

Third Party Evaluation Report 2016  
Ministry of Foreign Affairs of Japan

# Evaluation of Japan's Assistance in the Pollution Control Field

March 2017

International Development Center of Japan Inc.



## Preface

This report under the title Evaluation of Japan's Assistance in the Pollution Control Field was undertaken by the International Development Center of Japan Inc. (IDCJ), entrusted by the Ministry of Foreign Affairs (MOFA) in fiscal 2016.

Since its commencement in 1954, Japan's Official Development Assistance (ODA) has contributed to the development of partner countries and has contributed to bring solutions for international issues which vary over time. Recently, in both Japan and the international community, implementing of ODA requires higher effectiveness and efficiency. MOFA has been conducting ODA evaluation every year, of which most are conducted at the policy level with two main objectives: to improve the management of ODA; and to ensure its accountability. These evaluations are conducted by third parties to enhance transparency and objectivity.

The present evaluation study was conducted with the objectives of reviewing Japan's assistance in the pollution control field, drawing on the lessons from this review to make recommendations for reference in policy planning and its effective and efficient implementation in future pollution control cooperation efforts of the Government of Japan. The study also intends to ensure the accountability of Japan's ODA by making the evaluation results widely available to the general public.

Prof. Ryokichi Hirono, Professor Emeritus of Seikei University, served as a chief evaluator to supervise the entire evaluation process and Ph.D. Shigeru Matsumoto, Professor of Aoyama Gakuin University, served as an advisor to share his expertise on environmental pollution management. They have made an enormous contribution from the beginning of the study to the completion of this report. In addition, in the course of this study both in Japan and in Mongolia, we have benefited from the cooperation of MOFA, Japan International Cooperation Agency (JICA) and the local ODA Task Force, as well as government agencies in Mongolia, donors and non-governmental organizations (NGOs). We would like to take this opportunity to express our sincere gratitude to all those who were involved in this study.

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

March, 2017

International Development Center of Japan Inc.

Note: This English version of the Evaluation Report is a summary of the Evaluation of Japan's Assistance in the Pollution Control Field.



## Evaluation of Japan's Assistance in the Pollution Control Field (Brief Summary)

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Period of the Evaluation Study : June 2016- February 2017

Field Survey Country : Mongolia



Source: Ministry of Foreign Affairs in Japan

### Background, Objectives and Scope of the Evaluation

Pollution control is an important field in environmental ODA in the ODA Medium-Term Policy (February 2005) and other policies. In this evaluation, the Evaluation Team judged assistance through pollution control cooperation policy (herein after referred to as the Policy) from development and diplomatic viewpoints, and drew recommendations and lessons in the process. This evaluation was conducted to help propose and implement policy for future pollution control cooperation, and to ensure accountability to citizens.

### Brief Summary of the Evaluation Results

#### ● Development Viewpoints

##### (1) Relevance of Policies

The analysis of the relevance of the Policy implicates that the Pollution control cooperation policy is extremely consistent with higher policies of Japan. The Evaluation Team also confirmed that it is highly consistent with the need for diverse socioeconomic development in many recipient countries, primarily for the health of their citizens, and with global trends and challenges geared toward sustainable development. Furthermore, Japanese pollution control, which helped the country overcome environmental deterioration in a relatively short period of time, has received international acclaim, and Japan has comparative advantages in pollution control cooperation and scores highly on nearly all evaluation items. In light of the above, we judge the relevance of pollution control cooperation policy to be high.

##### (2) Effectiveness of Results

In regards to the effectiveness of pollution control cooperation, it is categorized generally high based on the DAC statistic data which shows Japanese achievement of the maximum amount of assistance (agreed amount base) among DAC member countries during the evaluation period. Also, the projects that Japan has implemented during the evaluation period essentially produced the expected outcomes, which resulted in enhancement and improvement of pollution control in recipient countries. The implementation methods stipulated in the Policy were all carried out, and showed good contribution to the achievement of objectives regarding the enhancement and improvement of pollution control. Therefore, we concluded the effectiveness of the enhancement and improvement of pollution control to be high. The state of pollution in recipient countries improved to some extent, but outcomes varied widely, and in some assistance areas and some countries and regions (particularly countries that are still in early development stages), the state of pollution did not necessarily showed improvement. However, it is notable to mention that there are limits to actions taken in response to external conditions, which have a major impact on the realization of improvement in the state of pollution. If we exclude external conditions, it is fair to say that certain outcomes were achieved from the pollution control cooperation. Therefore, the effectiveness of the improvement of the state of pollution in recipient countries was moderately high. Based on the above discussions, we evaluated the effectiveness of the results of this pollution control cooperation policy to be generally high.

##### (3) Appropriateness of Processes

The Evaluation Team found that the process of formulating the Policy involved many discussions and considerations of relevant documents among relevant personnel, and the Policy ended up with reflecting a diversity of viewpoints and opinions, as a result. Therefore, the formulation process was concluded as generally appropriate. As for the policy implementation process, each of the basic tenets of the Policy was proactively implemented; therefore, we concluded the appropriateness of the policy formulation process as high. Although

the “implementation system” and “collaboration and coordination with relevant agencies and other donors, etc.” were implemented generally appropriately, we found that “monitoring evaluation and feedback” and “review” were not conducted at the policy level; therefore, we concluded the appropriateness of the overall policy management process as moderate. Based on the above discussions, we evaluate the appropriateness of the processes of the Policy as generally high.

- Diplomatic Viewpoints

We identified plenty of diplomatic importance to the Policy due to factors such as the true purpose of providing assistance to developing countries, and the ability to create a strong presence of Japan through Japanese comparative advantages. As for the diplomatic impact, the Policy has helped improve bilateral relations by strengthening amicable relations with recipient countries, building smooth communications with neighbouring countries (stability in the Northeast Asian region), and keeping basic relations with sanctioned countries. Through these benefits and other factors such as initiatives borne of the adoption of the Minamata Convention, the Policy has contributed to improved presence of Japan in the international community. Therefore, we evaluate the Policy as having diplomatic importance and impact.

