



**【Online】**  
**Knowledge Co-Creation**  
**Program**  
**(Group & Region Focus)**

**GENERAL INFORMATION**

**Enhancement of Solid Waste Management Capacity for  
Waste Power Generation**

**課題別研修**

**「廃棄物発電導入に向けた廃棄物処理に係わる技術能力向上」**

***JFY 2020***

**NO. 201902216J001**

**Online Course Period : From March 8<sup>th</sup>,2021 to March 19<sup>th</sup> ,2021**

**Course Period in Japan: From May 16<sup>th</sup> ,2021 to May 29<sup>th</sup>,2021**

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) 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.

'JICA Knowledge Co-Creation Program (KCCP)

In the Development Cooperation Charter which was released from the Japanese Cabinet on February 2015, it is clearly pointed out that *"In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together."* We believe that this 'Knowledge Co-Creation Program' will serve as a center of mutual learning process.

# ***I. Concept***

## **Background**

Waste power generation is one of the solutions to tackle environmental issues such as public health, offensive odor or sewage caused by inadequate solid waste management (SWM). To install waste power generation plant, it is important that solid waste and industrial waste are appropriately managed including collection, intermediate treatment, final disposal, based on laws and regulations.

## **For what?**

Through obtaining fundamental knowledge on waste power generation and the SWM regarding waste incineration for power generation, participants find solutions for improving SWM and enhance material circulation in the participants' countries.

## **For whom?**

This program is offered to officers of central / local government and other public organizations in charge of SWM and introduction of waste power generation.

## **How?**

Participants shall have opportunities to acquire fundamental knowledge of SWM in Japan through lectures, observations, presentations and discussions. Participants will also formulate an action plan describing what the participants will do after they go back to their home countries, taking into consideration the current situation on SWM and procedure of decision making.

## II. Description

1. **Title (J-No.):** ENHANCEMENT OF SOLID WASTE MANAGEMENT CAPACITY FOR WASTE POWER GENERATION(201902216-J001)

2. **Course Period in Japan**

1<sup>st</sup> Part(Online) : From March 8<sup>th</sup> to March 19<sup>th</sup> ,2021

2<sup>nd</sup>Part(In Japan): From May 16<sup>th</sup> to May 29<sup>th</sup>,2021

**In the context of the COVID-19 pandemic, please note that there is still a possibility that the course period will be changed, shortened, or the course itself will be cancelled.**

3. **Target Regions or Countries**

Bangladesh, Brazil, Indonesia, Iran, Malaysia, Myanmar, the Philippines, Ukraine, Vietnam

4. **Eligible / Target Organization**

This program is designed for organizations of central / local government and other public organizations in charge of SWM and introduction of waste power generation.

5. **Course Capacity (Upper limit of Participants)**

10 participants

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

English

7. **Course Objective**

1. To understand the laws and regulations of the solid waste and industrial waste and the general process of waste collection, intermediate treatment and final disposal in Japan.
2. To find solutions for improving solid waste management and material circulation in the participants' country owing to introduce waste power generation.

8. **Overall Goal**

Through implementation of formulated action plans, SWM of participant's countries is improved.

9. **Expected Module Output and Contents**

Module outputs are shown in the figure 1 "Module Outputs."

Contents and schedule / days of program are shown in the figure 2 "Tentative Schedule of Program".

During the program in Japan(2<sup>nd</sup> Part Course Period), participants are required to make an action plan for planning of future solid waste management, in order to solve issues in their home countries after their return. This action plan will be presented by all participants at the final stage of the program.

Participating organizations are responsible to support the participants for sharing the knowledge within the organization and seek the possibility of implementation of the action plan.

