

# Knowledge Co-Creation Program (Group & Region Focus)

**GENERAL INFORMATION ON** 

Disaster Prevention of Buildings (against Earthquake, Tsunami, Typhoon, Fire, etc.) 課題別研修「建築防災(地震、津波、台風、火災等に対して)」 JFY 2017 NO. J1704291 / ID 1784776 Course Period in Japan: From June 21, 2017 to August 5, 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 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

#### <u>Background</u>

Extremely large disasters such as earthquakes and tsunamis happened in the world, causing a lot of casualties (death and missing). Large disasters and casualties from the year of 2000 are as follows:

- India: Bhuj Earthquake (Gujarat) in 2001	20,023	people;
- Indian Ocean Earthquake and Tsunami in 2004	226,408	people;
- Pakistan: Kashimir Earthquake in 2005	73,328	people;
- China: Sichuan (Wenchuan) Earthquake in 2008	69,195	people;
- Haiti Earthquake in 2010	222,576	people;
- Japan: Great East Japan Earthquake in 2011	19,295	people and
- Nepal: Gorkha Earthquake in 2015	8,964	people

On the other hand, after large buildings became popular in the world, there were large fire incidents (conflagrations) in these buildings, also causing a lot of casualties. Typhoon Yolanda (Haiyan) reminded us typhoons or other similar disasters also cause heavy damage to people.

In case where an earthquake, tsunami, typhoons or fire happens, safer buildings protect people, while disorderly constructed buildings kill people. Such unsafe buildings may result from a lack of systems, such as:

- Appropriate building codes;

- Efficient regulatory systems, such as permission/inspection systems:

- Adequate building construction system by architects, engineers and contractors; and

- Disaster mitigation policies.

Safer buildings can be constructed through these appropriate systems. And they will contribute a lot to disaster mitigation.

#### For what?

This program aims to improve building codes, building regulatory systems, construction practice and disaster prevention policies in the field of buildings based on the Japanese experiences.

#### For whom?

This program is offered to staff of governments or governmental organizations responsible for improvement of building codes and regulatory systems, and disaster prevention policies in the field of buildings.

#### How?

This course introduces experiences on improvement of building codes and regulatory systems, and disaster prevention policies in the field of buildings in Japan through lectures, visits, discussions. Participants will also formulate an action plan describing what the participant will do after they go back to home country putting the knowledge and ideas acquired and discussed in Japan among others. These activities give participants tips of solution of the issues in their home countries.

## II. Description

- 1. Title (J-No.): Disaster Prevention of Buildings (against Earthquake, Tsunami, Typhoon, Fire, etc.) (J1704291)
- 2. Course Period in JAPAN June 21, 2017 to August 5, 2017
- **3.** Target Regions or Countries: Philippines, India, Myanmar, Nepal, Turkmenistan, Turkey, Ecuador, Palau, Mauritius, Fiji, Afghanistan, Egypt, Uzbekistan
- 4. Eligible / Target Organization: Government or related governmental organizations that is responsible for improvement of building codes and regulatory systems, and disaster prevention policies in the field of buildings.
- 5. Course Capacity (Upper limit of Participants): 16
- 6. Language to be used in this program: English
- 7. Course Objective:

Practical knowledge to improve building codes and regulatory systems is obtained and action plans are developed in the participants' country.

#### 8. Overall Goal:

Building codes and regulatory systems are formulated from the standpoint of disaster prevention, and disaster-proof buildings are improved in the developing countries.

#### 9. Expected Output and Contents:

- (1) To understand the outline of Japanese building codes and regulatory systems especially in the field of earthquake and typhoon resistance and fire disaster prevention, and to understand the Japanese disaster prevention policies of buildings.
- (2) To identify the problems to be solved in the participants' country and to examine the applicability of Japanese system to each country.
- (3) To make proposals to improve the building codes and regulatory systems necessary to expand the disaster-proof buildings in the participants' country.

