

## Ex-ante Evaluation

<b>1. Name of the Project</b>
Country: Republic of Bulgaria Project: New Container Terminals Development Project at the Ports of Varna and Bourgas Loan Agreement: August 29, 2008 Loan Amount: 36,932 million yen Borrower: Republic of Bulgaria
<b>2. Necessity and Relevance of JBIC Assistance</b>
<p>In Bulgaria, the ports of Varna and Bourgas, which are the country's two major international ports, handle most of Bulgaria's international cargo volume. In the wake of the country's rapid economic development in recent years and its accession to the EU in January 2007, there has been a large-scale increase in the volume of cargo handled in recent years, particular container cargo, and still further increase in this trend is envisaged going forward. However, while the Port of Varna possesses a container terminal, its cargo handling capacity is inadequate, and there is no terminal specialized for containers at the Port of Bourgas; as a result, containers are handled at the same facilities as the bulk cargo, resulting in a mixture of different cargo. In addition, at both ports the distribution facilities at the quay and to the rear, and the cargo-handling machinery such as cranes, are aging, and problems are emerging such as the fact that they work inefficiently. In such circumstances, the container cargo handling volume of the Port of Varna and the Port of Bourgas in 2006 was approximately 94,000 twenty-foot equivalent units (TEUs) and approximately 26,000 TEUs respectively, but it is forecast that the combined cargo handling demand for the two ports in 2015 will reach approximately 700,000 TEUs. It is therefore indispensable to improve the ports' handling capacities through the establishment, at an early stage, of facilities which will meet the shortfall cargo handling capacity for the future.</p> <p>Because the final hinterland of both ports is the capital city of Sofia, and the Balkan Mountains divide the country in two (south and north), transportation of cargo between north and south by road is difficult, and the national axis of the country has been developed connecting the ports and Sofia parallel from east to west. Through this project, the Port of Varna will become the cargo transportation entrance for Central and Eastern Europe as the South-East route (the Danube River), one of 4 major EU inland water transport routes. The Port of Bourgas, however, is a port with the potential to accept large-scale cargo ships as the shortest route from the Bosphorus Straits, and thus together with the Port of Constanta occupies an indispensable position in the development of the entire Black Sea region. Therefore, the establishment of container terminals in both ports is indispensable not only as a basis for balanced development over the area of Bulgaria, but also for Bulgaria to occupy a robust political and economic position in the EU and in the Black Sea economic zone.</p> <p>Against the background described above, the Strategy for the Development of the Transport Infrastructure formulated by the Government of Bulgaria in 2006 sets out the objective of optimizing transportation infrastructure based on integration with the EU economic zone, and in particular the updating of port infrastructure, as priority items. JBIC has positioned "a foundation for sustained growth" in the establishment of transportation sector and elsewhere as a priority area in its</p>

Mid Term Strategy for Overseas Economic Cooperation Operations (FY2005-2007), and has set out a policy of assisting with the establishment of economic and social infrastructure which will contribute to the promotion of trade and investment as a foundation for private-sector activities. Thus, JBIC's support of this project is highly necessary and relevant.

### **3. Project Objectives**

To meet rapid increase of cargo demand and to improve efficiency of freight transport by constructing new container terminals and developing infrastructure related to the terminals at the ports of Varna and Bourgas, thereby contributing to economic development in Bulgaria.

### **4. Project Description**

#### (1) Target Area

The Port of Varna and the Port of Bourgas (on the coastline of the Black Sea in the east of Bulgaria)

#### (2) Project Outline

- (a) Construction of container terminals, dredging of shipping routes and anchorage berths
- (b) Procurement of related machinery
- (c) Consulting services (detailed design, tendering assistance, construction supervision, strengthening of project administration structures, environmentally/socially sensitive monitoring, tendering assistance relating to selection of operators for the newly constructed terminals etc.)

#### (3) Total Project Cost/Loan Amount

54,617 million yen (Yen Loan Amount: 36,932 million yen)

#### (4) Schedule

March 2008 to August 2015 (90 months). The project will be considered completed when consulting services are completed.

#### (5) Implementation Structure

- (a) Borrower: Republic of Bulgaria
- (b) Executing Agency: Bulgarian Ports Infrastructure Company
- (c) Operation and Maintenance System: To be consigned to a private-sector operator from the Bulgarian Ports Infrastructure Company
- (NB) The executing agency will be responsible for the operation and maintenance of the international ports' basic infrastructure. Currently, the Port of Varna JSC and the Port of Bourgas JSC are responsible for the operation and maintenance of the already existing facilities, but in the case of the newly constructed terminals, it is planned for a private-sector operator to undertake the management and administration, due to a concession contract.