### Recommendations

#### 1. Broad Recommendations for ODA in Other Areas

- (1) Active approach on mainstreaming the environmental conservation in in recipient country's policy

#### 2. Recommendations for ODA Regarding the Environment

##### [Regarding Policy Formulation]

- (2) Consider drafting the main policy document on Japanese pollution control cooperation

##### [Regarding Basic Orientation of Policy]

- (3) Provide assistance toward mainstreaming environmental conservation and pollution control

- (3-1) Capacity development to properly collect, analyze, monitor and evaluate environment-related data

- (3-2) Establish institutional systems to promote effective environmental policy, and develop and transfer environment-related technology

- (3-3) Build a framework to enable a variety of stakeholders to participate in environmental conservation

- (3-4) Propose, legislate and institutionalize policies related to environmental conservation

- (3-5) Improve environmental awareness among people

##### [Regarding Policy Implementation]

- (4) Enhance the use of the knowledge network regarding Japanese pollution control cooperation

- (5) Enhance efforts to improve the state of environmental pollution (super goal)

##### [Regarding Diplomatic Viewpoints]

- (6) Enhance diplomatic effects by creating global frameworks and taking leadership in global discussions



Air Pollution in Ulaanbaatar



Ger areas in Ulaanbaatar city have been expanding

## Contents

Chapter 1	Implementation Policy for the Evaluation.....	1
1-1	Background and Objectives.....	1
1-2	Scope of the Evaluation.....	1
1-3	Methodology of the Evaluation.....	3
1-3-1	Evaluation Framework and Analytical Process.....	3
1-3-2	Implementation Procedure for the Evaluation.....	3
Chapter 2	Performance of Japan's Assistance in the Pollution Control Field .....	3
2-1	Japan's Assistance in the Pollution Control Field.....	3
2-2	Performance of Japan's Pollution Control Cooperation .....	4
Chapter 3	Case Study of Mongolia .....	4
3-1	The State of Pollution and Pollution Control in Mongolia .....	4
3-2	Performance of Japan's Pollution Control Cooperation in Mongolia .....	5
3-3	Evaluation of Japan's Pollution Control Cooperation in Mongolia from the Viewpoints of Development and Diplomacy.....	5
3-3-1	Relevance of the Policy.....	5
3-3-2	Effectiveness of the Results.....	5
3-3-3	Appropriateness of the Processes .....	6
3-3-4	Viewpoint of Diplomacy.....	6
Chapter 4	Questionnaire Survey with Japan's Diplomatic Establishments Abroad.....	6
4-1	Outline of the Questionnaire Survey with Japan's Diplomatic Establishments Abroad .....	6
4-2	Findings of the Questionnaire Survey with Japan's Diplomatic Establishments Abroad.....	7
Chapter 5	Analysis of Reviews of Ex-Post and Terminal Evaluation Reports on Pollution Control Projects .....	8
5-1	Methodology of Analysis.....	8
5-2	Summary of Results .....	9
Chapter 6	Evaluation Results.....	10
6-1	Relevance of the Policy .....	10
6-1-1	Consistency with Higher Policies and Relevant Policies of Japan .....	11
6-1-2	Consistency with the Development Needs of Recipient Countries.....	11
6-1-3	Consistency with Global Trends and Challenges.....	11

6-1-4 Relevance of Japan's Comparative Advantages and Assistance .....	11
6-2 Effectiveness of the Results .....	11
6-2-1 Effectiveness of Assistance Performance.....	12
6-2-2 Effectiveness of Enhancement/Improvement of Pollution Control .....	12
6-2-3 Effectiveness in Recipient Countries.....	12
6-2-4 Effectiveness in Improvement of the State of Pollution in Recipient Countries.....	13
6-3 Appropriateness of the Processes .....	13
6-3-1 Appropriateness of the Policy Formulation Process .....	13
6-3-2 Appropriateness of the Policy Implementation Process.....	14
6-3-3 Appropriateness of the Policy Management Process .....	14
6-3-4 Appropriateness of the Publication and Dissemination of Information .....	14
6-4 Diplomatic Importance and Impacts.....	14
6-4-1 Diplomatic Importance .....	14
6-4-2 Diplomatic Impacts: Bilateral Relations .....	15
6-4-3 Diplomatic Impacts: Japan's Position in the Global Community.....	15
Chapter 7 Recommendations.....	16
7-1 Broad Recommendations for ODA in Other Areas .....	16
7-2 Recommendations for ODA Regarding the Environment.....	16



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## **Chapter 1 Implementation Policy for the Evaluation**

### **1-1 Background and Objectives**

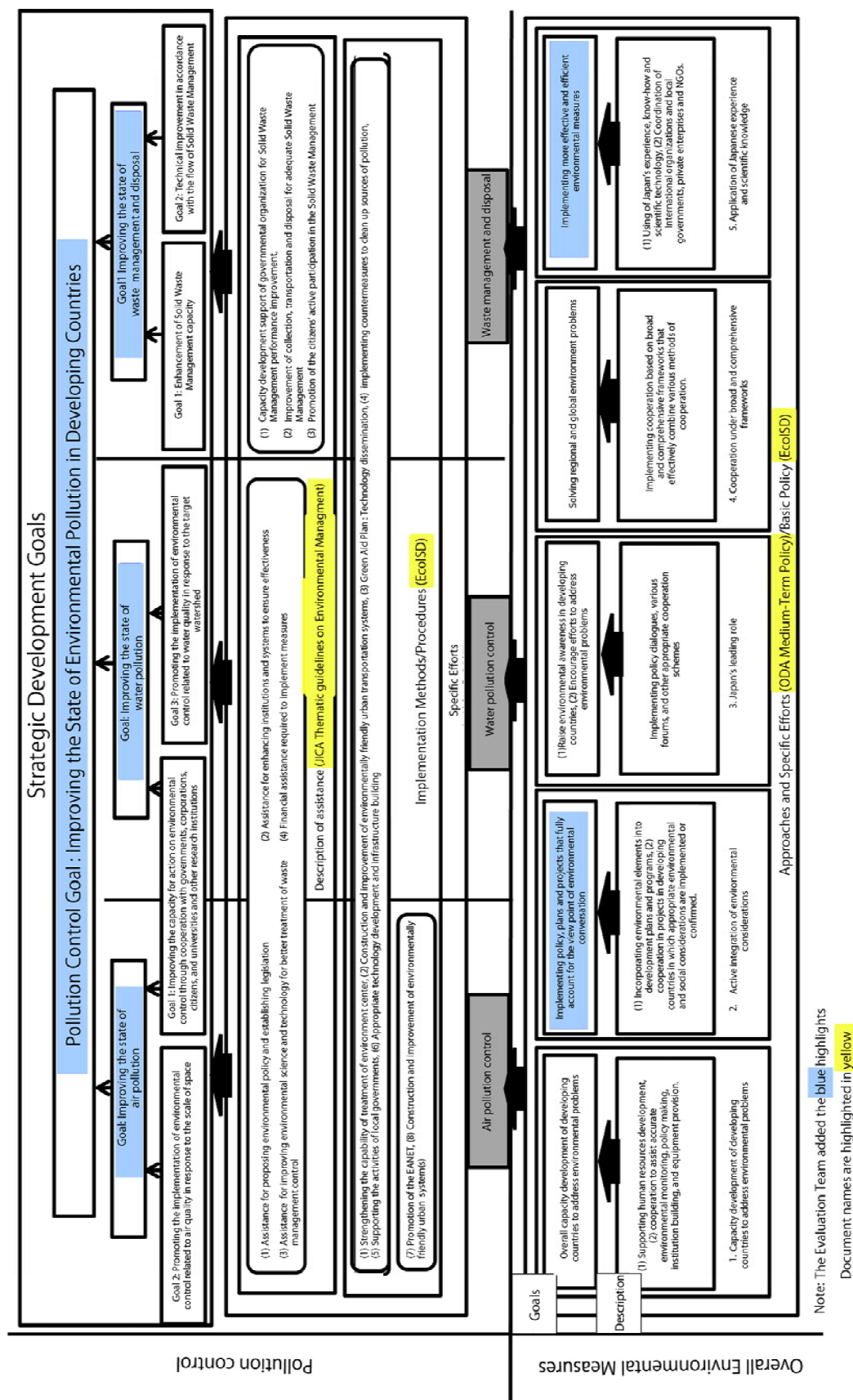
Environmental issues are important challenges in Japanese international cooperation or official development assistance (ODA), and among them, pollution control is one of the most important fields of environmental ODA. Japan has amassed considerable amount of knowledge, experience and technology regarding pollution control, and continues to utilize it to provide various types of assistance to resolve pollution problems in developing countries. In this evaluation, the Evaluation Team conducted a comprehensive investigation of assistance through relevant policy from development and diplomatic viewpoints, and drew recommendations and lessons in the process. This evaluation was conducted to help propose and implement policy for future pollution control cooperation, and to ensure accountability to citizens.

