

FY 2015

Report of the International Cooperation
Project Study
in the Water Supply Sector

Study on Ideal Public Relations

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Chapter 1 Policy of the FY 2015 Study Project for International Cooperation in the Water Supply Sector

1-1 Contents of the Study

1) Past Studies (as of Last Year)

To date, Japan has been continuously providing international cooperation in the water supply sector. Such cooperation started mainly in the form of assistance for the construction and maintenance of facilities, and has gradually expanded to the development of human resources that play a role in the maintenance and administration of the facilities and of water quality control, in the light of feedback from past activities which revealed that the assistance in the construction and maintenance of facilities alone could produce limited effects. For further advancement, Japan recently also started to provide assistance in the area of business management, such as for the structuring of proper a financial base.

With this trend and the history of international cooperation, the Ministry of Health, Labour and Welfare (MHLW) of Japan has been conducting research and making suggestions that focus on the assistance for what is called the “soft component”. The Study Committee on International Cooperation in the Water Supply Sector was established for this study project. In the studies from FY 2009 to 2011, measures to improve the efficacy of training, the implementation systems and the arrangement of the organizations that accept trainees were suggested. The study of FY 2012 was conducted to discuss an ideal system of assistance for the planning and operation of water utility businesses. The results of that study suggested the necessity for a gradual system of development and planning that suits the conditions of the country or territory, along with the necessity of introducing projects both from a facility and a financial perspective. In the study of FY 2013, mainly the collection and analysis of the information concerning financial affairs was conducted. Also, measures to increase charge revenue, ideas to streamline the operations for cost reduction, and methods to utilize external funds were proposed as desirable methods of assistance for the improvement of water utility business management. Finally, the study of FY 2014 suggested an analytical method to assess the management circumstance of the water utility businesses in each country, which is a prerequisite for providing assistance in water utility business management, from the three perspectives of: governance, personnel systems, and a financial base.

2) Background of Setting the Theme for the FY 2015 Study

The year 2015 represents a milestone in the community of international cooperation. This is highlighted by the adoption of the “Post-2015 Development Agenda, Sustainable Development Goals — SDGs”. It is expected that Japan’s international cooperation in the water supply sector

should contribute to the accomplishment of this new agenda.

In fact, the achievements from Japan's international cooperation in the water supply sector have played an extremely significant role, when compared to those of the rest of the world, especially in terms of the volume of aid. However, some people have pointed out that the significance and the achievements of Japan's efforts are not known well by the concerned persons and parties (stakeholders). It is therefore essential to obtain a broader and more accurate recognition of the significance and achievements of Japan's efforts. For this reason, we decided to focus on the ideal actions for better public relations in the study for this fiscal year.

3) Direction of the FY 2015 Study

Based on the history and background of past studies, we will begin the study of this fiscal year with a quick review of the framework and history of Japan's international cooperation in the water supply sector to date. In the next step, the flow of the information about the activities of Japan's cooperation will be studied through research on how this information has been publicized to and received, as of now, by the various persons and parties in Japan and overseas to whom the information is intended. Following that, we will try to extract the individual issues that need to be improved in the identified flow of information. Based on the results of the study on these subjects, we will make concrete suggestions from the standpoint of how the future public relations concerning Japan's international cooperation in the water supply sector should be improved.

1-2 Task Force of the Study

The study was conducted for a period of one year and the report of the study was drawn up through the deliberations in the three meetings, by the study committee that was established for this purpose. The members and the schedule of the study committee meetings for FY 2015 were as follows:

[Study committee members]

Koichi Ohno	National Institute of Public Health
Hidetoshi Kitawaki	Toyo University
Hiroki Kusano	Bureau of Waterworks Tokyo Metropolitan Government
Shoichi Kunikane*	(Former Professor, University of Shizuoka)
Akiko Kuniyasu	Yokohama City Water Works Bureau
Keisuke Sonoda	Saitama City Waterworks Bureau
Satoshi Takizawa	University of Tokyo
Daigo Takeda	Kitakyushu City Water and Sewer Bureau

Ikuo Mitake	Japan Water Works Association (JWWA)
Tatsuo Morimoto	Federation of Japan Water Industries, Inc. Pacific Consultants Co., Ltd.
Keiko Yamamoto	(Former Senior Adviser, Japan International Cooperation Agency (JICA))
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Shigeyuki Matsumoto	Japan International Cooperation Agency (JICA)
Mitsuo Tomari	Hakuhodo Inc., T•OOON Co., Ltd.

[Secretariat]

Hiroyuki Yamaya	Ministry of Health, Labour and Welfare
Takafumi Nakayama	Ministry of Health, Labour and Welfare
Tetsuo Abe	Japan International Corporation of Welfare Services
Takeo Yamaguchi	Japan International Corporation of Welfare Services
Miyu Hayashi	Japan International Corporation of Welfare Services

[Schedule of the committee meetings]

The Study Committee held three meetings in FY 2015 on the following dates.

- 1st Meeting Thursday, October 1, 2015
- 2nd Meeting Tuesday, January 12, 2016
- 3rd Meeting Thursday, March 10, 2016

[Domestic research]

- From September 2015 to March 2016

[Overseas research]

- From October 25 to 31*, 2015

*See Table 3.4 for details.

Chapter 2 Collection and Analysis of Information Concerning Japan's International Cooperation in the Water Supply Sector

In order to discuss the ideal actions for public relations concerning Japan's international cooperation in the water supply sector, we first need to clarify what international cooperation is all about.

For this purpose, we will first review the basic framework concerning Japan's international cooperation, then describe the history of the country's international cooperation in the water supply sector, before further introducing Japan's most recent activities.

2-1 Institutional Framework of International Cooperation

As a start, we explain the institutional framework of international cooperation and knowledge, which is essential for understanding the history of international cooperation.

1) Definition of ODA

Official Development Assistance (ODA) is defined as the flow of grants, concessional loans and the like, which are provided by official agencies to countries and territories on the list of ODA Recipients. This list is drawn up by the DAC (Development Assistance Committee) of the OECD (Organization for Economic Co-operation and Development), and each transaction is administered with the promotion of the economic development of developing countries and territories as its main objective.

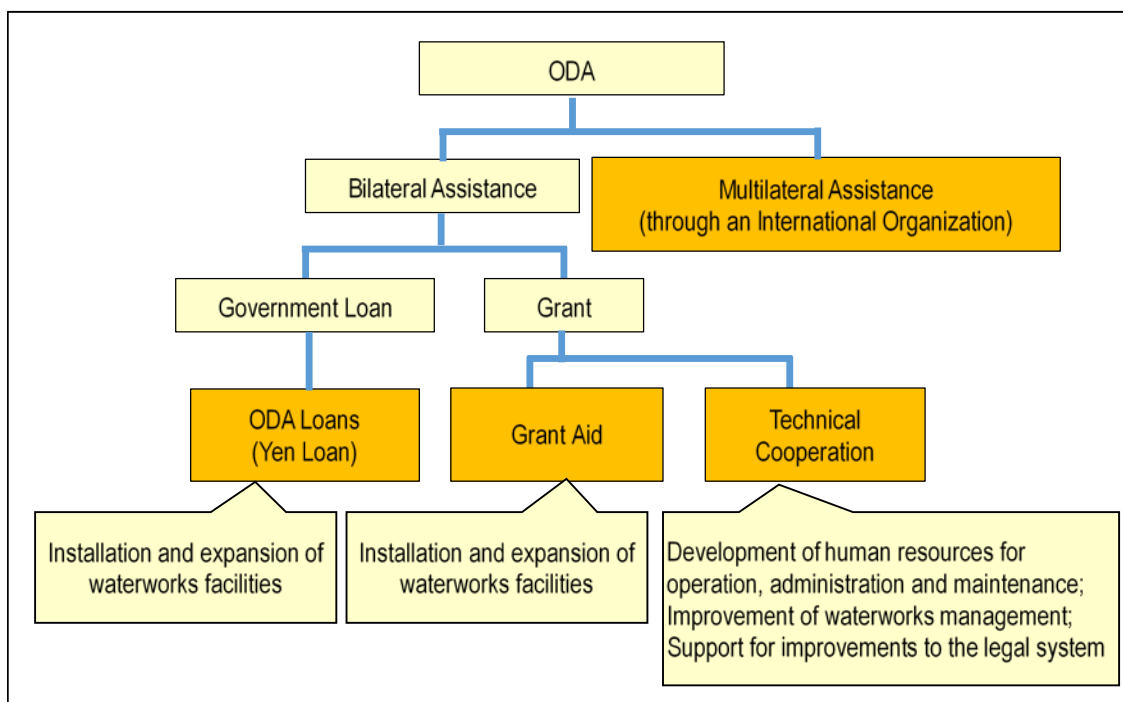


Figure 2.1 Framework of ODA

ODA is defined by the following three criteria: (1) It must be a flow of funds that is provided by governments or their executive agencies; (2) Its purpose must be a contribution to the economic development and the improvement of welfare in developing countries; and (3) It must convey a grant element (a measure of the concessionality of a loan expressed as a percentage, with a grant being 100%) of at least 25%, in order for the condition of the loan not to be a heavy burden for the developing country.

As is shown in Figure 2.1, ODA consists of two classifications of systems: bilateral assistance that directly assists developing countries and territories; and multilateral assistance that contributes to international organizations. Bilateral assistance is classified as Grants and Government Loans (ODA loans). Grants are a gratuitous aid to developing countries and territories, which can be divided into the two branches of: Grant Aid, and Technical Cooperation. Government Loans can also be divided into the two branches of: Yen Loans, and Overseas Investments and Loans.

2) Framework of ODA

(1) Grant Aid

Grant Aid is one of the two types of bilateral ODA that exempts the recipients from repayments. It is provided to developing countries without the obligation for its return, upon the request from the governments of those countries where funds are needed to purchase facilities which are necessary for the development of the society and for the country's economy. This type of cooperation is provided mainly to countries with a noticeably low income level. It does not take away from the fact that the Japanese government also procures materials, equipment and facilities and directly supplies them to the recipient countries.

The Japanese government (the Ministry of Foreign Affairs — MOFA) took charge of this type of cooperation until the New JICA started its operations (the former JICA had been responsible for preparatory surveys and for the promotion of projects). Since the establishment of the New JICA in October 2008, it has taken charge of the whole process, from preparatory surveys to the post-project management, for some of the Grant Aid for General Projects as the organization responsible for those projects.

(2) Technical Cooperation

Technical Cooperation is a form of assistance that is extended for the development of human resources that are necessary for the economic and social advancement of a developing country. This assistance can take the form of: the transfer of Japanese technology, skills, and knowledge; the development and improvement of technologies suitable for the conditions in

developing countries; and the resolution of problems that may hamper the development through dispatching experts, accepting trainees, supplying equipment and the like, in order to facilitate an improvement in the developing country's capacity to solve problems and its independence. The main program, called "Technical Cooperation Projects", aims to provide technical cooperation and is conducted through an optimum combination of "dispatching experts", "acceptance of trainees", and "supplying equipment", as well as through a consistent process of project planning, implementation and assessment, to ensure a positive and solid achievement.

In many case examples of "Technical Cooperation Projects", the projects are carried out with the involvement of the relevant staff in the recipient country in the planning, management and assessment. In this way, these countries consider the project as a process to solve their own problems through an independent-minded stance. The "Acceptance of Trainees" program has two implementation systems: "Training in Japan" (which includes training by country, training by subject, and training for youth) that is conducted in Japan by inviting the trainees to Japan; and "Training Overseas" that is conducted outside of Japan (training in the aid-recipient country or in a third-party country). In particular, it is expected that the "Training in Japan" will enable the invited trainees from the developing countries to discover the issues present in their country by visiting Japan. This program has a long-standing history of involvement with many persons related to the waterworks in Japan and in the recipient countries. Therefore, it can be seen as a frontline form of international cooperation, even though it is conducted in Japan.

(3) ODA Loan

ODA Loans consist of two systems: Yen Loans, and Overseas Investments and Loans. A Yen Loan is a type of aid in which a loan is provided to a developing country with concessional conditions, and with a lower interest rate and a longer payback period. The specific conditions are determined in consideration of the economic elements of the borrowing country, such as its income level. The Yen Loan prompts the developing countries to use the borrowed funds efficiently and to manage the project properly, so that it will function to boost their independency (ownership), which is essential for the economic development and the reduction of poverty in those countries. In addition, assistance by way of a Yen Loan is a sustainable way of cooperation for Japan, because the borrowing countries will eventually have to pay the funds back, and therefore Japan shoulders less of a financial burden.

An Overseas Investment and Loan provides financial assistance for the projects of private companies in developing countries, by way of an "investment" and a "loan." General financial institutions will normally set high hurdles for the loans intended for such projects, because of their nature of high risks and low returns. The intended fields for this type of assistance are

“Infrastructure Construction and the Acceleration of Development”, “Millennium Development Goals – Reduction of Poverty”, and “Climate Control”.

(4) Multilateral Assistance (Assistance through International Organizations)

Multilateral Assistance is an indirect form of aid to developing countries through the investment or contribution of funds to international organizations. Those international organizations are: U.N.-related agencies (to which funds are contributed) such as the United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA) and United Nations Children’s Fund (UNICEF); and Multilateral Development Banks (to which funds are invested) such as the World Bank, the International Development Association (IDA, the Second World Bank), and the Asian Development Bank (ADB).

(5) Other Various Types of Cooperation

Besides the above-mentioned methods of cooperation, other assistance systems utilize various types of ODA to provide assistance for international development and cooperation through private companies, NGOs, local governments, etc. In this way, assistance systems that are suited to each purpose are available, although they are smaller in scale. Table 2.1 below provides the overview of these various assistance systems.

