Knowledge Co-Creation Program (Group and Region Focus)

# Hydrogen Solution for Decarbonization (A)



Course Number: 202411693J001

Course Period: September 10, 2025- October 15, 2025



NOTE: Adobe Acrobat Leader DC and Google Chrome are recommended as PDF viewer. JAWS and NVDA are recommended as screen reader.

NOTE: If there are any difficulties in reading this document, please contact JICA Office in your country or JICA Center in Japan.

NOTE: Depending on the circumstances, some or all of the program periods may be changed or cancelled after the application has been accepted.



# How can we promote hydrogen supply and utilization?

Acquire theoretical and effective solutions for hydrogen energy development through practical program in Japan.

#### **Outline**



This course is designed for government officials engaged in policy making and administrative work to promote the supply and utilization of renewable energy, including hydrogen, in the energy transition period toward a carbon neutral society.

The program will be conducted in Japan. Lectures, discussions, and presentations will be conducted face-to-face.

During the field trip, participants will visit program sites in Fukuoka, Tokyo, Kyoto, Yamanashi and etc.

All sessions are carried out in **English**.

The period of the program is from September 10, to October 15, 2025.

Course Capacity: 9 participants



# JICA Knowledge Co-Creation Program (KCCP)

The Japanese Cabinet released the Development Cooperation Charter in February 2015, stated 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 foundation of mutual learning process.



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# For What?

#### \_\_\_\_\_

#### **Background**

Since the beginning of 2020, the world accelerating efforts to been promote the use of hydrogen, with European countries aiming to become carbon neutral by 2050, and other countries announcing their hydrogen strategies one after another. Hydrogen is said to be the ultimate clean energy, but due to cost and technical issues in the supply chain (production, storage, transportation, and utilization), medium- to long-term efforts are needed to expand its use.

#### \_\_\_\_\_

#### **Objectives**

The participants will understand the trends in other countries toward decarbonization, Japan's basic strategy for hydrogen, policies and technologies to expand the safe use of hydrogen, and efforts to strengthen the competitiveness of the hydrogen industry, and develop an action plan implemented by their institutions regarding the use of hydrogen toward decarbonization.

# To Who?

#### Job Areas and Organizations

This program is designed for administrative officials who are involved in policy making and research and development affairs for expanding the supply and use of clean energy in ministries in charge of clean energy such as hydrogen and renewable energy.

The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.

#### **Targeted Countries**

- Algeria(1)
- Argentina(2)
- Bangladesh(1)
- Bhutan(1)
- Indonesia(1)
- Mexico(1)
- Uruguay(1)
- Vietnam(1)

\*Additional allocation

Costa Rica (2)

Participants who have successfully completed the program will be **awarded a certificate by JICA**.



# When?

# Where?

Face to Face Program Period



From September 10, 2025 to October 15, 2025

This program will be organized by JICA Kyushu Center. Participants will mainly stay at **JICA Kyushu Center** to attend the program, and if they leave JICA Kyushu Center for a short study tour, other JICA domestic centers or private hotels will be arranged for them.





# How?

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#### **How to Learn**

- Research
- Workshops
- Discussions
- Field Visits
- Presentations













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#### Language

**English** 

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#### **Commitment to the SDGs**









#### **Program Structure**

**Preliminary Phase (Activities when applying)** 

#### **Job Report Presentation**

All applicants are required to prepare "Job Report (ANNEX1) and "Issue Analysis



#### Sheet(ANNEX2)"

The job report will provide information on the situation surrounding hydrogen energy in the applicant's country and the extent to which the applicant is or will be involved in the promotion of hydrogen energy.

Participants who receive an acceptance letter will prepare **a PowerPoint version of the job report** for presentation after their arrival in Japan and submmitte it prior to their arrival in Japan. Details will be explained in the Welcome Letter at the time of notice of acceptance.

