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 RCB 組織図

**MINUTES OF MEETINGS
JOINT COORDINATING COMMITTEE
ON
THE PROJECT ON IMPROVEMENT OF COLLECTION MANAGEMENT AND
BIODIVERSITY RESEARCH CAPACITY OF RCB, LIPI
IN THE REPUBLIC OF INDONESIA**

The Joint Terminal Evaluation Team (hereinafter referred to as "the Team") conducted the terminal evaluation from 21 June to 13 July 2009, and explained the evaluation result on the JCC meeting on 13 July 2009 chaired by the Prof. Dr. Endang SUKARA, Deputy Chairman for Life Sciences, Indonesian Institute of Sciences (hereinafter referred to as "LIPI"). As a result of a series of evaluations and discussions, both sides, the LIPI and the Team came to the understanding concerning the matters referred to in the report of the Joint Terminal Evaluation, which is attached hereto.

Jakarta, 13 July 2009

H 山 毅 之

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Witnessed by
Mr. Tetsuro KAJI
Chief Advisor of the project

MINUTES OF MEETINGS
BETWEEN THE JAPANESE TERMINAL EVALUATION TEAM
AND THE AUTHORITY CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF INDONESIA
ON
THE PROJECT ON IMPROVEMENT OF COLLECTION MANAGEMENT AND
BIODIVERSITY RESEARCH CAPACITY OF RCB, LIPI
IN THE REPUBLIC OF INDONESIA

The Japanese Terminal Evaluation Team (hereinafter referred to as "the Japanese Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Hiroyuki KATAYAMA, dispatched the mission from 21 June to 13 July, 2009 for the purpose of conducting terminal evaluation of the Japanese Technical Cooperation for the Project on Improvement of Collection Management and Biodiversity Research Capacity of RCB, LIPI (hereinafter referred to as "the Project") in the Republic of Indonesia.

This evaluation was conducted by forming the Joint Evaluation Team (hereinafter referred to as "the Team") with the Indonesia Evaluation Team, headed by Prof. Dr. Ani Mardiasuti. As a result of a series of surveys and discussions, the Team agreed to forward to respective Governments an Evaluation Report, which is referred to in the attached here to.

Jakarta, 13 July 2009



Mr. Hiroyuki KATAYAMA
Leader,
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Prof. Dr. Ani Mardiasuti
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**REPORT ON THE JOINT EVALUATION
OF
THE PROJECT ON IMPROVEMENT OF COLLECTION
MANAGEMENT AND BIODIVERSITY RESEARCH
CAPACITY OF RCB, LIPI
IN THE REPUBLIC OF INDONESIA**

ABBREVIATIONS

BCP	Biodiversity Conservation Project
BRC	Bio-resource Center
Cibinong	Project site where the RCB is located in Bogor district
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CM&BRC project	The project on improvement of collection management and biodiversity research capacity of RCB, LIPI (project title)
COP10	Conference of the parties to the convention on biological diversity in Nagoya 2010
DAC	Development Assistance Committee
DGHE	Directorate General of Higher Education, Ministry of Education
HPLC	High pressure liquid chromatography
IBSAP	Indonesian Biodiversity Strategy and Action Plan
IBIS	Indonesia Biodiversity Information System
IDR / Rp	Indonesia Rupiah
IPB	Bogor Agriculture University
INACC	Indonesian Culture Collection
IT	Information technology
IUCN	International Union for Conservation of Nature
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
JST	Japan Science and Technology Agency
LIPI	Indonesian Institute of Sciences
MAB	Man and Biosphere
MOFA	Ministry of Foreign Agreement
MOU	Memorandum of Understanding
MTA	Material Transfer Agreement
M/M	Minutes of Meetings
ODA	Overseas Development Assistance
OECD	Organization for Economic Cooperation and Development
PDM	Project Design Matrix
PO	Plan of Operation
RCB	Research Center of Biology, LIPI
R/D	Record of Discussion
SOP	Standard of Operation
UNESCO	United Nation Education, Social and cultural Organization
UV	Ultra Violet

I. INTRODUCTION

Indonesia is the country, which has 3rd largest tropical forestry in the world and has an important position in terms of global biodiversity, since it is one of the ten countries with the richest biodiversity, often known as mega-diversity country, and could well be on the top of the list in terms of biodiversity richness. Also Indonesia's geological history and topography supports its biological diversity and uniqueness. For instance, Indonesia is an archipelagic country located in the biodiversity distribution path of the Asian continent (Java, Sumatra and Kalimantan islands) and Australia (Papua), and in the transitional zone of the Wallace line (Sulawesi, Maluku and Nusa Tenggara islands), and therefore harbors the biological richness of Asia, Australia and the transitional zone of the two continents. But due to the economic growth, illegal activities such as illegal logging and land fire, cause the decreasing of the habitat for flora and fauna. Therefore ecosystem destruction, species extinction and erosion of genetic resources in Indonesia has been increasing over the years.

Under such circumstances, Government of Indonesia formulate the national strategy, the Indonesian Biodiversity Action Plan (IBSAP) on 2003, one of the actions for the biodiversity conservation is to strengthen of the research activities of the biology. And the rapid development of biodiversity research and the limited space for this research in Bogor prompted the consideration to move the activities for the establishment of the life science center from Bogor to Cibinong as a new appropriate research site.

In this occasion, the Government of Japan decided to assist the biodiversity conservation in Indonesia. At the beginning stage, Government of Japan supported the construction of the new research center for zoology in Cibinong. And after the grant aid project, JICA conducted technical cooperation project "Biodiversity Conservation Project (BCP phase I and II)" from 1996 to 2003 with the collaboration between zoology division of the RCB, LIPI and Ministry of Forestry. Following the BCP phase II project, the grant aid project to upgrade the culture collection for the botany and microbiology division of the RCB was conducted. After the opening of the new RCB (zoology, botany and microbiology) in Cibinong, the project titled "The project on improvement of collection management and biodiversity research capacity of RCB, LIPI" (hereinafter referred to as "the Project") has been implemented since March 2007, based on the Record of Discussions (hereinafter referred to as "the R/D"), signed on 22 December 2006, between the Government of Japan and the Government of the Republic of Indonesia.

The Project is scheduled to be implemented for two and half (2.5) years and be completed on 30 September, 2009. In order to evaluate the Project, JICA dispatched the Japanese Terminal Evaluation Team from 21 June to 13 July 2009. The Japanese and Indonesian Evaluation Teams have jointly undertaken the evaluation reported here.

II. MEMBERS OF THE JOINT EVALUATION TEAM

1. Japanese Side

- (1) Mr. Hiroyuki KATAYAMA (Leader)
Senior Representative, JICA Indonesia Office
- (2) Mr. Ginzo AOYAMA (Management Policy/Culture Collection)
Corporate Executive Officer, Japan Wildlife Research Center
- (3) Mr. Nobuo IWAI (Project Management)
Representative, JICA Indonesia Office
- (4) Mr. Keiji MORISHIMA (Evaluation Analysis)
Consultant, VSOC Co., Ltd

2. Indonesian Side

- (1) Prof. Dr. Ani Mardiasuti (Leader)
Professor, Faculty of Forestry, Bogor Agriculture University
- (2) Prof. Dr. Bambang Subiyanto
Head, Center for Innovation, LIPI

III. OBJECTIVES OF THE EVALUATION

The following is the main objectives of the evaluation;

- (1) To verify the accomplishments of the Project compared to those planned;
- (2) To identify obstacles and/or facilitating factors that have affected the implementation process;
- (3) To analyze the Project in terms of the five evaluation criteria (i.e. Relevance, Effectiveness, Efficiency, Impact, and Sustainability); and

- (4) To make recommendations on the Project regarding the measures to be taken for the remaining period and the post-project period.

IV. SCHEDULE OF EVALUATION

The Evaluation Study was conducted from 21 June to 13 July 2009. The Joint Evaluation Team (hereinafter referred to as the Team) collected the information through questionnaires and a series of interviews with Japanese experts and Indonesian counterpart personnel in RCB. Based on the results, the Team prepared a draft report and finalized it through a series of discussions on July 13, 2009.

V. METHODOLOGY OF EVALUATION

The evaluation was made in the following procedure.

5.1 Survey and data collection

The Team made interviews with the Indonesian C/P and the Japanese experts engaged in the Project. The Team also collected information through questionnaires from the concerned personnel. Before these activities, the preliminary survey of the Japanese team was conducted. The preliminary survey consisted of interviews, collection reports, books and other various document by the consultants.

Accomplishment of the Project was measured in terms of the Inputs, the Outputs and the Project Purpose in comparison with the Objectively Verifiable Indicators of the PDM as well as the plan delineated in the R/D.

Implementation process of the Project was reviewed to see if the Activities have been implemented according to the schedule delineated in the latest PO (Annex 2), and to see if the Project has been managed properly as well as to identify obstacles and/or facilitating factors that have affected the implementation process.

5.2 Evaluation

The evaluation was conducted referring to the "JICA Guidelines for the Project Evaluation, revised version of February 2004." JICA Guideline primarily follows "the Principles for Evaluation of Development Assistance, 1991" issued by the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD). This consists of the following three parts:

(1) Verification of the Project performance comparing the actual results of the Project performance with the Project Design Matrix attached to this document as Annex 1.

(2) Value judgment of the Project from the viewpoints of the five evaluation criteria described in the following section of the document. Evaluation result for each criterion was rated as:

- a. high
- b. relatively high
- c. moderate
- d. slightly low
- e. low

(3) In addition to (1) and (2) above, recommendations and lessons learned was made as follows:

a. Recommendations: Recommendations were made for better Project management in the future, for the remaining cooperation period and beyond, especially for securing sustainability and positive impacts.

b. Lessons learned: Lessons learned were made which are learned through the implementation of the Project and useful for better management, including planning and designing, of the projects of similar characteristics.

5.3 Criteria of Evaluation

The following is the description of the five evaluation criteria:

(1) Relevance: Relevance of the Project was reviewed as the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Republic of Indonesia as well as the needs of beneficiaries;

(2) Effectiveness: Effectiveness was assessed by evaluating the extent to which the Project has achieved and contributed to the beneficiaries;

(3) Efficiency: Efficiency of the Project implementation was analyzed focusing on the relationship between outputs and inputs in terms of timing, quality and quantity;

(4) Impacts: Impacts of the Project were identified by referring to direct and indirect, positive and negative impacts caused by the Project; and

(5) Sustainability: Sustainability of the Project was forecast in organizational, financial and technical aspects by examining the extent to which the achievement of the Project would be sustained or expanded after the Project is completed. In addition to the aspects above, the Indonesian side proposed that social aspect be added since sustainability of the Project depends also on social aspects.