### **1-2 Scope of the Evaluation**

Although the scope of this evaluation is pollution control cooperation policy, it is worth noting that Japan's pollution control cooperation codes have never been organized into a single document as pollution control cooperation policy. Therefore, the Evaluation Team came up with organizing the Policy into an objective framework based on the following three documents: "ODA Medium-Term Policy (February 2005)," "Environmental Conservation Initiative for Sustainable Development (EcoSD)," and "JICA Thematic Guidelines on Environmental Management." These three environmental policy documents have different scopes and levels; therefore, the Evaluation Team organized the objective framework in three steps as follows: (i) environment (policy/approach), (ii) general environmental pollution (efforts), and (iii) three major areas (efforts/strategic goals) such as air pollution.

The subject period, areas and scope of analysis for this evaluation study are listed below.

- (1) Subject period: Since ODA Medium-Term Policy was formulated in 2005
- (2) Subject area: Pollution control field (emphasis on the areas of air pollution control, water contamination control, and waste management and disposal)
- (3) Targeted geographical area: Global (Mongolia as a case study country)
- (4) Scope of analysis: Policies, programs/projects/other projects related to multilateral cooperation and bilateral cooperation by the Ministry of Foreign Affairs/JICA, the Ministry of the Environment, etc.



Source: Prepared by the Evaluation Team based on ODA Medium-Term Policy (February 2005), Environmental Conservation Initiative for Sustainable Development (EcoISD), JICA Thematic Guidelines on Environmental Management

Figure 1-2-1: Objective Framework of Japan's Pollution Control Cooperation Policy

## 1-3 Methodology of the Evaluation

### 1-3-1 Evaluation Framework and Analytical Process

The analytical process employed for this evaluation study consists of six components: (i) establishment of an evaluation implementation policy, (ii) analysis of international trends in pollution control and the performance of Japanese assistance, (iii) case study in Mongolia, (iv) analysis of questionnaire surveys with Japan's diplomatic establishments abroad, (v) analysis of reviews of ex-post and terminal evaluation reports, and (vi) summary of evaluation results. Based on the findings of components (i) through (v), the summary of evaluation results was conducted from development viewpoints (criteria: relevance of the policy, effectiveness of results and appropriateness of processes) in line with the ODA Evaluation Guidelines (10th Edition; June 2016) as well as from diplomatic viewpoints. Evaluation results were rated for three evaluation criteria from development viewpoints. In addition, recommendations were drawn from the evaluation results.

Table 1-3-1: Criteria for Rating the Evaluation from Development Viewpoints

Evaluation Item	Rating	Criteria
Relevance of policy	High	Obtained an evaluation of "high" for most items.
	Generally high	Obtained an evaluation of "generally high" for most items.
	Moderately high	Obtained an evaluation of "high" for many items.
	Not high	Not obtained an evaluation of "high" for many items.
Effectiveness of results	High	A very large effect was confirmed for most items.
	Generally high	Significant effects was confirmed for most items.
	Moderately high	Some effects confirmed for many items.
	Not high	Few effects confirmed for many items.
Appropriateness of processes	High	Obtained a high evaluation for most items in process of policy formation and implementation.
	Generally high	Obtained a generally high evaluation for most items in process of policy formation and implementation.
	Moderately high	Obtained a high evaluation for many items in process of policy formation and implementation.
	Not high	Not obtained a high evaluation for many items in process of policy formation and implementation.

Source: Prepared by the Evaluation Team in line with MOFA ODA Evaluation Guidelines (10th Edition)

### 1-3-2 Implementation Procedure for the Evaluation

This evaluation was conducted during the study period from July 2016 to February 2017 according to the following procedures: (i) formulating an evaluation plan, (ii) conducting surveys in Japan, (iii) conducting field surveys in Mongolia, and (iv) analyzing and editing the report in Japan.

## Chapter 2 Performance of Japan's Assistance in the Pollution Control Field

### 2-1 Japan's Assistance in the Pollution Control Field

Over the past 25 years, environmental ODA has been viewed as one of high priority ODA areas in which Japan actively addresses. The fact that Japan has been trying to take a global leadership in the human security, a nontraditional area of security as a part of environmental improvement, is one of the reasons why Japan has put significant efforts on environmental

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ODA. In 2005, a discussion on “The Direction of the International Environmental Cooperation” was held at the Central Environment Council. The report, in a context with necessity of strategic, effective and comprehensive international cooperation, encouraged not only the conclusion of environmental treaties and enhancement of cooperation structure of the Ministry of the Environment itself, but also strengthening the partnerships with local governments, NGO/NPO and private sector which participate actively in creating frameworks for environmental cooperation, especially with research institutions in East Asia, as target region, to establish robust global economic relationships. Various assistance was provided toward the development of environmental human resources in respond to these recommendations. In addition, the report posited that assistance should be provided, in particular, in the important areas of pollution control, environmental monitoring technology, environmental education and capacity development. Moreover, the report has a distinctive feature of emphasizing human resources development.

## **2-2 Performance of Japan’s Pollution Control Cooperation**

OECD statistical data was used to take a general outlook at performance of Japan’s assistance in the three important areas of the pollution control assistance field: air pollution, water contamination, and waste management and disposal.

The cumulative number of Japanese assistance (commitment-based) across all environmental pollution areas over the evaluation period of 2005 to 2015 was 4.824 billion USD, second only to France. Japan was second to France in assistance for air pollution, but was the largest supporter of OECD members in assistance for water contamination and waste management and disposal fields. Comparing across the three important areas, Japan made relatively large donations to air pollution control. In terms of the number of projects, Japan implemented over 550 projects in waste management and disposal, the biggest of all three fields, as well as roughly 280 projects on water contamination prevention, and around 100 projects on air pollution control. This could lead us to conclude that Japan’s implementation style can be categorized concentration type for air pollution control, dispersed type for waste management and disposal, and a mix of concentration and dispersed for water contamination prevention.