#### **General Orientation**

As part of the general orientation, those who receive a notice of acceptance will receive a URL to a video on "Japanese Administrative System and Local Governance" for study prior to their arrival in Japan. Please be sure to watch it, as the purpose of this advance study is to understand the system of interest coordination and decision-making in Japan, including the formulation of the "Basic Energy Plan," as well as the political background necessary for the implementation of the plan.



#### First day:

Arrival briefing, Program orientation, Japanese language courses, cultural exchange programs and Course orientation

#### First Week to final week:



The subjects are subject to change.

#### **Core Phase**

Course Outputs:	Subjects/Agendas	Methodology
-	Subjects/Agendas  (1) IAS solutions to issues and TASK extraction  (2) Job report presentation (including current status and issues of hydrogen utilization in each country)  The purpose of the job report presentation is as follows:  To understand the general situation of the current state of the field in the participating countries, the status of initiatives, and issues, etc.  To understand the status and issues of the organization to which the participant (applicant) belongs and the tasks he/she is in charge of.  Ask participants to submit a job report as a step toward creating the final deliverable Action plan.  In order to delve deeper into the issues in the field, we will give Participans a preliminary assignment and ask them to conduct research and analysis.	Lecture Presentation Discussion Site Visit
	<ul> <li>(3) Current Status and Future Prospects of Hydrogen Technology for Realization of a Carbon Neutral Society</li> <li>(4) Utilization of hydrogen as an energy carrier for decarbonization</li> <li>(5) Recent Trends in Hydrogen and Ammonia Technologies for Realizing a Decarbonized Society</li> <li>(6) Aims and Achievements of the Hydrogen Value Chain Council</li> </ul>	
2. Understand hydrogen	Production (1) Characteristics of Vericles Borrowskip	Lecture
production, storage /	(1) Characteristics of Variable Renewable	Presentation
transportation, supply and	Energy and Hydrogen Use  (2) Pasis characteristics and features of	Discussion Site Visit
utilization technologies,	(2) Basic characteristics and features of	Site Visit



safety and security outlines	photovoltaic power generation	
and laws and regulations.	systems	
	(3) Current Status and Future	
	Development of Wind Power	
	Generation	
	Transport	
	(4) Establishment of hydrogen supply	
	chain (LH2 and hydrogen CGS)	
	(5) Pure Hydrogen Fuel Cells	
	(6) Establishment of hydrogen supply	
	chain - dehydrogenation plant	
	Utilization	
	(7) Development of hydrogen and	
	ammonia power generation	
	technology	
	(8) Ammonia Supply Chain Future Vision	
	(9) Challenge to become carbon neutral	
	(development of commercial-use FCs)	
	(10)Current Status and Future	
	Development of Synthetic Fuel	
	Technology	
	(11)Toward the Future of Logistics with	
	Hydrogen (FC Forklift Trucks)	
	(12)TOTO's efforts to convert its factory	
	to a CN system	
	safety	
	(13)Security for the Realization of a	
	Hydrogen Society	
3. Explain the main points of	(1) Yamanashi Yonekurayama Electric	
various measures such as	Power Storage Technology Research	Lecture
policies, technologies /	Site	Presentation
infrastructure, and business	(2) FC-Cubic/ Fuel Cell Cutting-Edge	Discussion
necessary for promoting a	Research Center	Site Visit
hydrogen society in Japan.	(3) Toyota Kyushu / hydrogen-using CN	
	plant	



4.	Explain the main points of the roles and significance of governments, local governments, industrial and academic sectors, and local citizens to promote a hydrogen-based society.	(2) (3) (4) (5) (6) (7) (8)	realization of a hydrogen society Center for Advanced Hydrogen Materials Science (HYDROGENINUS) Hydrogenergy Products Research and Testing Center (HyTReC) Wind power generation in Kitakyushu City Hibiki Wind Energy Hibikinada Wind Energy Research ParkHydrogen production from sewage sludge Kitakyushu Next Generation Energy Park	Lecture Presentation Discussion Site Visit
5.	Understand the challenges for realizing a hydrogen-based society in your own country and be able to propose medium- to long-term countermeasures	(2)	Action Plan Lecture Guidance on Action Plan Preparation and Presentation Action Plan Presentation  On Plan= Final Deliverables Organize and summarize the findings of the program in Japan. Summarize specific post-return activity plans that address the issues you are facing.	Lecture Presentation Discussion



