

2. 討議議事録及び暫定実施計画

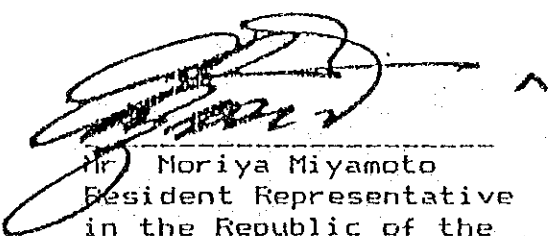
<討議議事録>

RECORD OF DISCUSSIONS  
BETWEEN THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF JAPAN  
AND THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES  
ON JAPANESE TECHNICAL COOPERATION FOR  
THE SOIL RESEARCH AND DEVELOPMENT CENTER PROJECT

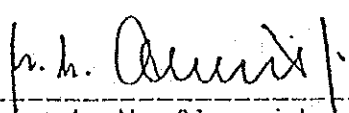
The Japan International Cooperation Agency (hereinafter referred to as "JICA"), with regard to the recommendation of the Minutes of Discussions of the Preliminary Survey Team dated December 1, 1988, had a series of discussions through the Resident Representative of JICA in the Philippines with the authorities concerned of the Government of the Republic of the Philippines covering desirable measures to be taken by both Governments for the successful implementation of Japanese Technical Cooperation on the Soil Research and Development Center Project.

As a result of the discussions, JICA and the authorities concerned of the Government of the Republic of the Philippines agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Manila, April 25, 1989



Mr. Noriya Miyamoto  
Resident Representative  
in the Republic of the  
Philippines  
Japan International  
Cooperation Agency



Mr. Godofredo N. Alcasid, Jr.  
Director  
Bureau of Soils and Water  
Management  
Department of Agriculture

## THE ATTACHED DOCUMENT

### I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Republic of the Philippines will cooperate with each other in implementing the Soil Research and Development Center Project (hereinafter referred to as "the Project") for the purpose of increasing agricultural productivity and profitability through developing applicable soil research and farming technology.
2. The Project will be implemented in accordance with the Master Plan which is given in I of the Annex.

### II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide, at its own expense, the services of Japanese experts as listed in II of the Annex through normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. Privileges, exemptions and benefits to be granted by the Government of the Republic of the Philippines to the Japanese experts and their families in the Republic of the Philippines will be no less favorable than those granted to experts of third countries or of international organizations such as the United Nations who are performing similar missions, and will include the following:
  - (1) Exemption from income taxes and charges of any kind imposed on or in connection with the living allowances remitted from abroad in relation to implementation of the Project;
  - (2) Exemption from import and export duties and any other charges imposed in respect of personal and household effects which may be brought in from abroad or taken out of the Republic of the Philippines;
  - (3) Exemption from import taxes, import sales taxes, sales taxes and other taxes and charges of any kind imposed on or in connection with the purchase in the Republic of the Philippines by the Japanese experts of one motor vehicle per expert; and

- (4) Free local medical services and facilities for the Japanese experts and their families as may be allowed and in accordance with the laws and regulations of the government of the Republic of the Philippines.

### III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide, at its own expense, such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for implementation of the Project as listed in III of the Annex through normal procedures under the Colombo Plan Technical Cooperation Scheme.
2. The Equipment will become the property of the Government of the Republic of the Philippines upon being delivered cost of Insurance Freight (CIF) to the authorities of the Philippines concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for implementation of the Project on consultation with the Japanese experts referred to in II of the Annex.

### IV. SPECIAL MEASURES TO BE TAKEN BY THE GOVERNMENT OF JAPAN

In order to assure smooth implementation of the Project in accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA:

1. To supplement a portion of the local expenditures, including travel allowances related to travel tours and field training for instructors and trainees, special instructors' fees and supplementary costs for training materials in the Republic of the Philippines;
2. To supplement a portion of the local expenditures for the execution of physical infrastructure of the Project including construction work of the experimental farm, when necessity arises.

### V. TRAINING OF FILIPINO PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to accept, at its

own expense, Filipino personnel connected with the Project for technical training in Japan through normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Republic of the Philippines will take necessary measures to ensure that the knowledge and experience acquired by Filipino personnel who have received technical training in Japan will be utilized effectively for implementation of the Project.

#### VI. SERVICES OF FILIPINO COUNTERPART AND ADMINISTRATIVE PERSONNEL

1. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to secure, at its own expense, the necessary services of Filipino counterpart and administrative personnel as listed in IV of the Annex.
2. The Government of the Republic of the Philippines will allocate the necessary number of suitably qualified personnel corresponding to the number of Japanese experts to be dispatched by the Government of Japan, as specified in II of the Annex, for complete effective transfer of technology under the Project.