## **Chapter 3 Case Study of Mongolia**

### **3-1 The State of Pollution and Pollution Control in Mongolia**

A 2010 survey of air pollution by WHO ranked the city of Ulaanbaatar one of the world’s top 10 worst cities. Air pollution is particularly serious issue during the winter. There are three major causes of air pollution in Ulaanbaatar: the use of coal in ger areas where majority of migrants to the city reside; the use of coal in factories, power generation facilities, etc.; and poorly maintained automobiles. Regarding the water pollution in Ulaanbaatar, there are three major causes: contamination by heavy metals due to mining excavation activities, dissolved organic nitrogen and ammonia contamination due to effluent from leather tanning plants in

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industrial zones, and untreated sewage from ger areas. Ger areas are not equipped with toilet facilities, and problems with contamination due to sewage are serious. Mongolia also faces problems with waste management due to the rapid expansion of its urban area. According to the World Bank Urban Solid Waste Management Survey in 2011, cities in low-income countries expend nearly 20-50% of their budgets on waste disposal and Ulaanbaatar also spends a huge amount on waste disposal every year.

### **3-2 Performance of Japan's Pollution Control Cooperation in Mongolia**

During the evaluation period, Japan implemented 16 pollution control cooperation projects in Mongolia: four air pollution control projects, four water contamination control projects, four waste management projects, and four other projects in which Japan provided assistance through a variety of schemes and actors. In addition, the Japanese Ministry of the Environment worked with the Mongolian Ministry of the Environment (currently the Mongolian Ministry of Environment, Green Development and Tourism) to host 10 Japan-Mongolia Environment Policy Dialogues from 2007 to 2016.

### **3-3 Evaluation of Japan's Pollution Control Cooperation in Mongolia from the Viewpoints of Development and Diplomacy**

#### **3-3-1 Relevance of the Policy**

The Evaluation Team judges the relevance of the policy as high. Japan's efforts in pollution control cooperation are highly consistent with its higher policies and other relevant policies, and are generally consistent with the development policy, action plans, environment-related policy, and other development needs of the Mongolian and Ulaanbaatar municipal governments despite the fact that the Mongolian government's current priority is recovery from economic crisis. Japan's efforts are also highly consistent with global trends and global challenges. The team evaluated air pollution and waste management as areas where Japan's comparative advantages stand out, and people involved in the assistance are highly satisfied with Japan's cooperation method such as municipal partnership program, human resources development program focused on administrative officials for which JICA has strengths, and package style support that incorporates a variety of schemes and other methods. Therefore, we concluded the relevance of Japan's assistance to be extremely high.

#### **3-3-2 Effectiveness of the Results**

The Evaluation Team judges the effectiveness of the results of each stage to date as moderately high. The ODA projects Japan has implemented match with the execution of policies of the Mongolian and Ulaanbaatar municipal governments, and have been helpful toward preventing environmental pollution from getting worse. Therefore, we concluded the effectiveness of the results in environmental assistance implementation and important areas to be generally high. As for the overall effectiveness of Japan's pollution control cooperation for Mongolia, while the Evaluation Team understands that Japan's assistance has contributed somewhat to the improvement of Mongolia's capacity for environmental management, Mongolia is still in the stage of solidifying its environmental management

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system and its management capacity for environmental pollution improvement. It is likely that together with the Mongolian government and other donors, Japan must continue to make further efforts to address high-priority challenges in order to achieve improvement in environmental pollution.

### **3-3-3 Appropriateness of the Processes**

The Evaluation Team judges the appropriateness of the processes as generally high. The policy implementation process is evaluated as generally appropriate, because approaches and specific efforts are made in line with Mongolia's needs, and are evaluated high by Mongolia and other donors. The policy management process is also evaluated as generally appropriate because, while understanding of the Mongolian needs, the approval and implementation of projects, and collaboration and coordination with multiple donors and inside Japan are all appropriate, there are some issues remained in efficiency, monitoring and evaluation. As for the appropriateness of publication and dissemination of information, due to the facts that (1) Japan's pollution control cooperation has never been integrated into a single policy document, and (2) there are not many Japanese projects focusing on pollution control, it is difficult to say that Japan's pollution control cooperation was fully understood by the Mongolian government, other donors, and even among Japanese assistance providers.

### **3-3-4 Viewpoint of Diplomacy**

"The Japan-Mongolia Mid-Term Action Plan for a Strategic Partnership" appears to help deepening friendship and trust between the two countries and given way to cooperation on pollution control, which is critical to the health and welfare of Mongolian citizens. In addition, Mongolia was the first country to sign a JCM agreement, a bilateral climate change cooperation initiated by Japanese Government, which likely had a number of positive effects on other Asian countries encouraging to sign the JCM agreement with Japan. Thus, the Evaluation Team concludes Japan's pollution control cooperation with Mongolia as not only beneficial in terms of diplomatic and friendly relations between the two countries, but also contributing to strengthening ties with neighboring Asian countries.

## **Chapter 4 Questionnaire Survey with Japan's Diplomatic Establishments Abroad**

### **4-1 Outline of the Questionnaire Survey with Japan's Diplomatic Establishments Abroad**

During this evaluation period, the Evaluation Team conducted a questionnaire survey with Japan's diplomatic establishments abroad. The table below shows an overview of the questionnaire survey.

Table 4-1-1: Outline of Questionnaire Survey with Japan's Diplomatic Establishments Abroad

Objective	To gather information on how Japanese pollution control cooperation has contributed to the improvement of environmental pollution in developing countries, environmental management required for improvement of the state of pollution, and environmental management capacity; and on what kinds of mitigation are required for further contribution
Target Countries	A total of 29 countries selected using the following criteria (1) Countries that have completed at least two loan assistance projects (main projects), grant aid projects, technical cooperation projects, or development surveys (since 2008, known as technical cooperation for development planning) related to pollution control between 2005 and 2015 (selected from information on the JICA Knowledge Site) (Note: Not including Syria) (2) Countries that do not fall under (1), but having signed the Memorandum of Understanding on environmental cooperation (Iran)
Survey Response Rate	16 countries responded (effective response rate: 53%)
Main Information Gathered	(1) Relevance of policies: Priority of pollution control, state of Japanese pollution control cooperation, state of project formation/donor cooperation etc., Japan's comparative advantages (2) Effectiveness of results: Impact of policy (state of improvement, degree of Japanese contribution) (3) Appropriateness of processes: Implementation status of monitoring and evaluation (4) Diplomatic viewpoints: Specific examples of results in terms of diplomacy

Source: Prepared by the Evaluation Team

## 4-2 Findings of the Questionnaire Survey with Japan's Diplomatic Establishments Abroad

The analysis conducted for this chapter revealed the following primary findings:

- Most partner countries had pressing needs for pollution control, and assistance was provided in response to those needs.
- 75% of respondents selected water contamination control and waste management as sub-sectors for Japan to emphasize in its implementation of pollution control cooperation, while 50% selected air pollution control (multiple answers were possible).
- As for the nature of cooperation for Japan to emphasize in its implementation of pollution control cooperation, nearly all partner emphasized capacity development more than the other content (multiple answers were possible). However, most of the cooperation items were regarded as important by a majority of the partner countries (each country selected an average of 4.2 items); partner are focusing on a wide range of cooperation items.
- The status of cooperation with other donors in development assistance in developing countries varied by country. Active efforts are identified to coordinate, differentiate and collaborate in countries where other donors are proactively providing assistance.
- A majority of relevant personnel concluded that Japan has high comparative advantages in the area of pollution control. Specific examples of those comparative advantages include (i) Japan's experience with overcoming its own pollution problems during its economic

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development, (ii) pollution control technology and know-how, (iii) knowledge about waste management and 3R, and (iv) capability of providing comprehensive assistance in pollution control.

- As for the state of enhancement and improvement of pollution control in partner countries, around 70% replied that the situation was improving, and gave high marks across a wide range of survey items. Japanese contributions elicited the highest evaluation, with 25% of respondents rating capacity development as extremely high and 63% rating it as high.
- Compared to other items, the state of improvement of environmental pollution was severely scored. Respondents recognize that improvement was progressing relatively well for the sub-sectors of water contamination control and waste management, but few (only 13%) responded that air pollution was improving. There are major differences in the development stages of improvement of environmental pollution; improvement rates are low in countries that are in early development stages. Japan's contributions reflect the status of improvement to a degree, receiving positive evaluations with over half of respondents rating extremely high or high on air pollution control and waste management as extremely high or high.
- Positive diplomatic outcomes have been reported: the recipient country governments are highly satisfied with high-quality pollution control cooperation that is implemented continuously over long periods of time by utilizing comparative advantages of Japan; some recipient country governments associate Japanese assistance with pollution control; and government leaders and senior officials of the Ministry of Environment in the partner countries such as Paraguay and Mexico have acknowledged these outcomes.

## **Chapter 5 Analysis of Reviews of Ex-Post and Terminal Evaluation Reports on Pollution Control Projects**

### **5-1 Methodology of Analysis**

There were ex-post evaluations conducted for pollution control projects under the technical assistance scheme, in addition to the publication of project report and the terminal evaluations at the final phase of individual projects. In an effort to conduct a quantitative evaluation, the Evaluation Team used original evaluation forms to organize and quantify reviews on each item for its analysis.

The scope of the analysis for this chapter was ODA projects related to pollution control; specifically, 55 projects were selected according to the following criteria.

- Projects in the “environmental management” category on the JICA Knowledge Site likely corresponding to pollution control (except projects addressing global warming and ozone layer destruction)
- Projects that began in and after 2002, and whose ex-post and terminal evaluation reports have been publicized



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## 5-2 Summary of Results

- Of the five approaches set out as specific efforts and approaches related to environmental measures as a whole, the most important approach was “Capacity development to address environmental problems,” with strong emphasis reported in 76% of projects. Projects are also reported as sufficiently reflecting “application of Japanese experience and scientific knowledge” and “cooperation under broad and comprehensive frameworks.” In contrast, the approach of “Japan’s leading role” was hardly mentioned at the project level, possibly because it was envisioned for international conferences and agreements.
- There were major differences between the levels of emphasis on “implementation methods and procedures” among pollution control measures. Examples of implementation methods and procedures emphasized across a wide range of projects are “appropriate technology development and basic infrastructure construction,” and “implementation of anti-pollution measures.” In contrast, “establishment of eco-friendly traffic,” the “Green Aid Plan/technology diffusion,” and “EANET promotion assistance” are implemented under the framework outside of scope of this review.
- As for the nature of assistance among efforts related to pollution control, certain types of assistance were emphasized across a wide variety of projects: for air and water pollution control, “assistance for enhancing institutions and systems” and “assistance toward improvement of environmental science and technology”; for waste control, “capacity development assistance for governmental institutions” and “improvement of waste collection, transportation and disposal.” In addition, “assistance for policy making and legislation (air/water pollution control)” and “encouragement of citizen participation (waste management)” were types of assistance distinct to technical cooperation projects.
- As for strategic development goals among specific efforts related to pollution control, for air and water pollution control, “promotion of implementation of environmental management” was set as a goal for a majority of projects, and is one of the main goals. “Capacity development through cooperation with relevant agencies” was also emphasized in many projects, but not to the extent of “promotion of implementation of environmental management” because the level of emphasis varied from project to project. For waste management, “improvement of management capacity” and “technology improvement” were both set as strategic development goals for nearly all projects.
- As mentioned above, the “implementation methods and procedures,” “nature of assistance” and “strategic development goals” of “efforts and approaches related to environmental measures as a whole” and “efforts related to pollution control” shown in the objective framework were emphasized across the majority of projects.
- The Evaluation Team’s review of the five items of the DAC evaluation shows that the relevance of nearly all projects was scored higher than “generally high”, with nearly 70% of projects scored “high”. The primary evaluation items, namely “appropriateness”, “priority”, and “necessity”, are all evaluated as “high”. As for the “effectiveness,” the majority

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of projects were evaluated positively; roughly one third was evaluated as “high”, and 86% were evaluated higher than “generally high”. As for “efficiency,” although 69% of projects were evaluated as “moderately high”, only 20% were evaluated as “high.” The evaluation result of “efficiency” scored lower than that of “effectiveness” and “appropriateness.” Efficiency also had the highest percentage of negative rating (“moderately high” and “not high”), at 30% of projects. As for “impact” of the project, only 22% of projects earned a “high” rating, which is lower than the rating of “effectiveness” (33%). On the other hand, when including “generally high” ratings, “impact” rating as a whole earned positive with receiving positive rating from nearly 80% of projects. As for “sustainability,” 71% of projects were evaluated as “very high”. However, only 20% of projects were evaluated as “high” Sustainability also had a high percentage of “moderate” and “not high” ratings, at 29% of projects.

- As mentioned above, the Evaluation Team’s rating of the five items of the DAC evaluation shows that a majority of projects were evaluated more than “generally high” in terms of relevance and effectiveness. Although some projects did not score well in terms of efficiency, impact and sustainability, as a whole they received positive evaluations.
- There was little information or review from diplomatic viewpoints because there was not much written to begin with. Nonetheless, some specific examples of diplomatic outcomes were introduced from a limited number of projects.