Figure 1  
“Module Outputs”

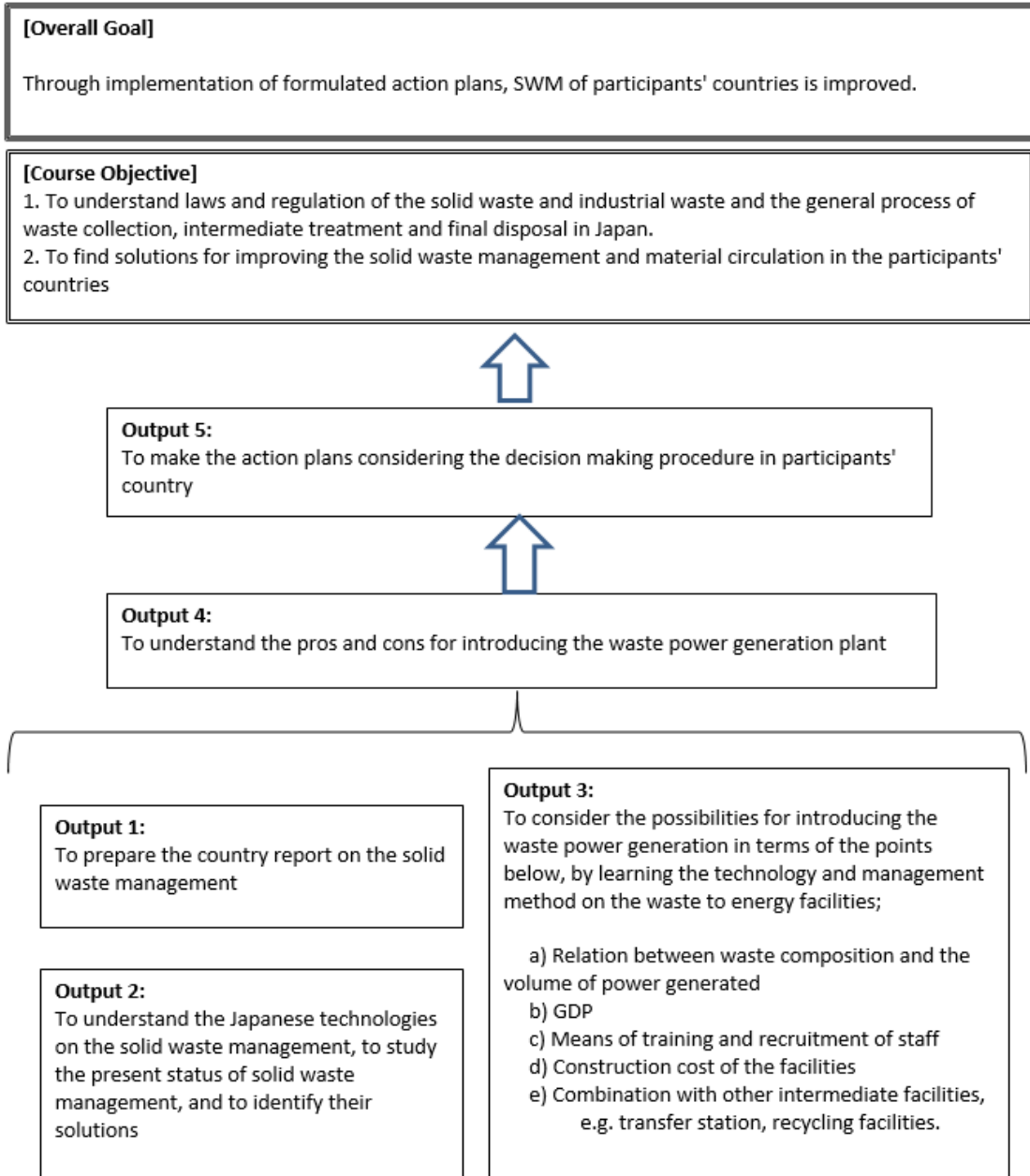


Figure 2  
“Tentative Schedule of Program”

<b>Preliminary Phase in home country</b>
Activity: Make a Country Report

<b>Online Program (1st Part)</b>		*Subject to change
Date	Type	Subject
8-March	-	Opening Ceremony Program Orientation
9-12 March	Webinar (Youtube&Z OOM) and Video lecture	<ul style="list-style-type: none"> <li>- Overview of SWM in Japan</li> <li>- Incineration and Waste Power Generation</li> <li>- Waste collection &amp; Transfer for waste power generation</li> <li>- Technology for Waste to Energy</li> <li>- Final disposal of incineration residue</li> <li>- Construction Procedure of waste power generation plant</li> <li>- Introduction to Oversea Case of Feasibility Study on WTE</li> </ul>
19- March		Intermediate Review Program Orientation for 2 <sup>nd</sup> Part

