

AGRICULTURAL DEVELOPMENT

COOPERATION

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AGRICULTURAL DEVELOPMENT COOPERATION OFFICE
OVERSEAS TECHNICAL COOPERATION AGENCY

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FOREWORD

Techno-economic Cooperation towards the developing countries by the advanced countries is now an international obligation on the part of the latter.

Contribution to the economic growth and stabilization of the people's livelihood of the developing countries is not simply called for in the name of humanitarianism; it is also to meet the more realistic and urgent needs of the time as tranquilizer against international tensions and, simultaneously, as stimulant for economic rejuvenation of industrially developed countries of the world.

Latin-America and Africa is not lacking in so-called developing countries on their continental expanse but Asian region comprising of not a few nations impatient with their stagnant conditions awaits our immediate attention because of the sheer fact that Japan is geographically in it, having had the closest historical and economic relations with its constituent-countries.

In these countries of Asia, particularly of south-east Asia, where agriculture is singularly dominant as the source of employment and national income, few developmental efforts would succeed in tapping national energy for socio-economic reconstruction unless directed at agricultural field. Since Japan's techno-economic cooperation has been intensified towards this region for the last several years, requests for the more positive cooperation in agricultural development are steadily in an increase.

It was to meet with such a trend that Agricultural Development Cooperation Office was newly established in the Overseas Technical Cooperation Agency (OTCA) in 1967 and, after the first two years of existence, a scope of its activities has largely expanded while it became more adept in the job assigned to it.

Under these circumstances, the booklet which was prepared with the intent of introducing to the general public an outline of the organization and activities of Agricultural Development Cooperation Office now finds itself outdated, hence an enlarged revision under new cover. I humbly submit this booklet with a hope that it will help bring the Overseas Technical Cooperation, particularly in agricultural sector, closer to the public knowledge and understanding.

Tadashi Sakamoto
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CHAPTER I: ON AGRICULTURAL DEVELOPMENT COOPERATION

1. *Agricultural Development Cooperation : Now and To Come*

Japan's technical cooperation towards the developing countries in southeast Asia, for instance, is believed to be steadily on an increase, together with the more positive attitudes assumed by our Government.

Technical cooperation has been and will continue to be offered in all imaginable fields as required by the recipient countries but as they happen to be predominantly agricultural in their socio-economic structure, every effort in their economic development has more or less bearings on Agriculture, and vice versa. Agriculture, therefore, will remain as an important target of advanced countries' continuing assistance and cooperation, particularly in the case of developing countries in Asia.

In fact, trends in agricultural sector in these countries cannot but attract grave international concerns because an extraordinarily high rate of population-increase there makes food production drive a pressing need of today and, in a longer perspective of a decade or two, food-stuff production needs to be given a long-term techno-economic assurance to rise in a steady curb as mobilization of developmental efforts among grass-root people can never go without planned improvement of their dietary intake and, again, any appreciable economic development will inevitably stimulate their preference for richer foods.

Whatsoever strategical a position agriculture may claim in each country's economic development plan, it is an incremental rate of its agricultural productivity that will remain a deciding factor of its economic growth.

The above briefly explains the reason why we feel so sure of the increasing requests from the developing countries in this part of the world, but we are as sure of the necessity to offer the more intensive and yet integrated cooperation in order to obtain a lasting satisfaction and gratitude of the recipient parties. But how?

(1) Our agricultural development cooperation in the past has been more or less anchored at paddy cultivation, and research, experimentation and demonstration employed as so many means of technical guidance were, by and large, focussed at the quantitative growth of paddy production, the whole operational concept being heavily biased to so-called "Center" formula.

Nowadays, however, applications for our cooperation are overwhelmingly those which would involve ourselves in one or more economic development programs of national importance, so much so techno-economic cooperation is becoming more "Project"- oriented, so to speak.

Agricultural Development Cooperation, therefore, has been undergoing qualitative progress and structural change into what may be called "modernization" approach, combining into one the three phases of improvement efforts, viz: physical infrastructural improvement in such as irrigation-drainage system and road network; farm management guidance coupled by introduction of advanced techniques to be applied for crops suitable for the soil and climate of the project-area, and socio-economic infrastructural renovation aimed at rationalization of pattern of operation, land tenure system, farmers' organization and marketing and finance.

As such a concentrated application of diverse developmental efforts packaged into one presupposes, as its receptacle, a specific theatre of performance in term of "project area" or "model district", our techno-economic assistance in agricultural sector will eventually assume a style of "Rural Development Project".

(2) "Rural Development Project" approach as mentioned in the above will often fail to attain its ultimate purpose if our cooperation is confined merely at technical aid; it will become increasingly necessary to tie up such project with appropriate financial backing of, for instance, the Asian Development Bank, IBRD and other international banking institutions, as well as the Overseas Cooperation Fund which was established for the similar purposes in our country; global bona fide aid giving arrangement such as the Food Aid under the International Grain Agreement, commonly known as 'Kennedy Round Assistance' may also be adequately utilized along the same direction.

