

JICA Standard Indicator Reference in Grant Aid Projects

Evaluation Department

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Notes about Thematic Standard Indicator Reference for Grant Aid Projects (Guidelines)

I. What Is “**Standard Indicator Reference**”?

In order to clearly show the effects of grant aid projects that the Japan International Cooperation Agency (JICA) conducts in developing countries **objectively** and **quantitatively**, the **Standard Indicator Reference** was made as a reference for evaluating the operation and the effects of JICA’s grant aid projects, for each type of development issue or problem that needs to be solved. The **Standard Indicator Reference** was made for 4 typical development themes (basic education, disaster management, water supply and rural water supply/groundwater) in English.

II. Objectives of the **Standard Indicator Reference**

The **Standard Indicator Reference** was made for each development theme, by classifying indicators based on the development objectives chart, in which each development theme is broken down to “development strategic objectives,” “mid-term objectives” and “sub-targets of mid-term objectives” and the relationships between objectives and means are summarized into a tree chart, in order to be able to take a cross-sectional view of the components of the development theme in a developing country and to gain an overall picture of the development theme. This makes it clear at the project planning stage which development theme the project is being implemented for. The **Standard Indicator Reference** is designed to be used as a reference when setting indicators for quantitative effects, particularly at the project formulation stage and the ex-ante evaluation stage.

The **Standard Indicator Reference** should be used based on the understanding that it consists of only examples which help in the consideration of indicators for grant aid projects, and that it is not designed to provide analysis frameworks or methods for achieving expected effects. When considering a project, the indicators shown in the **Standard Indicator Reference** should not be automatically used. Rather, project objectives should be set based on an analysis of the current situation and the development themes in each recipient country, and appropriate indicators suitable for the objectives should then be set in accordance with the specific individual situation.

We plan to improve the **Standard Indicator Reference** by obtaining advice from its users and upgrading the content and expanding its scope.

III. How to Use the **Standard Indicator Reference**

Please see the sample on the next page, on how to use the **Standard Indicator Reference**.

Firstly, (1) identify the type of problem based on the development objectives chart. Then, (2) consider the types of infrastructure needed to solve the problem. Then, (3) set appropriate indicators by referring to the **Standard Indicator Reference** which enables the objective and quantitative measurement of effects. At this point, (4) also refer to indicators used in similar projects in order to get a clear image of the project.

“Operation indicators” are used to quantitatively measure the operation of the project. “Effect indicators” are used to quantitatively measure the effects of the project. In other words, when equipment, facilities, etc. (outputs) were installed or established by the project, (1) operation indicators are used to measure whether or not the outputs are appropriately run and used, and (2) effect indicators are used to measure the effects which the outputs had on the recipients and the project area.

The basic indicators shown in the **Standard Indicator Reference** are generally deemed necessary regardless of the characteristics of the project, for which data collection is deemed possible. The supplementary indicators shown in the **Standard Indicator Reference** are likely to be needed depending on the characteristics and components of the project, or they are indicators where data collection is difficult although they are deemed necessary indicators.

When setting indicators for each project, there is no need to use all the basic indicators shown in the relevant **Standard Indicator Reference**. Rather, it is desirable to adapt them to each project, for example selecting indicators in accordance with the characteristics of the project, utilizing supplementary indicators where necessary, and adding appropriate indicators which are not included in the **Standard Indicator Reference** where necessary.

Examples of Setting Indicators for Each Development Strategic Objective Grant Aid Projects/Standard Indicator Reference (Basic Education)

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator	Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation (Note)
<div> <div>(1) Identify the type of problem based on the development objectives chart.</div> <div>(2) Consider the types of infrastructure needed to solve the problem.</div> <div>(3) Refer to the Standard Indicator which enable objective and quantitative measurement of effects. (Basic indicators and supplementary indicators)</div> <div>(4) Refer to the indicators used in similar projects. (Getting a clear image of the project)</div> </div>									
(Note) "FY of evaluation" means the fiscal year in which the ex-ante or ex-post evaluation was conducted.									
1. The expansion of basic education	1-1. Promoting enrollment in basic education	1-1-1. Increasing the quantity of education services	Building new school extending school Constructing teacher accommodation facilities	Operation and effect indicators	Basic indicators (1) The additional number of students who were able to enter school as a result of the project implementation (2) The percentage of the teacher positions filled (if the construction of teacher accommodation facilities is included in the project)	Basic indicators (1) Check both the planned number (expected number) and the actual number at the time of the ex-post evaluation. (2) Compare the percentages of teacher positions filled (or the percentage of required teaching positions filled) before and after the project implementation.	Mozambique	The Project for Construction of Secondary School	2009
					Supplementary indicators (*2) (1) The ratio of classroom shortage (The number and the percentage resolved) (2) The enrollment ratio (in the area) (3) Commuting distance (time) shortened (4) The ratio of applicants to places, or the percentage of capacity filled (5) The ratio of teacher accommodation facilities used	Supplementary indicators (1) The indicator shows to what extent the shortage of classrooms (that is calculated from the number of school-age children and the number of existing classrooms in the area) has been resolved through construction of new classrooms or extension of classrooms. (Note: The relevant data in the area needs to be available in order to adopt this indicator.) (2) The indicator enables an enrollment ratio comparison between the project area and an area which had a different enrollment ratio, or between the project area and the national average. This shows the reduction in disparities between areas. This indicator is difficult to adopt in a country where an EMIS (Education Management Information System) has not been established. In addition to EMIS data, it is necessary to obtain population statistics data in order to calculate the enrollment ratio. (3) The commuting distance can be verified by converting it to a commuting time. Check the commuting time through interviews or questionnaires if it is difficult to obtain numerical data. (4) The percentage of enrolled students compared to the capacity of the schools. This indicator is used to check whether the measures to increase the capacity have been fully utilized. (5) The percentage of teachers using accommodation facilities compared to the capacity of the facilities. This indicator is used to check whether the accommodation facilities are being used by teachers (i.e. check whether the accommodation facilities has been effectively utilized).	Swaziland	The Project for the Improvement of Secondary Education	2010
					Supplementary indicators (1) The ratio of applicants to places, or the percentage of capacity filled (2) Satisfaction levels for the learning environment (3) Ventilation, lighting/indoor illumination, etc.		Senegal	The Project of Construction of Lower Secondary Schools in Louga Region and Kaolack Region	2012
					Supplementary indicators The number of qualified teachers graduated from the teacher training schools				

(*1) Development Strategic objectives "3. Meeting the learning needs of the youth and adults," "4. Improving early child care and pre-primary education" and "5. Improving education management" were omitted because no grant aid project comes under these objectives. The mid-term objectives and the sub-targets of mid-term objectives, which do not apply to grant aid projects, were also omitted.

(*2) Supplementary indicators should only be set when certain conditions are met, for example specific data being available.

Grant Aid Projects/Standard Indicator Reference (Basic Education)

Development strategic objectives (*1)	Mid- term objectives	Sub- targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
1. The expansion of basic education	1-1. Promoting enrollment in basic education	1-1-1. Increasing the quantity of education services	Building new schools/ extending schools	Operation and effect indicators	Basic indicators (1) The number of classrooms that can be used continuously in the project area or in the specified area (2) The number of students enrolled at the project's target schools	Basic indicators (1) (2) Check both the planned number (the number of students who can be accommodated) and the actual number at the time of the ex-post evaluation. The following shows the points to note. <ul style="list-style-type: none"> Include a note which states the number of students who can be accommodated in each classroom which was used to calculate the planned number of students, on the ex-ante evaluation table. If a two- or three-shift system was planned when deciding on the number of students who can be accommodated, include a note which explains it on the ex-ante evaluation table. 	<ul style="list-style-type: none"> Construct four junior high schools (58 classrooms) and attached facilities in Maputo Province and Gaza Province in Mozambique, thereby contributing to improving local residents' access to secondary education. 	Mozambique	The Project for Construction of Secondary School	2009
					Supplementary indicators (*2) (1) Student satisfaction levels regarding the learning environment (2) Evaluation of the educational environment, the school management environment and the class management environment by the school principals and teachers (3) The ratio of applicants to places, or the percentage of capacity filled (4) The degree to which the commuting distance (time) has been shortened (5) The percentage of student dormitory facilities used (for projects which build student dormitories) (6) The percentage of teacher accommodation facilities used (for projects which build teacher accommodation facilities)	<ul style="list-style-type: none"> If the project is to build new schools, find out the number of classrooms that can be used continuously in the project area, and use that number as the baseline. Supplementary indicators (1) (2) Check these indicators by interviewing students, the school principals and teachers. (3) The percentage of enrolled students compared to the capacity of the schools. (4) Check the project's effects on the commuting distances or times by interviewing students, etc. or by giving them questionnaires, based on the information obtained during the study stage including school availability in the project area. (5) The percentage of dormitory facilities used by students out of the total capacity of the facilities (6) The percentage of accommodation facilities used by teachers out of the total capacity of the facilities Note: Count the number of male students and female students separately.	<ul style="list-style-type: none"> Improve junior high school facilities, classroom furniture, etc. in three regions (the Centre-Nord Region, the Centre Region and the Plateau-Central Region) in order to improve the learning environment for higher primary education, thereby contributing to improving access to higher primary education and to improving the quality of education. Note: Many projects cover the two sub-targets of mid-term objectives "1-1-1. Increasing the quantity of education services" and "1-2-5. Improving education facilities" (such as the project shown below). In such cases, it is necessary to set indicators for both 1-1-1 and 1-2-5.	Burkina Faso	The Project for the Construction of Junior High School Buildings	2015
							<ul style="list-style-type: none"> Build new or extend lower secondary schools in the Louga Region and the Kaolack Region, thereby contributing to improving access to basic education and improving the learning environment. 	Senegal	The Project of Construction of Lower Secondary Schools in Louga Region and Kaolack Region	2012
	1-2. Improving the quality of basic education	1-2-5. Improving education facilities	Extending and renovating/ rebuilding school facilities	Operation and effect indicators	Basic indicators (1) The number of classrooms that can be used continuously at the project's target schools (2) The number of students who learn at classrooms that can be used continuously (3) The number of students per classroom	Basic indicators (1) (2) Check both the planned number (the number of students who can be accommodated) and the actual number at the time of the ex-post evaluation. The following shows points to note. <ul style="list-style-type: none"> Include a note which states the number of students who can be accommodated in each classroom which was used to calculate the planned number of students, on the ex-ante evaluation table. If the improvement of facilities used for a two- or three-shift system was planned when deciding on the number of students who can be enrolled, include a note which explains it on the ex-ante evaluation table. 	<ul style="list-style-type: none"> Extend or rebuild the buildings for seven primary schools in Phnom Penh and install the furniture needed for education, thereby contributing to improving the students' learning environment. 	Cambodia	The Project for Construction of Primary Schools in Phnom Penh, Phase III	2009
					Supplementary indicators (1) Student satisfaction levels regarding the learning environment (2) Evaluation of the educational environment, the school management environment and the class management environment by the school principals and teachers (3) The classroom area per student (4) The ratio of applicants to places, or the percentage of capacity filled (5) The number of students per class (6) The number of students per teacher	<ul style="list-style-type: none"> If the project is to build new schools, find out the number of classrooms that can be used continuously in the project area, and use that number as the baseline. (3) The number of enrolled students divided by the number of classrooms. Compare the number before the project (the status quo), the planned number (the target number) and the number after the project (the actual number). Also compare these numbers with the government standard (the same applies to the indicators shown below). Supplementary indicators (1) (2) Check these indicators by interviewing students, the school principals and teachers. (3) The standard classroom area multiplied by the number of classrooms divided by the number of enrolled students. (4) The percentage of enrolled students compared to the capacity of the schools. (5) The number of students divided by the number of classes. (6) The number of students divided by the number of teachers.	<ul style="list-style-type: none"> Rebuild temporary and decrepit classrooms and install classroom furniture in the North-West Region, thereby contributing to improving the students' learning environment in the region. 	Cameroon	The 5th Project for Construction of Primary Schools	2010
							<ul style="list-style-type: none"> Extend primary school classroom buildings, etc. and install classroom furniture in four school districts in the Atsinanana Region in order to resolve the shortage of classrooms and improve the learning environment at the schools, thereby contributing to improving the quality of primary education in the school districts. 	Madagascar	The Project for Construction of Primary School (Phase 4)	2014
							<ul style="list-style-type: none"> Build new or extend lower secondary schools in the Louga Region and the Kaolack Region, thereby contributing to improving access to basic education and 	Senegal	The Project of Construction of Lower Secondary Schools in Louga Region and Kaolack Region	2012

[illegible]

(*1) Development strategic objectives “3. Meeting the learning needs of the youth and adults,” “4. Improving early child care and pre-primary education” and “5. Improving education management” were omitted because no grant aid project comes under these objectives. The mid-term objectives and the sub-targets of mid-term objectives, which do not apply to grant aid projects, were also omitted.

(*2) Supplementary indicators should only be set when certain conditions are met, for example specific data being available.

(*3) These indicators will be updated based on the results of future value-added school construction projects.

Reference: Issue analysis and improvement measures for projects which deal with disaster risk reduction, inclusiveness (regarding gender, disabilities and ethnic minorities), etc. are summarized in the documents for operation, the Final Report on the Basic Study "COMPARATIVE ANALYSIS ON PRIMARY / SECONDARY SCHOOL CONSTRUCTION PROJECTS."

Grant Aid Projects/Standard Indicator Reference (Disaster Management)

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
Prevention (prevention/mitigation) and Preparedness	1. Development of disaster-resistant communities and societies	1-2. Improvement on response to disasters by communities and societies	1-2-3. Improving disaster prevention capabilities by structural measures	[Earthquake disaster control measures] [Volcanic disaster control measures] Equipment for seismic observation at seismographic stations and for data transmission from the stations; equipment for the observation at intensive volcano observatories and equipment for data transmission from the stations and from the relay points for transmitting intensive observation data; etc.	Operation indicators	Basic indicators An increased number of seismic observation stations An increased number of seismic volcanic observatories An increased number of data transmission stations		• The project was conducted with the following objectives: detecting all earthquakes that are around 4.0 or more on magnitude which occur in the Philippines; reducing necessary time from the occurrence of an earthquake to the announcement of earthquake parameter to around 10-15 minutes; improving abilities to monitor the activities of the six main volcanoes; etc.	The Philippines	The Project for Improvement of Earthquake and Volcano Monitoring System (Phase 2)	2007
					Effect indicators	Basic indicators An increased capacity in earthquake detection and accuracy (becoming able to detect all earthquakes which are around 4.0 or more on magnitude) An increased capacity in volcano monitoring and accuracy (becoming able to issue detail warning) A reduction of necessary time to transmit information on earthquake parameter					
				[Earthquake disaster control measures] Improving the earthquake resistance of schools	Operation indicators	Basic indicators The number of enrolled students in target schools The maximum number of people who can evacuate in disaster time	From the view point of the effectiveness and sustainability of the project, it is needed to be confirmed that: the school facilities are being appropriately maintained after the project; all residents have been informed that the school facilities are evacuation facilities too; and evacuation drills are being conducted in that area.	The objectives of the project are to develop schools which can make safe for students to learn and to provide evacuation facilities for local residents in disaster time. Through the project, schools facilities which were devastated by the earthquake which occurred offshore of Padang in the West Sumatra Region, were reconstructed as well as improved the earthquake resistance. And the project contributed to reducing disaster risk in those areas. (Note: In Indonesia, there were the criticisms that the maintenance of tsunami evacuation buildings in Aceh was insufficient and that people are not fully informed about the buildings being evacuation facilities.)	Indonesia	The Project for Safe School Reconstruction in Devastated Area as of Earthquake in Offshore of Padang in West Sumatra Region	2010
					Effect indicators	Basic indicators The utilization of the school facilities as evacuation places by local residents					
				[Flood control measures] The provision of trucks loaded with portable drainage pumps and trucks loaded with stationary drainage pumps	Operation indicators	Basic indicators The operation rate and the operating time during flooding	Consider the most effective places for installing or deploying pumps during the project formulation study.	• In response to the large-scale inundation damage which occurred in Jakarta and surrounding areas in 2002, the project aims to reduce inundation damage in nine areas out of 78 areas susceptible to inundation in Jakarta.	Indonesia	The Project for Improvement of Pump Drainage in Poverty District in Jakarta	2008
					Effect indicators	A reduction in the hours of inundation of buildings through drainage operations Supplementary indicators	In particular, it is necessary to have a plan for the effective operation of portable pumps.				
				[Flood control measures] Reinforcing external ring levees (by	Operation indicators	Basic indicators Drainage capacity (m ³ /second) The capacity of drainage pump stations (m ³ /second)	In order to keep track of the operation, it is desirable to check whether the actual values meet or exceed the	• Minimize flood damage by increasing safety levels against the same scale as largest flood in the past (with a return period of	Cambodia	The Project for Flood Protection and	2008

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
Prevention (prevention/mitigation) and Preparedness	1. Development of disaster-resistant communities and societies	1-2. Improvement on response to disasters by communities and societies	1-2-3. Improving disaster prevention capabilities by structural measures	asphalting the levee crown roads), developing/improving drainage, constructing drainage pump stations	Effect indicators	Basic indicators A reduction in the number of inundation in the project area; a reduction in the area of inundation Supplementary indicators	design values after the construction work has been completed. The drainage capacity depends on the cross section and the inclination of the drainage. Therefore, it is important to make sure that garbage, etc. does not block the drainage. During the preparatory survey, find out the size of the area that could be inundated by rain with different return periods, so that the project effects can be presented quantitatively, for example the expected reduction in the inundated area. Peak flood discharge could increase due to development particularly in upstream areas. Therefore, it is necessary to clarify the preconditions of the plan.	approximately 30 years) of the Mekong River and the Sap River, as well as minimizing inundation in Phnom Penh.		Drainage Improvement in the Municipality of Phnom Penh	
				[Flood control measures] Installation of steel sheet piles for levee reinforcement	Operation indicators	Basic indicators Water stoppage effectiveness (reductions in amount of water leakages and areas of scouring)	In case of continuous levees consisting of reinforced sections and existing sections, a levee rehabilitation plan, a land use plan (for example allowing flood water to flow into retarding basins and farmland) and an evacuation plan are recommended to be proposed for the case of the levees breaches.	• The Yangtze River is the largest river in China and the middle and lower reaches of the river are important industrial and agricultural areas. Deforestation in the upper reaches reduced the water retention capacity of the soil, and this caused the inflow and accumulation of large quantities of rainwater and soil in the middle and lower reaches of the river, which caused floods in the middle and lower reaches of the river prone areas. Therefore, afforestation has been conducted in the upper reach and levees have been constructed in the middle and lower reaches. However, these measures are insufficient with unstable levees and water leakages. Therefore, the objectives of the project are to reinforce the levees with steel sheet piles at important sections of the middle and lower reaches of the Yangtze River, thereby reducing social losses caused by floods.	The People's Republic of China	The Project for Improvement of Dikes in Yangtze River	2006
					Effect indicators	Basic indicators A reduction in the flood damage caused by the design rainfall (a reduction in the number of floods, a reduction in casualties and economic damage caused by floods) Supplementary indicators	Floods occur only when the amount of rainfall exceeds a certain level, and therefore the design rainfall should be prepared.				
				[Landslide measures] The construction of sabo dams and roads for maintaining the dams	Operation indicators	Basic indicators Sediment trapping capacity A reduction in sediment discharge	For these indicators, a debris flow disaster is defined as a disaster which is associated with casualties, damage to infrastructure, buildings,	• Construct sabo dams and repair a bridge on Camiguin Island, thereby contributing to the prevention of debris flow disasters in the river basins and the improvement of	The Philippines	The Project for Flood Disaster Mitigation in	2009

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
Prevention (prevention/mitigation) and Preparedness	1. Development of disaster-resistant communities and societies	1-2. Improvement on response to disasters by communities and societies	1-2-3. Improving disaster prevention capabilities by structural measures				agricultural facilities, etc.	river-crossing transportation.	Honduras	Camiguin Island	2005
					Effect indicators	<p>Basic indicators</p> <p>Number of debris flows occurred by the design rainfall</p> <p>Supplementary indicators</p> <p>A reduction in the number of affected households</p> <p>A reduction in the amount of damages</p>	<p>In the preparatory survey, past disaster records should be studied and the project effects should be calculated based on the expected damage.</p> <p>Determine the effectiveness of sabo dams by comparing the number of incidents occurred within the range of design rainfall.</p>	<p>• “The Project for Flood and Erosion Control in the Chamelecón River Tributary Areas” was conducted in 1992. Based on the results of the study, the project aims to take flood and erosion control measures for the Choloma River area (a tributary of the Chamelecón River, which is considered to be a priority area and have the highest economic effect), thereby contributing to increase the safety of the area against natural disasters.</p>		The Project for Flood and Erosion Control Measures for the Choloma River	
				[Tsunami and storm surge control measures] The development of seawalls, dredging water areas in front of seawalls	Operation indicators	Basic indicators	<p>There were no deaths in Malé Island by Indian Ocean tsunami in 2004. The economic value of Malé Island having been protected is not clear because the asset values of the various types of infrastructure on Malé Island are unknown. In the project formulation study, etc., it is important to examine casualties and economic damage so that disaster prevention effects can be presented quantitatively.</p> <p>*1 Identify the sentiments of the islanders and residents through interviews, etc.</p>	<p>• (a) Construct strong shore protection structures on the southern shores of Malé Island, thereby contributing to strengthening the disaster management functions on the island, in combination with other grant aid projects (the construction of western seawalls, eastern seawalls, northern offshore breakwaters and southern offshore breakwaters).</p> <p>(b) Adopt durable shore protection structures, thereby contributing to the reduction maintenance cost for shore protection in Malé Island.</p>	Maldives	The Project for the Seawall Construction in Malé Island (Phase 3)	2006
					Effect indicators	<p>Basic indicators</p> <p>Disaster risk reduction effects in tsunami (a reduction in the number of deaths and the missing; a reduction in the number of fishing vessels affected; economic effects)</p> <p>Securing safe moorings for small vessels</p> <p>A reduction necessary cost for shore protection maintenance as a result of developing strong shore protection structures</p> <p>Supplementary indicators</p> <p>Sentiments of the islanders and residents regarding the disaster prevention effects that seawalls have (a safe and providing secure living environment)*1</p>					
				[Landslide measures] Structures for preventing landslides (drainage well, water collecting works and drains, horizontal drainage, channel works, the soil removal, counterweight)	Operation indicators	Basic indicators	<p>*2 The death toll will be reduced by issuance of evacuation advisories through monitoring of landslides. Properties such as buildings are generally difficult to protect, although it depends on the size of the landslide.</p> <p>*3 The safety factor is a ratio between the sliding force and the resistance. The current safety factor is assumed to be in a range between 0.95 and 1.00 depending on the current landslide conditions. Thus, the design safety factor is generally set to be between 1.10 and 1.20 considering the</p>	<p>• Construct structures for preventing landslides, conduct landslide monitoring activities and develop warning and evacuation systems in El Berrinche and El Reparto in Tegucigalpa City in order to reduce the landslide disaster risk.</p>	Honduras	The Project for Landslide Prevention in Tegucigalpa Metropolitan Area	2011
					Effect indicators	<p>Basic indicators</p> <p>A reduction in the death toll caused by landslides *2</p> <p>The safety factor *3</p> <p>Supplementary indicators</p>					

