



**国別：パキスタン廃棄物処理対策**

COURSE NO.: J-06-2\*\*\*\*



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THE GOVERNMENT OF JAPAN  
JAPAN INTERNATIONAL COOPERATION AGENCY



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## Preface

The Japanese Government extends official development assistance (ODA) to developing countries to support self-help efforts that will lead to economic progress and a better life for the citizens of those countries.

Since its foundation in 1974, the Japan International Cooperation Agency (JICA) has implemented Japan's technical cooperation under the ODA program.

Currently, JICA conducts such activities as training, dispatch of experts, provision of equipment, project-type technical cooperation, development study, dispatch of cooperation volunteers (JOCV), survey and administration of capital grant aid programs.

The training program for overseas participants is one of JICA's fundamental technical cooperation activities for developing countries. Participants come from overseas in order to obtain knowledge and technology in a wide variety of fields.

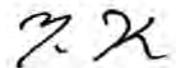
The objectives of the JICA training program are:

- (1) to contribute to the development of human resources who will promote the advancement of developing countries, and
- (2) to contribute to the promotion of mutual understanding and friendship.

JICA Kyushu International Center (JICA Kyushu) is one of JICA domestic centres located in Kitakyushu City to conduct various JICA schemes of training programs and others in Kyushu area. JICA Kyushu's training programs cover a wide variety of specialities from agriculture to mechatronics with special priorities on 1) industrial technology, 2) environmental issues, 3) health and medicine.

JICA Kyushu also conducts briefing, general orientation of Japanese life and culture, Japanese language training and program orientation.

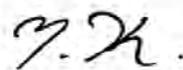
The Country Focused Training Course in *Solid Waste Management for Pakistan* is designed to provide participants with knowledge and technology of structure design and management of landfill sites. This course mainly aims at upgrading skills of solid waste management in Pakistan.



## I. ESSENTIAL FACTS

Course Title (No.)	Solid Waste Management for Pakistan (J-06-2****)
Duration	November 12, 2006 – December 19, 2006
Deadline for Application	October 20, 2006 *for acceptance of JICA Pakistan office
Number of Participants	10
Language	English
Target Group	Staff in charge of solid waste management in major city or central government in Pakistan
Course Outcome	Participants can plan the solution for the problem of solid waste management (survey, collection, intermediate treatment, land fill) based on the outputs of this course and "Guideline for Solid Waste Management".
Course Output	(1) To understand the survey method for the amount of waste and collection of garbage. (2) To plan for the garbage collection and conveyance (3) To understand the construction and maintenance method for sanitary landfill (4) To understand the way of public participation for solid waste management
Training Institution	<b>Fukuoka City Environment Foundation</b> Address: 9-14, Tsunaba-cho, Hakata-ku, Fukuoka city, 812-0024 Japan TEL: 81-92-271-2177 FAX: 81-92-291-1961 (81: country code for Japan, 92: area code) <b>Department of Civil Engineering, Faculty of Engineering, Fukuoka University</b> Address: 8-19-1, Nanakuma, Johnan-ku, Fukuoka city, 814-0180 Japan TEL: 81-92-863-8238 FAX: 81-92-863-8248 URL: <a href="http://www.fukuoka-u.ac.jp/">http://www.fukuoka-u.ac.jp/</a> <b>Environmental Bureau, City of Fukuoka</b> Address: 8-1, Tenjin 1-chome, Chuo-ku, Fukuoka city, 810-8620 Japan TEL: 81-92-711-4312 FAX: 81-92-733-5563 URL : <a href="http://www.city.fukuoka.jp/">http://www.city.fukuoka.jp/</a>
Accommodations	<b>JICA Kyushu International Center (JICA Kyushu),</b> Address: 2-2-1 Hirano, Yahata Higashi-ku, Kitakyushu-city, Fukuoka, 805-8505 Japan TEL: 81-93-671-6311 FAX: 81-93-671-0979 (81: country code for Japan, 93: area code) URL: <a href="http://www.jica.go.jp/branch/kic_e/kic_top_e.html">http://www.jica.go.jp/branch/kic_e/kic_top_e.html</a> E-mail: <a href="mailto:kictp2@jica.go.jp">kictp2@jica.go.jp</a> <b>For information about the facility of JICA Kyushu, please check the JICA Kyushu website. And hotels in Fukuoka City will be arranged by JICA</b>
Allowances & Expenses	The Government of Japan provides the following allowances and covers the following expenses through JICA in accordance with relevant laws and regulations. <u>Details:</u> Accommodation allowance, living allowance, outfit allowance, book allowance, shipping allowance, expenses for JICA study tours, free medical care for participants who become ill after arrival in Japan (costs related to preexisting illness, pregnancy and dental treatment are not included), etc. **The cost of round-trip air ticket between an international airport designated by JICA and Japan is not included.