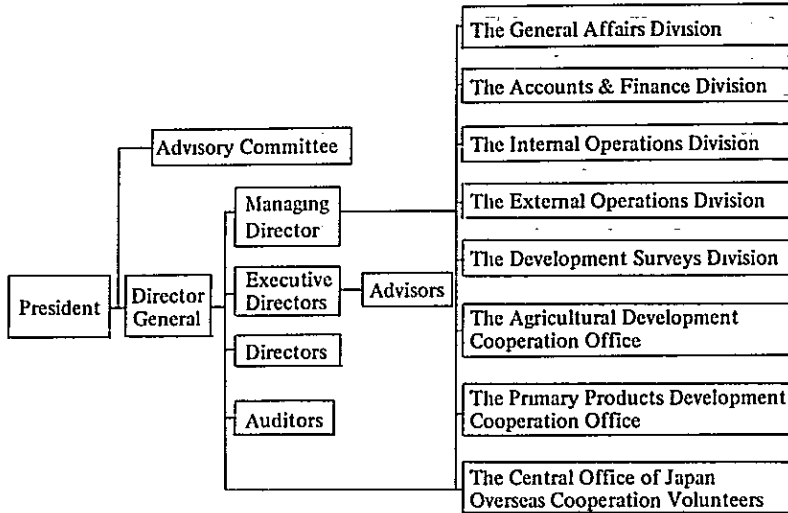
(3) As for the location and layout of the project area and model district where rural development operation as discussed in the above is to be staged, the priorities for its selection are obviously in the hand of the recipient countries. It has been learnt through experiences, however, that better results would follow with less financial worries if the bilateral techno-economic cooperation program could be affiliated to such large-scale projects in which more or less commitment might have been made by international or regional authorities like FAO or the Mekong Committee, for instance, in such manner as directly or indirectly undertaking feasibility or economic justification surveys thereof.

2: *Implementation of Co-operation Projects*

- a.- Feasibility survey to be undertaken in and around the project area of an adequate size as selected through a preliminary survey will bring forward a coordinated development plan combining inter-alia the physical infrastructural improvement primarily directed at irrigation-drainage facilities and road network, the establishment of best practicable pattern of farm-management, and the socio-economic rehabilitation through strengthening of farmers organization, rationalization of marketing and credit practices and development of agro-industries, etc. Detailed designing of necessary engineering work and pre-project preparations will be taken up upon approval of the said Development Plan;
- b.- Most strategical zone amidst the project area will be demarcated as for a Pilot-district where the Development Plan unfolds itself in the most condensed manner. In this Pilot-district which will be strengthened in its infrastructural conditions in both physical and socio-economic terms will be deployed the advanced farm-management techniques based on rational use and control of water, introduction of improved seeds and varieties under scientific method of cultivation, mechanized farming, etc on the day-to-day work level among the cultivators there.
- c.- The good results obtainable through the coordinated developmental efforts in the Pilot-district will spill over, without encountering any serious barrier, on an entire surface of the project area which will have been subjected to the similar physical and socio-economic infrastructural renovation in due course of time. Yet, the problem of extension service, particularly on behalf of the marginal farmers within the project area, will claim due attention and careful action on the part of the cooperation team.
- d.- The services of the Japanese experts as required for implementation of this kind of Agricultural Development Cooperation will be provided for, together with equipment and materials useful for the purpose. The term of cooperation will generally run for five years.

CHAPTER II : ORGANIZATIONAL SETUP OF THE OFFICE

1: Organization Chart of the Overseas Technical Cooperation Agency = (OTCA)
(as of June 1, 1969)



2: *Agricultural Development Cooperation Office - Assignment of Duty*
(as of Oct. 1, 1969)

Assignment	Name (Surname first)	Speciality	Allotment of Duty
Head of the Office	SAKAMOTO, Tadashi	Irrigation Engineering	Over-all Orientation, Policy-making and Coordination of the activities of the Office.
COORDINATION BRANCH			
Chief (Tech. Counsellor)	MORITA, Taisaku WATANABE, Tosei SHIBATA, Junko	Sericulture	1) Matters concerning the Agricultural Development Basic Surveys; 2) Archives & documents; 3) Accounts & Finance; 4) Over-all Coordination of the Office-activities; 5) Matters concerning Cooperation in Research, 6) Matters not falling on other Branches.
IRRIGATION & DRAINAGE BRANCH			
Chief (Tech. Counsellor)	KIMURA, Takashige	Irrigation Engineering	Matters concerning Agricultural Development Projects with emphasis on infra-structural improvements, particularly. 1) Preliminary & Feasibility Surveys; 2) Detailed-designing of the Projects, 3) Surveys called for establishment of Pilot Farm & Works related to establishment of Pilot Farms.
Junior Tech. Counsellor	KAWAMATA, Masakuni	— " —	
	NISHIKAWA, Kanehide BIYAJIMA, Katsuhiko	Economics Irrigation Engineering	
FARM-MANAGEMENT GUIDANCE BRANCH			
Acting-Head Chief (Tech. Counsellor)	SHINODA, Tatsuhiko	Agronomy	1) Agricultural Development Cooperation Projects excepting those handled by the above two Branches; 2) Operation & Management of Pilot-Farms; 3) Technical Guidance and Observation Teams sent over to Pilot-Farms, etc.
Junior Tech. Counsellor	SHIBATA, Toshihide	Agricultural Chemistry	
— " —	KONDOH, Hiroo	Agronomy	
	GOTOH, Ryonosuke KUSANO, Tateo	Agricultural Economics Fishery Science	