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
Prevention (prevention/mitigation) and Preparedness	1. Development of disaster-resistant communities and societies	1-2. Improvement on response to disasters by communities and societies	1-2-4. Establishment of forecasting, warning and evacuation systems			weather radar observation data (images)		systems, weather data display systems and weather data communication systems. Thereby, the project aims to contribute to reducing the damage caused by natural disasters.			
					Effect indicators	Basic indicators A reduction in the number of victims in disasters which are the same size as that used in the scenario in the disaster prevention plan					
				Weather information networking equipment including automatic surface observation systems, aerological observation systems, satellite communication systems (VSAT), GTS message switching systems, data analysis and processing systems, etc.	Operation indicators	Basic indicators The observation times at the meteorological observatories The time required to report to head office from the meteorological observatories Supplementary indicators		• In order to improve the promptness and appropriateness of weather information, the project aims to improve weather observation systems, information transmission systems and their analysis and processing systems, thereby meeting the needs of meteorological agencies inside and outside the country, mitigating weather disasters and supporting stable national development.	Mongolia	The Project for Improvement of Meteorological Information Network	2008
					Effect indicators	Basic indicators The types of advisories and warnings that can be issued Supplementary indicators A reduction in weather disaster-derived casualties which was achieved through improved weather observation and forecasting accuracy		• The objectives of the project are to reduce the time required to collect, process and transmit information by five hours or more, through installation of automatic telemeter systems at rainfall observation stations and water level observation stations in the basin of the Hanjiang River (a Yangtze River tributary), as well as providing information gathering and processing equipment for the system central bureau of the Yangtze River Water Resources Committee and for relevant facilities. Thereby, the project aims to reduce flood damage.	The People's Republic of China	The Project for Improvement of Equipment for the Flood Control System of the Hanjiang River	2006
				Hydrologic observation and data collection subsystems, data analysis and flood information transmission subsystems, warning issuance and transmission systems, etc.	Operation indicators	Basic indicators A reduction in missing hydrological observation data		• Reduce flood risk by establishing flood forecasting and warning systems in the High Atlas area.	Morocco	The Project for Flood Forecasting and Warning System in High Atlas Area	2010
					Effect indicators	Basic indicators Percentage of warnings issued at the time of rainfall events that had rainfall of the standard value or more					
				Construction of schools-cum-evacuation facilities (such as cyclone shelters) and the procurement and installation of the necessary equipment (water supply systems, toilets and school facilities)	Operation indicators	Basic indicators The number of times the schools are used in evacuations/emergency (times/year) The percentage of the local resident population that can be evacuated in the evacuation facilities Supplementary indicators		• Secure facilities where residents can evacuate safely during the eruption of the Mayon Volcano and during mudslides, debris flows and floods caused by typhoons, torrential rain, etc. as well as securing a learning environment in ordinary times, by developing school -cum-evacuation facilities in the existing schools designated as	The Philippines	The Project for Evacuation Shelter Construction in Disaster Vulnerable Areas in Province of	2011

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
					Effect indicators	Basic indicators The number of evacuees (i.e. the number of people saved) during severe cyclones		evacuation sites in the Province of Albay. Thereby, the project aims to contribute to reducing disaster risks in the area. • Construct 20 primary school buildings that function as evacuation facilities during cyclones in the Labutta and Bogale township in the Ayeyarwady Division which were cyclone Nargis affected areas, thereby improving the educational environment in schools and reducing the cyclone risk existing target area. • Enable an increased number of people to evacuate and also improve the educational environment in primary schools by constructing 20 school-cum- cyclone shelters in the districts of Chittagong, Cox's Bazar and Noakhali which have cyclone risk.	Myanmar	Albay The Project for Construction of Primary School -cum- Cyclone Shelter in the Area Affected by Cyclone "Nargis"	2009
									Bangladesh	The Project for Construction of Multi-purpose Cyclone Shelters (Phase 5)	2009
Recovery and reconstruction	3. Smooth transition to and implementation of recovery and reconstruction	3-2. Supporting victims affected by disasters to recover and regain their ordinary life	3-2-1. Recovery and reconstruction of social infrastructure	Preparation of construction machinery, work vehicles, etc. (such as bulldozers and dump trucks) needed for repair and restoration of public facilities such as roads and bridges affected by heavy flooding	Operation indicators	Basic indicators Construction machinery operating rates (%) Length of restored roads after being affected by floods Number of bridges restored after being affected by floods Annual average daily traffic (vehicles/day, vehicles/24 hours) Supplementary indicators An increase in the load capacity (axle load) of the pavement (tons)	It is acceptable if pre-disaster conditions are restored. It may be difficult to identify the pre-disaster conditions in the preparatory survey for this type of project, because the pre-disaster traffic and other data may be difficult to obtain.	• The Government of Bangladesh formulated the project in order to restore or repair public facilities including roads, levees and bridges which were affected by flood from July to September 1998.	Bangladesh	The Project for Supply of Equipment and Materials for Flood Disaster Relief	2006
					Effect indicators	Basic indicators A reduction in the time required to get to the destination (hours) Supplementary indicators Passenger transport volume (passenger-km), Volume of freight (tons/year) Driving costs saved (yen and the amount in local currency per year) An increase in the average driving speed (km/hour) A reduction in the number of road shut-down days per year due to natural disasters (days/year) An improvement in access to infrastructure (schools, health centers, etc.) (people/day)					

Disaster cycle (*1)	Development strategic objectives (*2)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator	Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
				The restoration of affected bridge facilities	Operation indicators Basic indicators The annual average daily traffic (vehicles/day, vehicles/12 hours) Supplementary indicators An increase in the load capacity (axle load) of the pavement (tons)	It is acceptable if pre-disaster conditions are restored. It may be difficult to identify the pre-disaster conditions in the preparatory survey for this type of project, because the pre-disaster traffic and other data may be difficult to obtain.	• Construct sabo dams and repair a bridge on Camiguin Island, thereby contributing to the prevention of debris flow disasters in the river basins and the improvement of river-crossing transportation.	The Philippines	The Project for Flood Disaster Mitigation in Camiguin Island	2009
					Effect indicators Basic indicators A reduction in the time required to get to the destination (unit: hours) Supplementary indicators The passenger transport volume (passenger-km), the volume of freight (tons/year) Driving costs saved (yen and the amount in local currency per year) An increase in the average driving speed (km/hour) A reduction in the number of road shut-down days per year due to natural disasters (days/year) An improvement in access to infrastructure (schools, health centers, etc.) (people/day)					

(*1) The disaster cycle has “prevention (prevention/ mitigation) and preparedness,” “emergency response” and “restoration and reconstruction” stages, but “emergency response” was omitted from the Standard Indicator Reference because no grant aid project comes under this disaster cycle stage.

(*2) Development Strategic objectives which do not apply to any grant aid projects were omitted. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

Grant Aid Projects/Standard Indicator Reference (Water Supply)

Examples of Setting Indicators for Each Development Strategic Objective

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
2. Water supply which takes efficiency, safety and stability into account	2-3. Improving water use efficiency	Improving water use efficiency in water supply (reducing non-revenue water)	Rehabilitation of water supply facilities (Measures to control an increase in water leakage due to deterioration, etc.)	Operation indicators	Basic indicators The water supply amount (m ³ /day) Service population (number of people) The non-revenue water rate (%) Supplementary indicators The leakage ratio (%) The water supply hours (hours/day)	<ul style="list-style-type: none"> The water supply amount (m³/day): The maximum daily water supply amount = the largest amount of water supply in a day during one year The average daily water supply amount = (the total annual water supply) ÷ (the number of days in the year) (recorded on a yearly basis) Service population (number of people): The population provided with water supply services (recorded on a yearly basis) The non-revenue water rate (%) = (the amount of non-revenue water, i.e. the amount of water which is not billed) ÷ (system input volume) × 100 	The objective of the project was to reduce the amount of non-revenue water and equally distribute the increased amount of water available, thereby improving water supply condition in the Tafieleh Governorate in the southern part of Jordan, by restructuring the water supply systems (including the construction of distribution reservoirs, the replacement of distribution networks, zoning distribution areas, the installation of pressure breaking facilities, the installation of distribution monitoring systems, and optimization of water transmission pumps).	Jordan	The Project for Rehabilitation and Improvement of Water Facilities in Tafieleh Governorate	2011
				Effect indicators	Supplementary indicators The daily water supply amount per capita (L/person/day)	<ul style="list-style-type: none"> The leakage ratio (%) = (the amount of leakage) ÷ (system input volume) × 100 (recorded on a yearly basis) The water supply hours (hours/day): The number of hours water was supplied per day (hours/day) is often used, but the number of hours water was supplied per week is sometimes used depending on the water supply situation. The daily water supply amount per capita (L/person/day): The maximum daily water supply amount per capita = (the maximum daily water supply amount) ÷ (service population) The average daily water supply amount per capita = (the average daily water supply amount) ÷ (service population) (recorded on a yearly basis) 				
3. Sustainable supply of safe water	3-1. Securing water resources		The development of water storage and intake facilities	Operation indicators	Basic indicators The amount of water made available through development (m ³ /second) The amount of water intake (m ³ /second or m ³ /day) Supplementary	<ul style="list-style-type: none"> The amount of water made available through development (m³/second): The additional amount of water intake that can be taken in from a water source without affecting the normal flow of water in a reservoir development plan The amount of water intake (m³/second or m³/day) = (the annual amount of water intake) ÷ (the number of seconds in a year or 	Water resources development lagged behind the need in the eastern part of Indonesia which had low levels of precipitation. The objective of the project was to supply domestic water to rural villages as well as to supply water for animal	Indonesia	The Reservoir (Embung) Development Project in East Nusa Tenggara	1999

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable supply of safe water					indicators Service population (number of people)	the number of days in a year) ● Service population (number of people): The population provided with water supply services (recorded on a yearly basis)	husbandry and irrigation where possible in East Nusa Tenggara through storing the scarce water effectively , by constructing five dam reservoirs and related facilities (pipelines, irrigation channels, etc.).			
				Effect indicators	Supplementary indicators The daily water supply amount per capita (L/person/day)	● The daily water supply amount per capita (L/person/day): The maximum daily water supply amount per capita = (the maximum daily water supply amount) ÷ (service population) The average daily water supply amount per capita = (the average daily water supply amount) ÷ (service population) (recorded on a yearly basis)				
	3-2. Improving access to water supply services in urban areas		The construction or expansion of water supply facilities (Facilities for storage (reservoir), intake, conveyance to water treatment plants, water treatment, transmission , and distribution)	Operation indicators	Basic indicators The water supply amount (m ³ /day) Service population (number of people) The number of connection (number of connection) Supplementary indicators The amount of water intake (m ³ /day) The water supply hours (hours/day) The capacity of the facilities (m ³ /day, L/second, etc.) (the capacity of a water treatment plant, etc.)	● The water supply amount (m ³ /day): The maximum daily water supply amount = the largest amount of water supplied in a day during one year The average daily water supply amount = (the total annual water supply) ÷ (the number of days in a year) (recorded on a yearly basis) ●Service population (number of people): The population provided with water supply services (recorded on a yearly basis) ● The number of connection (number of connection): The number of connection to water supply services (recorded on a yearly basis) ● The amount of water intake (m ³ /day): The maximum amount of water intake = the largest amount of water intake in a day during one year The average amount of water intake = (the total annual amount of water intake) ÷ (the number of days in the year) (recorded on a yearly basis)	‘The objective of the project was to provide safe and stable water supply services in Abbottabad City (including Nawanshehr) in the Abbottabad District in Khyber Pakhtunkhwa and four areas around the city, by constructing gravity-fed water supply systems of surface water, and groundwater supply systems, and providing technical guidance on operation and maintenance for engineers from the implementing agency, etc.	Pakistan	The Project for the Improvement of Water Supply System in Abbottabad	2010
				Effect indicators	Basic indicators Water supply coverage (%) Supplementary indicators The daily water supply amount per capita (L/person/day) Population affected by the suspension of the	● The water supply hours (hours/day): The number of hours water was supplied per day (hours/day) is often used, but the number of hours water was supplied per week is sometimes used depending on the water supply situation. ● The capacity of the facilities (m ³ /day, L/second, etc.): The capacity of a water treatment plant, etc.	‘The objective of the project was to increase the service population in Embu and the surrounding areas by rehabilitating and constructing water supply facilities in the areas. The project aimed to improve access to safe water, by developing available water resources in Kenya, which has limited water resources.	Kenya	The Project for Improvement of the Water Supply System in Embu and the Surrounding Area	2010

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable supply of safe water	3-2. Improving access to water supply services in urban areas				water supply (number of people) The improvement in water rationing (days/year)	<ul style="list-style-type: none">Water supply coverage (%) = (service population) ÷ (population in the area) × 100 (recorded on a yearly basis)The daily water supply amount per capita (L/person/day): The maximum daily water supply amount per capita = (the maximum daily water supply amount) ÷ (service population) The average daily water supply amount per capita = (the average daily water supply amount) ÷ (service population) (recorded on a yearly basis)Population affected by the suspension of the water supply (number of people): The population supplied with water in an area where the water supply was suspendedThe improvement in water rationing (days/year): Year-to-year comparison of the number of days subject to water rationing in a year				
			Rehabilitation of water supply facilities ((1) Measures to control a decline in the facility operating rate due to deterioration, etc.)	Operation indicators	Basic indicators The water supply amount (m³/day) Service population (number of people) The facility utilization rate (%) Supplementary indicators The leakage ratio (%) The amount of water intake (m³/day) The water supply hours (hours/day) The capacity of the facilities (m³/day, L/second, etc.) (the capacity of a water treatment plant, etc.)	<ul style="list-style-type: none">The water supply amount (m³/day): The maximum daily water supply amount = the largest amount of water supplied in a day during one year The average daily water supply amount= (the total annual water supply amount) ÷ (the number of days in the year) (recorded on a yearly basis)Service population (number of people): The population provided with water supply services (recorded on a yearly basis)The facility utilization rate (%): The facility utilization rate (maximum) = (the maximum daily water supply amount) ÷ (the capacity of the facility) × 100 The facility utilization rate (average) = (the average daily water supply amount) ÷ (the capacity of the facility) × 100	<ul style="list-style-type: none">The objective of the project was to achieve the stable water supply services to the citizens of Podgorica, by renewing the facilities for water, transmission and distribution as well as introducing systems for monitoring the operation of the facilities and the water transmission & distributionThe objective of the project was to improve the water supply situation in Ndola City, by rehabilitating and expanding the existing water supply facilities in the city.	Montenegro	The Project for Urgent Rehabilitation of Water Supply System in the Capital City Podgorica	2010
				Effect indicators	Supplementary indicators Water supply coverage (%) The daily water supply	<ul style="list-style-type: none">The leakage ratio (%) = (the amount of leakage) ÷ (system input volume) × 100 (recorded on a yearly basis)The amount of water intake (m³/day): The maximum amount of water intake = the largest amount of water intake in a day during one year The average amount of water intake = (the				

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable supply of safe water	3-2. Improving access to water supply services in urban areas				<p>amount per capita (L/person/day)</p> <p>Population affected by the suspension of the water supply (number of people)</p> <p>The improvement in water rationing (days/week, days/year, etc.)</p>	<p>total annual amount of water intake) ÷ (the number of days in the year) (recorded on a yearly basis)</p> <ul style="list-style-type: none"> • The water supply hours (hours): The number of hours water was supplied per day (hours/day) is often used, but the number of hours water was supplied per week is sometimes used depending on the water supply situation. • The capacity of the facilities (m³/day, L/second, etc.): The capacity of a water treatment plant, etc. • Water supply coverage (%) = (population supplied) ÷ (population in the area) × 100 (recorded on a yearly basis) • The daily water supply amount per capita (L/person/day): The maximum daily water supply amount per capita = (the maximum daily water supply amount) ÷ (population supplied with water) <p>The average daily water supply amount per capita = (the average daily water supply amount) ÷ (population supplied with water) (recorded on a yearly basis)</p> <ul style="list-style-type: none"> • Population affected by the suspension of the water supply (number of people): The population supplied with water in an area where the water supply was suspended • The improvement in water rationing (days/year): Year-to-year comparison of the number of days subject to water rationing in a year 			Water Supply Condition in Ndola City	
			Rehabilitation of water supply facilities ((2) Measures to control an increase in water leakage due to deterioration, etc.)	Operation indicators	<p>Basic indicators</p> <p>The water supply amount (m³/day)</p> <p>Service population (number of people)</p> <p>The non-revenue water rate (%)</p> <p>Supplementary indicators</p> <p>The leakage ratio (%)</p> <p>The water supply hours (hours/day)</p>	<ul style="list-style-type: none"> • The water supply amount (m³/day): The maximum daily water supply amount = the largest amount of water supplied in a day during one year The average daily water supply amount = (the total annual water supply) ÷ (the number of days in a year) (recorded on a yearly basis) • Service population (number of people): The population provided with water supply services (recorded on a yearly basis) • The non-revenue water rate (%) = (the amount of non-revenue water, i.e. the amount of water which is not billed) ÷ (system input 	• The objective of the project was to reduce the amount of non-revenue water and equally distribute the increased amount of water available, thereby improving water supply condition in the Tafieleh Governorate in the southern part of Jordan, by restructuring the water supply systems(including the construction of distribution reservoirs, the replacement of distribution	Jordan	The Project for Rehabilitation and Improvement of Water Facilities in Tafieleh Governorate	2011
			Same as 2-3 above.	Effect	Supplementary					

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
				indicators	indicators The daily water supply amount per capita (L/person/day)	volume) × 100 ● The leakage ratio (%) = (the amount of leakage) ÷ (system input volume) × 100 (recorded on a yearly basis) ● The water supply hours (hours/day): The number of hours water was supplied per day (hours/day) is often used, but the number of hours water was supplied per week is sometimes used depending on the water supply situation. ● The daily water supply amount per capita (L/person/day): The maximum daily water supply per capita = (the maximum daily water supply) ÷ (population supplied with water) The average daily water supply amount per capita = (the average daily water supply amount) ÷ (population supplied with water) (recorded on a yearly basis)	networks, zoning distribution areas, the installation of pressure breaking facilities, the installation of distribution monitoring systems, and optimization of transmission pumps).			
			Rehabilitation of water supply facilities ((3) Improving the water pressure and the flow rate through the improvement of water distribution systems (the improvement of distribution efficiency))	Operation indicators	Basic indicators The inappropriate water supply pressure rate (%) The water supply amount (m³/day) Supplementary indicators The non-revenue water rate (%) The leakage ratio (%) The water supply hours (hours/day)	● The inappropriate water supply pressure rate (%) = {(the number of sites where the pressure was outside the appropriate range × the number of days) ÷ (the total number of sites where the pressure was measured × the number of days in the year)} × 100 ● The water supply amount (m³/day): The maximum daily water supply amount = the largest amount of water supplied in a day during one year The average daily water supply amount = (the total annual water supply) ÷ (the number of days in the year) (recorded on a yearly basis)	The objective of the project was to reduce the amount of non-revenue water and equally distribute the increased amount of water available, thereby improving water supply condition in the Tafieleh Governorate in the southern part of Jordan, by restructuring the water supply systems (including the construction of distribution reservoirs, the replacement of distribution networks, zoning distribution areas, the installation of pressure breaking facilities, the installation of distribution monitoring systems, and optimization of transmission pumps).	Jordan	The Project for Rehabilitation and Improvement of Water Facilities in Tafieleh Governorate	2011
				Effect indicators	Supplementary indicators The daily water supply amount per capita (L/person/day) Population affected by the suspension of the water supply (number of people) The improvement in	● The non-revenue water rate (%) = (the amount of non-revenue water, i.e. the amount of water which is not billed) ÷ (system input volume) × 100 ● The leakage ratio (%) = (the amount of leakage) ÷ (system input volume) × 100 (recorded on a yearly basis) ● The water supply hours (hours/day): The number of hours water was supplied per day				

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable supply of safe water	3-2. Improving access to water supply services in urban areas				water rationing (days/week, days/year, etc.)	(hours/day) is often used, but the number of hours water was supplied per week is sometimes used depending on the water supply situation. <ul style="list-style-type: none"> The daily water supply amount per capita (L/person/day): The maximum daily water supply per capita = (the maximum daily water supply) ÷ (population supplied with water) Population affected by the suspension of the water supply (number of people): The population supplied with water in an area where the water supply was suspended The improvement in water rationing (days/year): Year-to-year comparison of the number of days subject to water rationing in a year 				
			Rehabilitation of water supply facilities ((4) Improving the quality of treated water)	Effect indicators	Basic indicators The quality of the treated water (the color unit (degree), the turbidity (NTU), the iron content (mg/L), the manganese content (mg/L), etc.)	<ul style="list-style-type: none"> The quality of the treated water: The values for items that should be checked during water quality test Recorded on a yearly basis (or a seasonal basis, etc. if the results are expected to fluctuate depending on the season, etc.)	·The objective of the project was to improve water quality, increase the amount of water supply and improve residents' access to safe water in Concepcion and Pilar Cities, by renewing water intake facilities and constructing water treatment facilities which use the rapid filtration method suitable for treating highly turbid raw water in the cities.	Paraguay	The Project for the Improvement of Water Supply System in Concepcion and Pilar Cities	2011
3. Sustainable supply of safe water	3-2. Improving access to water supply services in urban areas		Rehabilitation of water supply facilities ((5) Improving energy efficiency (replacement of pumps, etc.))	Operation indicators	Basic indicators Pump efficiency (%)	<ul style="list-style-type: none"> Pump efficiency (%) = (pump output power) ÷ (pump input power) × 100 	· The objective of the project was to reduce CO2 emissions (as a mitigation measure) through the reduction of energy consumption related to conveying and distributing the water as well as stabilizing water supply (as an adaptation measure) in the project area of the Zarqa Governorate, by taking the following measures: procuring pumping equipment, pipe materials and equipment for	Jordan	The Project for Energy Conservation through Upgrading Water Supply Network in the Hashemite Kingdom of Jordan	2009
				Effect indicators	Basic indicators The reduction in operation and	<ul style="list-style-type: none"> Electric power consumption rate (electric power consumption kWh / the pump discharge amount m³) = (the annual electric power consumption) ÷ (the annual pump discharge amount) The water supply amount (m³/day): The maximum daily water supply amount = the largest amount of water supplied in a day during one year The average daily water supply amount = (the total annual water supply) ÷ (the number of days in a year) (recorded on a yearly basis) 				

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators	Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
				maintenance costs (yen/year) Supplementary indicators The reduction in CO2 Emissions (tons/year) The reduction in electric power consumption (1,000 kWh/year) The reduction in electricity charges	<ul style="list-style-type: none"> • The reduction in operation and maintenance costs (yen/year) = (the electricity rate) × (the reduced annual electric power consumption) + the reduced pump repair costs, etc. • The reduction in CO2 emissions (tons/year) = (the CO2 emissions coefficient for electricity (ton CO2/kWh)) × (the reduced annual electric power consumption (kWh/year)) • The reduction in electric power consumption (1,000 kWh/year) = (the actual power) × (the number of operating hours) - (the rated power) × (the number of operating hours) × (1 - the power reduction rate × the safety factor) • The reduction in electricity charges = (the electricity charge) × (the reduced annual electric power consumption) 	transmission and distribution pipelines; installing the equipment and pipes; and providing technical support for training on the operation and maintenance of the pumping facilities as well as distribution facilities.			