**II CURRICULUM**

**Outcome**  
Participants can plan the solution for the problem of solid waste management (survey, collection, intermediate treatment, land fill) based on the outputs of this course and "Guideline for Solid Waste Management".

- Output 1 : To understand the survey method for the amount of waste and collection of garbage.**
- Output 2: To plan for the garbage collection and conveyance**
- Output 3: To understand the construction and maintenance method for sanitary landfill**
- Output 4: To understand the way of public participation for solid waste management**

- Others**
- Course Orientation
  - Presentation of Job Report
  - Study Tour
  - Evaluation Meeting, etc.

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### III. REQUIREMENTS FOR APPLICATION

Applicants should:

- (1) be nominated by their governments in accordance with the procedures mentioned in IV-1 below,
- (2) experience more than 3 years in the field of solid waste management,
- (3) be between 25 and 50 years of age,
- (4) be a staff in charge of solid waste management of following organization;
  - a. Pak-EPA or provincial EPA
  - b. (Department in charge of solid waste management) , Islamabad
  - c. (Department in charge of solid waste management) , Karachi
  - d. (Department in charge of solid waste management) , Quetta
  - e. (Department in charge of solid waste management) , Lahore
  - f. (Department in charge of solid waste management) , Peshawar
  - g. (Department in charge of solid waste management) , Multan
  - h. (Department in charge of solid waste management) , Sukkur
  - i. (Department in charge of solid waste management) , Faisalabad
  - j. (Department in charge of solid waste management) , Rawalpindi
- (5) be willing to work for your organization in the future (at least five years),
- (6) have sufficient command of spoken and written English since the **training will be conducted in English** – for example, TOEFL (Test of English as a Foreign Language) score 500 or above or the Cambridge First Certificate is considered equivalent (copy of the proof is preferable),
- (7) be in good health, both physically and mentally, to undergo the training (As the training includes much field works (tips), that may give risks to pregnant body, pregnancy is regarded as a disqualifying condition for participation in this training course), and
- (8) not be serving in any form of military services.

#### ATTENTION

Participants are required:

- (1) not to change the course subjects or extend the course period,
- (2) not to bring any members of their family,
- (3) to return to their home countries at the end of their course according to the international travel schedule designated by JICA,
- (4) to refrain from engaging in political activities or any form of employment for profit or gain, and
- (5) to observe the rules and regulations of their place of accommodation and not to change accommodations designated by JICA.

### IV. PROCEDURE FOR APPLICATION

1. Government desiring to nominate applicants for the course should fill in and forward one(1) original and three (3) copies of the Nomination Form (Form A2A3) for each applicant, to JICA office (or the Embassy of Japan) **by October 20, 2006.**
2. JICA office (or the Embassy of Japan) will inform the applying government whether or not the nominee's application has been accepted **no later than October 27, 2006.**

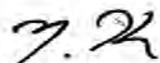
#### 3. Job Report

Applicants are required to submit a Job Report with the Nomination Form. The contents should include the items mentioned in ANNEX-I. The report will serve basic agenda for discussion on common and particular problems among lecturers and participants, and **each participant is required to present his/her Job Report in 10 minutes at the early stage of the training.**

