of Plans and Areas for Improvement

(i) Swift Equipment Selection through the Presentation of Equipment Lists

In the Grant for Economic and Social Development Programme implemented globally for COVID-19 countermeasures under the FY2020 supplementary budget, a matching system using pre-submitted equipment lists was introduced to accelerate project formation. This project also adopted an approach where procurement items were selected from equipment included in a list agreed upon by the Government of Japan and the Government of Cambodia. This approach ensured the expedition of the procurement procedures by the Procurement Agent.

(ii) Demarcation from Support Provided by Other Donor Agencies and International Organizations

Under global rapid response to COVID-19, other donors and international organizations carried out numerous technical and material support initiatives for healthcare workers to prevent infection spread. In considering its options for COVID-19 countermeasure support, the Government of Japan organized a Government Committee and three subcommittees (Private Sector, Civil Society, and Big Data Analysis) in consultation with ADB and the Government of Cambodia. Through these frameworks, the implementation status of the program was monitored each quarter, and recommendations for changes and improvements were made as necessary. This approach was designed to avoid duplication in the content and targets of support while seeking to achieve synergy effects.

(iii) Formulation of Distribution Plans After Equipment Delivery to the Implementing Agencies

The equipment procured under this project was first delivered to the MOH warehouse. Subsequently, a distribution plan to various destinations was formulated based on consultations between the Ministry and the Embassy of Japan in Cambodia. Under normal circumstances in a project, it is preferable to plan the final distribution points during the procurement phase and have the Procurement Agent manage the procedures. As this project took place during the COVID-19 pandemic, however, other donors and international organizations were also providing concentrated support. A detailed distribution plan was difficult to finalize under the prevailing circumstances, as the shipment plans for equipment from other supports were still undetermined. The approach of delivering equipment to the MOH warehouse and then coordinating other assistance activities before finalizing the destinations might have deviated from the standard process. Considering the circumstances at the time, however, the response can be judged to have been appropriate.

(2) Effectiveness of Results

The "Effectiveness of Results" criterion evaluates the performance of the actual outcomes (results) compared to the planned inputs, outputs, and outcomes for this project, as well as the cause-and-effect relationship between the inputs and outputs (efficiency).

Table 3-5 Overview of evaluation results for the "Effectiveness of Results"
(2020 Economic and Social Development Programme)

Effectiveness of Results: Satisfactory	
Level of achievement and efficiency of the project: Highly Satisfactory	
Evaluation Question	(A) Level of achievement of fund provision (input) (B) Level of achievement and efficiency of equipment provision (output) (C) Status of use of equipment (output) (D) Development effects through the provision and use of equipment (outcome) (E) Diplomatic effects through the provision and use of equipment (outcome)
Main Rationale	The provision of funds and the equipment procurement were implemented by and large as planned, with a certain level of efficiency recognized in the timing. Much of the equipment was highly effective in responding to COVID-19 patients and is still used routinely, contributing to the treatment of injured or sick individuals from diseases other than COVID-19. The development outcomes expected for this project—"improved capacity to treat COVID-19 patients, including Japanese nationals residing in Cambodia," "enhanced capacity to respond to other diseases," and "strengthened emergency transport capabilities"—were all achieved. Increased trust and satisfaction with Japanese products, as well as the establishment of a secure Japanese presence through Japan's support, were also confirmed. Thus, the project can be judged to have yielded diplomatic effects among local medical personnel and patients.
Appropriateness of implementation, monitoring and follow-up processes: Partially Satisfactory	
Evaluation Question	(A) Appropriateness compared to the Government of Japan's standard workflow (B) Facilitating points to ensure the Effectiveness of Results and areas for improvement
Main Rationale	The adoption of the quotation comparison method enabled the swift selection of suppliers. Smooth operations were subsequently ensured throughout the stages of manufacturing, transportation, and delivery through coordination among the Procurement Agent, suppliers, manufacturers, and local agents. The equipment procured for this project was delivered to PHDs and other locations based on the distribution plan formulated by the MOH. This equipment is now being used in provincial hospitals, district hospitals, and health centers. While the plan typically extends to end-users during the procurement phase, support from other donors and international organizations was concentrated on COVID-19 during the implementation of this project. As such, it was deemed reasonable to formulate the distribution plan after delivery to the MOH. Moreover, the installation support and initial operation training were provided to the regional PHDs and hospitals largely as planned, as the manufacturers'

	local agents were able to visit each Province in spite of the movement restrictions in place during the sequential shipping of the equipment. The process can therefore be judged to have been as appropriate as possible under the circumstances, notwithstanding the numerous constraints. The distribution plan, however, remained at the PHD level, and detailed information on which specific equipment was actually being used at which medical institutions was not shared with the Government of Japan or the Procurement Agent. This evaluation survey found that while some PHDs manage equipment allocation and usage status in detail at the hospital level, other PHDs lack a sufficient grasp of the types and quantities of the equipment or the equipment distribution. Information on the final destinations is crucial for verifying the sustainability of the support effect. Considering the difficulties in organizing and sharing information during the COVID-19 pandemic, it will be helpful to ascertain this information to the fullest extent possible in due course when the impact of the pandemic has subsided. To achieve this, the Embassy of Japan in Cambodia could play a role in confirming the allocation status with the implementing agencies. Such follow-up would enable more accurate verification of the usage status during third-party evaluations and follow-up activities.

