

Chapter 3 Project Evaluation and Recommendation

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

(1) Direct Effect

Table 38 Effects and degree of improvement of the project

Present states and problems	Measures in this project (Scope of the project)	Effects and degree of improvement of the project
1. Training equipment is out of order or fails to demonstrate its initial functions. Thus it is impossible to offer education for technologies and knowledge required for major production processes.	<ul style="list-style-type: none"> • Pieces of equipment identical in type and grade to the ones currently used at private firms will be supplied. The project covers machines for extruders, injection molding, blow machines, and thermal molding. 	<ul style="list-style-type: none"> • The number of persons out of work who will be able to acquire basic skills and knowledge of plastics processing at the basic course will increase from current 31 persons per year (the average of the previous four years as of 2002) to the target figure of the project, 60 persons per year (expected to be achieved in 2009).
		<ul style="list-style-type: none"> • The number of engineers who will be able to acquire professional, practical skills and knowledge of at the short term courses will increase from current 56 persons per year (the average of the previous four years as of 2002) to the target figure of the project, 280 persons per year (expected to be achieved in 2009).
2. There are only a small number of testing machines. Thus, the center cannot accept the entire request for the tests requested from firms.	<ul style="list-style-type: none"> • Newly 28 types of testing machines will be supplied. 	<ul style="list-style-type: none"> • The number of firm-commissioned tests will increase from the current 200 times per year (the average of the previous four years as of 2002) to the target figure of the project, 400 times per year (expected to be achieved in 2009).
3. Most of the machines are decrepit and outdated, and thus the center fails to train engineers who provide immediately available skills.	<ul style="list-style-type: none"> • Equipment identical in grade to the ones actually used at private firms will be supplied. 	<ul style="list-style-type: none"> • The renewal of existing outdated or decrepit machines will enable various training courses satisfying the needs of small and medium-sized enterprises.
4. There are only a small number of machines, and thus the center cannot provide training necessary for the manufacturing process as a whole.	<ul style="list-style-type: none"> • Equipment identical in type to the ones actually used at private firms will be supplied. 	<ul style="list-style-type: none"> • The diversification of types of machines will enable the provision of education and training courses concerning technologies which had been required by firms but failed to be offered so far.
5. There are little opportunities for exchanging opinions with private firms and other plastics-related organizations, and thus the center fails to provide training satisfying corporate needs.	<ul style="list-style-type: none"> • Guidance for methods of market surveys, curriculum development and so on will be given. 	<ul style="list-style-type: none"> • The establishment of a routine market survey scheme will lead to the development of training curriculum matching corporate needs and the provision of training courses and technological tests conforming to market trends.

(2) Indirect Effects

- * Expanding employment opportunities for graduates of the PTC who have received practical education and training sufficiently matching to the corporate needs at more than 6,000 plastics-related companies in Pakistan (of them, large firms account for 12 percent, as small and medium-sized firms 88 percent).
- * Improving the qualities of Pakistani-made plastics products, and reducing the necessity for the dependence on import ready-made products. This will vitalize the plastics industry in Pakistan, ensuring a certain amount of employment.

Since this project is expected to have the effects stated above, it is reasonable, one can conclude, that the project will be implemented under the grant aid cooperation. However, for smooth and efficient implementation of the project, it is desirable that the Pakistan side should conduct market surveys on a regular basis, sufficiently grasp the corporate needs, and revise the contents of its training courses from time to time. At the same time, it seems necessary for the center to strengthen the cooperation and ties with the University of Karachi, the Technical Assistance Centre (PITAC), the Pakistan Plastics Manufacturing Association (PPMA) and other related organizations for the purpose of appropriately exchanging information about trends in the plastic industry, corporate needs, trends in related technologies and so on, so that the center will provide services of high quality.