(*1) Development strategic objectives “1. Promoting integrated water resource management,” “4. Improving access to sanitary facilities and improving hygiene activities” and “5. Mitigating water-related disasters” were omitted because they do not apply to any grant aid projects. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

Grant Aid Projects/Standard Indicator Reference (Rural Water Supply/Groundwater)

Examples of Setting Indicators for Each Development Strategic Objective

Development Strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable safe water supply	3-3. Improving access to water supply services in rural areas		The construction of wells and hand pumps (level 1)	Operation indicators	Basic indicators Population supplied with water (number of people) Supplementary indicators The water supply amount (m ³ /day) The water supply hours (hours)	Population supplied with water (definition): The additional population supplied with safe water by the construction of the relevant facilities; or, in the case of an equipment procurement project, the additional population supplied with safe water by the drilling and construction of wells by the implementing agency using the equipment. Points to note, etc.: It is difficult to strictly compare projects in different countries because the definition may differ depending on the country, as shown in the following examples. (1) The unit water supply amount per person has been set and the population supplied with water per well is strictly counted based on the capacity. (2) The population of the village concerned is counted with the assumption that the wells constructed in one village will cover the entire village population (e.g. 500-1000 people). (3) The population supplied with water per well has been set regardless of the capacity, and the total additional population supplied with water is counted based on the number of successful wells. How to obtain data: Social conditions surveys, data of wells when they were drilled, etc.	'The objective of the project was to increase the population who can access safe water, increase the water supply coverage ratio, and to increase the population who can obtain domestic water and water needed to improve their livelihoods, by: the construction of water supply facilities including wells; and the procurement of the equipment and materials needed to maintain the water supply facilities and drill wells, in the Ali Sabieh Region, the Dikhil Region and the Arta Region in southern Djibouti.	Djibouti	The Project for Rural Water Supply in Southern Djibouti	2010
				Effect indicators	Basic indicators A reduction of water-borne diseases The percentage of the population supplied with water (%) The percentage of functional facilities Supplementary indicators A reduction in the water fetching time The stable water supply The distance to water sources Population benefiting from the improvement in the water supply situation The school enrollment ratio An increase in the employment ratio for women	The water supply amount (definition): The amount of water supplied by the facilities concerned Points to note, etc.: The total water supply amount is expected to increase by the construction of new facilities, but the additional water supply amount is decided by the number of operating hours of the facilities. For example, the additional water supply amount will be different in cases where an operator supplies water for one hour in the morning and one hour in the evening, and in cases where an operator supplies water all in the morning. Therefore, it is not exactly so suitable for an indicator. When a pay-for-use system is not used, it is difficult to accurately measure the amount of water sold. How to obtain data: The water supply amount is calculated based on interviews in the case of "level 1" and based on the amount of water distributed or the number of operating hours in the case of "level 2." The water supply hours (definition): The number of hours water was supplied by the facilities concerned Points to note, etc.: The number of hours water is supplied is dependent upon how the facilities are operated. In general, the construction or improvement of water supply facilities is expected to prolong water supply hours. This may not be always true in the case of "level 1," because the facilities can be considered to be	'The objective of the project was to improve access to safe water for residents in the project area, by constructing rural water supply facilities ("level 1" and "level 2") in the Greater Machakos County and the Greater Makeni County.	Kenya	The Project for Rural Water Supply (Phase II)	2011

Development Strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable safe water supply	3-3. Improving access to water supply services in rural areas					operable for 24 hours a day. How to obtain data: The operation records, the fuel consumption (when the facility is powered by a generator), etc.				
			The construction of wells, pumps, communal taps and elevated water tanks (level 2)	Operation indicators	Basic indicators Population supplied with water (number of people) The water supply amount (m ³ /day) Supplementary indicators The water supply hours (hours)	A reduction in water-borne diseases (definition): The number of people who contracted diseases caused by water in the area concerned Points to note, etc.: This is the most expected effect of the safe water supply, although the cause-and-effect relationship between the supplied water and the reduced number of people who contracted water-borne diseases cannot be strictly proven epidemiologically. How to obtain data: Obtainment through interviews is appropriate. Data kept by existing public health centers and hospitals can be used, but the number of patients counted could increase if the health center or the hospital was newly built.	• The objective of the project was to supply safe water to the residents of rural villages (19 sites in five governorates) which have low water supply coverage, by developing water supply facilities, etc. in the villages.	Yemen	The Project for Rural Water Supply	2010
				Effect indicators	Basic indicators A reduction in water-borne diseases The percentage of the population supplied with water (%) The percentage of functional facilities Supplementary indicators A reduction in the water fetching time The stable supply of water The distance to water sources Population benefiting from the improvement in the water supply situation The school enrollment ratio An increase in the employment ratio for women	The percentage of the population supplied with water (definition) = (The population to be provided with the safe water supply by the newly built facilities or the improved facilities) ÷ (the population in the area concerned) Points to note, etc.: It is effective as an indicator in general, but using it for facility improvement projects is difficult in many cases. How to obtain data: Inventory surveys, etc. The percentage of functional facilities (definition) = (The number of functional water supply facilities) ÷ (the number of water supply facilities in the relevant area) Points to note, etc.: It is an effective indicator for facility improvement projects. How to obtain data: Inventory surveys for water supply facilities, etc. A reduction in the water fetching time (definition) = (the average distance from the existing water supply points to homes) - (the average distance from the water supply points to be developed to homes) Points to note, etc.: 1) Please see the explanation of “the distance to water sources” for how to work out the average distance used in the calculation. 2) The social survey method called Time Allocation Studies allows the direct estimation of the water fetching time, but it is highly technical. It takes time and effort. • In this method, the activities of women (mainly those who fetch water) in randomly selected households are observed and recorded by researchers at random times or at intervals. 3) Qualitative data may be used, though it cannot be quantified. •For example, households can be randomly selected and women	• The objective of the project was to increase the population supplied with water and supply safe water sustainably, by constructing water supply facilities in 10 districts in the Tigray Region. • The objective of the project was to improve access to safe water for residents in the project area, by constructing rural water supply facilities (“level 1” and “level 2”) in the Greater Machakos District and the Greater Makueni District.	Ethiopia	The Project for Rural Water Supply in Tigray Region	2010
			The construction of wells, pumps, communal taps and elevated water tanks (level 2)					Kenya	The Project for Rural Water Supply (Phase II)	2011

Development Strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable safe water supply	3-3. Improving access to water supply services in rural areas					in the households can be asked multiple-choice questions as well as being asked for comments on the reduction of the labor and time required to fetch water. → These comments can be used in PR materials. Criticism of the data being “unscientific” can be avoided by randomly selecting those subject to the surveys. How to obtain data: Please see “Points to note, etc.” above.				
			The repair of wells and hand pumps (the repair of level 1 facilities)	Operation indicators	Basic indicators Population supplied with water (number of people) Supplementary indicators The water supply amount (m ³ /day) The water supply hours (hours)	The water supply amount per capita (definition) = (the amount of water distributed) ÷ (population supplied with water) Points to note, etc.: It is effective as an indicator particularly for “level 2.” How to obtain data: Operation record, etc. The stable supply of water (definition): Whether or not a stable water supply is possible regardless of whether it is the rainy or dry season Points to note, etc.: It is an effective indicator particularly in cases where the main water source was surface water or shallow wells, in an area with a harsh dry season. However, previously it has not been recognized to be particularly useful as an indicator. How to obtain data: Hydrogeological surveys, data on the volume of pumped water, interviews, etc.	• The objective of the project was to give a stable supply of safe and clean water to residents, by taking the following measures: the construction of water supply facilities at market centers in Mkanda in the Mchinji District and in Santhe in the Kasungu District; the development of operation and maintenance systems for the facilities; the repair of 300 deep wells with hand pumps or the construction of substitute wells in the Mchinji District; the development of operation and maintenance systems for the facilities; and the procurement of equipment for repairing wells.	Malawi	The Project for Selected Market Centres and Rural Water Supply in Mchinji and Kasungu District	2012
				Effect indicators	Basic indicators A reduction of water-borne diseases The percentage of the population supplied with water (%) The percentage of functional facilities Supplementary indicators A reduction in the water fetching time The stable supply of water The distance to water sources Population benefiting from the improvement in the water supply situation The school enrollment ratio An increase in the employment ratio for women	The distance to water sources (definition): The distance from residents’ homes to the points where they can obtain safe water Points to note, etc.: The following two methods can be considered to estimate the average distance, but both have some difficulties. i) Interviewing users living around the water supply facilities to be developed • The water sources which users’ families use are identified. However, members of the general public can rarely tell the distance and time it takes from water supply points to their homes. ii) Households are sampled and surveying is conducted for those households. • It is possible to calculate the direct distance to the water supply point using GPS (however, the calculation of the actual distance of the walking route is difficult. Researchers may walk to measure the distance for academic purposes). • The “average distance” could be longer than that of the baseline survey results because household members from further away may come to fetch water at the newly developed water supply point. • Care is needed in collecting data on a household basis, because water resources that they use change depending on the season in many cases (data may be inaccurate if the baseline survey and the post-completion survey are conducted in different seasons).				
			The repair of wells and hand pumps (the repair of level 1 facilities)							

Development Strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable safe water supply	3-3. Improving access to water supply services in rural areas					How to obtain data: Please see "Points to note, etc." above.				
			The repair of wells, pumps, communal taps and elevated water tanks (the repair of level 2 facilities)	Operation indicators	Basic indicators Population supplied with water (number of people) The water supply amount (m ³ /day) Supplementary indicators The water supply hours (hours)	Population benefiting from the improvement in the water supply situation (definition): The population who can benefit from the quantitative and qualitative improvement of water, the increased number of hours water is supplied, the reduced water charges, etc. when compared to before the project was implemented Points to note, etc.: It is effective as an indicator particularly for facility improvement projects, but it is necessary to define what "improvement in the water supply situation" means. For example, if the improvement of an aging facility which had been supplying water did not change the quality of water, the quantity of water, or the number of hours water is supplied, etc., then the effect of the project measured by this indicator should be considered zero.	The project aimed to achieve the sustainable supply of safe water to the projected population in 2019 at 19 project sites in the Tambacounda Region (15 sites), the Matam Region (two sites), the Thies Region (one site) and the Louga Region (one site), by improving and expanding the existing water supply facilities in the sites.	Senegal	The Project for Drinking Water Supply in the region of Tambacounda	2009
				Effect indicators	Basic indicators A reduction in water-borne diseases The percentage of the population supplied with water (%) The percentage of functional facilities Supplementary indicators A reduction in the water fetching time The stable supply of water The distance to water sources Population benefiting from the improvement in the water supply situation The school enrollment ratio An increase in the employment ratio for women					

Development Strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicators		Policy and methods for setting indicators	Examples of project objectives (getting a clear image of the project)	Country name	Project name	FY of evaluation
3. Sustainable safe water supply	3-3. Improving access to water supply services in rural areas		Equipment for drilling wells (rigs)	Operation indicators	Basic indicators The number of wells drilled with rigs (per year) Population supplied with water (number of people) The water supply amount (m ³ /day) Supplementary indicators The water supply hours (hours)	The school enrollment ratio (definition): The percentage of children enrolled in school in the area concerned Points to note, etc.: Some examples of this data are shown in the World Bank's guide (p. 16 of the separate document). • Other survey examples also suggest that the enrollment ratio and the rate of school absenteeism or attendance should be considered separately. • The number of days absent changes depending on the season. For example, some students have to travel further to fetch water in the dry season. Another common reason would be that they are absent from school because they help with the farming in the farming season. How to obtain data: Please see "Points to note, etc." above.	• The objective of the project was to secure water that is available all year round, by procuring the equipment needed for the Department of Development Affairs (DDA), the Ministry for Progress of Border Areas and National Races and Development Affairs to construct deep wells, in order to develop new water resources in the central dry zone.	Myanmar	The Provision of Equipment for Rural Water Supply Project in the Central Dry Zone	2011
				Effect indicators	Basic indicators A reduction of water-borne diseases The percentage of the population supplied with water (%) Supplementary indicators A reduction in the water fetching time The stable supply of water The distance to water sources Population benefiting from the improvement in the water supply situation The school enrollment ratio An increase in the employment ratio for women	An increase in the employment ratio for women (definition): A change in the percentage of women who have a stable job in the relevant area Points to note, etc.: Some examples are shown in the above-mentioned World Bank's guide (p. 16 of the separate document) as an indicator for "Gender and social Inclusion" and "Income/consumption." However, the guide also states, "We are aware of no evaluation that demonstrate the impacts of WSS (water supply and sanitation) programs on poverty, including income, consumption levels, or gender and ethnic inclusion" (p. 6-7). • Even if the labor needed to fetch water is reduced, there may be many areas which do not have employment opportunities anyway. It might be better to collect qualitative data on women's perception. How to obtain data: Please see "Points to note, etc."	• The project provided the equipment and materials needed to drill wells in the Beni and Pando Departments in the northern part of Bolivia.	Bolivia	The Project for Drink Water Provision in Rural Area of Beni & Pando Prefectures	2012
			Equipment for drilling wells (rigs)							

(*) Development strategic objectives "1. Promoting integrated water resource management," "2. Water resource conservation," "4. Improving access to sanitary facilities and improving hygiene activities" and "5. Mitigating water-related disasters" were omitted because they do not apply to any "Rural Water Supply/Groundwater" projects. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to "Rural Water Supply/Groundwater" projects were also omitted.

Grant Aid Projects/Standard Indicator Reference (Health)

Examples of Setting Indicators for Each Development Strategic Objective

Sector	Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples	Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
Maternal and child health	1. Improving maternal and child health conditions	1-1. Improving maternal health	1-1-1. Safe childbirth	Obstetrics and gynecology facilities and equipment	Operation indicators The number of Cesarean sections per year The number of gynecological operations per year Supplementary indicators The facility-based delivery rate in the target area (provided that health/hospital statistics are available) The number of high-risk delivery practices (suction, forceps delivery, etc.) per year The number of patients who received antenatal care/postnatal care per year The number of referrals for high-risk delivery	The five operation indicators shown on the left are normally difficult to calculate in percentages because it is difficult to work out the denominator. In most cases, it is possible to consider that an increase in the number of operations or checkups is nearly equal to an increase in the number of responses to (or preventions of) high-risk delivery, after taking the population growth rate into account. "The target area" could be the area covered by the hospital, a city, etc. It is often difficult to compare maternal mortality (out of 100,000 childbirths) because the incidences in each area are too small.	• The objectives of the project were to strengthen the function of the National Hospital for Obstetrics and Gynecology (NHOG) as a top referral hospital as well as to strengthen its education and training capacity for lower-level provincial hospitals, by taking the following measures at the NHOG: procuring advanced medical equipment for obstetrics and gynecology; and procuring the training equipment needed to give staff from lower-level hospitals technical guidance on obstetrics and gynecology. • The objective of the project was to strengthen the functions of University Clinics of Kinshasa as a tertiary referral hospital, by improving medical equipment for the neonatal care unit, thereby increasing the hospital's technical levels and capacity to host practical training.	Vietnam	The Project for Improvement of Equipment in the National Hospital for Obstetrics and Gynecology	2009
					Effect indicators Maternal mortality in the target area (provided that health statistics are available)					
		1-2. Improving infant health	1-2-1. Care for the newborn and infants at health facilities	Facilities and equipment for neonatal units and pediatrics departments	Operation indicators The number of patients at neonatal care units The number of operations at pediatrics departments The number of outpatients at pediatrics departments	These indicators should be used provided that human resources are appropriately allocated. Note that there may be cases where the number of outpatients who can be treated at primary medical facilities increases and tertiary hospitals stop functioning properly.	• The objective of the project was to strengthen the functions of University Clinics of Kinshasa as a tertiary referral hospital, by improving medical equipment for neonatal care unit, thereby increasing the hospital's technical levels and capacity to host practical training.	The Democratic Republic of the Congo	The Project for the Improvement of Equipment at University Clinics of Kinshasa	2010

					Effect indicators	Supplementary indicators Infant mortality rate (per 1000) in the target area (provided that health statistics are available) Under 5 Mortality Rate (per 1000) in the target area (provided that health statistics are available)				
			1-2-2. Preventing infectious diseases in infants	Vaccines and cold chain equipment for vaccinations (refrigerators, cold boxes, vaccine carriers, etc.)	Operation indicators The capacity of the central storage (a cold room or a freezer room) (m ²) The capacity of regional/district storage (m ²) Supplementary indicators The immunization rate for the DPT3 and measles1 vaccine in the target area (%) The frequency of transporting vaccines from the central to the local (times/year) Vaccine wastage rate (the number wasted(the number procured – the number administered)÷ the number procured)	Although the vaccination rates would not increase by improving equipment alone, the expected direct output of equipment improvement may be that the number of vaccine doses discarded would be reduced due to vaccines being stored and transported under appropriate temperature control. Equipment improvement alone would not increase vaccination rates because the success of vaccination projects largely depends on local cultural factors (such as gender) in addition to the availability of an appropriate human resource and operation cost. However, if all the factors are resolved, the incidence of the disease and mortality could become effective indicators.	<ul style="list-style-type: none"> The objective of the project was to deploy cold chain equipment at district health offices and basic health centers which did not have appropriate cold chain equipment, by replacing their unusable or decrepit refrigerators, cold boxes and vaccine carriers with new ones. The objective of the project was to increase the number of health facilities which can provide regular immunization services (thereby increasing access to immunization services), by improving cold chain equipment at health facilities. 	Madagascar	The Expanded Programme on Immunization	2008
					Effect indicators Basic indicators The incidence of an infectious disease subject to vaccination for children under the age of five in the target area (%) Supplementary indicators Infant mortality rate in the target area Under 5 Mortality Rate in the target area			Uganda	The Project for the Improvement of Uganda National Expanded Programme on Immunization	2010
Infectious disease control	1. Measures against HIV	1-1. Preventing HIV infection	1-1-1. Strengthening the testing systems and improving access to testing	Rapid test kits for HIV	Operation indicators Basic indicators The number of people who received HIV testing (unit: 10,000 people) in the target area	Through the appropriate distribution of the test kits and the implementation of the tests, those who are HIV positive can access to appropriate care and awareness-raising activities could prevent further spread of infections.	The objective of the project was to increase the number of HIV counseling sessions and tests conducted by strengthening HIV counseling and testing systems through the procurement and supply of rapid test kits for HIV across the country.	Kenya	The Project for HIV/AIDS Control	2009/2010
					Effect indicators Supplementary indicators The number of patients with HIV-related illness treated in the target area (people/year) The number of people newly infected with HIV (people/year) (provided that health statistics are available)					

Infectious disease control	1-2. Treatment of AIDS	1-2-1. Strengthening AIDS treatment systems at health facilities	The installation of related equipment (such as CD4 count machines) (a type of hospital equipment)	Operation indicators	Basic indicators The number of times CD4 count machines that are used (times/year)	The precondition for treatment is that the appropriate doses of ARV (antiretroviral) drugs are in stock in an appropriate condition.	The objective of the project was to enable those who have developed AIDS to receive care and treatment promptly, by installing CD4 count machines.	The Democratic Republic of the Congo	The Project for the Improvement of Equipment at University Clinics of Kinshasa	2010
				Effect indicators	Basic indicators The number of patients treated at the target facilities (people/year)					
	2. Tuberculosis control	2-1. Improving the capacity to conduct DOTS	2-1-3. Strengthening logistics capacity	Operation indicators	Basic indicators The DOTS coverage (DOTS: directly observed treatment, short-course) The number of new adult patients who can be treated under the DOTS program (unit: patients) The number of adult relapsing patients who need retreatment and who can be treated under the DOTS program (unit: patients) The number of smear-positive cases newly detected and the number of relapsing patients registered	The preconditions for the implementation of DOTS are the supply of anti-TB drugs, reagents for TB testing, etc. as well as the availability of technicians. The number of new patients (the number of positive cases detected), the number of relapsing patients registered, etc. often increase through the appropriate implementation of DOTS.	<ul style="list-style-type: none"> The objective of the project was to improve the treatment of TB by distributing anti-TB drugs (for adults) needed to control TB across the country. The objectives of the project were to promote the early detection and treatment of patients and improve TB control in the project areas, by taking the following measures in deprived areas where TB diagnosis and treatment for residents are not provided effectively: the provision of equipment needed for TB diagnosis and training; and the provision of anti-TB drugs needed for treatment. 	Myanmar	The Project for Equipment Provision for the National Tuberculosis Programme	2010
					Basic indicators The percentage of cases treated under DOTS					
		2-2. Improving the capacity to provide treatments beyond DOTS	2-2-2. Improving the capacity (diagnosis, research and treatment) to control MDR-TB (multidrug-resistant tuberculosis)	Operation indicators	Basic indicators The number of imaging tests per year The number of cultures performed at the laboratories Supplementary indicators The hospital bed occupancy rate (%)			The People's Republic of China	The Project for Tuberculosis Control in Poor Areas (Phase 3)	2008
					Basic indicators The number of patients treated at the relevant hospitals					
			The improvement of TB wards, the installation of TB culture laboratories	Operation indicators	Basic indicators The number of imaging tests per year The number of cultures performed at the laboratories Supplementary indicators The hospital bed occupancy rate (%)	The increase in the number of cultures performed could lead to improvements in the ability to diagnose in the laboratories.	<ul style="list-style-type: none"> The objective of the project was to provide testing and treatment services for the three major infectious diseases, particularly serious respiratory infectious diseases such as MDR-TB and TB/HIV co-infection, by constructing a hospital and procuring equipment in Kabul. 	Afghanistan	The Project for Construction of Hospital for Communicable Disease	2010
				Effect indicators	Basic indicators The number of patients treated at the relevant hospitals					