Table 2.1 Various Assistance Systems by Way of ODA

Assistance system	Type	Applicable organizations	Period	Maximum budget	Features, etc.
JICA Technical Cooperation for Grassroots Projects · Regional type · Support type · Partner type	Support for local governments, NGOs, etc.	Japanese local governments, non-profitable organizations such as NGOs, universities, public interest corporations, etc.	3–5 years	30–100 million yen	This purpose of the system is to promote and foster cooperation with the citizens in developing countries by Japanese organizations such as NGOs that have a wish to be involved in international cooperation. It consists of three types of systems: regional type (special entries for regional vitalization and regional economy activation projects from FY 2013 onward); support type; and partner type. It is intended for in-depth grassroots level cooperation. There is no restriction in terms of the intended fields or the subjects of the cooperation.
JICA Preparatory surveys for cooperation · PPP infrastructure projects · BOP business cooperation promotions	Support for private companies	Registered corporations in Japan	About 3 years, dependent on the scheme	50 (base) – 150 million yen	This support is based on the premise of assistance by Yen Loans, or Overseas Investments and Loans, and its purpose is to draw up the basic plan of a project and to verify the feasibility of a proposed project. There are two types of systems: PPP infrastructure projects; and BOP business cooperation promotions.
JICA Private sector technology dissemination	Support for private companies	Registered corporations in Japan	Maximum 2 years	20 million yen	This support can be used for projects that aim to promote the understanding of the superior products, technologies and systems of the Japanese private sector. It is

promotion project for the economic and social development of developing countries					mainly intended to assist governmental officials in developing countries through trainings and seminars, etc.
JICA Support project for overseas expansions of small and mid-sized enterprises · Basic research · Research for realization · Promotion and verification projects	Support for small and mid-sized enterprises	Small and mid-sized businesses, certain associations of small and mid-sized enterprise organizations	Several months to about 3 years	About 10–100 million yen	This support consists of three systems: “basic research” that can be used for the collection of the basic information necessary for the resolution of a development agenda and studies on the possibility of cooperation with ODA projects and the planning of the project based on the collected information; “research for realization” that is used to assess the possibility of for utilizing various products and technologies for the advancement of developing countries; and “promotion and verification projects” that are used for the verification of the effectiveness of the products and technologies used for the development and studies on the method of their dissemination.
MOFA Grant Aid · Grant Aid for grassroots human security · Grant Aid for cooperation of NGOs in Japan	Support for NGOs	NGOs and non-profitable organizations such as local public agencies, educational institutes and medical institutes that work in developing countries, and NGOs in Japan Registered corporations in Japan	1 year	About 10 million yen	This support consists of two systems: “Grant Aid for Grassroots Human Security” (popularly known as Grassroots Grant Aid), which is the provision of funds necessary for relatively smaller-scale operations of NGOs and the like in developing countries; and “Grant Aid for cooperation of NGOs in Japan”, which is financial assistance for economic and social development projects in developing countries conducted by the NGOs of Japan.
MOFA Grant Aid · Substitute procurement system	Support for private companies	Registered corporations in Japan	Various	Various	The purpose of this MOFA system is to procure various products from small and mid-sized enterprises and to provide them to developing countries, upon the request of the government of those countries, so that the visibility of the products is heightened and continuous demands are created, thereby supporting the overseas expansion of small and mid-sized enterprises in Japan.

Note: There are also systems available other than those listed in the table above, such as surveys for project formulation supported by the MOFA, and other ministries and agencies that offer assistance for small and mid-sized enterprises, such as the Organization for Small & Medium Enterprises and Regional Innovation, and the Japan Finance Corporation, etc.

2-2 Historical Stream of International Cooperation in the Water Supply Sector

1) History of International Cooperation

First, we will explain the history of Japan’s international cooperation in the water supply sector, which has led up to the formation of the outline of the present scheme.

Japan’s ODA began in 1954, when Japan officially joined the Colombo Plan. At that time, international cooperation was conducted mostly as postwar reparation or quasi-reparation (for

the provision of Grant Aid to the countries that turned down reparations). Through this plan, Japan provided assistance to the waterworks in Phnom Penh, Cambodia in 1959; and to Vientiane, Laos in 1963¹.

With regard to the project formulations in the water supply sector by the OTCA (Overseas Technical Cooperation Agency, today's JICA), the first Yen Loan was provided for a project in the water supply sector in 1965, in which a sum of 1,519 million yen was loaned to the Republic of Korea (for a waterworks project in the cities of Gwangju, Daejeon and Cheongju). In 1967, experts were dispatched to Kabul in Afghanistan for the construction of waterworks, and the first training course in the water supply sector started there in 1968. In 1973, training assistance at a waterworks training center commenced in Indonesia (which continued until 1975); and also that year, the first Grant Aid in the water supply sector was granted for the repair project of the waterworks in Vientiane, Laos. In 1975, a team of experts was dispatched to the city of Tansen, Nepal, and a pioneering research group was also dispatched to Egypt the next year². These projects were driven forward by the direct initiative of MHLW. Furthermore, by around 1975, the accumulated experiences from these activities led to the formation of the main assistance schemes such as the dispatching of experts, development research projects, training programs in Japan, Yen Loans and Grant Aid.

Meanwhile, the first group training program for trainees invited to Japan was held in 1968, as a precedent to the present JICA training programs. These training programs are important pillars in international cooperation.

As for the efforts of project-type human resource development in recipient countries, the first series of actions were taken over three years, starting from 1973, when university professors and executives of waterworks bureaus were sent to the training center in Indonesia for a period of two to three months to provide training program there³. Additionally, the efforts of to establish a training center in Thailand, which began in 1985 and continued until 1999 (through 1st and 2nd phases), set a precedent for the project-type of Technical Cooperation in the water supply sector with the completion of the construction of the training center in 1987 using the Grant

¹ Shimomura, Masahiro (2016). Assistance of Japan and Project MaWaSU, Mittaphab Communications No. 5. *Journal of Japan Small Scale Water Association "Suido"*, vol.61 (1), pp. 38-44 (p.40).

Kobayashi, Yasuhiko (1995). *Suido kankyo eisei bunya deno kokusai koryu no susume* (Encouragement of International Exchanges in the Waterworks and Environmental Sanitation Field: tentative translation). Japan Environmental Sanitation Center, p. 22.

Ministry of Foreign Affairs of Japan *Diplomatic Bluebook*, vol.11 (1967).

Shinonaga, Nobutaka (2004). Japanese Reparation and Economic Assistance to Laos and Cambodia. *Daito Bunka University Economic Journal*, vol.82-2, 2004.2, p. 29.

² "Round-table Talk of the JICA Person of Merit Award Winners: Norihito Niho, Sadao Sakazaki, Haruo Iwahori, Yasuhiko Kobayashi, Shigeyuki Okamoto and Yasumoto Magara. *Journal of Japan Water Works Association*, March 1994, pp. 2-25 (p.6).

³ Kunikane, Shoichi (1994). Advancement of Technical Cooperation in Indonesia. *Journal of Japan Water Works Association*, March 1994, pp. 45-48 (p. 45).

Kunikawa, Kenji, Nakamura, Fumio and Magara, Yasumoto (1976). Technical Cooperation for Waterworks Training Center in Indonesia II. *Journal of Japan Water Works Association*, July 1976, pp. 42-61.

Aid and the development of a training system that involved activities such as nurturing teachers/instructors. It should be noted that the water utility industry took up the issue of human resource development ahead of other industries. In particular, the training center in Thailand ensures the development of a wide range of experts, from managerial staff to skilled field site persons, and it has become the base of human resource development for the water supply sector in Thailand, as well as being a model for the succeeding project-type human resource developments by the JICA.

2) Flow of a Typical Project

The flow of a typical assistance project for a water utility business is as follows:

- Basically, Japan's ODA is provided upon the request of an aid-recipient country. In reality, however, some aid-recipient countries may not be capable of formulating a project by themselves. In these cases, the JICA provides them with assistance in formulating a project through the collection of basic information, verification research, and discussions with the concerned persons in the aid-recipient country. In addition, other assistance systems for the project formulation are also conducted, such as research by the dispatched research group sponsored by the budget of the MHLW, and the provision of information and assistance by water utility corporations, other consultants, and NGOs. Furthermore, the MOFA and the JICA set assistance strategies for each country in the form of an assistance policy based on the country and the project development plan, and also review the policy of cooperation in each sector, according to each policy issue.
- A separate request is then made for each type of assistance. These types of assistance include technical cooperation projects and the dispatching of experts in each segment for the purpose of human resource development, capability development, and assistance for policy and system development. A survey-type technical cooperation for the project formulation may also be conducted to draw up a master plan, and Grant Aid and Yen Loans may be offered for the construction and maintenance of facilities and the procurement of equipment. The MOFA and the JICA work together to combine various types of assistance to enhance the effects of the projects, based on the above-mentioned assistance strategies.
- The received requests are discussed by a local ODA task force, the JICA, the MOFA and any other concerned ministries and agencies. The JICA also conducts "preparatory surveys for cooperation" as needed, in order to collect the information necessary for an evaluation and decision on the adoption of the requested aid-project. Based on the collected information, including the results of the survey, a "screening" is conducted to determine whether the requested project is well-suited as an ODA project through

discussions on its adequacy, efficacy, and the efficiency of the contents of the requested project. Once the decision to adopt the project has been made, an international agreement is then signed between the two governments and a written document is exchanged between the implementing agencies.

- With regard to a technical cooperation projects, the JICA conducts a survey for detailed project planning, after the request and the successful adoption of the project by the Japanese government. The project is kicked off after detailed studies have been performed on the goal, achievements, activities, investment and the implementation framework of the project. In some cases, a new financial aid project may be created through the activities of the experts dispatched in the technical cooperation projects.
- Survey-type Technical Cooperation for project formulation is a type of technical cooperation that is conducted in order to develop a master plan and perform a survey on the feasibility of the project (feasibility study). The master plan encompasses the long-term plan for the waterworks, based on an analysis of the current situation and issues in the water sector of the aid-recipient country, and on studies of various aspects such as the water sources, water demands, facilities, finance and management situation, organization, legal system, and the human resource development. The master plan then becomes a guideline for building the foundation of the future water supply business. The master plan also helps the responsible organization to identify the projects and action plans that have to be implemented, on a priority basis. The project is intended either for a major metropolitan area, or for an entire country or region. The feasibility study is conducted in order to draw a rough design of the project that has been identified as the higher priority project, and to formulate a project through the feasibility analyses that are performed by the assessment of the environmental and social impacts and an assessment from the financial, technological, and maintenance and management perspectives. Technical Cooperation projects and the projects involving Grant Aid and Yen Loans are often formulated through the Survey-type Technical Cooperation for project formulation as well.
- Grant Aid is used for the construction and maintenance of waterworks facilities and the procurement of equipment. This type of aid is typically offered for smaller-sized projects that are planned in a relatively low-income country. Once the request for aid has been received and the performance has been decided from the survey, the JICA will conduct a preparatory survey for the cooperation and studies on the feasibility of the project through a rough design and cost estimate, followed by the screening, and the signing of an international agreement if the project passes the screening.
- In parallel with the construction and maintenance of the waterworks facility with the Grant

Aid, or following the same, human resource development and capability development are often conducted by the dispatching of experts and technical cooperation projects. Laying an emphasis on human resource development is a distinctive characteristic of international cooperation in the water supply sector.

- When an aid-recipient country has reached a certain degree of independence, the cooperation will transition to ODA loans, which normally deal with larger scale funds. The most popular ODA loan is the Yen Loan that is provided following two types of screenings that are conducted based on either the result of the feasibility study by the recipient country or by the information that the JICA considers necessary for the screening and collects through its preparatory survey for the cooperation.

3) Flow of International Cooperation between Projects

Although a project is formulated in consideration of the individual conditions, in principle, experiences from past projects may also be passed on to succeeding projects, as know-how. We will discuss human resource development, which is a feature of Japan's international cooperation in the water supply sector, as an example.

- From 1973 to 1975, training was conducted for senior waterworks engineers in Indonesia, in light of the importance of human resource development in the waterworks sector for the improvement of the public sanitation environment in a developing country.
- The establishment of the training center in Thailand was projected in response to a request from the government of Thailand. Based on the positive feedback received from the local training methods in Indonesia, the creation of a permanent training center in Thailand was envisaged⁴, which led to the establishment of the training center in 1987 by Grant Aid. The center included training facilities, lodging facilities and an effective curriculum.
- After the completion of this project, the Metropolitan Waterworks Authority (MWA) of Thailand began providing third-party country training sessions, mainly to its neighboring countries. Therefore, the active development of human resources in the waterworks sector is expected not only in Thailand, but also in Southeast Asia and Africa in the future. This is one of the remarkable examples of a successful project.
- Japan's experiences from establishing the training center offered proof of the efficacy of human resource development, as well as lessons on the difficulty of the sustainable management of the training center. Later projects for human resource development have

⁴ Technology transfer in waterworks and sanitation field-the trend and information of assistance activities. *JICA Report*, 1989 (p.2).

consequently become more diversified, depending on the conditions in the recipient countries, and have an increasing tendency for practical programs that use on-the-job (OJT) methods. In Vietnam, for example, a waterworks training center was established within the existing College of Construction No.2, where the methods for supporting the management of the training center were studied and involved developing its own income base through a business expansion and the introduction of a qualification authentication system.

- In Cambodia, the waterworks in the capital of Phnom Penh were developed through the assistance of donor countries including Japan after the end of the civil war in 1993. This was followed by the implementation of human resource development as an important pillar of the assistance, at a time when a certain level of advancement in the facility construction and the formation of the organization had been realized. In this case, the human resource development was implemented by laying an emphasis on the OJT method at the field level, and without establishing a training center, in consideration to the smaller budget and the weak human resources in Cambodia. The efforts of this project, along with the strong leadership from its counterpart, improved the waterworks in Phnom Penh at an incredibly high speed and the project was introduced worldwide as the “Miracle of Phnom Penh”.

As is demonstrated above, each international cooperation is implemented and completed as a separate project. At the same time, it can be thought that the continuous efforts to learn and acquire know-how from preceding projects in the phase of the aid project formulation, and to utilize this knowledge for further advancements, have produced strong ripple effects.

2-3 International Cooperation in Recent Years That Strengthens the Coordination with the International Community

International cooperation in the water supply sector used to be planned and conducted by each country or organization independently. Recently, however, there has been a shift toward the direction where the project is conducted purposely in a more harmonized way, with attention paid to the international community that is centered around the United Nations. In light of the above trend, we will review the history of how the framework of international cooperation has developed, with the United Nations as its center, and how the Japanese government has responded to the development of this framework, specifically after the year 2000.

1) Framework of International Cooperation Centered around the United Nations

Japan's ODA started in 1954, when the North-South issue was raised. Meanwhile, the major policy for international cooperation in the water supply sector was set out in the declaration,

“The International Drinking Water Supply and Sanitation Decade, 1981-1990”⁴⁾, which was adopted at the United Nations Water Conference in Mar del Plata in 1977. This declaration was made with the aim of supplying safe drinking water and sanitation systems to all people in the world by 1990, based on the clear recognition that international harmonization was indispensable for international cooperation in the waterworks and public sanitation sector. While this goal made a significant contribution to the improvement of public sanitation, the existence of major challenges to be overcome unfolded, such as the disparity between urban and rural areas, and the understanding of the whole picture and of the complexities of the situation deepened, which led to a discussion in 1990s on the succeeding plan of the “The International Drinking Water Supply and Sanitation Decade”, and resulted in the United Nations Millennium Development Goals (MDGs) to be achieved by 2015, which were adopted in the United Nations Millennium Summit in 2000. The MDGs launched in 2000 were groundbreaking in terms of their clear setting of concrete target dates and quantitative goals that the international community needed to accomplish. The waterworks and sanitation sector also set the concrete target, to “Cut by one half the number of the people who do not have the access to safe drinking water and a basic sanitation facility by 2015, in comparison to that the number in 1990”. Concrete efforts were also made for the assessment of these effects.

