



Knowledge Co-Creation Program (Group & Region Focus)

General Information on

Decentralized Wastewater Treatment System

課題別研修「分散型污水处理システム導入・普及」

JFY 2023

NO. 202208448J001

Course Period: From August 23, 2023 to September 16, 2023

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

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)' as a New Start

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

Due to rapid population growth and expansion of residential area, untreated night soil and wastewater discharge caused serious social problems: pollution to river, groundwater, or closed water area. Construction of sewerage system requires time and huge amount of money. The sanitary treatment of night soil and wastewater on-site is cost effective and possible countermeasures against various kinds of water pollution due to domestic wastewater; and will contribute to improve safe water environment.

This program offers comprehensive wastewater treatment systems: laws and regulation to control water pollution, methodology of night soil and wastewater treatment, and operation and maintenance of Johkasou.

For what?

This program is designed to improve on-site wastewater treatment (measure for domestic wastewater, biological treatment, operation and maintenance system) in participating countries and regions.

For whom?

This program is offered to administrative, engineering officers in charge of wastewater treatment with occupational experience of more than 3 years in relevant field.

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 to submit an action plan, utilizing contents of the program.

II. Description

1. Title (Course-No.)

Decentralized Wastewater Treatment System (202208448J001)

2. Course Period

August 23, 2023 to September 16, 2023

3. Target Regions or Countries

Brazil, Cambodia, India, Indonesia, Kenya, Mali, Nepal, Papua New Guinea, Philippines, Sri Lanka, and Viet Nam

4. Eligible / Target Organization

This program is designed for governmental organization engaged in wastewater management.

5. Course Capacity (Upper limit of Participants)

12 participants

6. Language to be used in this program

English

7. Course Objective

After successfully completed the course, participants will acquire comprehensive knowledge on the introduction and diffusion of decentralized sewage treatment systems and improve their ability to deal with sewage treatment problems.

8. Outputs and Contents (Tentative)

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

(1) Preliminary Phase in a participant's home country Applying organizations are required to submit the Job Report, Answer for the Questionnaire and the Issue Analysis Sheet (IAS) together with the Application Form for the selection of the Participants.	
Reports	Activities
Job Report, Questionnaire & IAS	Formulation and submission of Job Report, Answer for the Questionnaire, and IAS

(2) Core Phase in Japan Participants will attend the Program in Japan		
Expected Output	Subjects/Agendas	Methodology
To understand the history of public sanitation and national and municipal domestic wastewater control measures in Japan.	<ol style="list-style-type: none"> History of pollution and public health in Japan History of national and municipal wastewater control measures 	Lecture, Field Visit and Exercise
Be able to explain the summary of the legal system, policies (regulatory, planning, and finance), and human resource development system for decentralized sewage treatment in Japan.	<ol style="list-style-type: none"> National legal system, policy (regulatory, planning, financial) for decentralized sewage treatment in Japan Human resource development system for decentralized sewage treatment in Japan Municipal wastewater treatment system and plans in Japan 	Lecture, Field Visit and Exercise
Be able to explain the technology, manufacturing, installation and maintenance (including sludge treatment) of decentralized sewage treatment systems in Japan.	<ol style="list-style-type: none"> Wastewater and sludge treatment technology Products of wastewater treatment, Johkasou in Japan Manufacturing, Installation, and maintenance of Johkasou Performance evaluation and certification systems for Johkasou 	Lecture, Field Visit and Exercise
Be able to explain the situation of sanitation in developing countries and the role of sewage treatment for improvement.	<ol style="list-style-type: none"> Current status and challenges of decentralized wastewater treatment in developing countries Problem solving using IAS and PDCA cycle Presentation by former participants and discussion 	Lecture, Field Visit and Exercise

Be able to understand the challenges for sewage treatment in participant's country, and to develop an action plan to resolve the problem.	13. Review and Discussion 14. Action plan creation 15. Presentation and discussion of action plan	Lecture, Exercise
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(3) Finalization Phase in a participant's home country Participants will apply knowledge and skills acquired in the training in their respective countries.	
Expected Output	Activities
Implementation of the Action Plan	1. Action Plans formulated by participants are thoroughly shared within their organization, and discussed towards implementation. 2. Action Plans are implemented in their organization

Please refer to the attached Tentative Schedule (Annex V). The schedule is a model, and subject to change.

III. Eligibility and Procedures

1. Expectations to 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 program 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 course 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: Engineering officers in charge of wastewater treatment.
- 2) Experience in the relevant field: have more than three 3 years of experience in the field mentioned above.
- 3) Educational Background: be a graduate of university or equivalent level.
- 4) Language Proficiency: have a competent command of spoken and written English which is equal to TOEFL iBT 100 or more (This workshop includes active participation in discussions, which requires high competence of English ability. Please attach an official certificate for English ability such as TOEFL, TOEIC, etc, if possible.)
- 5) Health: must be in good health to participate in the program in Japan. To reduce the risk of worsening symptoms associated with respiratory tract infection, please be honest to declare in the Medical History (QUESTIONNAIRE ON MEDICAL STATUS RESTRICTION of the application form) if you have been a patient of following illnesses; Hypertension / Diabetes / Cardiovascular illness / Heart failure / Chronic respiratory illness.