#### VII. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

1. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to provide, at its own expense:
  - (1) Land, buildings and facilities as listed in V of the Annex;
  - (2) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for implementation of the Project other than those provided through JICA under III mentioned above;

- (3) Transportation facilities and domestic travel allowances for official travel by Japanese experts in the Republic of the Philippines; and
  - (4) Suitably furnished accommodations for the Japanese experts and their families.
2. In accordance with the laws and regulations in force in the Republic of the Philippines, the Government of the Republic of the Philippines will take necessary measures to meet:
- (1) Expenses necessary for domestic transportation of the Equipment in the Republic of the Philippines, as well as for installation, operation and maintenance thereof;
  - (2) Customs duties, internal taxes and other charges imposed on the Equipment in the Republic of the Philippines; and
  - (3) All running expenses necessary for implementation of the Project.

#### VIII. ADMINISTRATION OF THE PROJECT

1. The Secretary, Department of Agriculture, will bear overall responsibility for implementation of the Project.
2. The Director of the Bureau of Soils and Water Management (Executive Director, Soil Research and Development Center) as the Head of the Project, will be responsible for administrative and managerial matters covering the Project with the support of the Project Manager on the technical matters of the Project.
3. The Japanese Team Leader will provide necessary recommendations and advice to the Head of the Project on technical and administrative matters concerning implementation of the Project.
4. The Japanese experts will give necessary technical guidance and advice through joint research to the Filipino counterpart personnel on matters pertaining to implementation of the Project.
5. For complete and effective implementation of the Project, a Joint Committee will be established with the functions and compositions as referred to in VI of the Annex.

#### IX. CLAIMS AGAINST JAPANESE EXPERTS


The Government of the Republic of the Philippines undertakes to bear claims, if any should arise, against the Japanese experts engaged in the Project, resulting from, occurring in the course of, or otherwise connected with, the discharge of their official functions in the Republic of the Philippines except for those arising from willful misconduct or gross negligence on the part of the Japanese experts.

#### X. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with, this attached document.

#### XI. TERM OF COOPERATION

The duration of Technical Cooperation for the Project under this attached document will be five (5) years from July 1, 1989.



## ANNEX

### I. MASTER PLAN

#### 1. Objectives of the Project

The Project is to be executed by the Soil Research and Development Center (presently the Bureau of Soils and Water Management, Department of Agriculture) for the purpose of increasing agricultural productivity and profitability through developing and propagating applicable soil research and farming technology.

#### 2. The Japanese Technical Cooperation for the Project activity will include as follows:

- (1) To expedite the soil survey
- (2) To develop the land evaluation system
- (3) To expedite soils and fertilizers research
- (4) To expedite soil management research
- (5) To conduct agricultural extension training.

### II. JAPANESE EXPERTS

1. Team Leader
2. Coordinator
3. Experts in the fields of:
  - (1) Soil Survey
  - (2) Land Evaluation
  - (3) Soils and Fertilizers
  - (4) Soil Management
  - (5) Agricultural Extension Training

NOTE: Short-term experts in Data Processing, Remote Sensing, Cartography, Water Conservation Management and in other fields shall be dispatched as the need arises for smooth implementation of the Project.

### III. LIST OF EQUIPMENT

1. Machinery, equipment, instruments, tools, spare parts, thereof, and other materials for the laboratory and field survey
2. Audio-visual equipment
3. Vehicles and their spare parts
4. Books and other necessary printed matters
5. Other necessary equipment and materials related to the Project

### IV. LIST OF FILIPINO COUNTERPART AND ADMINISTRATIVE PERSONNEL

1. Head of the Project (Director of the Bureau of Soils and Water Management, Department of Agriculture)
2. Deputy Head of the Project
3. Project Manager
4. Counterpart personnel in the fields of:
  - (1) Soil Survey
  - (2) Land Evaluation
  - (3) Soils and Fertilizers
  - (4) Soil Management
  - (5) Agricultural Extension Training
  - (6) Other fields concerned with the Project mutually agreed upon, if necessary.
5. Administrative Personnel
  - (1) Administrative officers
  - (2) Accounting officers
  - (3) Typists



- (4) Key-punchers
- (5) Other necessary officers
6. Other personnel mutually agreed upon, if necessary.

#### V. LIST OF LAND, BUILDINGS AND FACILITIES

1. Land, buildings and facilities for the Project
2. Rooms and space necessary for installation and storage of machinery, equipment and materials provided by the Government of Japan
3. Office space and necessary facilities for the Japanese Team Leader, Coordinator and Experts
4. Other facilities mutually agreed upon, if necessary.