VI. Outline of the Project

6.1 Background of the Project

Indonesia is the country, which has 3rd largest tropical forestry in the world and has an important position in terms of global biodiversity, since it is one of the ten countries with the richest biodiversity, often known as mega-diversity country, and could well be on the top of the list in terms of biodiversity richness. The Government of Indonesia has been coping with strengthening of the biodiversity research in collaboration with the Government of Japan by conducting the BCP phase I and II. However, considering the situation of Indonesia where not only zoology but also botany and microbiology research improvement, another comprehensive action is needed to strengthen the research of the biology.

BCP phase I and II has helped implement the research activities of the zoology. The LIPI still needs technical assistance in the light of implementing the national strategy for the life science such as botany and microbiology. For this purpose, the Government of Indonesia would like to request to improve and strengthen the capacity of management of the biodiversity research and collection in RCB through its own effort and networking with other institutes.

6.2 Summary of the Project

(1) Project Purpose

Management capacity of the biodiversity research and collection in RCB is improved and strengthened through its own effort and networking with other institutes.

(2) Over goal

RCB becomes the nationally and internationally recognized center for tropical

biodiversity research, conservation and sustainable utilization.

(3) Outputs

a. Output1; The facility and equipment of RCB are fully utilized for RCB to perform its mandate and responsibility

b. Output2; Valuable specimen collections are preserved and utilized for the benefit of Indonesian and international researchers through the network among institutes and researchers.

c. Output3; Educational and public awareness program on RCB research activities is strengthened.

VII. Project Performance and Implementation Process

7.1 Accomplishment of the Project

(1) Accomplishment of Inputs

Plan as per the plan in the PDM	Source/Method	Results
1 Indonesian side		
1.1 Counterpart personnel	Review of record of Inputs	At present, 8 technical C/Ps in RCB are assigned for the Project officially. (Please see Appendix A-1 for details)
1.2 Project office in Cibinong	ditto	Project offices in Cibinong have been made available as planned with sufficient furniture, the electricity and telecommunications.
1.3 Financial Inputs	ditto	By the end of Indonesian Fiscal Year 2008 (i.e. December 2008), approximately 4,543 million IDR, equivalent to approximately 42.2 million yen, has been released for running expense of the Project. (Please see Appendix A-2 for details)
2 Japanese side		
2.1 Dispatch of expert	Review of record of Inputs	A total of 2 Long-term Experts and 15 Short-term Experts (as a total number of assignments) have been dispatched. (Please see Appendix B-1 for details)
2.2 Reagents and small equipment	ditto	Reagents and small equipment, which is equivalent to 26.9 million yen, has been provided. (Please see Appendix B-2 for details)
2.3 Counterpart training	ditto	As many as 10 officials have been sent for C/P training in Japan. In addition, a total of 6 officials have participated for group training and 2 officials have participated for youth training program. (Please see Appendix B-3 for details)

Plan as per the plan in the PDM	Source/Method	Results
2.4 Local activity cost	ditto	Approximately IDR 4.2 billion, equivalent to approximately 39 million yen, which includes the planned budget in the year of 2009, has been (will be) disbursed for local activity costs. (Please see Appendix B-4 for details)

(As of 13 July 2009)

(2) Accomplishment of Outputs

a. Output 1

Output 1: The facility and equipment of RCB are fully utilized for RCB to perform its mandate and responsibility.

-Objectively verifiable indicator:

1-1 Number of new research activities is increased.

1-2 Number of visiting scientists to RCB is increased.

1-3 Intensity of equipment usage is increased.

-No specific data representing the number of new research activities (corresponding to the indicator 1-1) was available. However, according to the interview, it is confirmed several new joint research between the universities of Japan and the U.S.

-Number of foreign scientists (corresponding to the indicator 1-2) visited RCB are increasing year by year after the project started, as shown in the following table.

	2005	2006	2007	2008	2009
Foreign scientists visited RCB	54	8	39	74	22

-Intensity of equipment usage (corresponding to the indicator 1-3) is increased in general as follows;

>Regarding the Microbiology division, the usage of equipments such as UV spectrophotometer, HPLC and genetic analyzer increased remarkably as shown in the table below.

>Regarding the Botany division, Liquid Nitrogen Producer, which was not been used before starting the project is being used now.

Equipment	2007	2008	2009
SHIMAZU spectrophotometer	34	81	21
UV spectrophotometer	111	291	52
HPLC	23	129	26
Genetic analyzer	12	63	4
Liquid nitrogen producer	-	-	Daily

Source: log book of the equipments of RCB.

b. Output 2

Output 2: Valuable specimen collections are preserved and utilized for the benefit of Indonesian and international researchers through the network among institutes and researchers.

-Objectively verifiable indicator:

2-1 Draft of comprehensive MTA*² is prepared.

*²MTA is defined as "Document of transfer of materials for research purpose" of RCB.

2-2 Number of specimens managed is increased.

2-3 Number of access to the specimen database from the outside is increased.

-Draft of MTA (corresponding to the indicator 2-1) for microbiology is already prepared. It will be authorized before the completion of the project.

-The MTA for zoology and botany had already been authorized and is used by the researchers.

-Herbarium specimens managed (corresponding to the indicator 2-2) are gradually increased as shown in the following table.

	Jan.07	Jan.08	Jan.09
Dried specimen	1,754,172	1,755,182	1,760,933
Wet specimen* ¹	17,341	17,398	17,444

*¹Including carpological specimens.

-Though there were not existed managed microbiological specimens before the implementation of the project, at present there are several managed specimens.

-Status of microbiological specimens/cultures during 2006 and 2009 is shown in the following table.

Taxon	Number of strains			
	2006* ¹	2007* ²	2008* ²	2009* ³
Bacteria	100	200	300	220 (100%validated)
Actinomycetes	0	173	173	348 (100%validated)
Yeast	300	350	450	475 (100%validated)
Filamentous fungi (mold)	500	600	600	743 (89%validated = 743 of 837)

*¹ not validated

*² revalidation in progress

*³ revalidation completed

-Number of validated strains in terms of the method of identification is shown in the

following table.

	Total	Molecular identification	Biochemical identification	Morphological identification
Bacteria	220	220	-	-
Actinomycetes	348	52	-	296
Yeast	475	175	300	300
Filamentous fungi (mold)	743	48	-	743

-And status of microbiological specimen/culture with validation also is increasing at not only species level but also genus level, as shown in the following tables.

Taxon	Number of validated strains (Year 2009)		
	Total	Identified at species level	Identified at genus level
Bacteria	220	220	-
Actinomycetes	348	52	296
Yeast	475	175	300
Filamentous fungi (mold)	743	430	313

-Hit number to the specimen database is shown in the following table.

	2008			
	Aug	Sep	Oct	Nov
Hit number	0	2,541	4,888	6,413
Accumulate hit number	0	2,541	7,429	13,842

2008	2009						
Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
4,409	3,089	17,197	7,091	12,141	10,876	9,948	6,449
18,251	21,340	38,537	45,628	57,769	68,645	78,593	85,042

-Hit number to the LIPIMC online catalogue is shown in the following table.

	2008	2009					
	Dec	Jan	Feb	Mar	Apr	May	Jun
Hit number	0	152	341	477	1,234	6,524	14,654
Accumulate	0	152	493	970	2,204	8,728	23,382

hit number							
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c. Output 3

Output 3: Educational and public awareness program on RCB research activities is strengthened.

-Objectively verifiable indicator:

3-1 Number of visitor to RCB is increased.

3-2 Educational, training and public awareness programs and materials are prepared/published.

3-3 English web site of RCB.

-Number of visitors for botany and microbiology divisions, RCB-LIPI (corresponding to the indicator 3-1) is increasing as shown in the following table.

	2005	2006	2007	2008	2009
Number of visitors	446	311	1,115	1,247	1,054
Number of groups	7	6	27	29	16

-Several books including field guides (corresponding to the indicator 3-2) are published as shown in the following table.

Year	2005	2006	2007	2008
Number of books	10	8	9	5

-Exhibition (corresponding to the indicator 3-2) explaining the biodiversity of Indonesia and activities of RCB is provided in the information center.

-The exhibition is basically prepared as a part of the events; consequently they are changed irregularly in accordance when the events are taken place.

-The web pages in English (corresponding to the indicator 3-3) are being elaborated. According to the interview. Approximately 40 % of the contents have been provided at present (July 2009). Principal reason of not being completed the web site is the shortage of materials for the contents.

(3) Accomplishment of Project Purpose

Project purpose: Management capacity of the biodiversity research and collection in RCB is improved and strengthened through its own effort and networking with other institutes.

-Objectively verifiable indicators:

1. Number of collaborative research program is increased.

2. Number of scientific publication is increased.

3. Number of access to the biological specimens at RCB is increased.

In addition to the above three indicators, following item was proposed by the evaluation team for measuring the project purpose more rationally.

4. Regulation/SOP is elaborated/ revised.

-Number of collaborative research in RCB (corresponding to the indicator 1) are shown in Table 1. It is remaining the same level till 2008 but is increasing 2009. On the other hand, several new collaborative researches are planned in collaboration with the universities of Japan and the U.S., according to the interview..

Category	2005	2006	2007	2008	2009* ²
Botany	55	47	50	53	46

*²The figures of the year 2009 of all the tables except table 10 are as of 18 June.

-Number of scientific publication (corresponding to the indicator 2) of botany division is increasing from 2007 to 2008 as shown in the following table.

Year	2005	2006	2007	2008
Number of Scientific publication	178	186	170	227

-As specific data on the number of access to the biological specimens at RCB (corresponding to the indicator 3) was not available, it is shown the number of service provided by RCB such as identification, preservation analysis and sales of strain.

Division	Service	2005	2006	2007	2008	2009
Botany	Identification	365	835	470	623	325
	Preservation	0	0	0	0	0
	Analysis	0	0	0	0	0
	Others	0	0	0	0	0
	Sub total	365	835	470	623	325
Microbiology	Identification	0	0	13	8	0
	Preservation	0	0	4	1	0
	Analysis	1	0	9	10	6
	Others	1	0	9	4	4
	Sub total	2	0	35	23	10
Total		367	835	505	646	335

-Draft regulation/SOP (corresponding to the indicator 4) is elaborated for botany and

microbiology as follows;

>"Standard Operating Procedures (SOP) (Prosedur Kerja Baku) Laboratorium di Bidang Botani" for botany.