(2) Recommendable Qualifications

- 1) Be in relation with past or on-going JICA projects focusing on wastewater treatment.
- 2) Be familiar with engineering.
- 3) Be familiar with PC operation, as there will be many chances for report writing and presentations.
- 4) Age: between the ages of 25 and 50 years
- 5) Gender Equality and Women's Empowerment: Women are encouraged to apply

for the program. JICA makes a commitment to promote gender equality and women's empowerment, providing equal opportunity for all applicants regardless of sexual orientation and gender identity.

3. Required Documents for Application

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

(2) Photocopy of passport: to be submitted with the application form

*The photocopy should include the followings:

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

(3) English Score Sheet: to be submitted with the application form, if the nominees have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

(4) 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 Application Form. Job Report, Questionnaire and Issue Analysis Sheet are necessary documents for screening applicants.

4. Procedures for Application and Selection

(1) Submission of the Application Documents

Closing date for applications: **Please confirm the local deadline with the JICA overseas office (or the Embassy of Japan).**

(All required material must arrive at **JICA Center in Japan** by **June 19, 2023.**)

(2) Selection

Primary screening is conducted at the JICA overseas office (or the embassy of Japan) after receiving official documents from your government. JICA Center will consult with concerned organizations in Japan in the process of final selection. Applying organizations with the best intentions to utilize the opportunity will be highly valued.

The Government of Japan will examine applicants who belong to the military or other military-related organizations and/or who are enlisted in the military, taking into consideration of their duties, positions in the organization and other relevant information in a comprehensive manner to be consistent with the Development Cooperation Charter of Japan.

(3) Notice of Acceptance

The JICA overseas office (or the Embassy of Japan) will notify the results **not later than July 19, 2023.**

5. Conditions for Participation

The participants of KCCP are required

- (1)** to strictly observe the course schedule,
- (2)** not to change the air ticket (and flight class and flight schedule arranged by JICA) and lodging by the participants themselves,
- (3)** to understand that leaving Japan during the course period (to return to home country, etc.) is not allowed (except for programs longer than one year),
- (4)** not to bring or invite any family members (except for programs longer than one year),
- (5)** to carry out such instructions and abide by such conditions as may be stipulated by both the nominating Government and the Japanese Government in respect of the course,
- (6)** to observe the rules and regulations of the program implementing partners to provide the program or establishments,
- (7)** not to engage in political activities, or any form of employment for profit,
- (8)** to discontinue the program, should the participants violate the Japanese laws or JICA's regulations, or the participants commit illegal or immoral conduct, or get critical illness or serious injury and be considered unable to continue the course. The participants shall be responsible for paying any cost for treatment of the said health conditions except for the medical care stipulated in (3) of "5. Expenses", "IV. Administrative Arrangements",
- (9)** to return the total amount or a part of the expenditure for the KCCP depending on the severity of such violation, should the participants violate the laws and ordinances,
- (10)** not to drive a car or motorbike, regardless of an international driving license possessed,
- (11)** to observe the rules and regulations at the place of the participants' accommodation, and
- (12)** to refund allowances or other benefits paid by JICA in the case of a change in schedule.

IV. Administrative Arrangements

1. Organizer (JICA Center in Japan)

(1) **Name:** JICA Kyushu Center (JICA KYUSHU)

(2) **Program Officer:** Mr. MIURA Sho (kictp@jica.go.jp)

2. Implementing Partner

To be determined.

3. Travel to Japan

(1) **Air Ticket:** In principle, JICA will arrange an economy-class round-trip ticket between an international airport designated by JICA and Japan.

(2) **Travel Insurance:** Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan (include damaged baggage during the arrival flight to Japan) will not be covered.

4. Accommodation in Japan

Basically, JICA will arrange the following accommodation(s) for the participants in Japan:

JICA Kyushu Center (JICA Kyushu)

Address: 2-2-1 Hirano, Yahatahigashi-ku, Kitakyushu-shi, Fukuoka 805-8505,
JAPAN

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

(where “81” is the country code for Japan, and “93” is the local area code)

Please refer to facility guide of JICA Kyushu at:

<https://www.jica.go.jp/kyushu/english/office/index.html>

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

5. Expenses

The following expenses in Japan will be provided by JICA

(1) Allowances for meals, living expenses, outfits, and shipping and stopover.

(2) Expenses for study tours (basically in the form of train tickets).

