



# TRAINING AND DIALOGUE PROGRAMS

## GENERAL INFORMATION ON

**Waste Management Technique (A)**

**集団研修**

**「廃棄物管理技術（A）」**

**JFY 2011**

**<Type: Solution Creation / 類型: 課題解決促進>**

**NO. J1100841 / ID. 1180100**

**From July 2011 to January 2012**

**Phase in Japan: From August 21, 2011 to October 22, 2011**

This information pertains to one of the Training and Dialogue Programs of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.

# **I. Concept**

## **Background**

Due to rapid population growth and expansion of residential area in urban areas, developing economies are facing issues in waste management: collection and transportation services are not able to cover all of the residential areas, and capacity of landfill sites are not enough to deal with increased / diversified wastes. Appropriate waste collection and transportation systems and landfill techniques are vital factors of waste management, and awareness of communities is indispensable for the systems and techniques to function. Therefore, to deal with waste management issues, improvement of systems / techniques and awareness raising should be done simultaneously.

Kitakyushu City, one of the largest industrial cities in Japan, has developed unique systems and techniques for waste management through its effort to dovetail economic development and pollution control. After introducing a new charge system for waste collection in 2006, the city has successfully reduced total amount of waste by 25% in a year. The result was fairly supported by the fact that the city has been promoted environmental education through programs and facilities to students, and conducted PR activities with communities upon introduction of the system.

Utilizing the experience of Kitakyushu City, this training program intends to provide participants practical waste management techniques, along with know-how of raising environmental consciousness of communities.

## **For what?**

This program is designed to improve waste management processes (discharge/storage, collection, intermediate treatment and final disposal) in participating countries and regions.

## **For whom?**

This program is offered to engineers in charge of waste management processes (discharge/storage, collection, intermediate treatment and final disposal)

## **How?**

Participants will learn techniques and know-how in the field through lectures, observations, practices, and discussions. At the end of the program, participants will be requested present an Action Plan, utilizing contents of the program.

## II. Description

### 1. Title (J-No.)

Waste Management Technique (A) (J1100841)

### 2. Period of program

**Duration of whole program:**

July 2011 to January 2012

**Preliminary Phase** (in a participant's home country): July 2011 to August 2011

**Core Phase in Japan:**

August 21, 2011 to October 22, 2011

**Finalization Phase** (in a participant's home country): October 2011 to January 2012

### 3. Target Regions or Countries

Jamaica, Maldives, Mongolia, Montenegro, Panama, and Serbia

### 4. Total Number of Participants

8 participants

### 5. Eligible / Target Organization

This program is designed for Governmental organization engaged in waste management.

### 6. Language to be used in this program

English

### 7. Program Objective

Participants will be able to formulate & propose action plans to improve waste management processes (discharge/storage, collection, intermediate treatment and final disposal) , utilizing the program.

### 8. Overall Goal

Formulated action plans are implemented in each country.

### 9. Expected Module Output and Contents

This program consists of the following components. Details on each component are given below:

| <b>(1) Preliminary Phase in a participant's home country</b><br>(July to August 2011)<br><i>Applying organizations are required to submit the Job Report and the Issue Analysis Sheet together with the application form for selection in Japan.</i> |   |
|--|---|
| Modules  | Activities  |
| <b>Job Report &amp; IAS</b>  | Formulation and submission of the job report and the issue analysis sheet(IAS) <sup>1</sup> in PPT format |