#### **Management Members**

#### Course Leader

#### Mr. Tarawa Yoichi

Kitakyushu International Techo-cooperative Association



#### Coordinator

#### **Ms.Aratake Miho**

Program Coordinator of KCCP

She has extensive experience in coordinating the Knowledge Co-Creation Program (KCCP), and has been the Program Coordinator for many courses in the field of resources and energy



#### **Program Officer**

#### Ms. Ogawa Yoko

Japan International Cooperation Agency (JICA) Kyushu Center

Message: Hello, friends! Have you ever experienced struggling with promotion of Hydrogen energy use? In this program, we will focus on Yamanashi, Japan's largest research center for P2G system "Hydrogen and Fuel Cells" as a key to the contribution of government officials and engineers in solving the issues of hydrogen energy promotion. Gain new perspectives through discussions with the lecturers and other participants. We look forward to meeting you!



# Voice

#### **Past Program Alumni Comments**



Mr. Jorge Vinicio Vargas Costa Rica

Thank you so much. The opportunity to expand technical knowledge and learn about Japanese and other cultures in the course will be memorable and help strengthen collaborative relationships between the countries.





Ms. Aurora Tenorio Dena Mexico

It was an amazing learning experience, both for Hydrogen and Japanese culture. I am very greatful to JICA, this course will be crucial for my activities and for developing a Hydrogen Strategy.



# Eligibility and Procedures

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#### 1. Expectations to the Applying Organizations

- (1) This course is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Applying organizations are expected to use the program for those specific purposes.
- (2) In this connection, applying organizations are expected to nominate the most qualified candidates to address the said issues or problems, carefully referring to the qualifications described in sectionIII-2 below.
- (3) This course 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.

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#### 2. Nominee Qualifications

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

#### (1) Essential Qualifications

#### 1)Target Organization:

Departments specialized in policy making on clean energy in relevant ministries such as energy and environment, which are engaged in renewable energy, hydrogen, carbon storage and so forth.

#### 2)Target personnel:

#### <Position>

Applicants in charge of **policy making and promotion of clean enegy** such as hydrogen at target organizations mentioned above.



#### <Experience>

At least two years of experience in policy development or promotion of clean energy, including hydrogen energy.

Particular emphasis will be placed on applicants with sufficient experience in renewable energy/hydrogen, sufficient motivation to participate, and ability to think logically.

#### <Education Background>

Applicants must have bachelor degrees or equivalent in relevant fields such as energy policy/engineering/science, economy, law, business.

#### < Language>

A high level of English proficiency is required as it includes active participation in discussions and presentations. Sufficient comprehension is also required as lectures will be given in English, including consecutive interpretation. If possible, please attach official certificates of English proficiency such as TOEFL or TOEIC.

#### < Health>

Applicants must be in good health and fit to participate in the program in Japan. If you have any chronic illnesses such as pulmonary tuberculosis, high blood pressure, diabetes, cardiovascular disease, heart disease, mental illness, chronic respiratory disease, or any type of disability, please be sure to declare them honestly in the medical history section of the application form.

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 between the ages of thirty and fifty years old.

#### 2)Gender Equality and Women's Empowerment:

**Women are encouraged to apply for the program.** JICA is committed to promoting gender equality and women's empowerment, and provides equal opportunities for all applicants regardless of their sexual orientation or gender identity.

#### 3) Disability

Applicants with physical disabilities who meet the required qualifications will be given



the same opportunity to apply. Reasonable accommodations will be considered for applicants with disabilities to the extent possible. Please indicate this in the disability question section of the application form.

Japan ratified the Convention on the Rights of Persons with Disabilities in January 2014, and JICA complies with the Convention.

#### 3. Required Documents for Application

#### (1) Application Form:

The Application Form is available at the JICA overseas office or the Embassy of Japan. Your description in "5. Background and Purpose of Application" will be particularly important in the selection process.