#### VI. JOINT COMMITTEE

##### 1. Functions

The Joint Committee will meet at least once a year and whenever the necessity arises, and work:

- (1) To formulate the Annual Work Plan of the Project in line with the Tentative Schedule of Implementation formulated under the framework of this Record of Discussions;
- (2) To review the overall progress of the Project as well as the achievement of the Annual Work Plan mentioned above; and
- (3) To review and exchange views on major issues arising from or in connection with the Project.

##### 2. Composition

###### (1) Chairman:

Secretary, Department of Agriculture

###### (2) Philippine Side:

- 1) Undersecretary for Regional Operations,  
Department of Agriculture

- 2) Assistant Secretary for Production Group, Department of Agriculture
- 3) Assistant Secretary for Foreign-Assisted Projects, Department of Agriculture
- 4) Assistant Secretary for Planning and Monitoring Group, Department of Agriculture
- 5) Assistant Secretary for Research and Training, Department of Agriculture
- 6) Executive Director, Soil Research and Development Center, (presently Director of the Bureau of Soils and Water Management), Department of Agriculture
- 7) Director of Agriculture Staff, National Economic Development Authority
- 8) Representative of the University of the Philippines
- 9) Representative of the National Irrigation Administration
- 10) Other personnel appointed by the Chairman

(3) Japanese side:

- 1) Team Leader
- 2) Coordinator
- 3) Experts
- 4) Representative of the JICA Philippines Office
- 5) Personnel concerned to be dispatched by JICA Headquarters, if necessary

NOTE: Representative of the Embassy of Japan may attend the Joint Committee as observer

<暫定実施計画>

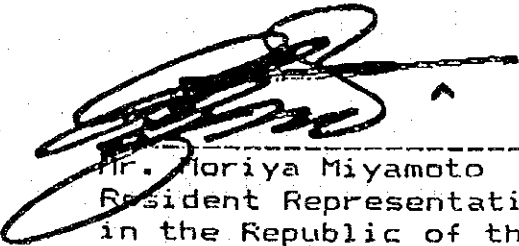
暫定実施計画

TENTATIVE SCHEDULE OF IMPLEMENTATION  
OF THE JAPANESE TECHNICAL COOPERATION  
FOR THE SOIL RESEARCH AND DEVELOPMENT CENTER PROJECT  
IN THE REPUBLIC OF THE PHILIPPINES

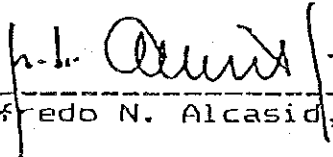
The resident representative of the Japan International Cooperation Agency (hereinafter referred to as "JICA") in the Republic of the Philippines, Mr. Moriya Miyamoto, and the authorities concerned of the Republic of the Philippines have jointly formulated the Tentative Schedule of Implementation for the Soil Research and Development Center Project (hereinafter referred to as "the Project") in the Republic of the Philippines as annexed hereto.

This schedule has been formulated on the basis of the Minutes of Discussions on the Japanese Technical Cooperation for the Project signed on December 1, 1988 between the Preliminary Survey Team dispatched by JICA and the authorities concerned of the Department of Agriculture of the Republic of the Philippines. This schedule presumes that the necessary budget will be allocated for implementation of the Project by both sides, and that the contents of the schedule are subject to change within the framework of the Record of Discussions when the necessity arises in the course of the implementation of the Project.

Manila, April 25, 1989



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Mr. Moriya Miyamoto  
Resident Representative  
in the Republic of the  
Philippines  
Japan International  
Cooperation Agency



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Mr. Godofredo N. Alcasid, Jr.  
Director  
Bureau of Soils and Water  
Management  
Department of Agriculture

ACTIVITIES OF THE PROJECT

ANNEX I

FIELD/ITEM	Y E A R				
	1st (1989)	2nd (1990)	3rd (1991)	4th (1992)	5th (1993/94)
1. SOIL SURVEY :	:	:	:	:	:
1) Soil survey and classification :	:	:	:	:	:
2) Standardization of soil chemico-physical analysis for soil survey :	:	:	:	:	:
3) Remote sensing :	:	:	:	:	:
4) Cartography :	:	:	:	:	:
2. LAND EVALUATION :	:	:	:	:	:
1) Soil suitability for agricultural land use :	:	:	:	:	:
2) Soil information system :	:	:	:	:	:
3. SOILS AND FERTILIZERS :	:	:	:	:	:
1) Soil fertility research, i.e. relationship between soil properties and crop growth :	:	:	:	:	:
2) Improvement of soils :	:	:	:	:	:
3) Fertilizer use and management :	:	:	:	:	:
4. SOIL MANAGEMENT :	:	:	:	:	:
1) Appropriate farming system for soil erosion control :	:	:	:	:	:
2) Water conservation management :	:	:	:	:	:
5. AGRICULTURAL EXTENSION TRAINING, DEV'T OF CURRICULA AND TEACHING MATERIALS :	:	:	:	:	:
1) Updating soil chemico-physical analysis for Center technical staff :	:	:	:	:	:
2) Training for satellite staff :	:	:	:	:	:

ITEM	YEAR				
	1st (1989)	2nd (1990)	3rd (1991)	4th (1992)	5th (1993/94)
I. DISPATCH OF EXPERT	:	:	:	:	:
1. Long-term assignment	:	:	:	:	:
(1) Team Leader	:	:	:	:	:
(2) Coordinator	:	:	:	:	:
(3) Expert	:	:	:	:	:
- Soil Survey	:	:	:	:	:
- Land Evaluation	:	:	:	:	:
- Soils and Fertilizers	:	:	:	:	:
- Soil Management	:	:	:	:	:
- Agricultural Extension Training	:	:	:	:	:
2. Short term assignment	:	Short term experts may be dispatched when the necessity arises.			:
II. ACCEPTANCE OF FILIPINO PERSONNEL IN JAPAN	:	2 - 4 a year			:
III. PROVISION OF EQUIPMENT, MACHINERY AND MATERIALS	:	:	:	:	:
IV. IMPROVEMENT OF EXPERIMENT FIELD INFRASTRUCTURE	:	:	:	:	:

ITEM	YEAR				
	1st (1989)	2nd (1990)	3rd (1991)	4th (1992)	5th (1993/94)
I. ASSIGNMENT OF COUNTERPARTS AND ADMINISTRATIVE PERSONNEL:	:	:	:	:	:
1. Head of the Project	:	:	:	:	:
2. Deputy Head of the Project	:	:	:	:	:
3. Project Manager	:	:	:	:	:
4. Counterpart personnel in the field of	:	:	:	:	:
- Soil Survey	:	:	:	:	:
- Land Evaluation	:	:	:	:	:
- Soils and Fertilizers	:	:	:	:	:
- Soil Management	:	:	:	:	:
- Agricultural Extension Training	:	:	:	:	:
- Other fields	:	:	:	:	:
5. Administrative personnel	:	:	:	:	:
- Administrative officer	:	:	:	:	:
- Accounting officer	:	:	:	:	:
- Other officers	:	:	:	:	:
II. PROVISION OF LAND, BUILDING AND OTHER NECESSARY FACILITIES	:	:	:	:	:
III. ALLOCATION OF RUNNING COST OF THE PROJECT	:	:	:	:	:

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3. 詳細暫定実施計画

MINUTES OF DISCUSSIONS  
ON  
THE SOIL RESEARCH AND DEVELOPMENT CENTER PROJECT  
IN  
THE REPUBLIC OF THE PHILIPPINES

The Japanese Consultation Survey Team headed by Dr. Kenji Kurashima had a series of discussion with the authorities concerned of the Government of the Republic of the Philippines to perceive and assess activities of the Soil Research and Development Center Project (hereinafter referred to as "the Project") in the Republic of the Philippines..

As the result of discussions, both sides itemized the tentative schedule of implementation for the Project, annex as per attached. This has been formulated on the basis of the record of discussions and the tentative schedule of implementation of Japanese technical cooperation for the Project signed by the resident representative of the Japan International Cooperation Agency (JICA) in the Republic of the Philippines and the authorities concerned of the Government of the Republic of the Philippines at Manila on April 25, 1989.

Both sides, furthermore, has agreed to increasing Filipino laboratory technicians of chemico-physical analyses in order to improve efficiency of analyses and to achieve better transfer of the technology in the Project.

Manila, April 4, 1990



Dr. Kenji Kurashima  
Leader  
Consultation Survey Team  
Japan International Cooperation  
Agency



Mr. Godofredo N. Alcasid, Jr.  
Director  
Bureau of Soils and Water  
Management  
Department of Agriculture

TENTATIVE SCHEDULE OF IMPLEMENTATION (ITEMIZED)  
OF  
THE TECHNICAL COOPERATION  
ON  
THE SOIL RESEARCH AND DEVELOPMENT CENTER PROJECT

Field/Item	Year	1	2	3	4	5	Remarks
1. SOIL SURVEY							
1) Soil Survey and Classification							
a. Survey and classification based on the the Soil Taxonomy, and development of soil fertility classification							Assisting the soil survey activities of BSWM. Developing them into the soil fertility classification through assembling outputs of other related fields below.
b. Survey on volcanic ash soils for the soil fertility classification							Clarifying soil types based on clay minerals (allophane, halloysite) and soil characteristics for agricultural land use in the Philippines.
c. Survey on paddy field soils for the soil fertility classification							Approaching via Japanese classification of paddy field soils in addition to the Soil Taxonomy.
2) Standardization of soil chemico-physical analysis for soil survey							Conforming methods of survey and analysis including fertility classification, and publishing manuals.
3) Remote Sensing							
a. Latest land use map							Obtaining data through Landsat and Spot satellites. Compounding with topographic maps.
b. Soil water distribution map							Analyzing dry season data of Hinawari and ground observations in addition to the Landsat and Spot. Updating the present climate maps for agricultural use.
4) Cartography							Cartographic operations related to the items above.