>"Regulasi Laboratorium Bidang Mikrobiologi" for microbiology.

(4) Accomplishment of Overall goal

Overall goal: RCB becomes the nationally and internationally recognized center for tropical biodiversity research, conservation and sustainable utilization.

-Objectively verifiable indicator:

1. Number of national and international symposium, seminar and workshop is increased.
2. Number of validated specimen is increased.
3. Draft MTA is authorized by LIPI.

-Several times of national and international symposium, seminar and workshop (corresponding to the indicator 1) are held in the years of 2007 and 2008. This tendency will continue after the completion of the project if the important assumptions remain unchanged.

-Number of validated specimen (corresponding to the indicator 2) is already increased since the project started. It will increase if the research projects of microbiology implemented continuously.

-Draft MTA (corresponding to the indicator 3) is already elaborated and it will be authorized by RCB-LIPI before the completion of the project.

-In addition, Bogor Herbarium and Zoological Museum are already recognized internationally.

7.2. Implementation Process

Technical transfer	<p>-Transfer of specific techniques such as analysis, operation of the equipments and the method of experiment were undertaken by the short term experts.</p> <p>>The project is designed rather for problem solution than technical transfer.</p> <p>>The approach of the project is to enhance the research activity by supporting the ability and the intention of the researchers.</p> <p>>Administration and the coordination of the project and technical assistance of collection management were done by long-term experts.</p> <p>>Technical assistance for microbial collection preservation and management of culture collection, molecular analysis to strengthen taxonomic research and IT and database development were done by short-term experts.</p>
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	<p>>Considering the fact that zoology division is continuing its activities until now (six year after the completion of the previous project of BCPII), it is expected that there were no problem in the method of technical transfer.</p>
Mechanism of monitoring	<p>-JCC meetings were held at least once a year, two times in total until July 2009. -Sub activities were authorized by the first JCC meeting. -Internal meetings of the project were held at least once a month by the initiative of the project manager.</p>
Procedure of decision making	<p>-Decision making is done in internal meetings of the project. -Development of the Red Data Book of Indonesian flora and fauna was recommended by the Management Consultation Mission in March 2008.</p>
Awareness and participation	<p>-The awareness of the project by the implementing agency and the counterpart personnel is recognized to be high, judging from the following facts;</p> <ul style="list-style-type: none"> >The superior leaders of LIPI participated to the events such as the Exhibition of the research results of RCB, Open House of Zoological Museum and the other promotion events, and expressed the appreciation of the activities of the project. >Personnel of the superior institutions participated not superficially but substantially. >It is mentioned about the activities of JICA in many occasions without requests by Japanese side. >The purpose of the project is correctly understood by the counterpart personnel and it is mentioned about JICA in the preface of the SOPs. >The staffs of RCB participated to the activities of the project very actively. >The counterpart personnel elaborated the curriculum of the training provided by short-term experts.

VIII. Results of the Evaluation

The results of the evaluation by the five criteria are as follows.

8.1 Relevance

Overall evaluation of relevance is rated as "high".

Necessity

- The necessity of supporting collection management and scientific activities of the LIPI are mentioned in the preparatory study report in detail.
- The government of Indonesia established IBSAP for comprehensive effort of conservation.
- LIPI, under the direct supervision of the president, has the principal role in the

conservation of biodiversity.

- Also, there was a need for training of operation and management of the equipments of RCB-LIPI for research activities donated by Japanese government and collection management.
- Therefore, it is evaluated that the Project is consistent with the necessity for the conservation of biodiversity of Indonesia.

Priority

- According to ODA data book 2007 published by the MOFA, environment conservation is mentioned as a component of the assistance for the "Formation of democratic and rational society", which is one of the four important issues.
- According to JICA's Country assistance policy, environment is placed as one of five development issues. Programs of conservation of biodiversity and forest and natural environment are being implemented.
- "Development of natural resources and the environment" is mentioned among five important issues mentioned in the national development plan of Indonesia.
- LIPI is nominated as an implementing agency of various programs mentioned in the Indonesian Biodiversity Strategy and Action Plan, 2003-2020.
- Therefore, the Project is consistent not only with foreign assistance policy of Japan but also the policy of biodiversity conservation of Indonesia.

Relevance as a Means

- The approach of the project to support the ability and intention of the researchers is appropriate.
- Support from private companies was provided by the implementing the Project in cooperation with LIPI. At the same time it was possible to raise public recognition of LIPI.
- The project rose attention of the embassy of Sweden and the proceeding of the event celebrating the 300 anniversary of Linnaeus's birth.
- The project prepared guide books on UNESCO's MAB site upon request of LIPI, which is being the secretariat of the program in Indonesia.
- The project has effects in equality point of view.
- The know-how of culture collection management, research and interpretation of natural history are accumulated in Japan.
- The experience of Japan regarding the required technologies has been transferred through the activities of Japanese short-term experts.

- Researchers networks between Japan and RCB has been already established in various levels before starting this project.
- Cost sharing by the Indonesian part is evaluated to be done sufficiently;
- Therefore, it is evaluated that the Project has a relevant means in terms of its approach, equality point of view, Japan's technical advantage and cost sharing by Indonesian part.

8.2 Effectiveness

Overall evaluation of effectiveness is rated as "relatively high".

Achievement of Project purpose and outputs

Remarkable progress and improvement is recognized in various aspects by the implementation of the Project. Thence the Project purpose is prospected to be mostly achieved within the Project period. On the other hand, as far as it is evaluated in accordance with the indicators enumerated in PDM, not all of them are attained perfectly.

It must be considered that the indicators were not quite consistent for measuring short term effect of the Project (2.5 years). At the same time, the indicators should be set considering the temporary suspension of the activities of RCB because of moving from Bogor to Cibinong.

However, thanks to the painstaking efforts of data collection and compilation by RCB staffs, it was possible to acquire several useful data for evaluating the effectiveness of the project in a short period.

As a result, it was clarified based on the data that most of the indicators for project purpose and outputs have increased or have a tendency of increase. Therefore, the team evaluated the effectiveness of the Project as "relatively high".

Contributing factors

- The substantial concern about the climate change is recognized as a contributing factor.
- The concern of Japanese government about the biodiversity conservation is increasing, expecting the COP 10 of the CBD.

Hindering factors

- Important assumptions mentioned in PDM continued to be stable, hence there were not substantial influence of important assumptions.
- It is not recognized other remarkable hindering factors.

8.3 Efficiency

Overall evaluation of efficiency is rated as "relatively high".

Japanese experts

- The number of long term experts, expertise and timing are evaluated mostly appropriate.
- Twelve short-term experts planned. Among them, ten experts were dispatched on schedule. One expert is under procedure of dispatch. One expert will be replaced by a local expert.
- The activities of the short-term expert were evaluated to be almost efficient.
- It is pointed out that there is a necessity of assuring the effects of activities of the short-term experts during there absence.

Equipment

- Appropriate amount and quality of equipments necessary for the implementation of the project were provided as shown in the attached list.

Indonesian personnel

- Counterpart personnel were assigned as enumerated in the PDM.
- The qualification of the counterpart personnel was sufficient for the implementation of the project.
- Personnel in RCB who were not assigned officially as counterpart also participated to the activities of the project.
- New IT team was organized

Counterpart training

- Counterpart training in Japan was conducted for capacity building.
- Six counterpart personnel from RCB were planned and eventually twelve persons participated to the training.

Project budget

- Additional budget was provided by the Indonesian government for the initiation of the project.
- Two office assistant personnel were employed by the budget of Indonesian part.

Office

- Office space was provided within the building of RCB together with necessary furniture

Implementation of inputs in comparison with the timeframe

- The inputs were provided at appropriately in comparison with the timeframe of two and a half years.

Timing

- Timing of input was appropriate in accordance with the P/O.

Size and quality

- The size and the quality of the inputs were almost appropriate.
- Some activities of the short-term experts should be increased.

Justification of the cost of inputs by the degree of achievement of outputs

- The cost was evaluated to be almost appropriate in relation to the outputs.

8.4 Impact

Overall evaluation of impact is rated as "high".

Achievement of overall goal

Overall goal of the Project is prospected to be achieved in approximately five years after completion of the Project. It is mentioned in accordance with the items enumerated in PDM as follows;

- Several times of national and international symposium, seminar and workshop are held in the years of 2007 and 2008. This tendency will continue after the completion of the project if the important assumptions remain unchanged.
- Number of validated specimen is already increased since the project started. It will increase if the research projects of microbiology implemented continuously.
- Draft MTA is already elaborated and it will be authorized by RCB-LIPI before the completion of the project.
- In addition, Bogor Herbarium and Zoological Museum are already recognized

internationally.

Impact to the development plan of counterpart government

Impact to the development plan of counterpart government is expected as follows;

- Impact through the economic contribution by the research for exploring beneficial varieties/strains or the utilization of the plants that absorb heavy metals is expected.
- Since the conservation of natural environment is mentioned in the national development plan of Indonesia, it is expected to have impact other than the economic point of view.

Alienation between the overall goal and the project purpose

- There is no alienation between them; however the project purpose is not completely leading to the overall goal. Overall goal is supposed to be slightly ambitious in comparison with the Project purpose.

Factors hindering the achievement of overall goal

- Remarkable hindering factor is not recognized.
- Important assumption is remaining the same as the beginning of the project at this moment.
- Therefore, possibility of being satisfied the important assumptions are high

Impact to the policy, law, regulation and standards

- Impact to the policy of conservation of natural environment is expected through preparing the Red List, scrutinizing local flora and fauna and more detailed than that of IUCN.
- A draft of Plant Red List is prepared in collaboration of the project.
- RCB is expected to be the implementing center for Asian-Pacific Biodiversity Inventory Program.
- New MAB site was designated in Riau Province.

Impacts by technological revolution

- Remarkable impacts were recognized in microbiology division.
- Fungi and bacteria used to be identified without using molecular information before the implementation of the project. Now it is possible to identify them using the results of DNA analysis.