A. Level of Achievement and Efficiency of the Project

(A) Level of Achievement of Fund Provision (input)

Funding of 2 billion yen was provided in this project, as planned. The funding allocation plan agreed upon by the Committee and the actual performance are as follows. Note that due to delays in ambulance delivery in this project, the supplier incurred a compensation liability in the amount of JPY 806,381. This amount was handled separately from the total JPY 2 billion allocation shown in the table below and was applied to additional contract costs related to equipment installation support and initial operation training.

Table 3-6 Planned and Performance of Fund Allocation

Breakdown	Plan (agreed in the committee)		Result	
	Budget Allocation	Portion	Budget Allocation	Portion
Products and Services	¥1,948,000,000	97.40%	¥1,946,480,000	97.32%
Agent's Fees	¥52,000,000	2.60%	¥53,520,000	2.68%
Total	¥2,000,000,000	100.00%	¥2,000,000,000	100.00%

(Source: Prepared by the evaluation team based on the minutes of the 4th Committee meeting and the project completion report)

(B) Level of Achievement and Efficiency of Equipment Provision (output)

Details on the equipment procurement results (quantity, amount, delivery date, training completion date, supplier, manufacturer, local agent for each piece of equipment) are shown on the table below.

Table 3-7 Details of Equipment Procurement Results

End-user	Product	Quantity (Plan)	Quantity (Result)	Price (Installation and set-up, and operation and maintenance training included.)	Date of receipt of products	Completion date of initial training	Supplier	Manufacturer	Local agent
MOH (Equipment was distributed to each hospital and province through MOH)	Ocygen Concentrator *	100	24	¥13,461,920	August 26, 2020	July 13, 2022	SIRIUS	KOIKE MEDICAL	MEDIEN SDN BHD
			39	¥18,138,120	November 18, 2020	July 13, 2022			
	Blood Pressure Meter	100	100	¥900,000	October 14, 2020	-	Ogawa Seiki	Omron Healthcare	DKSH Cambodia
	Thermography	10	10	¥13,395,000	November 4, 2020	September 5, 2021	Ogawa Seiki	Nippon Avionics	Ricemill Engineering
	Portable Ultrasound Scanner	25	25	¥80,520,000	November 18, 2020	September 2, 2022	Toyota Tsusho	FUJIFILM	Dynamic Pharma
	Ultrasound Scanner	1	1	¥4,040,000	December 9, 2020	September 13, 2021	SIRIUS	CANON MEDICAL SYSTEMS	Dynamic Pharma
	Mobile X-Ray	10	10	¥212,402,779	February 1, 2021	February 20, 2024	Toyota Tsusho	FUJIFILM	Long Term Development
	ICU Bed	150	100	¥24,250,000	February 23, 2021	September 13, 2021	SIRIUS	Paramount Bed	Dynamic Pharma
			50	¥11,950,000	January 20, 2022	-			
	Engine Generator	100	100	¥14,450,000	March 16, 2021	-	Ogawa Seiki	Yamaha Motor	Ricemill Engineering
	Bedside Patient Monitor	150	100	¥280,120,000	May 6, 2021	February 27, 2023	Tec International	Nihon Kohden	Nipon Corporation Phnom Penh
			50	¥151,350,000	February 25, 2022	December 30, 2022			
	Central Patient Monitor	12	8	¥39,106,500	May 6, 2021	February 27, 2023	Tec International	Nihon Kohden	Nipon Corporation Phnom Penh
			4	¥28,340,950	February 25, 2022	December 30, 2022			
	Ambulance	100	5	¥28,500,000	February 22, 2021	February 28, 2021	Toyota Tsusho	Toyota Motor Corporation	Toyota Cambodia
			30	¥168,174,400	June 4, 2021	November 11, 2021	Futurebud International	Koushin & Nissan Motor	Futaba, Tan Chong Motor Cambodia
			65	¥304,200,000	July 12, 2021	September 28, 2021	Toyota Tsusho	Toyota Motor Corporation	Toyota Cambodia
	Ventilator	50	50	¥395,890,000	February 25, 2022	-	Tec International	ACOMA Medical Industry	Medical Equipment & Electro-Technical Services (MEES)
Banteay Meanchey PHD	Oxygen Concentrator	4	4	¥1,154,000	January 4, 2022	April 6, 2022	Tec International	CAIRE (US)	DKSH Cambodia