Please note the following omissions

- Your photo
- Official Stamp
- Questionnaire on Relationship with the Military
- Language Proficiency
- Medical stutus and restriction
- Signatures (in 5 places)

#### (2) English Score Sheet:

to be submitted with the application form if nominees have any official English examination scores. (e.g., TOEFL, TOEIC, IELTS)

(3) **Photocopy of Passport:** You should submit it 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.

\*The following information should be included in the photocopy:

Name, Date of Birth, Nationality, Sex, Passport Number and Expiry Date

#### (4) Job Report and Issue Analysis Sheet (IAS) (ANNEX I & II):

- To be submitted with application form. Job Report and IAS are necessary documents for screening of applicants.
- Each participant will be required to present IAS in approx. 10 minutes in an early stage of the course. Visual materials such as PowerPoint and pictures may be helpful for your presentation if you bring them.
- When you use PowerPoint, it is preferable to use letters more than 24-point and not to use pictures on the background.
- An applicant should submit an IAS with approval of his/her superior and an IAS without approval of an applicant's superior is not accepted.
- The purpose of an IAS is to logically organize relationships between challenges of an applicant's organization and contents of fields to be covered



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#### 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 July 10, 2025)

#### (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 August 7, 2025

### 5. Additional Document to be submitted by accepted candidates

Job Report Presentation (PowerPoint) -- Selected candidates must prepare a PPT version of the Job Report prior to departure. Job reports PPT must be submit by August 29, 2025. Preferably by e-mail to Ms. OGAWA Yoko (kicttp@jica.go.jp). Files should weigh no more than 5 MB.

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#### 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 "3.Expenses", "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.
- (12) to refund allowances or other benefits paid by JICA in the case of a change in schedule.



# Administrative Arrangements

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#### 1. Organizer (JICA Center in Japan)

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

(2) **Program Officer**: Ms. OGAWA Yoko (kicttp@jica.go.jp)

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#### 2. Implementing Partner

(1) Name: Kitakyushu International Techno-cooperative Association(KITA)

(2) URL: http://www.kita.or.jp/english/

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#### 3. Travel to Japan

(1) **Air Ticket:** In principle, JICA will arrange an economy-class roud-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 tive to outside Japan (include damaged baggage during the arrival fligt to Japan) will not be covered.

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#### 4. Accommodation in Japan

Basically, JICA will arrange the following accommodations for the participants in Japan outside of JICA Kyushu.

#### JICA Kyushu Center (JICA Kyushu)

Address:

2-1, Hirano 2-chome, Yahata Higashi-ku, Kitakyushu City, Fukuoka Prefecture 805-8505

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.

https://www.jica.go.jp/english/domestic/kyushu/index.html

#### **JICA Tokyo Center (JICA Tokyo)**

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

Tel: +81-3-3485-7051 Fax: +81-3-3485-7904

If there is no vacancy at JICA Kansai or Tokyo, JICA will arrange alternative accommodation(s) for the



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#### 5. Expenses

The following expenses in Japan will be provided by JICA

- (1) Allowances for meals, living expenses 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 preexisting 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 "KENSHU-IN GUIDE BOOK," which will be given before departure for Japan.
- (6) \*Link to JICA HP (English/French/Spanish/Russian): The Knowledge Co-Creation Program (KCCP) | Our Work | JICA



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#### 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=m7l-WlQSDjI					
Russian ver.	https://www.youtube.com/watch?v=P7_ujz37AQc					
Arabic ver.	https://www.youtube.com/watch?v=1iBQqdpXQb4					
Part II: Introdu	Part II: Introduction of JICA Centers in Japan					
JICA Tokyo	https://www.jica.go.jp/tokyo/english/office/index.html					
JICA Kyushu	https://www.jica.go.jp/kyushu/english/office/index.html					
	Introduction of JICA Kyushu - YouTube					

If the link of these youtube URLs has expired, please access the URL below and search the nessesary information from the key word.

https://www.youtube.com/user/JICAChannel02



### Other Information

#### 1. Report and Presentation

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

Each applicant is required to submit his/her own Job Report & Issue Analysis Sheet following the instruction. Participants will have a presentation of his/her Job Report & Issue Analysis Sheet up to 10 minutes at the earlier stage of the program in Japan in order to share knowledge and background with other participants as well as instructors. Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them with you.