Economic impacts to RCB

- Impacts are produced by instructing the operation of the equipment, elaboration of the SOPs, etc.
- Special budget is allocated by the DGHE, Ministry of Education.
- Small amount of positive economic impact is generated by marketing of products such as T-shirts, field guides and accessories using insect specimen.

Impacts to the academic activities

- MOU for research cooperation was agreed with the University of California Davis for implementing research projects.
- Several cooperation research projects are being implemented such as with Hokkaido University and Kagoshima University in Japan.
- Delegation from Nagoya University is visiting for preparatory information exchange in scope of scientific cooperation.
- Research School Program is started this year in collaboration with universities in Indonesia and foreign universities.

8.5 Sustainability

Overall evaluation of sustainability is rated as "relatively high".

Political/Institutional aspect

- Political support is expected to continue by the fact that the president and the vice president of Indonesia have visited RCB.
- It is considered that the relating laws and regulations are established, such as IBSAP and BRC.

Organization

- Personnel are allocated in adequate number: however it is slightly recognized the necessity of improving the communication and information sharing among the personnel.
- LIPI employs 200-300 new researchers every year and the young researchers are allocated for RCB. Capacity building of those researchers will be a task of RCB.

Ownership

- Ownership of the LIPI and RCB is recognized to be sufficient from the fact that the plan of sub activities of the project was elaborated by the active participation of LIPI and IT

team has elaborated the five year plan of the new IBIS on its own.

Budget

- Budget is secured as plenty as possible, however it is not sufficient, not exceptional for an assistance project.
- Budget allocation for the running cost of RCB has increased remarkably after starting the project.
- Total budget for RCB is decreasing since 2007. On the contrary, the ratio of research budget is increasing, as shown in the Table as below.

Table. Research budget of RCB (Rp.).

Year	2007	2008	2009 ^{*4}
Total budget	41,410,318,500	39,494,511,000	36,879,349,800
Budget for research	4,341,994,224	4,180,708,924	13,484,068,800
Ratio (%)	10.5	10.6	36.6

^{*4}The budget of 2009 includes Rp.8.3 billion allocated by the DGHE, Ministry of Education.

- Budget allocation of Rp.8.3 billion by the DGHE is a favorable factor for enhancing the research activities.
- Special research fund is allocated in the year 2007 and 2008 for the research of avian influenza.

Technical aspect

- Level of the technique is appropriate and is learned efficiently by the counterpart personnel.
- Equipments are managed and maintained almost appropriately because there are no equipments or materials left without using.
- Occasional difficulty of procurement of chemical materials is caused by temporary financial shortage.

Environmental aspect

- Waste management is conducted in accordance with Indonesian laws and regulations.
- Environmentally friendlier waste management will be attained by improving the acid and alkaline waste treatment facility, maintenance of sewerage treatment tanks, and appropriate incineration of the solid wastes.

VIII. Conclusion and Recommendations and Lessons Learned

9.1 Conclusion

1. The team concludes that through sincere efforts by Indonesian side and Japanese experts the project has shown quite a lot of progress during the project period, and evaluates that the project activities were successfully done, especially the team appreciates the contribution of C/P of Indonesian for trying to carry out sub-activities responsibly.
2. The equipments and facilities by grant-aid became to be used appropriately through project activities (frozen storage equipment, DNA sequencer, etc). Moreover, the equipments which were additionally provided in through the project have promoted the research activities of RCB effectively (hygrometer, dehumidifier, scanner for scanning botanical specimen, and renovation of the liquid nitrogen producer room). From these equipments utilization etc, it is recognized that the management capacity of biodiversity research in RCB has been improved steadily through its own efforts and related activities.
3. However, in order to become truly the internationally recognized center for tropical biodiversity research, RCB should promote further to develop the joint research program among institutes, publish the result of research and improve the specimen database, even more, the research budget for those activities should be secured.
4. Toward achievement of overall goal, RCB would consider to take some schemes for strengthen the research management capacity moreover. For example, in order to strengthen the culture collection of the microbiology division, RCB could consider to use resources such as JST-JICA scheme (science technology ODA) and other volunteers. Besides, RCB would invite researchers from Asia and Pacific Ocean area and have joint research, and then RCB could attain the presence as an international research institution in the near future.

9.2 Recommendation

1. For the remaining period

The team recommends the project should finalize the following activities for achieving the project purpose in the remaining period;

- a) Authorizing comprehensive MTA, regulation and SOP in RCB, LIPI

- b) Drawing up an equipments maintenance manual (procurement list of fixtures and article-of-consumption)
- c) Improving a waste disposal treatment facility and a wastewater processing facility and considering a pretreatment of disposal
- d) Developing the specimen database steadily
- e) Publishing botanic red list
- f) Developing the contents of Web site (English)
- g) Developing the display of space of the information center
- h) Considering to hold an event toward project closing
- i) Dispatching the 2 experts for botany and microbiology

2. For the post-project period

The evaluation team expects that RCB will promote the following activities in order to attain overall goal after the project period.

- a) Development of new IBIS by the action plan to strengthen IT team and information system infrastructure
- b) Sharing of information about MTA among the Ministry of Health and other related Ministries
- c) Operation and maintenance of equipments based on a manual
- d) Continuous renewal of WEB site (English)
- e) Participating to the East and the Southeast Asia Biodiversity Inventory Initiative which Japanese government is intend to lead on COP10 in Nagoya, Japan next year
- f) Strengthening a public-relations of RCB's activities, for example, It is recommended to arrange the staff like a concierge for visitors
- g) Raising public awareness and science education on human activity of natural history

3. For the near future

The evaluation team hopes that RCB will consider the following activities in order to achieve overall goal in the near future.

(Strengthen of research coordinating function)

It is considered to be very effective that research coordinating staffs (or team) plan the research strategy accepted internationally and a long-term vision on the base of the fundamental data, and perform such as arranging inquires of research activities from

the outside, etc, as well as conducting joint research arrangements with other institutions. Therefore the evaluation team recommends strengthening research-coordinating function under the director of RCB. For example, in the near future it will be considered to request a long-term expert or a senior volunteer on the research coordinating by JICA scheme.

(Research school program)

The team recommends the capacity building activities for researchers such as "Research school program" which is a scheme of collaboration between RCB and universities with support from JICA.

9.3 Lessons Learned

(Regarding project for the scientific research institution)

In the project implementation for the scientific research institution, it is necessary to evaluate project implementation by taking into consideration the involvement of Japanese scientists/researchers during formulation and the designing of the project. As Japanese researcher resource is not easily available, input of Japanese research support was not maximum. Since many Indonesian researchers expect strongly research support more than capacity management support, hereafter it will be necessary to have a point of view that the Japanese research support could facilitate the Indonesian researcher's willingness and stimulate their eagerness.

End of the document

List of Attachment

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| Annex 2 | Plan of Operation (PO) |
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| A-2 | Activity Cost borne by the Indonesian Side |
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ANNEX1 PDM

<p>Project Title: THE PROJECT ON IMPROVEMENT OF COLLECTION MANAGEMENT AND BIODIVERSITY RESEARCH CAPACITY OF RCB, LIPI</p> <p>Implementing Agency in Beneficiary Country: Research Center for Biology (RCB), Indonesian Institute of Sciences (LIPI)</p>	<p>Period of Cooperation: 2.5 years (March 2007- Sep 2009)</p> <p>Target Group: Research Center for Biology (RCB), Indonesian Institute of Sciences (LIPI)</p>
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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Overall Goals RCB becomes the nationally and internationally recognized center for tropical biodiversity research, conservation and sustainable utilization</p>	<ol style="list-style-type: none"> 1. Number of national and international symposium, seminar and workshop is increased 2. Number of validated specimens is increased 3. Draft MTA is authorized by LIPI 	<ul style="list-style-type: none"> - Annual report of RCB - Record of validated specimens - MTA of LIPI 	<ul style="list-style-type: none"> - The government policy about biodiversity conservation does not change very much. - Budget of RCB is not largely reduced.
<p>Project Purpose Management capacity of the biodiversity research and collection in RCB is improved and strengthened through its own effort and networking with other institutes</p>	<ol style="list-style-type: none"> 1. Number of collaborative research program is increased 2. Number of scientific publication is increased. 3. Number of access to the biological specimens at RCB is increased 	<ul style="list-style-type: none"> - Annual report of RCB - Record of publication - Specimen loan record 	
<p>Outputs</p> <ol style="list-style-type: none"> 1. The facility and equipment of RCB are fully utilized for RCB to perform its mandate and responsibility 2. Valuable specimen collections are preserved and utilized for the benefit of Indonesian and international researchers through the network among institutes and researchers 3. Educational and public awareness program on RCB research activities is strengthened. 	<ol style="list-style-type: none"> 1-1 Number of new research activities is increased 1-2 Number of visiting scientists to RCB is increased 1-3 Intensity of equipment usage is increased. 2-1 Draft of comprehensive MTA is prepared. 2-2 Number of specimens managed adequately is increased 2-3 Number of access to the specimen database from the outside is increased 3-1 Number of visitors to RCB is increased 3-2 Educational, training and public awareness programs and materials are prepared/published. 3-3 English web site of RCB is improved 	<ul style="list-style-type: none"> - Annual report of RCB - Annual report of RCB - Log book - Draft MTA - Specimen database - Computer access records - Annual report/guest book - Materials and publications. - Web site of RCB 	<ul style="list-style-type: none"> - Positive participation of researchers is maintained.