CHAPTER III : BUDGETARY ALLOCATION AMONG THE PROJECT

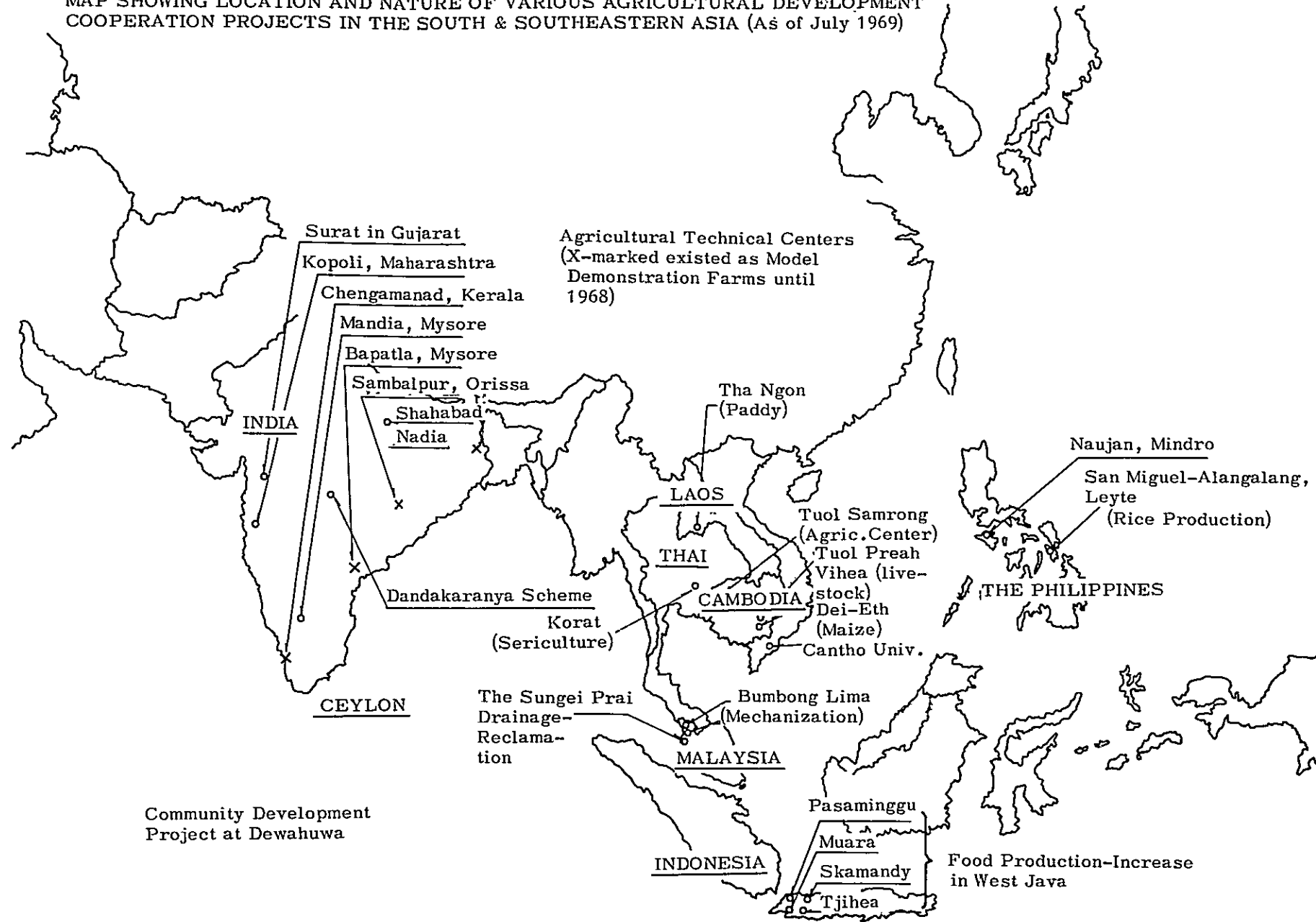
Country	Project	Budgetary Allocation (¥ 1,000)			
		F Y Head	1967	1968	1969
INDONESIA	<u>Food Production Increase in West Java</u> 1) Improvement of seed, inspection and extension at MUARA Experimentation Farm; 2) Trainings on Mechanized Farming at Sang Hyang Seri State Farm & Agric. Machinery Dept., Central Agricultural Research Institute, Sukamandy; 3) Model Farm at Tjihea State Farm at Tjiandjur.	Deputation of Team			
		Assignment of Experts & Material Supply			
			77,244	36,668	34,237
		Duration of Cooperation: 1968 - 1971 = 3 years			
MALAYSIA	<u>The Sungei Prai Basin Drainage & Reclamation and Agricultural Mechanization in the Prai-Muda Basin</u> 1) Reclamation of 700 ha paddyfield and improvement of 2,400 ha of existing paddyfield in the lower stream of the Prai River; 2) Training program of Mechanized Farming in the lower Basin of the Prai River and the Muda River	Feasibility survey and detailed designing			
		Implementation survey for Agricultural Mechanization			
		Assignment of Experts & Material supply			
			47,805	63,277	42,186
Duration of Cooperation: 1969 - 1971 = 3 years					
PHILIPPINES	<u>Rice Production Centers at Naujan District on the Mindro Island and San Miguel-Alangalang District on the Leyte Island</u> Development of each one Model District (1,000 ha) for paddy production at Naujan and San Miguel-Alangalang	Feasibility survey & detailed designing			
		Implementation survey of Pilot-Farms			
		Assignment of Experts & Material Supply			
			61,204	118,103	65,918
Duration of Cooperation: 1969 - 1973 = 5 years					