This chapter is a summary of the review of ex-post evaluations on pollution control. It is worth noting that restrictions like the following should be kept in mind: (1) Although the Evaluation Team carefully covered a wide range of schemes in its scope of review work, there are limited number of qualified capital cooperation projects due to the restriction on ex-post evaluation report only targeting 2-3 years old projects after the completion; and (2) there are issues with objectivity of the terminal evaluations by not being reviewed by third party, and with ambiguity on the project impact due to the timing of terminal reviews which are conducted six months prior to the completion of projects.

## **Chapter 6      Evaluation Results**

### **6-1    Relevance of the Policy**

Pollution control cooperation policy is extremely consistent with higher policies of Japan. The Evaluation Team also confirmed that it is highly consistent with the need for diverse socioeconomic development in many recipient countries, primarily for the health of their citizens, and with recent global trends and challenges gearing toward sustainable development. Furthermore, Japanese experience in pollution control, which overcame environmental deterioration in a relatively short period of time, has received international acclaim, and Japan has comparative advantages in pollution control cooperation and scores highly on nearly all evaluation items. In light of the above, we judge the relevance of pollution control cooperation policy to be high.

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### **6-1-1 Consistency with Higher Policies and Relevant Policies of Japan**

According to the previous ODA Charter, the objectives of ODA is “to contribute to peace and development of the international community, and thereby to help ensure Japan’s own security and prosperity” The text of the objective also makes mention of “environment” as a global-scale issue, and clearly states that it is “an important issue that need to be addressed in order for the international community as a whole to achieve sustainable development” The Development Cooperation Charter calls for assistance going beyond the generation toward “sustainable” and “quality growth” taking into account viewpoints on consideration of harmony with the environment and on sustainable growth of society to achieve “Quality growth and poverty eradication through such growth” . In addition, the Policy is highly consistent with policy related to the environment. Therefore, we judge the consistency of the Policy with higher policies and relevant policies of Japan to be high.

### **6-1-2 Consistency with the Development Needs of Recipient Countries**

In many developing countries, environmental pollution is growing more serious as their economies grows with industrialization, population increase and urbanization. Environmental pollution is a major issue in the pursuit of sustainable growth, and the need of countermeasures is growing with more importance in the pursuit of diverse socioeconomic development, primarily for improving the national health. The aggregated results of the questionnaire survey with diplomatic establishments abroad also show that most recipient countries have pressing needs for pollution control, and assistance is provided in response to those needs. Therefore, we judge the consistency of the Policy with the development needs of recipient countries to be high.

### **6-1-3 Consistency with Global Trends and Challenges**

Emphasis on the concept of “sustainable development” has grown in the international community since the beginning of the millennium. Furthermore, pollution control has been emphasized in the international discussion on “sustainable development”, and is clearly stated in the SDG s. Therefore, we judge the consistency of the Policy with global trends and challenges to be high.

### **6-1-4 Relevance of Japan’s Comparative Advantages and Assistance**

Three comparative advantages of Japan ’ s pollution control cooperation have been identified: (1) the country ’ s own experience with overcoming the environmental pollutions, (2) resources and know-how developed through implementation of the countermeasures based on division of responsibilities and collaboration between relevant agencies (local government know-how, mechanisms for utilizing regulations and incentives, experience establishing policy and systems etc.), and (3) relevant technology and the like.

## **6-2 Effectiveness of the Results**

In regard to the effectiveness, it is categorized as generally high based on the DAC statistic data which shows Japan achieved the maximum amount (agreed amount base) among

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DAC member countries during the evaluation period. Also, the projects that Japan has implemented during the evaluation period essentially produced the expected outcomes, which resulted in enhancement and improvement of pollution control in recipient countries. The implementation methods stipulated in the Policy were all carried out, and showed good contribution to the achievement of objectives regarding the enhancement and improvement of pollution control. Therefore, we judge the effectiveness of the enhancement and improvement of pollution control to be high. The state of pollution in recipient countries showed improvement to some extent, but outcomes varied widely, and in some assistance areas and some countries and regions (particularly countries that are still in early development stages), the state of pollution did not necessarily improve. However, it is notable to mention that there are limits to actions taken in response to external conditions, which have a major impact on the realization of improvement in the state of pollution. If we exclude external conditions, it is fair to say that certain outcomes were achieved from the pollution control cooperation. Therefore, the effectiveness of the improvement of the state of pollution in recipient countries was moderately high. Based on the above discussions, we judge the effectiveness of the results of this pollution control cooperation policy to be generally high.

#### **6-2-1 Effectiveness of Assistance Performance**

Japan's performance of assistance increased after 2005, but decreased in line with the other members of DAC between 2011 and 2014; nonetheless, Japan's performance was top among DAC members during the evaluation period (2005 to 2015). In addition, the Japanese government has made expenditures in consideration of implementation methods and procedures set out in the Policy. Therefore, we judge the effectiveness of the performance of assistance on pollution control to be generally high.

#### **6-2-2 Effectiveness of Enhancement/Improvement of Pollution Control**

The projects that Japan implemented essentially produced the expected outcomes, which, despite the fact that further improvement is necessary, resulted in enhancement and improvement of pollution control in recipient countries. The implementation methods mentioned in the Policy were all carried out, and likely contributed to the achievement of objectives regarding the enhancement and improvement of pollution control (capacity improvement, promotion of implementation of environmental management etc.). Basic actions were taken in consideration of socially vulnerable people and to emphasize and utilize knowledge, two important points in the implementation of pollution control cooperation; however, the consideration toward socially vulnerable people can be improved, and knowledge can be used to greater advantages. Therefore, we evaluate the effectiveness of the enhancement and improvement of pollution control as high.

#### **6-2-3 Effectiveness in Recipient Countries**

The Japanese government implemented and enhanced assistance regarding pollution control in line with the development plans of Vietnam and Indonesia, which were used as example recipient countries, and contributed largely to the enhancement of pollution control

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in each of those countries. However, there were cases where continuous action was required toward intellectual assistance for establishing legislation, cases where further improvement of pollution control was required, and the cases where the state of pollution itself was not necessarily improved. Therefore, we judge the effectiveness of the results in recipient countries selected as case studies to be generally high.

#### **6-2-4 Effectiveness in Improvement of the State of Pollution in Recipient Countries**

The state of pollution in recipient countries improved to some extent, but outcomes varied wildly, and in some assistance areas and some countries and regions (particularly countries that are still in early development stages), the state of pollution did not necessarily improve, even though Japanese assistance did have the effect of preventing further deterioration of the environment due to factors such as the rapid progression of environmental pollution or the inherent lack of capacity to take comprehensive action or implement solutions. There are limits to actions taken in response to population growth (increase in the number of motor vehicles, etc.) due to urbanization, increased economic activity due to economic development, and other external conditions, which have a major impact on the realization of improvement in the state of pollution. If we exclude external conditions, it is fair to say that certain outcomes were achieved from the pollution control cooperation. Therefore, the effectiveness of the improvement of the state of pollution control in recipient countries was likely moderately high.

