

## Ex-ante Evaluation

**1. Name of the Project**

Country: The Republic of Indonesia

Project: Development of Bandung Institute of Technology (III)

Loan Agreement: March, 31, 2009

Loan Amount: 5,659 million Yen

Borrower: The Republic of Indonesia

**2. Background and Necessity of the Project****(1) Current State and Issues of the Higher Education Sector in Indonesia**

Due to the progress of economic deregulation, Indonesia is now facing fierce competition, in its domestic market, against imported goods, and is simultaneously becoming more important as an exporting base under the globalization. With this as a background, the role of institutions of higher education has also become important to meet the needs of the human resource development that will become the core of industry, to meet the need for technological improvements, and to meet the expectation that they will serve as regional development hubs in outlying regions. There are 82 national and approximately 3,150 private institutions of higher education in Indonesia, and the enrollment rate is about 17% (as of 2005, approx. 3.5 million individuals), which is, by comparison, lower than the surrounding countries (46% in Thailand, 29% in Malaysia, 28% in the Philippines). Moreover, research and educational activities, both in quality and quantity, are insufficient, a fact which is evidenced by the lack of facilities and equipment, the small number of research publications by teachers, etc.

**(2) Development Policies for the Higher Education Sector in Indonesia and Priority of the Project**

In its National Midterm Development Plan (RPJM) 2004-2009, Indonesia has set the goal of enhancing the effectiveness of its institutions of higher education by fostering human resources that will satisfy the needs of private sectors, thereby contributing to the enhancement of its competitiveness through development in the field of science and technology. In the Higher Education Long-Term Strategy (HELTS) 2003-2010 and the Strategic Plan by Ministry of National Education (RENSTRA) 2005-2009, by setting Equality and Expansion of Access, Quality and Relevance, and Governance and Accountability as its three main pillars, it attempts to enhance the effectiveness of educational facilities and equipment, foster teachers, utilize IT, expand scholarship support, improve curriculums, etc.

**(3) Japan and JICA's Policy and Operations in the Higher Education Sector**

Japan's Country Assistance Program for Indonesia (November, 2004) states, from the perspective of the creation of a fair and democratic society, the necessity of providing assistance to produce personnel, at the level of higher education, who will become the core of industry so as to contribute to poverty reduction. Furthermore, it states the importance of human resource development which will enable the achievement of economic growth, which these policies match with the goal of the Project. In response to these policies, JICA, as one of its cooperative programs, has set its direction to provide assistance to private sectors through contributions in human resource development for industries in Indonesia. The Project is in

accordance with this policy as well.

#### (4) Necessity of the Project

The Project will improve and expand the research and educational facilities of Bandung Institute of Technology (hereinafter referred as "ITB") and will promote its linkage with other higher education institutions and society. ITB has been the leader of the higher education sector in Indonesia, and it has been producing human resources to the government as well as to the private sector. Taking into account of the fact that the faculties and departments which were not covered by the past two yen-loan projects as well as which are expected to respond to new needs, such as nanoscience & technology, are as yet undeveloped, further assistance, required to enhance the industrial competitiveness of Indonesia, to promote extensive improvements and to enhance the educational and research functions of ITB is imperative. Therefore, the Project is highly necessary and relevant.

### **3. Project Description**

#### (1) Project Objective(s)

The Project aims to promote qualitative and quantitative improvement of education and research at ITB by enhancing its research facilities and capacities, as well as University-Industry-Community Linkage, and thereby contributing to the development of human resources who will be the core of industry and academic research, as well as the nation's industry and its competitiveness in the world.

#### (2) Project Site/ Target Area: West Java Province (Bandung City)

#### (3) Project Component(s):

- 1) Construction: New construction and renovation of university facilities
- 2) Procurement of equipment and furniture: Equipment and furniture related to the target facilities
- 3) Fellowship: Dispatch of teaching staffs to universities in Japan
- 4) Consulting services: Detailed design, Assistance in tender, Supervision of construction, Assistance to overseas education, Academic advisory, etc.

#### (4) Estimated Project Cost (Loan Amount): 7,801 million Yen (Loan Amount: 5,659 million Yen)

#### (5) Schedule

Scheduled from January, 2009 to September, 2015 (81 months in total)

The Project will be deemed complete when the consulting services are completed.