#### (2) Action Plan

Participants are required to make an Action Plan at the end of the program to express your idea and plan that you carry out after your return, reflecting the knowledge and method you acquire in the program. Each person will have 10-15 minutes for presentation.

In addition, participants are required to complete IAS by the end of the program in Japan and present it at the Action Plan Presentation.

- 2. Participants who have successfully completed the program will be awarded a certificate by JICA. It requires **70% or more** of program participation. If you do not create an action plan and submit a questionnaire, you will not be awarded a certificate.
- 3. Participants are recommended to bring **a laptop computer** for your convenience. During the program, participants are required to work on the computers, including preparation of Action plans, finalizing Job report etc.
- 4. Allowances will be deposited to your temporary bank account in Japan after 2 to 5days after your arrival to Japan. Itis highly advised to bring **some cash (100 usd etc.)** in order to spend necessary money for the first 2 to 5 days stays after your arrival.
- 5. It is very important that your currency must be exchanged to Japanese Yen at any transit airport, Narita International Airport in Tokyo. It is quite difficult to exchange money after that, due to no facility or time during the program.
- 6. The field trip is arranged during the program. It would be convenient if you bring a **small travel bag** or small carry.



## **Annex**

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- I. Job Report
- II. Issue Analysis Sheet
- III. Issue Analysis Sheet (IAS) Guidelines
- IV. Sample Schedule (for reference)



#### Annex I

#### Job Report

Name of the Course	Hydrogen Solution for Decarbonization(A)
Name of Applicant	
Name of Country	
E-Mail	

#### 1. Energy Situation in your country (up to 1 page)

- Policy frameworks for clean energy and carbon neutrality,
- Outline of nationally determined commitment
- Primary energy supply (present and forecasts)
- https://www.iea.org/countries
- Electricity supply (outline of share of generation and future plan)
- Enactment & enforcement situation of renewable energy law and/or regulation
- Incentive scheme to promote renewable energy (e.g. feed-in-tariff, subsidy)
- Issues for promotion of hydrogen energy

#### 2. Your organization and main tasks (up to 1 page)

- (1) Main tasks of 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.
- (3) Brief description of your assignments
- (4) Problems in your job

#### 3. Expectations for the course (up to 1 page)

- (1) Your purpose of participating in this course
- (2) Subjects of the course which you are interested in the most
- (3) How do you expect to apply skills and knowledge that you will gain through the module (refer to Annex III) to tackle problems in your home country?
- (4) Other matters which you are expecting to obtain from the course

### 4. What type of renewable energy have you applied in your country? Please fill in the installed capacity and annual generated energy for each generation facility.

	Installed (MW)	capacity	Annual generated energy (GWh)
Hydrogen energy			
Hydropower			
Wind-power generation			
Geothermal power generation			
Solar power			
Biomass power generation			



#### ANNEX II Issue Analysis Sheet (IAS)

Name:

No	[A]* Issues that you confront.	[B] Actions that you are taking.			
	In column "A: Issues you are facing", please indicate the issues you are facing related to the use of hydrogen for decarbonization.	Describe the actions you are taking to address the A issue.			
1	[I] Task or The information that I need.	[II] Useful information that I obtained [III] Lecturer			
	(1) Task of the information that I need.	/found.			
	Shaded areas need not be listed. It will be described at the end of the program.				

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			



#### ANNEX III

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

#### 1. What is IAS?

- (1) IAS is a tool to logically organize relationships between issues and contents of the program in Japan.
- (2) IAS will help the nominee to clarify his/her challenges to be covered in each expected module output and to formulate solutions to them.
- (3) The sheet is to be utilized as a logical process control sheet to draw up improvement plans for the issues by filling out the sheet in phases from prior to the nominee's arrival through to the end of the program.
- (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 program in Japan.