	Portable Ultrasound Scanner	10	10	¥20,984,000	March 10, 2022	March 30, 2022	Tec International	FUJIFILM	MEES
	Bedside Patient Monitor	20	20	¥12,814,000	March 10, 2022	April 26, 2022	Tec International	Nihon Kohden	Nipon Corporation Phnom Penh
	Electrocardiogram	6	6	¥1,518,800	March 10, 2022	April 26, 2022	Tec International	Nihon Kohden	Nipon Corporation Phnom Penh
	Blood Gas Analyzer	4	4	¥4,707,600	March 10, 2022	April 6, 2022	Tec International	Techno Medica	DKSH Cambodia
	Syringe Pump	10	10	¥6,665,500	March 10, 2022	-	Tec International	TOP	METGROUP Co., Ltd
	Incubator	2	2	¥2,600,400	March 10, 2022	April 6, 2022	Tec International	Nakamura Medical Industry (current: Ideal Medical)	Nakamura Medical Industry
	ICU Bed	10	10	¥2,783,300	March 15, 2022	March 24, 2022	SIRIUS	Paramount Bed	Dynamic Pharma
	Hospital Tent	4	4	¥27,944,000	March 30, 2022	June 10, 2022	Nissei Trading	Taiyo Kogyo	Medilite Pharma
	Folding Stretcher	4	4	¥2,765,000	March 30, 2022	-	Nissei Trading	Paramount Bed	Dynamic Pharma
	Generator	1	1	¥7,471,000	March 30, 2022	June 10, 2022	Nissei Trading	Hokuetsu Industries (current: AIRMAN)	Medilite Pharma
	Ambulance	2	2	¥13,610,512	December 1, 2022	December 1, 2022	Toyota Tsusho	Toyota Motor Corporation	Toyota Cambodia
	Uninterruptible Power Supply (UPS) **	1	0						
Siem Reap PHD	Oxygen Concentrator	8	8	¥2,266,000	January 4, 2022	April 4, 2022	Tec International	CAIRE (US)	DKSH Cambodia
	Bedside Patient Monitor	8	8	¥5,185,600	March 10, 2022	April 8, 2022	Tec International	Nihon Kohden	Nipon Corporation Phnom Penh
	Mobile Suction Machine	8	8	¥3,096,000	March 10, 2022	-	Tec International	Koshin	Nakamura Medical Industry
	Blood Gas Analyzer	1	1	¥1,214,400	March 10, 2022	April 4, 2022	Tec International	Techno Medica	DKSH Cambodia
	ICU Bed	20	20	¥5,516,600	March 15, 2022	March 24, 2022	SIRIUS	Paramount Bed	Dynamic Pharma
	Mobile X-Ray	2	2	¥35,682,600	April 1, 2022	April 20, 2022	Nissei Trading	Shimadzu	Capital Health Cambodia (MET Group)
	X-Ray Protection Apron	2	2	¥117,400	April 1, 2022	-	Nissei Trading	HOSHINA	METGROUP Co., Ltd

(Source: Prepared by the evaluation team based on Committee minutes and the Completion Report)

(i) Achievement of Equipment Delivery Compared to the Plan

The results on the previous page confirm that nearly all equipment was delivered in the quantities originally planned. Oxygen concentrators were one of the exceptions, as the manufacturer was only able to ship 63 units, fewer than initially planned. Though export restrictions were initially imposed on ventilators, procurement was agreed upon at the 3rd Committee meeting, after the restrictions were lifted. Uninterruptible power supply (UPS) was cancelled from the procurement list at the 4th Committee meeting, as no products meeting the technical requirements were available.

(ii) Equipment Pricing

For equipment procurement, the Procurement Agent, JICS, calculated estimated costs based on quotes from manufacturers and others, verified the appropriateness of the prices, and conducted price negotiations as necessary. No issues with cost efficiency were identified, as the prices of equipment procured for this project showed no significant deviation from general market prices or performance in other ODA projects.

(iii) Timing of Equipment Delivery

Equipment delivery took place in phases between August 26, 2020 and December 1, 2022. As shown in the figure on the right, the COVID-19 outbreak in Cambodia peaked from April to September 2021. Therefore, the equipment dispatched to the MOH was generally delivered in time for the peak of the outbreak.