<sup>1</sup> Please see Annex-2

| <b>(2) Core Phase in Japan</b><br>(August 21, 2011 to October 22, 2011)<br><i>Participants dispatched by the organizations attend the Program implemented in Japan.</i> |  |   |
|---|--|---|
| <b>Expected Module Output</b>   | <b>Subjects</b>  | <b>Methodology</b>                          |
| 1) Being able to explain the historical process of environmental policy and waste management system in Japan.   | 1. Overview of waste management<br>2. Waste treatment in Kitakyushu City<br>3. Industrial waste management<br>4. Promotion of sound material cycle society<br>5. Environmental impact assessment<br>6. Global issues | Lecture and discussion                      |
| 2) Being able to explain waste treatment processes (collection, transportation, intermediate treatment, recycling, and composting) in Japan                             | 1. Composting<br>2. Time and motion study<br>3. Waste composition<br>4. Treatment of hazardous waste<br>5. Eco-town project  | Lecture, observation and practice           |
| 3) Being able to explain the techniques and measures of final disposal site in Japan.   | 1. Regulation and structure of final disposal site<br>2. Maintenance of final disposal site<br>3. Application to overseas<br>4. Methane fermentation   | Lecture, observation and practice           |
| 4) Being able to explain concrete methods of environmental education and awareness raising.   | 1. Environmental education in Kitakyushu City<br>2. Waste reduction activities in communities<br>3. Trainers' training by JICA<br>4. Environmental Museum and volunteer activities                                   | Lecture, observation and practice           |
| 5) Being able to formulate and present action plans   | 1. Formulation of issue analysis sheet<br>2. Instruction on action plan formulation<br>3. Discussion on proposed action plans plan<br>4. Presentation of action plan   | Discussion, presentation and report writing |

| <b>(3) Finalization Phase in a participant's home country</b><br><i>Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.</i> |  |
|---|--|
| <b>Expected Module Output</b>   | <b>Activities</b>  |
| Implementation of the Action Plan will be recognized through final report   | Proposals (Action plans) formulated by participants are shared within their organizations, and discussed towards implementation. |

### ***III. Conditions and Procedures for Application***

#### **1. Expectations for the Participating Organizations**

- (1) This program is designed primarily for organizations that intend to address specific challenges identified in their operation. Participating organizations are expected to use the project for those specific purposes.
- (2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the project to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the challenges.
- (3) As this program is designed to facilitate organizations to come up with concrete solutions for their issues, participating organizations are expected to make due preparation before dispatching their participants to Japan by carrying out the activities of the Preliminary Phase described in the previous section.

#### **2. Nominee Qualifications**

Applying Organizations are expected to select nominees who meet the following qualifications.

##### **Essential Qualifications**

- (1) Current Duties: Engineers in charge of waste management processes (discharge/storage, collection, intermediate treatment and final disposal)
- (2) Experience in the relevant field: have more than 3 years' experience in the field mentioned above (1).
- (3) Educational Background: be a graduate of university or equivalent level.
- (4) Language: have a competent command of spoken and written English which is equal to TOEFL CBT 250 or more (copy of the proof is preferable).
- (5) Age: be under 45 years of age
- (6) Must not be serving any form of military service.
- (7) Health: must be in good health, both physically and mentally, to participate in the Program in Japan. As the training includes much field work (trips), that may give risks to pregnant body, pregnancy is regarded as a disqualifying condition for participation in this training program.

##### **Recommended Qualifications**

- (1) Be in relation with past or on-going JICA projects focusing on waste management.
- (2) Be familiar with engineering background.
- (3) Be familiar with PC operation, as there will be many chances for report writing and presentations.

### 3. Required Documents for Application

- (1) **Application Form:** The Application Form is attached to this General Information.
- (2) **Job Report, Questionnaire and Issue Analysis Sheet (IAS):** to be submitted with the application form. Fill in Annex-I, II and III of this General Information, and submit it along with the Nomination Form. **Job Report, Questionnaire and I.A.S. are necessary documents for screening of an applicant.** Each participant will be required to present his/her Job Report and IAS in approx. 10 minutes in an early stage of the course. Visual materials such as PowerPoint and pictures may be helpful for your presentation if you bring them. When you use PowerPoint, it is preferable to use letters more than 24-point and not to use pictures on the background. **An applicant should submit his/her IAS with approval of his/her superior and an IAS without approval of an applicant's superior is not accepted.** The purpose of an IAS is to logically organize relationships between issues participants are facing and contents covered in the training course. The sheet is to be utilized as a logical process control sheet to draw on improvement plans for challenges by filling out the sheet in phases from prior to a participant's arrival in Japan through the end of training. **Participants accepted to the Course are requested to bring this IAS in electronic file when coming to Japan.**