3. Malaria control	3-1. Prevention of malaria infection	3-1-1. Strengthening measures to control infection routes and sources of infection	Long-lasting insecticidal mosquito nets, agent kits	Operation indicators	Basic indicators The number of insecticide treated nets (ITNs) owned by each household, the percentage of households which own ITNs (%) The number of ITNs used by children under the age of five and pregnant women per year	ITNs should be distributed to each household. Note that infants, expectant and nursing mothers can only use ITNs if there is more than one ITN in each household, in many cases.	<ul style="list-style-type: none"> The objective of the project was to increase the use of long-lasting insecticidal nets (LLINs) by children under the age of five and pregnant women, by procuring and distributing LLINs. The objective of the project was to prevent malaria infection by providing ITNs and the kits containing insecticides and immersion agents needed to control malaria. 	Zambia	The Project for Malaria Control	2006
				Effect indicators	Basic indicators The number of people who contracted malaria and the number of deaths due to malaria per year in the target area			Malawi	The Project for Malaria Control	2003
	3-2. Strengthening the rapid diagnosis and treatment systems	3-2-1. Improving testing and diagnostic capacities	Rapid diagnostic test kits, microscopes and related equipment	Operation indicators	Basic indicators The number of outpatients at primary health facilities per year The number of rapid malaria diagnoses performed at primary health facilities per year The number of microscopic diagnoses performed at primary health facilities per year Supplementary indicators An increase in the number of people infected with malaria per year The number of referral patients per year	The implementation of rapid diagnosis at primary health facilities which are easy for local residents to access can lead to prompt treatment. However, this measure could result in an increase in the number of patients and infected people diagnosed.	<ul style="list-style-type: none"> The expected outcomes of the implementation of the project included the following, among others: (1) the strengthening of comprehensive malaria control measures including prevention, diagnosis, treatment and awareness raising would reduce the malaria incidence and mortality; (2) the project would enable about 100,000 expectant and nursing women to sleep in safe conditions; and (3) the project would enable rapid and appropriate malaria diagnosis. 	Niger	The Project for Malaria Control	2008
				Operation indicators	Basic indicators The number of outpatients at each health facility per year The number of patients treated (the number of therapeutic drugs that are used)					
3. Malaria control	3-2. Strengthening the rapid diagnosis and treatment systems	3-2-2. Strengthening systems for appropriate treatment	Medicines, vehicles for transporting medicines	Effect indicators	Basic indicators Malaria mortality in the target area	Prompt treatment is essential in order to reduce mortality. This requires an improved access to medicines because it will increase the number of patients treated.	<ul style="list-style-type: none"> Through equipping public health facilities with medicines, malaria patients who could not receive consultation and treatment services at health facilities in the past will be able to receive appropriate malaria diagnosis and treatment at appropriate times, and this will increase the number of patients examined and treated in the divisions and state subject to the project. 	Myanmar	The Project for Malaria Control	2008

Health system	1. Capacity Building for HRH	1-2. Development of highly qualified HRH	1-2-1. Quantitative and qualitative improvement of training for HRH	Facilities and equipment for training schools for HRH	Operation indicators	Basic indicators The classroom floor area per student Supplementary indicators The number of students per teacher The number of teaching aids per student	Projects for improving training facilities for HRH usually involve renovation of deteriorating schools and/or expansion of schools which became too small for their activities, accompanied by the installation of training equipment. The direct effect of these projects is the improvement in the learning environment, which is a precondition for students to receive high quality training.	<ul style="list-style-type: none"> The objectives of the project were to improve nursing education equipment, reduce disparities in the education environments of nursing schools and improve the levels of medical services provided by nurses, by equipping national universities and nursing universities controlled by the Ministry of Health. Through the improvement of the Institute for Medical Education in Kinshasa (IEM Kinshasa) as a national model health personnel school in the Democratic Republic of the Congo, the project aimed to: (1) produce high quality intermediate-level health personnel; (2) develop an education model for intermediate-level health personnel; (3) train instructors for intermediate-level health personnel centers nationwide; and (4) provide continuing education for intermediate-level health personnel. 	Nicaragua	The Project for Improvement of Education Equipment of Nursing	2009
					Effect indicators	Basic indicators The number of health personnel who receive high quality training (people/year) Supplementary indicators The percentage of graduates from the target schools who passed national qualification test					
Health systems	1. Capacity building for HRH	1-2. Development of highly qualified HRH	1-2-2. Improving technical skills of new and current health personnel	Equipment for clinical practice at health facilities	Operation indicators	Basic indicators The number of clinical practice sessions for students at health facilities (times/year) The number of clinical practice sessions for current health personnel at health facilities (people/year) The number of trainees hosted at health facilities (people/year)	More trainees can attend clinical practice through improvement in the clinical practice environment in health facilities (improvement of observation spaces for delivery rooms and operating theaters, equipment for clinical practice, etc.).	The objective of the project was to strengthen the function of the university hospital as a tertiary referral hospital, by improving medical equipment at the hospital, thereby improving its medical services and capacity to host trainees.	Zambia	The Project for the Improvement of the Medical Equipment of the University Teaching Hospital	2009
					Operation indicators	Basic indicators The number of hospital beds (unit: beds) The number of tests performed (tests/year) The number of operations (operations/year) The number of outpatients (people/year) The number of inpatients (people/year) Supplementary indicators The time required to access medical institutions The number of patients referred from lower-level medical facilities (people/year)* Reduction in waiting time at higher-level medical facilities					
Health systems	2. Improving access to health services	2-1. Improving access to medical facilities and improving the quality of services	2-1-1. Qualitative and quantitative improvement of secondary and tertiary medical services	The construction of hospitals and improvement of equipment	Operation indicators	Basic indicators The number of hospital beds (unit: beds) The number of tests performed (tests/year) The number of operations (operations/year) The number of outpatients (people/year) The number of inpatients (people/year) Supplementary indicators The time required to access medical institutions The number of patients referred from lower-level medical facilities (people/year)* Reduction in waiting time at higher-level medical facilities	An increase in the number of hospital beds and operating rooms and upgrading of decrepit or malfunctioning equipment will improve the testing and treatment systems. *Upgrading secondary hospitals will contribute to reduce waiting times at neighboring tertiary hospitals because the secondary hospitals can receive more patients referred from primary medical facilities as well as patients who used to directly visit tertiary hospitals as outpatients.	The objective of the project was to provide medical services such as Cesarean operations and other operations including appendectomy that were not available in the Province of Aurora,	The Philippines	The Project for Improvement of Aurora Memorial Hospital	2009

2-2. Strengthening the emergency care systems	2-1-2. Qualitative and quantitative improvement of primary medical services	The improvement of primary health facilities using grant aid for community empowerment	Operation indicators	Basic indicators Travel time of target population to medical facilities The average radius of the catchment areas of primary health care facilities in target area (km) The number of outpatients (medical examination and vaccination)* Supplementary indicators The number of medical examinations received per resident in target area per year (unit: times)*	*These indicators should be used provided that medical personnel and drugs and medicines are allocated at primary health care facilities. The reduction of the number of maternal deaths and the deaths of children under the age of five requires a means of emergency transportation to higher-level hospitals in many cases.	The objective of the project was to expand maternal and child health related services by constructing CHPS (Community Based Health Planning and Services) compounds (health posts) along with the provision of necessary equipment in the Upper West Region.	Ghana	The Project for the Development of CHPS Infrastructure in the Upper West Region	2012
			Effect indicators	Basic indicators Maternal mortality rate in target area Under-5 mortality rate (provided that health statistics are available)					
			Operation indicators	Basic indicators The number of patients taken by ambulance in target area to relevant hospitals Supplementary indicators The number of requests from patients on ambulance dispatch.*	An increase in residents' awareness of ambulances will increase the chance of appropriate use of them for emergency transportation. Both data collected at hospitals receiving patients and the number of times ambulances were dispatched should be looked at. *The number should be counted for each emergency station.				
	2-2-1. Improving the patient transportation systems and preparedness for receiving patients in emergencies	The improvement of ambulances, and equipment and facilities for the emergency department at hospitals				Albania	The Project for the Improvement of the Medical Equipment of the Regional Level Emergency Centers	2009	

(*) Development strategic objectives which do not apply to any grant aid projects are omitted. Mid-term objectives and sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

HRH; human resources for health

Examples of Setting Indicators for Each Development Strategic Objective **Grant Aid Projects/Standard Indicator Reference (Transportation (Roads, Bridges, Land Transportation, Aviation and Ports))**

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
2. Toward internationalization and regionalization	2-1. Facilitation of international movement of people and goods	2-1-1. Development of international transportation network (road/railway/airport/port)	Trunk roads and bridges (international)	Operation and effect indicators	Basic indicators Annual average daily traffic (AADT)(vehicles/day, vehicles/24 hours)	Annual average daily traffic (vehicles/day, vehicles/12 hours): The annual average daily traffic at a specific point, a representative point in the whole section or the distance-weighted mean annual traffic. The total number of full-size cars, compact cars, etc., or, the number when converted into compact cars (the passenger car unit (PCU)) is used for counting volume of traffic. The duration is represented basically by units of days (24 hours). Representing the duration by 12-hour units is also acceptable. Time Saving (hours): According to measurement survey on time required Average Velocity Increase (km/hour): It is calculated from the above-mentioned time required and the distances before and after the improvements.	The objective of the project was to stimulate the international distribution of goods by constructing a bridge in the Santa Fe area, over the San Juan River which runs along the border between Nicaragua and Costa Rica. The objective of the project was to ensure safer and smoother traffic flows by constructing a new bridge at the point where National Road No. 1 crosses over the Mekong River (Neak Loeung). The objective of the project was to improve the distribution of goods and the movement of people between Phnom Penh and Ho Chi Minh by improving a section of National Road No. 1 (between Phnom Penh and Neak Loeung, about 56 km). The objectives of the project were to achieve smooth traffic flows in the area along the Southern Corridor and to promote traffic and trade between Senegal and Mali as well as with neighboring nations, by constructing bridges in the Southern Corridor which connects the capitals of the two countries. In Phase III a bridge was constructed in Mali which is an inland state.	Nicaragua	The Project for Construction of Santa Fe Bridge	2010
				Operation indicators	Supplementary indicators An increase in the load capacity of paved roads (the axle load) (tons)			Cambodia	The Project for Construction of Neak Loeung Bridge	2010
				Effect indicators	Supplementary indicators An increase in the maximum vehicle tonnage that can pass The number of vehicles such as large vehicles which became able to pass Transport volumes for passengers and cargos (passenger-kilometers or ton-kilometers, or, tons/year at a specific point or section, similarly to the measuring of the volume of traffic) Time Saving (hours) Vehicle Operation Cost Saving (yen (and in the local currency)/year) Average Velocity Increase (km/hour) Decrease of Annual Traffic Impassability Dates due to Disaster (days/year)			Cambodia	The Project for Improvement of the National Road No. 1 (Phase III)	2009
								Mali	The Project of Construction of Bridges on the Southern Corridor in the Republic of Mali and the Republic of Senegal (Phase III)	2009
								Nicaragua	The Project for Reconstruction of Bridges on Managua - El Rama Road	2011
				Laos	The Project for Improvement of National Road No. 9 as East-West Economic Corridor of the Mekong Region	2011				
				Ethiopia	The Project for Replacement of Awash Bridge on A1 Trunk Road	2011				
				Malawi	The Project for Replacement of South Rukuru Bridge on the Main Road M001	2009				

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
2. Toward internationalization and regionalization	2-1. Facilitation of international movement of people and goods	2-1-3. Strengthening of safety and security measures (aviation, port and maritime safety)	Enhancement of security management at ports, airports and road traffic systems (measures to control trespassers and the inspection of passengers and luggage), qualitative flight control improvement, etc.	Operation indicators	Basic indicators The implementation of an inspection system which meets international standards (increasing the number of people and products inspected, the expansion of monitoring and security areas, a reduction in the number of accidents and incidents, etc.)		<ul style="list-style-type: none"> With the Overall Goal of "securing the movement of people and the distribution of goods from other countries which are essential for the reconstruction of Afghanistan," the project aimed to improve the equipment at Kabul International Airport in order to improve passenger services at the airport. 	Afghanistan	The Project for Improvement of Equipment of the Kabul International Airport	2008
							<ul style="list-style-type: none"> In order to ensure the safety of airplanes which arrive at and depart from Ninoy Aquino International Airport and to ensure efficient airport operations, the project aimed to restore the functioning and reliability of the approach radar facilities used at the airport which were put in place in 1984 and were frequently breaking down due to considerable deterioration. 	The Philippines	The Project for Rehabilitation of the Approach Radar Facility in the Ninoy Aquino International Airport	2006
							<ul style="list-style-type: none"> In order to increase the effectiveness of the radars installed in the Kathmandu International Airport Improvement Project which was completed in 1997 and to ensure safe air traffic control activities, the project improved the air traffic control equipment including the updating of radio equipment which had been in use since before the project was conducted and the construction of weather observation facilities. 	Nepal	The Project for Improvement of Existing Air Traffic Services System under the Tribhuvan International Airport Modernization Project	2006
3. Toward balanced development of a whole country (national transportation)	3-1. Improvement of road transportation	3-1-1. Improvement and development of trunk road system	Trunk roads and bridges (domestic)	Operation and effect indicators	Basic indicators Annual average daily traffic(AADT)(vehicles/day, vehicles/24 hours)		<ul style="list-style-type: none"> The objective of the project was to ensure safe and smooth traffic flows by improving a 22.5 km section of the Masasi-Mangaka Road which is subject to Phase III of the project (from the 37.4 km point to the end of the Masasi-Mangaka Road) in the Mtwara Region. 	Tanzania	The Project for the Improvement of Masasi-Mangaka Road (Phase III/III)	2009
				Operation indicators	Supplementary indicators An increase in the load capacity of paved roads (the axle load) (tons)		<ul style="list-style-type: none"> The objective of the project was to ensure smooth traffic flows on National Highway 3 in Ethiopia which is an international trunk road connecting Addis Ababa and Sudan, by improving the unpaved section of the road. 	Ethiopia	The Project for Rehabilitation of Trunk Road, Phase IV	2011
							<ul style="list-style-type: none"> The objective of the project was to improve the distribution of goods and the movement of people between Phnom Penh and Ho Chi Minh by improving a section of National Road No. 1 (between Phnom Penh and Neak Loeung, about 56 km). 	Cambodia	The Project for Improvement of the National Road No.1 (Phase III)	2009
				Effect indicators	Supplementary indicators An increase in the maximum vehicle tonnage that can pass An increase in large vehicle traffic (vehicles/day) Transport volumes for passengers and cargos (passenger-kilometers or tons/year) Time Saving (hours)/Vehicle Operation Cost Saving (yen (and in the local currency)/year) Average Velocity Increase (km/hour) Decrease of Annual Traffic Impassability Dates due to Disaster (days/year)		<ul style="list-style-type: none"> The objective of the project was to ensure smooth traffic flows and resolve the traffic bottleneck, by replacing the Rukuru Bridge on the main trunk road in Runphi in the Northern Region. 	Malawi	The Project for Replacement of South Rukuru Bridge on the Main Road M001	2009
							<ul style="list-style-type: none"> In the Eastern Province, through reconstructing small- and medium-sized bridges on National Highway 5 which connects the Eastern Province and the Central Province, and through reconstructing the Panichan Keni Causeway and bridges on National Highway 15 in the Eastern Province, the project aimed to improve access to the Eastern Province, thereby contributing to the distribution of peace dividends to the people affected by the civil war. 	Sri Lanka	The Project for Reconstruction of 5 Bridges in Eastern Province	2010

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
3. Toward balanced development of a whole country (national transportation)	3-1. Improvement of road transportation	3-1-2. Strengthening of road maintenance system	Road maintenance	Operation indicators	Basic indicators An increase in the number of operable construction machinery units (units) The total length of roads improved (repaired), etc. (km/year) Supplementary indicators The number of times equipment was repaired (times/year)		• The objective of the project was to improve the operating rate of road construction machinery possessed by the General Corporation for Roads and Bridges (GCRB), by restoring the road construction machinery repairing and maintenance capacity of the Road Construction Machinery Workshop at Nukum, through the updating and improvement of the equipment needed to repair and maintain road construction machinery at the workshop. • The objective of the project was to achieve stable regional transportation and local resident traffic accessibility, by appropriately deploying road maintenance equipment and strengthening the road maintenance systems in the Issyk-Kul and Chui Oblasts, thereby contributing to the promotion of regional exchanges of people and the distribution of goods, as well as the revitalization of regional economic and social activities.	Yemen	The Project for Upgrading and Revitalization of Road Construction Machinery Workshop at Nukum	2010
				Effect indicators	Supplementary indicators A reduction in annual maintenance costs (yen (and in the local currency))			Kyrgyzstan	The Project for Improvement of the Equipment for Road Maintenance in Issyk-Kul and Chui Oblasts	2010
	3-3. Improvement of maritime transportation	3-3-1. Restoration, improvement and development of ports and port facilities	Improvement of port terminals	Operation and effect indicators	Basic indicators Total Cargoes (tons/year) (1) Containerized cargo volume (tons and TEU/year) (2) Bulk cargo volume (tons/year) (3) General cargo volume (tons/year) Total Passengers (people/year) Supplementary indicators The average overstay time for vessels which have entered the port, the average time vessels wait at anchor offshore (hours) An increase in loading and unloading efficiency, an increase in the cargo handling machinery operating rate Maximum Dead Weight Tonnage (DWT)	Cargo volume = Containerized cargo volume + bulk cargo volume + general cargo volume It depends on the contents of each project whether to adopt total cargoes or any of the three kinds of cargo on the left. When gantry cranes are used as procured equipment, (1), and when grain silos and oil tanks are used, (2), should be effective indicators. TEU represents the cargo volume available in a container 20 feet long.	• The objectives of the project were to enable safe and efficient boarding and alighting of passengers as well as loading and unloading of cargo, by improving the existing pier in the Mahata area in the Oecusse District in East Timor, thereby contributing to the economic revitalization of the district and the reduction of economic disparities between areas within East Timor, through the expansion of marine transportation between the district and the capital city Dili. • The objectives of the project were to improve efficiency and safety when loading and unloading cargo, as well as to improve the navigation safety of vessels entering and leaving Betio Port, by strengthening the functioning of the port through improving the facilities and equipment at the port.	East Timor	The Oecusse Port Urgent Rehabilitation Project	2010
					Kiribati			The Project for Expansion of Betio Port	2011	
	3-4. Improvement of air transportation	3-4-1. Improvement/ Development of airport facilities	Airport facilities	Operation and effect indicators	Basic indicators Number of passengers (people) Cargo Volume (tons) Number of takeoffs and landings by origin and destination (times) Air traffic Volume (airplanes)	Number of passengers(people) •Grasp numbers under the categories of international flight and domestic flight •Grasp numbers of annual total, in the peak month, or on the peak day It is desirable to grasp data of the following three groups. (1) Number of departing passengers (under the categories of foreign citizens and domestic citizens) (2) Number of arriving passengers (under the categories of foreign citizens and domestic citizens) (3) Number of transient passengers (under the categories of foreign citizens and domestic citizens) Air traffic Volume (airplanes): •Grasp numbers under the categories of international flight (over flight and others) and domestic flight •Annual total	• The objective of the project was to improve safety and convenience for airport users by improving the existing Bamyay Airport, through: paving runways, constructing an airport apron and a passenger terminal building, as well as putting in place the equipment and facilities needed for airplane operations including fire engines, snowplows and aeronautical radio equipment. The project is part of the infrastructural improvement which is a priority field in Japan's assistance for Afghanistan. It is also part of the Afghanistan Regional Resource Corridor Initiative (AR-RCI) which is one of the national priority programs of the Afghanistan government.	Afghanistan	The Project for Improvement of Existing Bamyay Airport	2011
				Operation indicators	Supplementary indicators An increase in the number of airplanes that can be parked (airplanes)					