ANNEX1 PDM

Activities	Inputs	Pre-conditions
<p>1-1. To improve the RCB management policy in terms of research activities, facility and equipment operation, maintenance and utilization, and securing financial sources.</p> <p>1-2. To develop the maintenance protocol of the facilities and equipment including repair, replace and supplement of equipment, its parts, chemicals and consumables.</p> <p>1-3. To manage toxic and hazardous wastes from laboratories.</p> <p>1-4. To conduct the training programs for the newly installed facility and equipment (cryopreservation research, ways and means for specimen collections and storage of microbial collections, extracts and <i>simplicia</i> etc)</p> <p>2-1. To develop and/or improve specimen collection management regulations and technical guidelines including MTA</p> <p>2-2. To assist procurement of instruments and materials for the purpose of rehabilitation, restoration, and arrangement of the specimen collections</p> <p>2-3. To develop the research collaboration or joint programs among institutes, and produce model activities for the collaboration</p> <p>2-4. To develop and/or improve specimen databases (ex. linkage with other databases and access from outside).</p> <p>3-1. To develop educational and awareness programs and materials related to RCB activities including exhibits at the RCB information center.</p>	<p>Japan:</p> <ul style="list-style-type: none"> - Long-term experts (1) Chief adviser (2) Expert on coordination of research activities/programs (3) Expert on public awareness and education <p>- Short-term experts</p> <ul style="list-style-type: none"> (1) Expert on microbial collection preservation, and management of culture collection (2) Expert on molecular analysis to strengthen taxonomic research (3) Expert on IT and database development, etc <ul style="list-style-type: none"> - Training of counterpart personnel in Japan (6 persons) - Provision of equipment for the project activities <p>Indonesia:</p> <ul style="list-style-type: none"> - Government staff as counterpart personnel - Administrative and operational costs - Provision of office for the JICA team 	<p>None</p>

ANNEX2 PLAN OF OPERATIONS OF THE CM & BRC PROJECT

Activities	Sub Activities	Expected Results	2007			2008												2009									Notes															
			9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8		9														
<p>1. To improve the RCB management policy in terms of research activities, facility and equipment maintenance and utilization, and securing financial resources.</p>	<p>1-1-1. REGULATION OF RESEARCH COLLABORATION: To develop guideline of research activities and research collaborations for national and international scale on Research Center for Biology (RCB)-Indonesian Institute of Sciences (LIPI).</p>	<p>Authorized Document of Regulations</p>																																								
	<p>1-1-2. REGULATION OF EQUIPMENTS/FACILITIES ACCESS: To create guideline of facility and equipment access/operation on RCB-LIPI.</p>																																									
	<p>1-1-3. REGULATION OF FACILITY AND EQUIPMENT MAINTENANCES: To create guideline of facility and equipment maintenance on RCB-LIPI.</p>																																									
	<p>1-1-4. GUIDELINE OF FINANCIAL SOURCES: To create guideline of securing financial sources for facility and equipment usage/maintenance.</p>																																									
<p>2. To develop maintenance protocol of the facilities and equipment including repair, replace and complement of equipment, its parts, chemicals and consumables.</p>	<p>1-2-1. SOP OF EQUIPMENT USAGE: To create book/leaflet concerning on Standard Operating Procedure (SOP) of facility and equipment usage, which distributed in laboratories and collection rooms.</p>	<p>Authorized Document of SOPs</p>																																								
	<p>1-2-2. SOP OF EQUIPMENTS MAINTENANCE: To create book/leaflet/poster concerning on SOP of rehabilitation, restoration, and arrangement of facility and equipment (including the supporting components), which distributed in laboratories or collection rooms.</p>																																									
	<p>1-2-3. SOP OF CHEMICAL USAGE AND ORDER: To create book/leaflet concerning on chemicals/consumable materials usage and order, which distributed in laboratories and collection rooms.</p>																																									
<p>3. To manage toxic and hazardous wastes from laboratories.</p>	<p>1-3-1. SOP OF WASTE MANAGEMENT: To create book/leaflet concerning on SOP of toxic and hazardous wastes management which distributed in laboratories or collection rooms.</p>	<p>Authorized Document of SOP</p>																																								
	<p>1-3-2. WASTE FACILITIES: To develop facilities for wastes management (usage/storage) of toxic and hazardous wastes (organic/anorganic materials, pathogen organisms, etc.)</p>																																									
	<p>1-3-3. TRAINING OF WASTE MANAGEMENT: To carry out training program concerning on facilities operating and management of toxic and hazardous wastes (organic/anorganic materials, pathogen organisms/biosafety level, etc.)</p>																																									
<p>4. To conduct programs of the newly installed facility and equipment (cryopreservation search, ways and means for specimen collections and storage of microbial collection, tract and simplisia, etc).</p>	<p>1-4-1. TRAINING OF MICROBIAL PRESERVATION: To carry out training program concerning on microbial preservation for development of microbial culture collection in RCB-LIPI.</p>	<p>Training</p>																																								
	<p>1-4-2. TRAINING OF CRYOPRESERVATION: To carry out training program concerning on cryopreservation for research and storage of biological materials (ex. plant).</p>																																									
	<p>1-4-3. TRAINING OF MOLECULAR TECHNIQUES: To carry out training program concerning on molecular analysis (DNA sequencing, genetic marker, bioinformatics, gene expression, etc) for supporting taxonomical studies.</p>																																									
<p>1. To develop and/or improve specimen management regulations and technical guideline including MTA</p>	<p>2-1-1. COLLECTION MANAGEMENT: To complete regulations related to specimen/culture collection management.</p>	<p>Book of Regulation</p>																																								
	<p>2-1-2. MTA: To complete regulation of material transfer agreement (MTA) as reference of national regulation which concern on specimen/culture for scientific purposes</p>																																									
	<p>2-1-3. TRAINING OF CULTURE COLLECTION: To carry out training program concerning on microbial culture collection management.</p>																																									

	<p>2-2-1. CULTURE COLLECTION: To make basic design of processing and storage rooms of microbial culture collection with international standard.</p>	Basic design of Culture Collection		STE on microbial collection, preservation & management of culture collection
	<p>2-2-2. CULTURE COLLECTION FACILITY: To support facility microbial culture collection with international standard.</p>	Facility/Equipment		STE on microbial collection, preservation & management of culture collection
	<p>2-2-3. REHABILITATION/RESTORATION ARRANGEMENT: To assist procurement of instruments and materials for specimen/culture rehabilitation, restoration, and arrangement.</p>	Facility/Equipment		
	<p>2-3-1. NETWORKING: To create team to look for research collaboration and to expand network with other institutions.</p>	Networking System		
	<p>2-3-2. RESEARCH FUNDING SEMINAR: To carry out seminar concerning on strategy to develop international collaboration and to achieve research grants from abroad.</p>	Seminar		
	<p>2-4-1. TRAINING OF IT & DATABASE: To carry out training program concerning on IT and database management.</p>	Training		STE on IT & database development
	<p>2-4-2. INTEGRATED DATABASE SYSTEM: To improve integrated database of animal/plant specimen and microbial culture collection.</p>	Improved database		
	<p>2-4-3. ONLINE DATABASE: To improve database of animal/plant specimen or microbial culture which can be accessed online.</p>	Online database		
	<p>3-1-1. EDUCATION AND PUBLIC AWARENESS PROGRAM: To coordinate the education and public awareness programs (display room, clip, museum goods).</p>	Program & materials (Display room, clip, etc.)		
	<p>3-1-2. SCIENCE PROMOTION: To coordinate the making of materials/media for promotion (researcher, research facilities)</p>	Promotion materials		
	<p>3-1-3. RCB WEBSITE: To develop bilingual and informative RCB website.</p>	Improved RCB website		

Appendix C (Evaluation Grid)

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub items		
Process of Implementation	Implementation of the activities	Technical transfer	Interview	<ul style="list-style-type: none"> -Transfer of specific techniques such as analysis, operation of the equipments and the method of experiment were undertaken by the short term experts. >The project is designed rather for problem solution than technical transfer. >The approach of the project is to enhance the research activity by supporting the ability and the intention of the researchers. >Administration and the coordination of the project and technical assistance of collection management were done by long-term experts. >Technical assistance for microbial collection preservation and management of culture collection, molecular analysis to strengthen taxonomic research and IT and database development were done by short-term experts. >Considering the fact that zoology division is continuing its activities until now (six year after the completion of the previous project of BCPH), it is expected that there were no problem in the method of technical transfer.
		Management system	Interview JCC reports	<ul style="list-style-type: none"> -JCC meetings were held at least once a year, two times in total until July 2009. -Sub activities were authorized by the first JCC meeting. -Internal meetings of the project were held at least once a month by the initiative of the project manager.
	Awareness and participation	Mechanism of monitoring	Interview	<ul style="list-style-type: none"> -Decision making is done in internal meetings of the project. -Development of the Red Data Book of Indonesian flora and fauna was recommended by the Management Consultation Mission in March 2008.
		Procedure of decision making	Interview	<ul style="list-style-type: none"> -Additional meetings including informal meetings were held irregularly other than regular internal meetings, for the purpose of information exchange. -It was advantageous for the communication that all the project members were usually staying in the same building.
	Awareness and participation	Mechanism of communication within the project	Interview	<ul style="list-style-type: none"> -The awareness of the project by the implementing agency and the counterpart personnel is recognized to be high, judging from the following facts; >The superior leaders of LIPI participated to the events such as the Exhibition of the research results of RCB, Open House of Zoological Museum and the other promotion events, and expressed the appreciation of the activities of the project.
	Awareness and participation	Interview	<ul style="list-style-type: none"> >Personnel of the superior institutions participated not superficially but substantially. >It is mentioned about the activities of JICA in many occasions without requests by Japanese side. >The purpose of the project is correctly understood by the counterpart 	

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub items		
				<p>personnel and it is mentioned about JICA in the preface of the SOPs.</p> <ul style="list-style-type: none"> >The staffs of RCB participated to the activities of the project very actively. >The counterpart personnel elaborated the curriculum of the training provided by short-term experts.
	Problems	<p>Problems during implementing the project and the factors influencing the production of the effect of the project.</p> <p>Factors that inhibit or contribute to the efficiency of project implementation process.</p> <p>Influence of important assumptions and preconditions on the process from inputs through output.</p>	Interview	<ul style="list-style-type: none"> -Though the project had JCC and regular internal meetings, the system for information sharing among the staffs and decision making as an organization are supposed to need some improvements. -Regarding the activities of short-term experts, it was pointed out the necessity to take some measures for ensuring the continuity of the activities by the local staffs after leave the experts. -The team evaluated that the PO of activities was not revised at appropriate timing. -Remarkable factors that inhibit the efficiency of project implementation were not recognized.
Relevance	Necessity	Matching of the project with the needs of the target area or society.	Interview PDM	<ul style="list-style-type: none"> -Important assumptions such as budget allocation continued to be favorable for the implementation of the project; hence there were not substantial influence of important assumptions. -Preconditions were not defined in the PDM; however the existence of the herbarium and the research center are regarded as the adequate pre-conditions. -The necessity of supporting collection management and scientific activities of LIPI are mentioned in the preparatory study report. >Necessity of conserving the biological diversity of Indonesia, whose area occupies approximately 1.3% of the land of the earth and has 325,000 plant and animal species. >60% of plant, 49% of mammal and 27% of bird species are endemic to Indonesia. >Above mentioned plants and animals are confronting the danger of population decrease or extinction, caused by development, deforestation or commercial activities. >The government of Indonesia established IBSAP for comprehensive effort of conservation and LIPI, under the direct supervision of the president, has the principal role in the conservation of biodiversity.
		Matching of the	Preparatory study report	<ul style="list-style-type: none"> -There was a need for training of operation and management of the equipments

