



Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

Metal-Mining Development Administration

課題別研修「鉱物資源開発行政」

JFY 2017

NO. J17-04149 / ID. 1784607

Course Period in Japan: From October 1st, 2017 to October 28th, 2017

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 is 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.

This Program is designed for the Government officials of resource-rich countries to realize more efficient and effective policy development, implementation and administration. We believe this program will be strong support to realize sustainable mining project which contribute economic and social development of participant's country. This program will provide study mining development from basic to application, particularly focusing on the government's role such as systematic legal systems and organizations as well as organizing mining information, mining policy and feasibility study, master plan, action plan, and follow-up, pollution control, environmental impact assessment and others,.

For what?

This program aims to enhance the Government officials' capacity particularly on policy development and implementation in mining sector. This course will include issues on mining cadaster management, reserves evaluation, economic and financial evaluation, permissions and licensing procedures, environmental and social impact assessment, mining safety, mine closure and reclamation plan for sustainable development of mining industry.

For whom?

The expected participants on this program is the Government officials who are responsible for mining policies, facilitating / coordinating mining projects, mining safety, and prevention of mining pollution. Participants are also required to have bachelor / master degree on mining related fields, such as geology, mining engineer, applied science, etc.

How?

Participants shall join series of lectures, observations, exercises and discussions for efficient and environment-friendly mining and recycling. Participants shall also formulate an action plan on dissemination activities of skills and knowledge gained from the program in Japan.

II. Description

1. Title (J-No.): Metal-Mining Development Administration (J17-04149)
(except coal, oil, natural gas and iron ore)

2. Course Period in JAPAN
October 1st to October 28th, 2017

3. Target Regions or Countries
Botswana, Democratic Republic of the Congo, Fiji, Ghana, Indonesia, Kenya, Malawi, Mongolia, Mozambique, Myanmar, Papua New Guinea, Peru, Philippines, Solomon Islands, South Africa, South Sudan, Tanzania, Zambia and Zimbabwe

4. Eligible / Target Organization
This program is designed for the Government officials who are responsible for mining policies, facilitating / coordinating mining projects, mining safety, and prevention of mining pollution, and also has studied in mining and / or related course at university or equivalent institute.

5. Course Capacity (Upper limit of Participants)
20 participants (one participant per one country)

6. Language to be used in this program: English

7. Course Objective:
The participated Government officials can catch guideline of making appropriate policies for sustainable development of mining activities to maximize economic benefits with minimizing environmental impact.

8. Overall Goal
The participated Government officials can promote and manage efficient and environment-friendly mining industry.

9. Implementing Partner:
International Institute for Mining Technology, JMEC (MINETEC)

10. Expected Module Output and Contents:

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

(1) Preliminary Phase in a participant's home country (July 2017 to September 2017) <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Expected Module Output	Activities
Country Report	Formulation and submission of Country Report A guideline of making Country Report is attached as ANNEX 1. The participants are required to make a power point file for presentation focusing on their challenges to be shared in this program.

(2) Core Phase in Japan (October 1st, 2017 to October 28th, 2017) <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>		
Expected Module Output	Subjects/Agendas	Methodology
To deepen understanding of the relationship between changes in the global resource logistics structure with the economic development of emerging countries and the importance of mineral resources as well as the relationship between changes in such trends concerning resources and resource-producing countries.	(1) To make discussion on the situation and problems of mining sector in each country.	Workshop
	(2) To learn the history about mineral resources development which has played an important role to contributes to modernization of the developed countries in the 19th and 20th centuries.	Lecture
	(3) To understand changes in the global resource logistics structure through economic development of emerging countries, the importance of metal resources such as copper, lead, zinc, nickel and other minor metals, as well as economic development conditions of resource-producing countries and consuming countries including Japan, through lectures on international economy and metal supply-demand prospect, resources development cases in developing countries, introduction to resource economy, etc.	Lecture
To learn knowledge and technology on mineral resource exploration, including satellite image processing, as well as policy schemes and functions of resource-related	(1) To find suitable methods for resource exploration in the participants' home countries by learning exploration techniques including remote sensing techniques through lectures.	Lecture
	(2) To understand techniques for the processes of ore dressing, refining and processing through lectures and site observations.	Lecture / Observation