The Sustainable Development Goals (SDGs), which were adopted in 2015 as the succeeding development goals to the MDGs for the international community, set out even more evolutionary actions than the MDGs in many aspects. This included setting goals for not only developing countries but also for advanced countries, the expansion of the intended sectors and the targets, and an emphasis on the process management guided by discussion rather than led by the United Nations. Especially, the SDGs are consistent with the efforts that Japan’s international cooperation in the water supply sector has made at all times to improve the water quality and the management of the water utility business and to reduce water leakages. They also include the points that a monitoring system for evaluating the level of services should be considered, and the efficiency of water use has been introduced as a target. Therefore, it is the right time for Japan to position the MDGs as the guidelines for future international cooperation and to draw up a concrete action plan based on them.

2) Efforts of the Japanese Government in the Last 15 Years

In recent years, Japan’s international cooperation has been conducted in accordance with the policymaking of the government in various areas, which has been made in line with the goals that the international community has established in a coordinated manner, and as a series of actions to put the policies in practice. Among these activities, we list the country’s activities from 2000 (at which time the MDGs were adopted) to 2015 in Table 2.2 below.

Table 2.2 Policies of the International Community and the Japanese Government
Concerning the Water Supply Sector

Item	Outline
Year 2000: United Nations Millennium Development Goals	The United Nations Millennium Development Goals (MDGs) were declared as the clear target that the international community must accomplish by 2015. "Cut by one half the number of the people who do not have continuous access to safe drinking water and a basic sanitation facility," was adopted as the number 10 target.
Year 2003: Japan's Clean Water for People Initiative	Japan hosted the 3rd World Water Forum. The Japanese government announced the establishment of "Water Resource Grant Aid" and the allocation of 16 billion yen for the related projects in the FY 2003 government budget plan, as Japan's "Clean Water for People Initiative".
Year 2003: Revision of the ODA Charter	Based on the change in the conditions surrounding ODA in Japan and overseas, the Japanese government revised the ODA Charter on August 29, 2003 for the first time in 11 years. In the revised ODA Charter, Japan listed the reduction of poverty as a major issue to be tackled, and expressed the aim to assist developing countries by way of providing assistance in the "water and sanitation" sector.
Year 2004: Regional Waterworks Vision	As a policy guidance of the MHLW for the whole water utility industry, an international perspective was introduced in the Regional Waterworks Vision.
Year 2006: Water and Sanitation Broad Partnership Initiative (WASABI)	In the 4th World Water Forum, Japan announced the "Water and Sanitation Broad Partnership Initiative" as Japan's new policy for ODA in the water supply and sanitation sector. In this initiative, Japan expressed the plan to provide high quality assistance that utilizes Japan's experience and technologies, and to promote technology transfers in the water supply sector, the establishment of domestic systems and organizations for globalization, and the enhancement of international competitiveness. Based on this initiative, Japan announced a policy to assist in the self-reliant efforts of developing countries, according to the following basic directions: (1) pursuing the sustainability of water use; (2) emphasizing the perspective of human security; (3) placing a higher priority on capacity development; (4) pursuing synergy effects through cross-sectoral efforts; and (5) the consideration of local conditions and the appropriate technologies for the aid-recipient countries.
Year 2006–2007	The Special Mission Committee on Water Security was established in the Liberal Democratic Party of Japan, and frequent discussions were held in the committee meetings. The committee summarized the concept based on the proposals made from concerned parties, which formed the basis of the "Asian Gateway Initiative".
Year 2007	In the "Asian Gateway Initiative", announced by Japanese government, the policy of promoting assistance for the development of a water control and supply plan in Asia, and the international business expansion of government enterprises such as water utility corporations, was expressed. The support of the Ministry of Internal Affairs and Communications for international water utility business expansions promoted by local governments, and the participation of the water utility corporation in the strategy for infrastructure exports was clearly stated in the "Economic Growth Strategy".
Year 2008	At the Hokkaido Toyako G8 Summit, the progress of the actions undertaken in the water supply and sanitation sector, proposed at the Evian G8 Summit in 2003, was discussed. The Japanese government co-sponsored the side event concerning water and sanitation, "Water and Sanitation for All", in the UN-MDGs High Level Meeting.
Year 2008: TICAD IV	Foreign Minister Komura presented a policy address at the TICAD IV (4th Tokyo International Conference on African Development), a ministerial level international conference between African countries and the donor countries, and expressed the following assistance measures for waterworks development in Africa: (1) construction and maintenance of water supply facilities; (2) human resource development; and (3) the dispatching of the Special Assistance Team for Waterworks (W-SAT).
Year 2008: International Year of Sanitation	The United Nations adopted a resolution on the declaration of the International Year of Sanitation 2008 following the initiative from Japan aimed at the enlightenment of people on the issues related to sanitation, the mobilization of the necessary human

Item	Outline
	resources, and furthermore, the demonstration of the guiding principles that all of the people concerned must follow.
Year 2009	At the G8 L'Aquila Summit, the G8 leaders reviewed the progress of the Evian Water Action Plan and agreed to start a partnership with Africa.
Year 2009: Water Security Council of Japan	The Water Security Council of Japan was established on January 30, 2009 as an organization comprising leaders from politics, business, academia, and other experts. This organization was assembled in response to a call by Yoshiro Mori, the former Prime Minister, Fujio Mitarai, former Chairman of the Federation of Economic Organizations, and Norihito Tambo, Professor Emeritus at Hokkaido University and the Open University of Japan. In October 2012, it announced the Recommendation: Towards a Low-Carbon and Sustainable Water and Material- Circulating Society.
Year 2010	In the follow-up conference to the International Year of Sanitation that was cosponsored by the Asian Development Bank and United Nations University, major issues to be overcome for the achievement of the MDGs and the resolution of sanitation problems were discussed.
Year 2013: TICAD V	In the TICAD V (5th Tokyo International Conference on African Development), a ministerial level international conference, the "Yokohama Declaration 2013" and the "Yokohama Action Plan 2013-2017" were adopted, in which: (1) assistance for the improvement of water supplies and sanitation; and (2) the development of human resources for urban waterworks engineering were expressed. It was also confirmed that the achievements of the TICAD V would become an important input for the future works toward the establishment of the post-2015 development goals.
Year 2015: Establishment of Official Development Assistance Charter (ODAC)	The Development Cooperation Charter, which set out the principles and basic rules of Japan's Official Development Cooperation (ODA), was revised to establish a new charter with the new name of the "Official Development Assistance Charter". Its significant characteristics include an emphasis on the broader cooperation between the central government, local governments, and private sectors, etc., as contrasted to the ODA implementation only by the central government. It also addresses the importance of comprehensive assistance that encompasses assistance for the autonomous development of developing countries and assistance for the development of the capacity of administrations and operations, human resources, and legal systems (collectively referred to as the "intangible side of assistance" hereinafter), besides the assistance for hardware developments.
Year 2015: Sustainable Development Goals (SDGs)	The United Nations Sustainable Development Goals, which are common targets that the entire international community needs to achieve in the years of 2016–2030, were adopted. The SDGs are more evolutionary, particularly in terms of their wider coverage that spreads to all countries, when compared to the MDGs that were only intended for developing countries. Regarding the targets concerning the water supply, "Goal 6: Ensure the availability and sustainable management of water and sanitation for all" has been set, and "Ensuring universal and equal access to safe and affordable drinking water for all by 2030" has been called for.

2-4 Achievements of International Cooperation in the Past

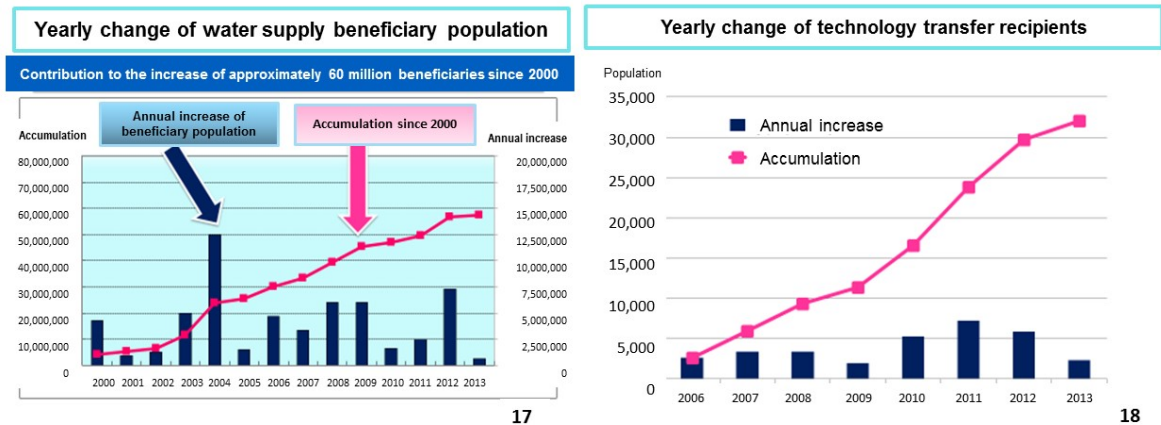
Next, we will review the current situation of Japan's international cooperation by the type of assistance. The results of the international cooperation projects organized by the JICA are summarized in the JICA Performance Report, which serves as the basis for the quantitative report of the achievements by the JICA in the chronological table and the ODA White Papers. JICA has also independently extracted the data concerning the water supply sector, and has compiled material that summarizes its achievements only in the water supply sector, because the statistical materials above do not report on the activities specifically in the water supply sector. The classifications of the aggregated data are shown in Table 2.3 below.

Table 2.3 Results of Japan's International Cooperation in the Water Supply Sector

Item	Outline	Data of the water supply sector*	Remarks
General	Expenditure	1990–	Reported in the Statistic on the JICA's Operational Results
Data	List of projects	–	Portal sites for the project information are prepared on the JICA official website.
Technical Cooperation	Number of experts dispatched	1990–	Same as above
	Number of trainees accepted	1990–	Same as above
	Number of persons who received the technology transfer	2006–	Number of administrative officers, employees of water utility corporations, members of water control associations, community sanitation training officers, pump repair workers and workers in toilet construction who received the instructions and training in the technical cooperation program of the water supply and sanitation sector (counterparts of experts, trainees, seminar participants, etc.)
Financial Cooperation	Population of beneficiaries of the water supply project	1999–	Estimated number of people who will have an access to the improved water supply system constructed by Grant Aid or a Yen Loan, for which an exchange of notes (E/N) was signed within the same fiscal year Classifications of the aggregated data, etc. are described in the reference materials.
	Loan contract amount; Grant contract amount	–	Reported in the Statistic on the JICA's Operational Results

Note: This data was aggregated by the Global Environment Department of the JICA

Along with the 3rd World Water Forum in 2003, the report from the study on the water resource project (first phase) was drawn up in March 2002, in which the implemented condition of Japan's international cooperation was publicized. It should be noted that the data shown in this report was limited to the scope of the JICA's operations at that time, and included the following content: the number of Grant Aid projects (research for basic designs), development surveys, and project-type Technical Cooperation projects; and the number of experts, Japan Overseas Cooperation Volunteers, and accepted trainees. Furthermore, the JICA's achievement reports on its activities (performance reports and P.R. pamphlets, etc.) reported on achievements that included the "number of beneficiaries from the water supply project" and the "number of persons who received the technical transfer". According to the data aggregated by the Global Environment Department of the JICA, Japan contributed to an increase in the number of water supply beneficiaries by approximately 60 million people, and made a technical transfer to more than 32 thousand people, as an accumulated total.



Source: Materials provided by the JICA (reference material for the topic contribution in the 1st committee meeting)

Figure 2.2 International Cooperation by the JICA in the Water Supply Sector

The achievements of Japan's international cooperation are also reported to the Development Assistance Committee (DAC) of the OECD. According to this information source, Japan has been the number one donor country in the world in the water sector, in terms of the monetary amount, since 2005.

Table 2.4 Past Rankings of International Cooperation in Water Supply Sector

	First place		Second place		Third place		Fourth place		Fifth place	
2004	U.S.A.	955	Japan	709	Germany	424	Denmark	249	France	176
2005	Japan	2,129	U.S.A.	1,026	Germany	402	Netherlands	207	Sweden	117
2006	Japan	1,256	U.S.A.	818	Germany	497	Netherlands	455	France	254
2007	Japan	1,930	Germany	594	U.S.A.	432	France	383	Netherlands	364
2008	Japan	1,668	Germany	906	U.S.A.	847	Spain	622	Netherlands	373
2009	Japan	2,786	Germany	820	France	810	Spain	575	U.S.A.	462
2010	Japan	1,933	Germany	751	France	501	U.S.A.	431	Spain	309
2011	Japan	1,711	Germany	1,041	U.S.A.	465	Switzerland	332	France	323
2012	Japan	2,140	Germany	1,382	France	920	U.S.A.	537	Netherlands	465
2013	Japan	1,615	Germany	1,067	U.S.A.	593	South Korea	365	France	351

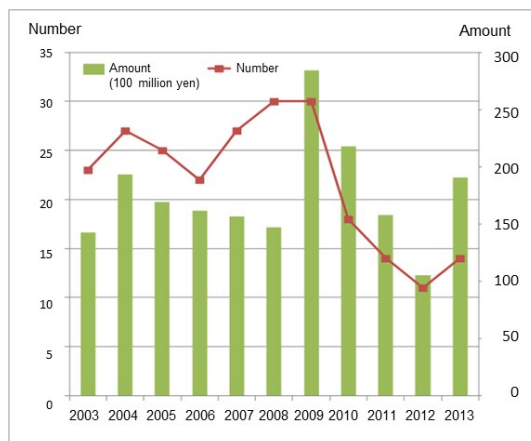
Source: OECD-DAC Creditors Reporting System.

Note: The figures are the total amounts of cooperation in million USD.

The results of the cooperation in the most recent years are shown in more detail in the following paragraphs, according to the type of cooperation.

1) Grant Aid

The amount spent on Grant Aid and the number of projects vary from year to year. The total amount and the number of Grant Aid projects in the water supply sector in 2013 are 19 and 14 billion yen, respectively.