Country	Project	Budgetary Allocation (¥ 1,000)			
		F Y	1967	1968	1969
CAMBODIA	<u>Agricultural Technical Center and Livestock Breeding Center at Battambang & Kgcham</u> Technical Cooperation in establishment and operation of both Centers	Material Supply			
		Material Supply Plan			
			49,500	31,249	11,560
	Duration of Cooperation: 1966 - 1969 = 3 years 1969 - 1972 = 3 years (extension under consideration)				
	<u>Development of Maize Cultivation</u> Technical Cooperation in term of Research and Experimentation as well as Training for Development of Maiz cultivation	Implementation Survey			
Assignment of Experts & Material Supply					
		80,665	42,040	29,458	
Duration of Cooperation: 1968 - 1971 = 3 years					
LAOS	<u>Agricnultural Development in Tha Ngon</u> Technical Cooperation in developing 800 ha for Increased Paddy Production	Feasibility Survey			
		Detailed Designing			
		Detailed designing of Pilot Farm; Assignment of Experts & Material Supply			
			19,008	88,520	34,574
Duration of Cooperation: 1969 - 1974 5 years					
THAI	<u>Sericultural Development in North-eastern Region</u> Technical Cooperation for economic development and livelihood stabilization in Thailand through sericultural improvement	Implementation Survey			
		Assignment of Experts & Material Supply			
				2,784	53,821

Country	Project	Budgetary Allocation (Y 1,000)			
		F Y Head	1967	1968	1969
THAI	<u>Model Agricultural Development at Pran Buri district</u>	Feasibility Survey			
	Technical Cooperation in connection with irrigation scheme in Pran Buri				38,442
INDIA	<u>Agricultural Extension Centers</u>	Assignment of Experts & Material Supply			
	Establishment and operation of Agricultural Extension Centers and Cooperation in Increased Paddy production in around these Centers		37,488	89,216	85,010
	Duration of Cooperation: 1966 - 1968 = 3 years (2 Centers) 1968 - 1970 = 3 years (2 Centers)				
	<u>Dandakaranya Development Project</u>	Formulation Survey			
	Agricultural Development Cooperation in its Paralkote Zone				29,322
CEYLON	<u>Rural Development Project at Dewahuwa</u>	Feasibility Survey			
	Intensive Rural Development Scheme on 700 acres of paddy-land and 100 acres of upland field, to begin with	Detailed designing Survey			
				12,754	39,425
Duration of Cooperation: 1969 - 1975 = 5 years (in assignment of experts and material supply)					
SOUTH VIETNAM	<u>Opening of the Faculty of Agriculture in Cantho University</u>	Implementation survey, assignment of experts & material supply			
					47,009
Duration of Cooperation: 1969 - 1971 = 3 years					

Country	Project	Budgetary Allocation (¥ 1,000)			
		FY Head	1967	1968	1969
OTHERS	<u>Miscellaneous</u>	Basic Surveys		Thai; Ceylon	Malaysia; Indonesia, Burma
		Technical Guidance	India	India; Cambodia; Laos; Indonesia	Indonesia; Cambodia; India; Thai
		Negotiation	P. I	Malaysia; Ceylon; Laos	Laos
			2,086	23,389	43,542
		Grand Total	375,000	508,000	554,504

MAP SHOWING LOCATION AND NATURE OF VARIOUS AGRICULTURAL DEVELOPMENT COOPERATION PROJECTS IN THE SOUTH & SOUTHEASTERN ASIA (As of July 1969)



CHAPTER IV : OUTLINE OF THE PROJECTS

(1) INDONESIA: Food Production Project in West Java

1. *Background Information & Significance of the Project*

In Indonesia, the Government is right-earnestly propelling an ambitious food production drive named BIMAS Project, in view of attaining self-sufficiency in foodstuff and stopping a drainage of its foreign-exchange an importation of rice. Dewi Sri Djaja Scheme, in particular, is an intensive project meant for production of 450,000 ton of additional rice per year for two consecutive years of 1966 - 68, by taking full benefits out of the Djatiluhur Dam which had been just completed, thus catering for West Java where the demand for food is the acute-most in the country.

Our country pledged to cooperate with the Indonesian Government in its agricultural development efforts and, in compliance with its request, agreed to implement the following three projects, beginning in May 1968:

- (1) Project meant for breeding of the improved paddy-seeds, inspection and extension, centering at the Agricultural Experimentation Station at Muara, near Bogor;
- (2) Project aimed at training required for mechanized farming at two places, the one on Sang Hyang Seri State Farm at Sukamandy, and the other, at the Agricultural Machinery Dept., Central Agricultural Research Institute in Pasarminggu, and
- (3) Coordinated technical cooperation project in such as the minor infrastructural improvement through better irrigation and drainage, the technical improvements including breeding of better seeds, pests and diseases control, mechanization and fertilizer application - and their extension for increased paddy-production - as well as the strengthening of agricultural co-operative organization and its management, on a Model Farm extending over 1,000 ha at Tjihea State Farm in Tjiandjur.

2. *Implementation of the Projects*

A team comprising of four specialists under the leadership of Mr. K. Ishii (the - then Chief of Extension Division, Agricultural Administration Bureau, Ministry of Agriculture & Forestry (hereinafter abbreviated as MAF), currently the Head of North-eastern Division Agricultural Administration Office) was deputed, on October 20, 1966, by the Ministry of Foreign Affairs to Indonesia where it spent three weeks in preliminary survey called for the establishment of an agricultural center which would answer the question posed by the Government of

Indonesia. Perspectives for the more closely integrated and coordinated cooperation approach having been projected through careful analysis of the first team's preliminary survey-data, the second team of nine members led by the same Mr. Ishii returned to Indonesia on August 22, 1967 in view of exploring the possibility of dovetailing such scheme within the Indonesian framework intended for an intensive agricultural development. Five week's study tour undertaken by the second team brought forward a solid basis for bilateral agreement on the more expanded agricultural technical cooperation between the two governments, which was signed on May 29, 1968.