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub items		
		project with the needs of target groups.	report	<p>of RCB-LIPI for research activities donated by Japanese government and collection management.</p> <p>>The Bogor Herbarium was moved from Bogor to Cibinong for the renovation of collection storage facility.</p> <p>>Technical supervision for moving specimens and arrangement of specimen collection racks was provided by the previous BCP project.</p> <p>>New project was planned for the improvement of management capacity of collection and the research activities of RCB.</p>
Priority	Consistency of the project with the Japan's foreign assistance policy and JICA's country programs.		ODA Data book JICA Country assistance policy	<p>-According to ODA data book 2007 published by the MOFA, environment conservation is mentioned as a component of the assistance for the "Formation of democratic and rational society", which is one of the four important issues.</p> <p>-According to JICA's Country assistance policy, environment is placed as one of five development issues. Programs of conservation of biodiversity and forest and natural environment are being implemented.</p>
	Consistency of the project with the partner country's development plans.		Preparatory study report	<p>"Development of natural resources and the environment" is mentioned among five important issues mentioned in the national development plan of Indonesia.</p> <p>-LIPI is nominated as an implementing agency of various programs mentioned in the Indonesian Biodiversity Strategy and Action Plan, 2003-2020.</p>
Relevance as a Means	Production of the impact of project strategy on development issues in related sector of the partner country.		Interview Publications of the RCB	<p>-The approach of the project to support the ability and intention of the researchers is appropriate.</p> <p>-Financial support from private companies was provided by the cooperation with LIPI. At the same time it was possible to raise public recognition of LIPI.</p> <p>-The project rose attention of the embassy of Sweden and the proceeding of the event celebrating the 300 anniversary of Linnaeus's birth.</p> <p>-The project prepared guide books on UNESCO's MAB site upon request of LIPI, which is being the secretariat of the program in Indonesia.</p>
	Relevance of the project from the equality point of view.		Interview Log book	<p>-The project has effects in equality point of view, for example;</p> <p>>The center and the equipments are utilized not only by the researchers of RCB but also private companies and other institutions for the utilization of microorganisms under the ministries of agriculture and industry.</p> <p>>The facilities and equipments are utilized for the training of candidate researchers from the institutions other than RCB.</p>

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub-items		
Effectiveness		<p>Japan's advantage in extending technical cooperation in the related sector or sub-sector.</p> <p>Cost sharing</p>	<p>Interview</p> <p>Interview</p>	<p>-The know-how of culture collection management, research and interpretation of natural history are accumulated in Japan.</p> <p>-The experience of Japan regarding the required technologies have been transferred through the activities of Japanese short-term experts.</p> <p>-Researchers networks between Japan and RCB has been already established in various levels before starting this project.</p> <p>-Cost sharing by the Indonesian part is evaluated to be done sufficiently;</p> <p>>The cost for participation of the Indonesian personnel for the events was shared by the Indonesian part.</p> <p>>Two staffs of the project office were employed by the cost of the Indonesian part.</p>
		<p>Achievement forecast for the project purpose</p>	<p>Interview</p> <p>Specimen loan record</p> <p>PDM</p>	<p>Project purpose: Management capacity of the biodiversity research and collection in RCB is improved and strengthened through its own effort and networking with other institutes.</p> <p>-Objectively verifiable indicators:</p> <ol style="list-style-type: none"> 1. Number of collaborative research program is increased. 2. Number of scientific publication is increased. 3. Number of access to the biological specimens at RCB is increased. <p>In addition to the above three indicators, following item was proposed by the evaluation team for measuring the project purpose more rationally.</p> <ol style="list-style-type: none"> 4. Regulation/SOP is elaborated/ revised. <p>-Number of collaborative research in RCB (corresponding to the indicator 1) are shown in Table 1. It is remaining the same level till 2008 but is increasing 2009. On the other hand, several new collaborative researches are planned in collaboration with the universities of Japan and the U.S., according to the interview.</p>

Table 1. Number of collaborative researches.

Category	2005	2006	2007	2008	2009*1
	55	47	50	53	46

*1 As of 13 June.

-Number of scientific publication (corresponding to the indicator 2) of botany division is increasing from 2007 to 2008 as shown in the Table 2.

Table 2. Number of scientific publications of RCB.

Year	2005	2006	2007	2008
Number of Scientific publication	178	186	170	227

-As specific data on the number of access to the biological specimens at RCB

Evaluation Criteria	Evaluation Items		Data sources	Results																																																																																										
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				<p>(corresponding to the indicator 3)</p> <p>-It is shown the number of service provided by RCB such as identification, preservation analysis and sales of strain in the Table 3.</p> <p>Table 3. Number of service provided by RCB.</p> <table border="1"> <thead> <tr> <th>Division</th> <th>Service</th> <th>2005</th> <th>2006</th> <th>2007</th> <th>2008</th> <th>2009</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Botany</td> <td>Identification</td> <td>365</td> <td>835</td> <td>470</td> <td>623</td> <td>325</td> </tr> <tr> <td>Preservation</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Analysis</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Others</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td></td> <td>Sub total</td> <td>365</td> <td>835</td> <td>470</td> <td>623</td> <td>325</td> </tr> <tr> <td rowspan="4">Microbiology</td> <td>Identification</td> <td>0</td> <td>0</td> <td>13</td> <td>8</td> <td>0</td> </tr> <tr> <td>Preservation</td> <td>0</td> <td>0</td> <td>4</td> <td>1</td> <td>0</td> </tr> <tr> <td>Analysis</td> <td>1</td> <td>0</td> <td>9</td> <td>10</td> <td>6</td> </tr> <tr> <td>Others</td> <td>1</td> <td>0</td> <td>9</td> <td>4</td> <td>4</td> </tr> <tr> <td></td> <td>Sub total</td> <td>2</td> <td>0</td> <td>35</td> <td>23</td> <td>10</td> </tr> <tr> <td></td> <td>Total</td> <td>367</td> <td>835</td> <td>505</td> <td>646</td> <td>335</td> </tr> </tbody> </table> <p>-Draft regulation/SOP (corresponding to the indicator 4) is elaborated for botany and microbiology as follows;</p> <ul style="list-style-type: none"> >"Standard Operating Procedures (SOP) (Prosedur Kerja Baku) Laboratorium di Bidang Botani" for botany. >"Regulasi Laboratorium Bidang Mikrobiologi" for microbiology. <p>Output 1: The facility and equipment of RCB are fully utilized for RCB to perform its mandate and responsibility.</p> <p>-Objectively verifiable indicator:</p> <ul style="list-style-type: none"> 1-1 Number of new research activities is increased. 1-2 Number of visiting scientists to RCB is increased. 1-3 Intensity of equipment usage is increased. <p>-No specific data representing the number of new research activities (corresponding to the indicator 1-1) was available. However, according to the interview, it is confirmed several new joint research between the universities of Japan and the U.S.</p> <p>-Number of foreign scientists (corresponding to the indicator 1-2) visited RCB are increasing year by year after the project started as shown in the Table 4.</p> <p>Table 4. Number of foreign scientists.</p> <table border="1"> <thead> <tr> <th>Category</th> <th>2005</th> <th>2006</th> <th>2007</th> <th>2008</th> <th>2009</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Division	Service	2005	2006	2007	2008	2009	Botany	Identification	365	835	470	623	325	Preservation	0	0	0	0	0	Analysis	0	0	0	0	0	Others	0	0	0	0	0		Sub total	365	835	470	623	325	Microbiology	Identification	0	0	13	8	0	Preservation	0	0	4	1	0	Analysis	1	0	9	10	6	Others	1	0	9	4	4		Sub total	2	0	35	23	10		Total	367	835	505	646	335	Category	2005	2006	2007	2008	2009						
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Evaluation Criteria	Evaluation Items		Data sources	Results																											
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				<p>-Intensity of equipment usage (corresponding to the indicator 1-3) is increased in general as follows;</p> <p>>Regarding the Microbiology division, the usage of equipments such as UV spectrophotometer, HPLC and genetic analyzer increased remarkably as shown in Table 5.</p> <p>>Regarding the Botany division, Liquid Nitrogen Producer, which was not been used before starting the project is being used now.</p>																											
				<p align="center">Table 5. Number of equipment usage.</p> <table border="1"> <thead> <tr> <th>Equipment</th> <th>2007</th> <th>2008</th> <th>2009</th> </tr> </thead> <tbody> <tr> <td>SHIMAZU spectrophotometer</td> <td>34</td> <td>81</td> <td>21</td> </tr> <tr> <td>UV spectrophotometer</td> <td>111</td> <td>291</td> <td>52</td> </tr> <tr> <td>HPLC</td> <td>23</td> <td>129</td> <td>26</td> </tr> <tr> <td>Genetic analyzer</td> <td>12</td> <td>63</td> <td>4</td> </tr> <tr> <td>Liquid nitrogen producer</td> <td>-</td> <td>-</td> <td>Daily</td> </tr> </tbody> </table> <p>Source: log book of the equipments of RCB.</p>				Equipment	2007	2008	2009	SHIMAZU spectrophotometer	34	81	21	UV spectrophotometer	111	291	52	HPLC	23	129	26	Genetic analyzer	12	63	4	Liquid nitrogen producer	-	-	Daily
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	Achievement forecast for Output 2.	Draft MTA Interview	<p>Output 2: Valuable specimen collections are preserved and utilized for the benefit of Indonesian and international researchers through the network among institutes and researchers.</p> <p>-Objectively verifiable indicator:</p> <p>2-1 Draft of comprehensive MTA*² is prepared.</p> <p>*²MTA is defined as "Document of transfer of materials for research purpose" of RCB.</p> <p>2-2 Number of specimens managed is increased.</p> <p>2-3 Number of access to the specimen database from the outside is increased.</p> <p>-Draft of MTA (corresponding to the indicator 2-1) for microbiology is already prepared. It will be authorized before the completion of the project.</p> <p>-The MTA for zoology and botany had already been authorized and is used by the researchers.</p> <p>-Herbarium specimens managed (corresponding to the indicator 2-2) are gradually increased as shown in the Table 6.</p>																												
			<p align="center">Table 6. Number of herbarium specimens managed.</p> <table border="1"> <thead> <tr> <th></th> <th>Jan.07</th> <th>Jan.08</th> <th>Jan.09</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Jan.07	Jan.08	Jan.09																					
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				<p>^{*3}Including carpological specimens.</p> <p>-Though there were not existed managed microbiological specimens before the implementation of the project, at present there are several managed specimens.</p> <p>-Status of microbiological specimen/culture during 2006-2009 is shown in the Table 7. And status of microbiological specimen/culture with validation also is increasing at not only species level but also genus level as shown in the Table 8 and 9.</p>																																
				<p>Table 7. Status of microbiological specimen/culture 2006-2009</p> <table border="1"> <thead> <tr> <th rowspan="2">Taxon</th> <th colspan="4">Number of strains</th> </tr> <tr> <th>2006*</th> <th>2007**</th> <th>2008**</th> <th>2009***</th> </tr> </thead> <tbody> <tr> <td>Bacteria</td> <td>100</td> <td>200</td> <td>300</td> <td>220 (100%validated)</td> </tr> <tr> <td>Actinomycetes</td> <td>0</td> <td>173</td> <td>173</td> <td>348 (100%validated)</td> </tr> <tr> <td>Yeast</td> <td>300</td> <td>350</td> <td>450</td> <td>475 (100%validated)</td> </tr> <tr> <td>Filamentous fungi (mold)</td> <td>500</td> <td>600</td> <td>600</td> <td>743 (89%validated = 743 of 837)</td> </tr> </tbody> </table> <p>(grey shading means not validated yet or revalidation still in progress)</p> <p>* not validated</p> <p>** revalidation in progress</p> <p>*** revalidation completed</p>				Taxon	Number of strains				2006*	2007**	2008**	2009***	Bacteria	100	200	300	220 (100%validated)	Actinomycetes	0	173	173	348 (100%validated)	Yeast	300	350	450	475 (100%validated)	Filamentous fungi (mold)	500	600	600	743 (89%validated = 743 of 837)
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	The relation of cause and effect	Achievement as the result of outputs.	Interview PDM																																											