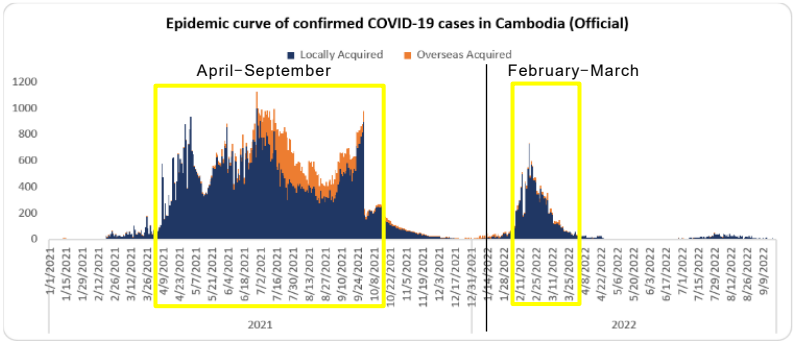


Figure 3-10 Trends in COVID-19 Cases in Cambodia
(Source: WHO, 2022)

As to the equipment for the Banteay Meanchey PHD and Siem Reap PHD, requests from both stations were submitted during the mid-stage of the project, and the items were agreed upon at the third Committee meeting on April 23, 2021. Consequently, shipment could not be completed during the peak of the outbreak. As a resurgence of COVID-19 infections subsequently took place in Cambodia from February to March 2022, the delivery at this timing was still judged to be conducive to the COVID-19 response.

(C) Status of Use of Equipment (output)

(i) Equipment Distributed Locations

The equipment delivered to the MOH was distributed nationwide based on the plan formulated by the Ministry. As shown in the figure below, the destinations cover the whole of the country, confirming that the equipment procured through this project is being widely used.

Figure 3-11 Map of Equipment Distribution Locations

(Source: UN Geospatial Information / Prepared by the evaluation team based on materials provided by MOFA)

(ii) Usage Status Based on Interviews and Site Visits

In the course of the Field Survey, the evaluation team examined and verified equipment installation and usage status through interviews and inspections at the Phnom Penh Municipal Health Department (MHD), National Maternal and Child Health Center (NMCHC), Khmer-Soviet Friendship Hospital, Kampong Cham Provincial Hospital, Siem Reap Provincial Hospital, and Kampong Thom Provincial Hospital.

a) Use of Ambulances

Ambulances are delivered to national hospitals, referral hospitals, provincial hospitals, and health centers nationwide. During the pandemic, they were frequently dispatched and utilized extensively for transporting numerous COVID-19 patients. Currently they are used multiple times each day for the transport of

emergency patients with respiratory or cardiac disease, as well as injured individuals. Routine cleaning and inspections are conducted at the hospitals where the ambulances are stationed, ensuring that they are properly maintained.

Left photo: Ambulance (Source: MHD)

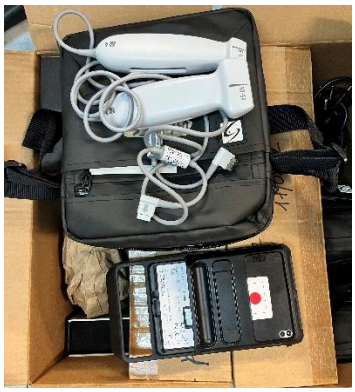
Right photo: Ambulance interior (Source: Photographed by the evaluation team during the Field Survey)

b) Use of Medical Equipment

Among the procured equipment, oxygen concentrators, portable ultrasound scanners, and blood pressure meters were used the most frequently in treating COVID-19 patients. Local medical personnel reported that the portable equipment was highly useful, as the doctors needed to make house calls to examine COVID-19 patients whose movements were restricted.

The beds and patient monitors (bedside and central) have also been confirmed to have been used daily from the time of their installation up to the present, primarily in the ICU, and also in the gastroenterology, respiratory medicine, general internal medicine, and surgery departments.

Left photo: Oxygen concentrator



Center photo: Portable Ultrasound Scanner

Right photo: Blood pressure meter

(Source: Photographed by the evaluation team during the Field Survey)

Left photo: ICU bed　　Right photo: Patient monitor (central)

(Source: Photographed by the evaluation team during the Field Survey)

c) Unused Equipment

Among the equipment confirmed during the Field Survey, one ambulance at Phnom Penh MHD and another at Kampong Cham PHD were out of service due to breakdown or damage. However, local personnel stated that repairs would be scheduled as soon as budget allocations were secured. The evaluation team also observed that the oxygen concentrators were somewhat underused at multiple inspection sites, primarily for reasons such as the low maximum oxygen flow rate. Portable ultrasound scanners, blood pressure meters, and mobile X-rays were also often found to be out of service because of malfunctions except in some of the inspection sites. Meanwhile, some equipment with no damage or functional impairments has been left unused. This equipment is currently stored in the warehouses and deemed to be fully deployable for future use.

(iii) Usage Status Based on Questionnaire Results

PHD facilities and hospitals that could not be visited during the Field Survey were surveyed by questionnaire as a complementary measure to examine equipment usage and maintenance status. The questionnaire's results confirmed that much of the equipment is still in continuous use. In relatively many cases, however, portable ultrasound scanners, blood pressure meters, and other types of small equipment were out of service due to breakdown. This aligns with the results observed during the on-site inspection. In other cases, mobile X-rays were taken out of service as a result of difficulties in obtaining replacement parts.