#### (6) Project Implementation Structure

- 1) Borrower: The Republic of Indonesia
- 2) Executing Agencies: Directorate General of Higher Education, Ministry of National Education, Bandung Institute of Technology
- 3) Operation and Maintenance System: Operation and maintenance of the facilities after the completion of the Project shall be handled by the ITB.

#### (7) Environmental and Social Considerations/Poverty Reduction/Social Development

##### 1) Environmental and Social Consideration

① Category (A, B, C, or FI): B

② Reason for categorization:

The Project is categorized into Category B due to the fact that it does not fall into the

sector category, nor is it located in an area where it can be easily affected, as stipulated in the JBIC Cooperation Guidelines for Confirmation of Environmental and Social Considerations (established in April, 2002), and it is not considered to have any undesirable impact on the environment.

③ Environmental Permit: It is not necessary to create an Environmental Impact Assessment (EIA) under the laws and regulations of Indonesia

④ Anti-Pollution Measures:

JICA will provide assistance in taking the necessary measures against noise, vibration, and other possible impacts which might occur during construction. The treatment of waste and wastewater produced from each building shall be carried out in accordance with ITB regulations.

⑤ Natural Environment:

The target area of the Project is inside the existing campus of a university; therefore, it is likely to have minimum impact on the natural environment.

⑥ Social Environment:

The target area of the Project is inside the existing campus of a university; therefore, land acquisition and resident resettlement are not required.

⑥ Other/Monitoring: The executing agencies shall monitor the noise, vibration, etc.

2) Promotion of Poverty Reduction: None in particular

3) Promotion of Social Inclusion: None in particular

(8) Collaboration with Other Donors: None in particular

(9) Other Important Issues: None in particular

#### 4. Targeted Outcomes

(1) Performance Indicators (Operation and Effect Indicator)

Indicators	Baseline (Actual Value in 2008)	Target (2017) 【Expected value 2 years after project completion】
Number of intake of relating faculties Enrollment (1) Master Program (2) Doctoral Program	(1) 300 (2) 42	(1) 425 (2) 78
Out of the students enrolled, the number of students who have successfully earned degrees	72.7%	85%
The percentage of the eligible lecturers who hold either Masters degree or Doctors degree	95%	100%
Lecturer-student ratio	1:16	1:15
Number of collaborative research projects with new centers <sup>1</sup>	38	84

<sup>1</sup> “Joint Research” in the Project is defined as research jointly conducted by the teachers who have utilized the facilities, materials, and equipment renovated or newly-built through the Project or the teachers who have participated in fellowships in cooperation with organizations (universities, institutions, associations, companies, etc.) other than the Bandung Institute of Technology.

Number of international universities involved in research collaboration with new centers	11	34
Number of funding institutions for collaborative research	11	28

## 5. External Factors and Risk Control

None in particular

## 6. Lessons Learned from Past Projects

According to the post-evaluation report of the past similar project implemented, it has been reported that the operation and maintenance of facilities and equipment varied among departments. As a background factor, it was pointed out that there were some differences in the management as to whether or not the procured equipment was selected in consideration of the ease of operation and maintenance, and whether or not comprehensive operation and maintenance plans were established and implemented. Based on this lesson, in the Project, JICA has agreed with the Bandung Institute of Technology to take into account of the operation and maintenance cost as part of the procurement cost calculation, and to hold Bandung Institute of Technology accountable in development and implementation of a comprehensive operation and maintenance plan. Further, JICA will consider providing assistance in development of operation and maintenance plans and manual creation as part of its consulting services, etc.

## 7. Plan for Future Evaluation

(1) Indicators to be used:

- 1) Number of intake of relating faculties E (1) Master Program (2) Doctoral Program
- 2) Out of the students enrolled, the number of students who have successfully earned one's degree
- 3) The percentage of the eligible lecturers who hold either Masters degree or Doctoral degree
- 4) Lecturer-student ratio
- 5) Number of collaborative research projects with new centers
- 6) Number of international universities involved in research collaboration with new centers
- 7) Number of funding institutions for collaborative research

(2) Timing: Two years after the completion of the Project