### 4. Procedure for Application and Selection

- (1) **Submitting the Application Documents**  
Closing date for application to the JICA Center in JAPAN: **Jul. 1, 2011**  
**Note: Please confirm the closing date set by the respective country's JICA office or Embassy of Japan of your country to meet the final date in Japan.**
- (2) **Selection**  
After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Center in charge in Japan, which organizes this project. Selection shall be made by the JICA Center in consultation with the organizations concerned in Japan based on submitted documents according to qualifications. *The organization with intention to utilize the opportunity of this program will be highly valued in the selection.*
- (3) **Notice of Acceptance**  
Notification of results shall be made by the respective country's JICA office (or Embassy of Japan) to the respective Government by **not later than Jul. 21, 2011.**

## 5. Conditions for Attendance

- (1) to follow the schedule of the program,
- (2) not to change the program subjects or extend the period of stay in Japan,
- (3) not to bring any members of their family,
- (4) to return to their home countries at the end of the program in accordance with the travel schedule designated by JICA,
- (5) to refrain from engaging in political activities, or any form of employment for profit or gain,
- (6) to observe Japanese laws and ordinances. If there is any violation of said laws and ordinances participants may be required to return part or all of the training expenditure depending on the severity of said violation.
- (7) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA.
- (8) to participate in the whole program including a preparatory phase prior to arrival in Japan. Applying organizations, after receiving notice of acceptance for their nominees, are expected to carry out the actions described in the previous section.

# IV. Administrative Arrangements

## 1. Organizer

- (1) **Name:** JICA Kyushu
- (2) **Contact:** Mr. KODAMA Akihiko (Kodama.Akihiko@jica.go.jp)

## 2. Implementing Partner

- (1) **Name:** Kitakyushu International Techno-cooperative Association (KITA)
- (2) **URL:** <http://www.kita.or.jp/>
- (3) **Remark:** KITA has carried out JICA training projects since 1980, and over the period from 1980 to 2010 has accepted nearly 6,000 participants. The courses cover environmental policies, promotion of a recycling-oriented society, production techniques and facility maintenance as well as projects related to the improvement of work training management ability, and in 2010 it offered a total of 34 courses.

## 3. Travel to Japan

- (1) **Air Ticket:** The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.
- (2) **Travel Insurance:** Term of Insurance: From arrival to departure in Japan. The traveling time outside Japan shall not be covered.

#### **4. Accommodation in Japan**

JICA will arrange the following accommodations for the participants in Japan:

|   |
|---|
| <p><b>JICA Kyushu International Center (JICA Kyushu)</b><br/>Address: 2-2-1 Hirano, Yahata Higashi-ku, Kitakyushu-shi,<br/>Fukuoka, 805-8505 Japan<br/>TEL: 81-93-671-6311    FAX: 81-93-671-0979<br/>(81: country code for Japan, 93: area code)</p> |
|---|

If there is no vacancy at JICA Kyushu, JICA will arrange alternative accommodations for the participants. Please refer to facility guide of JICA Kyushu at its URL, <http://www.jica.go.jp/english/contact/domestic/>

#### **5. Expenses**

The following expenses will be provided for the participants by JICA:

- (1) Allowances for accommodation, living expenses, outfit, and shipping
- (2) Expenses for study tours (basically in the form of train tickets).
- (3) Free medical care for participants who become ill after arriving in Japan (costs related to pre-existing illness, pregnancy, or dental treatment are not included)
- (4) Expenses for program implementation, including materials

For more details, please see the brochure for participants titled “KENSU-IN GUIDE BOOK,” which will be given to the selected participants before (or at the time of) the pre-departure orientation.

#### **6. Pre-departure Orientation**

A pre-departure orientation will be held at the respective country’s JICA office (or Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.