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
3. Toward balanced development of a whole country (national transportation)	3-4. Improvement of air transportation	3-4-2. Improvement/Development of aeronautical navigation aid system	Aeronautical navigation aid systems (air-route surveillance radars, etc.)	Operation and effect indicators	Basic indicators Number of takeoffs and landings by origin and destination (times)	<ul style="list-style-type: none"> Grasp numbers under the categories of international flight and domestic flight Grasp numbers of annual total, the peak month, and the peak day Grasp number under the categories of regular and temporary (commercial) flights 	<ul style="list-style-type: none"> The objectives of the project were to improve aircraft operational safety and to respond to the increase in the number of passengers by expanding the aprons and improving their pavement at Kabul International Airport. The project is part of the Kabul Metropolitan Area Development program. The objectives of the project were to increase the number of flights which arrive at and depart from Kabul International Airport and to increase the number of passengers as well as to improve aircraft operational safety, by improving and repairing the taxiways and aprons at the airport. The objectives of the project were to meet the standards recommended by the ICAO (the International Civil Aviation Organization) and to improve the safety and efficiency of aircraft operations, by updating deteriorated air navigation facilities and related equipment at Kamuzu International Airport in Malawi. The objective of the project was to improve air transportation safety in Nepal, by constructing an air-route surveillance radar system and updating the existing airfield control radar system and equipment at Tribhuvan International Airport which is the only international airport in Nepal, thereby contributing to improving transportation between the Kathmandu Valley and areas outside the valley (other countries). 	Afghanistan	The Project for Rehabilitation and Expansion of Aircraft Parking Aprons at Kabul International Airport	2011
				Operation indicators	Supplementary indicators An increase in the number of airplanes that can be parked (airplanes) The navigation lights coverage at the international airport Runways (%) Taxiways (%) Aprons (%)			Afghanistan	The Project for Rehabilitation of Airfield Pavements at Kabul International Airport	2010
					The percentage of international flights covered by the surveillance radar safety net (%) The percentage of all the airplanes covered by the surveillance radar safety net (%)			Malawi	The Project for the Replacement of Air Navigation System at Kamuzu International Airport	2010
				Effect indicators	Supplementary indicators A reduction in the number of accidents on taxiways and aprons			The Federal Democratic Republic of Nepal	Tribhuvan International Airport Modernization Project	2013
	3-5. Strengthening of intermodal transportation as well as improvement of issues common to all modes of transportation	3-5-3. Transportation safety measures	Development of transportation safety facilities, etc.	Effect indicators	Basic indicators Number and Frequency of Traffic Accidents (Accidents/10,000 Vehicles • km, Number of accidents, Casualties, Yen (and Local currency))	They should be calculated based on traffic accident statistics compiled by the traffic safety agency. Monetary terms can be adopted when amount of human cost and property damage per accident are set.				
		3-5-4. Disaster management	(For road facilities and bridges) slope protection measures, the enhancement of seismic adequacy, etc.	Effect indicators	Basic indicators Decrease of Annual Traffic Impassability Dates due to Disaster (days/year) Supplementary indicators An increase in the maximum vehicle tonnage that can pass The number of vehicles such as large vehicles which became able to pass (vehicles/day)		<ul style="list-style-type: none"> The objective of the project was to stimulate the international distribution of goods by constructing a bridge in the Santa Fe area, over the San Juan River which runs along the border between Nicaragua and Costa Rica. The objective of the project was to achieve smoother traffic flows in the East-West Economic Corridor, by improving the road pavement and the road bed on the damaged section of National Road No. 9. Being part of the East-West Economic Corridor which is an important route connecting Laos with neighboring Thailand and Vietnam, National Road No. 9 plays an important role in promoting economic activity in Laos. In the Eastern Province, through reconstructing small- and medium-sized bridges on National Highway 5 which connects the Eastern Province and the Central Province, and through reconstructing the Panichan Keni Causeway and bridges on National Highway 15 in the Eastern Province, the project aimed to improve access to the Eastern Province, thereby contributing to the distribution of peace dividends to the people affected by the civil war. The objectives of the project were to strengthen the functioning of the international distribution route and to improve the movement of people and goods for the convenience of local residents, by replacing the Awash Bridge (132.4 meters) which would have the biggest impact on the nation, out of all bridges on Ethiopia's A1 Trunk Road, if it collapsed. 	Nicaragua	The Project for Construction of Santa Fe Bridge	2010
								Laos	The Project for Improvement of National Road No. 9 as East-West Economic Corridor of the Mekong Region	2011
								Sri Lanka	The Project for Reconstruction of 5 Bridges in Eastern Province	2010
								Ethiopia	The Project for Replacement of Awash Bridge on A1 Trunk Road	2011

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
3. Toward balanced development of a whole country (national transportation)	3-5. Strengthening of intermodal transportation as well as improvement of issues common to all modes of transportation	3-5-4. Disaster management	(For road facilities and bridges) slope protection measures, the enhancement of seismic adequacy, etc.				<ul style="list-style-type: none"> The objective of the project was to ensure safe and efficient traffic flows by reconstructing six bridges on Nias Island which are structurally dangerous due to damage caused by earthquakes. Some of the six bridges are on Provincial Road No. 75 which is the only trunk road on the island connecting Gunungsitoli (the largest city on the island) and Teluk Dalam (the second largest city on the island) 	Indonesia	The Project for Improvement of Bridges in Nias Island	2009
4. Toward sustainable urban development and improvement of urban life (urban transportation)	4-1. Improvement and development of urban transportation infrastructure	4-1-1. Traffic capacity increase of arterial roads, intersections and bridges under the jurisdiction of central government	Road facilities and bridges (urban areas)	Operation and effect indicators	Basic indicators Annual average daily traffic(AADT) (vehicles/day, vehicles/24 hours)		<ul style="list-style-type: none"> The objectives of the project were to ensure safe and smooth traffic flows in Bujumbura City and to reduce transportation costs through the alleviation of congestion, by improving the road network of the city. The objective of the project was to improve the road network by rehabilitating and repairing Poids Lourds Avenue in Kinshasa City. The objectives of the project were to save transportation times, resolve congestion and reduce annual maintenance costs, by rehabilitating, improving and expanding the width of the bottleneck section of the trunk road in Blantyre City, which is the largest commercial city in Malawi. 	Burundi	The Project for Rehabilitation of Roads and Infrastructures for Bujumbura City	2010
				Operation indicators	Supplementary indicators An increase in the load capacity of paved roads (the axle load) (tons)					
				Effect indicators	Supplementary indicators Transport volumes for passengers and cargos (passenger-kilometers or tons/year) Time Saving (hours) Vehicle Operation Cost Saving (yen (and in the local currency)/year) Average Velocity Increase (km/hour) Congestion Length Decrease A reduction in the waiting time at intersections					
	4-2. Improvement and development of urban public transportation services	4-2-1. Improvement of bus services	Improvement of buses	Operation and effect indicators	Basic indicators Carrying capacity of buses (10,000 passenger-kilometers/day)		<ul style="list-style-type: none"> The objective of the project was to increase the carrying capacity of public transport systems within Burundi and those going to neighboring countries, by providing public transport buses and the necessary equipment for the public transport system across the country. The objectives of the project were to improve bus services and to increase the carrying capacity of public buses, by updating route buses in Vientiane City owned by the public bus corporation which have become dilapidated. 	Burundi	The Rehabilitation of Public Transportation Project	2009
				Operation indicators	Basic indicators The number of operable buses The number of bus services (services/day) The number of bus routes The bus route length (km)					
								The Democratic Republic of the Congo	The Project for Rehabilitation and Modernization of the Poids Lourds Avenue in Kinshasa (Phase II)	2010
								Malawi	The Project for Improvement of Blantyre City Roads (Phase II)	2010
								The Lao People's Democratic Republic	The Project for Improvement of Transportation Capacity of Public Bus in Vientiane Capital	2010

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
5. Toward sustainable rural development and improvement of rural life (rural transportation)	5-1. Improvement of rural transportation infrastructure	5-1-1. Provision of basic transportation infrastructure and services to secure civil minimum	Rural roads and bridges (domestic)	Operation and effect indicators	Basic indicators Annual average daily traffic(AADT) (vehicles/day, vehicles/12 hours)		<ul style="list-style-type: none"> The objective of the project was to facilitate traffic flows and the distribution of goods by constructing a bridge in Manmunai over the Batticaloa Lagoon. Thereby, the project aimed to contribute to post-disaster reconstruction and flood control measures, as well as promoting socioeconomic development in the Eastern Province and providing a symbol of the consolidation of peace in reconstruction efforts. The objective of the project was to improve the road network on Sumbawa Island, through the construction of four bridges which requires high technical skills, on the southern ring road section on the island. The objective of the project was to ensure traffic flows throughout the year, by constructing suspension bridges, truss bridges, reinforced concrete bridges and continuous box girder bridges at about 28 river crossing points which cause long-term transportation route holdups due to the swelling of rivers in the rainy season. The crossing points are on 11 provincial roads in five districts situated along the Sindhuli Road in the central part of Nepal. The objective of the project was to ensure safe and efficient traffic flows by reconstructing six bridges on Nias Island which are structurally dangerous due to damage caused by earthquakes. Some of the six bridges are on Provincial Road No. 75 which is the only trunk road on the island connecting Gunungsitoli (the largest city on the island) and Teluk Dalam (the second largest city on the island). 	Sri Lanka	The Project for Construction of Manmunai Bridge	2011
				Operation indicators	Supplementary indicators An increase in the load capacity of paved roads (the axle load) (tons)					
				Effect indicators	Basic indicators Time Saving (hours) Supplementary indicators Transport volumes for passengers and cargos (passenger-kilometers or tons/year) Vehicle Operation Cost Saving (yen (and in the local currency)/year) Average Velocity Increase (km/hour) Decrease of Annual Traffic Impassability Dates due to Disaster (days/year) An improvement in access to social infrastructure (schools, health centers, etc.) (people/day)			Indonesia	The Project for Construction of Bridges in the Province of Nusa Tenggara Barat (Phase II)	2009
		5-1-2. Enhancement of transportation safety and reliability	Roads and bridges (safety)	Effect indicators	Basic indicators Decrease of Annual Traffic Impassability Dates due to Disaster (days/year)		<ul style="list-style-type: none"> The objective of the project was to facilitate traffic flows and the distribution of goods by constructing a bridge in Manmunai over the Batticaloa Lagoon. Thereby, the project aimed to contribute to post-disaster reconstruction and flood control measures, as well as promoting socioeconomic development in the Eastern Province and providing a symbol of the consolidation of peace in reconstruction efforts. The objective of the project was to ensure safe and efficient traffic flows by reconstructing six bridges on Nias Island which are structurally dangerous due to damage caused by earthquakes. Some of the six bridges are on Provincial Road No. 75 which is the only trunk road on the island connecting Gunungsitoli (the largest city on the island) and Teluk Dalam (the second largest city on the island). 	Sri Lanka	The Project for Construction of Manmunai Bridge	2011
							<ul style="list-style-type: none"> The objective of the project was to ensure safe and efficient traffic flows by reconstructing six bridges on Nias Island which are structurally dangerous due to damage caused by earthquakes. Some of the six bridges are on Provincial Road No. 75 which is the only trunk road on the island connecting Gunungsitoli (the largest city on the island) and Teluk Dalam (the second largest city on the island). 	Indonesia	The Project for Improvement of Bridges in Nias Island	2009

(*) The development strategic objective "1. Capacity development of the transportation sector" was omitted because it does not apply to any grant aid projects. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

Examples of Setting Indicators for
Each Development Strategic
Objective

Grant Aid Projects/Standard Indicator Reference (Agricultural and Rural Development)

Objective	Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation	
1. Sustainable agricultural production	1-2. Improving, maintaining, conserving and managing production infrastructure	Land use and soil conservation	Developing and improving agricultural land	Operation indicators	Basic indicators Area of reclaimed land (ha)			The objectives of the project were to improve the productivity and the living standards of small-scale farmers in the project area by taking the following measures: the improvement of agricultural and social infrastructure mainly irrigation facilities (including reclamation and the construction of rural roads), as part of the participatory irrigation development governed by small-scale farmers, based on the agricultural development scheme for Bwanje Valley which is the least developed economically in Malawi.	Malawi	The Bwanje Valley Irrigation Development Project	2006	
				Effect indicators	Basic indicators Rice yield (t/ha)							
		Water management	Improving irrigation and drainage facilities	Operation indicators	Basic indicators Irrigation coverage (the percentage of farms to which irrigation water is delivered) Area of benefited by the project (ha) Cultivated area by crops (ha) Collection rate of irrigation water charge (%) Supplementary indicators Rate of water users groups (%)	Regarding the factors related to production, it is desirable to check national and provincial data (the data for the province where the project is conducted) at the same time.	The objective of the project was to increase the production of rice by supplying a sufficient amount of irrigation water through the improvement, of irrigation facilities, etc. in five municipalities in Cagayan, thereby contributing to poverty reduction.	The Philippines	The Project for Rehabilitation of Cagayan Irrigation Facilities	2008		
						Regarding the irrigation coverage, coverage in the rainy season and coverage in the dry season should be checked separately.					The objective of the project was to contribute to improving agricultural productivity by updating and increasing the number of drainage machines as well as by improving drainage in the Tan Chi area (6,240 ha) which was suffering from damage caused by the flood during heavy rain, due to a capacity shortage and the degradation (malfunctioning) of the drainage system (drainage pumps and drainage canals).	Vietnam
						Effect indicators	Basic indicators Production volume of major crops (tons/year) Yield of major crops per unit (tons/ha) Gross annual average farm income (yen/year/household) Supplementary indicators Net annual average farm income (yen/year/household) Operation and maintenance cost per unit area (yen/year/ha)		The objective of the project was to resolve bottlenecks of the whole system in the Chokwe Irrigation Scheme by repairing the main irrigation canals in the uppermost reaches of the Chokwe Irrigation Scheme.	Mozambique		
												Through the project, it was expected that a stable supply of irrigation water to the project area would be achieved, and the irrigated land area would be increased from 3,200 ha to 4,368 ha. It was also expected that the improvement in the efficiency of the facilities and the installation of pumps with an appropriate capacity would reduce the annual operation and maintenance expenses by about 10%, and by 35% per unit area. The project also aimed to increase the agricultural output (farmers' income) by about 18%, through the expansion of crop areas for high-value-added crops.

			Support activities for the creation of water users associations (as a soft component)	Operation indicators	Basic indicators Rate of water users group formulated (%)		<p>• In the areas along the levees of the Mekong River, the Tonlé Sap River and the Bassac River near the capital city Phnom Penh, a type of agriculture called Colmatage has been conducted since the 1940s. In the system, silty soil containing nutrients is channeled to the hinterlands when the rivers swell during the rainy season, using irrigation canals dug at right angles to the rivers. This made the areas the most fertile dry-field cropping areas in Cambodia. However, due to the civil war which lasted for over 20 years, the Colmatage irrigation system was left unmaintained and considerable damage and degradation left the system unable to support sufficient agricultural production. Therefore, the objectives of the project were to contribute to increasing the crop areas and yield as well as securing a stable supply of food for the target area and improving farmers' living standards, by improving the Colmatage irrigation system in the area and establishing a system for the maintenance of the irrigation system by the beneficiary farmers.</p>	Cambodia	The Project for Improvement of Facilities of Colmatage Systems in Kandal Province along the Mekong River	2006
				Effect indicators	Basic indicators Collection rate of irrigation water charge (%)					
1. Sustainable agricultural production	1-4. Capacity building for research and development	Strengthening testing, research and technological development	Equipment for testing and research institutes	Operation indicators	Basic indicators Experimental equipment operating rate (%)		<p>• Agriculture in China needs the following changes among others in order to achieve sustainable development in the 21st century: (1) switching from traditional agriculture to modern agriculture; (2) switching from extensive farming management to intensive farming management; and (3) securing a stable supply of food for its population which is forecasted to reach 1.6 billion by the end of the 21st century. In light of the situation, the project aimed to strengthen research and development as well as extension abilities for practical agricultural technologies at the Chinese Academy of Agricultural Sciences, with the aim of establishing agricultural technologies.</p>	The People's Republic of China	The Project for Improvement of Equipment for Japan China Research and Development Center for Agriculture Technology	2005
				Effect indicators	Supplementary indicators Number of testing and inspection reports					
3. Promoting vitality in rural areas	3-2. Improving the distribution and sale of food	Improvement of market infrastructure	Bridges and feeder roads	Operation indicators	Basic indicators Average time required to transport agricultural products to markets (minutes)		<p>• The objectives of the project were to ensure safe and smooth traffic flows as well as to streamline distribution in agrarian reform communities, by constructing a bridge over the Umiray River that separates Quezon and Aurora provinces.</p>	The Philippines	The Project for the Bridge Construction for Expanded Agrarian Reform Communities Development, Phase II (Umiray Bridge)	2011
				Effect indicators	<p>Basic indicators Increase in farmers' income in the target area through streamlining and increases in distribution in the target area Increase in the amount of agricultural products transported</p> <p>Supplementary indicators Increase in the amount of perishable products distributed (such as fruits - a good example to get an idea would be peaches.)</p>					
							<p>• The objectives of the project were to achieve the stable supply of agricultural water and improve access to markets by improving irrigation facilities and rural roads in the Dehsabz area, which is a suburb situated north of Kabul City. The project is part of the "Kabul Metropolitan Area Development" in the Rolling Plan for the Islamic Republic of Afghanistan.</p>	Afghanistan	The Project for Rehabilitation of Small Irrigation Facilities and Village Accessibility in Dehsabz Area, Kabul Province	2011

					Average time required to cross rivers (seconds) Decrease of Annual Traffic Impassability Dates due to swollen rivers and flooding disasters (days/year) Increase in agricultural product transportation capacity					
3. Promoting vitality in rural areas	3-2. Improving the distribution and sale of food	Improvement of rural roads	Rural road construction / maintenance equipment, rural roads and bridges	Operation indicators	Basic indicators Operating rate of rural road construction/maintenance equipment (%) Annual average daily traffic volume (vehicles/day, vehicles/12 hours) Supplementary indicators Increase in the load capacity of paved roads (axle load) (tons)	· The objectives of the project were to ensure safe and smooth traffic flows as well as to streamline distribution in agrarian reform communities, by constructing a bridge over the Umiray River that separates Quezon and Aurora provinces. · The objective of the project was to promote the construction of rural roads (161 km of rural roads and 74 km of farming roads, a total of 235 km) in six districts in Eastern Bhutan in the period between 2006 and 2009 (three years), by procuring rural road improvement equipment.	The Philippines	The Project for the Bridge Construction for Expanded Agrarian Reform Communities Development, Phase II (Umiray Bridge)	2011	
				Effect indicators	Basic indicators Total length of rural roads improved (km) Annual average daily traffic (AADT) (vehicles/day, vehicles/12 hours) Time Saving (hours) Increase in agricultural incomes through streamlined process of collection and shipment of agricultural products Supplementary indicators Vehicle Operation Cost Saving (hours, yen (and in the local currency)/year) Average Velocity Increase (km/hour) Decrease of Annual Traffic Impassability Dates due to swollen rivers and flooding disasters (days/year)		Bhutan	The Project for Improvement of Machinery and Equipment for Construction of Rural Agricultural Road (phase 2)	2009	
					· The objective of the project was to promote the improvement of 278 sections of farm roads (a total of 2,766 km) across the country in the period between 2005 and 2007 (three years), by procuring construction equipment for farm road improvement across the country.	Nicaragua	The Project for Complementation and Amplification of Construction Equipment for the Rehabilitation and Maintenance of the Rural Roads	2009		
					· The objectives of the project were to achieve the stable supply of agricultural water and improve access to markets by improving irrigation facilities and rural roads in the Dehsabz area, which is a suburb situated north of Kabul City. The project is part of the “Kabul Metropolitan Area Development” in the Rolling Plan for the Islamic Republic of Afghanistan.	Afghanistan	The Project for Rehabilitation of Small Irrigation Facilities and Village Accessibility in Dehsabz Area, Kabul Province	2011		
		Development of stockpiling systems	Development of stockpiling and storage warehouses	Operation indicators	Basic indicators Amount of food reserves (Mt) Population receiving food aid (households or people)	· The objective of the project was to increase stockpiling capacity by constructing warehouses for rice in the Bogra District in northwestern Bangladesh which is the nation’s granary, thereby contributing to the stable supply of food including during disasters and contributing to the food security of the country.	Bangladesh	The Project for Improvement of the Capacity of Public Food Storage in the People’s Republic of Bangladesh	2012	

3-6. Improving the rural living environment	Rural electrification (*2) and the development of water supply systems	Rural water supply wells	Operation indicators	Basic indicators Population supplied with water (people) Amount of water supplied (m ³ /day) Supplementary indicators Number of hours water was supplied (hours) Number of wells newly dug in the relevant villages (wells)		• The objectives of the project were to improve the productivity and the living standards of small-scale farmers in the project area by taking the following measures: the improvement of agricultural and social infrastructure mainly irrigation facilities, as part of the participatory irrigation development governed by small-scale farmers, based on the agricultural development scheme for Bwanje Valley which is the least developed economically in Malawi.	Malawi	The Bwanje Valley Irrigation Development Project	2006
			Effect indicators	Basic indicators Water supply coverage (%) Supplementary indicators Amount of water supplied per capita (L/person/day)					
3-8. Improving the health and education standard of rural residents	Improving health and medical services	Rural road improvement equipment and rural roads	Operation indicators	Basic indicators Operating rate for rural road improvement equipment (%)		• The objective of the project was to promote the improvement of 278 sections of farm roads (a total of 2,766 km) across the country in the period between 2005 and 2007 (three years), by procuring construction equipment for farm road improvement across the country.	Nicaragua	The Project for Complementation and Amplification of Construction Equipment for the Rehabilitation and Maintenance of the Rural Roads	2009
			Effect indicators	Basic indicators Total length of rural roads improved (km) Number of health centers to which access was improved Supplementary indicators Reduction in access times to the target facilities (hours)					
	Expansion of education services	Rural road improvement equipment, rural roads and bridges	Operation indicators	Basic indicators Operating rate for rural road improvement equipment (%)		• The objective of the project was to promote the improvement of 278 sections of farm roads (a total of 2,766 km) across the country in the period between 2005 and 2007 (three years), by procuring construction equipment for farm road improvement across the country. • The objectives of the project were to improve roads, construct bridges and improve irrigation canals by improving construction machinery, vehicles, supporting equipment, survey equipment and facility construction equipment that are needed to improve basic infrastructure as well as by giving guidance on construction management techniques, in the Achacachi Province in the La Paz Department.	Nicaragua	The Project for Complementation and Amplification of Construction Equipment for the Rehabilitation and Maintenance of the Rural Roads	2009
			Effect indicators	Basic indicators Total length of rural roads improved (km) Number of education facilities to which access was improved Number of students who became able to commute to schools due to the opening of bridges Supplementary indicators Reduction in access times to the target facilities (hours) Improvements in the enrollment ratio for elementary school first graders and the completion ratio			Bolivia	The Project for the Improvement of Village Development Equipment in the La Paz Department	2010

(*1) The development strategic objective "2. Stable food supply" was omitted because it does not apply to any grant aid projects. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

(*2) Indicators for "Rural electrification" will be added if there are applicable grant aid projects.