Source: Official Website of the Ministry of Health, Labour and Welfare

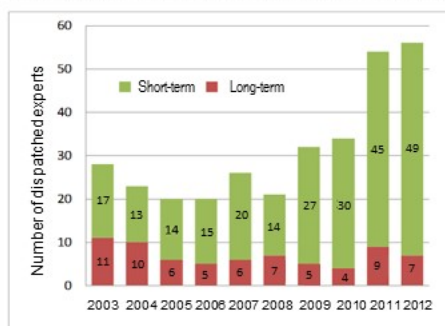
<http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/topics/bukyoku/kenkou/suido/jouhou/other/o4.html>

Figure 2.3 Results of Grant Aid in the Water Supply Sector

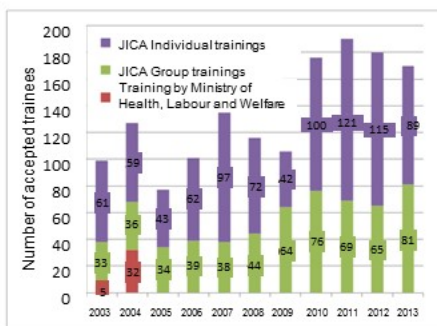
2) Technical Cooperation

The numbers of experts dispatched and the trainee acceptance rates have slightly increased in recent years, which indicates that there is a continual strong need for cooperation in this field. Please note that the numbers of experts dispatched shown in Figure 2.4 includes only the experts who were dispatched from water utility corporations following the recommendation of the MHLW, and the additional experts (such as consultants) were also sent from private sectors.

Yearly change of waterworks expert dispatch
(recommended by Ministry of Health, Labour and Welfare)



Yearly change of waterworks trainee acceptance



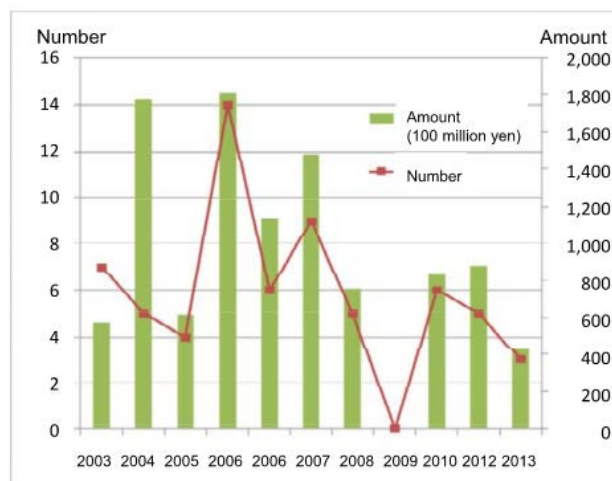
Source: Homepage of the Ministry of Health, Labour and Welfare

<http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/topics/bukyoku/kenkou/suido/jouhou/other/o4.html>

Figure 2.4 Results of Technical Cooperation in the Water Supply Sector

3) ODA Loans

ODA Loans have been provided in a much larger scale in comparison to Grant Aid. In 2013, the amounts of the country's major ODA loans exceeded 10 billion yen per loan.



Source: Homepage of the Ministry of Health, Labour and Welfare
<http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/topics/bukyoku/kenkou/suido/jouhou/other/o4.html>

Figure 2.5 Results of ODA Loans in the Water Supply Sector

2-5 Summary of International Cooperation in the Water Supply Sector

In this chapter, we reviewed Japan's mainstream international cooperation projects and the scale of its cooperation in the past, in order to discuss the information about international cooperation in the water supply sector that should be more well-known by people.

We first described the basic framework of international cooperation, to facilitate the understanding of the detailed explanations, and then mentioned the effects of the continuous implementation of projects by showing the history of international cooperation projects in the past and the flow of the project formulation. Following that, we explained a recent trend in international cooperation, which is to conduct a project with the awareness of the necessity for cooperation with the international community centered around the United Nations, and introduced the SGDs as a new framework that is fostering this trend. In addition, we described the outline of Japan's international cooperation in the water supply sector, with reference to the projects' data, such as the scale of the projects.

During the course of the study to this point, we experienced difficulties especially in summarizing the entire history of the activities concerning international cooperation in an exhaustive way and with a panoramic view. However, we consider that the information that accompanies the historical content and the background of the related events (i.e., story style reporting) will interest more people and is more effective for public relations, especially for

readers from the general public. Based on this consideration, it is important to make continuous and active efforts in collecting the relevant information and compiling it in a proper way.

Chapter 3 Field Surveys for Verifying the Impact of Public Relations

3-1 Purpose of the Field Survey

1) Purpose of the Survey

The purpose of the field survey is to understand how people, mainly in the aid-recipient countries, have been informed of Japan's international cooperation in the water supply sector and how these efforts have been accepted by them.

Specifically, we tried to collect information, mainly through interviews, about how the purpose and effects of the project were publicly announced and accepted, and what types of methods and contents were used for public relations in the -recipient countries in each of: the project development phase (spreading phase); the project implementation phase (the phase of constructing the waterworks facilities and developing the human resources); and after the completion of the project (the phase of actual use).

2) Country Surveyed

We selected Cambodia as the country targeted for the field survey, and decided to collect information about the project in the capital of Phnom Penh and about its succeeding projects in this country. The reason of this selection is the high reputation of the above-mentioned project as the most remarkable achievement among Japan's international cooperation projects in the water supply sector.

Among the variety of Japan's cooperation projects performed for the reconstruction of Cambodia after the end of the civil war, the water supply sector undertook the project to improve the water utility business in the city of Phnom Penh. This involved the repair of the water treatment plant, the construction of pipework in the central city, and the expansion of the water treatment plant, which was conducted using the funding from three sets of Grant Aid that were incorporated into the basic plan established in 1993. The achievement of the project contributed to the increase in the total water treatment capacity of the Phnom Penh Water Supply Authority (PPWSA) to 235,000 m³/day in 2003, which was about four times more than it had been in 1993. Meanwhile, in acknowledging the importance of the development of human resources who could undertake the efficient operation and maintenance of the newly constructed facilities, four experts were first sent from Kitakyushu City Water and Sewer Bureau in 1999, based on the JICA technical cooperation framework, and worked on the transfer of technology for the pipework administration and maintenance. This was followed by

the dispatching of experts in mechanical equipment from the Department of Waterworks, Osaka Prefectural Government (at that time), who conducted a transfer of the technology for the administration and maintenance of the water treatment plant. The relationships that were built through these activities led to the technology transfer of the telemeter system in 2001, and the provision of information about its principles and theories by a team from the Kitakyushu City Water and Sewer Bureau, using the framework of the Small-Scale Partnership Program. In the city of Siem Reap, the JICA's preparatory survey was started in 1996 for the development of the waterworks system. Despite the interruption of the survey by a military conflict, the JICA finished the survey in 2000 and established a master plan. After that, facilities were built in 2004–2006 with the assistance of a Grant Aid, and were then transferred to the Siem Reap Water Supply Authority (SRWSA).

At the time of the completion of the waterworks system in Phnom Penh and the decision to construction the facility for Siem Reap, the “Project of developing human resources for the water utility business” in 2003–2006 was kicked-off, with the aim of the comprehensive and local region inclusive development of human resources. The project was intended for the Phnom Penh Water Supply Authority, the Water Supply Department of the Ministry of Industry, Mines and Energy (MIME), and the staff of the water supply authorities in eight cities, including Siem Reap. For this project, three experts were sent to Cambodia on a long-stay basis, and a total of 32 experts were sent for a short period over a timeframe of three years. These experts came from the cities of Kitakyushu and Yokohama, etc.. The concept of this project was to develop the PPWSA as a top running organization and to situate it as a model for the waterworks development of local regions and an organization that would guide local developments. Various achievements were made by this project, including the advancement of the PPWSA central training center, lectures at the training center, training programs for water treatment through OJT in the water treatment plants and water distribution areas, the development of manuals, and the improvement of the rate of the unpaid water supply using the telemeter.

In 2007, the focal point for the human resource development was shifted toward local regions and the “Project of developing human resources for waterworks businesses — Phase 2” was launched at eight Targeted Provincial Waterworks (TPW): Siem Reap (which became a public corporation in 2007), Battambang, Pursat, Kampong Thom, Kampong Cham, Sihanoukville, Kampot, and Svay Rieng. During this project spanning five years, four experts were sent on a long-stay basis, and a totally 15 experts were sent for short periods, to provide assistance in improving the capabilities of the general water utility business administration and management. From 2012 until the present, the “Project of developing human resources for waterworks business — Phase 3” has been continuously conducted in the same eight TPW, where the

Technical Cooperation is being provided for the development of human resources that focuses the enhancement of their managing capacity.

3-2 Method of the Field Survey

1) Organizations Surveyed

In Table 3.1 below is a list of the organizations involved in the survey, along with an outline of each organization.

Table 3.1 List of Organizations Visited for the Survey

Organization surveyed	Date of the survey	Outline of the organization
Minister of Industry and Handicraft (MIH)	October 26 (Monday)	The ministry that exercises jurisdiction over the urban water utility business in Cambodia. Former PPWSA General Director, Ek Sonn Chan, is the Secretary of State, MIH and is presently involved in the promotion of waterworks development.
Phnom Penh Water Supply Authority (PPWSA)	October 27 (Tuesday) October 28 (Wednesday)	A water utility corporation that provides water services to the special administrative unit, Phnom Penh, a city with a population of about 1.5 million, and to the urban areas of Kandal Province. It is recognized as one of the most excellent water utility corporations in Asia. Number of water supplies: 270,812 (2014) Supply capacity: 5,324 L/s (460,000 m ³ /day) (2014) Diffusion rate: 91% (2010) Leakage rate: 7% (2014)
Siem Reap Water Supply Authority (SRWSA)	October 30 (Friday)	A water utility corporation that provides water services to the city of Siem Reap, with a population of about 170,000. It is quickly developing as the base for tours to the World Heritage site, Angkor Wat. JICA's grassroots technical cooperation (a special entry for regional economy activation project), "Project for enhancing the administrative capacity of the waterworks facilities in Siem Reap, Cambodia," is conducted by Kitakyushu City Water and Sewer Bureau. Also, a Yen Loan project, "Project for expanding the drinking water supply system for Siem Reap", is underway. Number of water supplies: 4,146 (2010) (population of the people receiving the water supply: 24,876) Supply capacity: 8,000 m ³ /day (2010) Diffusion rate: 13% (2010) *based on the interview Leakage rate: 10.1% (2010)

Note: The outlines of the organizations are based material on the website of PPWSA (<http://www.ppwas.com.kh/>) and from JICA internal materials.

The list of the persons whom we interviewed in the official survey schedule is shown in Table 3.2 below. Besides these persons, we actively interviewed as many of people as the schedule allowed, such as the local project managers, interpreters and general citizens, in order to allow us to collect the relevant information.

Table 3.2 List of Persons Interviewed in the Survey

Organization	Person interviewed	Job position/title	Remarks
MIH (10/26)	H.E. Ek Sonn Chan	Secretary of State, MIH, PNH-CAMBODIA	Responsible for waterworks, currently focusing on the improvement of waterworks in local regions. Former General Director of PPWSA from 1994 to 2013, having a profound understanding of the conditions while in office.
PPWSA (10/27)	H.E. Sim Sitha	Director General	PPWSA Director General. Top executive of the current organization.
PPWSA (10/27)	Mr. Long Naro	Deputy Director General of the Administration and Human Resources Department	PPWSA Deputy Director General, Long-standing contributor to the development of the PPWSA as a counterpart.
PPWSA (10/27)	Ms. Kakada Chhim	Chief of IR Office, Accounting & Finance Dept. PPWSA	Chief of the IR Office of the PPWSA. Responsible for public relations to the market, and for controlling the interactions with the market.
PPWSA (10/28)	Mr. Phen ty	Deputy Director of the Production and Distribution Department	Responsible for maintaining a solid relationship with the City of Kitakyushu. An influential person for conveying the experience of leakage preventing measures to others in the PPWSA.
PPWSA (10/28)	Ms. Roeun Nari	Director, Administration and Human Resource Development	Director of the Training Center of the PPWSA. Responsible for controlling human resource development and recruitment, as an expert in personnel affairs.
SRWSA (10/30)	Mr. Khut Vuthiarith	Director General	Worked at PPWSA before joining the SRWSA. Responsible for controlling the advancement of the SRWSA
JICA (10/28)	Togo Uchida, Project Formulation Adviser	JICA Cambodia Office, Project Formulation Adviser	Has job experience at the Japan Bank for International Cooperation, and has abundant knowledge of local conditions as well as of the conditions of Japan side

2) Survey Task Team

The members of the survey task team are shown in Table 3.3 below.

Table 3.3 Members of the Field Survey Team

Task team member	Committee member/ Secretariat	Job position/title	Remarks
Ikuo Mitake	Committee member	Senior Specialist of International Affairs, International Section, Department of International Training, Japan Water Works Association, a Public Interest Incorporated Association	

Keiko Yamamoto	Committee member	Former International Cooperation Specialist, Japan International Cooperation Agency, an Independent Administrative Agency	
Tatsuo Morimoto	Committee member	Senior Adviser, Federation of Japan Water Industries, Inc., a General Incorporated Association / General Manager, Department of Disaster Prevention and Water Project, International Business Division, Pacific Consultants Co., Ltd.	
Takeo Yamaguchi	Secretariat	Technical Counselor, Japan International Corporation of Welfare Services, a Public Interest Incorporated Association	

3) Survey Schedule

The survey schedule is shown in Table 3.4 below.

Table 3.4 Schedule of the Field Survey

Date	A.M.	P.M.
October 25 (Sun.)	Travel from Haneda to Phnom Penh (on a plane)	
October 26 (Mon.)	Survey task team meeting	Interview with H.E. Ek Sonn Chan, Secretary of State, MIH
October 27 (Tue.)	Interview with H.E. Sim Sitha, Director General, PPWSA	Interview with Mr. Long Naro, Deputy Director General and Ms. Kakada Chhim, Chief of the IR Office, PPWSA
October 28 (Wed.)	Interview with Mr. Phen ty, Deputy Director and Ms. Roeun Nari, Director of the Training Center, PPWSA	Visit to the Niroth Water Treatment Plant Visit to the JICA office
October 29 (Thu.)	Travel from Phnom Penh to Siem Reap (using ground transportation) (On the way, stop by a project site in Kampong Cham Province)	
October 30 (Fri.)	Interview with Mr. Khut Vuthiarith, Director General, SRWSA	Travel from Siem Reap to Narita (on a plane) *
October 31 (Sat.)	Travel from Siem Reap to Narita (on a plane) *	

Note: The members went their separate ways at Siem Reap.