## ***V. Other Information***

### **1. Reports Presentation**

#### **(1) Job Report and IAS**

As written in the previous page, each nominee is required to submit his/her own Job Report, Questionnaire and IAS following the instruction in Annex-III. Accepted participant will have a presentation of his/her Job Report and IAS up to 10 minutes at the earlier stage of the training program in order to share knowledge and background with other participants as well as the course leader and lectures. Visual materials such as PowerPoint and pictures may be helpful for your presentation if you bring them with you. When you use PowerPoint, it is preferable to use letters more than 24 points and not to use pictures on the background.

#### **(2) Action Plan**

Accepted participants are required to formulate an action plan at the end of the training program in Japan to show your ideas and plans, which you carry out after returning home, reflecting the knowledge and method acquired from the training. Each participant will have 10 minutes for presentation.

### **2. Remarks**

JICA training is implemented for the purpose of development of human resources who will promote the advancement of the countries, but not for the enrichment of individuals or private companies. Matters of a trade secret and patent techniques will remain confidential and inaccessible during the training.

## **VI. ANNEX:**

Annex-I

### **Waste Management Technique (A) (JFY 2011)**

#### **Job Report**

Name:

Country:

Organization and present post:

E-mail:

FAX:

Remarks 1: The Report should be typewritten in English (12-point font, A4 size paper), and total pages of the report should be limited to 3 pages (not including organization chart).

Remarks 2: Each participant is required to have presentation in 10 minutes based on this Job Report at the early stage of the training for the purpose of making the training more effective and fruitful by comprehending the situations and challenges of the participants each other.

Remarks3: Please itemize your answer and make them specific.

#### **1. Organization and main tasks (up to 1 page)**

##### **(1) Main tasks of the organization**

Please include annual turnover or product amount, name of products and number of employees.

##### **(2) Organization chart**

Please draw a chart of your organization including the department (section) names with the number of staffs in it and mark where you are positioned. (The chart should be attached and not be counted in this page limit.)

##### **(3) Brief description of your assignments.**

2. Existing challenges in your section (up to 1 page)
  - (1) Challenges and issues you are facing
  - (2) Countermeasures for these challenges
  - (3) Obstacles in the process of solving those challenges
3. Expectations for the training course (up to 1 page)
  - (1) Most interesting subjects or topics in the training course
  - (2) How do you expect to apply skills and knowledge for overcoming challenges according to listed items in curriculum (in the previous section) after you return to your home country?
  - (3) Other matters you are expecting for this course

**Waste Management Technique (A)**  
**(JFY 2011)**

**Questionnaire**

Name:

Country:

Organization and present post:

E-mail:

FAX:

Remarks 1: The Questionnaire should be typewritten in English (12-point font, appropriately spaced, A4 size paper), and total pages of the report should be limited to 2 pages.

Remarks 2: Please itemize your answers and make them specific.

1. Have you ever studied the following subjects? Please check either Yes or No. If your answer is "Yes", please fill in "Years" parentheses with your years of experience on the respective items.

|   | Yes      | No       | Years    |
|---|----------|----------|----------|
| (1) Environmental science and engineering | (      ) | (      ) | (      ) |
| (2) Sanitary engineering                  | (      ) | (      ) | (      ) |
| (3) Environmental education               | (      ) | (      ) | (      ) |
| (4) Household refuse treatment practice   | (      ) | (      ) | (      ) |
| (5) Solid waste management administration | (      ) | (      ) | (      ) |

2. Explain the situation in the jurisdiction of your organization.

(1) Household Refuse Management

- Volume of household refuse
- Kinds of household refuse and their percentage
- Collection method
- Fee of household refuse

(2) Landfill Site

- Capacity (volume and area)
- Distance from collecting spot to landfill site
- Method for measurement (or estimation) of volume of waste
- Volume of waste per day
- Rate of tipping fee
- Management (local government or private company)

(3) Industrial Waste

- Kinds/volume of industrial waste
- Waste generator can be identified?