The verifications above demonstrated that much of the equipment procured with the grant funds for this project has been effectively utilized in routine medical activities from the onset of COVID-19 to the present. It also confirmed, however, that specific equipment at some medical institutions has been taken out of service caused by malfunctions or other issues. Since most of this

equipment consists of small-scale devices and the malfunctions are believed to have stemmed from frequent use during the pandemic, however, the instances of out-of-service equipment are not judged to have significantly impacted the overall sustainability of the project.

(D) Development Effects through the Provision and Use of Equipment (outcome)

(i) Enhanced Capacity to Treat COVID-19 Patients, Including Japanese Nationals Residing in Cambodia

The number of medical facilities capable of accepting infected patients was limited in the early stages of the COVID-19 outbreak in Cambodia, resulting in the transport of many patients from the provinces to Phnom Penh. Additionally, the need to transport specimens to laboratories and national institutions in Phnom Penh drove up the demand for ambulances to extremely high levels. This project delivered a total of 102 ambulances equipped with stretchers, oxygen inhalation sets, oxygen cylinders, first aid kits, and other supplies to PHDs nationwide. Reports indicate that the ambulances enabled "the transport of infected individuals from remote areas to referral hospitals," thus contributing to improved intra-regional and inter-regional transport capacity.

Lastly, amid a countrywide shortage of medical equipment, the equipment distributed through this project—particularly oxygen concentrators, portable ultrasound scanners, blood pressure meters, and ICU beds—can be reliably judged to have been directly utilized for the treatment of COVID-19 patients. As the patients required treatment in isolation environments, compact and portable equipment proved to be especially effective.

(ii) Enhanced Capacity to Address Other Diseases

While some equipment frequently used for COVID-19 malfunctioned, much of the procured equipment in this project remains in use today and has been confirmed to have contributed to the treatment response to diseases other than COVID-19, as well. ICU beds and patient monitors, in particular, are often used together in sets, and all of the hospitals were found to be utilizing them in this manner during the inspections. The symptoms of patients requiring intensive care are diverse, making this equipment valuable for treating a wide range of patients even out of pandemic periods. Mobile X-rays are used for imaging diagnosis of pneumonia patients, and mobile suction machines are used for suctioning phlegm from patients with colds. It was confirmed that the necessary

equipment for each department has been appropriately allocated and continues to be effectively utilized.

(iii) Enhancing Emergency Transport Capabilities

The ambulances provided through this project are routinely used in all regions for the emergency transport of the traffic accident injured and other emergency patients, contributing to rapid patient transport. In Phnom Penh specifically, all referral hospitals and national hospitals within the city have coordinated their transport efforts, which has improved their efficiency compared to several years ago. Aside from the 119-emergency call system, new hotlines established at each referral hospital now enable faster identification of hospitals capable of accepting patients, facilitating their transport. Meanwhile, some PHDs expressed a desire to expand ambulance deployment not only to provincial hospitals, but also to district hospitals and health centers. To improve the transport system across an entire Province, further increases in the quantities are expected.

(E) Diplomatic Effects through the Provision and Use of Equipment (outcome)

The project specified that the manufacturing country must be "a third country other than Cambodia," and all of the procured equipment was Japanese-made (the exception being a number of oxygen concentrators manufactured in the United States). The Field Survey confirmed that stickers bearing emblems of the Japanese flag were affixed to each piece of equipment to indicate that it was provided through Japanese ODA. The stickers affixed to the ICU beds, however, were placed at a difficult-to-see position on the vertical frame components, resulting in insufficient visibility even for hospital staff.

Photo: ODA sticker affixed to an ambulance
(Source: Evaluation Team photo)

The Field Survey interviews revealed that the medical staff members understood that the equipment was provided through Japanese assistance and were satisfied with its high quality. Awareness that the support originated from Japan was also widespread among patients using the medical services, particularly for highly visible equipment like ambulances. The perception that "Japanese ODA = high quality" is spreading. In fact, some hospitalized patients offered statements of approval such as, "We are comforted to see a lot of

Japanese equipment in the hospital."

Given that Cambodia could not help but rely on developed countries for medical equipment support owing to the pandemic's onset, the initial expectation is unlikely to have been a promotional effect for Japanese products. However, the results prove that Japanese-made medical equipment is highly valued and regarded, which proves that a promotional effect was achieved to some degree.