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

- (1) Please describe the issues you confront in column" A: Issue that you confront".
- (2) You shall describe challenges you are facing in your section also in the Job Report. Among them, in column A, please describe only those issues you expect to solve utilizing information and knowledge being delivered in this course. Prepare the separate rows for each problem; if necessary, please add new rows.
- (3) In column "B: Actions that you are taking to deal with the issue now.", please describe actions that you are taking to solve the issue shown in "Column A".
- (4) This information is very important to carry out the course and also to make Action Plan as a fruit of the program.
- (5) It's not necessary to fill in column "I: Task to solve the Issue", column "II: The information that I need to carry out the Task." and column "Result". These columns shall be filled out during the program.
- (6) "ColumnI" shall be clarified and filled out in the subject "Confirmation of Task based on IAS" implemented at the earlier time in the program.
- (7) "Column II" and "Column Result" shall be filled out during the program and you are required to present completed IAS in the subject "Action Plan Presentation". II



#### ANNEX IV -

#### **Sample Schedule**

\*The schedule will be subjest to change.

date	time		form	Program Content	prefectures	Accomodation
10-Sep				Arrival in Japan		JICA Kyushu
11-Sep	9:40	12:30		Japan Visit Briefing (Joint)	Fukuoka Prefecture	JICA Kyushu
	12:00	12:30		Exchange program meeting (CDN)		
	14:45	15:00		Explanation of the exchange program to the trainees (Ogawa also present)		
	15:30	17:10		Japanese Language 1		
12-Sep	09:30	12:30		Exchange Program_Takesue Elementary School(Transportation by JICA bus)	Fukuoka Prefecture	JICA Kyushu
	13:30	14:00		Program Orientation		
	14:00	16:30		Course Orientation		
	17:30	19:10		Japanese Language②		
13-Sep	09:30	11:30	lecture	How to solve problems using IAS	Fukuoka Prefecture	JICA Kyushu
	11:30	12:30	discussion	Extraction of Tasks Based on IAS ① Individual		
	13:30	16:30	discussion	Extraction of Tasks Based on IAS@ Individual		
14-Sep				holiday		JICA Kyushu
15-Sep				holiday		JICA Kyushu
16-Sep	09:30	12:30	lecture	Use of hydrogen as an energy carrier for decarbonization	Fukuoka Prefecture	JICA Kyushu
	13:30	16:30	announcement	Job Report Presentation		
	17:30	19:10		Japanese Language②		
17-Sep	9:00	11:30		Kitakyushu City's efforts to realize a hydrogen society		JICA Kyushu
	12:30	13:00		Move: KIC → Eco Town		



	13:00	14:15	Visit	Next-generation Energy Park	Fukuoka Prefecture	
	14:15	14:45		Move: Eco Town → KIC		-
	15:00	17:00	lecture	Safety for the realization of a hydrogen society	Fukuoka Prefecture	
18-Sep	09:30	12:30	lecture	Activities and results of the Fukuoka Prefecture Hydrogen Strategy Council	Fukuoka Prefecture	JICA Kyushu
	13:30	16:30	lecture	Aims and Results of the Hydrogen Value Chain Promotion Council		
19-Sep	09:00	12:00	lecture	Basic characteristics and features of solar power generation systems	Fukuoka Prefecture	JICA Kyushu
	13:00	14:30	lecture	Technological development of hydrogen and ammonia power generation		
	14:30	15:30	lecture	Action plan lecture		
	15:30	16:30	discussion	Review ①		
	16:30	17:30		Return flight meeting (from 16:45)		
20-Sep				holiday		JICA Kyushu
21-Sep	08:20	9:20		Travel: KIC → Kitakyushu Airport	Tokyo	JICA Tokyo
	10:00	11:35		Travel: Kitakyushu Airport → Haneda Airport		
	12:00	12:40		Travel: Haneda Airport → TIC		
22-Sep	09:30	12:00	lecture	Building a hydrogen supply chain	Tokyo	JICA Tokyo
	13:00	14:00		Travel: TIC → Koyasu, Yokohama		
	14:00	15:30	lecture	SPERA Hydrogen Pilot Plant ①	Kanagawa Prefecture	
	15:30	16:30	Visit	SPERA Hydrogen Pilot Plant②		
	16:30	17:30		Travel: Yokohama City Koyasu → TIC		
23-Sep				holiday		JICA Tokyo
24-Sep	09:30	12:30	lecture	Characteristics of variable renewable energy and hydrogen utilization	Tokyo	JICA Tokyo
	13:30	15:00	lecture	Latest Trends in Hydrogen and Ammonia Technology Towards a Carbon-Free Society①		