organizations for improvement in resource discoverability.	(3) To understand policy tools (theories and methods) to promote exploration through lectures on mining policies and observations at Geological Research Institutes of Japan, such as the National Institute of Advanced Industrial Science and Technology (AIST), etc.	Lecture / Observation
To understand the importance of government agency's role on the environment-friendly mining development and the points of environmental impact assessment and guidance in such planning.	(1) To learn the history of mine pollution and the experience of controlling it in Japan to understand the economic and social risks of mine pollution. Especially to understand the fact that environmental considerations result in economically sustainable development.	Lecture
	(2) To understand environmental impact and environment-friendly system/methods of mining development through lectures on environmental regulations and legal systems in Japan, mine pollution prevention techniques and environmental assessment as well as observations at the mining wastewater treatment facilities.	Lecture/ Observation
	(3) To understand measures to reduce the effects on the environment through lectures on current conditions and techniques of recycling metals from waste as well as observations at recycling / environmental management facilities.	Lecture/ Observation
To learn financing mechanisms for mining projects in developing countries, as well as the current situation of industry in Japan.	(1) To understand economic assessment techniques, analysis methods of investment climate, project evaluation, financing systems and funding methods for resources development through lectures and exercise. Also you can understand the activities on public financing institutions in Japan (JOGMEC, JICA, and JBIC), etc.	Lecture/ Exercise
	(2) To learn the realities of the non-ferrous metal industry and to deepen understanding of guidelines for formulation of resources development strategies and project plans in Japan, through lectures given by lecturers at private non-ferrous metal companies as well as facility observation, and to strengthen coordination through exchange with those concerned.	Lecture/ Observation

Preparation and Presentation of Action Plan	<p>(1) Preparation of Action plan At the end of this program, participants will develop an action plan on how to share and promote skills and knowledge gained from this program. For the theme selection for the action plan, participants should reflect their country's challenges and issues mentioned in their country reports. For the preparation and presentation of actions plans, a) the outlines will be explained at the beginning of this course, b) a lecture and discussion will be held in the middle of this course, and c) consultations to individual trainees will be given by several commentators through e-mail or other means as needed.</p> <p>(2) Presentation of Action Plan</p>	Workshop Consultation Presentation
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(3) Finalization Phase in a participant's home country

(November 2017 to March 2018)

Participants with their organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.

Expected Module Output	Activities
To implement a dissemination plan	Participants are to implement the dissemination activities based on the action plan which was made during the program.

(1) ANNEX2 shows guideline of how to make Action Plan.

(2) MINETEC is going to contact participants before they are coming to Japan. Please clearly specify your E-mail address on application form to receive necessary information.

III. Conditions and Procedures for Application

1. Expectations for the Participating Organizations:

- (1) This program is designed primarily for government/public that intends to address specific issues or problems identified in their operation.
- (2) This program will be held in collaboration with relevant prominent organizations including private sector. These special features enable projects to meet specific requirements of applying organizations and effectively facilitate them toward solutions for issues and problems.
- (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 section II -10 .
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan by carrying out the activities of the Finalization Phase described in section II -10.

2. Nominee Qualifications:

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

(1) Essential Qualifications

- 1) Current Duties: be officials working for the government or governmental organization, engaging on mining policies and managerial departments including mining development. This course will not cover the area of oil, gas, coal and iron development.
- 2) Experience in the relevant field: have more than 3 years' practical experience in the field of mining policy
- 3) Educational Background: bachelor / master of mining related field
- 4) Language: have a competent command of spoken and written English, especially reading comprehension, workshop includes active participation in discussions, action plan development, thus requires high competence of English ability. Please attach an official certificate for English ability such as TOEFL, TOEIC etc, if possible)
- 5) PC skill: have a competent command of using PC
- 6) 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: be under forty (40) years old

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), please attach it (or a copy) to the application form.