<b>Phase in Japan (2nd Part)</b>		*Subject to change
Date	Type	Subject
16-May	-	Arrival in Japan
17-May	-	Opening Ceremony (Review of 1st Part Program) Program Orientation
18-May	Exercise	- Country Report Presentation
19-26 May	Observation	<ul style="list-style-type: none"> <li>- Waste Power Generation Plant</li> <li>- Waste Transfer Station</li> <li>- Public Awareness / Solid Waste Intermediate Facility</li> <li>- Landfil Site</li> </ul>
	Exercise	<ul style="list-style-type: none"> <li>- Discussion on Introducing Waste Power Generation</li> <li>- Discussion on Formulating Action Plan</li> </ul>
27- May		- Formulation of Action Plan
28-May		- Presentation of Action Plan
29-May		Departure from Japan

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

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

- (1) This program is designed primarily for organizations that intend to address specific issues or problems 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 issues and problems.

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

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

##### **(1) Essential Qualifications**

- 1) Current Duties: Officers in central / local government and other public organizations, in charge of solid waste management and introduction of waste power generation.  
\*\* Especially, officers in charge of solid waste management in engineering department in central / local government are regarded as qualifying persons in charge of below field are regarded as qualifying.
- 2) Experience in the relevant field: to have more than three (3) years' experience with item 1) above.
- 3) Educational Background: be a graduate of university, majoring in civil, environmental, chemical and other engineering, or the equivalent
- 4) Language: have a sufficient command of speaking and writing English in order to fully understand the lectures which will be carried out in English (Copy of document certifying the applicant's capability of English, such as TOEFL, is to be attached).
- 5) Health: must be in good health, both physically and mentally, to participate in the Program in Japan. Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus.

##### **(2) Recommendable Qualifications**

- 1) Age: Under fifty (50) years old in principal.

#### **3. Required Documents for Application**

- (1) **Application Form:** The Application Form is available at **the JICA office (or the Embassy of Japan)**.

**(2) Photocopy of passport:** to be submitted with the application form, if you possess your passport which you will carry when entering Japan for this program. If not, you are requested to submit its photocopy as soon as you obtain it.

\*Photocopy should include the followings:

Name, Date of birth, Nationality, Sex, Passport number and Expire date.

**(3) Nominee's English Score Sheet:** to be submitted with the application form. If you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

#### **4. Procedures for Application and Selection :**

##### **(1) Submission of the Application Documents:**

Closing date for applications: **Please inquire to the JICA office (or the Embassy of Japan).**

(After receiving applications, the JICA office (or the Embassy of Japan) will send them to **the JICA Center in JAPAN** by **February 12<sup>th</sup>,2021**)

##### **(2) Selection:**

After receiving the documents through proper channels from your government, the JICA office (or the embassy of Japan) will conduct screenings, and then forward the documents to the JICA Center in Japan. Selection will be made by the JICA Center in consultation with concerned organizations in Japan. *The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.* Qualifications of applicants who belong to the military or other military-related organizations and/or who are enlisted in the military will be examined by the Government of Japan on a case-by-case basis, consistent with the Development Cooperation Charter of Japan, taking into consideration their duties, positions in the organization, and other relevant information in a comprehensive manner.

##### **(3) Notice of Acceptance**

Notification of results will be made by the JICA office (or the Embassy of Japan) **not later than February 26<sup>th</sup>,2021.**

## **5. Document(s) to be submitted by *accepted candidates***

### **Country Report:**

Only accepted participants are required to prepare a **Country Report**.

The country report will be introduced by presentation of the participant in the beginning of the training course. The country report should be prepared in the form of the attached ANNEX.

Participating organization is expected to support the making of their Country Report. The Country Report should be submitted to JICA Yokohama by E-mail to [<yictt1@jica.go.jp>](mailto:yictt1@jica.go.jp), **by March 1<sup>st</sup>**.