In compliance with the said Agreement, deputation of technical experts, five in number as listed in the below, was effected on September 5, 1968:

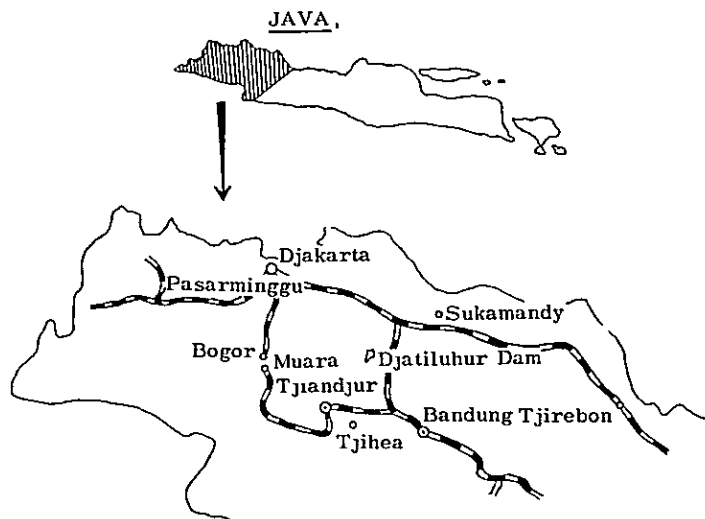
<u>Name</u>	<u>Affiliation</u>	<u>Specialty</u>	<u>Assignment</u>
SUGO, Kazuma	(ex) Agricultural Experimentation Station, Aichi Prefectural Government	Agronomy	Production programming: Project leader
FUNADA, Masaaki	International Cooperation Div., Agricultural & Fishery Economy Bureau, MAF	Agronomy	Inspection system
KAGAMI, Takeo	Technical Staff, Agricultural Experimentation Station, Aichi Prefectural Government	Agronomy	Mechanized farming
SEKI, Masatsugu	Technical Staff, Farm Products Section, Economic Department, Shizuoka Prefectural Government.	Agronomy	Seed-breeding
HAGA, Mitsuo	(ex) Agricultural Machinery Div., Agricultural Administration Bureau, MAF	Agricultural Mechanics	Maintenance of Agricultural Machinery

Further, equipment and materials, mainly comprising of agricultural machinery, equivalent to ¥ 65,716,000 and ¥ 25,605,000, respectively for the initial and the second year, were supplied during the fiscal year of 1968, to facilitate for the guidance as well as extension work of the food-production increase program.

Services of Mr. Sugita (OTCA) on the capacity of a Coordinator were provided under the Colombo Plan for smooth delivery of the said equipment and materials during December 4, 1968 and February 27, 1969.

Cooperation in term of experts' consultations on such problems as having emerged among the Japanese specialists stationed in Indonesia relating to soil and fertilizer, pests and diseases,

farm-management, agricultural engineering work, etc., was also made available through deputation of a Technical Guidance Mission headed by Mr. H. Hashimoto (Chief of Soil & Fertilizer No. 3 Laboratory, Kyushu Division Agricultural Experimentation Station, MAF); during its stay in Indonesia from February 13 to March 5, 1968, the same Mission had fruitful discussions with the authorities and officials in charge of the Government of Indonesia on the direction as well as procedural matters concerning future co-operation between their two countries.



(2) MALAYSIA : The Sungai Prai Drainage-Reclamation Project

1. *Background Information & Significance of the Project*

The Sungai Prai Basin is spreading over at the central part of the Province of Wellesley, in the northern Malaysia, opposite the Island of Penang. This river flows, in its upper- and middle- streams, through a rural area well advanced in Malaysia in its capacity of raising double crops of paddy in a year and, in its lower stream, among the flourishing rubber and coconut plantations and the ever-expanding Butterworth-Prai industrial estate, until it merges into the Strait of Malacca through modern harbour facilities at its mouth.

Development of the Sungai Prai Basin has a long history behind it that there is left no unutilized land excepting a boggy space extending for some 1,000 ha along the stream and accompanying problem of drainage difficulties of the adjacent paddyfield.

The Government of Malaysia has been exhausting its intensive efforts at production increase of paddy under its First Five-Year Plan (1966-70) and many a bold schemes to raise the self-sufficiency level of the people's staple-food above the line of 60% have been pushed forward through reclamation and drainage improvements of its paddy-field. Development of paddyfield through reclamation of the said marshy land in the Sungai Prai Basin duly attracted the attention of the Malaysian Government which, after confirming its justification through its own preliminary survey, approached the Government of Japan for feasibility survey as well as detailed designing of this undertaking.

This project is a multi-purpose scheme aiming at attainment of the following four benefits by construction a barrage and a closing dam at the pontoon-bridgehead on the Sungai Prai at 8 km upstream of its mouth:

- (i) Development of a new paddyfield as large as 700 ha or so through reclamation of the marshy land in question;
- (ii) Improved drainage and prevention of salination damage on behalf of 2,400 ha of the already cultivated field,
- (iii) Assured supply of industrial water to the industrial belt spreading over Makmadin and Prai, and
- (iv) Better transport facilities by making use of the crests of the barrage and closing dam as permanent bridges eligible for two-way motor traffic, in lieu of the existing pontoon-bridge.