3-2 Recommendations

(1) Scheme for certifications of proficiency in skills

Behind the low-evaluation among private firms of the achievement of training given by the center lies the fact, among other things, that there is no scheme that objectively certifies the technology level of workers. In the field of vocational training (under the jurisdiction of the ministry responsible for labor, human resources, and overseas Pakistani), the vocational technological standards are laid down for 45 job types, such as machines, turning machines, and automobile mechanics. The standards certify a certain level of technologies, helping encourage workers to make efforts and giving an effective proof for their technological level at the time accredited workers switch or look for jobs. On the other hand, firms can reduce recruitment costs by explicitly showing their required technological level, so that the standards enable them to secure workers. For such purposes, it is necessary to establish an official scheme for certifications which proves the technological levels concerning plastics processing, and to issue, apart from the certificate of completion which is currently issued, certifications to workers who have completed a training course of the center. However, it is still necessary to consider whether such an official scheme for certifications should be part of existing schemes, or newly established under the Ministry of Industries and Production.

(2) Recognition of PSQCA and ISO

The target levels of production technologies and tests of the PTC will be not a simple improvement of the current levels, but required to meet the levels which can be objectively acclaimed to some extent. The current levels of production technologies and tests are far from the scheme and technologies enabling to cover the entire fields related to plastics, and thus there is concern that the implementation of an all-inclusive project might result in making any aspects half-finished. Thus, this project is aimed at concentrating on a specific field – PVC pipes for water services at this stage – and pursuing the establishment of the PTC production system and the improvement of its technological levels, so as for products in this field to be approved by PSQCA (accreditation organization of the Pakistani Standards). In line with this, the approval by PSQCA will be served as an objective indication for the technological levels provided under the education and training of the PTC, guaranteeing the contents of the education and training at the PTC. Also, since the PS (Pakistani Standards) is going to be replaced by the standards regulated by ISO, it will be necessary to construct a production scheme and improve the technological levels, taking the ISO standards into account.

(3) Development of curriculum

As one reason for the low-evaluation among the industrial circles of the activities of the PTC, it is pointed out that the contents of education and training do not meet the demand from the industrial circles. Methods of curriculum development will be guided in accordance with the market survey and its findings through the Soft Component. But at the same time, because measures to be given during the period of the Soft Component are difficult, and because curriculum development satisfying demand requires market surveys on a regular basis, it is necessary for the PTC to continuously conduct market surveys and develop their curriculums even after the soft component.

(4) Effective use of senior volunteers and specialists

Although the Pakistani Standards (PS) have been instituted, the number of firms which have acquired the standards is small, merely 20 firms out of 57 major PVC pipe manufacturers having acquired the PS. Since the country is about to participate in WTO, the tariff rates will be reduced, and the Agreement on Technical Barriers to Trade (Agreement on TBT: it promotes the adoption of international standards so that standards or qualification systems for industrial products do not place obstacles to trade) will be adopted in future. All this will expose domestic products to international competition with foreign products. The soft component will give guidance concerning quality control to deal with such situations, but in order to improve specific qualities at the level of production sites where equipment is actually operated, it is necessary for the PTC to hold engineers who are able to facilitate the curriculums from technical viewpoints. Such engineers cannot be created within a short time even in Japan, and continuous efforts to train and update their technologies. In particular, private firms and the PTC seem to consider that the introduction of new machines will immediately lead to the production of high-quality products, lacking the understanding of the know-how of operating machines. Since the technology enabling the production of high quality large-diameter pipes is based on the established quality of smaller-diameter pipes, it is essential to make

continuous efforts to improve technology levels step by step from the level requiring less expertise.

(5) Cooperation with PITAC and other organizations

While there are several plastics-related organizations and institutions in Pakistan, including PITAC (assisting firms with professional skills related to metal mold processing), Pak Swiss Training Center (focusing on machine processing, including mold processing), University of Karachi (with a course related to petroleum chemistry), and PPMA (an organization of manufacturing firms of plastics products), these organizations have little mutual cooperation. However, since raw materials (University of Karachi), metal molding (PITAC and Pak Swiss Training Center), and molding machines (PPMA) are mutually related, and thus sharing of technologies and information will enable the solution of current problems and development of new products, it is necessary to facilitate them to hold, for example, seminars and human exchange.