(4) Population in the area which your organization is in charge of

(5) The annual budget (U.S. dollar) for solid waste management

(6) Solid waste management

a. Breakdown by weight of the annual solid waste materials and percentage

|           | Weight (tons) | Percentage  |
|-----------|---------------|-------------|
| - food    | (        t)   | (        %) |
| - paper   | (        t)   | (        %) |
| - plastic | (        t)   | (        %) |
| - metals  | (        t)   | (        %) |
| - others  | (        t)   | (        %) |

b. Breakdown of annual municipal solid waste budget and their percentage

|   | Budget (USD) | Percentage  |
|---|--------------|-------------|
| - collection                                    | (        t)  | (        %) |
| - construction of treatment/disposal facilities | (        t)  | (        %) |
| - disposal operation and management             | (        t)  | (        %) |
| - others  | (        t)  | (        %) |

(7) Compost plant

- Method and capacity

(8) Medical/Toxic waste treatment

- Kind/volume of medical/toxic waste treatment
- Treatment method

(9) Environmental education

- Method and target persons

## **Issue Analysis Sheet (IAS) Guidelines**

### **1. What is IAS?**

- (1) IAS is a tool to logically organize relationships between issues and contents of the training program in Japan.
- (2) IAS will help the nominee to clarify his/her challenges to be covered in each expected module output and to formulate solutions to them.
- (3) The sheet is to be utilized as a logical process control sheet to draw up improvement plans for the issues by filling out the sheet in phases from prior to the nominee's arrival in Japan through to the end of the training.
- (4) In addition, it is used for the course leader and lecturers to understand the issues that each participant is facing, and provide him/her with technical advice, useful references and solutions through the training program in Japan

### **2. How to fill out IAS?**

- (1) Please refer to Item 2 "Purpose of Application" of Part A in the Application Form, and describe the challenges that your department is facing in column "A" and "B" in each "Expected Module Output" of the IAS. You will formulate practical solutions to these challenges through the training program in Japan. If you write cross-cutting issues related to two or more "Expected Module Outputs,, you can enter them between the Outputs.
- (2) Please leave column C and D blank. These columns are filled out during the training program in Japan.
- (3) If your organization has many challenges to be overcome, you can submit two or more sheets.

### **3. Remarks**

- (1) IAS without approval of a nominee's superior is not accepted.
- (2) IAS is a key material for the screening of the nominees. The Japan side puts emphasis on its contents and then proceeds with the screening.
- (3) Accepted participants will make a presentation on the IAS and the job report at the beginning of the training program in Japan
- (4) Accepted participants are requested to bring this IAS in electronic file when coming to Japan.

## Sample

| Subjects  | Category   | A: Issues/Problems<br>You or Your organization are<br>facing at work       | B: Backgrounds that<br>cause the Issue/Problems  | C: Measures<br>taken in<br>Japan | D: Proposal<br>to your<br>country |
|---|--|--|--|----------------------------------|-----------------------------------|
| 1.<br>environmental policy and<br>waste management<br>system in Japan | 1. Legal framework for waste<br>management<br>2. Environmental policies for<br>waste management  | 1-1Collection / transport systems of<br>waste have not been<br>established | 1-①Laws and regulations for<br>waste management have not<br>been formulated<br>1-②Communities'<br>unwillingness to promote waste<br>management |                                  |                                   |
| 2.<br>Waste Treatment<br>Processes                                    | 1. Composting<br>2. Time and motion study<br>3. Treatment of hazardous<br>waste<br>4. Recycling industry                                     |  |  |                                  |                                   |
| 3.<br>Techniques and<br>measures of final<br>disposal site            | 1. Regulation and structure<br>of final disposal site<br>2. Maintenance of final<br>disposal site<br>3. Methane fermentation                 |  |  |                                  |                                   |
| 4.<br>Environmental education<br>and awareness raising                | 1. Policies on environmental<br>education<br>2. Waste reduction activities<br>by communities<br>3. Facilities for environmental<br>education |  |  |                                  |                                   |

Fill in the blanks under  
A and B according to  
course objectives.

(1) Describe in a brief  
sentence or two but not by just  
keywords.  
(2) When there is more than  
one challenge or cause, describe  
them all.

(3) You don't have to  
fill in C and D blanks.  
You will have to fill in  
these blanks during the  
training course and  
make an Action Plan  
Presentation on the final  
day.