B. Appropriateness of Implementation, Monitoring and Follow-Up Processes

(A) Appropriateness Compared to the Government of Japan's Standard Workflow

(i) Appropriateness of Procurement Processes

a) Preparation of Specifications

Owing to the need for rapid response, this project was found to have deviated from standard procedures in a number of ways. The drafting of the specifications commenced prior to approval of the A/A and committee meetings. JICS, the Procurement Agent, drafted the specifications based on research into the products of Japanese medical manufacturers. Over the course of consultation with the MOH, consensus on the final specifications was reached by the end of June 2020. As a result, procurement activities commenced promptly the day after the first committee meeting.

b) Selection of Suppliers

Under the FY2020 Supplementary Budget for the COVID-19 Countermeasure Grant for Economic and Social Development Programme, a quotation comparison process was adopted as an exceptional measure to ensure expeditious implementation. JICS issued a public notice covering the entire COVID-19 Countermeasure Grant for Economic and Social Development Programme. Next, it distributed requests for quotations (RFQs) sequentially to the vendors that had expressed interest and passed the screening process, once the necessary documentation for equipment was ready. This approach significantly reduced the time required for vendor selection.

c) Equipment Manufacturing and Transportation

The procurement of equipment agreed upon at the 1st Committee meeting commenced on July 2, 2020, with the first contract signed with a supplier on July 22. The first equipment delivered was a high-concentration oxygen generator

shipped on August 26 of the same year. Subsequent procurement proceeded according to agreements concluded up to the fourth Committee meeting. The final piece of equipment supplied was an ambulance delivered to Banteay Meanchey PHD on December 1, 2022.

The suppliers meticulously examined the entire schedule for potential bottlenecks in the transportation, customs clearance, and delivery processes with manufacturers, transporters, and local agents. They also pre-validated the service structure and capabilities of local agents in order to deliver the equipment to the sites as quickly as possible, in some cases switching from sea to air transport if needed. The suppliers also frequently consulted with the Procurement Agent on shipping schedules, on the documentation required for tax exemption procedures, and on the progress of import customs clearance procedures. By obtaining timely advice, they noticeably contributed to the smooth execution of the entire delivery.

Based on the points illustrated above, the procurement process can be evaluated as appropriate and prompt.

(ii) Appropriateness of Processes for Delivery and Handover

a) Delivery to the MOH Warehouse and Holding of the Handover Ceremony

Apart from several types of equipment requested directly by the PHDs, all other equipment was delivered to the MOH warehouse in Phnom Penh. As the equipment had arrived in phases, no individual handover ceremony was held. Handover ceremonies for the ambulances were conducted on May 7 and June 4, 2021, with staff from the MOH and Embassy of Japan in Cambodia attending. These events were publicized on the Embassy's Facebook page and covered by local media outlets such as the Khmer Times, ensuring broad visibility among the Cambodian public.

b) Distribution to Provincial Health Departments (PHDs) and Hospitals

The MOH formulated a distribution plan in consultation with the Embassy of Japan in Cambodia, and based on this plan, MOH allocated the equipment in their warehouse to PHDs and hospitals. At the time, personnel from each recipient PHD and hospital across the country traveled to the warehouse in the capital to receive the delivered equipment and arranged transport to their facilities. Interviews during the Field Survey revealed that while some medical personnel clearly recognized the equipment as aid from Japan, others were

unaware of the countries that provided them, misidentifying it as another equipment. One factor contributing to this situation was the phased scheduling for the procurement operations, with different types of equipment arriving on different dates.

c) Equipment Installation Support and Initial Operation Training

Installation support and initial operation training for granted equipment were included in the original supplier contracts for some of the equipment. There were also cases where the MOH requested the suppliers to provide training after delivery of the equipment by making additional contracts. Training for the ambulances was conducted for medical personnel gathered at the MOH warehouse. For other equipment, local agents visited each Province and hospital to conduct the training. During the Field Survey, some hospital personnel reported that they and their colleagues started to use the equipment either through self-study or with the help of knowledgeable physicians teaching others. The training to be provided contractually was likely to have come after the equipment usage commenced in these cases, presumably as a result of unclear distribution timelines and movement restrictions in place at the time.

Overall, however, in spite of some issues identified when assisting with equipment installation and training for initial operation, it could be evaluated that the training was executed largely as planned and the use of equipment commenced without major issues, and that appropriate processes were followed to the fullest extent possible under the restricted conditions.

(iii) Appropriateness of the Warranty Period

The contract with the suppliers stipulated a one-year warranty period starting from the date of the equipment receipt. The equipment was stored in the allotted warehouse under the MOH's custody until it was distributed to other Provinces. The warranty periods originally set were not extended after the equipment was shipped to the regions, chiefly because of budget constraints, and no requests for extension came from the MOH side.

(iv) Appropriateness of the Processes for Periodic Reporting

The Procurement Agent submitted quarterly reports on this project and the progress of grant fund usage to MOFA with no delay for each period from Q3 2020 to Q1 2024 relevantly. The completion of fund usage (April 10, 2024) was reported in the Completion Report dated April 11, 2024, indicating that the

reporting process was appropriate.