Grant Aid Projects/Standard Indicator Reference (Fisheries)

Examples of Setting Indicators for Each Development Strategic Objective

Development strategic objectives (*1)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
1. Effective utilization of fishery resources (stable food supply)	1-1. Increase in fishery production	1-1-2. Dissemination of appropriate fishing technologies	Vessels for skipjack pole and line fishing, fishery guidance vessels used for training, equipment for repairing outboard motors, etc.	Operation indicators	Basic indicators The monthly average operating rate of fishing vessels	(This column explains how to set each indicator, calculation standards and points to note when setting the indicators, among others.)	<ul style="list-style-type: none"> The objectives of the project were to increase the catch, increase the production of value-added products and enable continuous stable business management, by introducing two additional vessels for skipjack pole and line fishing to Soltai Fishing and Processing Ltd. (SFPL) on the Solomon Islands. The objectives of the project were to increase the safety and efficiency of fishing activities in a hygienic environment and to improve the fishermen's fishing technologies as well as to increase their rates of return, in Parita and Pedasi (which have high potential for development in the small-scale fishery field due to vigorous relevant activities taking place in the areas), through the following activities: developing fishing port facilities that will provide centers for fishing activities such as dry docking yards, goods handling shed, toilets, etc.; and procuring equipment for supporting the activities, such as fishery guidance vessels used for training. The objectives of the project were to improve the freshness of the catch, improve the system for ice production and supply and increase the operating rate of pirogues, by constructing small-scale fishery facilities (CECOPAK) and procuring goods handling equipment and repair tools for the Mboa-Manga fish-landing center in Kribi City, the Ocean Division, the South Province in the Republic of Cameroon. 	The Solomon Islands	The Project for Rehabilitation of the Domestic Tuna Fishery	2009
				Effect indicators	Basic indicators An increase in the handling of the catch Supplementary indicators An increase in the number of powered pirogues registered. An increase in the average daily number of powered pirogues in operation.			Panama	The Small-scale Fishery Development Project	2007
								Cameroon	The Project for the Improvement of Small-scale Fishery Center	2009
	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-1. The improvement of technologies for processing and preserving the freshness of the catch	Hygiene testing laboratories	Operation indicators	Basic indicators The number of hygiene tests performed in hygiene testing laboratories The number of times workshops on HACCP (a comprehensive hygiene management system) were held		<ul style="list-style-type: none"> The objective of the project was to improve fishery facilities in the Point Wharf area in Antigua and Barbuda, by repairing a quay, a revetment and a ramp as well as constructing a fish processing plant and a hygiene testing laboratory in the area. The objectives of the project were to improve hygiene conditions at the production and distribution stages by strengthening fish market functioning. Based on the improvement, the project aimed to supply hygienic and safe highly value-added fishery products to consumers in Kingstown and the surrounding areas. 	Antigua and Barbuda	The Project for Construction of Fisheries Center	2009
				Effect indicators	Basic indicators The number of those who have passed the HACCP course examination which is an examination on the food hygiene management system			St. Vincent	The Project for Re-Modeling of New Kingstown Fish Market	2008

1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-1. The improvement of technologies for processing and preserving the freshness of the catch	Fresh fish retailing facilities	Operation indicators Effect indicators	Basic indicators The utilization rate for retail booths Basic indicators A reduction in (illegal) sales by street stalls A reduction in the amount of fish rejected due to a decline in freshness The improvement in freshness and hygiene conditions during sale	<ul style="list-style-type: none"> The objectives of the project were to improve fishery product wholesale and retail functioning as well as the hygiene testing system in the Kenien area which neighbors a retail market directly controlled by the Conakry city authorities, by improving relevant facilities and equipment. The expected effects of the project were: (1) the improvement of frozen fish and fresh fish wholesale functioning, (2) the improvement of wholesale functioning for smoked fish to be supplied to the western Ratoma area, etc., (3) the improvement of fishery product retail functioning in Conakry particularly around the market; and (4) the strengthening of hygiene testing activities by the market administering agency.	Guinea	The Project for Construction of Fish Market at Kenien in Conakry	2007
			Freezers and refrigerators	Operation indicators Effect indicators	Basic indicators The amount stored The number of facility users Basic indicators A reduction in the amount of fish rejected due to a decline in freshness The stable supply of fishery products in fishery off-seasons	<ul style="list-style-type: none"> The objectives of the project were to improve fishery product wholesale and retail functioning as well as the hygiene testing system in the Kenien area which neighbors a retail market directly controlled by the Conakry city authorities, by improving relevant facilities and equipment. The expected effects of the project were: (1) the improvement of frozen fish and fresh fish wholesale functioning, (2) the improvement of wholesale functioning for smoked fish to be supplied to the western Ratoma area, etc., (3) the improvement of fishery product retail functioning in Conakry particularly around the market; and (5) the strengthening of hygiene testing activities by the market administering agency.	Guinea	The Project for Construction of Fish Market at Kenien in Conakry	2007
			Ice making and storage facilities	Operation indicators	Basic indicators The operating rate of ice makers (amount of ice production) Supplementary indicators Cumulative hours of operation for emergency generators	<ul style="list-style-type: none"> The objectives of the project were to improve hygiene conditions at the production and distribution stages by strengthening fish market functioning. Based on the improvement, the project aimed to supply hygienic and safe highly value-added fishery products to consumers in Kingstown and the surrounding areas. 	St. Vincent	The Project for Re-Modeling of New Kingstown Fish Market	2008
				Effect indicators	Basic indicators An increase in the amount of fresh fish handled The amount of frozen fish distributed to inland areas The amount of fresh fish	<ul style="list-style-type: none"> The objectives of the project were to increase fishery production through improving the efficiency of fishing activities and to preserve the freshness of the landed 	St. Lucia	The Project for Construction of Vieux Fort Fishery Complex	2005
						<ul style="list-style-type: none"> The objectives of the project were to restore and improve the functioning of Maputo Fishing Port by improving and expanding the port which had posed problems to a series of fishing activities due to the deterioration of infrastructure. 	Mozambique	The Project for Rehabilitation of Maputo Fishing Port (Phase II)	2005

1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure				exported Supplementary indicators A drop in the price of ice (an indicator which indirectly indicates the freshness of fishery products) The amount of ice sold at fishing ports (an indicator for freshness preservation effectiveness)	catch as well as to facilitate the stable supply of fishery products to the general consumer market. The project also aimed to benefit fishermen by improving the existing storage system used for price adjustment, in order to eliminate differences in the supply and the price of fish in the fishing seasons and the off-seasons. • At Praia fishing port, there were mainly three problems: (i) the quay being overcrowded due to fish-landing operations and the trading of fish, (ii) inefficient and unhygienic fish-landing operations and fish trading, and (iii) declining freshness of the catch and declining fish prices. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency; increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system. • The objective of the project was to reduce the loss of caught fish and increase the amount of catch handled at San Juan del Sur (SJDS) Port, by improving the fishery facilities and equipment at the port.	Cape Verde	The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)	2007
							Nicaragua	The Project for Improvement of Fishery Facilities at San Juan del Sur Port	2010
		1-4-2. The improvement of fish processing technologies	Fishery processing plants	Operation indicators	Basic indicators The amount of fishery processing product	• The objective of the project was to improve fishery facilities in the Point Wharf area in Antigua and Barbuda, by repairing a quay, a revetment and a ramp as well as constructing a fish processing plant and a hygiene testing laboratory in the area. • The objectives of the project were to streamline and stimulate distribution activities and to reduce the loss of caught fish which occurs in the distribution process, by improving the facilities within the fish market.	Antigua and Barbuda	The Project for Construction of Fisheries Center	2009
				Effect indicators	Basic indicators A reduction in the amount of caught fish lost or disposed of An increase in the amount of processed fishery products distributed (sold) Supplementary indicators An increase in the number of items and types of processed fishery products An improvement in the quality of processed fishery products				
1-4-3. The improvement of distribution facilities such as fishing ports and fish markets	Breakwaters	Operation indicators	Basic indicators The calmness of waters inside the harbor (the total number of days when the wave height was 0.3 m or less)	• The objectives of the project were to increase the safety and operational efficiency of the fishing activities and to increase the freshness of the catch, by constructing fishery facilities including breakwaters, a pier, ice making and storage facilities in Soufriere and Choiseul which are the main fish-landing areas.	St. Lucia	The Project for Improvement of Coastal Fisheries Development	2006		
		Effect indicators	Basic indicators A reduction in fishing vessel damage caused by stormy						

1. Effective utilization of fishery resources (stable food supply)	1-4. The improvement of fish processing and distribution, the improvement of fishery infrastructure	1-4-3. The improvement of distribution facilities such as fishing ports and fish markets			weather An increase in the number of workable days inside the harbor (a reduction in the impact of waves on work)					
			Fish-landing piers	Operation indicators	Basic Indicators The number of fishing vessels which used piers The sufficiency ratio of piers (the number of fishing vessels which used piers divided by the planned number of fishing vessels)		• The objectives of the project were to increase the safety and operational efficiency of the fishing activities and to increase the freshness of the catch, by constructing fishery facilities including breakwaters, a pier, ice making and storage facilities, etc. in Soufriere and Choiseul which are the main fish-landing areas.	St. Lucia	The Project for Improvement of Coastal Fisheries Development	2006
				Effect indicators	A reduction in the congestion rate at the existing piers A reduction in the time required for landing fish Supplementary indicators A reduction in the number of workers needed for landing fish from small-scale fishing vessels (an indicator which indirectly indicates the improvement of fish-landing efficiency)					
			Dredging, the installation of navigation beacons, etc.	Operation indicators	Basic indicators The amount dredged The number of dredging operations An increase in the number of vessels which called at the port An increase in the operating rate of liners		• The objectives of the project were to improve the efficiency of fish-landing operations at North Dock in Peleliu State and increase the operating rate of the regular ferries, by repairing and improving North Dock through the repair of the fish-landing center for fishing vessels, dredging, the installation of navigation beacons, etc.	Palau	The Project for the Improvement of North Dock of Peleliu State	2010
				Effect indicators	Basic indicators An increase in the amount of fish-landing work The elimination of fishing vessels' offshore waiting times The number of days when fully loaded liners can use the shipping lane A reduction in the time required for liners to pass through the shipping lane					
			The development of fishery complexes (which include storage facilities, administration offices, processing and	Operation indicators	Basic indicators The number of facility users The number of registered fishermen The number of registered fishing vessels The number of fishermen Supplementary indicators The fishermen's locker usage		• At Praia fishing port, there were problems including the quay being overcrowded due to fish-landing operations and the trading of fish, inefficient and unhygienic fish-landing operations and fish trading, declining freshness of the catch and declining fish prices, etc. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency;	Cape Verde	The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)	2007

			handling shed, retail markets and meeting rooms), the improvement and development of facilities for fisheries centers		rate An increase in the number of corporate fishing vessels		increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system.			
				Effect indicators	Basic indicators An increase in the handling of the catch Fishery output Income from facility operations (income from facility use fees, the volume of ice sales) A reduction in the time required for the handling of goods A reduction in the number of days when fish markets were suspended or closed due to rain Supplementary indicators A reduction in the amount of fishery products imported An increase in the number of FRP (fiber reinforced plastic) fishing vessels (the number of fishing vessels in operation for each type of vessel (unit: vessels/year))		<p>• The objectives of the project were to improve the operational efficiency of fishing vessels and to improve the distribution system for fishery products, by constructing and procuring fishing port facilities and equipment, including a fish-landing quay, goods handling shed and an ice maker for Cotonou Fishing Port.</p> <p>• The objectives of the project were to improve fish-landing efficiency at the fishing port and to improve the efficiency of fishery-related operations such as sales at the fish market, by repairing and improving the facilities of the fishing port, the fish markets and the fishery center at Apia Fisheries Wharf which is the hub for the fishing industry (a key industry in Samoa).</p>	Benin	The Project for the Improvement of Cotonou Fishing Port	2009
								Samoa	The Project for the Renovation and Extension of Apia Fisheries Wharf and Related Facilities	2010
2. Conservation and management of fishery resources	2-1. Fish stock assessment	2-1-1. The establishment of resource survey systems	The provision of research vessels	Operation indicators	Basic indicators The average annual number of voyages by research vessels The degree of the utilization of acoustic survey equipment		<p>• By providing a research vessel, the project aimed to achieve the following results: contribute to resolving urgent issues such as “controlling the decline of coastal bottom fish stocks” and “understanding the size of coastal pelagic fish stocks”; and clarifying the factors affecting the fluctuations in the size of the fish stocks such as fishing activities and changes in the marine environment. In addition, because coastal pelagic fish stocks including sardines are distributed across northwest Africa, the project also aimed to improve the infrastructural side of the system which enables joint research with neighboring countries in addition to research within Senegal’s exclusive economic zone.</p> <p>• The objectives of the project were to enable full-fledged research into pelagic fish stocks including sardines, thereby establishing the foundation for resources management-based fisheries, by providing a research vessel.</p>	Senegal	The Project for the Construction of a Fishery Research Vessel	2006
				Effect indicators	Basic indicators The improvement of fishery statistics			Morocco	The Project for the Construction of a Fishery Research Vessel	2005
2. Conservation and management of fishery resources	2-1. Fish stock assessment	2-1-3. Raising resources management awareness of governments and	The construction of fishery management training facilities (which include	Operation indicators	Basic indicators The number of officials who received training dedicated to government officials engaged in fishery management		• The project aimed to achieve the objectives shown below, by constructing a fishery management and training facility (including a fishery management office and a library) and improving relevant equipment such as	Mauritius	The Project for Upgrading and Renovation of the Management and Training Facilities	2008

		fishermen	fishery management offices and libraries), the improvement of relevant equipment including training equipment and workshop equipment	Effect indicators	Basic indicators The number of fishermen who switched fishing grounds from inside lagoons to outside lagoons	training and workshop equipment. (1) Encourage artisanal fishermen who have been operating inside lagoons to conduct fishing outside lagoons, by giving training on fishing technologies. (2) Conserve the marine environment and protect stocks, through thorough fishery management in fishing areas inside and outside the lagoons. (3) Give fishermen and the general public education to raise awareness about the conservation of the marine environment and the protection of stocks.		for Artisanal Fisheries	
	2-4. The production and release of eggs and fingerling	2-4-1. The establishment of aquaculture technologies	The improvement of facilities and equipment for conducting aquaculture research and technological development	Operation indicators	Basic indicators The operating rate of research equipment	<ul style="list-style-type: none"> The objective of the project was to promote research and technological development for sea fish aquaculture including technologies for the mass production of fingerling, by improving the facilities and equipment for research and technological development for sea fish aquaculture which had been insufficient. Through the promotion of the aquaculture industry, in the medium- and long-term, the project was expected to contribute to the diversification of job opportunities and the reduction of poverty for small-scale fishermen, the protection of marine resources and the stable supply of marine products to Vietnamese nationals. 	Vietnam	The Project for Construction of Marine Culture Research and Development Center in Nha Trang	2007
				Effect indicators	Basic indicators The number of brood fish raised The number of fingerling raised An increase in the hatching rate An increase in the survival rate				
3. Poverty reduction for fishermen and fishing villages (the promotion of vital fishing villages)	3-1. Increasing fishery income	3-1-1. Increasing the catch	The construction of facilities for small-scale fisheries (the construction of fish markets, ice making facilities, fishing gear warehouses and security light fittings, the provision of equipment such as ice makers, ice tanks, generators, etc.)	Operation indicators	Basic indicators The utilization rate of fish markets The utilization rate of ice making facilities The operating rate of generators	<ul style="list-style-type: none"> At Praia fishing port, there were problems including the quay being overcrowded due to fish-landing operations and the trading of fish, inefficient and unhygienic fish-landing operations and fish trading, declining freshness of the catch and declining fish prices, etc. Therefore, the project aimed at the following results through providing assistance: improving fishing efficiency; increasing the catch; ensuring safety in the shipping lanes and anchorage areas of fishing vessels; preservation of the freshness of the catch; water pollution prevention at the fishing port through the appropriate treatment of the catch; and the establishment of an appropriate management and administration system. The objectives of the project were to improve the freshness of the catch, improve the system for ice production and supply and increase the operating rate of pirogues, by constructing small-scale fishery facilities (CECOPAK) and procuring goods handling equipment and repair tools for the Mboa-Manga fish-landing center in Kribi City, the Ocean Division, the South Province 	Cape Verde	The Project for Extension of Fishing Port Infrastructure in Praia (Phase II)	2007
				Effect indicators	Basic indicators An increase in the handling of the catch An increase in fishermen's income				
							Cameroon	The Project for the Improvement of Small-scale Fishery Center	2004

							in the Republic of Cameroon.			
		3-1-2. Normalization of the price of the catch and increase in its value	The improvement of fish-landing and distribution facilities and facilities for supporting fishermen's activities, the improvement of storage for price adjustment	Effect indicators	Basic indicators An increase in the price of fish by the efficient, hygienic and fair trading of fish (auction) An increase in fishermen's income		<ul style="list-style-type: none"> The objectives of the project were to increase fishery production through improving the efficiency of fishing activities and to preserve the freshness of the landed catch as well as to facilitate the stable supply of fishery products to the general consumer market. The project also aimed to benefit fishermen by improving the existing storage system used for price adjustment, in order to eliminate differences in the supply and the price of fish in the fishing seasons and the off-seasons. 	St. Lucia	The Project for Construction of Vieux Fort Fishery Complex	1997
							<ul style="list-style-type: none"> The objectives of the project were to: (1) improve the safety and efficiency of fishing activities, (2) improve the distribution system for the catch, and (3) reduce the labor needed and the costs for fishing activities, by developing fish-landing and distribution facilities and facilities for supporting fishermen's activities, in a fishery village in Sidi Hsaine which faces the Mediterranean. 	Morocco	The Project for Developing an Artisanal Fishery Village in Sidi Hsaine (Phase I and Phase II)	2002
	3-1. Increasing fishery income	3-1-3. The reduction of fishing costs	The construction of breakwaters and quays for coastal fishing vessels, the provision of seawater pumps, security and tower lighting equipment	Operation indicators	Basic indicators The fishing port utilization rate by small-scale fishing vessels		<ul style="list-style-type: none"> The catch for Ghanaian food supply will increase and employment opportunities in fishery will increase. 	Ghana	The Project for Construction of Sekondi Fishing Port	2006
				Effect indicators	Basic indicators A reduction in vessel body repair costs An increase in fishery income due to a reduction in the vessel body repair costs An increase in fishermen's income					
3. Poverty reduction for fishermen and fishing villages (the promotion of vital fishing villages)	3-2. Income source diversification	3-2-1. Income increase through aquaculture	The improvement of facilities and equipment for conducting aquaculture research and technological development	Effect indicators	Basic indicators An increase in fishermen's income		<ul style="list-style-type: none"> The objective of the project was to promote research and technological development for sea fish aquaculture including technologies for the mass production of fingerling, by improving the facilities and equipment for research and technological development for sea fish aquaculture which had been insufficient. <p>Through the promotion of the aquaculture industry, in the medium- and long-term, the project was expected to contribute to the diversification of job opportunities and the reduction of poverty for small-scale fishermen, the protection of marine resources and the stable supply of marine products to Vietnamese nationals.</p>	Vietnam	The Project for Construction of Marine Culture Research and Development Center in Nha Trang	2002

4. Capacity development	4-1. Fishery administration	4-1-1. Enhancing the abilities of fishery administrative officers	The construction of fishery management training facilities (which include fishery management offices and libraries), the improvement of relevant equipment including training equipment and workshop equipment	Operation indicators	Basic indicators The number of officials who received training dedicated to government officials engaged in fishery management	<ul style="list-style-type: none"> The project aimed to achieve the objectives shown below, by constructing a fishery management and training facility (including a fishery management office and a library) and improving relevant equipment such as training and workshop equipment. (1) Encourage artisanal fishermen who have been operating inside lagoons to conduct fishing outside lagoons, by giving training on fishing technologies. (2) Conserve the marine environment and protect stocks, through thorough fishery management in fishing areas inside and outside the lagoons. (3) Give fishermen and the general public education to raise awareness about the conservation of the marine environment and the protection of stocks. 	Mauritius	The Project for Upgrading and Renovation of the Management and Training Facilities for Artisanal Fisheries	2007
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(*) The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were omitted.

Grant Aid Projects/Standard Indicator Reference (Energy)

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation				
1. Energy supply with low-cost, low-carbon, and low-risk	1-1. Develop a power source to realize a low-carbon society	1-1-1. Introduce highly efficient thermal power	Thermal power	Operation indicators	Basic indicators Maximum output (MW), electricity generated (kWh) Plant capacity factor (%) Gross thermal efficiency (generating-end) (%) A reduction in fuel consumption CO ₂ reduction ratio (%) (per unit of electricity generated) SO ₂ reduction ratio (%) (per unit of electricity generated) Supplementary indicators Availability factor (%) Auxiliary power ratio (%) The percentage of electricity generated by the generator provided by the grant aid project out of the total amount of electricity generated (%) Installed capacity of base load generation facilities Reserve margin	· Plant capacity factor (%) = Electricity generated per year / (rated output × hours per year) × 100 <To assess if the power plant is adequately operated> · Gross thermal efficiency = (Gross electricity generated per year × 860) / (fuel consumption per year × heat release value of the fuel) × 100 (To check the levels of performance retention and energy conservation levels) · Availability factor (%) = Operating hours per year / hours per year × 100 <To confirm the relevance of the original operation plan> · Auxiliary power ratio (%) = (Auxiliary electricity consumption per year / gross electricity generated) × 100 <To check the levels of performance retention> · Net electric energy production = (Rated output × hours per year × Plant capacity factor) or (Gross electricity generated – auxiliary electricity consumption) <To check if the assumed amount of electricity was actually generated > · Capacity of base load generation facilities: The capacity of power sources that generate the minimum required amount of electricity 24 hours a day except for inspection times · CO ₂ reduction ratio (%) (per unit of electricity generated) = (Emissions from the existing plant – emissions after the project) / (emissions from the existing plant) × 100 · SO ₂ reduction ratio (%) (per unit of electricity generated) = (Emissions from the existing plant – emissions after the project) / (emissions from the existing plant) × 100 · Dust reduction ratio (%) (per unit of electricity generated) = (Emissions from the existing plant – emissions after the project) / (emissions from the existing plant) × 100 · Fuel reduction ratio (%) (per unit of electricity generated) = (Fuel consumption at the existing plant – fuel consumption after the project) / (fuel consumption at the existing plant) × 100	In South Tarawa which is the capital city of the Republic of Kiribati, the existing power generation facilities were extremely deteriorated. A decline in their power generation capacity led to a notable supply capacity shortage and decline in the reliability in electricity supply. The distribution facilities were also in a very poor condition: they had more than a 20% power loss in addition to suffering from deterioration and a distribution capacity shortage. In order to improve the situation urgently, the project aimed to augment the power generation facilities and improve the distribution facilities. The objective of the project was to reduce electricity shortages in the country by providing two 5 MW diesel generators for the Aimeliik Power Plant on Babeldaob Island.	Kiribati	The Project for Upgrading of Electric Power Supply in Tarawa Atoll (Phase II)	2009				
						The objective of the project was to ensure a highly reliable, economical, and stable power supply in Dili through the rehabilitation of power generation facilities at Comoro Power Station. In South Tarawa which is the capital city of the Republic of Kiribati, the existing power generation facilities were extremely deteriorated. A decline in their power generation capacity led to a notable supply capacity shortage and decline in the reliability in electricity supply. The distribution facilities were also in a very poor condition: they had more than a 20% power loss in addition to suffering from deterioration and a distribution capacity shortage. In order to improve the situation urgently, the project aimed to augment the power generation facilities and improve the distribution facilities.	Palau	The Project for Enhancing Power Generation Capacity in the Urban Area in the Republic of Palau	2012					
							East Timor	The Project for Rehabilitation of Power Supply in Dili	2009					
							Kiribati	The Project for Upgrading of Electric Power Supply in Tarawa Atoll	2006					
							Effect indicators	Basic indicators Net electric energy production (sending-end) (annual) (MWh/year) Outage hours for every cause (hours/year or days/year) A reduction in fuel costs (yen) Electricity tariff (USD/kWh) Dust reduction ratio (%) (per unit of electricity generated) Fuel reduction ratio (%) (per unit of electricity generated) Values checked by environmental monitoring (SO ₂ , NO ₂ , suspended particles) Supplementary indicators Electric energy sold (kWh) The number of households consuming electricity (households) The number of individual contractors The number of commercial contractors The number of contracting	The objectives of the project were to recover the maximum output, improve the thermal efficiency and durability of Units 3 and 4 of steam turbine power generation facilities of the Gresik Thermal Power Plant located to the northwest of Surabaya in East Java Province, by rehabilitating the turbine system, replacement of the existing turbine rotor blades, the repair of feed pumps, and other measures. The objectives of the project was to recover the maximum output, reduce operating costs and contribute to reducing environmental impacts by rehabilitating the parts which had deteriorated through aging and completing the modification of power generation facilities into a gas-fired model at Units 1 and 2 of the Gresik Steam Power Plant which were constructed in 1975 and 1977 using a Japanese ODA loan. The modification of power generation facilities had been started independently by PT PLN (Persero), but it could not complete the work. Electricity for Siem Reap (the capital of Siem Reap Province) and for the neighboring areas had been supplied by four diesel generators given through	Indonesia	The Project for Rehabilitation of Gresik Steam Power Plant Units 3 and 4	2009		
											Indonesia	The Project for Rehabilitation of Gresik Steam Power Plant Units 1 and 2	2005	
												Cambodia	The Project for Expansion of Electricity	2007