## **6. Conditions for Attendance:**

- (1) to strictly adhere to the program schedule.
- (2) not to change the program topics.
- (3) not to extend the period of stay in Japan.
- (4) not to be accompanied by family members during the program.
- (5) to return to home countries at the end of the program in accordance with the travel schedule designated by JICA.
- (6) to refrain from engaging in any political activities, or any form of employment for profit or gain.
- (7) 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.
- (8) to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.



## IV. Administrative Arrangements

### 1. Organizer:

(1) **Name:** JICA Yokohama Center(JICA Yokohama)

(2) **Contact:** Ms.Ayaka Toyama ([yictt1@jica.go.jp](mailto:yictt1@jica.go.jp))

### 2. Implementing Partner:

(1) **Name:** JAPAN ENVIRONMENTAL SANITATION CENTER

3. (2) **URL:** <http://www.iesc.or.jp>

### 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:** Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan will not be covered.

### 4. Accommodation in Japan:

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

JICA Yokohama Center (JICA YOKOHAMA)

Address: 2-3-1 Shinko, Naka-ku, Yokohama, Kanagawa 231-0001, Japan

TEL: 81-45-663-3251 FAX: 81-45-663-3265

( "81" is the country code for Japan, and "45" is the local area code)

If there is no vacancy at JICA YOKOHAMA, JICA will arrange alternative accommodations for the participants.

### 5. Expenses

#### <Online Phase>

Depending on the Participants' location and condition, JICA may consider the following fees: Daily Allowances, Accommodation fee, and Transportation fee, etc.

(\*For more detail, confirm with JICA Office in your country)

#### <Phase in Japan>

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

(1) Allowances for accommodation, meals, 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 "III. ALLOWANCES" of the brochure for participants titled "KENSU-IN GUIDE BOOK," which will be given before departure for Japan.

## 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

## <Online program>

### 1. Online Tools expected to use in the course:

#### (1) Zoom:

Main Use: To participate in Webinars.

Preparation: See the tutorials, and confirm how to use it. You may be requested to give presentations through zoom.

(zoom video tutorials)

<https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials>

#### (2) Youtube:

Main Use: To watch video materials.

Preparation: None

#### (3) Google Drive

Main Use: To share and download materials and documents.

Preparation: Google Classroom is considered to be used.

### 2. Response to the time difference during the online program:

Ontime Webinars are planned during the course to have bilateral communication between lecturers and participants, under the conditions as below;

#### (1) Time:

The tentative time tables on the online program in the respective countries are shown as below;

#### a) Orientation (2 hours) and Webiner (2 hours)

Japan Time	16:00 - 18:00	Malaysia	15:00 - 17:00
Bangladesh	13:00 - 15:00	Myanmar	13:30 - 15:30
Brazil	Shared with recoded Video (*follow up Q&A session is planed)	the Philippines	15:00 - 17:00
Indonesia	14:00 - 16:00	Ukraine	9:00 - 11:00
Iran	10:30 - 12:30	Vietnam	14:00 - 16:00

- ※ *Due to the time lag, recorded videos of the online sessions will be shared to the participants from Brazil. Extra online Q & A session is scheduled for Brazil.*
- ※ *Some Webinars may be provided by recorded video due to the time lag.*

**(2) Tool:**

- Youtube will be used to provide the video lecture series and the virtual field visits. You can watch the video lectures, whenever you have a time in the preparation phase and the online program.
- Zoom will be used as online meeting tool. Consultation for follow-up online lecture will be carried out on Zoom in the online program. Please download the application before the online program starts.

**3. Schedule**

Webinars are planned during the 2 weeks online program. The fixed schedule will be shared to the accepted candidates with the Notice of Acceptance.

**<Program in Japan>**

**1. Laptop personal computer:**

During the course, there are occasions of making reports. Though there are computer machines at the disposal of the participants in JICA Yokohama center, it is recommended to bring your laptop personal computer at your convenience.

**2. Traditional clothing and items:**

There are a few occasions like closing ceremonies, when the participants may wear formal clothing. It is recommended to bring your national or traditional dress for closing ceremonies or other events.

Additionally, bringing along any visual materials like photos or donations of any handicrafts and/or folk crafts items that can be exhibited in order to share your culture is welcomed.