(4) **Questionnaire:** to be submitted with the application form. Please refer to the ANNEX "Q/N & Country Report", and submit it along with the application form.

(5) **Country Report:** to be submitted with the application form (detailed information is provided in the ANNEX "Q/N & Country Report").

4. Procedure for Application and Selection :

(1) Submission of the Application Documents:

Closing date for application to the JICA Center in JAPAN: **August 15, 2017**

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 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 TOHOKU 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 shall be made by the respective country's JICA office (or Embassy of Japan) to the respective Government by **not later than September 1, 2017**.

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

Participants are requested to prepare a country report before coming to Japan and to make a presentation(s) after arriving in Japan to introduce current state and information regarding mining of each country. The report should be typewritten in English on A4 size paper (21 cm x 29.5 cm) by MS word and Power Point data.

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 program 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. HIRAYAMA Kumiko (thictad@jica.go.jp)

2. Implementing Partner:

International Institute for Mining Technology, JMEC (MINETEC)

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:

Kosaka Gold Palace (A hotel in MINETEC)

Address: 9-3 Furudate, Kosaka Kouzan, Kosaka-machi, Kazuno-gun, Akita-ken 017-0202 Japan

TEL: 81-186-29-3833 FAX: 81-186-29-3843

(where “81” is the country code for Japan, and “186” is the local area code)

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

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 “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 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. Others

- 1) URL of Monitoring information of environmental radioactivity level:

<http://ramap.jmc.or.jp/map/eng/>

VI. ANNEX

ANNEX 1

Q/N & Country Report

[Q/N(Questionnaire)]

Participants are requested to submit a questionnaire with the application form which is screening the participants. This Questionnaire should be typewritten in English (A4 size paper) in accordance with the format indicated as follows.

Note: An application not accompanied with a complete questionnaire cannot be considered.

- (1) Name of participant:
- (2) Country:
- (3) E-mail:
- (4) Course you graduated in:
 - A. Mining Technology
 - B. Technology of exploration
 - C. Processing Technology
 - D. Technology of Metallurgy
 - E. Others
- (5) Describe your graduation thesis briefly(within 500 words):
- (6) State your fields of interest and the reason thereof(within 100 words)
- (7) If you have studied abroad, inform its country(ies) and periods
Country : _____
Period: From ___ to ___
- (8) Inform any available information (food restriction due to health /religious reasons), if you have.
- (9) 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.

[Country Report]

Participants are requested to prepare a country report on the following issues and submit it along with the Application Form by **August 15, 2017**. The report should be typewritten in English on A4 size paper (21 cm x 29.5 cm) by MS word/Power Point data. It is assumed that participants should bring economic and social statistics or development plans of their country in addition to the country report, when they come to Japan. You may utilize those information for making your action plan. Due to the time limitation on the presentation (30 minutes for each), the participants are requested to highlight major problems 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.

1. Background information

Background information	
(1)	Name of participant and country
(2)	Overview of organization which participants belong to.

2. Topics : (please prepare your report on all of the following four topics)

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) Realities and future of resources development: How can projects be developed? What types of resources should be developed? What obstructive factors can be found? Where do problems lie, in social infrastructure, in environment, in funds, or elsewhere? What solutions can be found? etc.
- b) Realities and future direction of improvement of legal and tax systems for resources development: What laws exist? What problems lay in resources development, environmental concerns, tax systems, and elsewhere? What direction do improvements have? etc.
- c) Problems with, measures for and directions of small-scale mines: Have any problems arisen? What problems have arisen? What factors can be found? (e.g. use of mercury, acid effluent) etc.
- d) History, current state and counter measures against mining pollution of each country: What problems have arisen? What laws exist? What is a concrete solution?