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

1) Preliminary Phase i	1) Preliminary Phase in a Participant's Home Country			
(May 2017 to June	2017)			
Formulation of Inceptio	n Report and Submission	to JICA Tokyo.		
The content of Inception	Reports is mentioned in Sec	ction V.		
Expected Module	Subjects/Agendas	Methodology		
Output				
Inception Report	Formulation and	Report and		
	Submission of Inception	Preparation for		
	Report.	Presentation (10-minute		
		per each participant)		

2) Core Phase in Japan (June 21, 2017 to August 5, 2017)			
Expected Module Subjects/Agendas			
Output	* There may be minor changes in some subjects.		
To understand Building Regulation	- Building Regulation in Japan		
To understand the Disasters and Disaster Mitigation Policies	<ul> <li>Disaster Mitigation Strategy</li> <li>Mechanism of Earthquake and Tsunami</li> <li>Strong Motion and its Occurrence Mechanism</li> <li>Rapid Screening and Seismic Evaluation Method fo Damaged Buildings</li> <li>Past Earthquakes and Restoration</li> <li>Earthquake Disaster Countermeasures</li> <li>Urban Development for Disaster Prevention</li> <li>Earthquake/Tsunami Disasters and Tools in the Wor</li> </ul>		
To understand Structural Safety	<ul> <li>Reinforced Concrete Buildings</li> <li>Steel Structure Building</li> <li>Wooded Houses</li> <li>Building Construction (RC, S)</li> <li>Structural Stability of Buildings</li> <li>Seismic Isolation System</li> <li>Seismic Retrofitting Technology</li> <li>Technical Visit to a Large Scale Experimental Facility</li> </ul>		
To understand Fire Safety	<ul> <li>Testing Methodologies for Building Fire Safety</li> <li>Building Standards on Fire Safety</li> <li>Fire Protection</li> </ul>		
To understand Safety against Typhoons	<ul> <li>Basic Knowledge on Wind Engineering</li> <li>Codes for Safety against Strong Winds</li> <li>Lessons from Recent Typhoons</li> </ul>		
To understand Operation on Building Control	<ul> <li>Administration of Local Governments</li> <li>Building Permission, Inspection and Evaluation by Private Sector</li> </ul>		
To understand International Cooperation	<ul> <li>Safer Non-Engineered Houses for Earthquake</li> <li>Disaster Reduction</li> <li>Measures Taken to Reduce Building Damages in the</li> <li>Developing Countries</li> </ul>		

All participants are required to elaborate an Action Plan at the end of Core Phase in Japan on Improvement of the building codes and regulatory systems necessary to expand the disaster-proof buildings in the participants' country.

		ram by category]	
	Lecture / Observ	ation	Reports and Presentations
		DISASTER MEASURES	Presentation of Inception report
Building Administration         • (L) Building Regulations in Japan         • (L) Seismic Evaluation Method and Rapid Screening for Buildings         • (L) Activities of "Designated Administrative Agency" (Kobe City)         • (L) Activities of "Designated Building Confirmation and Inspection Bodies" and "Designated Evaluation Bodies" (BCJ)         Fire Safety "Evacuation" Fire Protection         • (L) Fire Safety of Buildings (Fire Protection)         • (L) Overview of Building Standards on Fire Safety in Japan         • (L) Overview of study and measures for Fire Safety in Cities         Research Testing" Development         • (L&O) Research and Development by the Government (Introduction of the Building Research Institute, BRI and observation of its facilities)         • (L&O) F-Defense         • (O) Wind Tunnel Test Equipment         • (L&O) Material Testing	Structures (Includes pecifics related to earthquakes, Bunamis and Typhoons) • (L) Structural Stability of Buildings (Structural standards in Japan and other countries) • (L) Earthquake Resistance Testing • (E&D) Group Work (Seismic Evaluation, calcubtion on design seismic load) • (L) Seismic Bolation System • (L) Masonry structures • (L) Design and Construction of Steel Building Structures • (L&O) Seismic Retrofitting • (L) Wind Resistant Design of Buildings • (D) Building Construction: RC structure (Construction management, On-Site inspection) • (O) Building Construction: Structure Buildings in Japan • (O) Preservation, Repair and Seismic Reinforcement of Cultural Heritage structures (Nikko Toshogu Shrine and Rinnoji Temple, Tomioka Silk Mill) • (D) Production of Wooden Housing • (L&O) Tokyo Skytree	<ul> <li>(L) Disaster Administration and City Planning (Provisional)</li> <li>(L) Disaster Mitigation in Japan</li> <li>(L) Mechanism of Earthquakes and Bunamis</li> <li>(L) Mechanism of Earthquakes and Bunamis</li> <li>(L) Strong motion and its occurrence mechanism</li> <li>(L) Earthquake Disaster Mitigation Measures for Tokyo</li> <li>(L) Urban Development of Disaster Prevention in Tokyo</li> <li>(D) Hyogo Prefectural Emergency Management and Training Center</li> <li>Disaster cases</li> <li>(L) Characteristics of building damage due to the Great East Japan Earthquake</li> <li>(L) Characteristics of building damage due to the Great East Japan Earthquake</li> <li>(L&amp;O) Front Line Training Tour in Tohoku Stricken Area (Ofunato City, UR)</li> <li>(L) Disaster Mitigation Lessons learned from the Great Hanshin-Awaji Earthquake in 1995 (Hyogo Prefecture, DR)</li> <li>INTERNATIONAL RELATIONS</li> <li>(L) Earthquake/Bunami Disasters and Tools from around the World</li> <li>(D) Building Regulation in trainee's country</li> <li>(L) Measures Taken to Reduce Building Damage in Developing Countries</li> <li>(L) Safer Non-engineered Housing for Earthquake Disaster Reduction</li> </ul>	<ul> <li>Consultation of Draft Action Plan</li> <li>Presentation of Draft Action Plan and Discussion</li> </ul>