Gist of the project in a tabulated form shows as follows

Division	Area (ha)	Estimated increase in paddy production	Cost in Malaysia \$	Cost Break-down in Malaysia \$	Annual Benefits in Malaysia \$	Important structures
AGRICULTURE						
Reclamation	700	4,200			227,120	Barrage Closing dam and deviated roads & deviated canals
Drainage	2,400	4,700		4,791,000	356,184	
Total	3,100	8,900	8,491,000	3,700,000 (Direct cost only)	583,304	
INDUSTRIAL WATER					788,400	
TRAFFIC					117,200	
Grand Total					1,488,904	

(Malaysian Dollar = Yen 118 00)

2 Implementation of the Project

A Team of eleven specialists, headed by Mr. E. Sugita (Chief, Irrigation & Drainage Div.,

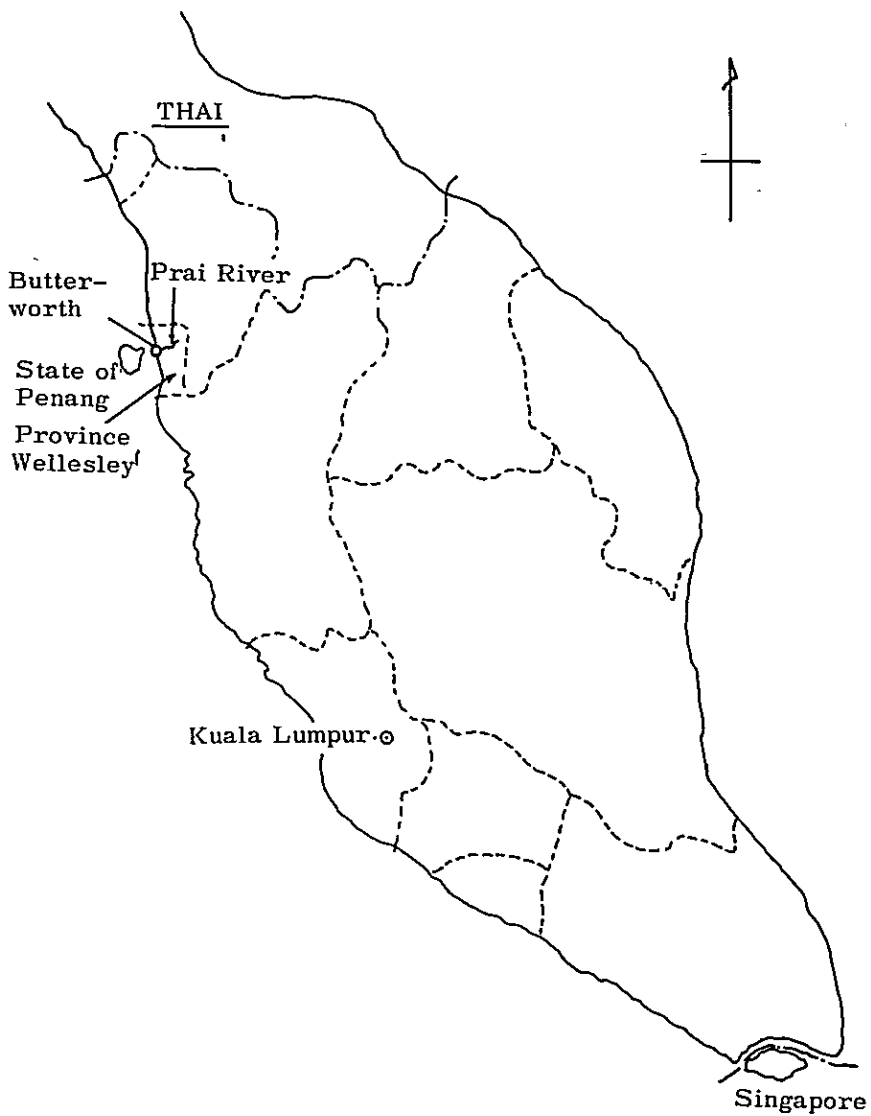
Agricultural Land Bureau, MAF), was deputed to Malaysia for about three months (from September 4 to November 21, 1967) for techno-economic feasibility survey and formulation of the Sungai Prai Drainage & Reclamation Project. The Detailed Design Team of nine-members led by Mr. Yukawa (Senior Irrigation Engineer, Agricultural Land Bureau, MAF) returned to the project-area on April 22, 1968 and, within a month-time, completed the final detailed designing called for tender.

Further to the above, a 2-men technical team represented by Mr. S. Kanatsu (Senior Irrigation Engineer, Agricultural Development Cooperation Office, OTCA) was sent over there, for two weeks from October 24, 1968, to make necessary technical explanation on the said detailed designs and also to discuss with the officials concerned of Malaysian government on cooperation methodology of the project.

It is understood that a part of the construction-cost of the said project will be paid from Yen Credit concluded between the two governments of Japan and Malaysia in the year 1966

Japan is still eager to extend agricultural development cooperation towards the Prai-Muda Basin in term of a coordinated project which coherently integrates infrastructural improvement with farm-management guidance, through implementation of the training scheme on mechanized farming beginning at the double-cropping paddyfields as was recommended by the Farm Mechanization Team which undertook on-the-spot survey of a month-duration there.