The reports should be typewritten in English, less than 3 pages (12-point font, double spaced, A4



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size paper). The contents of Job Report will be referred to during our selection process, and **Application without Job Report will not be accepted.**

**4. Questionnaire**

Applicants are required to submit filled-in Questionnaire (format attached in **Annex- II**) with the Nomination Form. **Application without filled-in Questionnaire will not be accepted.**



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## 14. OTHER MATTERS

### 1. Pre-departure Information

Pre-departure orientation is held at JICA Malaysia offices (or the Embassy of Japan) to provide the selected candidates with details on travel to Japan, conditions of training, and other matters. Participants will see a video, "TRAINING IN JAPAN", and will receive a textbook and cassette tape, "SIMPLE CONVERSATION IN JAPANESE". A brochure, "GUIDE TO TRAINING IN JAPAN" will be handed to each selected candidate before (or at the time of) the orientation.

### 2. Reports and Presentation

#### (1) Job Report

As written in the previous page, each applicant is required to write and submit a Job Report and Questionnaire following the instruction on page 5. Participants will have a presentation of his/her Job Report and Questionnaire up to 10 minutes at the early stage of the training 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. Please bring many materials such as data, machinery, plans and pictures of your disposal site to make your Job Report fruitful.

#### (2) Action Plan Report

Participants are required to make an Action Plan at the end of the training to express your idea and plan which you carry out after your return, reflecting the knowledge and method you acquire from the training. Each person will have 10 minutes for presentation. After coming back to Pakistan, each participant will be requested to have the meeting to report "Action Plan" in your organization.

### 3. Certification

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

### 4. Remarks

JICA training is implemented for the purpose of development of human resources who will promote the advancement of the countries, but not for the enrichment of individuals nor private companies. Matters of a trade secret and patent techniques will remain confidential and inaccessible during the training.

### 5. Daily life information about Kyushu

Please check the website of JICA Kyushu ([http://www.jica.go.jp/branch/kic\\_e/kic\\_top\\_e.html](http://www.jica.go.jp/branch/kic_e/kic_top_e.html)). The contents are mentioned below.

1) Facility of JICA Kyushu (with photo)

2) Map around JICA Kyushu

3) Process of training course,

4) Other daily life information (climate, sightseeing site around JICA Kyushu, etc.)

**Solid Waste Management for Pakistan  
(JFY 2006)  
Job Report**

Name:  
Organization:  
Present post:  
E-mail:  
FAX:

**Remarks 1:** The Report should be typewritten in English (12-point font, A4 size paper).

**Remarks 2:** Each participant is required to have presentation in 10 minutes based on this Job Report at the early stage of the training for the purpose of making the training more effective and fruitful by comprehending the situations and problems of the participants each other.

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

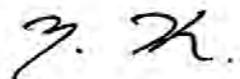
- (1) Main tasks of the organization
- (2) Organization chart of your department/section and brief description of its duties. (The chart should be attached and not be counted in this page limit.)
- (3) Brief description of your assignments

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

- (1) Problems and issues you are facing
- (2) Countermeasures for these problems
- (3) Obstacles in the process of solving those problems

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

- (1) Most interesting subjects or topics in the training course
- (2) How do you expect to apply skills and knowledge for your problem solving according to listed items in curriculum (in section II, page 2) after you return to your home country?
- (3) Other matters you are expecting for this course



**Solid Waste Management for Pakistan  
(JFY 2006)  
Questionnaire**

Name:  
Organization:  
Present post:  
E-mail:  
FAX:

**1. Have you ever studied the following subjects? Please check either Yes or No.**

If your answer is "Yes", please fill in "Years" column how many years of experience you have on the respective items

	Yes	No	Years
(1) Environmental science and engineering .....	( )	( )	( )
(2) Chemical engineering .....	( )	( )	( )
(3) Hygiene engineering .....	( )	( )	( )
(4) Chemical analysis .....	( )	( )	( )
(5) Household refuse treatment practice.....	( )	( )	( )
(6) Solid waste management administration .....	( )	( )	( )
(7) Waste water treatment.....	( )	( )	( )
(8) Waste landfilling practice .....	( )	( )	( )