(v) Appropriateness of Follow-up Processes

A follow-up activity plan for this project was formulated by the Embassy of Japan in Cambodia around one year after the handover of the equipment and materials, which took place on June 25, 2025.The follow-up involved inspections at NMCHC, the Khmer-Soviet Friendship Hospital, Mongkul Borei Hospital in Banteay Meanchey Province, Battambang Provincial Hospital, and Kampong Cham Provincial Hospital. The follow-up confirmed the usage status of the equipment and included interviews covering the hospitals' response to COVID-19. This process can be evaluated as appropriate, as the inquiry was conducted in multiple regions, including remote areas, one year and four months after the completion of the initial operational training.

(B) Facilitating Points to Ensure the Effectiveness of Results

(i) Procurement of High-Quality, User-Friendly Equipment

Most equipment delivered under this project was Japanese-made, and its high-quality was markedly praised during the Field Survey at each location. The high quality of the equipment enabled its medium- to long-term use, which contributed to the sustainability of the project effects. The equipment selected was also intuitive to use, requiring no complex and user-friendly operations. With regard to the ambulances, the supplier created and provided a comprehensive manual with layout and wiring diagrams for the apparatus equipped with vehicles. This procurement approach consciously focused on ease of use and enhanced the significance of the equipment provision achieved through this project.

(ii) Japanese Staff of the Procurement Agent Stationed On-Site

Organizing on-site business trips from outside a country was infeasible during the COVID-19 pandemic, making face-to-face meetings virtually impossible. Consequently, Japanese staff from JICS stationed in Cambodia maintained frequent contact via email, phone, and online meetings with the MOH and the Embassy of Japan in Cambodia to expedite procurement. Additionally, Cambodian national staff were temporarily hired to help conduct operations in Khmer, contributing to on-site information gathering. Under this structure, it was observed that communications with MOH were made smoother as a result of intervention by Japanese staff and that Cambodian staff who are well versed in local cultural and social characteristics built appropriate interpersonal

relationships. Thus, a setup that draws on the comparative advantages of both sides made the operation orderly despite the difficult conditions at the time.

(C) Improvements to Ensure Effectiveness of Results

(i) Delays in Distribution due to Lost Equipment Parts

Local agents found that parts were missing from the mobile X-ray units delivered to the MOH, during the verification procedures conducted before the equipment was delivered to the destination regions. As a consequence, additional orders were placed with the suppliers based on MOH requests. Compared to the timing when other equipment was distributed, this resulted in a deferral in the completion of the initial operational training to February 20, 2024. While it may have been difficult for the Procurement Agent or local agents to take part in equipment management at the MOH warehouse, it would have been preferable to collaborate with the implementing agencies, given that the initial operational training was included in the original contracts for this equipment. This would have allowed for proper management of the process until the completion of training, prevented the loss of parts, and ensured timely distribution.

(ii) Tracking Final Destinations of Delivery

The equipment procured under this project was delivered to various PHDs based on the MOH's distribution plan. It has been subsequently used in state hospitals, district hospitals, and health centers across the Provinces. Note that the plan formulated by the MOH was to be applied at the PHD level. Detailed information regarding the specific hospitals where the equipment is actually used has not been shared with the Government of Japan or the Procurement Agent.

This evaluation survey/research determined that there are PHDs which conscientiously manage the allocated locations and usage status of the equipment, quantities, etc., some do not seem to do so. Information on end-user locations is crucial for verifying the sustainability of the support's effectiveness. Considering the difficulties in organizing and sharing information during the COVID-19 pandemic, it will be helpful to verify the distribution status to the fullest extent possible by various means, such as by having the Embassy of Japan in Cambodia confirm it with the implementing agencies in due course. Doing so will enable more accurate verification of the usage status during third-party evaluations and follow-ups.

(iii) Strengthening Maintenance Capabilities

The Field Survey confirmed that the equipment maintenance is being performed at the responsibility of each hospital. Larger hospitals have established maintenance teams of 10 to 15 members who are together capable of handling basic maintenance operations. Some hospitals have also implemented appropriate maintenance practices that reflect the guidelines drawn up by the MOH and capacity-building initiatives by JICA.

The case may differ in provincial hospitals, where staff responsible for maintenance are often absent or insufficient, and where repairs have often been outsourced to nearby private contractors. The repair skills of local contractors, moreover, are often inadequate, which sometimes necessitates reliance on contractors in Phnom Penh at increased costs.

To enable the long-term use of the equipment procured using Grant for Economic and Social Development Programme funds, one approach is to secure maintenance personnel through effective coordination with other ODA projects, such as Technical Cooperation Projects.