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#### Disaster Prevention of Buildings (Earthquake, Tsunami, Fire, Typhoon, etc.) 2017

※ (U, Lecture, (O) Observation, (D) Discussion, (E) Exercise

Da	ate	Time	Contents	
6/21	Tue		Arrival	
C/22		9:30-10:30	Briefing	
6/22	Wed	14:00-15:00	Program Orientation	
C/22	<b>T</b> b	9:30-12:30	Fire Safety of Buildings (Fire Protection)	
6/23	Thu	13:30-16:00	Disaster Mitigation in Japan	
		9:30-12:00	Building Regulation in Japan, No.1	
6/24	Fri	13:30-15:00	Building Regulation in Japan, No.2	
		15:00-16:00	Building Regulation in Participants' Countries	
6/25	Sat		Free	
6/26	Sun		Free	
		9:30-12:00	Earthquake/Tsunami Disasters and Tools in the World	
6/27	Mon	14:00-16:30	Urban Development for Disaster Prevention at Tokyo	
6/28	Tue	0.00 16:15	General Orientation about Economy, Society, Culture of	
0/20	Tue	9:00-16:15	Japan by JICA	
		9:30-12:00	Characteristics on Building's Damage due to the Great East	
6/29	Wed		Japan Earthquake	
		13:30-16:00	Seismic Isolation System	
6/30	Thu	9:30-12:00	<ul> <li>Presentation of Inception Report and Discussion</li> </ul>	
0/30	IIIQ	13:30-16:30		
		9:30-11:00	Presentation of Inception Report and Discussion	
7/1	Fri	11:00-12:00	Discussion about each Country's Problems -from	
771	1 11	11.00-12.00	Inception Report Presentation	
		13:30-16:00	Reconstruction from the Great East Japan Earthquake	
7/2	Sat		Free	
7/3	Sun	13:00-16:00	Study Tour to Tohoku Region	
			Study Tour to Tohoku Region (Areas affected by East	
		Japan Earthquake and Tsunami) by Sanriku Railway		
7/4	Mon	9:00-17:00	Company	
			<ul> <li>Iwaizumiomoto →Miyako City Taro district →</li> </ul>	
			Jyodogahama	