#### (6) Environmental and Social Consideration

- (a) Environmental Effects/Land Acquisition and Resident Relocation
  - (i) Category: B
  - (ii) Reason for Categorization

This project is classified under Category B because it does not correspond to a large-scale project of the ports sector as set out in the "Japan Bank for International Cooperation Guidelines

for Confirmation of Environmental and Social Considerations” (established April 2002), and it is therefore judged that adverse impact on the environment will not be heavy; in addition, it does not correspond to a sector/characteristic likely to have an impact on the environment, or a region which is likely to suffer such impact, as set out in the abovementioned guidelines.

(iii) Environmental Permit

An Environmental Impact Assessment (EIA) related to this project was approved for the Port of Bourgas by the Ministry of Environment and Water in May 2008. It is forecast that the EIA for the Port of Varna will be approved in September 2008.

(iv) Anti-Pollution Measures

Countermeasures for waste water and water produced by ships will be carried out in terms of the administration of the port, according to the International Convention for the Prevention of Pollution from Ships. In addition, during the dredging, the project will make use of schemes for preventing the scattering of dredged sand, and plans to handle dredged soil appropriately, so as not to have an impact on the surrounding area of water.

(v) Natural Environment

This project will not take place in or near any national parks, and any adverse environmental impact stemming from this project is expected to be minimal.

(vi) Social Environment

The target site for this project is either land within the already existing ports or land possessed by local governments, so no land is to be acquired and no residents are to be relocated.

(vii) Other/Monitoring

The executing agency will monitor air quality, water quality etc.

(b) Promotion of Poverty Reduction

None.

(c) Promotion of Social Development (e.g. Gender Perspective, Countermeasures for Infectious Diseases Such as AIDS, Participatory-Style Development, Consideration of the Disabled etc.)

Regarding the employment of immigrant workers, the related laws of Bulgaria will be strictly adhered to, and related groups will be taken into account.

(7) Other Important Issues

None.

**5. Outcome Targets**

(1) Operation and Effect Indicator

Indicators (Left: Port of Bourgas; Right: Port of Varna)	Baseline (2006 figures)		Targets (2017, 2 years after project completion)	
Container handling volume (TEUs)	26,000	94,000	454,000	375,000
Total tonnage of ships entering ports (1,000GT)	845	2,451	14,437	10,510
Berth occupancy rate (%)	14.2	42.0	34.7	38.9
Average demurrage period (Hours/ship)	13.5	10.3	1.0	1.0

(2) Number of Beneficiaries

Unspecified number of persons inside and outside Bulgaria

(3) Internal Rate of Return (IRR) (Economic Internal Rate of Return (EIRR)/Financial Internal Rate of Return (FIRR))

Based on the following assumptions, this project's Economic Internal Rate of Return (EIRR) is set at 22.0%. The Financial Internal Rate of Return (FIRR) is set at 5.1%.

Economic Internal Rate of Return (EIRR)

Costs: Project costs, operation and maintenance costs (excluding tax)

Benefits: Reduction in transportation costs due to use of larger ships, elimination of overland transportation costs

Project Life: 30 years

Financial Internal Rate of Return (FIRR)

Costs: Project costs, operation and maintenance costs

Benefits: Fees for using ports

Project life: 30 years

#### **6. External Risk Factors**

None

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

The lesson has been learned from ex-post evaluations of yen loan projects conducted in the past that when conducting project supervision in countries where there is no JBIC staff office stationed, it is essential to make use of external manpower. No JBIC staff office is stationed in Bulgaria, and in addition, the executing agency has no experience of executing a yen loan project. It is therefore possible that the procedures relating to the yen loan may be inadequate. Therefore, JBIC will carry out seminars relating to its procurement and lending etc., and thus strengthen the project supervision capabilities of its counterparts.

In addition to considering the use of assistance under SAPI, JBIC also plans to carry out assistance for the procedures for procurement and loan requests through consulting services.

#### **8. Plans for Future Evaluation**

(1) Indicators for Future Evaluation

- (a) Container cargo volume (TEUs/year)
- (b) Total tonnage of ships entering ports (1,000GT)
- (c) Berth occupancy rate (%)
- (d) Average demurrage period (Hours/ship)
- (e) IRR: EIRR (%), FIRR (%)

(2) Timing of Next Evaluation

Two years after project completion