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Field/Item	Year	1	2	3	4	5	Remarks
2. Land Evaluation							
1) Soil suitability for agricultural land use							
a. Crop suitability in the natural soil fertility							Referring to 3-1). Comparing crop growth in main soils of the Philippines.
b. Feasibility survey for agricultural development							Referring to 1-2) and 2-1)-a. Studying developmental feasibility in the natural soil condition.
2) Soil information system							
a. Study for data processing system							Discussing the proper data format (coding sheet) for the Philippine soil.
b. Data processing							Input and retrieval of the data collected by BSWM.
3. Soils and Fertilizers							
1) Soil fertility research i.e. relationship between soil properties and crop growth							
a. Research on chemico-physical properties and crop growth in the major soils of the Philippines							Studying deficient and excessive elements (leaf-analysis) at the Bulacan Experiment Station. Setting criteria for the soil analysis including minor elements.
2) Improvement of soils							
a. Research on improvement of methodology for major soils of the Philippines							Studying application effects on soils with deficient elements (at Bulacan Station and the Center's Greenhouse)
3) Fertilizer use and mgt.							
a. Research on fertilizer application to various crops							Studying effects on fertilizer application (N,P,K,Cs) to various crops and soil types. Calculating Cost/Benefit Ratio of each fertilizer.
b. Research on bio-organic fertilizers							Developing and managing bio-organic fertilizers for upland and lowland agriculture.

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Field/Item	Year	1	2	3	4	5	Remarks
4. Soil Management							
1) Appropriate farming system for soil erosion control							
a. Erosion grading based on land use type							Referring to 1-2). Strengthening field erosion surveys using Remote Sensing technique. Comparing forest land with Cogon grass land. Noting the relation between land use and topography.
b. Erosion grading based on soil type							
c. Erosion grading based on topography							
d. Research on erosion control for upland							Studying examples. Multi-story-cropping under coconut in agricultural land and sloping agricultural land technique in uplands.
2) Water conservation wgt.							
a. Search for soil water deficient area							Referring to 1-2). Setting the areas for soil water conservation.
b. Soil water retention in dry season							Studying farmers practices for soil water retention and its improvement.
c. Development of small scale water impounding projects							Improving soil moisture in moisture deficient areas.
5. Agricultural Extension Training, Development of Curricula and Teaching Materials							
1) Updating soil chemico-physical analysis for Center technical staff							Determining analysis standard. Improving analysis speed and precision after training lab. technicians. Utilizing 3-1) for interpretation of results.
2) Training for satellite staff							Improving speed and precision of analyses at satellite labs. through training lab. technicians and lab. assistants after standardizing analysis methods. Utilizing 3-1) for training.
a. Preparation of appropriate training materials							Easy-to-understand manuals, for example.

4. ログフレーム (参考)

ログフレーム (当初/討議録等録署名等)

プロジェクトの要約	指標	実績	重要な外部条件
<p>I. 最終目標</p> <p>フィリピン国の森林生産性が向上される</p>			
<p>II. 上位目標 (調査目標)</p> <p>フィリピンにおいて、土壌分類及び肥力度分類が行われる。さらに土壌診断システム、土壌情報システム、土壌改良法、生物有酸素肥料の利用を含む肥力改良法、土壌保全防止のための作物体系及び水保全のための地帯区分の研究が行われ、森林生産性向上のため農業用地は適用される</p>			
<p>III. プロジェクト目標</p> <p>プロシニクサイトにおいて、土壌の分類、評価、改良及び管理に関する調査、研究及び普及が強化、改善される</p> <p>IV. 成果</p> <p>1. 土壌調査</p> <p>1-1 土壌調査分類方法の確立がなされる</p> <p>(1) Soil Taxonomy及び肥力度分類に基づく土壌調査分類の研究</p> <p>(2) 肥力度分類に適する火山灰土壌分類体系の改善の研究</p> <p>(3) 肥力度分類に適する水田土壌分類体系の改善の研究</p> <p>1-2 土壌理化学分析法の標準化がなされる</p> <p>(1) 肥力度分類を含む土壌理化学分析法・調査法の標準化の研究</p> <p>(2) 標準化された土壌理化学分析法・調査法のマニュアル作成</p> <p>1-3 リモートセンシング・利用技術が確立される</p> <p>(1) 土地利用状況の作成技術の確立</p> <p>(2) 土壌水分分布図の作成技術の確立</p>			