Appendices

List of Appendix

Appendix-1 Member List of the Study Team	A – 1 – 1
Appendix-2 Study Schedule	A – 2 – 1
Appendix-3 List of Parties Concerned in the Recipient Country	A – 3 – 1
Appendix-4 Minutes of Discussion	A – 4 – 1
Appendix-5 Cost Estimation borne by the Recipient Country	A – 5 – 1
Appendix-6 Equipment List	A – 6 – 1

Appendix-1-1 Member List of the Study Team
(Basic Design Study)

- 1) Team Leader
Mr. YAMAURA Nobuyuki
Resident Representative of JICA Pakistan Office

- 2) Coordinator
Mr. KUNITAKE Daiki
First Project Management Division
Grant Aid Management Department, JICA

- 3) Technical Advisor
Mr. TSUBOI Kinji
Nishinoda Electronics Co., Ltd.

- 4) Consultant (Consultant's Leader)
Mr. IKEDA Jun
UNICO International Corporation

- 5) Consultant (Equipment Planner 1)
Mr. SUZUKI Shiro
UNICO International Corporation

- 6) Consultant (Equipment Planner 2)
Mr. OHKATA Susumu
UNICO International Corporation

- 7) Consultant (Cost Estimator 1)
Mr. TABE Mutsumi
UNICO International Corporation

- 8) Consultant (Cost Estimator 2)
Mr. KOKADO Nobuhiro
UNICO International Corporation

Appendix-1-2 Member List of the Study Team
(Explanation of Draft Final Report)

- 1) Team Leader
Mr. **MISUMI** Sachiko
Senior Deputy Resident Representative of JICA Pakistan Office

- 2) Consultant (Consultant's Leader)
Mr. **IKEDA** Jun
UNICO International Corporation

- 3) Consultant (Equipment Planner)
Mr. **SUZUKI** Shiro
UNICO International Corporation

- 4) Consultant (Cost Estimator)
Mr. **TABE** Mutsumi
UNICO International Corporation

Appendix-2-1 Study Schedule (Basic Design Study)

No.	Date	City	Officials		Consultants			KOKADO Nobuhiro	
			KUNITAKE Daiki TSUBOI Kinji	IKEDA Jun	SUZUKI Shiro	OHKATA Susumu	TABE Mutsumi		
1	Oct. 6	Mon	Karachi	Tokyo Bangkok Karachi					
2	Oct. 7	Tue	Islamabad	Karachi Islamabad Courtesy Call : JICA and Embassy of Japan Meeting : EAD and Ministry of Industries and Production					
3	Oct. 8	Wed	Karachi	Islamabad Lahore Meeting : PITAC, NFC and SMEDA Lahore Karachi					
4	Oct. 9	Thu	Karachi	Meeting : PTC Meeting : PPMA, PJBF, JETRO and Consulate of Japan					
5	Oct. 10	Fri	Karachi	Meeting : PTC Manufacturer's Survey			Tokyo Bangkok Karachi		
6	Oct. 11	Sat	Karachi	Meeting : PTC Manufacturer's Survey					
7	Oct. 12	Sun	Karachi	Discussion with PTC					
8	Oct. 13	Mon	Islamabad Karachi	Discussion with PTC Report to Consulate of Japan Karachi Islamabad			Market Survey : Contractor		
9	Oct. 14	Tue	Islamabad Karachi	Discussion & Signing; Ministry of Industries and Production, PTC Report to JICA Office and Embassy of Japan Islamabad Lahore		Manufacturer's Survey	Market Survey : Contractor		
10	Oct. 15	Wed	Islamabad Karachi	Bangkok Tokyo	Meeting : EAC UNIDO	Manufacturer's Survey	Market Survey : Contractor		
11	Oct. 16	Thu	Islamabad Karachi		Meeting : Contractor MoE	Manufacturer's Survey	Market Survey : Contractor		
12	Oct. 17	Fri	Islamabad Karachi		Meeting : Contractor Islamabad Water & Sewage Board, EU	Manufacturer's Survey	Survey: Legal matter		
13	Oct. 18	Sat	Islamabad Karachi		Internal Meeting	Internal Meeting	Survey: Legal matter		
14	Oct. 19	Sun	Karachi		Islamabad Karachi	Internal Meeting			
15	Oct. 20	Mon	Karachi		Discussion with PTC Meeting : Sindh Environmental Dept.	Discussion with PTC	Market Survey : Forwarder		Tokyo Karachi
16	Oct. 21	Tue	Karachi		Discussion with PTC		Market Survey : Forwarder		Site Survey
17	Oct. 22	Wed	Karachi		Discussion with PTC		Market Survey : Agent		Meeting : Surveyor
18	Oct. 23	Thu	Karachi		Discussion with PTC		Market Survey : Forwarder		Meeting : Contractor
19	Oct. 24	Fri	Karachi		Discussion with PTC		Market Survey : Agent		Meeting : Contractor
20	Oct. 25	Sat	Karachi		Internal Meeting		Market Survey : Agent		Meeting : Heavy Vehicles
21	Oct. 26	Sun	Karachi		Internal Meeting				Internal Meeting
22	Oct. 27	Mon	Karachi		Discussion with PTC		Market Survey : Agent		Meeting : Construction Materials
23	Oct. 28	Tue	Karachi		Discussion with PTC Meeting : PSQCA	Discussion with PTC	Market Survey : Agent		Meeting : Construction Materials
24	Oct. 29	Wed	Karachi		Discussion with PTC		Market Survey : Agent		Utilities Survey
25	Oct. 30	Thu	Islamabad Karachi		Report to Consulate of Japan Karachi Islamabad	Discussion with PTC	Market Survey : Agent		Meeting : Construction Materials
26	Oct. 31	Fri	Islamabad Karachi		Report to JICA Office and Embassy of Japan	Discussion with PTC	Market Survey : Agent		Meeting : Surveyor
27	Nov.1	Sat	Islamabad Karachi		Market Survey	Internal Meeting	Market Survey Karachi		Meeting : Surveyor
28	Nov.2	Sun			Islamabad Lahore	Karachi Lahore	Bangkok Tokyo		Karachi Lahore
29	Nov.3	Mon			Bangkok Tokyo				Bangkok Tokyo