### **6-3 Appropriateness of the Processes**

The Evaluation Team found that the process of formulating this Policy involved many discussions and considerations of relevant documents among relevant personnel, and the Policy formed by reflecting a diversity of viewpoints and opinions, as a result. Therefore, the formulation process was concluded as generally appropriate. As for the policy implementation process, each of the basic tenets of the Policy was proactively implemented; therefore, we evaluate the appropriateness of the policy formulation process as high. Although the “implementation system” and “collaboration and coordination with relevant agencies and other donors, etc.” were implemented generally appropriately, we found that “monitoring evaluation and feedback” and “review” were not implemented at the policy level; therefore, we evaluated the appropriateness of the overall policy management process as moderate. Based on the above discussions, we evaluate the appropriateness of the processes of this Policy as generally high.

#### **6-3-1 Appropriateness of the Policy Formulation Process**

Each policy document has its own significance and position, but they are generally formulated and organized through multiple discussions between experts and relevant personnel, or in such a way that incorporates viewpoints and opinions as necessary. Details of Japan’s pollution control cooperation policy have never been organized into a single document, so it is difficult to verify the appropriateness of the policy formulation processes; however, the formulation process for relevant documents is likely highly appropriate.

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Therefore, we evaluate the appropriateness of the policy formulation process as generally high.

### **6-3-2 Appropriateness of the Policy Implementation Process**

We judge that practical, proactive action has been taken for each of the five approaches and specific efforts to be made: “capacity development in environment,” “cooperation under broad and comprehensive frameworks,” “application of Japanese experience and scientific knowledge (comparative advantages),” “active integration of environmental considerations,” and “Japan’s leading role.” Therefore, we evaluate the appropriateness of the policy implementation process as generally high.

### **6-3-3 Appropriateness of the Policy Management Process**

Although the “implementation system” and “collaboration and coordination with relevant agencies and other donors, etc.” were implemented generally appropriately, “monitoring evaluation and feedback” and “review” were not implemented at the policy level. Therefore, we evaluated the appropriateness of the overall policy management process as moderately high.

### **6-3-4 Appropriateness of the Publication and Dissemination of Information**

Japan’s pollution control cooperation policy has never been organized into a single policy document. Thus, it is difficult to say that Japanese pollution control cooperation policy was fully understood by the governments of developing countries, other aid agencies, and even among assistance providers in Japan. Therefore, we cannot judge the publication and dissemination of information to be highly appropriate.

## **6-4 Diplomatic Importance and Impacts**

We identified plenty of diplomatic importance to the Policy due to factors such as the deep meaning of providing assistance in developing countries, and the ability to create a strong presence of Japan through Japanese comparative advantages. As for the diplomatic impact, the Policy has helped improve bilateral relations by strengthening amicable relations with recipient countries, building smooth communications with neighboring countries (stability in the Northeast Asian region), and keeping basic relations with sanctioned countries. Through these benefits and other factors such as initiatives borne of the adoption of the Minamata Convention, the Policy has contributed to improved presence of Japan in the international community. Therefore, we evaluate the Policy as having diplomatic importance and impact.

### **6-4-1 Diplomatic Importance**

Pollution and other environmental problems are obstacles that cancel out the effects of development that developing countries have worked to achieve. In this sense, efforts to reduce environmental pollution and the damage it causes contribute to peace and development of the international community, which is a principle of Japanese ODA. Pollution control cooperation is also very significant toward improving Japan’s presence in these countries. Japan has the comparative advantages of technology, knowledge and experience

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in the pollution control field that other advanced nations do not have; therefore, the pollution control field allows Japan to establish a presence distinct from other cooperation areas, and it should be easy to gain the understanding of Japanese citizen because they live in a country that is at the forefront of pollution control.

#### **6-4-2 Diplomatic Impacts: Bilateral Relations**

Positive diplomatic outcomes were reported in the questionnaire survey with diplomatic establishments abroad: the governments of the partner countries are highly satisfied with high-quality pollution control cooperation that has been implemented continuously over long period of time by utilizing comparative advantages of Japan ; some partner country governments associate Japanese assistance with pollution control; and government leaders and senior officials of ministries of environments in countries such as Paraguay and Mexico have acknowledged these outcomes. Through pledges to implement cooperation in the pollution control field in discussions with leaders and at international meetings, pollution control is an important diplomatic tool that effectively functions to deepen friendly bilateral relations with other countries, particularly developing countries in the later stages of development.

China and South Korea are neighbors that are politically and economically important to Japan, but due to the history between Japan and those countries, it is not always easy to maintain positive bilateral relations. Air pollution, pollution control and environmental issues are common topics that the three countries share the problem awareness, thus they are relatively easy area to collaborate and cooperate on without broaching political viewpoints; collaboration and other actions to resolve these problems should help maintain and deepen relations among the three countries, and thus carry substantial diplomatic significance. In addition, the case of Iran (a sanctioned country) shows that cooperation in the pollution control field is a crucial part of building cooperative relationships with countries that are difficult to access diplomatically, and thus produce a diplomatic impact.

#### **6-4-3 Diplomatic Impacts: Japan's Position in the Global Community**

The idea that Japan has comparative advantages in the area of pollution control is taking hold across the globe, and has created relatively strong influence for Japan in international discussions in these matters. In light of these developments, Japan has led the discussion as to how to continue to promote pollution control, and has contributed to the discussion such that its pollution control efforts are incorporated into international frameworks. Specific examples of Japan's leadership in recent years include the adoption of the Minamata Convention on Mercury in 2013, and initiatives to promote 3R. The fact that Japan took the initiative in these international agreements should have a broad diplomatic impact.

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## Chapter 7 Recommendations

The following recommendations are put forth to strengthen Japan's cooperation in the education sector through the implementation of the new policy.

### 7-1 Broad Recommendations for ODA in Other Areas

#### Recommendation 1: Active approach on mainstreaming the environmental conservation in in recipient country's policy

In considering the enhancement of Japanese pollution control cooperation, it is crucial to proactively assist the mainstreaming of environmental conservation and measures in broad policies of the recipient countries. Japan must use its experience to promote understanding of the importance of environmental measures amidst sustainable economic growth in policy discussions and deliberations with recipient countries. In addition, Japan must exert a more active influence toward greater emphasis on environmental measures in broad policy making (in other words, putting high priorities on environmental measures), and on coordination capacity of relevant ministries and agencies in pursuit of mainstreaming the environmental conservation and measures in recipient countries from a viewpoint that exceeds environmental ODA.

### 7-2 Recommendations for ODA Regarding the Environment

#### Recommendation 2: Consider drafting the main policy document on Japanese pollution control cooperation

Japan should integrate information about pollution control cooperation into a policy document in the near future.