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
1. Energy supply with low-cost, low-carbon, and low-risk	1-1. Develop a power source to realize a low-carbon society				government agencies The increase rate of the number of contractors (%) Outage times (times/year) Outage hours per year A reduction in voltage drops		grant aid from the former Soviet Union and four portable diesel generators leased by a domestic private business. However, the supply capacity of the leased generators and the generators made in the former Soviet Union which can only operate for a short time could not meet the increasing demand and there was a concern about a serious electricity shortage. Therefore, the Cambodian government requested that the Japanese government conduct the grant aid project in order to reduce electricity shortages in Siem Reap.		Supply Facilities in Siem Reap	
		1-1-2. Develop hydropower	Hydropower	Operation indicators	Basic indicators Plant capacity factor (%) Comprehensive circulating efficiency (%) Maximum output (MW), electric energy generated (GWh) Supplementary indicators Operating hours (hours) Hydro utilization factor (%) Annual total volume of inflow to the reservoir (m ³ /year) Volume of sedimentation in the reservoir (m ³ /year) The percentage of electricity generated by the generator subject to the project out of the total amount of electricity generated by the power plant (%) Expected life span of the equipment (years)	• Plant capacity factor (%) = Electricity generated per year / (rated output × hours per year) × 100 <To assess if the plant performance has been maintained and exhibited> • Comprehensive circulating efficiency (%) = (Net electric energy) ÷ (electricity used for pumping) × 100 <To assess if the power plant performance has been maintained> • Annual total volume of inflow to the reservoir: Annual total volume of inflow to the dam reservoir from rivers <Primary indicator to show dam control and drought conditions> • Hydro utilization factor = (Net electric energy) ÷ (possible power generation in a given year) × 100	The Bajina Basta Pumped Storage Hydroelectric Power Plant was constructed using a loan from the then Export-Import Bank of Japan and started commercial operations in 1982. However, due to the economic blockade from 1992 onwards, normal inspections and repairs could not be carried out similarly to other power plants. Over the past 10 years, the reversible pump-turbine and the generator-motor (which are the main parts of power generation facilities) have been damaged and have deteriorated, and it was greatly affecting the operation of the power generation facilities. The objectives of the project were to improve the electricity supply in the country and to contribute to the stabilization and the improvement of civic life, social and economic activities, by rehabilitating the power generation facilities and making them reliable.	Serbia	The Project for Rehabilitation of the Bajina Basta Pumped Storage Hydroelectric Power Plant (2nd term)	2008
				Effect indicators	Basic indicators Net electric energy production (sending-end) (GWh/year) Electrification rate of households (%) Electricity consumption (GWh) Unplanned outage hours (hours or days/year) Planned outage hours (hours) CO ₂ emissions reduction effect (tons/year) Supplementary indicators A reduction in fossil fuel consumption (tons/year) The number of failure cases (cases) Annual total income from electricity generation Maintenance costs		The objectives of the project were to restore the performance and reliability of electricity supply as well as to improve skills of technicians in charge, by rehabilitating the significantly deteriorating Unit No. 1 and Unit No. 2 of the Nam Ngum I Hydropower Station (located in Keo Oudom District, Vientiane Province) and their associated common equipment which were essential to their operation.	Laos	The Project for Rehabilitation of the Nam Ngum I Hydropower Station	2009
		1-1-3. Develop geothermal power	Geothermal power	Operation indicators	Basic indicators Maximum output (MW) Plant capacity factor (%) Gross thermal efficiency (generating-end) (%) Outage times for every cause Supplementary indicators Availability factor (%) Auxiliary power ratio (%) Outage times for every cause (times/year)					
				Effect indicators	Basic indicators Net electric energy production (sending-end) (annual) (MWh/year) Maximum output (actual value) CO ₂ emissions reduction effect					
		1-1-4. Develop new	Renewable	Photovoltaic	Operation indicators	Basic indicators	• The objectives of the project were to increase	Tajikistan	The Project for	2009

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure		Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
		energy sources/ renewable energy	energy	systems		Unplanned outage hours (hours or days/year) Plant capacity factor (%) Net electric energy production (sending-end) (MWh/year) Maximum output		power generation capacity, diversify energy sources and raise Tajikistan nationals' awareness about the utilization of renewable energy, by procuring photovoltaic power generation-related equipment and supporting the training of engineers, in the central district of the capital city Dushanbe. Thereby, the project aimed to contribute to Japan's initiatives in promoting both developed and developing countries' efforts on climate change measures. • The objectives of the project were to increase power generation capacity, diversify energy sources and raise Pakistani nationals' awareness about the utilization of renewable energy, by procuring photovoltaic power generation-related equipment and supporting the training of engineers, in Islamabad. Thereby, the project aimed to contribute to Japan's initiatives in promoting both developed and developing countries' efforts on climate change measures.	Pakistan	Introduction of Clean Energy by Solar Electricity Generation System	
					Effect indicators	Basic indicators CO ₂ emissions reduction effect (tons/year) Electrification rate of households (%) A reduction in electricity charges Supplementary indicators A reduction in fossil fuel consumption (tons/year) Annual amount of electric energy imported		• The objectives of the project were to increase power generation capacity, diversify energy sources and raise Marshallese nationals' awareness about the utilization of renewable energy, by procuring photovoltaic power generation-related equipment and supporting the training of engineers, in the capital city Majuro and its suburbs. Thereby, the project aimed to contribute to Japan's initiatives in promoting both developed and developing countries' efforts on climate change measures.	The Marshall Islands	The Project for Introduction of Clean Energy by Solar Electricity Generation System	2009
				Solar thermal systems	Operation indicators	Basic indicators Maximum output (MW) Plant capacity factor (%) Outage hours for every cause (human error, machine trouble and regular inspection) (hours/year) Supplementary indicators Facility availability factor (%) Gross thermal efficiency (generating-end) (%)		• The objectives of the project were to produce electricity to be supplied to the domestic electricity network and to use solar thermal energy as supplementary energy for power generation in order to reduce the environmental impacts of electricity supply by constructing a 150 MW integrated solar combined cycle power plant in Kuraymat district located about 100 km south of Cairo. Thereby, the project aimed to contribute to economic development and environmental improvement.	Egypt	The Kuraymat Integrated Solar Combined Cycle Power Plant Project (II) [Japanese ODA loan]	2008
					Effect indicators	Basic indicators Net electric energy production (sending-end) CO ₂ emissions reduction effect (tons/year)					
1. Energy supply with low-cost, low-carbon, and low-risk	1-1. Develop a power source to realize a low-carbon society	1-1-4. Develop new energy sources / renewable energy	Renewable energy	Wind power	Operation indicators	Basic indicators Plant capacity factor (%) Unplanned outage hours – due to mechanical outage Unplanned outage hours – due to other factors: natural disasters, etc. (hours or days) Planned outage hours (hours or days) Supplementary indicators Plant availability factor (%) or operating hours (hours) Maximum output (MW)	• Plant capacity factor = { Annual gross generated output (kWh) / rated output (kW) × annual hours } × 100 • Plant availability factor = { Annual operating hours / annual hours } × 100				
					Effect indicators	Basic indicators Net electric energy production (sending-end) CO ₂ emissions reduction effect (tons/year) Supplementary indicators	• Net electric energy production (sending-end) = Gross electric energy production (generating-end) (kWh) – plant auxiliary electric consumption (kWh) (the annual total)				

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
					A reduction in fossil fuel consumption (tons/year)					
	1-2. Efficient power system	1-2-1. Improve the electric power system	Transmission facilities	Operation indicators Basic indicators Availability factor Supplementary indicators Voltage drop at end user (%) Electricity supply at sending-end (GWh) Transmission loss (%) Transmission and transformation loss (%) Voltage	Basic indicators Availability factor Supplementary indicators Voltage drop at end user (%) Electricity supply at sending-end (GWh) Transmission loss (%) Transmission and transformation loss (%) Voltage	• Availability factor (%) = Maximum load (MW) / {rated capacity of the facility (MVA) × power factor} <To assess if the facility is properly operated> • Voltage drop at end user = Maximum voltage drop (V) / standard voltage (V) <To assess if the quality is maintained at the end user> • Electricity supply: Annual electric energy transmitted from the target electrical transformer <To confirm that the transmission lines and the substation are adequately utilized> • Transmission and transformation loss (%) = {Electricity supply (kWh) - electricity consumption at the substation (kWh) - receiving electric energy (kWh)} / electricity supply (kWh) <To confirm that the transmission lines and the substation are adequately utilized> • SAIDI = Sum of all customer outage hours / total number of customers served • SAIFI = Total number of customer outage / total number of customers served	The objective of the project was to ensure a stable electricity supply for the residents of the central area of the Kilimanjaro Region, by improving (e.g. updating and constructing) the electrical infrastructure, including substations and equipment for transmission and distribution facilities, in the area. Outages were frequently occurring in Dar es Salaam due to the excess load on deteriorated electricity supply facilities in the city. In order to solve the problem, there was a need for improvement and rehabilitation of the equipment for transmission, distribution and transformation as well as construction of new substations. In addition, the project aimed to promote socio-economic development by enabling the supply of electricity to potential users who had to wait for electricity supply due to a capacity shortage. The objective of the project was to ensure a more stable supply of electricity to the residents of Unguja Island in Zanzibar, by improving (e.g. updating and constructing) the electrical infrastructure, including substations and equipment for distribution facilities, on the island.	Tanzania	The Project for Rehabilitation of Substation and Transmission Line in Kilimanjaro Region	2010
				Effect indicators Basic indicators Accidental outage hours per user (min/year) SAIDI (System Average Interruption Duration Index) SAIFI (System Average Interruption Frequency Index) Supplementary indicators Outage times Outage frequency (times/day) Accidental outage hours (hours/month) Hours of supply restrictions (hours/month)	Basic indicators Accidental outage hours per user (min/year) SAIDI (System Average Interruption Duration Index) SAIFI (System Average Interruption Frequency Index) Supplementary indicators Outage times Outage frequency (times/day) Accidental outage hours (hours/month) Hours of supply restrictions (hours/month)	• SAIDI = Sum of all customer outage hours / total number of customers served • SAIFI = Total number of customer outage / total number of customers served	Outages were frequently occurring in Dar es Salaam due to the excess load on deteriorated electricity supply facilities in the city. In order to solve the problem, there was a need for improvement and rehabilitation of the equipment for transmission, distribution and transformation as well as construction of new substations. In addition, the project aimed to promote socio-economic development by enabling the supply of electricity to potential users who had to wait for electricity supply due to a capacity shortage. The objective of the project was to ensure a more stable supply of electricity to the residents of Unguja Island in Zanzibar, by improving (e.g. updating and constructing) the electrical infrastructure, including substations and equipment for distribution facilities, on the island.	Tanzania	The Project for Power Supply Expansion in Dar es Salaam (Phase 2) (a project evaluated by the Ministry of Foreign Affairs)	2005
		1-2-2. Improve distribution network	Distribution facilities	Operation indicators Basic indicators Peak load (kW) Supplementary indicators Installed capacity of the electricity supply facilities (MW)	Basic indicators Peak load (kW) Supplementary indicators Installed capacity of the electricity supply facilities (MW)	• Accidental outage hours per user (min/year) = Total outage hours per year (min) / the number of users • SAIDI = Sum of all customer outage hours / total number of customers served • SAIFI = Total number of customer outage / total number of customers served • Distribution loss (%) = Distribution loss (kWh) × 100 / electricity transmitted (kWh) <To grasp the degree of distribution loss reduction> • Index of Progress of Distribution Network Automation: Set the indicator appropriately, considering the staff who engage in the maintenance of distribution cables (the number of persons) and personnel costs. <To grasp the degree of reduction in the number of staff and the personnel cost>	The objective of the project was to supply highly reliable electric power to the center of Katmandu city, by constructing a new substation for distribution lines (K3 substation) and by extending high voltage underground transmission lines from existing substations (Teku and Siuchatar substations) to the new substation. The areas subject to the project are important areas in the Phnom Penh metropolitan area, but many parts of the areas had not been electrified. In the electrified parts of the areas, demand had not been met due to capacity shortages and the poor quality of electricity. These problems caused the stagnation of industrial activities, accompanying declines in employment opportunities and unstable public welfare in the areas. In addition, there were large economic losses caused by increasing power loss and maintenance costs. In order to improve the situation, the project aimed to improve and expand the power distribution facilities that are needed to electrify the non-electrified parts of the areas, improve the electricity supply service and reduce power loss.	Nepal	The Project for the Extension and Reinforcement of Power Transmission and Distribution System in Kathmandu Valley (Phase 3)	2009
				Effect indicators Basic indicators Accidental outage hours per user (min/year) SAIDI (System Average Interruption Duration Index) SAIFI (System Average Interruption Frequency Index) Supplementary indicators Accidental outage hours (hours/month) Planned outage hours (hours/year) Unplanned outage hours (hours/year) Distribution loss (%) Distribution loss (MW) Index of Progress of Distribution Network Automation CO ₂ emissions reduction effect (tons/year)	Basic indicators Accidental outage hours per user (min/year) SAIDI (System Average Interruption Duration Index) SAIFI (System Average Interruption Frequency Index) Supplementary indicators Accidental outage hours (hours/month) Planned outage hours (hours/year) Unplanned outage hours (hours/year) Distribution loss (%) Distribution loss (MW) Index of Progress of Distribution Network Automation CO ₂ emissions reduction effect (tons/year)	• Index of Progress of Distribution Network Automation: Set the indicator appropriately, considering the staff who engage in the maintenance of distribution cables (the number of persons) and personnel costs. <To grasp the degree of reduction in the number of staff and the personnel cost>	The areas subject to the project are important areas in the Phnom Penh metropolitan area, but many parts of the areas had not been electrified. In the electrified parts of the areas, demand had not been met due to capacity shortages and the poor quality of electricity. These problems caused the stagnation of industrial activities, accompanying declines in employment opportunities and unstable public welfare in the areas. In addition, there were large economic losses caused by increasing power loss and maintenance costs. In order to improve the situation, the project aimed to improve and expand the power distribution facilities that are needed to electrify the non-electrified parts of the areas, improve the electricity supply service and reduce power loss.	Cambodia	The Project for Rehabilitation and Upgrading of Electricity Supply Facilities in Phnom Penh (Phase 2)	2005
1. Energy supply with low-cost, low-carbon, and low-risk	1-3. Improve energy access	1-3-1. Extend the power grid	Transmission and distribution facilities	Operation indicators Basic indicators Availability factor (%) The number of electrified rural centers or villages The number of households	Basic indicators Availability factor (%) The number of electrified rural centers or villages The number of households	• Availability factor (%) = Maximum load (MW) / {rated capacity of the facility (MVA) × power factor} <To assess if the facility is properly operated>	The objective of the project was to supply highly reliable electric power to the center of Katmandu city, by constructing a new substation for distribution lines (K3 substation) and by extending high voltage underground transmission lines from	Nepal	The Project for the Extension and Reinforcement of Power	2009

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
					<p>electrified (or the electrification rate of households (%))</p> <p>Installed capacity of the electricity supply facilities (kW)</p> <p>The length of distribution line/cables newly installed (km)</p> <p>Supplementary indicators</p> <p>Voltage drop at end user (%)</p> <p>Electricity supply at sending-end (GWh) (kWh)</p> <p>Transmission and transformation loss (%)</p>	<p>• Electrification rate of households (%) = Number of households electrified × 100 / total number of households <To grasp the increased demand></p> <p>• Voltage drop at end user = Maximum voltage drop (V) / standard voltage (V) <To assess if the quality is maintained at the end user></p> <p>• Electricity supply: Annual electric energy transmitted from the target electrical transformer <To confirm that the transmission lines and the substation are adequately utilized></p> <p>• Transmission and transformation loss (%) = {Electricity supply (kWh) - electricity consumption at the substation (kWh) - receiving electric energy (kWh)} / electricity supply (kWh) <To confirm that the transmission lines and the substation are adequately utilized></p>	<p>existing substations (Teku and Siuchatar substations) to the new substation.</p> <p>Outages were frequently occurring in Dar es Salaam due to the excess load on deteriorated electricity supply facilities in the city. In order to solve the problem, there was a need for improvement and rehabilitation in the equipment for transmission, distribution and transformation as well as construction of new substations. In addition, the project aimed to promote socio-economic development by enabling the supply of electricity to potential users who had to wait for electricity supply due to a capacity shortage.</p> <p>Commewijne District (population 24,000) and Saramacca District (population 15,000) in Suriname, neighbor Paramaribo the capital city and their residential populations are increasing. However, some parts of the districts had no distribution lines, or their power grids were isolated or very unstable. Therefore, the objectives of the project were to ensure the stable supply of electricity to a larger number of residents and to promote the development of local industries, by connecting the power grids of the districts with the one in Paramaribo as well as expanding the distribution networks in the districts.</p> <p>The objective of the project was to achieve a stable supply of electricity to non-electrified areas, by developing transmission networks in the four areas which were designated as priority areas in the rural electrification master plan made by the Uganda government.</p> <p>The objective of the project was to supply electricity to an additional 16,000 residents or so (at the time of the basic design study), by developing transmission and distribution networks in the non-electrified Amansie West District in the Ashanti Region. Thereby, the project was expected to improve the living conditions of local residents through enabling the use of electric appliances in their homes and public facilities.</p> <p>It was also expected that the electricity supply would reduce energy-related expenditures by residents.</p>	Tanzania	The Project for Power Supply Expansion in Dar es Salaam (Phase 2)	2005
								Suriname	The Project for Expansion of Transmission and Distribution Grid for the Districts Commewijne and Saramacca	2005
								Uganda	The Rural Electrification Project	2006
								Ghana	The Project for Rural Electrification (2nd term)	2008
				Effect indicators	<p>Basic indicators</p> <p>Beneficiary population (people)</p> <p>Supplementary indicators</p> <p><Indicators related to the electrification of rural centers></p> <p>The number or percentage of public facilities and business establishments where electric lights were introduced (public facilities: schools (classrooms), health centers, government facilities, streetlights, public markets, etc.)</p> <p>The number of public facilities where PCs were introduced (schools, government facilities, public markets, etc.)</p>		<p>The objective of the project was to ensure a highly reliable, economical, and stable power supply in Dili through the rehabilitation of power generation facilities at Comoro Power Station.</p> <p>The objective of the project was to supply electricity to an additional 16,000 residents or so (at the time of the basic design study), by developing transmission and distribution networks in the non-electrified Amansie West District in the Ashanti Region. Thereby, the project was expected to improve the living conditions of local residents through enabling the use of electric appliances in their homes and public facilities.</p> <p>It was also expected that the electricity supply</p>	East Timor	The Project for Rehabilitation of Power Distribution Network in Dili	2008
								Ghana	The Project for Rural Electrification (1st term)	2007