Chapter 4 Recommendations and Lessons Learned

1. Recommendations

(1) Recommendations to Japan's Diplomatic Mission

A. Ensuring Visibility of Support to Beneficiaries

In the 2016 Project for Expansion of Water Supply System in Kampong Thom, ODA stickers were affixed to the water treatment plant signboard and major equipment, confirming that a certain level of visibility was ensured. Nonetheless, some of the local residents using the water supply at the time turned out to have little awareness of the support from Japan. In this context, it would be desirable to take appropriate measures to disseminate awareness to end-user beneficiaries through occasions such as at the time of a household water connection or in information sessions where local residents are attentively briefed on the current water service supported by Japan. Affixing ODA stickers to user-facing equipment such as water meters might be another beneficial measure to enhance awareness.

B. Post-Handover Follow-up

Spare parts and other items necessary for Operation & Maintenance (O&M) of the water treatment plant facilities provided under the "2016 Project for

Expansion of Water Supply System in Kampong Thom" have already been delivered and stored. These are thought to suffice for the initial five-year O&M period, and for the foreseeable future thereafter. However, some consumables, such as water quality testing reagents have to be imported. Follow-up may therefore be necessary to better ensure the sustainability of operations after the facilities are handed over to the implementing agencies. Consequently, it is recommended that the Embassy of Japan in Cambodia ascertain the status and confirm the availability of equipment and materials at the time of handover.

The "2020 Economic and Social Development Programme" adopted a process where much of the equipment was first delivered to the Ministry of Health (MOH), then distributed to Provincial Health Departments (PHDs) and hospitals nationwide. The distribution plan was formulated under MOH leadership following consultations with the Embassy of Japan in Cambodia. For some equipment, it will be necessary to ascertain what (type of equipment), how many (quantity), where (which hospitals, etc.), and when (timing). The evaluation team therefore recommends that Japan's diplomatic mission and the Procurement Agent coordinate with the MOH for further follow up on this information.

This evaluation survey also confirmed that some PHDs had a poor grasp of which equipment had been allocated, where it had been allocated, and in what quantities. Given that this project was implemented under the exceptional circumstances of the COVID-19 pandemic, it was difficult at the time to track usage down to the end-user level. Considering that the original plan called for follow-up by the Embassy of Japan in Cambodia one year after project completion, it would be desirable for the Embassy to collect necessary information to ascertain the usage status of procured equipment at an appropriate time, such as by inquiring with the MOH down to the end-user level during that follow-up.

(2) Recommendations to Japan’s Diplomatic Mission and MOFA

Notification to Implementing Agencies Regarding Equipment Disposal

Some of the equipment delivered under the "2020 Economic and Social Development Programme," such as portable ultrasound scanners and blood pressure meters, has been confirmed to have malfunctioned or been damaged as a result of highly frequent use during the pandemic. Given that the equipment was procured through ODA, and that all hospitals have faced space constraints, local end-users are currently storing these items in warehouses. Generally, the

useful life of medical equipment is considered to be around 5 to 7 years. When equipment shows signs of malfunction or damage, it might be appropriate to consider disposal.

The Exchange of Notes (E/N) for grant explicitly states that the partner country is responsible for properly using and maintaining the products and services provided for project implementation. Japan's diplomatic missions are to report to the MOFA headquarters if they receive any requests regarding the disposal of the procured equipment from the partner country. Based on the ministry's internal guidelines, the relevance of approval is reviewed. If deemed appropriate, Japan's diplomatic missions and the partner country's government will exchange a note verbale.

The implementing agency, the MOH, has not formally consulted on disposal under this project as of the present. Given that a certain amount of malfunctioning equipment has been identified on-site due to factors such as the aging of equipment beyond its service life, Japan's diplomatic mission can support proper management by disseminating information to the MOH on disposal procedures and providing related advice.

2. Lessons Learned

(1) Lessons Learned for Japan's Diplomatic Mission

Improving the Placement of ODA Stickers

It was confirmed, in the "2020 Economic and Social Development Programme," that ODA stickers were affixed to the medical equipment. For the intensive care unit (ICU) beds still in use, however, the stickers were placed in areas that made them difficult to see even by the medical personnel. Rather than merely affixing the stickers, improvement of visibility policies could be further enhanced by placing the stickers in areas where they are certain to be seen by checking the affixing status prior to handover as part of the inspection.

(2) Lessons Learned for MOFA

Creating a Synergy Effect with Other ODA Projects

Japan has implemented numerous support projects in the healthcare sector in Cambodia. Among the hospitals equipped with medical equipment under the "2020 Economic and Social Development Programme," many also received facility improvements and human resource development through other ODA projects, including several by the Japan International Cooperation Agency (JICA). Local medical professionals have voiced high praise in response, noting that

“support—combining facilities, equipment, and personnel—has significantly enhanced effectiveness.” Such commendations help to enhance the long-term reliability of Japan's overall assistance. While the rapid response characteristic of the Grant for Economic and Social Development Programme is particularly effective in emergencies, many also expect that future assistance will be implemented with greater awareness of complementarity with other ODA projects, keeping subsequent developments in mind.

End