Location of the Sungai Prai Drainage-
Reclamation Project in Malaysia



(3) MALAYSIA: Agricultural Mechanization Project in the Prai-Muda Basin

1: *Background Information & Significance of the Project*

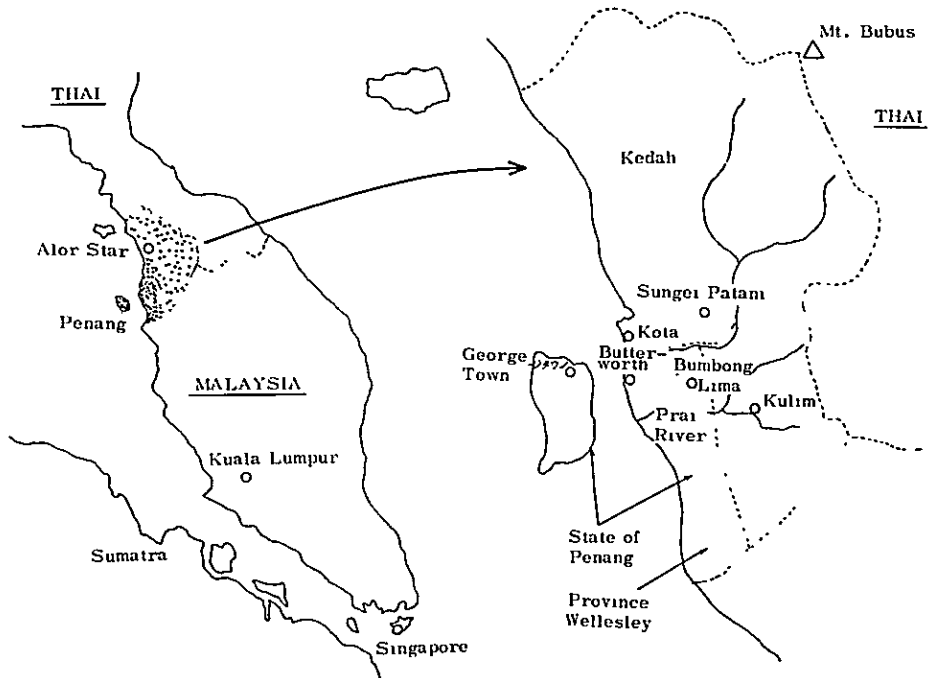
Under the Malaysian First Five-Year Plan, a series of large-scale infrastructural improvement works such as the Sungei Muda Irrigation Scheme and the Sungei Prai Basin Drainage-Reclamation Project are quickly turning the State of Kedah and the Province of Wellesley into a "Rice-Bowl" of Malaysia through expansion of the paddyfield eligible for double-cropping of rice. On the other hand, however, the chronic labour shortage in its rural area has now come to take an acute turn which should be dealt with through proper mechanization of paddy-cultivation there.

Japan, in a ready response to the Malaysian government's request for solution of this problem, carried out a preliminary survey on mechanization feasibilities, in combination with that of the Sungei Prai Basin Development Scheme, from September 1967. An independent Team of specialists which was deputed in June 1968 formulated a plan of offering an intensive training on mechanized farming beginning at such an area of the Prai-Muda Basin where infrastructural improvement would allow its cultivators to raise two paddy crops a year, pin-pointing Bumbong Lima as an appropriate-most site deserving for deputation of Japanese specialists equipped with necessary machinery and materials for the purpose.

2: *Implementation of the Project*

Mr. Saegusa (Technical Staff attached to the Agriculture, Forestry and Fishery Research Council, MAF) and some others, out of the members of the Feasibility Survey Team sent for the Sungei Prai Basin Development Project, were given additional but equally important duty to undertake technical studies relevant to introduction of mechanized paddy cultivation in and around the Project-area. Broad guidelines having been projected through these studies, five-member Implementation Survey Team headed by Mr. T. Yanagida (Director, Institute for Agricultural Mechanization) was sent over there on June 24, 1968 for a month's on-the-spot study submitting, at its completion, the recommendations to the effect of establishing at Bumbong Lima the appropriate training facilities for agricultural mechanization, primarily towards the agricultural extension personnel of the Government of Malaysia and, eventually, for spill-over benefits around the neighboring districts, under an over-all guidance of a group of qualified Japanese specialists equipped with necessary equipment and materials. Deputation of four such specialists, with ¥ 51,995,000-worth training equipment and materials (including transport-cost) was thereby sanctioned during the fiscal year of 1968 with necessary budgetary appropriation, but no final

agreement on this specific technical cooperation project could have been reached to date, presumably due to reasons mainly attributable to the domestic affairs of Malaysia. The Government of Japan, being still eager to materialize this project, has taken necessary steps to carry forward the budgetary allocation earmarked for it to the 1969 fiscal year during which term it is hoped that an agreement would be reached.



(4) LAOS: Tha Ngon Agricultural Development Project

1: *Background Information & Significance of the Project*

The project-area is situated at about 25 m north of Vientiane, the Laotian capital, and 5 km east of Ban Tha Ngon. In its neighborhood is found the Laos-Japanese Agriculture and Livestocks Training Center which was established through the auspice of the Japanese Cooperation Association of the Development of Laos.

Extending over approximately 1,000 ha of extremely flat terrain at the elevation of 163-167 m, the project-area is largely made up of the grassland and forest which is perennially submerged under water, almost in its entirety, during August and September, due to flooding of the River Nam Ngum, a tributary of the Mekong River, which is flowing on its northern border.

Increased production of foodstuff, particularly rice, is what the Kingdom of Laos desperately needs today and in near future and the most effective means to attain this purpose is deemed to lie in double-cropping of paddy through irrigation which, however, has been long neglected in the country. Thereupon, this project means to turn a spacious basin of the River Nam Ngum into a paddy-producing valley by opening up - as a model for attainment of the ultimate purpose - a farmland of the size not less than 800 ha where modern rice-cultivation methods based on irrigation would be demonstrated.

Tha Ngon has been selected as a core of our project-area by virtue of its very favorable techno-economic feasibilities, plus demonstration-value, because of its proximity to Vientiane, as a model agricultural development scheme directed at solution of food problem confronted by the Kingdom.