プロジェクトの要約	指 標	実 績	重要な外部条件
<p>1-4 Cartographyの技術が確立される</p> <p>(1) Cartographyの技術の確立</p> <p>(2) 土壌図が発行</p> <p>2. 土地評価システム</p> <p>2-1 農耕地の土壌適性評価システムの開発に関する調査、研究がなされる</p> <p>(1) 自然肥沃条件における作物の土壌適性の研究</p> <p>(2) 開発可能性の調査</p> <p>2-2 土壌情報システムの構築と利用に関する技術が確立される</p> <p>(1) フォーマットの作成</p> <p>(2) データの入力</p> <p>3. 土壌肥料研究</p> <p>3-1 土壌肥沃度の検討、土壌の塩化と作物生育に関する研究がなされる</p> <p>(1) 代表的土壌の理化学的性質と作物生育との関連性に関する研究</p> <p>3-2 土壌改良法に関する研究がなされる</p> <p>(1) 代表的土壌の改良方法に関する研究</p> <p>3-3 培肥法に関する研究がなされる</p> <p>(1) 代表的土壌の有機質と作物間の生育差に関する研究</p> <p>(2) 生物有機肥料の開発と施肥に関する研究</p> <p>4. 土壌管理研究の促進</p> <p>4-1 土壌改良防止のための作物体系の研究が行われる</p> <p>(1) 土地利用形態による養分発生動態に関する研究</p> <p>(2) 土壌改良による養分発生動態に関する研究</p> <p>(3) 地形による養分発生動態に関する研究</p> <p>(4) 畑地における養分防上方法に関する研究</p>			

プロジェクトの要約	格 様	要 求	重要な外部条件
<p>4.2 水保全管理に関する研究が行われる</p> <p>(1) 土壌水分欠乏地帯区分に関する研究</p> <p>(2) 乾燥土壌水分保持の方法に関する研究</p> <p>(3) 小規模他地帯の水循環水質における水保全に関する研究</p> <p>5. 農産物及調理及びカリキュラム、教材の整備</p> <p>5.1 技術者の土壌理化学分析技術が向上する</p> <p>(1) センサー技術への改善された土壌理化学分析技術の調製</p> <p>(2) サテライト技術者への改善された土壌理化学分析技術の調製</p> <p>6. その他の成果</p> <p>(1) 研究成果が学会等に発表される</p> <p>(2) 研究成果の論文が発行される</p> <p>(3) 研究者が学位を取得する</p> <p>(4) セミナー、ワークショップが開催される</p> <p>(5) 研究成果の技術が普及される</p> <p>V. 活 動</p> <p>1. 土壌調査の促進</p> <p>1-1 土壌調査分野に関する助言を行う</p> <p>1-2 土壌理化学分析法の標準化に関する助言を行う</p> <p>1-3 リモートセンシング利用に関する助言を行う</p> <p>1-4 Cartography に関する助言を行う</p> <p>2. 土壌評価システムの開発</p> <p>2-1 農耕地の土壌適正評価に関する助言を行う</p> <p>2-2 土壌情報システムの構築と利用に関する助言を行う</p> <p>3. 土壌肥料研究の促進</p> <p>3-1 土壌肥力低下の検討、土壌の性質と作物生育の確立に関する助言を行う</p> <p>3-2 土壌改良の研究に関する助言を行う</p> <p>3-3 施肥法の研究に関する助言を行う</p> <p>4. 土壌管理研究の促進</p> <p>4-1 土壌侵食防止のための作物体系の研究に関する助言を行う</p> <p>4-2 水保全管理の研究に関する助言を行う</p>	<p>VI. 投 入</p> <p>日本側インプット</p> <p>専門家派遣</p> <p>機材供与</p> <p>研究員受入</p> <p>ローカルコスト負担</p> <p>↑コストに カワサキレポート3月に 運営費 4.5セ P.1-1</p> <p>フィリピン側インプット 土地、建物、施設</p>		

ログフレーム (改訂/終了時評価時)