Guidelines for “Action Plan”

1. What’s the Action Plan (AP)?

Action Plan is to improve problems of organizations, divisions to which you belong through knowledge obtained from this training course.

You are expected to carry out the “action plan” after going back to your country so that “Action Plan” should be concrete and feasible

2. Why you are requested to prepare the Action Plan?

All of you are participating in this training representing your country or organization. Therefore, you are expected to share the ideas and knowledge acquired through this training within and outside your organization and take initiative in acting for improving extension service. Your Action Plan (AP) is a course of action for you to take after resuming your duty. Accordingly, it needs to be concrete and feasible. When elaborating an AP you are expected to make the best out of the knowledge and ideas acquired during the training.

3. Contents of the AP

Based on the information and experiences, which you have obtained through the training course, you will write a proposal to your Department of your Ministry/Organization and Cooperatives in order to improve the current situation of your country. When you write an AP, please refer to your respective “Job/Country Report”. The contents of your action should include the below-mentioned items as minimum requirement. You are free to add more information that you think necessary.

[Contents to be included]

1) Introduction:

Please describe the reasons for choosing the subject, and also to describe which specific information from the training you think is useful for the activities in your AP.

2) Purpose:

Please describe the purpose of your AP.

3) Target Group:

Please describe a group of people or organizations to whom your AP is targeted in order to improve the identified problems.

4) Expected Output:

Please describe specifically the output, which is expected to be seen after your AP is fulfilled.

5) Essential Activities:

Please describe activities that are necessary in order to achieve the expected output mentioned in paragraph 4.

6) Division of Responsibilities:

Please describe the name of organization or department expected to be in charge of the

activities mentioned in 5. If many people or organizations are involved, please don't forget to indicate their relationship.

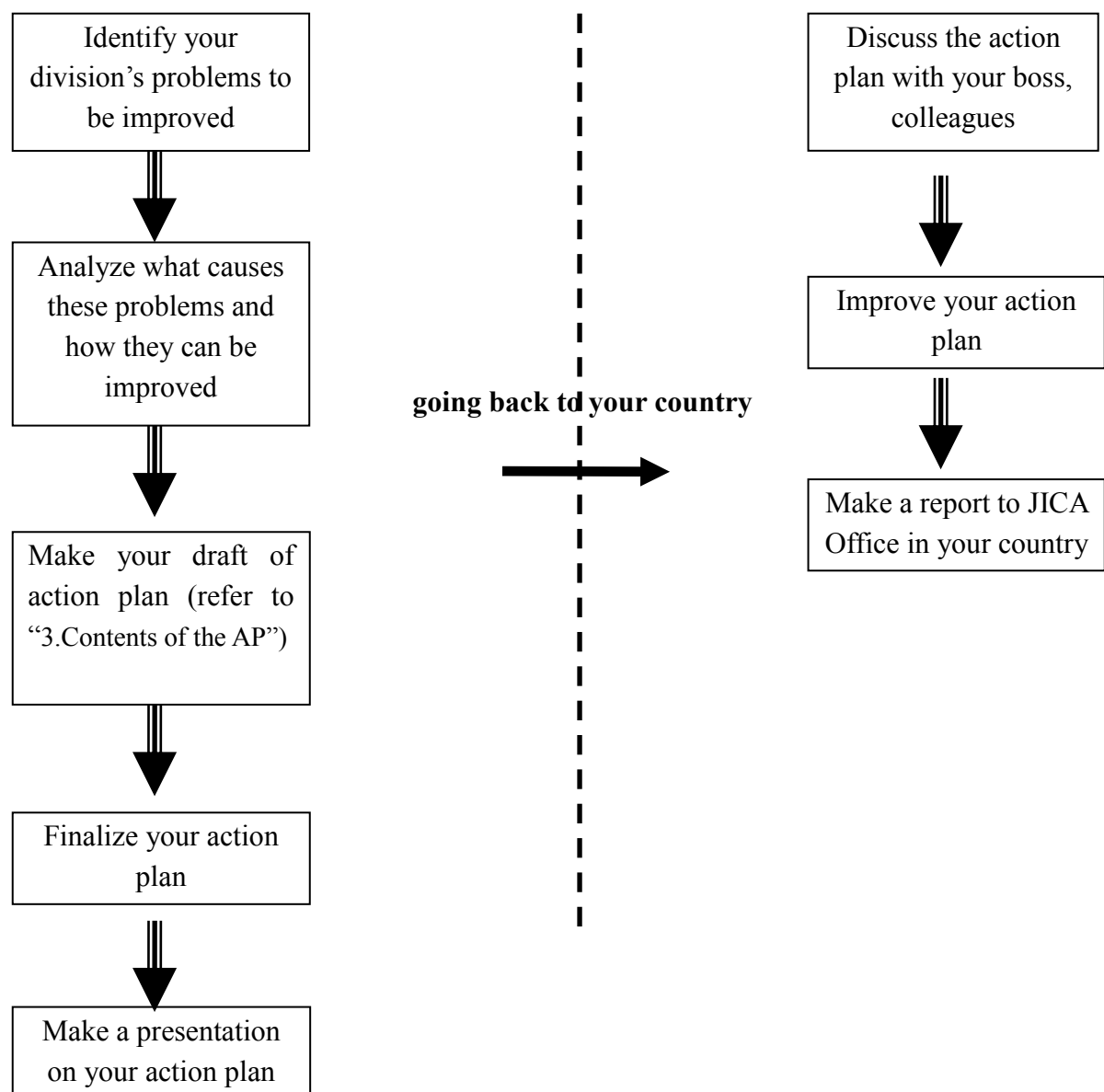
7) Financial Resources (Cost Estimate):