Note: PITAC
NFC
PPMA
PJBF
JETRO
PTC
PSQCA

Pakistan Industrial Technical Assistance Center
National Fertilizer Corporation
Pakistan Plastic Manufacturing Association
Pakistan Japanese Business Forum
Japan External Trading Organization
Plastics Technology Center
Pakistan Standard and Quality Control Authority

MoIP
MoE
EAD
SMEDA
EU
UNIDO

Ministry of Industries and Production
Ministry of Environment
Economic Affairs Division
Small & Medium Enterprise Development Authority
European Union
United Nations Industrial Development Organization

Appendix-2-2 Study Schedule (Explanation of Draft Final Report)

No.	Date		City	Consultants		
				IKEDA Jun	SUZUKI Shiro	TABE Mutsumi
1	Feb. 10	Tue	Karachi	Tokyo Bangkok Karachi		
2	Feb. 11	Wed	Islamabad Karachi	Karachi Islamabad Meeting : JICA Coutesy Call: Emabassy of Japan		Discussion with PTC
3	Feb. 12	Thu	Karachi	Coutesy Call: Ministry of Economic Affairs & Statistics Ministry of Industry & Production Islamabad Karachi		Discussion with PTC
4	Feb. 13	Fri	Karachi	Discussion with PTC		
5	Feb. 14	Sat	Karachi	Discussion with PTC		
6	Feb. 15	Sun	Karachi	Internal Meeting		
7	Feb. 16	Mon	Karachi	Discussion with PTC		
8	Feb. 17	Tue	Karachi	Discussion with PTC		
9	Feb. 18	Wed	Karachi	Report to Consulate of Japan, JETRO Karachi Islamabad		Discussion with PTC
10	Feb. 19	Thu	Islamabad Karachi	Meeting with JICA Discussion and Signing on Minutes of Meeting Report to Emabassy of Japan Islamabad Lahore		Discussion with PTC Karachi Lahore
11	Feb. 20	Fri		Bangkok Tokyo		

