

【Online & In Japan】

Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

Environmental Measures for Mining Development

課題別研修「鉱山開発における環境対策等研修」

JFY 2020

NO. 201902119-J001 / ID. 201902119

Online Program: From January 12, 2021 to March 19, 2021

Course Period in Japan: From January 26, 2022 to February 9, 2022

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

Mineral resources are essential to industrial and economic activities, and it is quite important for resource rich countries to promote effective and sustainable development of natural resources. Mining projects would not only promote mining-related industries but also create other benefits for society including improvement of infrastructure and basic social systems, economic development of rural area, and human resources development in various fields. On the other hand, we should pay attention to negative aspects of mining activity such as deforestation and erosion, contamination of soil, groundwater and surface water.

Developing countries have difficulties to operate mining stably by having many kinds of challenges to cooperate with local communities because of inadequate environmental measures. Japan has many experiences to overcome environmental challenges and could share this experiences and techniques to resource rich developing countries to manage mining activity stably.

For what?

This program aims to acquire the knowledge and know-how necessary to manage mining pollution by getting knowledge about environmental problems in mining sector and building mineral resources management structure in own country.

For whom?

The expected participants on this program is the Governmental agencies in charge of mining development or environmental conservation in mining sector.

How?

Participants will have opportunities through online program and program in Japan to learn knowledge regarding efficient and environment-friendly mining and recycling by series of lectures, observations, exercises and discussions.

Participants' understanding of this program will help to solve their own mine pollution problems.

II. Description

1. Title (J-No.): Environmental Measures for Mining Development (201902119-J001)

2. Course Period in JAPAN

Online Program: January 12 to March 19, 2021

Course Period in Japan: From January 26, 2022 to February 9, 2022

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

3. Target Regions or Countries

Argentina, Botswana, Brazil, Chile, Democratic Republic of Congo, Madagascar, Mozambique, Myanmar, Papua New Guinea, Peru, Philippines, South Africa, Zambia

4. Eligible / Target Organization

This program is designed for governmental officials in charge of planning section in the field of mining development or environmental conservation in mining sector

5. Course Capacity (Upper limit of Participants)

15 participants

6. Language to be used in this program: English

7. Course Objective:

To acquire the knowledge and know-how necessary to manage mining pollution by getting knowledge about environmental problems in mining sector and building mineral resources management structure in own country.

8. Overall Goal

This program will contribute to enhance partnerships with Japan and resource rich developing countries by sharing Japanese mining experiences and techniques, and to develop sustainable mining management in the respective countries.

Expected Module Output and Contents:

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

(1) KCCP Online Program in 2021

(January 12, 2021 to March 19, 2021)

As a part of the KCCP program, each participant is required to participate in Online Program remotely in respective country.

| Expected Module Output | Subjects/Agendas | Methodology |
|--|---|--------------------|
| Participants understand Japan's policy and governmental organizations' role in mine pollution field. | <ul style="list-style-type: none"> Japan's Current Policy on Mineral and Natural Resources Regulation and Measures about Mine Pollution Control of Japan Cooperation in Mining Environment of JICA Role of JOGMEC (Japan Oil, Gas and Metals National Corporation) and introduction of mine pollution prevention measures | -Lecture by online |
| Participants learn some technologies for mine pollution prevention and recycling. | <ul style="list-style-type: none"> Metal resource recycling system / Metal recycling technology Resource development and mine pollution prevention (Introduction of corporate efforts) Bioleaching and Passive Treatment Technology | -Lecture by online |

(2) KCCP Program in Japan in 2022

(January 26, 2022 to February 9, 2022)

Participants to be dispatched by the concerned government and organizations will attend the program implemented in Japan.

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

| Expected Module Output | Subjects/Agendas | Methodology |
|---|--|-------------|
| 1) To identify challenges in each country, through understanding and comparing the environmental measures in Japan and other countries in mining sector | Discussions regarding challenges of environmental measures in each country | Discussion |

| | | |
|--|---|--------------|
| 2) To formulate reports describing measures to solve challenges in each country. | Observations regarding facilities, wastewater treatment for mine drainage in abandoned mine sites in Japan | Observation |
| 3) To learn techniques and experience regarding environmental measures of Japanese companies and make suggestion how to utilize those learnings in each country. | Presentations and discussions regarding environmental measures, challenges and future plan in mining sector in own country. | Presentation |

<Course period in Japan in 2022 >

Topic outline (subject to minor changes)

1st week

- (1) Briefing General Orientation, Living & Program Orientation
- (2) Courtesy visit
- (3) Job and Country Presentation