Table 3.5 List of Questions Asked in the Field Survey Interview

Category	Questions	MIH	PPWSA			SRWSA
		H.E. Ek Sonn Chan	H.E. Sim Sitha	Others ¹⁾	Ms. Kakada Chhim	Mr. Khut Vuthiarith
Involvement in projects	How were you involved in the project with Japan?		○	○	○	○
	Do you know who else was involved in the project with Japan and what was accomplished? ²⁾		○		○	
	What effects do you think were brought about for the organization/country?	○	○	○	△	○
	What impacts/effects did the project make on you?	○	○	○	△	○
	What kind of further cooperative relationship do you think will be necessary in the future?	○	○	○	△	○

Public relations	Does your organization have a public relations section? If yes, please tell us who the intended targets are, how many staff are employed in the section and what the recent activities are?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Who are your organization's intended targets for public relations? How many staff are involved in the section? What are the recent activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	What do you think about the Japanese assistance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	What do you think about the assistance from other Aid-donor organizations?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Do you think the government, other organizations and the citizens have been properly informed about the effects of the Japanese assistance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	How are public relations conducted at each stage of the preparation, implementation and after the completion of a project?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	What type of public relations do you recommend as the ideal ways to promote the achievements and experiences of Phnom Penh to other regions and countries?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effects of assistance	Do you think the projects have contributed to building a relationship between Japan and Cambodia? If not, what else do you think could be done?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Do you think the projects have contributed to building a friendship between the citizens of Japan and Cambodia? If not, what else do you think could be done?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: 1) Mr. Long Naro, Mr. Phen ty, and Ms. Roeun Nari

2) This question was only asked to the persons who were considered as not being deeply involved in the projects.

3-3 Results of the Field Survey

The field survey was conducted by interviewing the persons to whom a questionnaire, arranged for each individual, had been sent in advance by e-mail, etc. The questions for each individual are summarized in the following table. Please note that a questionnaire was not used for the interview with Mr. Uchida, a Project Formulation Adviser.

The full text of the exchanges made in the interviews is compiled in the appendices. The information related to public relations among the responses in each interview have been extracted and are summarized in Table 3.6 below.

Table 3.6 Responses in the Field Survey (extracted comments only about public relations)

Subject	Response	Respondents
Systems and methods of public relations		
Organization that conducts public relations	MIH does not yet have the staff for public relations, although it bears the responsibility for public relations.	H.E. Ek Sonn Chan
	The planning section controls the public relations in the PPWSA. In addition, four staff members in the IR office to the public relations for finance departments and the agencies for investors.	PPWSA Ms. Kakada Chhim
	There is no public relations section in the SWRSA at present. Nonetheless, meter reading staff are expected to contact and listen to the customers besides performing their meter reading task. This is not actively implemented, however, due to their busy working schedule.	SRWSA Mr. Khut Vuthiarith
Publication of information, public relations	The PPWSA conducts public relations using the Internet. Its public relations include seminars, Facebook postings, public relations for the stock market, and media releases. The public relations on the Internet provide the public with information about the history of the waterworks in Khmer and English. The progress of international cooperation is always posted. Facebook is also an effective tool. (Such information on the Internet can be accessed by anyone through smartphones.)	PPWSA H.E. Sim Sitha
Announcements of events	News reporters and TV stations are invited to signing ceremonies, which are held after the discussion with a counterpart through preparatory surveys, for the purpose of providing them with coverage, and at the same time providing public relations for the officials.	Ms. Yamamoto
	An official opening ceremony is held when a new facility is built.	H. E. Ek Sonn Chan
	When a new facility is built, the Prime Minister and ambassadors attend the completion ceremony, which makes the headlines of the local newspapers. Taking advantage of these occasions, active public relations are conducted through the actions of posting presentation panels concerning the water sector and by a JICA public relations photographer taking photographs concerning the Grant Aid projects.	Ms. Yamamoto
Impact of public relations by the dissemination of the waterworks	The dissemination of the waterworks itself has a strong impact on the promotion of understanding about the significance of waterworks. Before the introduction of the waterworks, people relied on the underground water and therefore didn't recognize the value of waterworks. After the dissemination of the waterworks, people started to understand the value of waterworks very well.	SRWSA Mr. Khut Vuthiarith
Introduction through TV and media	TV broadcasting has a strong effect on informing the public about Japan's international cooperation because the journalists report it. Whenever we answer questions in the interviews, we always speak about Japan's ODA.	PPWSA Mr. Phen ty, Ms. Roeun Nari
	The Japanese assistance for the improvement of the waterworks at Phnom Penh is known to the general citizens, as it is often reported in the TV news programs for a general audience. In particular, I came to know about it very well when I watched the TV program that featured the waterworks development as a part of a series of programs that commemorated the 60th Anniversary of Cambodian Independence.	Interpreter
	We have not been interviewed for TV or the like specifically about this project, as the project is still ongoing. However, we were once interviewed for a TV program about water shortages.	Director of the Water Supply Bureau of Kampong Cham Province
Presence of Japan	The reliability of Japanese products, the credibility of Japanese brands, and confidence we feel toward Japan as a nation, all contribute to a positive impression of Japan.	Mr. Uchida, Project Formulation Adviser of the JICA

Subject	Response	Respondents
	The presence of Japan can be seen through the persons related to Japanese companies that are working locally, and the cars running around that have the JICA's logo on their body.	PPWSA Mr. Phen ty, Ms. Roeun Nari
Publication to the general public		
Publication to the general citizens in Cambodia	We have always publicized the achievements (i.e., the development of waterworks) that were brought about with the assistance of Japanese citizens. There is a clear understanding in the minds of Cambodian citizens that the waterworks have significantly advanced on account of Japan's assistance. The waterworks project also contributes to the deepening of mutual understanding and friendship between both countries' citizens and the enhancement of the political relationship between the two countries.	MIH H. E. Ek Sonn Chan
	The fact that Cambodia has been receiving various forms of assistance from Japan is well recognized by the government, organizations and by the people in each area of the social spectrum.	PPWSA H.E. Sim Sitha
	The citizens of Phnom Penh are proud of the city's excellent waterworks. I wish it would disseminate everywhere in Cambodia and that everyone would be able to use clean water soon.	Interpreter
	We sometimes have an opportunity to contact our customers directly and listen to their voices. From their words, we find that they understand well that Japan's assistance has helped Cambodia and made a contribution to clean water supply.	PPWSA Mr. Phen ty, Ms. Roeun Nari
	It seems that the general citizens regard the assistance of Japan as it is delivered through the JICA. TV coverage introduces Japan's assistance in that way. We don't think many people recognize the assistance of Japanese local governments, such as the City of Kitakyushu.	SRWSA Mr. Khut Vuthiarith
	We will never forget the assistance of Japan. The Prime Minister says that he recalls the Japanese people whenever he drinks water. (The words of the Prime Minister might be reflected by the tradition in Cambodia that people feel grateful to the giver of water.) People always like to listen to the conversations about the waterworks. They truly appreciate that clean water is supplied to everyone, especially to the poor at an affordable cost.	PPWSA H.E. Sim Sitha
	I think that the increase in the benefits will further improve the relationship between the two countries. Japan's ODA has provided a safe water supply in Phnom Penh, while the water charge remains at an affordable level. These facts are explained in the IR briefing for investors.	PPWSA Ms. Kakada Chhim
Announcements to citizens in waterworks-undeveloped areas	Supplying water to local regions is essential if we mean to realize the goal, "Water for all". For this purpose, we are making an effort to expand the successful case in Phnom Penh to other areas.	MIH H.E. Ek Sonn Chan
	We are conducting promotional activities for waterworks in the surrounding areas of Phnom Penh, and giving an explanation about the importance of waterworks to the key responsible persons in villages and areas based on the formulated project plans. These activities are being conducted in accordance with the JICA 2008 Master Plan. We explain the process of how the water supply has been accomplished by using paper materials.	PPWSA H.E. Sim Sitha
	At the start of a project, the public relations team informs the residents in the area of the importance of the water quality, etc., through workshops and the like. The general public in the local region also come to understand the significance of the development of waterworks because an explanation is given to them by the staff responsible for the waterworks.	PPWSA H.E. Sim Sitha Mr. Phen ty, Ms. Roeun Nari
	We hold a public hearing once a year. We visit the surrounding areas of Siem Reap, gather the residents, and hold a meeting where we explain the status of the project and listen to their opinions. We started these actions last year, and they are currently a new effort	SRWSA Mr. Khut Vuthiarith

Subject	Response	Respondents
	only in the Siem Reap area.	
	We don't conduct any particular public relations for the water treatment plant that is under construction in Kampong Chhnang Province. According the director of the water supply authority, a public announcement is planned for after the completion of the project.	Administrator of the construction project in Kampong Chhnang Province
Publication to the general public in Japan	The Japanese people living in Cambodia know about the waterworks in Phnom Penh, under the increasing number of Japanese in this country. For example, the program about Kitakyushu city's active cooperation is well known, probably because it was reported on TV.	Mr. Uchida, Project Formulation Adviser of the JICA
	We want the people in Japan to know that the City of Phnom Penh now has safe water. We talked about the training of the waterworks staff conducted by Japan's ODA when we were interviewed by a Japanese TV channel (which came to Cambodia to cover the activities of the Aeon group here). It is a good thing that the people in Japan understand the importance of these activities.	PPWSA Mr. Phen ty, Ms. Roeun Nari
Publication to the general public in third-party countries	The achievement of the waterworks in Phnom Penh is known to the people in third-party countries, as it was publicized by the JICA, aid-provision organizations in France, and by other countries as a successful example. However, we in Cambodia have not publicized the relevant information outside of the country.	MIH H.E. Ek Sonn Chan
	We have been interviewed by TV channels in the U.S.A. and Canada. When responding to the interviews, we have stressed the importance of training human resources to achieve successful results.	PPWSA H.E. Sim Sitha
	The expression "Miracle of Phnom Penh" started to be used by the media in the English-speaking world in around 2010. It appeared in later years than the implemented period of the project. At the same time, the print media started to write about this subject.	Mr. Uchida, Project Formulation Adviser of the JICA
Building relationships with the persons in the water supply sector		
Publication to the experts of waterworks in and outside of Cambodia	The staff of the PPWSA have conveyed this knowledge to other countries as teachers through the JICA's projects, such as by dispatching staff to training centers in Thailand upon their invitation. They share their knowledge in a variety of fields, from management, to water quality to leakage prevention measures and always speak about the significance of Japan's assistance, specifically for the development of our skills and the capabilities of our staff.	PPWSA H.E. Sim Sitha Mr. Phen ty, Ms. Roeun Nari
	We conducted a project for trainees invited from foreign countries as a JICA project. We accepted trainees from Nigeria and Zimbabwe.	PPWSA H.E. Sim Sitha
	In international conferences or annual international TV conferences, we speak about how important human resource development is for the improvement of waterworks, from our experiences in Phnom Penh. It has a strong impact that the staff of the PPWSA base their talks on real experiences and speak about the significance of the persons who have undergone the training, and have obtained the skills to provide training to others.	PPWSA H.E. Sim Sitha Mr. Long Naro
	We often talk to new faces who have no direct experience of business with Japan about the history of the projects that we have conducted together with Japan. We place an emphasis on the history of the improvements that have spanned ten years, including the pre-JICA years, in our lectures.	PPWSA Mr. Phen ty, Ms. Roeun Nari
Building relationships with investors	The PPWSA makes our financial condition, investment potential and the like publically available to investors. The PPWSA can raise funds through loans in an open market. For this purpose, the transparency and disclosure of information are important. The conditions that are implemented for information disclosure have to undergo an assessment by the assessment committee. I admit that we tend to	PPWSA Ms. Kakada Chhim

Subject	Response	Respondents
	publicize the good information more actively.	
	We explain to the stockholders that the PPWSA constructed the pipework and the Phum Prek water treatment plant with the money that Japan loaned to us. We picked up this operation in the IR and appealed for the stock market. Significant investments that have to be reported in the IR (e.g., the areal expansion of pipeline renewal works in 2013 from the City of Phnom Penh to its periphery) are controlled by the Planning Section.	PPWSA Ms. Kakada Chhim
	We use websites, TV interviews and reports for our information disclosure to investors. We do not advertise in newspapers often, as it costs a lot. The official Facebook page of the PPWSA is the most effective method of IR. We draw up the PPWSA White Paper (English version available) that contains our business condition and forecast, and post this on our website for public viewing.	PPWSA Ms. Kakada Chhim
Exchanges with persons in the water supply sector of Japan	The Business Support Center of Kitakyushu City has just opened this October. I hope it will function to strengthen the relationship with the Japanese business community.	PPWSA H.E. Sim Sitha
	JICA and JETRO in cooperation conduct public relations directed at business entities through the Japan-Cambodia water business seminar and the like.	Mr. Uchida, Project Formulation Adviser of the JICA
	There was an experience where we consulted with the community of Japanese waterworks experts and received technical advice when we encountered a problem with turbid water. I think that an international human relationship has been established in the water supply sector.	PPWSA H.E. Sim Sitha

To summarize the information described above, we have extracted the following points:

- From the standpoint of the people in developing countries, they pointed out that the publication of information through websites is acknowledged as a typical method, even in developing countries, that is backed by the popularization of smartphones. Specifically, SNSs such as Facebook have started to make a strong impact on the society and are accepted as a faster and more reliable way of publicizing information than websites, in the context of the advancement of the information society even in developing countries.
- TV broadcasts are very effective means for public relations directed at the general residents. We heard comments about the TV coverage of ceremonial events and about special TV programs.
- The activities of the JICA staff and employees of water utility corporations and private companies who are engaged in these projects also have a strong impact on public relations through noticeable signboards about the project, logos on cars, etc. In particular, public relations directed at the residents in the area around the construction site have been effective.
- Inviting the local persons in aid-recipient countries who are engaged in the projects to speak to other countries and organizations is a very effective form of public relations. The experience in Phnom Penh has been favorably reported to other developing countries.

However, no one but the staff of the PPWSA have spoken about the significance of human resource development based on their real experiences, which has a strong impact on the public relations in developing countries.

- The aid-providing organizations in each country competitively attempt to call the international community's attention to the successful achievements of their projects. These actions act synergistically, and can greatly help to increase Japan's visibility in the international community.
- The effects of word-of-mouth communications among the Japanese who are living in Cambodia can be seen. The increase of the Japanese population in Cambodia, by deepening the relationship between the two countries, may help to transmit the information concerning the achievements of Japan's cooperation to Japan.