#### < Program in 2016 (last year) >

7/5	Tue	8:00-17:00	<ul> <li>Yamada Town → Otsuchi Town → Kamaishi City → Rikuzentakata City</li> <li>13:00-14:00 Lecture and Observation about Reconstruction from the</li> <li>Great East Japan Earthquake</li> <li>14:40-15:40 Observation of Rikuzentakata City</li> </ul>
7/6	Wed	9:30-12:00	Design and Construction of Steel Building Structure
770	weu	14:00-16:00	Building Construction:
		9:30	Study Tour to Tomioka and Nikko
7/7	Thu	13:00-17:00	Tomioka Silk Mill (World Heritage Site)
		19:10	Arrival at the Hotel
= 10		9:00-12:30	Nikko Toshogu Shrine and Rinnoji Temple
7/8	Fri	17:30	Arrival at TIC
7/9	Sat		Free
7/10	Sun		Free
7/44	N4	9:30-12:00	Wind Resistant Design of Buildings
7/11	Mon	13:00-15:30	Wind Tunnel Test Equipment
7/40	<b>T</b>	9:30-12:00	Seismic Retrofitting Technology
7/12	Tue	14:00-16:00	Examples of Seismic Retrofitting
		10:00-12:00	Research and Development in the Government
7/13	7/13 Thu 13:30-15:00	13:30-15:00	Mechanism of Earthquake and Tsunami
	15:15-16:45		Strong Motion and its Occurrence Mechanism
		0.20 40.00	Rapid Screening and Seismic Evaluation Method for
	9:30-12:00		Buildings
7/4 4	E-i	13:30-15:00	Overview of Building Standards on Fire Safety in Japan
7/14	Fri	15:15-16:45	Overview of Study and Measures for Fire Safety in City
		10:00-12:00	Production of Wooden Housing
		РМ	Self-Study
7/16	Sat		Free
7/17	Sun		Free
		9:30-12:00	Structural Stability of Buildings, No.1 (Outline)
7/18	Mon	12:20 16:00	Structural Stability of Buildings, No.2 (Structural Standard
		13:30-16:00	in Japan)
		0.20 40.00	Structural Stability of Buildings, No.3 (Structural Standard
7/19	Tue	9:30-12:00	in Europe and USA)
	13:30-16:00		Structural Stability of Buildings, No.4
7/20	Mod	9:30-12:00	Methods of Earthquake Resistance Testing
7/20 Wed	Wed 13:30-16:00		Methods of Latinquake Resistance resulty

		9:30-12:00	Discussion and Work in Groups (orientation)	
		Thu	Discussion and Work in Groups	
7/21	Thu		①Primary Diagnosis	
		13:30-16:00	②Comparison of Seismic Resistance Standards by	
			Countries	
		9:30-12:00	Discussion and Work in Groups	
7/22	Fri		①Primary Diagnosis	
1/22	FII	13:30-16:00	②Comparison of Seismic Resistance Standards by	
			Countries	
7/23	Sat		Free	
		9:30	Study Tour to Kobe City, Hyogo Prefecture	
7/24	Sun	13:30-18:00	Excursion to Kyoto	
		0.00.40.00	"Designated Administrative Agency" in case of Kobe	
		9:30-12:00	Municipality	
7/25	Mon	44.00.40.00	Disaster Mitigation Lessons from the Great Hanshin-Awaji	
		14:00-16:30	Earthquake in 1995	
		17:00	Arrival at the Hotel	
		10:00-11:30	E-Defense	
7/26 Tue		13:30-16:00	Lessons from the Great Hanshin-Awaji Earthquake in 1995	
		20:50	Arrival at TIC	
	9:30-12:00 Wed		Measures Taken to Reduce Building Damages in the	
7/27			Developing Countries (provisional)	
1/21		13:30-16:30	Safer Non-engineered Houses for Earthquake Disaster	
		13.30-10.30	Reduction: Videoconference	
7/28	Thu	9:30-12:00	Discussion for Draft Action Plan	
1/20	Thu	13:30-16:00		
7/29	Fri	10:30-16:00	Material Testing	
1729	ΓΠ	18:00	Arrival at TIC	
7/30	Sat		Free	
7/31	Sun		Free	
		AM	Submission of Draft Action Plan	
		10:00-12:30	Building Construction: RC	
8/1	Mon		Activities of "Designated Building Confirmation and	
		14:00-16:30	Inspection Bodies" and "Designated Evaluation Bodies" in	
			case of BCJ	
		9:30-12:00	Earthquake Disaster Mitigation Measures in Tokyo	
8/2	Tue	14:00-17:00	Buildings in Japan: Tokyo "Skytree"	

8/3	Wed	9:30-12:00	Presentation of Draft Action Plan & Discussion	
0/3	Wed         Presentation of Draft Action Plan & Discussion           13:30-16:00         13:30-16:00		Fresentation of Drait Action Flan & Discussion	
		09:30-12:00	Presentation of Draft Action Plan & Discussion	
8/4	Thu	PM	Completion of Action Plan and Submission (Individual	
		FIVI	Activity)	
0/5	8/5 Fri 9:30-10:30 10:45-11:15		Evaluation Meeting	
0/0			Closing Ceremony	
8/6	Sat		Return to your countries	



Lecture (2016)



Study Tour(2016)

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

#### 1. Expectations for 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.
- (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, 9 1).
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan.