2nd week

- (1) Lake Towada and Osarizawa Historical Mine Tour
- (2) Field Survey in Akita prefecture
 - Smelter & Refinery at Kosaka
- (3) Field Survey in Iwate prefecture
 - Water treatment facility at the abandoned Mine
 - Geothermal Power Station
- (4) Site visit in Shikoku and West Japan
 - Smelter & Refinery in Shikoku
 - Company visit at Kyoto or Shiga

3rd week

- (1) Action Plan Presentation

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: be an official working for Governmental agencies in charge of mining development or environmental conservation in mining sector
- 2) be an official in planning in central or local government
- 3) Experience in the relevant field: have more than 3 years' experience in the field of mining development
- 4) Educational Background: be a graduate of university
- 5) Language: have a competent command of spoken and written English which is equal to TOEFL iBT 53 - 55 (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)
- 6) PC skill: have a competent command of using PC
- 7) 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: between the ages of twenty-five (25) and fifty (50) years
- 2) Gender Consideration: JICA is promoting Gender equality. Women are encouraged to apply for the program.

(3) IT Environment

- 1) Internet communication speed: downstream bandwidth is more than 20Mbps
- 2) Browser: Recommended: Google Chrome

Google Chrome Browser:

<https://www.google.com/chrome/>

Alternative: Microsoft Edge、Mozilla Firefox(*1)、Safari

*1 As of August 2018, Mp4 videos cannot be played in Fire Fox of Android Version.

- 3) OS: Windows、macOS、Android、iOS
- 4) Device: to be prepared a PC or Tablet

3. Required Documents for Application

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

If you have any difficulties/disabilities which require assistance, please specify necessary assistances in the Medical History (1-(d)) of the application forms.

It may allow us (people concerned in this course) to prepare better logistics or alternatives.

- (2) Photocopy of passport or government-issued ID:** Submit a photocopy of your passport with your application. If you do not own a passport, a government-issued ID can be an alternative for online program in 2020, and should submit its photocopy of passport at least ONE month before your arrival in Japan.

*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) Inception Report,** to be submitted with the application form (detailed information is provided in the ANNEX "Inception Report").

Note: The applicant must be submitted all required documents.

You will not be selected if there are any deficiencies in the documents submitted.

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 **December 4, 2020**)

***The closing date in your country is earlier than the date noted above.**

(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 (JICA Tohoku). Selection will be made by the JICA HQ and JICA Tohoku 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 December 14, 2020.**

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

Before coming to Japan, only accepted candidates are required to prepare the Job and Country Report (detailed information is provided in the ANNEX "Job and Country Report".) The Job and Country Report should be sent to JICA Tohoku, preferably by e-mail to thictad@jica.go.jp

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 Tohoku

(2) **Contact:** Ms. FUJIHARA Reiko (thictad@jica.go.jp)

Address : Sendai Dai-ichiseimei Tower Bldg.

4-6-1, Ichiban-cho, Aoba-ku, Sendai, Miyagi-ken, 980-0811, Japan

Tel: 81(*)-22(**) -223-5151

Fax: 81(*)-22(**) -227-3090

(*): country code for Japan (**): area code for Sendai

2. Implementing Partner:

(1) **Name:** Japan Mining Engineering & Training Center

URL: <https://www.jmec.or.jp/home/english/outline/>

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 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

(where "81" is the country code for Japan, and "3" is the local area code)

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

5. Expenses:

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

1. VISA

Visa to enter Japan will be arranged and issued at Japanese Embassy in candidates' respective countries.

If there is no Japanese Embassy or Councilor in the country, please contact JICA office or Japanese Embassy in neighbor countries.

2. Request

Participants are requested to bring information (data) of economic and social statistics, mining statistics, and mining policy which will be used not only for making a presentation of your country report, but also for making an action plan at the end of this program.

3. Computers

Participants are recommended to bring their own laptop/notebook computers (*1) to prepare for Action Plans and presentation slides, and to check personal e-mail.

(*1) Laptop/notebook computers should have antivirus software installed, and must not have file sharing softwares, such as Winny, WinMX, BitTorrent and Gnutella.

Note: The power plug shape of Japan is "A type." Bring the power plug adaptor.

4. Short trip

The short trip is arranged during the program. Participants are required to bring comfortable walking shoes and backpack (or small suitcase). Walking shoes are necessary for field visit and backpack (or small suitcase) is necessary when you go out for a short trip to other cities. (so you don't need to carry everything)

5. Japanese Currency

Allowance will be deposited to your temporary bank account in Japan 2 to 5 days after your arrival to Japan. It is highly advised to bring some cash / traveler's check in order to spend necessary money for the first 2 to 5 days after your arrival.