In the next chapter, we discuss the ideal ways to conduct public relations about Japan's international cooperation, based on the information above.

Chapter 4 Discussion on the Public Relations Strategy of Japan's International Cooperation

4-1 Method of the Discussion

In this study, we will start the discussion about the ideal way of performing public relations with the premise that public relations is not a mere provision of information but is instead a form of communication. In other words, we have to deepen the discussion about public relations from the viewpoints of who the intended targets are, what information they want to receive, and how to deliver such information to them accurately; and not on the basis of a viewpoint of mere information transmission. A series of action plans for public relations drawn up in the light of such viewpoints is called a public relations strategy.

When discussing the series of actions required for strategic public relations, the following four steps must be gone through: clarify the purpose of the public relations; sort out the intended targets of the public relations (segmentation); identify the targets to whom the public relations can be conducted effectively among those sorted targets (targeting); and figure out the best way of conducting the public relations, in consideration of the contents to be delivered and the method of delivery. Although the targets will have to be narrowed down after the segmentation of the potential customers in a typical public relations strategy, we will focus on the work to clarify the flow of information and the things that have to be performed by each concerned organization, and not on the work of narrowing down the effective targets (which a typical public relations strategy might put weight on) because the type of public relations in the discussion here is not directed at customers.

4-2 Discussion on the Purpose of the Public Relations

In this study, we define the purpose of the public relations as "Increasing the presence of Japan's international cooperation in the water supply sector through public relations".

Japan's international cooperation is conducted under the basic premise that Japan, as a member of the international community, must fulfill an important role in realizing a sustainable society around the world. Among other things, it is important to contribute to the self-reliant development of aid-recipient countries, in light of the current situation in those countries and the intangible aspects of such assistance; that is, human resource development is very important for making such a contribution. It is also important to establish a system that can put the above policy into practice. In this regard, the Official Development Assistance Charter states the following: "In implementing development cooperation, Japan will proactively adopt proposals from various actors in the private and other sectors. It will also work with universities and research institutions to make good use of their expertise and seek out their untapped capabilities. Japan's assistance in infrastructure development will not be limited to constructing physical infrastructures. It will also address the non-physical aspects that encompass developing systems for operating and maintaining such infrastructure, as well as human resources development and institution building. Such an integrated approach will enable the active utilization of Japan's experience and expertise." (Source: Japan's Official Development Assistance Charter 2015, III., (1), A, (b))

The broad recognition and support for Japan's international cooperation in the water supply sector by the international community, aid-recipient countries, and the Japanese people are necessary to further our cooperation, in accordance with the directions set forth in the charter, which are: "basing the operations on the relationship with the international community"; "contributing to human resource development with respect to the conditions in the aid-recipient countries"; and "promoting the participation of Japan's water utility industry".

The activities that provide publicity to international cooperation in the water supply sector naturally assume the character of advocacy (policy recommendations for the resolution of social problems). Therefore, the transmitters of such information also have to increase their presence, to make the information valuable.

From these points, it can be said that increasing the presence of Japan's international cooperation in the water supply sector through public relations will play an important role in pursuing the objectives of international cooperation. Figure 4.1 below illustrates the above-mentioned relationship.

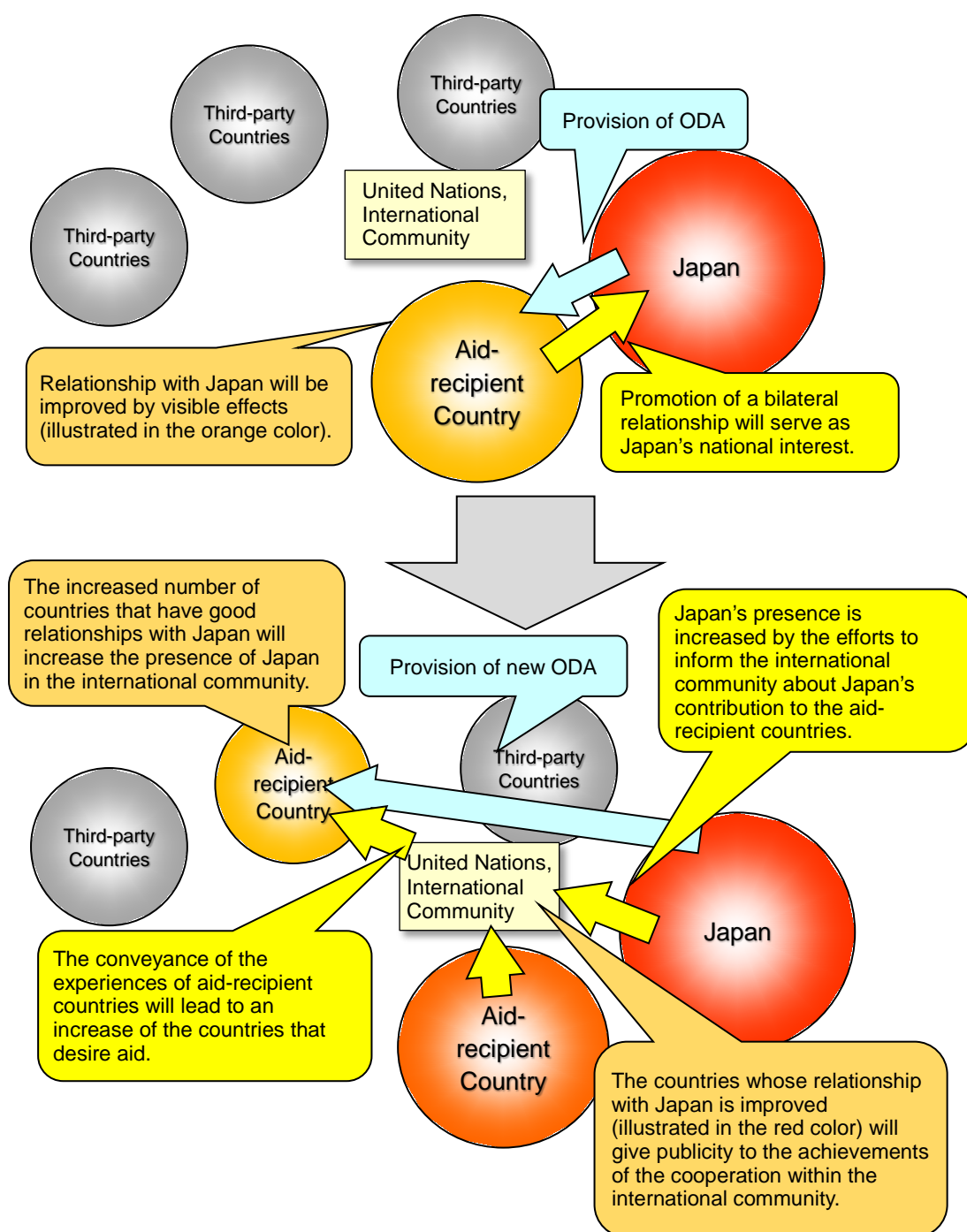


Figure 4.1 Effect of Japan's Increased Presence in International Cooperation

The following effects are expected from an increase of the presence of Japan in the international community and in aid-recipient countries.

- It is expected that the increase of Japan's presence in the water supply sector in the international community, through public relations, will heighten the recognition of Japan as a responsible member of the international community. Such recognition will make it

easier for Japan to play an active role in pursuing a sustainable society and its ideal goals together with the international community. This relationship will eventually serve as a foundation that will connect the cooperation to the national interests.

- If Japan's presence in the water supply sector is increased in the aid-recipient countries, with a good impression through public relations, it will be easier to establish a mutual trust relationship, which will serve as the foundation for building relationships with other aid-recipient countries. The existence of such a trustworthy human relationship will make it easier to understand the situation in the aid-recipient countries and to provide the most suitable assistance based on this understanding. It will also be possible to build a mutual trust relationship, thereby creating a win-win situation through the furtherance of interactions between Japan and the aid-recipient countries at the government level, the water utility corporation level, and the related private company level, based on the series of actions described above.
- The increased presence of Japan's international cooperation in the water supply sector through public relations will make it easier to create circumstances that are favorable for water utility corporations, private companies, and related organizations, which participate in international cooperation and support the activities on a working level, to further promote their activities related to international cooperation. In addition, informing Japanese people of the significance of Japan's international cooperation with a good impression through a series of those activities will produce positive effects to maintain the continuous international cooperation.

Based on the above-mentioned way of thinking, we define the purpose of the public relation in this study as: "Increasing the presence of Japan's international cooperation in the water supply sector through public relations". Based on this definition, we will further discuss how to effectively deliver the publicity about the information regarding the achievements of Japan's international cooperation in the water supply sector.

4-3 Analysis of the Public Relations Targets

1) Method of the Analysis

We will now discuss the public relations strategy for Japan's international cooperation based on the recognition of the current situation described in the previous section. We will proceed with the discussion through the following procedure:

- We will extract all parties and persons involved in the information flow of public relations and sort them into groups (segmentation), by their similarity, for example. Specifically, we will list the persons whose understanding of Japan's international cooperation should be

deepened and analyze their characteristics and their relationship with the international cooperation. The citizens of Japan and the aid-recipient countries will be among those that are listed in this context.

- We will then discuss the most effective methods of public relations (e.g., media) for each segment, based on a thorough analysis of the scope of the interest in each segment.
- We will focus on the relationships between the segments, in order to spread the effects of the public relations and the flow of information to other segments, and will then narrow down the segments that will become the keys in the implementation of the public relations strategies (targeting).

2) Method of Public Relations Matched with the Intended Target

(1) Past Public Relations for International Cooperation in the Water Supply Sector

Before discussing the methods we will implement for public relations, we will review how international cooperation in the water supply sector has been publicized in the past. In this study, we will examine the outline and the characteristics of the public relations performed by the JICA, a main body that has conducted public relations concerning Japan's international cooperation in the most organized manner in Japan, by going through the explanatory materials that the JICA has produced.

- The stakeholders are diverse and are the intended targets of the broadly spread public relations.
- The significance of international cooperation in the water supply sector is easy to understand. In a public opinion survey by the Cabinet Office, the cooperation activities for solving water problems have a high level of support.
- The goals of the public relations by the JICA are to give publicity to the Japanese people about the significance and necessity of international cooperation from a domestic viewpoint, and to increase the presence of Japan from an international viewpoint.
- There are two types of public relations: one for the general public; and the other for experts in the related fields. We have an impression, by looking at its public relations channels (tools), that the JICA has been making efforts at its maximum capacity to date.
- In particular, the impressive public relations and the provision of detailed information about individual cases have been implemented very well.
- The creation of brochures and newsletters is encouraged, with the guideline that 2% of each project budget should be actively used for public relations.

(2) Difference from Public Relations performed by Overseas Aid-donor Organizations

In European countries, many of which have a history of controlling colonized countries, the citizens mainly have a good understanding of the international cooperation conducted by their countries through ODA. In Western countries, much value is placed on the creation of new initiatives and concepts in international cooperation, as well as the increase of their influence and informational activities. The organizations that undertake public relations in these donor countries make appeals concerning their initiatives and concepts to other NGOs and aid-donor countries by announcing the concept and introducing examples of case studies in showcases that they set up in a form of session at international conferences.

There are also cases where an organization has effectively increased its presence in the international community through ways such as setting up a forum for an international exchange of views as a behind-the-scenes player, and in this way creating momentum for international cooperation, and actively supporting such momentum. For example, the German Agency for International Cooperation Corporation (GIZ), a public-benefit federal enterprise in Germany, operates an expert community in the sanitation sector, the “Sustainable Sanitation Alliance (SuSanA)”, and gains the effects of public relations by actively participating in the forum, although it does not publicize its control over the SuSanA. We can see the activities performed by GIZ as a case example to be referred to by the JICA’s public relations, which has been being conducted in such a very steadily and detailed way, so as to inform us about specific activities, achievements, knowledge and lessons that may be learned.

(3) Types of Public Relations for International Cooperation in the Water Supply Sector

In this section, we will list the public relations methods that can be used for international cooperation in the water supply sector, based on the JICA’s activities and the results of the field survey in Cambodia. The public relations methods have been classified into the following four groups.

- Publication of achievements and activities (Push-type public relations)
To conduct Push-type public relations (pushing information out from the sender) directed at general targets using events and promotional activities, etc.
Public relations through mass media are classified in this group.
- Provision of information to experts (Pull-type public relations)
To conduct Pull-type public relations (causing the receivers to pull in information), is intended to inform those who have a certain degree of interest in international cooperation in waterworks and wish to seek relevant information.

- Public relations that rely on the effects of word-of-mouth communication in human networks

Dissemination of publicized information through word-of-mouth communications, where SNSs have recently played a huge role as the channels for such communications, although it is difficult to control the contents of the communicated information.

- Introduction of case examples by mass media

Media that is specialized in a relevant field will be requested to give publicity to case examples.

TV media is especially very effective for people with a low level of interest and those in developing countries. We will not classify the public relations that are conducted by the mass media upon a request by this group in this category, as it is a part of the Push-type public relations.

Among the above-listed groups, the groups of Push-type public relations and Pull-type public relations are all regarded as public relations, in a more limited sense, because the activities in these groups are conducted by the initiative of the organization that is carrying out the project. A word-of-mouth communication, on the other hand, is not a form of public relations where the sender takes control of the contents of the communicated information. Furthermore, the group of actions that includes the “Introduction of case examples by mass media” in this report leaves the selection of the information to mass media, unlike the forms of public relations that are conducted by mass media based on a request (which is classified in the Push-type public relations group). Table 4.1 below summarizes the four types of public relations and their features.