(3) Medical care for participants who become ill after arriving in Japan (the costs related to pre-existing illness, pregnancy, or dental treatment are not included).

(4) Expenses for program implementation, including materials.

(5) 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.

*Link to JICA HP (English/French/Spanish/Russian):

https://www.jica.go.jp/english/our_work/types_of_assistance/tech/acceptance/training/index.html

6. Pre-departure Orientation

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

*YouTube of "Knowledge Co-Creation Program and Life in Japan" and "Introduction of JICA Center" are viewable from the link below.

Image videos of 'Introduction of JICA Center (YouTube)' show the following information of JICA Centers: Location, Building, Entrance, Reception (Front desk), Lobby, Office, Accommodation (Room), Amenities (Hand dryer), Bathroom (Shower and Toilet), Toiletries, Restaurant, Laundry Room (Washing machine, Iron), ICT Room (Computer for participants), Clinic, Cash dispenser, Gym, Neighborhood

Part I: Knowledge Co-Creation Program and Life in Japan	
English ver.	https://www.youtube.com/watch?v=SLurfKugrEw
French ver.	https://www.youtube.com/watch?v=v2yU9ISYcTY
Spanish ver.	https://www.youtube.com/watch?v=m7I-WIQSDjl
Russian ver.	https://www.youtube.com/watch?v=P7_ujz37AQc
Arabic ver.	https://www.youtube.com/watch?v=1iBQqdpXQb4
Part II: Introduction of JICA Centers in Japan	
JICA Kyushu	https://www.jica.go.jp/kyushu/english/office/index.html

V. Other Information

1. Report and Presentation

(1) Job Report& Issue Analysis Sheet (IAS)

Each applicant is required to submit his/her own Job Report, Questionnaire & Issue Analysis Sheet following the instruction. Participants will explain their issues briefly at the beginning of the training in order to share knowledge and background with other participants as well as a course leader.

(2) Action Plan

Participants are required to make an Action Plan to express your idea and plan which you carry out after the training, reflecting the knowledge and method you acquire in the training. Participants will be requested to present the Action Plan at the end of the training.

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.

Annex I

Decentralized Wastewater Treatment System (JFY 2023)
Job Report

Name: _____
Country: _____
Organization and present post: _____
E-mail: _____
Phone: _____

Remarks 1: Please itemize your answer and make them specific.

Remarks 2: The Report should be typewritten in English (12-point font, appropriately spaced, A4 size paper) and total pages of the report should be limited to 3 pages (not including organization chart).

Remarks 3: Each participant is requested to give presentation based on this Job Report and Issue Analysis Sheet (IAS). You are also requested to prepare a Microsoft POWERPOINT file for the presentation when you come to Japan. Please use letter size more than 24 points for PPT.

Remarks 4: Please make the presentation clearly and in detail to let all training staff understand the challenges you are facing and why you attend this training course.

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

(1) Description of the organization

Name of organization:

Number of staff:

Main task of the organization:

Your task in the organization:

(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) What the organization expects you to learn from the training

2. Existing challenges in your section (up to 1 page)

(1) Challenges you are facing in your section (Please describe concrete details)

(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 this training course and reasons why you pick up the subjects

(2) How do you expect to apply skills and knowledge according to the listed items in Curriculum after you return to your home country?

(3) Other matters you are expecting for this course, if any
(This training program is basically fixed and cannot be changed upon your request.)

Annex II

Decentralized Wastewater Treatment System

(JFY 2023)

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.

1. How has wastewater (night soil and gray water) been treated?

- ☐ Treated by sewage plant
- ☐ Night soil has been treated by septic tank while gray water left untreated
- ☐ Night soil has left untreated while gray water has been treated
- ☐ Both night soil and gray water have left untreated
- ☐ Others ()

2. Does pollution from urine, night soil or wastewater cause problems in obtaining safe water from streams or groundwater?

☐ Yes ☐ No

If "yes," Please explain the details.

3. Has sewage treatment plant been installed?

☐ Yes ☐ No

If "yes," what is the method of treatment? (e.g., activated sludge process)

If "yes," what is the covered population rate by the plants in your country and city?

4. Are septic tanks in use in your country?

☐ Yes ☐ No

If "yes," what types of septic tank in use?

If "yes," how are the septic tanks maintained; and what are the methods of sludge withdrawal?

5. Have you ever heard of Johkasou which is capable of treating both night soil and gray water at once?
- ☐ Yes ☐ No

Thank you for your cooperation!

Issue Analysis Sheet (IAS)

Country: _____ Name: _____

No.	【A】* Issues that you confront.	【B】 Actions that you are taking.	
1			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

No.	【A】* Issues that you confront.	【B】 Actions that you are taking.	
2			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

No.	【A】* Issues that you confront.	【B】 Actions that you are taking.	
3			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

【 I 】, **【 II 】**, and **【 III 】** will be filled during the training course

*You shall describe challenges you are facing in your section also in the Job Report. Among them, please describe only those issues you expect to solve utilizing information and knowledge being delivered in this training course into column A.