#### 2. Nominee Qualifications:

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

#### (1)Essential Qualifications

1) Current Duties:

be officials in the government office or related governmental organizations currently in charge of establishment of building codes, improvement, application of regulatory systems and disaster prevention policies in the field of buildings, and also expected to assume a leading position in those organizations.

2) Experience in the relevant field:

more than <u>five (5) years</u> and with the general knowledge in the field of buildings or architecture such as building administration, architectural design and structural engineering

 Educational Background: be university graduates or equivalents 4) Language:

have a high level of English ability which is equal to TOEFL CBT 250 or more. Please attach an official certificate for English ability such as TOEFL, TOEIC, etc., if possible)

5) Health:

must be in good health, both physically and mentally, to participate in the Program in Japan. Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus.

#### (2)Recommendable Qualifications

- 1) Expectations for the Participants: The priority level of the selection might be lower to the person who participated in the JICA training course in the past.
- 2) Age between the ages of twenty-five (25) and fifty (50) years

#### 3. Required Documents for Application:

- (1) Application Form: The Application Form is available at the respective country's JICA office or the Embassy of Japan.
- (2) Inception Report : Please refer to "V. Guidance for Reports and Presentation 1.Inception report".
- (3) Questionnaire: Please refer to "V. Guidance for Reports and Presentation 2.Questionnaire".
- (4) 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. Procedure for Application and Selection:

(1) Submitting the Application Documents:

Please submit the necessary documents as below;

- 1) Application Form
- 2) Inception Report
- 3) Questionnaire
- 4) Nominee's English Score Sheet

As for <u>the closing date for applications</u>, <u>please inquire to the JICA office</u> (or the Embassy of Japan).

(Just for reference, after receiving the documents, our JICA office is supposed to send it to the JICA Tokyo by April 21<sup>st</sup>, 2017).

(2) Selection:

After receiving the documents through due administrative procedures in the respective government, the respective country's JICA office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Tokyo International Center.

Selection shall be made by the JICA Tokyo International Center in consultation with the implementing partner based on submitted documents. The organization with 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 <u>not later</u> <u>than May 22<sup>nd</sup> (Monday), 2017.</u>

#### 5. <For accepted applicants only> Preparation for a presentation:

During the course, all participants are required to do a 10-minute presentation on the Inception Report of their respective countries.

The PPT presentation should be saved on a USB and submitted to the person in charge on <u>June 23<sup>rd</sup> (Friday), 2017</u> after the program orientation.

Accepted applicants will receive the format to follow for the presentation with the notification of acceptance to the workshop.

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

#### 2. Implementing Partner:

Housing Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan (MLIT)

#### 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.

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/domestic/pdf/welcome.pdf

#### 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 "KENSHU-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 countries' JICA offices (or Embassies of Japan), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

## V. Guidance for Reports and Presentation

All applicants are required to submit both "Inception Report" as well as "the questionnaire". Both documents are used for the selection of the candidate. In addition, these documents will be shared with other participants and lecturers.

#### 1. Inception Report:

<Guideline>:

The Inception Report should respect the following:

- (1) Use the designated format below.
- (2) Written in Microsoft Word.
- (3) Number of pages should not exceed 5.
- (4) Font: Arial or Times New Roman, size 12.
- (5) Add some charts, graphs and/or pictures to better illustrate your country's situation.

#### <Format>:

Name of the Participant:	
Country:	
Organization:	
Position:	
Responsibility:	

- 1. Outline of the buildings in the country.
  - (1) Popular construction methods for houses of low-income and middle-income people
  - (2) Popular construction methods for buildings in the 4-6 story range
  - (3) Popular construction methods for buildings of 20 stories and over
  - (4) Other characteristics
- 2. Outline of risks of disaster (earthquake, tsunami, etc.).
  - (1) Possible risks and prioritization among them
  - (2) The heaviest damage and recent damages in your country
  - (3) Future risks
  - \* Please attach hazard map if available.
- 3. Outline of current building control situation and/or disaster mitigation measures.