Table 4.1 Types of Public Relations and their Features

Classification	Way of dissemination	Detailed method	Features and good points
Publication of achievements and activities (Push-type public relations)	Opening ceremony	Holding signing and completion ceremonies, etc., at each milestone of the completion or at the end of the project	Events are held at each milestone of the project for the common interest of the mass media and the project organizer.
	Real experience of improved waterworks	The fact that the waterworks is improved by the project has a strong impact of public relations by itself.	This has a synergistic effect with the human network. It is an important point that the beneficiary effect itself has an impact on the public relations.
	Promoting popularization activities	A part of the public relations is to inform the targets of the importance of water and to give rise to the need for waterworks in the project formulation phase.	This has a synergistic effect with the human network. It is a part of public relations to produce the succeeding beneficiary effects.
	Marks, signage, etc.	Publicizing Japan's assistance for the project during the implementation and after the	There is an effect to enhance the impact of the public relations of the project. It can

Classification	Way of dissemination	Detailed method	Features and good points
		completion of the project	be done at a low cost.
	Introduction of case examples through elementary education	Teaching children about the importance of waterworks and public sanitation, as part of the children's learning curriculum	A spreading effect of the children's experience to their parents, and consequently to the whole country, can be expected.
	Awarding an international prize	To make recommendations for the awards concerning waterworks that each country will prepare and to actively announce the winning of such awards	The good reputation of Japan's efforts in foreign countries will make a strong appeal to the people in Japan who have opposing opinions about Japan's cooperation.
Provision of information to experts (Pull-type public relations)	Internet media	The provision of information through networks such as a websites or Facebook are now publicly accessible through the widespread use of smart phones.	Valuable information for the recipients can be sent at a relatively low cost when compared to other means of communication.
Public relations that rely on the effects of word-of-mouth communication in human networks	Word-of-mouth communication, SNS	In addition to direct word-of-mouth communications, indirect word-of-mouth communications through internet media such as Facebook and Twitter are advancing.	This type of communication has dramatically increased its presence by the advancement of the information society. It has a strong penetrating power. At the same time, it is difficult to take the initiative in communicating and to control such communications.
	Training and expert network	A type of public relations performed by the persons who received training in Japan or underwent a human resource development program in the preceding projects, in which they convey their experiences to other countries.	A stronger connection of the experts' network will promote the exchanges with persons at the working level and will produce an excellent effect for propelling the project.
Introduction of case examples by mass media	News coverage	At the time of events, a provision of information to the mass media is carried out with the expectation of the information being picked up in the coverage of TVs and newspapers.	Socially valuable information can be disseminated through this channel at a low cost. In particular, it is an influential method in developing countries.
	Special program	When the mass media or a sponsor produces a special program, Japan's cooperation will be reported in connection with the achieved contribution and as part of the involved country in the project.	The report of an interesting topic to Japanese people by other countries can be an effective means of public relations in Japan.

The information in the table above can be summarized as follows:

- Among the publication of achievements and activities through Push-type public relations, the public relations of the project that are properly and broadly conducted within aid-recipient countries, and the waterworks developed by the aid itself, has a strong impact on the public relations. In particular, it is effective to inform various targets of Japan's achievements in conjunction with the importance of the waterworks through social

learning opportunities, such as in the elementary school classes, etc. However, such actions have less impact on the public relations to the general public in Japan, who do not have much interest in international cooperation, because of the limited chances for such actions to be seen by Japanese people.

- As to the Pull-type public relations, the individual efforts and the figures that demonstrate the achievements of projects are organized in detail on a project basis, and are effectively informed to the experts in the field and to those who are interested in international cooperation.
- The JICA recognizes the importance of human networks and recommends post-project communications between the persons who were involved in the project. However, the JICA is not ready to tackle on this area as a whole organization. Meanwhile, the experts who have developed through JICA projects, especially in the field of the water supply sector, are independently expanding a communication area by playing a key role in the succeeding projects or by training people in other countries.
- Public relations through mass media produce a significant effect in developing countries. On one hand, the aid-recipient countries take advantage of the power of mass media actively for the political purposes. On the other hand, the opportunities for public relations in the Japanese mass media is generally limited to cases where the segment requesting the public relations bears a part of the cost, or the where the media finds a benefit by itself in covering the subject or producing a special program about it; however, some of the community-based media have favorably publicized the activities of the local water utility corporations.

3) Breakdown of the Public Relations Targets and Targeting

(1) Breakdown of the Public Relations Targets (Segmentation)

In the following step, we will disassemble the parties and persons who are involved in international cooperation in the water supply sector (i.e. the stakeholders) in order to extract the public relations targets. The results are described below.

In the primary classification, the targets are classified into the three layers of: government officials; citizens; and the implementing bodies of waterworks in both Japan and the aid-recipient countries. These three layers are then further classified into smaller groups, depending on their roles and characteristics. In addition, the two segments of the United Nations, in light of the purpose of increasing Japan's presence in the international community; and media representatives, from the viewpoint of dealing with the information flow (viewing media representatives as the persons who select public relations targets rather than as mere information transmitters), are included as public relations targets.

Table 4.2 Segmentation of Public Relations Targets

Segment		Role	Effective method of public relations
Japanese government officials	Japanese government	Responsible for the decision-making processes for Japan's international cooperation	Publication of achievements and activities, provision of information to experts, human networks, mass media
Japanese people	Japanese people who are appointed to work overseas	To improve bilateral relationships; To influence the government's decisions; To recruit participants for the activities	Publication of achievements and activities, human networks, mass media
	People with an understanding of international cooperation and a willingness to participate		
	General citizens		Human networks, mass media
Media representatives (as persons responsible for screening information)		To provide information to general citizens on a broad level	Publication of achievements and activities, human networks, mass media
Japanese organizations responsible for waterworks project	JICA	To control international cooperation activities on a practical level	Provision of information to experts, human networks
	Water utility corporations	To participate in international cooperation; To contribute to the formulation of projects	
	Private companies; Consultants	To participate in international cooperation; To contribute to the formulation of projects	
	Incorporated associations; NGOs	To participate in international cooperation; To contribute to the formulation of projects	
International community	United Nations, International organizations; International NGOs	Responsible for decision-making in international cooperation at an international level; To contribute to the formulation of projects	Provision of information to experts, human networks
Government officials of the aid-recipient countries	Government of aid-recipient countries	To improve bilateral relationships; To contribute to the formulation of projects	Publication of achievements and activities, provision of information to experts, human networks, mass media
Organizations in aid-recipient countries responsible for the waterworks project	Local staff who are involved in the waterworks project assisted by international cooperation	To convey the effect of the waterworks development assisted by international cooperation to the citizens and to other countries	Provision of information to experts, human networks
Citizens of the aid-recipient countries	General citizens	To gain a higher reputation of Japan and improve the bilateral relationship	Publication of achievements and activities, human networks, mass media

(2) Intersegment Relationships

Next, we will analyze the relationships between the segments and stakeholders, and discuss the information flow. The information flow is summarized in Table 4.3 and is illustrated in Figure

4.2. By referring to these, we will explain the contents of the important flow.

In order to accomplish the purpose of the public relations that we defined as "Increasing the presence of Japan's international cooperation in the water supply sector through public relations", the Japanese government and the organizations responsible for international cooperation first need to present the significance and achievements of Japan's international cooperation in the water supply sector actively in the international community centered around the United Nations (See Row A in Table 4.3). For this purpose, it is desirable that the Japanese people express their support of the international cooperation as the will of the public (B). The support of the Japanese people will be bolstered by the effective publication of the information by the Japanese organizations that are responsible for the projects in which aid-recipient countries have received benefits from the development of waterworks (C). The same effect can be brought about by the statements from Japanese people who are appointed to aid-recipient countries and who come into contact with the people in the aid-recipient countries who have experienced the benefits of the waterworks (D). All of above-mentioned information transmitted to various organizations will eventually be received as feedback, and will create the foundation to support the activities of the Japanese organizations that are responsible for the project. (E)

Table 4.3 Flow of Information in Public Relations and its Characteristics

	Segment of the information receiver		Segment of the information sender	Contents	Main flow of information, method of public relations, etc.
A	International community	←	Japanese government; Japanese organization responsible for the waterworks project	To increase Japan's presence by showcasing Japan's international cooperation activities to the international community	Publication of achievements and activities, provision of information to experts, human networks, mass media
B	Japanese government; Japanese organization responsible for the waterworks project	←	Japanese people (including the information transmitted through media representatives)	To express support for the international cooperation in the water supply sector promoted by the Japanese government or the responsible Japanese organizations	Human networks
C	Japanese people (including the information transmitted through media representatives)	←	Responsible Japanese organizations	To explain the achievements and effects of Japan's international cooperation in the water supply sector to the Japanese people in a simple manner	Publication of achievements and activities, mass media
D	Japanese people (including the information transmitted)	←	Citizens of aid-recipient countries; Japanese people who are	To physically experience the effects of Japan's international cooperation in the water supply sector and to convey such an	Human networks, mass media

	through media representatives)		appointed to work in aid-recipient countries	experience to the Japanese people for a broader understanding	
E	Japanese organization responsible for the waterworks project	←	Japanese government; Japanese people; Media representatives	A broader and deeper understanding of Japan's international cooperation in the water supply sector makes it easy to carry out the activities on a working level and to receive political assistance.	Publication of achievements and activities, human networks, mass media
a	International community	←	Government of the aid-recipient countries	To increase Japan's presence by showcasing Japan's international cooperation to the international community	Publication of achievements and activities, provision of information to experts, human networks, mass media
b	Government of the aid-recipient countries	←	Organization responsible for the waterworks project in the aid-recipient countries; Citizens of aid-recipient countries	The government of the aid-recipient countries expresses support for the international cooperation activities in the water supply sector that are assisted by Japan.	Publication of achievements and activities, human networks
c	Japanese organization responsible for the waterworks project; Citizens of the aid-recipient countries	←	Japanese organization responsible for the waterworks project; Organization responsible for the waterworks project in aid-recipient countries	Japan's promotion of international cooperation in the water supply sector in a practical manner provides benefits to the aid-recipient countries.	Publication of achievements and activities, human networks, mass media

Secondly, it is desirable that the aid-recipient countries that have actually benefited from these projects make a positive statement about Japan's international cooperation in the international community since: (a) in order for such movements to occur, the favorable acceptance of the benefit by the citizens in the aid-recipient countries has to be obtained; and (b) such a favorable acceptance can only be obtained through the implementation of the international cooperation itself (c).

A series of effective actions by the responsible organizations will reach even further through a deeper understanding and stronger support from the Japanese government, the Japanese people and media representatives. The realization of such circumstances will help the water utility corporations to actively participate in the project and will lead to the formulation of new projects by specialized agencies. This cycle will then proceed to deepen the bilateral relationship and the formation of a basis for the enhancement of mutual national interests.

(3) Method of Enhancing the Impact of the Public Relations in Each Segment

Based on the results of the study up to this point, we discuss what type of public relations activities fit with each segment of the public relations targets, and how the activities for each segment can be conducted in order to achieve the purpose of the public relations, which is to increase the presence of Japan's international cooperation in the water supply sector. For this purpose, we have rearranged the flow of information from the standpoint of the receiver, the sender and the direction of the information, and have suggested the best method to be used for each pathway of the information flow in order to increase its impact on the public relations, based on the results of the study up to this point. The results of the discussion and the suggestions are summarized in Table 4.4.

Table 4.4 Flow of Information in Public Relations and Suggestions for Improvements

	Segment of the information receiver		Segment of the information sender	Main flow of information, method of public relations, etc.	Suggestion about the method to increase the impact of public relations
A	International community	←	Japanese government; Japanese organization responsible for the waterworks project	Publication of achievements and activities, provision of information to experts, human networks, mass media	Taking the opportunity of the establishment of SDGs, the presence could be increased effectively by devising a better method of giving publicity about the achievements of Japan's contribution to the international community.
B	Japanese government; Japanese organization responsible for the waterworks project	←	Japanese people Media representatives	Human networks	Many people agree on the significance of Japan's international cooperation in the water supply sector, when it is compared with other sectors, and the meaning of the projects themselves are well understood.
C	Media representatives; Japanese people	←	Japanese organization responsible for the waterworks project	Publication of achievements and activities, mass media	Although the publication of information to the persons in relevant fields appears to be sufficient, there is room for improvements in the ways of publicizing the information, which has to be easier for the general public to become familiar with and to obtain public support. It is effective to talk about historical stories and to take advantage of events, such as SDGs.
D	Media representatives; Japanese people	←	Citizens of aid-recipient countries; Japanese people who are appointed to work in aid-recipient countries	Human networks, mass media	We identified a case where the results of an international cooperation project were transmitted to Japan directly and/or indirectly, and served as an effective form of public relations.
E	Japanese organization responsible for	←	Japanese government; Japanese people;	Publication of achievements and activities, human	Efforts to measure the degree of the support of the Japanese people are being made

	the waterworks project		Media representatives	networks, mass media	continuously. However, the publication of the results may not be sufficient in some instances. The indirect impact of the public relations can be aimed at by making the contents of the information transmitted in the information flow Group C path "easy-to-understand".
a	International community	←	Government of the aid-recipient countries	Publication of achievements and activities, provision of information to experts, human networks, mass media	We also identified specific positive effects of a successful project on public relations where the achievements of the project were given publicity by an aid-recipient country and were disseminated to the international community, and where the people who underwent development through the project conveyed their experiences beyond the country's border.
b	Government of the aid-recipient countries	←	Organizations responsible for the waterworks project in the aid-recipient countries; Citizens of the aid-recipient countries	Publication of achievements and activities, human networks	It has been confirmed that the water supply sector is regarded as an area for effective assistance and that there is a greater need for such projects in many developing countries, based on the collected information that includes the number of applications for the training programs.
c	Organizations responsible for the waterworks project in the aid-recipient countries; Citizens of the aid-recipient countries	←	Japanese organization responsible for the waterworks project	Publication of achievements and activities, human networks, mass media	As the result of the field survey, we confirmed that public relations actions for the projects were conducted in the aid-recipient countries using various methods and that the construction of the waterworks itself served as good public relations. Thus, we were able to observe, to a certain degree, achievements in public relations.

Based on the results of this rearrangement of the information, we can discuss the room for the improvement in the information flow Path C among the three information flow path groups (A, C and c, highlighted by the green color), all of which the Japanese organizations that are responsible for the waterworks project can take direct control over. In other words, the information flow C is intended to reach the general people who have less interest in international cooperation, and to strengthen the public relations intended for those people by making these contents and their way of explanation simple and easy-to-understand.

The reason for the direction that we have taken here is that the Target A and the Target C should be addressed together. As to the Target c, we were able to confirm various public relations activities and their effective results according to the field survey.

Again, we consider that the information flow C is intended to reach the general people who

have less interest in international cooperation, and to strengthen the public relations intended for those people, and that making these contents and their way of explanation simple and easy-to-understand will be an effective action.

As a matter of fact, the public relations through the information flow C, that is, public relations intended for the general public, has been conducted actively and, because of these efforts, the support for international cooperation in the water supply sector is higher in comparison to other sectors. However, we still see room for an improvement in the water supply sector by conducting public relations in such a way as to be accepted and to impress the people who having less interest in international cooperation. Specifically, it is most effective to promote the plentiful achievements and the historical record of Japan's international cooperation in the water supply sector, along with an emphasis on the significance of leaning from the achievements for the sustainable implementation of international cooperation and its continuous implementation. Arranging all of these elements in a fact-based and story-like fashion will result in an effective means of publicizing the promotion through simple and popularly used media.