	15:00	16:30	lecture	Latest Trends in Hydrogen and Ammonia		
	15.00	10.00	i cocai c	Technology Towards a Carbon-Free Society②		
25-Sep	09:00	10:30	lecture	Initiatives for CN fuels (including synthetic fuels)	Tokyo	JICA Tokyo
	10:30	12:15	lecture	Towards the future of logistics with hydrogen	ŕ	,
	14:00	16:30	lecture	Japan's vision for a hydrogen-based society		
26-Sep	09:00	13:00		Travel: TIC → Kofu City		JICA Tokyo
	13:00	14:00	lecture	A hydrogen energy society starting with Yamanashi	Yamanashi Prefecture	
	14:00	15:00	Visit	Yonekurayama P2G Demonstration Facility		
	15:00	16:30	Visit	Tour of FC-Cubic		
	16:30	18:30		Travel: Kofu City → TIC		
27-Sep	09:30	12:30	discussion	Participant Business Discussion ①	Tokyo	JICA Tokyo
	13:30	15:30	discussion	Participant Business Discussion②		
	15:30	16:30	discussion	Review 2		
28-Sep				holiday		JICA Tokyo
29-Sep	09:30	12:30	lecture	Future vision for the ammonia supply chain	Tokyo	JICA Tokyo
	13:30	16:30		Action plan creation guidance ①		
30-Sep	09:30	12:30	lecture	Current status and future developments of wind power generation	Tokyo	JICA Tokyo
	13:30	14:00		Travel: TIC $\rightarrow$ Ariake		]
	14:00	15:00	Visit	Panasonic C Tokyo	Tokyo	
	15:00	15:30		Travel: Ariake → TIC		
1-Oct	08:00	8:30		Travel: TIC → Tokyo Station		Hotel Elcient Kyoto
	09:09	11:21		Travel: Tokyo Station → Kyoto Station		
	12:45	13:25		Travel: Kyoto Station → Kusatsu City		1
	13:30	14:30	lecture	Research and development of fuel cells for home and commercial use and future prospects	Shiga Prefecture	
	14:30	16:30	Visit	Hydrogen utilization facility		



	16:30	17:10		Travel: Kusatsu City → Hotel in Kyoto City		
2-Oct	09:00	9:30		Travel: Kyoto city hotel → Kinkakuji Temple		Daiwa Roynet Hotel Kobe Sannomiya
	09:30	10:30	Visit	Kinkakuji Temple	Kyoto Prefecture	
	10:30	13:30		Travel: Kinkakuji Temple → Kawasaki Heavy Industries Kobe Hydrogen Center		
	13:30	15:00	lecture	Initiatives to build a hydrogen supply chain	Hyogo Prefecture	]
	15:00	15:15		Move: Kawasaki Heavy Industries Kobe Hydrogen Center → Kawasaki Heavy Industries Hytouch Kobe		
	15:15	16:00	Visit	Kobe CGS·Hytouch	Hyogo Prefecture	
	16:00	16:35		Travel: Kawasaki Heavy Industries Hytouch Kobe $\rightarrow$ Hotel in the city		
3-Oct	08:45	9:00		Travel: Kobe city $\rightarrow$ Shin-Kobe Station		JICA Kyushu
	09:33	10:51		Travel: Shin-Kobe Station → Hiroshima Station		
	11:00	11:30		Travel: Hiroshima Station → Hiroshima Peace Memorial Museum		
	11:30	15:30	Visit	Hiroshima Peace Memorial Museum	Hiroshima Prefecture	
	15:00	15:30		Travel: Hiroshima Peace Memorial Museum → Hiroshima Station		
	16:03	16:53		Travel: Hiroshima Station $ ightarrow$ Kokura Station		
	17:00	17:30		Travel: Kokura Station $ ightarrow$ KIC		
4-Oct				holiday		JICA Kyushu
5-Oct				holiday		JICA Kyushu
6-Oct	09:30	12:30		Action plan creation guidance②	Fukuoka Prefecture	JICA Kyushu
	13:30	15:30		Action plan creation instruction ③		
	15:30	16:30	discussion	Review 3		
7-Oct	8:00	9:20		Travel: KIC → Kyushu University Ito		JICA Kyushu