**2. Explain the situation in the jurisdiction of your organization.**

- (1) Household Refuse Management
  - Volume of household refuse
  - Kinds of household refuse and their percentage
  - Rate of collection service area
  - Collection method
- (2) Landfill Site
  - Capacity (volume and area)
  - Distance from collecting spot to landfill site
  - Method for measurement (or estimation) of volume of waste
  - Volume of waste landfilled per day
  - Rate of tipping fee
  - Place of transit, if any
  - Number of staff working at landfill site
  - Number of heavy equipment
  - Number of waste pickers




- (3) Industrial Waste
  - Kinds/volume of industrial waste
  - Waste generator can be identified?, if can, how?
- (4) Population in the area which your organisation is in charge of
- (5) The annual budget (U.S. dollar) for solid waste management

(6) Solid waste management

a. Breakdown by weight of the annual solid waste materials and their percentage

	<u>weight (tons)</u>	<u>percentage</u>
- food .....	( t )	( % )
- paper .....	( t )	( % )
- plastic.....	( t )	( % )
- metals.....	( t )	( % )
- the others .....	( t )	( % )

b. Breakdown of the annual municipal solid waste budget and their percentage

	<u>budget (U.S. dollar)</u>	<u>percentage</u>
- collection .....	( \$ )	( % )
- construction of treatment/disposal facilities ....	( \$ )	( % )
- disposal operation & management .....	( \$ )	( % )
- the others .....	( \$ )	( % )

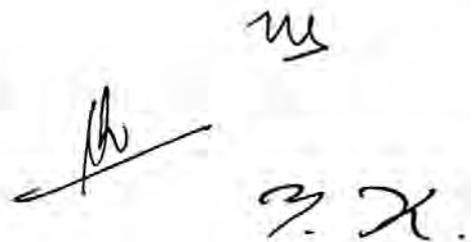
(7) Method for performance monitoring on landfill site management including concessionaire or contractor

( For Participants from Local Authorities)

(8) Reporting from concessionaire or contractor, and penalty/warning on mismanagement/unfavourable conduct

(9) If a license is issued on solid waste management such as dumping of construction waste, please describe the content.

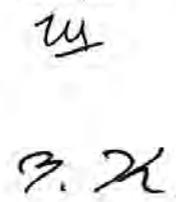
(10) Please attach By-law on littering or waste management, if any

ANNEX IV LIST OF ATTENDANCE

Name	Title	Organization
<b><u>Government of Pakistan</u></b>		
<b><u>Ministry of Environment</u></b>		
Mr. Khyzer Hayat	Joint Secretary	Ministry of Environment
Mr. Mahboob Elah	Director General (Environment)	Ministry of Environment
Dr. Bashir Wani	Joint Secretary (F)	Ministry of Environment
<b><u>Ministry of Economic Affairs and Statistics</u></b>		
Ms. Najime Siddigi	Joint Secretary (ADB / Japan)	Economic Affairs Division,
<b><u>Pakistan Environmental Protection Agency</u></b>		
Mr. Asif Shuja Khan	Director General	Pak-EPA
Mr. Zia-ul-Islam	Director	Pak-EPA
Dr. Javed Iqbal	Director	Pak-EPA
Mr. M. Fasim Riaz Khan	Director	Pak-EPA
Mr. Ahsan Rafi Kiani	Deputy Director	Pak-EPA
Mr. Sajjad Hussain Talpur	Deputy Director	Pak-EPA
<b><u>Government of Punjab</u></b>		
Mr. Muhammad Iqbal Shaikh	Secretary (-8/6)	EPA Punjab
Mr. Arif Azim	Secretary (8/7-)	EPA Punjab
Mr. M. Tahir	Under Secretary (T)	EPA Punjab
Ms. Shangufta Shajahan	Director	EPA Punjab
Mr. Amir Farooq	Deputy Director (Lab)	EPA Punjab
Mr. Javed Shakceel	Technical Advisor	EPA Punjab
<b><u>Government of Sindh</u></b>		
Ms. Nazneen Chisari	Director General	Sindh EPA
Mr. Naeem Ahmed Mughal	Deputy Director (EIA)	Sindh EPA
Mr. Irfanullah Tunio	Assistant Director (Tech)	Sindh EPA
Mr. Muhammad Masoom Pahore	Deputy Director (Resource Management)	Sindh EPA
<b><u>Government of N.W.F.P.</u></b>		
Dr. Hammad Agha	Director General	NWFP EPA
Dr. M Bashir Khan	Director	NWFP EPA
Mr. Mohammed Afi	Assistant Director	NWFP EPA
<b><u>Capital Development Authority Islamabad</u></b>		
Mr. Syed Mustafain Kazmi	Director Sports & Culture	CDA
Dr. Sheeraz Sami Khan	Administrative Officer	Directorate of Sanitation
Mr. Iqtidar Ahmed	Sanitary Supervisor	SWM Wing, Directorate of Sanitation
Mr. Yasir Raza Khan	Assistant-Incharge	SWM Wing, Directorate of Sanitation