Appendix-3 List of Parties Concerned in the Recipient Country

1. Plastics Technology Centre(PTC)

Ahsan Siddiqi	General Manager
Muhammad Ehsan Ashraf	Senior Manager
Rehman Ali Khan	Deputy Manager
Arshad Faruqui	Manager Technical Services
Zaheer Ahmad Chughtai	Associate Professor
Saleem Baig	Manager
Shabbir Ahmed	Manager Testing
Yasser Jaffer	Assistant Manger Technology
Fayyaz A. Chaudhry	Secretary

2. Pakistan Japan Business Forum (PJBF)

Asif Qadir	
Farrukh H. Sheikh	President
Iftikhar H. Shirazi	
Asif Rasheed	
Hasegawa Yukio	
Shiga Yosio	
Yosioka Motoo	S. Vice President
Minakami Masami	

3. Ministry of Industries and Production

Abdul Hafeez Chaudhry	Joint Secretary
Irshad Muhammad Khan	Deputy Secretary
Hashim Hussain	Assistant Chief
Zahid Aziz	Expert Advisory Cell, Chief
Ijaz Ahmad	Expert Advisory Cell, Manager (Technical)

4. Ministry of Economic Affairs & Statistics

Ms. Samar Ihsan	Section Officer
-----------------	-----------------

5. Pakistan Industrial Technical Assistance Centre (PITAC)

Sawada Koji	CAD-CAM Expert
Yoshimatsu Hiroaki	Mold Design Expert
Ide Masaki	Expert of Mold Processing Assembly & Trial Shot

6. National Fertilizer Corporation (NFC)

Zafar Abbas	Chairman
Tariq Chaudry	General Manager
Iftikhar Chaudry	Secretary Manager

7. Small & Medium Enterprise Development Authority (SMEDA)

Mohammad Shahid Chaudhry	General Manager for Technical Services Group
Syed Abid Hussain	Assistant Manager for IIN Project
Ogawa Seiichi	SME Development Expert
8. Pakistan Plastics Manufacturing Association (PPMA)

Zakaria Usman	C.E.O
Shakil Ahamad	Director
Muhammad Iqbal Lakhani	Director
Fayyaz. A. Choudharm	Secretary
9. Pak Petrochemical Industries (Pvt) Ltd.

Syed Haider Ali	Director
Fayyaz Ahmed	Director (Tech)
10. BATLASONS

Dawood Shafi Batla	President
--------------------	-----------
11. Pelikan Industries

Ammad Bokhari	Chief Executive
---------------	-----------------
12. Shoaibee Industries

Ehtesham-Uddin	
Muhammad Din	
13. Ministry of Environment, Local Government & Rural Development

Jawed Ali Khan	Director General (Environment)
Nusrat Abbas	Private Secretary to Director General
14. UNIDO

Abdul Aziz Khan	Senior Assistant
-----------------	------------------
15. Experts Advisory Cell (Ministry of Industries & Production)
16. European Union

Mireille Perrin Decorzent	Economic Adviso
---------------------------	-----------------
17. Capital Development Authority

Jehan Zeb	Director General Services
-----------	---------------------------
18. Directorate of Water & Sewerage Development

Mustafain Kazmi	Director
-----------------	----------
19. Environment & Alternate Energy Department, Government of Sindh

Shujaat Ali Darni	Secretray
Naeew Ahwed Mughal	Deputy Director (EIA)
20. Automotive Testing & Training Centre

Minoru Ohira	JETRO Expert
--------------	--------------
21. Pakistan Standards & Quality Control Authority

Dr. M. Asad Hasan	Director General
-------------------	------------------

22. Embassy of Japan	
Kitada Hiromichi	First Secretary
Hashimoto Toshiyuki	First Secretary
Kobayashi Teruo	Second Secretary
23. Consulate of Japan at Karachi	
Hanagata Kenji	Consul General
Neki Hitoshi	Consulate of General
Izumi Akihiro	Vice Consul Political Affairs
Kondo Takafumi	Assistant Researcher
24. JETRO Karachi Office	
Mizui Osamu	JETRO Karachi Office
25. JICA	
Yamaura Nobuyuki	Resident Representative
Misumi Sachiko	Senior Deputy Resident Representative
Takahashi Makoto	Deputy Resident Representative
Haroon-ur-Rashid Rana	Head of Training Affairs/Programme Officer