#### 2. Questionnaire:

<Guideline>:

The Questionnaire should respect the following:

- (1) Use the designated format below.
- (2) Written in Microsoft Word.
- (3) Font: Arial or Times New Roman, size 12.

<Format>

#### Questionnaire

Country:

Q1 When someone intends to construct a building in your country, does he/she have to go through official procedures, such as building permission?

Please put Yes or No into the boxes in the table below.

Location	Urban areas	Rural areas
Buildings		
Ordinary small		
houses		

\*If all answers are No, skip to Q6.

Q2 Please write the name of the Act, which provides official procedures above.

The act is available at

website(http://www.), bookshops,

)]

government offices, others(

English documents are welcome if available.

Q3 What fields does the mandatory technical requirements, which are applied to buildings, cover?

\* Two or more checks are acceptable.

Fields		·	Y (Yes) or N (No)
Building Codes	Structural stability	dead loads and live loads	
		earthquakes	
		heavy winds	
	Fire safety	Fire resistance	
		Escape	
		Firefighting equipment	
	Barrier free /	universal design	
	Elevators / es	Elevators / escalators	
Zoning	Building use		
Codes	Building heig		
	Floor area ra		
	Building cove		
	Setback from	the street boundary	

#### Q4 What organization mainly issues the building codes?

() Central Government

\*

(

(

- ) Local authorities, such as municipalities
- ) Others \* Please explain below about the authorities that issue

The codes are available at[ website(http://www.),bookshops, government offices, others() ]

- Q5 Please answer the following questions regarding a <u>building</u> <u>regulatory system (administration system)</u> in the region in which your office is located.
  - Q5-1 Which <u>authorities</u> are in charge of permission/approval/inspection of each building?
    - \* Two or more checks are acceptable.
    - ) Central Government, including its branch offices
    - ) Local authorities, such as municipalities
    - Organizations which are authorized by Central Government or by local authorities
    - () Others \* Please explain below about the authorities that issue permission/approval.



- Q5-2 Is it required to receive <u>inspection</u> by the public authority during <u>construction</u>?
  - () No, inspection by the public authority <u>is not required</u> during construction.
  - ( ) Yes, inspection by the public authority <u>is required</u> during construction.

\*Please explain below about the buildings to which it is applied.

- Q5-3 Is it required to receive <u>inspection</u> by the public authority <u>after</u> <u>construction work</u>?
  - () No, inspection by the public authority <u>is not required</u> after construction work. \* If the answer is No, skip to Q6.
  - () Yes, inspection by the public authority <u>is required</u> after construction work.

\* Please explain below about the buildings to which it is required.

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- Q5-4 Is it prohibited to use the building before receiving a certificate of final inspection mentioned in Q5-3?
  - () No, it is allowed to use the building before receiving a certificate.
    - ) Yes, it is prohibited.

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\* Please explain below about the buildings, which cannot be used before issue of a certificate of final inspection.

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- Q6 Please answer the following questions regarding **licensing system** for architects or building engineers.
  - Q6-1 <u>Does your country have</u> licensing system for **architects** and **building engineers**?
    - ( ) Both licensing systems for **architects** and **building engineers**
    - () Licensing system for **architects** only
    - () Licensing system for **building engineers** only
      - ) No license system for **architects** nor **building engineers** (No need to answer Q6-2.)
    - () Others \* Please explain below about the licensing system.

# Q6-2 <u>Is it required</u> for buildings **to be designed or checked** by a qualified architect and/or a building engineer? And <u>by whom</u> must the design or check be done?

- () No, <u>it is not required</u> for buildings to be designed or checked by a qualified architect and/or building engineer.
- () Yes. <u>it is required</u> for buildings to be designed or checked by <u>both a qualified architect and building engineer</u>.
- () Yes. <u>it is required</u> for buildings to be designed or checked by a <u>gualified architect only</u>.
- () Yes. <u>it is required</u> for buildings to be designed or checked by a <u>qualified building engineer only</u>.
- () Others \* Please explain below about the system.

\*

#### 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

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