## **VI. ANNEX “Country Report”**

### Country Report

The participants for JICA Knowledge Co-Creation Program on “Enhancement of Solid Waste Management Capacity for Waste Power Generation” are requested to develop a document as follows.

Please describe the current situation, problems and countermeasures against them concerned with SWM in accordance with following <contents> into the country report.

- a. Submission dead line: March 1<sup>st</sup>, 2021
- b. Submit to: <[yictt1@jica.go.jp](mailto:yictt1@jica.go.jp)> by e-mail.

<Contents>

Please make a country report according to following contents.

In case data is not available, please mention it.

1. Brief Description of the Country / City
  - 1.1 Map
  - 1.2 Climate
  - 1.3 Population
  - 1.4 GDP per-capita
  - 1.5 Other relevant facts
2. Related laws and regulations on SWM and waste power generation
3. Related national policy and plans on SWM

If you have national policy or plans related to waste power generation, please describe them.
4. Solid Waste Management Situation in the district, city or country for which you are responsible

If you belong to the central government, please describe the national level information according to the following sections (4.1).

If you belong to the local government or other public organizations, please describe the local level information (4.2) as below.

  - 4.1 **National Level** Solid Waste Management
    - (1) Organization chart concerned with solid waste management with number of staff

- (2) Policy or plans related to SWM in the central government.
- (3) Annual national budget and expenditure for solid waste management and the breakdown
- (4) Typical solid wastes flow from generation to disposal  
(As a reference, the example of Japan is attached at the end of this ANNEX. Though the chart includes amount, it is not necessary. )
- (5) Generation amount of solid waste in your country according to the kind (e.g. household waste, industrial waste, hazardous waste, medical waste)  
(As a reference, the example of Japan is attached at the end of this ANNEX.)
- (6) Daily per capita of solid waste generation amount in your country
- (7) Solid waste data collection mechanism on national level
- (8) Outline of intermediate treatment facility/ solid waste final disposal site in your country

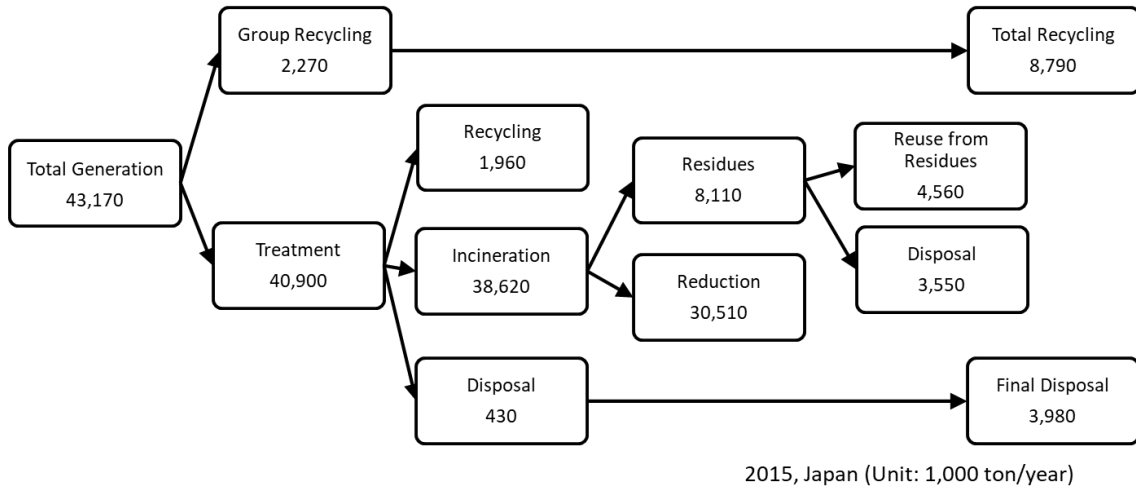
#### 4.2 Local Level / other public organizations' Solid Waste Management