The Action Plan should include a realistic consideration of financial resources based on your organization's budget. The budget of your Action Plan should be calculated based on costs of all inputs.

8) Schedule (How long):

The duration of the Action Plan depends on each participant. However, your plan should be realistic and something that you can achieve in 6 months to 2 years.

4. How do you make it? (Writing process)



5. Notes for AP writing

The most important point in your AP is “feasibility”. Even an excellent plan will become meaningless if it is never implemented. Followings are some tips to improve “feasibility”.

1) Involvement of your Boss

Design your plan which can be implemented responsibly with your given authority. It means that the plan should fit in the scope where you have a direct influence or coordination. AP is not a grand scale plan for launching a new project or formulating new policies or revising existing policies of your government. AP is a plan of one organization or a person in order to solve some of the present issues, which are under the direct responsibility of such organization or person.

2) Balance between Volume and Resources of your Target Group

Specify the target group by considering the budget required for implementation, your position, duties, etc. If target groups become more limited, the financial and human resource requirement will be less and coordination efforts will also become smaller accordingly.

3) Monitoring and Improvement

Specify the expected results. Otherwise it is difficult to properly assess the progress and to identify missing factors to achieve the goal.

4) Control Area

Specify the essential activities. Though the more activities performed by the participants instead of someone else brings the higher possibilities of the activities which are actually carried out, it may bring the higher responsibilities at the same time. Therefore, scope of activities should be limited for easiness of control.

5) Period

Make a timetable with sufficient latitude.

6) Describe how the knowledge and ideas obtained in Japan are applied to the plan. Due to different conditions such as financial and human resources as well as cultural background in your country and in Japan, Japan’s system or method may not be immediately applicable in your country. Please give due consideration to the factors derived from such conditions.

6. Final presentation

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 Tohoku Branch (JICA TOHOKU)

**Address: Sendai Dai-ichi Seimei Tower Bldg.4-6-1 Ichiban-cho, Aoba-ku,
Sendai-shi, Miyagi-ken, 980-0811 Japan**

TEL: +81-22-223-5775 FAX: +81-22-227-3090

E-mail: thictad@jica.go.jp