Name of Superior Officer \_\_\_\_\_

Designation/Position of superior officer \_\_\_\_\_

Signature r \_\_\_\_\_

**Waste Management Technique (A) (JFY 2011)**  
**Issue Analysis Sheet**

| <b>Subjects</b>  | <b>Category</b>  | <b>A; Issues/Problems<br/>You or Your organization<br/>are facing at work</b> | <b>B: Backgrounds that<br/>cause the challenges</b> | <b>C: Measures taken in<br/>Japan</b> | <b>D: Proposal to your<br/>country</b> |
|--|--|---|---|---------------------------------------|--|
| 1.<br>environmental policy<br>and waste<br>management system<br>in Japan | 3. Legal framework for waste<br>management<br>4. Environmental policies for<br>waste management  |   |   |                                       |  |
| 2.<br>Waste Treatment<br>Processes                                       | 5. Composting<br>6. Time and motion study<br>7. Treatment of hazardous<br>waste<br>8. Recycling industry                                     |   |   |                                       |  |
| 3.<br>Techniques and<br>measures of final<br>disposal site               | 4. Regulation and structure of<br>final disposal site<br>5. Maintenance of final<br>disposal site<br>6. Methane fermentation                 |   |   |                                       |  |
| 4.<br>Environmental<br>education and<br>awareness raising                | 4. Policies on environmental<br>education<br>5. Waste reduction activities by<br>communities<br>6. Facilities for environmental<br>education |   |   |                                       |  |

**Name of Superior Officer** \_\_\_\_\_

**Designation/Position of superior officer**\_\_\_\_\_

**Signature**\_\_\_\_\_



## ***For Your Reference***

### **JICA and Capacity Development**

The key concept underpinning JICA operations since its establishment in 1974 has been the conviction that “capacity development” is central to the socioeconomic development of any country, regardless of the specific operational scheme one may be undertaking, i.e. expert assignments, development projects, development study projects, training programs, JOCV programs, etc.

Within this wide range of programs, Training Programs have long occupied an important place in JICA operations. Conducted in Japan, they provide partner countries with opportunities to acquire practical knowledge accumulated in Japanese society. Participants dispatched by partner countries might find useful knowledge and re-create their own knowledge for enhancement of their own capacity or that of the organization and society to which they belong.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs are being customized to address the specific needs of different target organizations, such as policy-making organizations, service provision organizations, as well as research and academic institutions. Some programs are organized to target a certain group of countries with similar developmental challenges.

### **Japanese Development Experience**

Japan was the first non-Western country to successfully modernize its society and industrialize its economy. At the core of this process, which started more than 140 years ago, was the “*adopt and adapt*” concept by which a wide range of appropriate skills and knowledge have been imported from developed countries; these skills and knowledge have been adapted and/or improved using local skills, knowledge and initiatives. They finally became internalized in Japanese society to suit its local needs and conditions.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated from this “*adoption and adaptation*” process, which, of course, has been accompanied by countless failures and errors behind the success stories. We presume that such experiences, both successful and unsuccessful, will be useful to our partners who are trying to address the challenges currently faced by developing countries.

However, it is rather challenging to share with our partners this whole body of Japan’s developmental experience. This difficulty has to do, in part, with the challenge of explaining a body of “tacit knowledge,” a type of knowledge that cannot fully be expressed in words or numbers. Adding to this difficulty are the social and cultural systems of Japan that vastly differ from those of other Western industrialized countries, and hence still remain unfamiliar to many partner countries. Simply stated, coming to Japan might be one way of overcoming such a cultural gap.

JICA, therefore, would like to invite as many leaders of partner countries as possible to come and visit us, to mingle with the Japanese people, and witness the advantages as well as the disadvantages of Japanese systems, so that integration of their findings might help them reach their developmental objectives.



***CORRESPONDENCE***

For enquiries and further information, please contact the JICA office or the Embassy of Japan. Further, address correspondence to:

**JICA Kyushu International Center (JICA KYUSHU)**

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Fukuoka Prefecture 805-8505, Japan**

**TEL: +81-93-671-6311    FAX: +81-93-663-0979**