- (1) Organization chart concerned with solid waste management including your organization
- (2) Number of staff in your organization
- (3) Policy or plans related to SWM in local government
- (4) Solid waste flow and the quantity from generation to disposal
- (5) Generation amount of solid waste according to the kind (e.g. household waste, industrial waste, hazardous waste, medical waste)
- (6) Daily per capita of solid waste generation amount in local government
- (7) Solid waste collection method (Organization in charge, sort collection)
- (8) Collection coverage rate of solid waste
- (9) Solid waste collection charge setting (collection fee, collection method)
- (10) Outline of intermediate treatment facility/ final disposal site (including solid waste collection vehicle station, transfer station, etc.)
- (11) Annual budget for solid waste management and the breakdown
- (12) Collection/Intermediate treatment/Final disposal cost per ton, per capita in local government

#### 5. Theme which you want to highlight (or select) in action plan

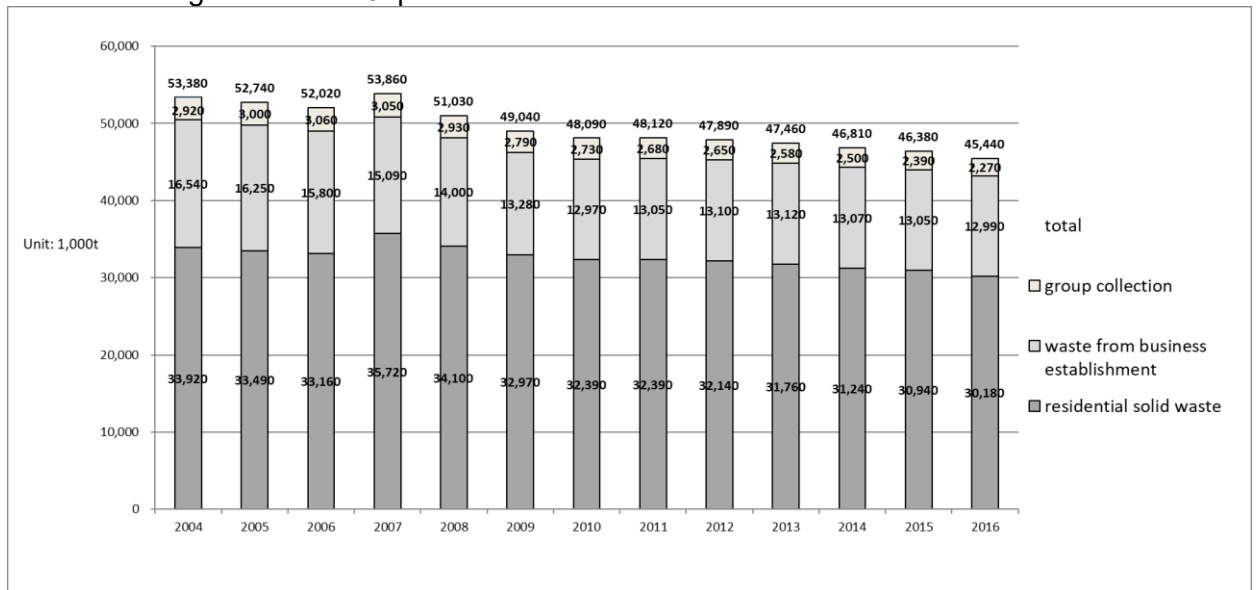
Please describe issues to be addressed for improvement in participant's organization.

<Reference for Country Report 4.1 (3)>  
 “Municipal Solid Waste Treatment Flow in Japan”



Ministry of the Environment, Government of Japan (2018) Emission and processing condition (2015) [Online]  
[http://www.env.go.jp/recycle/waste\\_tech/ippan/h29/data/env\\_press.pdf](http://www.env.go.jp/recycle/waste_tech/ippan/h29/data/env_press.pdf)

<Reference for Country Report 4.1 (4)>  
 “Total waste generation in Japan”



Ministry of the Environment, Government of Japan (2018) Emission and processing condition (2016)  
 [Online] [http://www.env.go.jp/recycle/waste\\_tech/ippan/h29/data/env\\_press.pdf](http://www.env.go.jp/recycle/waste_tech/ippan/h29/data/env_press.pdf)

## *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 Tokyo International Center (JICA TOKYO)**

**Address: 2-49-5 Nishihara, Shibuya-ku, Tokyo 151-0066, Japan**

**TEL: +81-3-3485-7051 FAX: +81-3-3485-7904**