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 nominees 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 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 confronting, and provide him/her with technical advice, useful references and solutions through the training program in Japan.

2. How to fill out IAS?

(1) Column A: Issues that you confront

Among the issues you confront, please describe only those issues you expect to solve utilizing information and knowledge being delivered in this training course.

(2) In column B: Actions that you are taking

Please describe the actions that you are taking to solve the issues shown in Column A.

(3) In column I , II and III:

These columns shall be filled out during the training.

※Please add new rows if necessary.

Annex V Tentative Schedule

This is Model Schedule and subject to Change

Day		Program Contents	
1	Wed	Arrival to Japan	
2	Thu	Arrival Briefing	Program orientation
3	Fri	General orientation	Cultural Exchange program
4	Sat	Holiday	
5	Sun	Holiday	
6	Mon	Course orientation	Job report presentation
7	Tue	Overview of pollution and public health / wastewater control measures in Japan	National and Municipal legal system and policy (regulatory, planning, finance)
8	Wed	Introduction and development of wastewater treatment system by municipality	Human resource development system in the field of Wastewater control / Discussions
9	Thu	Problem Solving using IAS and PDCA cycle	Site Visit to Sewerage Treatment Plant
10	Fri	Lecture on action plan	Site Visit to NGO and Company related to Water Quality Control
11	Sat	Holiday	
12	Sun	Holiday	
13	Mon	Introduction of Johkasou System	Johkasou type / Promotion of Gappei Johkasou system
14	Tue	License system of Management of Johkasou	Treatment and effective use of Johkasou sludge / Maintenance of Johkasou
15	Wed	Formulation of municipal wastewater plan	Observation of Johkasou manufacturing
16	Thu	Situation and challenges for implementing decentralized treatment system in developing country	Presentations by Former Participants online / Discussions
17	Fri	Review and feedback/Discussions on action plan presentation	Performance evaluation and certification systems for Johkasou
18	Sat	Holiday	
19	Sun	Holiday	

20	Mon	Citizens' efforts and Awareness Raising	Wastewater treatment and sludge treatment technology
21	Tue	River protection organizations' efforts	Design of small scale waste water treatment facility
22	Wed	Government's efforts toward recycling of water	Observation of Night soil treatment system
23	Thu	Discussion on action plan presentation	Observation of Sewage treatment system
24	Fri	Evaluation Meeting	Action Plan Presentation
25	Sat	Departure	

For Your Reference

JICA and Capacity Development

Technical cooperation is people-to-people cooperation that supports partner countries in enhancing their comprehensive capacities to address development challenges by their own efforts. Instead of applying Japanese technology per se to partner countries, JICA's technical cooperation provides solutions that best fit their needs by working with people living there. In the process, consideration is given to factors such as their regional characteristics, historical background, and languages. JICA does not limit its technical cooperation to human resources development; it offers multi-tiered assistance that also involves organizational strengthening, policy formulation, and institution building.

Implementation methods of JICA's technical cooperation can be divided into two approaches. One is overseas cooperation by dispatching experts and volunteers in various development sectors to partner countries; the other is domestic cooperation by inviting participants from developing countries to Japan. The latter method is the Knowledge Co-Creation Program, formerly called Training Program, and it is one of the core programs carried out in Japan. By inviting officials from partner countries and with cooperation from domestic partners, the Knowledge Co-Creation Program provides technical knowledge and practical solutions for development issues in participating countries.

The Knowledge Co-Creation Program (Group & Region Focus) has long occupied an important place in JICA operations. About 400 pre-organized courses 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 is being customized by the different target organizations to address the specific needs, 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, as the first non-Western nation to become a developed country, built itself into a country that is free, peaceful, prosperous and democratic while preserving its tradition. Japan will serve as one of the best examples for our partner countries to follow in their own development.

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 a process of adoption and adaptation, of course, has been accompanied by countless failures and errors behind the

success stories.

Through Japan's progressive adaptation and application of systems, methods and technologies from the West in a way that is suited to its own circumstances, Japan has developed a storehouse of knowledge not found elsewhere from unique systems of organization, administration and personnel management to such social systems as the livelihood improvement approach and governmental organization. It is not easy to apply such experiences to other countries where the circumstances differ, but the experiences can provide ideas and clues useful when devising measures to solve problems.

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.



Contact Information for Inquiries

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

JICA Kyushu Center (JICA Kyushu)

**Address: 2-2-1 Hirano, Yahatahigashi-ku, Kitakyushu-shi,
Fukuoka 805-8505 Japan**

TEL: +81-93-671-6311

FAX: +81-93-671-0979