6. Money Exchange

It is very important that your currency must be exchanged to Japanese Yen at any transit airport or Narita International Airport or Haneda Airport, Japan soon after your arrival. It is quite difficult to exchange money after that, due to no facility or time during the training program.

7. International Exchange Programs with Local Communities

For the promotion of mutual friendship, JICA TOHOKU and implementing organization encourage international exchange between JICA participants and local communities as a part of development education program. JICA participants are expected to contribute by attending such activities and will possibly be asked to make presentation on society, economy and culture of their home country.

VI. ANNEX:

A: Inception Report

(Deadline is December 4, 2020 same as Application Form)

All applicants are required to fill in the form and submit them with other application documents. This is used for the selection of applicants. **The report should be typewritten in English.**

*Please answer clearly and concisely. You may expand the space of each row and column of format, if necessary. Three pages at maximum.

1. Basic Information

| | | | |
|---|--|---|--|
| 1 | Name of participant | | |
| 2 | Country | | |
| 3 | E-mail | | |
| 4 | Course you graduated in | | |
| 5 | Inform any available information (food restriction due to health /religious reasons), if you have. | | |
| 6 | Inform your body size for your uniform during the program | Height: cm Weight: kg Shoe size: cm (If you are not familiar with centimeter-size, please write your size with a note of "American" or "European" measures. | |
| 7 | Overview of organization which participants belong to | duration | The name of department, organization and the service it provides |
| | | | |
| | | | |

| | | | |
|----|---|--|--|
| | | | |
| | | | |
| 8 | Name of your present department. | | |
| 9 | Outline of the duty and the role of your department | | |
| 10 | Outline of your current duty and role | | |
| 11 | Organization chart | | |

2. Information regarding the program

(Please prepare your report for all of the following topics)

Applicants are requested to prepare a report based on the following issues and submit it along with the Application Form **December 4, 2020**. The report should be typewritten in English on A4 size paper (21 cm x 29.5 cm) by MS word/Power Point data.

Topic 1: Economic statistics

- a) The role of mining industry in the overall economy of your country

Topic 2: Mining statistics:

- a) Ore reserves and the amount of production, domestic consumption and export
- b) The activities of major mines (place, the kind of minerals, the amount of production, etc.)
- c) The capacity of mineral processing and smelting

Topic 3: Mining policy:

- a) The name and structure of mining organizations
- b) Domestic taxation system concerning foreign investment
- c) Domestic policies concerning mining industry

- d) Environmental protection

Topic 4: Technical and financial cooperation from foreign countries in the field of mining industry:

- a) The name of countries/agencies
- b) The type of cooperation, period and budget

Topic 5: Challenges and issues in the mining industry:

The items below will be discussed based on this report in Japan, the content of which is to be reflected in your action plan.

- a) Mineral resources management structure in your country
- b) History, current state, and counter measures against mining pollution of your country: What problems have arisen? What laws exist? What is a concrete solution?
- c) Problems with local communities against mining pollution of your country: Have any problems arisen? What problems have arisen?
- d) What are the major issues and challenges you face at work?
- e) Your expectations for the course (What would you like to learn in the course?)

B. Presentation of Job and Country Report

After selection, only accepted participants are required to make presentation for Job and Country Report. Presentation session will be held in the course period in Japan in 2022.

You may utilize above A information for making the Job and Country report. Due to the time limitation on the presentation (10 minutes for each), participants are requested to highlight major problems about Counter measures against mining pollution of your country in the presentation. In addition to the presentation, we will use your country report and its information (data) to have discussions with other participants for mutual understanding among others.

Note: It is advisable to use audio visual equipment such as movies, slides, pictures, or Power Point when presenting the country report.

(Deadline will be sent in 2021)

1) Format:

- Please modify your Inception Report, especially using Topic 5 (made according to the requirements shown in the section A above) to a presentation file, using Microsoft Power Point.
- Please include pictures and maps for easy understanding.

- One presentation per participant.
 - Number of slides: about 5 slides.
- 2) Language: English
 - 3) Presentation time: 10 minutes, including Q & A. (presentation 8 minutes, Q&A 2 minutes)
 - 4) Presentation Date and Place: to be informed at the beginning of the program in Japan.
 - 5) Others: Before coming to Japan, the Job and Country Report should be sent to JICA Tohoku, preferably by e-mail to thictad@jica.go.jp, and please bring your presentation data saved in a media like a USB memory device

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 and 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 Tohoku Center (JICA TOHOKU)

Address: Sendai Dai-ichiseimei Tower Bldg.

4-6-1, Ichiban-cho, Aoba-ku, Sendai, Miyagi-ken, 980-0811, Japan

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