プロジェクトの要約	指標	実績	重要な外部条件
<p>I. 説明書</p> <p>フィリピン国の森林生態系が向上される</p>	<p>(1) 主要作物の収取が向上する</p> <p>(2) 貧困ライン以下の世帯数が減少する</p> <p>(3) 都市と農村地域の所得格差が減少する</p>		
<p>II. 上位目標(開発目標)</p> <p>フィリピンにおいて、土壌分類及び肥力診断が広く行われる。モ          ちたに土地が、灌漑システム、土壌施肥システム、土壌改良剤、生物          有機肥料の利用を含む肥力診断法、土壌改良剤の施用、土壌改良剤の          施用及び肥料の施用のための地帯区分の研究開発が行われ、森林生態系          向上のために森林生態系が向上される</p>	<p>(1) 土壌分類と土壌肥力診断が農業用地に適用される</p> <p>(2) 肥力診断と肥力診断が農業用地に適用される</p> <p>(3) 土地評価システムが農業用地に適用される</p> <p>(4) 土壌改良剤システムが農業用地に適用される</p> <p>(5) 土壌改良剤が農業用地に適用される</p> <p>(6) 生物有機肥料の利用を含む肥力診断が農業用地に適用される</p> <p>(7) 土壌改良剤の施用のための作物体系が農業用地に適用される</p> <p>(8) 水保全のための地帯区分が農業用地に適用される</p>		<ul style="list-style-type: none"> <li>土壌改良剤センターにより肥料が農家の自己                      評価が行われ、農家が取り入れやすい特定の製                      薬及び問題解決方法に結びついた問題の解決                      がなされている</li> <li>研究費が農民に普及されている</li> <li>農民により研究費が受け付けられている</li> <li>リカレントコストがプロジェクト終了後も配分                      されている</li> </ul>
<p>III. プロジェクト目標</p> <p>プロジェクトにおいて、土壌の分類、評価、改良及び管          理に関する調査、研究及び普及が強化、改善される</p>	<p>土壌の分類、評価、改良及び管理に関する調査、研究及び普及が強化改善され          た内容</p>		<ul style="list-style-type: none"> <li>プロジェクトの組織において調査や必要量の                      研究者が継続性のある研究を行っている</li> <li>移転技術が普及化されないうちで高品質への促進                      が効果的になされる</li> <li>ローコストが普及されている</li> </ul>
<p>IV. 成果</p> <p>I. 土壌調査</p> <p>I-1 土壌調査方法の確立がなされる</p> <p>(1) Soil Taxonomy 及び肥力診断に基づく土壌調査分類の研究</p> <p>(2) 肥力診断法に適合する火山灰土壌調査分類の研究</p> <p>(3) 肥力診断法に適合する水田土壌調査分類の研究</p> <p>I-2 土壌改良剤の普及化がなされる</p> <p>(1) 肥力診断法を含む土壌改良剤の普及化の研究</p> <p>(2) 普及化された土壌改良剤の研究</p> <p>I-3 リモートセンシング・利用技術が確立される</p> <p>(1) 土地利用状況の作成技術の確立</p> <p>(2) 土壌水分測定技術の確立</p>	<p>(1) Soil Taxonomy 及び肥力診断に基づく土壌調査分類の研究結果</p> <p>(2) 肥力診断法に適合する火山灰土壌調査分類の研究結果</p> <p>(3) 肥力診断法に適合する水田土壌調査分類の研究結果</p> <p>(1) 肥力診断法を含む土壌改良剤の普及化に関する研究結果</p> <p>(2) 普及化された土壌改良剤の研究結果</p> <p>(1) 土地利用状況の作成に関する技術確立の結果</p> <p>(2) 土壌水分測定技術に関する技術確立の結果</p>		<ul style="list-style-type: none"> <li>プロジェクトの進捗状況に合わせて専門家                      派遣、研修員の受入、研修の計画が行われて                      いる</li> <li>各施設に調査を置くプロジェクトのスタッフ                      が十分に配置されている</li> <li>衛星画像の取得、検証が適切に行われている</li> <li>各研究機関で研究結果の進捗上の調査が適切に                      行われている</li> </ul>

プロシエグトの要約	摘 要	期 間	受託者外部委託
<p>1-1 Cartographyの技術が確立される</p> <p>(1) Cartographyの技術の確立</p> <p>(2) 土壌図が発行</p>	<p>(1) Cartographyの技術確立の成果</p> <p>(2) 発行される土壌図の種類</p>		
<p>2. 土壌評価システム</p> <p>2-1 農耕地の土壌適性評価システムの開発に関する調査、研究がなされる</p> <p>(1) 自然肥沃度条件における作物の土壌適性の研究</p> <p>(2) 開発可能性の調査</p>	<p>(1) 自然肥沃度条件における作物の土壌適性に関する研究成果</p> <p>(2) 開発可能性調査結果</p>		
<p>2-2 土壌肥力システムの構築と利用に関する技術が確立される</p> <p>(1) フォーマットの作成</p> <p>(2) データの入力</p>	<p>(1) フォーマットの作成に関する技術確立の成果</p> <p>(2) データの入力数</p>		
<p>3. 土壌肥料研究</p> <p>3-1 土壌肥力調査の設計、土壌の性質と作物生育に関する研究がなされる</p> <p>(1) 代表的土壌の理化学的性質と作物生育との関連性に関する研究</p>	<p>(1) 代表的土壌の理化学的性質と作物生育との関連性に関する研究成果</p>		
<p>3-2 土壌改良法に関する研究がなされる</p> <p>(1) 代表的土壌の改良方法に関する研究</p>	<p>(1) 代表的土壌の改良法に関する研究成果</p>		
<p>3-3 施肥法に関する研究がなされる</p> <p>(1) 代表的土壌の施肥量と作物間の生育差に関する研究</p> <p>(2) 生物有機肥料の開発と施肥に関する研究</p>	<p>(1) 代表的土壌の施肥量と作物間の生育差に関する研究成果</p> <p>(2) 生物有機肥料の開発と施肥に関する研究成果</p>		
<p>4. 土壌管理研究の促進</p> <p>4-1 土壌保全防止のための作物体系の研究が行われる</p> <p>(1) 土壌利用形態による窒素発生領域に関する研究</p> <p>(2) 土壌型による窒素発生領域に関する研究</p> <p>(3) 地形による窒素発生領域に関する研究</p> <p>(4) 畑地における窒素発生防止方法に関する研究</p>	<p>(1) 土壌利用形態による窒素発生領域に関する研究成果</p> <p>(2) 土壌型による窒素発生領域に関する研究成果</p> <p>(3) 地形による窒素発生領域に関する研究成果</p> <p>(4) 畑地における窒素発生防止方法に関する研究成果</p>		