	09:30	11:30	lecture	Current status and future prospects of hydrogen technology for the realization of a CN society	Fukuoka Prefecture	
	13:00	14:30	Visit	Hydrogen Advanced Materials Science Research Center		
	14:30	15:00		Travel: Kyushu University Itoshima → Itoshima City		
	15:00	16:30	Visit	Hydrogen Energy Products Research and Testing Center	Fukuoka Prefecture	
	16:30	17:30		Travel: Itoshima City $\rightarrow$ KIC		
8-Oct	09:00	9:30		Travel: KIC → TOTO		JICA Kyushu
	09:30	11:30	lecture	TOTO's factory automation	Fukuoka Prefecture	
	11:30	11:50	Visit	TOTO Factory Tour		
	12:00	12:30		Travel: TOTO $\rightarrow$ KIC		
	13:00	14:00	lecture	Wind power generation in Kitakyushu City	Fukuoka Prefecture	
	14:15	14:45		Travel: KIC → Kitakyushu Hibikinada Wind Farm		
	15:00	16:00	Visit	Offshore wind power generation facilities	Fukuoka Prefecture	
	16:00	16:15		Travel: Kitakyushu Hibikinada Wind Farm → Hibikinada Wind Energy Research Park		
	16:15	16:45	lecture	Onshore wind power generation facilities	Fukuoka Prefecture	
	16:45	17:15		Move: Hibikinada Wind Energy Research Park $\rightarrow$ KIC		
9-Oct	08:30	9:30		Travel: KIC → Miyawaka City		JICA Kyushu
	09:30	11:00	lecture	Hydrogen-based carbon-neutral factory	Fukuoka Prefecture	
	11:00	12:00	Visit	Hydrogen utilization facility		
	12:00	13:50		Travel: Miyawaka City $\rightarrow$ Koga SA $\rightarrow$ Fukuoka City		
	14:00	15:30	lecture	Hydrogen production from sewage sludge by Fukuoka City	Fukuoka Prefecture	



	15:30	16:30	Visit	Sewage hydrogen production facility		
	16:30	17:30		Travel: Fukuoka City → KIC		
10-Oct	09:30	12:30		Action plan presentation program ①	Fukuoka Prefecture	JICA Kyushu
	13:30	15:30		Action plan presentation program②		
	15:30	16:30	discussion	Review 4		
11-Oct				Kitakyushu City Bus Tour		JICA Kyushu
12-Oct				holiday		JICA Kyushu
13-Oct				holiday		JICA Kyushu
14-Oct	09:30	12:30	Presentation	Action Plan Presentation 1	Fukuoka Prefecture	JICA Kyushu
	13:30	15:00	Presentation	Action Plan Presentation 2		
	15:00	15:30		Evaluation meeting		
	16:00	17:00		Closing Ceremony		
15-Oct				Leaving Japan		

\*The schedule will be subjest to change.



### 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 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 course 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.



This information pertains to one of the JICA Knowledge Co-Creation Programs (Group & Region Focus) of the Japan International Cooperation Agency (JICA) implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.



#### Correspondence

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