Another effective action is to announce that the basic direction of Japan's international cooperation in recent years is harmonized with the international community. It is particularly effective to introduce the new frameworks, such as the SDGs, which are strongly committed to advancements in the field of public sanitation centered on waterworks as a major component. Although the series of actions described above for strengthening public relations are intended for public relations targeting the Japanese people (C), it is expected that these actions will lead to the increase of Japan's presence in the international community (A). Furthermore, these actions will have a positive impact on the creation of an environment that encourages the water utility corporations of local governments that are not currently active in international cooperation to participate in these projects (E). Such an environment will form a foundation for the continuous development of Japan's international cooperation in the future.

Based on the results of the discussion above, we will suggest some specific methods for achieving our purpose in the next chapter.

Chapter 5 Specific Measures to Increase the Impact of Public Relations and Issues to address in the Future

5-1 Suggestions for Specific Measures

From the discussion to this point, we can conclude that there is room for strengthening the public relations with the people having less interest in international cooperation by

communicating it to those people in a simple and easy-to-understand manner. Based on this conclusion, in this section we will provide suggestions for the public relations actions to be taken by each responsible organization in terms of who should play a main role in the public relations, who the public relations targets are, what the recommended contents and methods are, as well as the suggestions for new efforts to be made.

1) Organizations Responsible for Public Relations

In this study, we discussed the public relations actions conducted by government agencies that are practically involved in Japan's international cooperation in the water supply sector: JICA, the water utility corporations, consultants, private companies, incorporated associations and NGOs, etc.

2) Public Relations Targets

From the results of the discussion on the actions of each segment, we have focused on the general public that currently has less interest in international cooperation as the direct target of the public relations efforts, because effective public relations intended for these people will have a spreading effect to the other segments.

Although up to now, the publication of information to the general public has been carried out very actively, we consider that it is still important to seek a better method of public relations to strengthen the dissemination of this information from the standpoint of the characteristics of the targets and based on the significance of the public relations.

3) Suggestions for the Attractive Contents and Methods of Effective Publications

From the results of the discussion up to this point, we will describe below what information should be publicized, and how the existing methods of publication can be improved.

First of all, devising a better method for public relations intended for the general public is suggested as a measure that can be taken directly. Simplicity and impressiveness are important in this form of public relations, because the targeted people have no special knowledge about the water supply sector. Although the public relations that are currently conducted are so multidirectional and precise as to be very effective for the persons who access the publications with great interest, there is still room for strengthening the publications in consideration of their simplicity and impressiveness. (The specific ideas and contents of the public relation publications that will be discussed for actual use are described in the next section.)

It is expected that a deeper understanding from the general public will lead to more support for the activities of the organizations responsible for international cooperation, as a

consequence of the dissemination of the information described above. In particular, the existence of such background support makes it possible for the concerned persons to participate in international conferences, seminars and forums and to publicize the relevant information and thereby increase the visibility of Japan's achievements in the international community and amongst international organizations. Furthermore, it will lead to much more effective activities including Japanese organizations hosting international conferences such as, for example, the Executive Forum for Enhancing the Sustainability of Urban Water Services in the Asian Region hosted by the JICA and the IWA conference in Yokohama.

Water utility corporations are indispensable entities in driving the international cooperation in the water supply sector strongly forward. For this reason, there is room for seeking methods that will help the water utility corporations to participate in international cooperation projects without difficulty.

Meanwhile, from the result of the field survey, we judge that public relations actions in the aid-recipient countries, which are also important, should be conducted through various activities to produce good impacts. In particular, the development of waterworks is an easily recognizable achievement and contributes greatly to the public relations, as the people in the aid-recipient countries can feel its benefits in terms of real experiences. Also, the governments in the aid-recipient countries can make appeals through TV and the like about the development of the waterworks as a political achievement. While we acknowledge the fact that such activities have been supported by the related Japanese organizations so far, we are sure that these activities should be continued in the future.

4) Suggestions for New Efforts

Based on the discussion in the previous section, we will make a concrete suggestion to further strengthen public relations by properly publicizing the significance and effects of the international contributions.

(1) Significance of the Benefits of the Project in the Water Supply Sector and its Ripple Effect

The cooperation in the water supply sector has a great ripple effect, such as reducing the region's infant mortality rate, besides the direct benefit of the improvement of the living infrastructure by the project. It can therefore be said that it is a very beneficial project for the aid-recipient countries. Efforts to obtain a broader understanding of this point are particularly needed.

For example, the UNICEF report, "Pneumonia and diarrhea", records the yearly changes in the U5MR (Under-five mortality rate: number of children dying before reaching the age of five, expressed as a rate per 1,000 live births) from the standpoint that the securement of safe water

and sanitation is a determining factor for the improvement of the mortality rate from diarrhea. Monitoring this type of information over several years and editing the relevant data in the explanatory materials will be an effective way of emphasizing the effects of the waterworks on the resulting public sanitation.

Country or territory	Number of children under age 5 (thousands) 2010	Under-five mortality rate ^a (deaths per 1,000 live births) 2010	Number of deaths among children under age 5 (thousands) 2010	Child immunization, 2010 (% of one-year-old children)			Exclusive breast-feeding (% of infants under age 6 months) 2006–2010 ^b	Undernutrition, 2006–2010 ^b (% of children under age 5)		
				Measles	Hib	DTP3		Underweight		Stunting
								Moderate and severe	Severe	Moderate and severe
Afghanistan	5,546	149	191	62	66	66	—	33 ^c	12 ^c	59 ^c
Albania	208	18	1	99	99	99	39	5	2	19
Algeria	3,447	36	26	95	95	95	7	3	1	15
Andorra	4	4	0	99	98	99	—	—	—	—
Angola	3,378	161	121	93	91	91	11 ^c	16 ^d	7 ^d	29 ^d
Antigua and Barbuda	8	8	0	98	98	98	—	—	—	—
Argentina	3,386	14	10	99	94	94	—	2 ^d	0 ^d	8 ^d
Armenia	226	20	97	48	94	35	5	1	19	—
Australia	1,458	5	1	94	92	92	—	—	—	—
Austria	386	4	0	76	83	83	—	—	—	—

Country or territory	Population using an improved drinking water source (%)				Population using an improved sanitation facility (%)				Population using solid fuels as the main cooking fuel (%)
	Total		Rural 2010	Urban 2010	Total		Rural 2010	Urban 2010	
	2000	2010			2000	2010			
Afghanistan	22	68	12	78	32	37	30	60	85
Albania	98	95	94	96	84	94	93	95	39
Algeria	89	83	79	85	92	95	88	98	<5
Andorra	100	100	100	100	100	100	100	100	<5
Angola	46	51	38	60	42	58	19	85	55
Antigua and Barbuda	91	—	—	95	95	—	—	98	<5
Argentina	96	—	—	98	91	—	—	—	<5
Armenia	92	98	97	99	89	90	80	95	19
Australia	100	100	100	100	100	100	100	100	<5
Austria	100	100	100	100	100	100	100	100	<5

Figure 5.1 Statistical Material Compiled by UNICEF

(2) Public Relations that Emphasize the Importance of Sustainable International Cooperation

As described in Chapter 2, the current framework of international cooperation in the water supply sector is built on more than 50 years of accumulated experiences gained through the challenges and efforts faced in many countries. For example, the cumulative effort of the human resource development in Thailand and Indonesia proved effective in developing the successful project in Cambodia. Currently, the public relations are independently conducted by the responsible organization for each project, and the publicized information is mainly the details of each project on a project-by-project and/or a country-by-country basis. Therefore, it is difficult to know about the stream of Japan's international cooperation in an historical context and from the viewpoint of the connections between projects in different countries. Meanwhile, it is important to pay attention to distributing easy-to-understand information, in order to obtain

the understanding of the public who have less interest in the international cooperation in the water supply sector. In particular, the information about an event that occurs in a narrative fashion will be well accepted by the public, and is thus considered as effective for public relations.

From this reason, we suggest the creation of public relations publications that focus on introducing the long-standing historical stream of Japan's international cooperation in the water supply sector and certain projects that showcase excellent achievements, in relation to the historical context and in a narrative fashion.

For example, we propose the production and use of a document that features the "Spectacular story of Japan's more than 50-year history", in which the fact that the benefits for the aid-recipient countries have been enlarged by the efforts of the people and have grown through successive and interrelated projects, and especially the achievements of internationally renowned projects that were brought about as the result of the cumulative experience from many projects, are explained in a narrative manner.

(3) Objective Assessments by Third-parties

The objective assessment by entities other than those involved in Japan's international cooperation is a highly effective action for public relations. The objective data, such as the international rankings of the active aid spending in the past and its benefits, can be used to create easy-to-understand explanations of a highly beneficial nature regarding the ripple effect of the waterworks project.

It is also effective to show the fact that Japan's international cooperation in the water supply sector has more support than that of other sectors in Japan (according to the JICA survey, whose data is attached as reference materials).

Additionally, in this regard, the SDGs have set a policy to address the improvement of the waterworks and sanitary conditions in each country with quantitative criteria. If the conditions of the waterworks and sanitation in each country and the quantitatively measured improvements made by international cooperation are publicized in detail in the future, in the pursuit of the SDGs, the significance of Japan's international cooperation in the water supply sector will be acknowledged more objectively.

Furthermore, winning international awards, such as the Stockholm Industry Water Award in Sweden, the Philippines Ramon Magsaysay Award and the Lee Kuan Yew World City Prize in Singapore, all of which demonstrate the recognition of Japan's efforts from foreign institutions, revealing that "Japan has been making this much effort" will be a persuasive form public relations.

(4) Introduction of a Leading-edge Project Conducted by a Third-party

By introducing a case that encourages the promotion of international cooperation, Japan can be a model and can create the momentum for other countries to try to follow its lead.

The fact that the water supply sector is positioned as an important theme in the SDGs provides a great opportunity in itself to stress the importance of international cooperation in the water supply sector objectively.

Another option is to introduce a country that puts a priority on its international cooperation as an important national policy. For example, one percent of the water revenue is used for international cooperation in the Netherlands. In the UK, water utility corporations take care of the country's donations through WaterAid, an international NGO.

(5) Introduction of the Activities and Achievements of the Advanced Organizations in Japan

In terms of the Japanese local governments that actively participate in international cooperation, their participation in international cooperation is considered as effective not only in terms of the benefits that the aid-recipient countries receive, but also in terms of the positive effect that is exerted on the domestic business through the development of skills and knowledge in the staff that are involved in these projects. However, it is also a fact that the number of local governments that actively participate in these projects is limited, partly because of the restrictions from laws such as the Local Autonomy Act. Nonetheless, for the local governments that have already participated in international cooperation, the positive effect exerted on their domestic business has been acknowledged. This type of participation can be therefore be an effective method for public relations, in order to encourage more local governments to be involved (participate) in international cooperation. If a direction to actively participate in international cooperation is incorporated in the policies of a local government or a water utility corporation, with reference to the public relations actions described above, it could facilitate cooperation activities at working levels. We will list the concrete methods as follows.

- Deepening of direct bilateral relationships

It is necessary to deepen the understanding of international cooperation as an activity that can obtain the support of local residents. An effective method is to actively inform the residents about the efforts in the ground of international cooperation and the reputation that has been gained in the aid-recipient countries through local media.

- Ripple effect on the local economy

As one example, the City of Yokohama has a policy, as an international city, of building international relations through city-wide activities. In the City of Kitakyushu, an

international contribution is incorporated into the management policies of the Water and Sewer Bureau. These local governments have achieved significant results in international cooperation. A clear explanation of their contributions to the local community would help to obtain more support. Furthermore, an effective action would be to advocate and seek understanding about the usefulness of the relationship with the international community, as an asset for the vitalization of the area in ages to come, even as a provincial city (for example, it can be advantageous for attracting tourists and for the international expansion of local businesses).

- **Effect on the development of human resources in the water utility corporations**

The effect on human resource development is a result that people often point out as the significance of participating in international cooperation. At present, the succession of technology is an important theme in Japan. At the same time, opportunities for persons to cultivate their skills and knowledge in the field through the construction of major waterworks facilities in Japan are extremely rare, especially in terms of the maintenance of the water supply sector. In contrast, staff have a chance to work on the construction of a full-scale new waterworks facility in foreign countries. Therefore, they will face various difficulties that arise because of insufficient assistance and have to overcome these impediments by themselves. Because of such conditions, leading organizations report that the actual involvement in international cooperation has a great effect on their human resource development. Based on this point, it is effective to clearly position international cooperation as a part of the human resource development.

5-2 Issues in the Future

Lastly, we will bring up two issues that will need to be worked on in the future, which we have discovered through this study.

1) Discussion about the Method of Measuring the Impact of Public Relations

In this study, we have concentrated on following the series of procedures that are necessary for a discussion on the issues related to public relations, such as the definition of the purpose of the public relations and its targeting. However, we have not discussed the issue of the measurement of the impact of public relations.

Typically, private companies assess the impact on public relations by analyzing the consequent increase in the company's profits and revenue produced by the public relations, based on a breakdown of the data into the number of customers and the unit prices. However, the main beneficiary of the effect of waterworks is an external economy. Therefore, it is not possible to measure the impact of the public relations by analyzing the direct profits that the beneficiaries

receive. For this reason, the measurement of the impact requires complex procedures, such as the quantification of the benefits, and thus, this measurement is very difficult.

Therefore, the method of measuring the impact of public relations should be continuously discussed in a future study.

2) New Assistance Needed for Quantitative Assessments

The SDGs, which set the policy for international cooperation toward the future, are remarkable in terms of their quantitative assessments on the status of the improvements in each country. Under the new policy, the method used to calculate various indicators that evolved from the rate of accessibility to safe water, which was used in MDGs, has to be developed.

As was described in Chapter 2, the JICA has been making an effort to develop a quantitative assessment, within its best practicable range, that will involve factors such as analyzing the statistics of the water supply beneficiary population, the number of persons who have received the technology transfer, etc. Also, various organizations including UNICEF and the WHO independently publicize various statistics, such as the of infant mortality rate, the number of patients presenting diarrhea, etc.

In addition, the importance of the effective use of quantitative indicators, such as the Performance Indicators (PI), is emphasized in Japan's international cooperation in the water supply sector and is broadly recognized by the aid-recipient countries.

Meanwhile, the information for the quantification has to be gathered through detailed and precise research on the conditions of the aid-recipient countries, in order to pursue the SDGs. It is apparent that there is room for studying a framework for a new type of assistance that places an emphasis on the collection of data concerning each project, as well as the statistical data, because the census data in developing countries is often unreliable. We suggest that the water utility industries in Japan continue their active efforts, by utilizing the resources that have been acquired through the achievement of the activities including the statistical survey on the waterworks, in a very early phase and also actively participate in the international discussion on the PI.