プロジェクトの要約	招 徠	要 員	重要な外部条件
<p>4-2 水保全管理に関する研究が行われる</p> <p>(1) 土壌水分不足被害区分に関する研究</p> <p>(2) 乾涸土壌水分保持の方法に関する研究</p> <p>(3) 小規模池地帯の水涵養水増における水保全に関する研究</p> <p>5. 農薬管理施設及びカリキュラム・校舎の整備</p> <p>5-1 技術者の土壌理化学分析技術の向上</p> <p>(1) センター技術者への改善された土壌理化学分析技術の訓練</p> <p>(2) サテライト技術者への改善された土壌理化学分析技術の訓練</p> <p>6. その他の成果</p> <p>(1) 研究成果が学会等に発表される</p> <p>(2) 研究成果の論文が発表される</p> <p>(3) 研究者が学位を取得する</p> <p>(4) セミナー、ワークショップが開催される</p> <p>(5) 研究成果の技術が普及される</p>	<p>招 徠</p> <p>(1) 土壌水分不足被害区分に関する研究結果</p> <p>(2) 乾涸土壌水分保持の方法に関する研究結果</p> <p>(3) 小規模池地帯の水涵養水増における水保全に関する研究結果</p> <p>(1) 訓練終了のセンター技術者数</p> <p>(2) 訓練終了のサテライト技術者数</p> <p>(1) 研究成果の発表回数</p> <p>(2) 発表された論文数</p> <p>(3) 研究者の学位取得数</p> <p>(4) 開催されたセミナー、ワークショップの数</p> <p>(5) 普及された研究成果技術件数</p>	<p>要 員</p>	<p>重要な外部条件</p>
<p>V. 活 動</p> <p>1. 土壌調査の促進</p> <p>1-1 土壌調査分派に関する助産を行う</p> <p>1-2 土壌理化学分析法の標準化に関する助産を行う</p> <p>1-3 リモートセンシング利用に関する助産を行う</p> <p>1-4 Cartography に関する助産を行う</p> <p>2. 土壌評価システムの開発</p> <p>2-1 農耕地の土壌還元状態に関する助産を行う</p> <p>2-2 土壌評価システムの構築と利用に関する助産を行う</p> <p>3. 土壌肥料研究の促進</p> <p>3-1 土壌肥力低下の診断、土壌の性状と作物生育の研究に関する助産を行う</p> <p>3-2 土壌改良の研究に関する助産を行う</p> <p>3-3 施肥法の研究に関する助産を行う</p> <p>4. 土壌管理研究の促進</p> <p>4-1 土壌保全防止のための作物体系の研究に関する助産を行う</p> <p>4-2 水保全管理の研究に関する助産を行う</p>	<p>招 徠</p> <p>VI. 役 入</p> <p>日本国インフラ</p> <p>専門家派遣</p> <p>総件数</p> <p>研究員受入</p> <p>ノーカルコスト負担</p> <p>① 中経教育養成研修費</p> <p>② モバイルインフラ整備</p> <p>③ バイオフィットインフラ整備</p> <p>ファイリビリティインフラ</p> <p>土地、建物、施設</p> <p>合計</p> <p>カウンターパート 47名</p> <p>運営費 1,511百万円</p>	<p>要 員</p> <p>民間専門家 11名</p> <p>民間専門家 20名</p> <p>148 百万円</p> <p>16名</p> <p>5百万円</p> <p>25 百万円</p> <p>50 百万円</p> <p>カウンターパート 47名</p> <p>運営費 1,511百万円</p>	<p>重要な外部条件</p>





JICA