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub-items		
		Influence of important assumptions on the attainment of the project purpose. Hindering/contributing factors for effectiveness.	Interview PDM Interview	purpose, can be attained as a result of improving the utilization of the facility and equipment (Output 1). On the contrary, Output 2 will not lead directly to the project purpose but rather seems to be fitting directly for the overall goal. -Important assumptions continued to be stable, hence there were not substantial influence of important assumptions. -Remarkable hindering factors were not recognized. -The substantial concern about the climatic change is recognized as a contributing factor. -The concern of Japanese government about the biodiversity conservation is increasing, expecting the COP 10 of the CBD.
Efficiency	Inputs	Japanese expert	Project report Interview	-All long term experts were dispatched in accordance with the schedule. -Among twelve short term experts planned; >Ten experts were dispatched on schedule. >One expert is under procedure of dispatch. >One expert is replaced by local expert. -The activities of the short term expert were evaluated to be almost efficient. -It is pointed out that there is a necessity of assuring the effects of activities of the short-term experts during their absence.
		Equipment	Project record Interview	-Appropriate amount and quality of equipments necessary for the implementation of the project were provided as shown in the attached list.
	Indonesian counterpart personnel	Project record Interview	-Counterpart personnel were assigned as enumerated in the PDM. -The qualification of the counterpart personnel was sufficient for the implementation of the project. -Personnel in RCB who were not assigned officially as counterpart also participated to the activities of the project. -New II team was organized.	
	Counterpart training	Project record Interview	-Counterpart training in Japan was conducted for capacity building. -Six counterpart personnel from RCB were planned and eventually twelve persons participated to the training.	
	Project budget	Project record Interview	-Additional budget was provided by the Indonesian government for the initiation of the project.	
	Office	Project record Interview	-Two office assistant personnel were employed by the budget of Indonesian part. -Office space was provided within the building of RCB together with necessary furniture.	

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub items		
Impact	The relation of cause and effect	Implementation of inputs in comparison with the timeframe.	Interview	-The inputs were provided at appropriately in comparison with the timeframe of two and a half years.
		Timing of input implementation.	P/O	-Timing of input was appropriate in accordance with the P/O.
		Size and the quality of inputs.	Interview	-The size and the quality of the inputs were almost appropriate. -Some activities of the short-term experts should be increased.
		Justification of the cost of inputs by the degree of achievement of outputs.	Interview	-The cost was evaluated to be almost appropriate in relation to the outputs.
	Achievement of overall goal	Prospect of the achievement of the overall goal.	Interview	Overall goal: RCB becomes the nationally and internationally recognized center for tropical biodiversity research, conservation and sustainable utilization. -Objectively verifiable indicator: 1. Number of national and international symposium, seminar and workshop is increased. 2. Number of validated specimen is increased. 3. Draft MTA is authorized by LIPI. -Several times of national and international symposium, seminar and workshop (corresponding to the indicator 1) are held in the years of 2007 and 2008. This tendency will continue after the completion of the project if the important assumptions remain unchanged. -Number of validated specimen (corresponding to the indicator 2) is already increased since the project started. It will increase if the research projects of microbiology implemented continuously. -Draft MTA (corresponding to the indicator 3) is already elaborated and it will be authorized by RCB-LIPI before the completion of the project. -In addition, Bogor Herbarium and Zoological Museum are already recognized internationally. -Impact to the development plan of counterpart government is expected as follows; >Impact through the economic contribution by the research for exploring beneficial varieties/strains or the utilization of the plants which absorb heavy metals is expected. >Since the conservation of natural environment is mentioned in the national development plan of Indonesia, it is expected to have impact other than the
	Prospect of the impact to the development plan of counterpart government through the achievement of the overall goal.	Interview Preparatory study report		

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub-items		
The relation of cause and effect	Alienation between the overall goal and the project purpose. Factors hindering the achievement of overall goal. Change of the important assumptions of the project purpose. Possibility of being satisfied the important assumption.		Interview	economic point of view. -There is no alienation between them; however the project purpose is not completely leading to the overall goal. Overall goal is supposed to be too ambitious. -Remarkable hindering factor is not recognized.
			Interview	-Important assumption is remaining the same as the beginning of the project at this moment. -The possibility of being satisfied the important assumptions are high.
			Interview	-Impact to the policy of conservation of natural environment is expected through preparing the Red List, scrutinizing local flora and fauna and more detailed than that of IUCN. -A draft of Plant Red List is prepared in collaboration of the project. -RCB is expected to be the implementing center for Asian-Pacific Biodiversity Inventory Program. -New MAB site was designated in Riau Province.
Ripple effects	Impact to the policy, law, regulation and standards. Impacts by Technological revolution. Economic impacts to the target society, stakeholders of the project and the beneficiary. Impacts to the academic activities		Interview	-Remarkable impacts were recognized in microbiology division. >Fungi and bacteria used to be identified without using molecular information before the implementation of the project. Now it is possible to identify them using the results of DNA analysis.
			Interview	-Impacts are produced by instructing the operation of the equipment, elaboration of the SOPs, etc. -Network is being established by training in Japan and exchange of researchers. -Special budget is allocated by the DGHE, Ministry of Education. -Small amount of positive economic impact is generated by marketing of products such as T-shirts, field guides and accessories using insect specimen.
			Interview	-MOU for research cooperation was agreed with the University of California Davis for implementing research projects. -Several cooperation research projects are being implemented with universities such as Hokkaido University and Kagoshima University in Japan. -Delegation from Nagoya University is visiting for preparatory information exchange in scope of scientific cooperation.

Evaluation Criteria	Evaluation Items		Data sources	Results																
	Main Items	Sub items																		
Sustainability	Political/ Institutional aspect	Prospect of continuing political support after the termination of the project and relating laws and regulations are provided	Interview	<p>-Research School Program is started this year in collaboration with universities in Indonesia and foreign universities.</p> <p>-Political support is expected to continue judging from the following facts; >The president and the vice president of Indonesia have visited RCB. -It is considered that the relating laws and regulations are established. >Indonesian government has drawn up the IBSAP (Indonesian Biodiversity Strategy and Action) in 2003 for implementing the effort for the conservation of biodiversity. >BRC (Bio resource center) will be established in the next five year national research program.</p>																
	Organizational aspect	Allocation of the personnel	Interview	<p>-Personnel are allocated in adequate number: however it is slightly recognized the necessity of improving the communication and information sharing among the personnel. -LIPI employs 200-300 new researchers every year and the young researchers are allocated for RCB. Capacity building of those researchers will be a task of RCB. -Decision making is undertaken by the participation of related staffs.</p>																
	Ownership of The implementing agency.	Process of decision making	Interview	<p>-Ownership of LIPI and RCB is recognized to be sufficient. >The plan of sub activities of the project was elaborated by the active participation of LIPI. >IT team has elaborated the five year plan of the new IBIS on its own.</p>																
	Secure budget allocation by the government including operating expense.	Annual budget allocated for RCB	Interview	<p>-Budget is secured as plenty as possible, however it is not sufficient, not exceptional for an assistance project. -Budget allocation for the running cost of RCB has increased remarkably after starting the project.</p>																
		Budget for research activities	Interview	<p>-Total budget for RCB is decreasing since 2007. On the contrary, the ratio of research budget is increasing, as shown in the Table 14.</p>																
				<p>Table 14. Research budget of RCB (Rp.).</p> <table border="1"> <thead> <tr> <th>Year</th> <th>2007</th> <th>2008</th> <th>2009*4</th> </tr> </thead> <tbody> <tr> <td>Total budget</td> <td>41,410,318,500</td> <td>39,494,511,000</td> <td>36,879,349,800</td> </tr> <tr> <td>Budget for research</td> <td>4,341,994,224</td> <td>4,180,708,924</td> <td>13,484,068,800</td> </tr> <tr> <td>Ratio (%)</td> <td>10.5</td> <td>10.6</td> <td>36.6</td> </tr> </tbody> </table>	Year	2007	2008	2009*4	Total budget	41,410,318,500	39,494,511,000	36,879,349,800	Budget for research	4,341,994,224	4,180,708,924	13,484,068,800	Ratio (%)	10.5	10.6	36.6
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			<p>*4The budget of 2009 includes Rp.8.3 billion allocated by the DGHE, Ministry of Education. -Budget allocation of Rp.8.3 billion by the DGHE is a favorable factor for</p>																	

Evaluation Criteria	Evaluation Items		Data sources	Results
	Main Items	Sub items		
Technical aspect				enhancing the research activities. -Special research fund is allocated in the year 2007 and 2008 for the research of avian influenza.
		Level of the technique	Interview	-Level of the technique is appropriate and is learned efficiently by the counterpart personnel.
		Appropriateness of the management and maintenance of the equipments and materials.	Interview	-Equipments are managed and maintained almost appropriately. >There are no equipments or materials left without using. >Occasional difficulty of procurement of chemical materials is caused by temporary financial shortage.
Social, cultural And Environmental aspect		Possibility of hindering the sustainable effects because of lacking environmental consideration etc.		-Waste management is conducted in accordance with Indonesian laws and regulations. -Environmentally friendlier waste management will be attained by improving the acid and alkaline waste treatment facility, maintenance of sewerage treatment tanks, and appropriate incineration of the solid wastes.

