



## Pakistan

# 46 Daudkhel Fertilizer Plant Modernization Project (1)(2)

This project was designed to increase fertilizer production by renewing the aging facilities of PAFL's Daudkhel Plant, which is located 150 km southwest of Islamabad, and thereby contribute to the improvement of Pakistan's agricultural productivity.



**Loan Amount/Disbursed Amount:** 23,750 million yen/23,443 million yen

**Loan Agreement:** March 1989, November 1994

**Terms and Conditions:** Interest rate, 2.5% (1)/2.6% (2); Repayment period, 30 years (grace period, 10 years); Partially untied (1)/ General untied (2)

**Final Disbursement Date:** August 2000, August 2001

**External Evaluator:** Ayako Namura (IC Net Limited)

**Field Survey:** August 2003

## Evaluation Result

In this project, renewal of the aging facilities was carried out almost as planned. The project period was extended considerably beyond the planned period because the start of the project was delayed due to the slow approval processing by the Pakistani Government and the effects of the Gulf War, and also because procurement processing took a long time due to changes in specifications, etc. The project cost was basically as planned. Due to this project, the annual fertilizer production amount in 2001 reached approximately 470,000 tons, which is approximately 90% of the planned level. The amount of fertilizer produced from 1998 (the year this project was completed) through 2001 increased by 270,000 tons, which accounts for approximately 80% of the domestic fertilizer production increase during this period. Because during the same period the amount of fertilizer used domestically increased and the yield per hectare of wheat and sugar cane increased by 6% and 11%, respectively, the project made some contribution to the improvement of productivity of the agricultural sector, which employs approximately 50% of the workforce. Moreover, this project contributes to producing foreign exchange savings benefits (approx. \$37 million (4.1

billion yen) based on 2001 trial calculations) since the amount of imported urea fertilizer dropped to zero following the completion of the project, and also to the improvement of the environment because modernization of the production facilities led to a decrease in the amounts of sulfur oxides and ammonia emitted by the plant. There are no problems in the technical capacity, operation and maintenance system, or financial status of the executing agency, PAFL. However, PAFL is required to improve profitability, because, on one hand, domestic natural gas, which is a raw material, is costly, while the price of fertilizer is depressed.

## Third-Party Evaluator's Opinion

The increase in fertilizer production has increased the fertilizer use in the country. The better usage of fertilizer has increased the agricultural productivity raising income level of the rural farm households. If the quality and quantity problem of the natural gas is resolved, the production can increase further.

**Third-Party Evaluator:** Mr. Zafar Mueen Nasar

Obtained a doctorate in economics from Kansas State University. Presently holds the post of Chief of Research, Pakistan Institute of Development Economics. Specializes in macroeconomics and international trade.

### Outline of Pakistan's Fertilizer Sector

#### Outline of Fertilizer Companies

As of August 2003, each fertilizer companies in Pakistan belong to one of four main corporate groups.

Company	Corporate Group (abbreviated)	Fertilizer Produced
Dawood Hercules Ltd.	D.H.	Urea
Lyapllpur Chemicals and Fertilizers Ltd.	NFC	Phosphoric Fertilizer
Hazara Phosphate Pvt. Ltd.	NFC	Phosphoric Fertilizer
PAFL Ltd.(main business)	NFC	Urea
Pak-Arab Fertilizers Ltd.	NFC	Urea, Compound and mixed Fertilizer, Calcium Cyanamide
Fauji Fertilizers Co. Ltd.	FFC	Urea
Engro Chemical Pakistan Ltd.	ENGRO	Urea
Pak-Saudi Fertilizers Pvt. Ltd.	FFC	Urea
Fauji Fertilizers Co. Ltd., Jordan	FFC	DAP, Urea

Source: "Pakistan Fertilizer Related Statistics" National Fertilizer Development Center, 2002

#### Outline of the Urea Fertilizer Sector

In 2003, FFC had a 62% share of the urea fertilizer sector, putting it in first place. Next was ENGRO at 20%, followed by NFC and D.H., both at 9%.