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure		Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
1. Energy supply with low-cost, low-carbon, and low-risk	1-3. Improve energy access	1-3-2. Electrify off-grid communities by utilizing renewable energy	Renewable energy	Photovoltaic power, small hydropower, wind power, etc.	Operation indicators	<p>The number of health centers, etc. where major pieces of equipment were introduced such as refrigerators for storing vaccines and drugs, and equipment for sterilization and disinfection treatments</p> <p>The number of electric pumps installed which will contribute to rural water supply, irrigation, etc.</p> <p><Indicators related to the electrification of individual households></p> <p>Power generation capacity (kW)</p> <p>The number of houses where electric lights have been installed</p>		<p>would reduce energy-related expenditures by residents.</p> <p>In Nigeria, the electrification rate in rural areas is very low. In order to supply good quality stable electricity to rural areas in the medium to long term, the government planned to connect rural areas with existing transmission networks and electrify the areas. However, implementation was difficult due to the tight financial situation. In light of the situation, the project procured the materials and equipment for transmission and distribution which were needed to implement its Rural Electrification Projects in five areas with particularly low electrification rates: Awe and Keana in Nasarawa state, Bogoro in Bauchi state, Kashingi in Gombe state, and Damasak in Borno state.</p> <p>The Nigerian government prioritizes infrastructure development in its national policies. In particular, it places the highest priority on the electricity sector among all types of infrastructure and wants to improve the living conditions of rural residents, improve administrative and public services and develop industry by promoting rural electrification. In order to contribute to the achievement of these goals, the project aimed to electrify non-electrified areas.</p>	Nigeria	The Project for Rural Electrification (3rd term) (a project evaluated by the Ministry of Foreign Affairs)	2007
									Nigeria	The Project for Rural Electrification (1st term) (a project evaluated by the Ministry of Foreign Affairs)	2005
					Effect indicators	<p>Basic indicators</p> <p>The number of electrified rural centers or villages</p> <p>The number of households electrified (or the electrification rate of households (%))</p> <p>Supplementary indicators</p> <p>Installed capacity per electricity supply system (Wp) (photovoltaic power)</p> <p>Unplanned outage hours (hours or days/year) (hydropower)</p> <p>Unplanned outage hours for each type of cause (wind power)</p> <p>Planned outage hours (hours or days) (wind power)</p> <p>Plant capacity factor (%) (hydropower/wind power)</p> <p>Net electric energy production (MWh/year) (hydropower/wind power)</p> <p>Maximum output (hydropower/wind power)</p> <p>Plant availability factor (%) or operating hours (hours) (wind power)</p>	<p>• Plant capacity factor (%) (hydropower) = (Net electric energy) ÷ (maximum output × hours per year) × 100</p> <p>• Unplanned outage hours should be calculated for two types of causes: mechanical outage and outage due to other factors (natural disasters, etc.)</p> <p>• Plant capacity factor (%) (wind power) = {Annual gross generated output (kWh) / rated output (kW) × annual hours} × 100</p> <p>• Plant availability factor = {Annual operating hours / annual hours} × 100</p> <p>• Net electric energy production = Gross electric energy production (kWh) – plant auxiliary electric consumption (kWh) (the annual total) (wind power)</p>	<p>• The objectives of the project were to increase the electrification rate, diversify energy sources and raise Tongan people's awareness about the utilization of renewable energy, by procuring photovoltaic power generation-related equipment and supporting the training of engineers, in parts of the Vava'u Islands and the Tongatapu island group (the electrification of non-electrified areas and outlying islands). Thereby, the project aimed to contribute to Japan's initiatives in promoting both developed and developing countries' efforts on climate change measures.</p> <p>• The objectives of the project were to reduce electricity imports from China and to stabilize the electricity at power grid terminals by constructing a mini-hydropower plant in Gnod ou District, Phongsaly Province. The project also aimed to contribute to achieving the Laos government's rural electrification goals by increasing the electrification rate of Gnod ou District, Phongsaly Province, through extending distribution cables to surrounding non-electrified villages.</p> <p>• The objectives of the project were to provide reliable power supplies and diversify energy sources in rural regions, by constructing a small hydropower plant and rehabilitating an existing small hydropower plant in Rattanakiri Province in the northeastern part of Cambodia. Thereby, the project aimed to contribute to the social economic development of Cambodia and the reduction of greenhouse gas emissions.</p> <p>• The objectives of the project were to promote the use of renewable energy and to use the revenues from power generation to augment the Rice Terraces Conservation Fund, by constructing the Likud mini-hydropower plant (maximum output 820 kW) in Haliap barangay in Asipulo municipality, the Province of Ifugao. Thereby, the project aimed to contribute to energy source</p>	Tonga	The Project for Introduction of Clean Energy by Solar Home System	2009
									Laos	The Mini-Hydropower Development Project	2012
									Cambodia	The Project for Construction and Rehabilitation of Small Hydropower Plants in Rattanakiri Province	2012
									The Philippines	The Mini-Hydropower Development Project in the Province of Ifugao	2012

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure		Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
						<p>facilities and business establishments where electric lights were introduced (public facilities: schools (classrooms), health centers, government facilities, streetlights, public markets, etc.)</p> <p>The number of public facilities where PCs were introduced (schools, government facilities, public markets, etc.)</p> <p>The number of health centers, etc. where major pieces of equipment were introduced such as refrigerators for storing vaccines and drugs, and equipment for sterilization and disinfection treatments</p>		<p>diversification, the local electricity supply and the reduction of greenhouse gas emissions.</p> <p>The objective of the project was to promote the use of renewable energy by constructing micro/mini hydropower plants in the irrigated areas of rural regions in the Philippines, thereby contributing to the diversification of energy sources, the reduction of greenhouse gas emissions and increasing the electricity supply coverage in the areas.</p> <p>The objectives of the project were to promote the use of renewable energy and the efficient management of water treatment stations (a reduction in electricity bought) which are managed by National Autonomous Water and Sewerage Service (SANAA), by constructing micro-hydroelectric power generation plants (total output 430 kW) using unused hydro-energy within the water treatment stations. Thereby, the project aimed to contribute to the economic and social development of Honduras and the reduction of greenhouse gas emissions.</p>	<p>The Philippines</p> <p>Honduras</p>	<p>The Micro/Mini Hydropower Development Project (Irrigation)</p> <p>The Micro-Hydroelectric Power Generation Project in Metropolitan area of Tegucigalpa</p>	<p>2012</p> <p>2012</p>

Grant Aid Projects/Standard Indicator Reference (Information and Communication Technology)

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for creating indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
2. Development of human resources to support ICT	2-3. Improvement in ICT literacy	2-3-3. Introduction of ICT in education	The development of IT-related education facilities and the provision of equipment (audio and video systems, remote education equipment)	Operation indicators	Basic indicators (1) The number of participants in the courses (2) The number of ICT-related curriculums (courses/year) (3) ICT-related courses for adults (hours/week) (4) The number of countries which can be connected to a large classroom simultaneously	For the operation indicator (1) shown on the left, compare before and after the project. For (2), count the number of courses which became possible through the development and provision of facilities and equipment. For (3), count the number of courses which became possible through the development and provision of facilities and equipment.	• The objectives of the project were to improve ICT education and training functions and ICT human resource development functions at the University of the South Pacific (USP) in Fiji, by developing ICT and remote education facilities as well as research and development environments, at the headquarters of the USP.	Fiji	The Project for Construction of Information and Communication Technology Center at the University of the South Pacific (2nd term)	2009
			Satellite connection systems, wireless and wired connection management systems, antenna equipment, etc.	Effect indicators	Supplementary indicators (1) The number of students who received ICT-related bachelor's degrees (2) The satisfaction levels for the learning environment	For (4), the assumption is that satellite or other communication systems can be used if transmission and reception equipment has been put in place. For the effect indicator (1), compare before and after the project. For (2), it is desirable to assess the satisfaction levels quantitatively as much as possible, through questionnaire surveys, etc.				
				Operation indicators	Basic indicators (1) The number of remote participants on courses (2) The number of remote education programs provided (3) The number of subjects in remote education programs	For the operation indicator (1) shown on the left, compare before and after the project. For (2), count the number of programs which became possible through the development and provision of facilities and equipment. For (3), count the number of subjects which became possible through the development and provision of facilities and equipment.	• Through the construction of the University of the South Pacific communication network (USPNet), the objectives of the project were to improve the USP's remote education and contribute to opportunity expansion and quality improvements in higher education in island countries, by improving the communication system between the university headquarters and USP centers in member countries and regions.	Fiji	The Project for Upgrade of USPNet Communication System (a project evaluated by the Ministry of Foreign Affairs)	2006
				Effect indicators	Supplementary indicators (1) The school enrollment ratios in remote areas (outlying islands) (2) Remote education participants' satisfaction levels for the learning environment	For the effect indicator (1), compare before and after the project. For (2), it is desirable to assess the satisfaction levels quantitatively as much as possible, through				

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for creating indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
						questionnaire surveys, etc.				
3. Development of ICT infrastructure	3-1. Development of ICT infrastructure	3-1-1. Development of a backbone network	The development of an international telephone switching system	Operation indicators	Basic indicators Telephone main lines in operation-to-exchange capacity ratio (%) Enabling international calls from all wired phones and cell phones Supplementary indicators Telephone traffic (international) Call completion rate (%)	Telephone main lines in operation-to-exchange capacity ratio (%): Rate of the number of lines in operation in a switching facility (n) to the capacity of the facility (N); (n/N) International traffic: Traffic that is transmitted from a given country to a foreign country and traffic that arrives from a foreign country into the country The telephone traffic and the call completion ratio are “basic indicators” in the Operation and Effect References for Japanese ODA Loans, but they are included in the supplementary indicators because the data is very difficult to obtain in countries eligible to receive grant aid.	1) Maintaining the stable supply of international telephone services: The project aimed to ensure the stable supply of international telephone services across Laos. It also aimed to ensure convenience for the people of Laos by meeting the demands of the people, the government and businesses for international calls and by providing the services needed for the general public and government personnel to make international phone calls, as well as enabling the use of international telephone services by the tourist industry, trading businesses, etc. Thereby, the project aimed to ensure the convenience of people and provide infrastructure for the political and economic development of the country. 2) The reduction of relay fee expenditures: The project aimed to enable the avoidance of unnecessary relay fee expenditures by eliminating the future possibility of unnecessary relays in third countries for international calls, through the introduction of the international signaling system No. 7 protocol, so that direct communications with a counterpart country can be set up.	Laos	The Project for Improvement of International Telephone Switching System (a project evaluated by the Ministry of Foreign Affairs)	2008
				Effect indicators	Basic indicators A reduction in third-country relay fee expenditures Waiting list for main lines	Call completion rate: Ratio of the number of calls connected (n) among the number of calls tried (N); (n/N)				
3. Development of ICT infrastructure	3-1. Development of ICT infrastructure	3-1-1. Development of a backbone network	Expansion of phone lines	Operation indicators	Basic indicators Telephone main lines in operation-to-exchange capacity ratio (%) Supplementary indicators Telephone traffic – local, toll, or international Call completion rate (%)	Local traffic: Traffic that is exchanged within the area covered by the inner city switching facility Toll traffic: Traffic that is exchanged through a point outside the area covered by the inner city switching facility	• The objectives of the project were to improve telephone density, reduce the rate of fault reports, etc. and to support infrastructure development for the introduction of IT, by improving the obsolete telephone network which has many faults and marked quality deterioration, in Terra Nova in Luanda the capital city of Angola.	Angola	The Project for Rehabilitation of Telephone Network in Luanda Phase 2 (3rd term) (a project evaluated by the Ministry of Foreign Affairs)	2007
				Effect indicators	Basic indicators Telephone density per 100 population Rate of fault reports per 100 population per year Rate of telephone network faults fixed within 24 hours Waiting list for main lines	Telephone traffic: Number of calls × average holding time				

(*) The development strategic objectives which do not apply to any grant aid projects were omitted. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

Grant Aid Projects/Standard Indicator Reference (Broadcasting)

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
3. Development of broadcasting facilities and equipment	3-1. Development of broadcasting infrastructure	3-1-1. Development of facilities and equipment at broadcasting stations	TV broadcasting equipment	Operation indicators	Basic indicators TV broadcasting hours per day Total broadcasting hours of self-produced TV Programs Area coverage for TV viewing	For all the operation and effect indicators except for “viewer satisfaction levels,” compare before and after the project.	<ul style="list-style-type: none"> In order to support the reconstruction of Afghanistan and the consolidation of peace, the objective of the project was to ensure that the Kabul TV Broadcasting Station (headquarters) can produce programs without problems, by providing equipment, etc. for the production of programs at the station’s studios, so that the station can provide necessary information to Afghan people. The objective of the project was to maintain or improve local program production and broadcasting abilities in the eastern part of Indonesia, by updating and improving equipment for program production at the Makassar substation of TVRI (Television of the Republic of Indonesia). 	Afghanistan	The Project for Improvement of TV Broadcasting Equipment in Kabul	2007
					Supplementary indicators Total broadcasting hours of multi-language TV programs The number of TV programs in multi-language.					
				Effect indicators	Basic indicators Viewer’s satisfaction The number of TV viewers.	It is desirable to assess “viewer satisfaction levels” quantitatively as much as possible, through questionnaire surveys, etc.	<ul style="list-style-type: none"> The objectives of the project were to improve and continue TV broadcasting by RTS (Radiodiffusion Télévision Sénégalaise), by replacing obsolete analogue equipment with digital equipment which is needed for efficient voice dubbing and quality improvement. 	Indonesia	The Project for Improvement of Broadcasting Equipment for Television of the Republic of Indonesia (TVRI) Makassar Station	2008
					Supplementary indicators The number of TV broadcasting channels					
			Radio broadcasting equipment	Operation indicators	Basic indicators The number of radio broadcasting hours per day The number of radio programs	For all the operation and effect indicators except for “listener satisfaction levels,” compare before and after the project.	<ul style="list-style-type: none"> The objective of the project was to establish a broadcasting network which covers about 80% of the Tanzanian population by providing equipment needed for Radio Tanzania Dar es Salaam (RTD) (which is one of the Tanzania Broadcasting Corporation’s stations) to broadcast education programs. Thereby, the project aimed to contribute to increasing education opportunities and resolve education disparities between areas. 	Tanzania	The Project for Strengthening the Radio Broadcasting for School Education by Improving the Quality of Education and Promotion of Equal Access to Education	2005
					Supplementary indicators The percentage of school education programs out of all radio programs broadcasted					
				Effect indicators	Basic indicators Listener satisfaction levels The number of listeners	It is desirable to assess “listener satisfaction levels” quantitatively as much as possible, through questionnaire surveys, etc.	<ul style="list-style-type: none"> The implementation of the project was expected to bring about the following results: program production functions of the rural radio station and the national radio station will be improved and this will enable the efficient production of programs in the socio-economic field and the education field, which in turn will enable various awareness raising activities for people and increase their willingness to learn. 	Burkina Faso	The Project for Improvement of Equipment in the National Radio Station in Burkina Faso	2008
					Supplementary indicator The number of channels The literacy rate in rural areas through the nationwide broadcasting of radio education programs The vaccination rate of rural residents through the nationwide broadcasting of health information radio programs					
			Development of radio broadcasting transmitting systems	Operation indicators	Basic indicators The hours for which radio broadcasting is possible	For all the operation and effect indicators except for “listener satisfaction levels,” compare before and after the project.	<ul style="list-style-type: none"> The objective of the project was to increase the country’s ability to transmit emergency information to residents in times of disaster, by improving shortwave radio broadcasting (which covers the entire country) so that it can broadcast around the clock, in the Solomon Islands which is prone to natural disasters such as earthquakes, tsunamis and cyclones. 	The Solomon Islands	The Project for the Improvement of Radio Broadcasting Network for Administration of Disaster Prevention	2010
					Effect indicators Basic indicators The number of times emergency		<ul style="list-style-type: none"> (1) The average population coverage by the five stations will increase from 20% 			

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for setting indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
3. Development of broadcasting facilities and equipment	3-1. Development of broadcasting infrastructure	3-1-1. Development of facilities and equipment at broadcasting stations	Development of radio broadcasting transmitting systems		information was transmitted The coverage ratio of the population who can receive radio broadcasts (%) Population benefiting from radio broadcasting The radio broadcasting service area (%) The number of radio listeners		to 83%. The beneficiary population will increase from 326,000 to 1.36 million. (2) The area covered by the five stations will expand from 12,000 km ² to 32,500 km ² in total. (3) Through the introduction of FM medium-wave broadcasting and the addition of equipment at some studios, the broadcasting quality will improve dramatically and this, in combination with program improvement, is expected to increase the number of listeners.		Equipment of the National Broadcasting Corporation	
		3-1-2. Expansion and development of broadcasting networks	TV transmitting stations and transmitters	Operation indicators	Basic indicators The coverage of TV reception The TV broadcasting hours	For all the operation and effect indicators, compare before and after the project.	• The objectives of the project were to expand the broadcast area and extend the hours of broadcasting in Kabul, by reconstructing the transmitting station and procuring transmitting equipment for Mt. Asmayi in Kabul, as well as by renovating the TV Studio Center.	Afghanistan	The Project for Improvement of TV Broadcasting Facilities in Kabul	2009
				Effect indicators	Basic indicators The number of times emergency information was transmitted The number of TV viewers The percentage of TV viewing households The number of TV programs					
			Radio transmitting stations and transmitters	Operation indicators	Basic indicators The coverage of radio reception The radio broadcasting hours The percentage of the population who can receive radio broadcasts Supplementary indicators The number of outlying islands with radio reception	Operation indicators: Compare before and after the project. Effect indicators: Compare before and after the project.	• The objective of the project was to reduce information disparities between outlying island areas and other parts of Tuvalu, by developing a medium wave radio broadcasting network which stably provides highly reliable information to the entire country including the outlying islands. Thereby, the project aimed to contribute to improving natural disaster control abilities regarding cyclones, storm surges, etc. • The objective of the project was to recover the broadcasting service area which has gone down to a little less than 50% of the country to at least 90%, by installing shortwave radio transmitting equipment at transmitting stations (in Ulaanbaatar, Altai and Murun) managed by Mongolian State-run Radio and Television (the current Radio and Television Network Station), which is responsible for radio broadcasting in Mongolia. • The objective of the project was to establish a broadcasting network which covers about 80% of the Tanzanian population by providing equipment needed for Radio Tanzania Dar es Salaam (RTD) (which is one of the Tanzania Broadcasting Corporation's stations) to broadcast education programs. Thereby, the project aimed to contribute to increasing education opportunities and resolve education disparities between areas.	Tuvalu	The Project for Improvement of Medium Wave Radio Broadcasting Network and Disaster Prevention	2010
				Effect indicators	Basic indicators The number of times emergency information was transmitted The expansion of coverage of good radio reception The size of the population that can listen to good quality radio The radio broadcasting service area (%) Supplementary indicators Power saving effect (achieved by the introduction of shortwave broadcasting which consumes less power) (%)					
								Mongolia	The Project for Improvement of Shortwave Radio Broadcasting Network	2007
								Tanzania	The Project for Strengthening the Radio Broadcasting for School Education by Improving the Quality of Education and Promotion of Equal Access to Education	2005

(*) The development strategic objectives which do not apply to any grant aid projects were omitted. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.

Grant Aid Projects/Standard Indicator Reference (Solid Waste Management)

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for creating indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
2. Technical improvement to achieve appropriate solid waste management	2-2. Improving collection and transportation	2-2-2 and 2-2-3. Expansion of collection coverage and more efficient collection and improved service	Waste collection and transportation vehicles (packer trucks, detachable container trucks, compactor trucks with container reversing gear, etc.), containers, sets of equipment and tools for inspection and repair of collection and transportation vehicles	Operation indicators	Basic indicators The amount of waste collected (tons/day) The waste collection rate (%) (the annual amount of waste collected / the annual amount of waste generated) The operating rate of waste collection vehicles	It is important that the collection service improve through the provision of collection equipment. Set indicators which demonstrate improvements in the collection service as well as appropriate maintenance (indicators concerning service providers).	<ul style="list-style-type: none"> The objectives of the project were to improve the environment and hygiene in Djibouti City, by providing equipment for the collection and disposal of waste to the cleaning department of Djibouti City, thereby contributing to the improvement of the basic living conditions of Djibouti citizens. 	The Republic of Djibouti	The Project for Provision of Waste Management Equipment	2012
							<ul style="list-style-type: none"> The objective of the project was to provide equipment such as waste collection and transportation vehicles in order to resolve the shortage and deterioration of waste collection and transportation equipment which was a particularly serious problem concerning solid waste management in Hanoi City. Thereby, the project aimed to improve solid waste management in the city and directly contribute to the improvement in the living conditions of Hanoi citizens. 	Vietnam	The Project for Supply of Equipment for Waste Management in Hanoi City	2007
				Effect indicators	Basic indicators The size of the population receiving collection services The number of illegal dumping sites	Set indicators which demonstrate the number of service beneficiaries and improvements in the quality of services (indicators concerning service beneficiaries).	<ul style="list-style-type: none"> The objective of the project was to increase the waste collection rate and its efficiency by providing collection and transportation vehicles, thereby improving hygiene in Palestine. 	Palestine	The Project for Improvement of Waste Disposal Equipment	2005
					Supplementary indicators Improvement in collection plans The amount of special waste (medical, etc.) collected (Use this indicator depending on the project content.) The waste fee collection rate		<ul style="list-style-type: none"> The objective of the project was to improve the waste collection rates in Prizren and Pristina by providing waste collection vehicles and repair tools and equipment to the respective cities. 	Kosovo	The Project for Improvement of Solid Waste Management	2010
							<ul style="list-style-type: none"> The objectives of the project were to increase and strengthen the capacity of 15 local governments for their waste collection in the project areas and to promote the safe and separate collection of medical waste, by procuring waste collection vehicles. 	Syria	The Project for Improvement of Equipment for Solid Waste Treatment in Local Cities (Phase 2)	2009

Development strategic objectives (*)	Mid-term objectives	Sub-targets of mid-term objectives	Types of infrastructure	Standard indicator examples		Policy and methods for creating indicators	Examples of project objectives (project image)	Country name	Project name	FY of evaluation
2. Technical improvement to achieve appropriate solid waste management	2-2. Improving collection and transportation	2-2-2 and 2-2-3. Expansion of collection coverage and more efficient collection and improved service	Transfer stations, transfer vehicles	Operation indicators	Basic indicators Treatment capacity of transfer stations The operating rate The amount of waste treated The waste collection rate (%) (the annual amount of waste collected / the annual amount of waste generated) The operating rate of waste collection vehicles	The basic idea is the same as the one for waste collection vehicles.	▪ The objective of the project was to improve the technical capacity for appropriate solid waste management (collection, transportation and disposal) in the project area (the Greater Amman) by providing solid waste management equipment.	Jordan	The Project for the Improvement of Solid Waste Management in the Greater Amman (Phase 2)	2009
				Effect indicators	Basic indicators The size of the population receiving collection services The amount of waste collected and the waste collection rate The number of illegal dumping sites Supplementary indicators Improvement in treatment efficiency (Consider measuring methods on a case-by-case basis.) The waste fee collection rate					
	2-3. Introduction and improvement of intermediate treatment	2-3-1. Reduction and recycling	Resource recovery facilities (waste segregation, recycling, etc.)	Operation indicators	Basic indicators The operating rate of the resource recovery facility The amount treated at the resource recovery facility	It is important that the operation of the facility be properly measured. Therefore, the operating rate and the amount handled at the facility should essentially be used as indicators	▪ The objectives of the project were to promote activities related to the collection, transportation and volume reduction of waste as well as to improve the sanitary condition at the final disposal sites, by providing solid waste management equipment, expanding final disposal sites, developing recycling facilities, etc. Thereby, the project aimed to contribute to the improvement of the living conditions as well as public health in the target area.	Palestine	The Project for the Improvement of Solid Waste Management in the West Bank	2012
				Effect indicators	Basic indicators The amount handled at the resource recovery facility					
	2-4. Improving final disposal sites	2-4-3. Proper management and operation of final disposal sites	Equipment for final disposal sites (landfill compactors, bulldozers, backhoes, loaders, etc.)	Operation indicators	Basic indicators The operating rate of the equipment at the final disposal site	For a final disposal site, it is important that the facility be operated and conditions be improved (important to more closely follow sanitary landfill condition). It is, however, difficult to set quantitative indicators because the improvement in conditions aimed by each project is different from each other.	▪ The objective of the project was to improve the solid waste management system in Xian City by providing equipment for a transfer station, a final disposal site and environmental monitoring.	The People's Republic of China	The Project for Improvement of Solid Waste Management in Xian City	2008
				Effect indicators	Basic indicators Improvement in the condition of the final disposal site Supplementary indicators Conditions of application of soil cover					

(*) Those development strategic objectives which do not apply to any grant aid projects were omitted. The mid-term objectives and the sub-targets of mid-term objectives which do not apply to grant aid projects were also omitted.