Appendix A-2: Activity cost born by Indonesian side

(1) Budget

(Unit: Rp.)

	IFY 2007	IFY 2008	IFY 2009	Total
Laboratory activities implementation	135,626,000	200,000,000	150,000,000	485,626,000
Digital Library development	214,260,000	133,411,000	97,634,000	445,305,000
Herbarium specimen rehabilitation and counter budget for Japanese Grant Aid	2,942,660,000	0	0	2,942,660,000
Collection management, equipment for research, and collection database application development	0	982,850,000	695,234,000	1,678,084,000
計	3,292,546,000	1,316,261,000	942,868,000	5,551,675,000

(2) Exercise

(Unit: Rp.)

	IFY 2007	IFY 2008	IFY 2009	Total
Laboratory activities implementation	135,599,300	199,903,564		335,502,864
Digital Library development	202,185,210	126,530,850		328,716,060
Herbarium specimen rehabilitation and counter budget for Japanese Grant Aid	2,897,669,047	981,473,650		3,879,142,697
Collection management, equipment for research, and collection database application development	0			0
計	3,235,453,557	1,307,908,064	0	4,543,361,621

Appendix B-1: List of Japanese Experts

Name	Assignment	Period	Office affiliated
林 浩	Coordinator/Public Awareness & Education	31/03/07-30/09/09	NDC Corporation Co., Ltd
治 哲郎	Chief Advisor	26/09/07-25/09/09	Ministry of Environment
岡 誠行	Coordination of Research Activities/Programs	20/06/07-15/12/07	Museum of Nature and Human Activities, Hyogo
岡 誠行	Coordination of Research Activities/Programs	03/02/08-30/07/08	Museum of Nature and Human Activities, Hyogo
木 健一朗	Culture collection management 1	13/02/08-23/02/08	National Institute of Technology and Evaluation
桐 昭	Culture collection management 2	13/02/08-23/02/08	National Institute of Technology and Evaluation
田 幸代	IT and database	24/02/08-23/03/08	Japan Development Service Co., Ltd
岡 誠行	Coordination of Research Activities/Programs	07/09/08-04/03/09	Museum of Nature and Human Activities, Hyogo
木 健一朗	Material Transfer Agreement (MTA)	05/11/08-15/11/08	National Institute of Technology and Evaluation
藤 博俊	Biodiversity research (plant Molecular systematic)	08/12/08-20/12/08	Kyoto University
野 孝男	Cryopreservation for research and storage of biological materials	10/12/08-27/12/08	National Institute of Agrobiological Sciences
木 健一朗	Molecular analyses for microbial systematic	07/02/09-17/02/09	National Institute of Technology and Evaluation
桐 昭	Preservation of microbial cultures 1	03/03/09-13/03/09	National Institute of Technology and Evaluation
岡 誠行	Coordination of Research Activities/Programs	12/04/09-30/09/09	Museum of Nature and Human Activities, Hyogo
田 幸代	Development and evaluation for Database of Biodiversity	28/04/09-06/06/09	Japan Development Service Co., Ltd
木 正人	Culture Collection Management	18/05/09-14/09/09	National Institute of Technology and Evaluation
田 博	Plant Molecular Systematic	20/08/09-31/08/09	Osaka City University
	Cell Culture Maintenance & Assay	xx/08/09-xx/08/09	under preparation

Appendix B-2: List of the equipment provision

JFY 2007

Origin	Date	Main items	Cost	
Japan		none	0	JPY
Indonesia	Apr-08	Automobile (4WD)	234,500,000	IDR
	Sep-07	Notebook PC	1,450	USD
	Sep-07	Software	240	USD
	Sep-07	Software	40	USD
	Sep-07	Desktop PC	1,295	USD
	Sep-07	Software	1,450	USD
	Sep-07	Software	40	USD
	Sep-07	Printer	610	USD
	Sep-07	A3 size Scanner	1,740	USD
	Sep-07	LCD Projector	965	USD
	Oct-07	Photocopy Machine	18,980,000	IDR
	Mar-08	Reagents and small equipment for research, PC and other equipment for data base, AV equipment etc. (procured by the project directly)	660,215,715	IDR
Total			0	JPY
			913,695,715	IDR
			7,830	USD

JFY 2008

Origin	Date	Main items	Cost	
Japan		none	0	JPY
Indonesia	Mar-09	Reagents and small equipment for research, PC and other equipment for data base, AV equipment etc. (procured by the project directly)	1,737,853,620	IDR
Total			0	JPY
			1,737,853,620	IDR
			0	USD

JFY 2009

Origin	Date	Main items	Cost	
Japan		none	0	JPY
Indonesia	plan	Refractive Index Detector for HPLC	163,020,000	IDR
	plan	Reagents and small equipment for research, etc. (procured by the project directly)		IDR
Total			0	JPY
			163,020,000	IDR
			0	USD

Appendix B-3: List of Training program for the C/P

Type	Name of C/P	Post when training	Present post	Period	Title	Responsible organization
C/P training	Mr. Arif Hidayat	Botany div., RCB	Botany div., RCB	23/02/08-25/03/08	specimen collection management	Museum of Nature and Human Activities, Hyogo
	Ms. Atit Kanti	Microbiology div., RCB	Microbiology div., RCB	23/02/08-20/03/08	Culture collection management	National Institute of Technology and Evaluation
	Mr. Rohmanah	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	16/09/08-08/11/08	Biodiversity information system	
	Mr. Achmad Dinoto	Microbiology div., RCB	Microbiology div., RCB	24/11/08-19/12/08	Culture collection management	National Institute of Technology and Evaluation
	Mr. Heddy Julistiono	Microbiology div., RCB	Microbiology div., RCB	24/11/08-05/12/08	Culture collection management policy	National Institute of Technology and Evaluation
	Mr. Muhammad Ilyas	Microbiology div., RCB	Microbiology div., RCB	24/11/08-19/12/08	Culture collection management technique	National Institute of Technology and Evaluation
	Mr. Heryanto	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	08/02/09-07/03/09	Public awareness & education	Museum of Nature and Human Activities, Hyogo
	Mr. Mohammad Irfham	Zoology div. RCB	Zoology div. RCB	08/02/09-07/03/09	Collection Management (Zoology)	Museum of Nature and Human Activities, Hyogo
	Mr. Alex Sumadjiaya	Botany div., RCB	Botany div., RCB	08/02/09-07/03/09	Collection Management (Botany)	Museum of Nature and Human Activities, Hyogo
	Mr. Uway Warsita Mahyar	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	07/07/09-23/07/09	Waste management and processing	
	Mr. Dewi Susan	Botany div., RCB	Botany div., RCB	xx/07/09-xx/08/09	Collection Management (Botany)	
	Mr. Pesigrihastamadya Normakristagaluh	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	18/08/09-09/10/09	Biodiversity information system	
	Mr. Rifaie Farid	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	16/09/08-08/11/08	Biodiversity information system	
	Mr. Arwan Sugiharto	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	11/05/09-18/07/09	Advanced Bioindustry	
	Mr. Awal Riyanto	Zoology div. RCB	Zoology div. RCB	14/06/09-22/08/09	Wildlife issue solutions for Biodiversity Conservation	
	Mr. Muhamad Ruslan	Facility & Collection Management div. RCB	Facility & Collection Management div. RCB	18/08/09-09/10/09	Biodiversity information system	
	Ms. Vera Budi Lestari	Botany div., RCB	Botany div., RCB	15/09/09-15/12/09	Intensive course of Museology	
Ms. Mohammad Fathi Royyani	Botany div., RCB	Botany div., RCB	15/09/09-15/12/09	Intensive course of Museology		
Mr. Arif Nurkanto	Microbiology div., RCB	Microbiology div., RCB	04/11/08-21/11/08	Environment Conservation		
Ms. Siti Sundari	Botany div., RCB	Botany div., RCB	04/11/08-21/11/08	Environment Conservation		
Youth training Program						

Appendix B-4: Local activity cost born by Japanese side

(1) Budget

(Unit: Rp.)

	JFY 2007	JFY 2008	JFY 2009	Total
Miscellaneous	746,325,000	2,036,275,000	712,500,000	3,495,100,000
Air Fare	0	0	0	0
Travel Allowance	15,850,000	57,200,000	11,100,000	84,150,000
Fees and honorarium (non-staff)	22,825,000	138,720,000	43,900,000	205,445,000
Contract with Local Based Consultant	160,000,000	53,000,000	0	213,000,000
Contract with Local Based NGO	0	28,000,000	0	28,000,000
Commission Contract (others)	0	0	0	0
Refreshments	11,000,000	139,000,000	72,000,000	222,000,000
計	956,000,000	2,452,195,000	839,500,000	4,247,695,000

(2) Exercise

(Unit: Rp.)

	JFY 2007	JFY 2008	JFY 2009	Total
Miscellaneous	921,189,909	2,218,932,605		3,140,122,514
Air Fare	0	36,602,300		36,602,300
Travel Allowance	2,800,000	22,495,000		25,295,000
Fees and honorarium (non-staff)	9,356,000	51,935,025		61,291,025
Contract with Local Based Consultant	18,500,000	73,000,000		91,500,000
Contract with Local Based NGO	0	0		0
Commission Contract (others)	0	0		0
Refreshments	4,154,000	49,230,000		53,384,000
計	955,999,909	2,452,194,930	0	3,408,194,839