**City District Government Lahore**

Ms. Shabnum Najaf	Urban Planner	The urban unit of Plan & Development Departmen
Mr. Ayesha Najie	Planner	The urban unit of Plan & Development Departmen
Mr. Arif Khalil	Deputy Direct Officer (wks)	Solid Waste Management Department
Mr. Muhammad Riat Akbar	Reaerch Associate	The urban unit of Plan & Development Departmen
Ms. Huia Naseel	Reaerch Associate	The urban unit of Plan & Development Departmen
Mr. Zaffi Hayul Nieji	Mayor	Central Workshop
Mr. Asif Iqbal	Project Officer	City District Government Lahore

**District Government of Rawalpindi**

Mr. Iftikhar Ali Shakkwani	Exclusive District Officer	District Government of Rawalpindi
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**City District Government Karachi**

Mr. Mustafa Kamal	City mayor (Nazim)	City District Government Karachi
Mr. Khalil Tawail	District Officer 1	Solid Waste Mngagement Department
Mr. Sohail Ahmed	District Officer 2	Solid Waste Mngagement Department

**City District Government Peshawar**

Mr. Haji Ghulum Ali	City mayor (Nazim)	City District Government Peshawar
Mr. Jahanzel Khan	District Coordination Officer	City District Government Peshawar
Mr. Alam Shah	Director Coordination	City District Government Peshawar
Mr. Imtiaz Saleem	Deputy Director	City District Government Peshawar
Mr. Imban Ali	PRO to Nazim	City District Government Peshawar
Mr. Ayub Jan	Assistant Director	City District Government Peshawar

**District Government Multan**

Mr. Abdul Shakoor Bhutta	District Officer	District Government Multan
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**City District Government Quetta**

Mr. Ghulam Qadir Lehri	Coordinator	City District Government Quetta
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**Global Environmental Lab**

Dr. Sami uz Zaman	Chief Executive	Global Environmental Lab
Mr. Saleem uz Zaman	Chief Executive	Global Environmental Management Services

**Embassy of Japan, in Pakistan**

Mr. Seiji Kojima	Ambassador	Embassy of Japan, in Pakistan
Mr. Kazunobu Shimura	First Secretary	Embassy of Japan, in Pakistan

**Consulate Gneral of Japan, in Karachi**

Mr. Shoichi Nakano	Consul-General	Consulate Gneral of Japan, in Karachi
Mr. Shoichi Kawai	Deputy Cosul-General	

**JICA Pakistan Office**

Ms. Sachiko Misumi	Senior Deputy Resident Representative	JICA Pakistan Office
Mr. Keiji Ishigame	Deputy Resident Representative	JICA Pakistan Office
Ms. Nazia Seher	Program Officer	JICA Pakistan Office

**JICA Karachi Project Office**

Mr. K Tamaki	Project Formulation Advisor	JICA Karachi Project Office
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