

Ex-ante Evaluation

1. Name of the Project

Country: The Republic of Iraq

Project: Khor Al-Zubair Fertilizer Plant Rehabilitation Project

(Loan Agreement: January 25, 2008; Loan Amount: 18,120 million yen; Borrower: The Government of the Republic of Iraq)

2. Necessity and Relevance of JBIC's Assistance

In the aftermath of many years of economic sanctions and conflicts, which have left deep scars in its economy and society, Iraq has begun to move toward reconstruction with assistance from the international community after the war.

Iraq's agricultural sector accounted for about 10% of its GDP in 2004, making it the second most important industry in the non-oil economy following the service industry. However, the self-sufficiency ratio of main cereals, which hovered between 80% to 100% until the 1980s, plunged to around 20% in 2003. In addition, Iraq gets nearly 100% of its vegetables from abroad, resulting in a wide gap between supply and demand. In response to this state of affairs, in its national development strategy of 2005–2007 adopted in June 2005, the Government of Iraq adopted, among other things, improvement in agricultural productivity through fertilizer supply, restoration of irrigation facilities as well as strengthening of functions for agricultural research, and so on, as its priority issue.

With regard to the issue of fertilizer, anywhere from 500,000 to 700,000 tons of fertilizer (urea) has been supplied from two plants in Iraq – the one in Khor Al-Zubair and the other in Beiji. However, after 2003, because of shortages in raw natural gas and electric power supply and the like, the operating capability of the Beiji plant has dropped significantly (as of 2004, from about 1.15 million tons per year of design production capacity to about 50,000 tons per year). In addition, because of the aging of equipment, lack of parts and so on, as of 2004, the operating capability of the Khor Al-Zubair plant has dropped from 1.06 million tons per year of planned production capacity to about 260,000 tons. Consequently, Iraq faces a serious shortage of fertilizer, which is indispensable for improving agricultural production.

At the meeting of supporting countries held in Madrid in October 2003, in addition to 1.5 billion dollars in noncompensatory assistance to meet Iraq's emergency reconstruction demand, the Government of Japan announced that it would provide Iraq with 3.5 billion dollars in ODA loans to meet its medium-term reconstruction needs from 2005. Additionally, in JBIC's Medium-Term Strategy for Overseas Economic Cooperation Operations (April 2005), one of the priority sectors is the assistance to solve global scale problems and build peace. Consequently, the support for Iraq, where social instability has continued even after major conflicts ceased, is consistent with such strategy.

As a result, JBIC's support for the project is highly necessary and relevant.

3. Project Objectives

This project aims to improve the production capacity of the Khor Al-Zubair Fertilizer plant which went into operation in 1978 by supplying the plant with equipment it urgently needs, and thereby contribute to the improvement of Iraq's farm production and the restoration of its society and economy by increasing its supply of fertilizer (urea).

4. Project Description

(1) Target Area

Khor Al-Zubair, Basrah Governorate

(2) Project Outline

(a) Rehabilitation of Khor Al-Zubair Fertilizer Plant

(c) Consulting services

(3) Total Project Cost / Loan Amount

22,997 million yen (Yen Loan Amount: 18,120 million yen)

(4) Schedule

January 2008–June 2012 (54 months). The definition of project completion is “when the installation of equipment and materials is completed.”

(5) Implementation Structure

(a) Borrower: The Government of the Republic of Iraq

(b) Executing Agency: Ministry of Industry and Minerals (MOIM)

(c) Operation and Maintenance System: Same as (b)

(6) Environmental and Social Consideration

(a) Environmental Effects / Land Acquisition and Resident Relocation

(i) Category: B

(ii) Reason for Categorization

This project is not likely to have significant adverse impact on the environment due to the fact that the project sector and project characteristics are not likely to exert impact and the project is not located in a sensitive area under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established in April 2002). Thus this project is classified as Category B.

(iii) Environmental Permit

Preparation of the Environmental Impact Assessment (EIA) report related to the project is not required under Iraq's domestic laws.

(iv) Anti-Pollution Measures

This project involves rehabilitation of the existing plant. Thus it is assumed that there will be no additional outbreak of contamination.

(v) Natural Environment

This project will be implemented on the premises of the existing plant, and so any adverse impact on the natural environment is assumed to be minimal.

(vi) Social Environment

This project aims to rehabilitate the existing plant, and so it will involve neither land acquisition nor resident relocation.

(vii) Other / Monitoring

During and after project completion, MOIM will monitor the drainage in the plant to be rehabilitated under this project. MOIM will also monitor the gas emission at the plant using equipment obtained under the project.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Gender Perspective, Measures for Infectious Diseases, Including AIDS, Participatory Development, Consideration for the Handicapped, etc.)

None

(7) Other Important Issues

(a) This project aims to rehabilitate a fertilizer plant that a Japanese company built in the past.

(b) The implementation of the project is expected to be secured by, among other things, (i) providing thorough training for the staff of the Ministry of Industry and Minerals and (ii) requiring the building of a remote control operation system from neighboring countries as a condition for bidding, in view of the security situation.

(c) Improvement in agricultural productivity can be expected as a result of the synergetic effect with other projects related to agricultural infrastructure development such as “irrigation sector loans.”

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Baseline (2004)	Target (2013, 1 year after completion)
Urea production volume rate (design production capacity ratio) (%)	55	80
Urea plant availability rate (%)	45	70
Urea production amount (tons/year)	261,350	591,360

(Note) Urea production volume rate: Maximum production volume (daily output) / design production volume (daily output) x 100

Urea plant availability rate: Annual availability hours / design annual availability hours x 100

(2) Internal Rate of Return (Financial and Economic Internal Rate of Return)

Based on the conditions below, this project’s financial internal rate of return (FIRR) will be 14.4%. Since there are no valid data regarding the project’s impact on Iraq’s national economy, etc., the

economic internal rate of return (EIRR) cannot be calculated.

- (a) Cost: Project cost, operation and management expenses
- (b) Benefit: Earnings from sale of urea fertilizer, etc.
- (c) Project life: 20 years

6. External Risk Factors

Deterioration of law and order, etc.

7. Lessons Learned from Findings of Similar Projects Undertaken in the Past

In the ex-post evaluations of similar past projects, the lesson learned is that establishing an appropriate operation and maintenance system is indispensable for ensuring smooth operation and maintenance of projects after they are launched. The Ministry of Industry and Minerals, operation and maintenance agency of this project, has operated and maintained the fertilizer plant through the period of economic sanctions as well before and after the conflicts, and will continue to pay attention to the establishment of an operation and maintenance system by including training for its staff, etc.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- (a) Urea production volume rate (design production capacity ratio) (%)
- (b) Urea plant availability rate (%)
- (c) Urea production amount (tons/year)

(2) Timing of Next Evaluation

2 years after project completion