As pollution control cooperation policy is a part of environmental ODA policy, two things must be kept in mind when formulating a pollution control cooperation policy document: (1) the work of formulating the document must not place excessive burdens on relevant personnel, and (2) pollution control and pollution control cooperation policy must be prepared alongside the formulation of implementation indicators for SDGs, which are international objectives and worthy of emphasis in the pollution control field, as pollution control and pollution control cooperation policy should help SDGs to be realized. In light of these two requirements, one basic policy formulation plan to consider could involve the following three steps: (1) Link pollution control cooperation policy and periods for positioning etc. with those of policies to achieve SDGs, (2) create a policy document regarding environmental ODA and clearly position pollution control within it, (3) simplify documents.

In addition, in light of the fact that Japan must also exert an "active influence toward mainstreaming environmental conservation and measures" as described previously, the formulators of this policy must incorporate elements which are critical for its realization, include specific outcomes and quantifiable objectives based on material evidence as well as action plans and review plans, and hold discussions and collaborate with relevant ministries and agencies (ministries of the environment, etc.), local governments and other relevant



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agencies as to the content of the policy from the early stages of considerations.

Recommendation 3: Provide assistance toward mainstreaming environmental conservation and pollution control

Five components of environmental ODA are critical toward mainstreaming environmental conservation and pollution control in recipient countries, and Japan must prioritize and intensify assistance toward the achievement of each: (1) establish institutional systems to promote effective environmental policy, and develop and transfer environment-related technology; (2) build a framework to enable a variety of stakeholders' participation in environmental conservation; (3) propose, legislate and systematize policy related to environmental conservation; (4) capacity development to properly gather, analyze, monitor and evaluate environment-related data; and (5) improve citizens' environmental awareness. The mainstreaming of environmental conservation will require a variety of actions from other fields, but these five components of assistance are exceedingly important to promote approval of specific policies to implement and facilitate the mainstreaming of environmental conversation at the practical level.

Recommendation 3-1: Capacity development to properly collect, analyze, monitor and evaluate environment-related data

Assistance related to monitoring pollution conditions has been provided proactively using the know-how and human resources of local governments, but further enhancement is required in the future. The Japanese Ministry of the Environment has organized knowledge and know-how on crucial data set, monitoring duration and others for each fields for well functioned environmental management. It is important to collect these data sets to analyze them while assisting capacity development in developing countries on data collection and data analyzation in those countries, as well as on being capable of policy making, enforcement and monitoring based on the quantitative analysis.

Recommendation 3-2: Establish institutional systems to promote effective environmental policy, and develop and transfer environment-related technology

The focus for this recommendation should be on improving institutional capacity of ministries and agencies in charge of the environment management, and striving to strengthen collaboration with all agencies and ministries. Japanese technical cooperation focuses on capacity development at the institutional level, but further efforts to strengthen weakness of the recipient countries must be tackled. Two things can serve to contribute to the establishment of institutional systems: (1) comprehensive promotion of environmental measures, which are usually put low-priority, by directly linking them with development projects in each sector, and (2) promotion of the use of appropriate technology and utilizing the private sector technical experience and know-how. Japan's assistance toward creating institutional frameworks should help enhance the ownership of recipient countries. Also, it should be highlighted that such assistance for administrative systems to improve institutional conditions is essential.

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Recommendation 3-3: Build a framework to enable a variety of stakeholders to participate in environmental conservation

It is important for local governments of recipient countries to build frameworks that enable specific actions and improvements, because they are actual agents who have to take the actual pollution control actions. ODA implementation is required more to incorporate with this perspective. . In addition, it is important to involve socially vulnerable people not only in the pursuit of forming fair societies, but also achieving environmental conservation at lower costs because it could lead early action towards pollution control before problems grow worse. It is also expected that Japan's assistance toward creating the frameworks with stakeholder's involvement should enhance the ownership of the governments of recipient countries.

Recommendation 3-4: Propose, legislate and institutionalize policies related to environmental conservation

Although capacity and systems ensuring promotion of pollution control are strengthened, however, policy making, legislating and institutionalizing environmental policies must be emphasized, as these are actually what guarantee the practice of environmental management capacity and system. In addition to the policy making and legislation, three key supporting facts must be kept in mind: (1) policy, laws and systems can be effectively functioned through the establishment of evaluation systems and enforcement, (2) intellectual assistance and capacity development can be achieved through both capital and technical cooperation for promoting policy, legislation and institutionalization, and (3) it is important to actively influence on leaders and high ranking government officials of relevant ministries and agencies in recipient countries through policy discussions.

Recommendation 3-5: Improve environmental awareness among citizen

It is important to provide assistance with environmental education and NGO development toward the improvement of environmental awareness of citizen. Regarding the development of NGOs, it is particularly important to utilize Japanese experience in establishing the Fund for Global Environment, environmental conservation foundations sponsored by private sector. It is also particularly important to proactively educate and advocate core concepts in the resolution of environmental problems, such as "extended producer responsibility".

Recommendation 4: Enhance the use of the knowledge network regarding Japanese pollution control cooperation

The use of knowledge networks is extremely important in promoting pollution control in developing countries, and requires more proactive promotion in the future.

Efforts must be made according to the following methods to enhance the usefulness of knowledge networks.

- (1) Actively encourage the participation of developed countries already active in the pollution control field, such as Germany and the United States of America, in the existing network initiated by Japan and Asian countries;

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- (2) Actively encourage the participation of key people at international institutions (United Nations, World Bank, ADB, etc.) who are responsible for environmental data collection;
  - (3) Actively encourage the participation of a wide range of relevant agencies within the country, including NGOs;
  - (4) Actively encourage the participation of local governments, which will take the actual pollution control actions, rather than holding discussions only in a closed circle of experts in each country; and
  - (5) Utilize past intellectual assistance experience.

Recommendation 5: Enhance efforts to improve the state of environmental pollution (super goal)

It is important to conduct sufficient review on the state of environmental pollution improvement in countries that have identified pollution control as a core theme in the country assistance policy. In the case where improvements have not met initial expectations, it is required to consider and clarify problems to take further actions, while giving attentions to reasons why expected improvements have not been achieved. In such cases, it is particularly important to take full consideration on the Recommendation 3: "Provide assistance toward mainstreaming environmental conservation and pollution control." It is worth noting that there are some restrictions on ODA (such as capital cooperation cannot be implemented to certain countries, etc.) when recipient countries are categorized as higher stages of development. Nonetheless, it is important to fully discuss Japan's role with recipient countries, and involve private-sector, corporate foundations in promotion of collaboration on efforts toward improving the state of environmental pollution.

Recommendation 6: Enhance diplomatic effects by creating global frameworks and taking leadership in global discussions

It is important to take full advantage of the prevalence of diplomatic effects and to continue further proactive efforts in the pollution control field. Japan has precious experience of overcoming environmental pollutions, and should show strong leadership by proactively sharing its experience with the world and utilize them in the international discussions for the establishment of global frameworks. Also, it is expected to enhance diplomatic effects by cooperating with other donors to implement with more effective assistance while forming the assent of the global community. In addition, it is important to proactively appeal to Japanese society about the diplomatic impacts of Japan's efforts in the global community in the pollution control field.