Gist of the project can be tabulated as follows :

Size of the project area	Area to be irrigated	Main Objective	Cost	Important facilities	Total Annual production	Annual net farm receipt
(ha)	(ha)		(US\$)		(US\$)	(US\$)
1,000	800	Development of paddyfield	860,000	Pumps; irrigation canals & drainage facilities	555,000	287,600

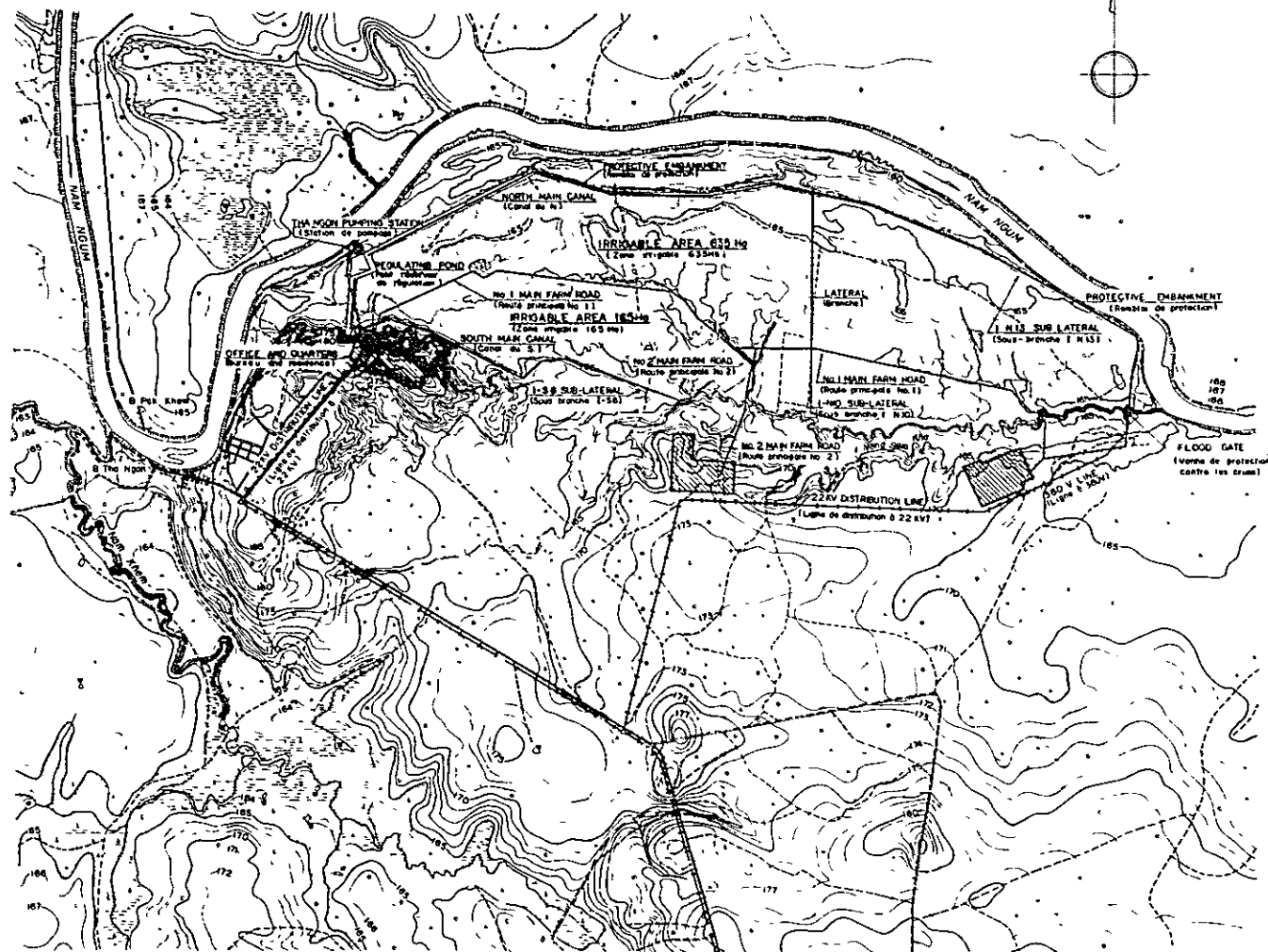
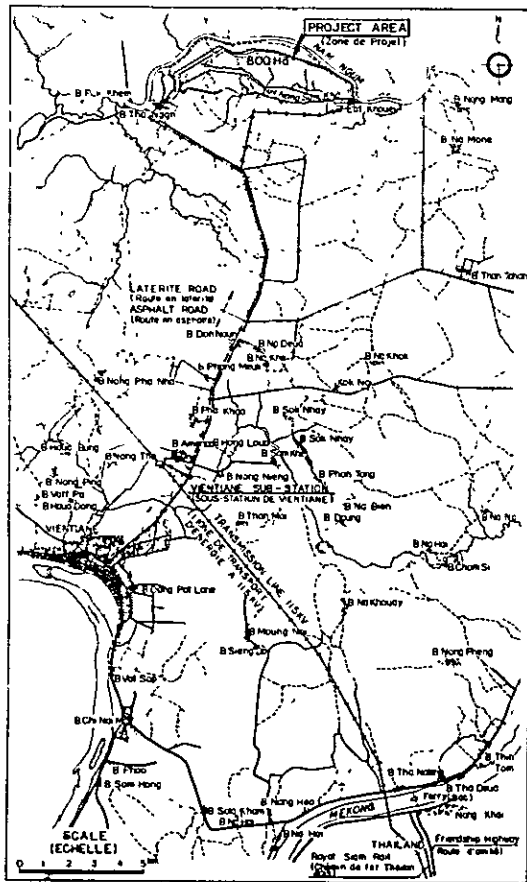
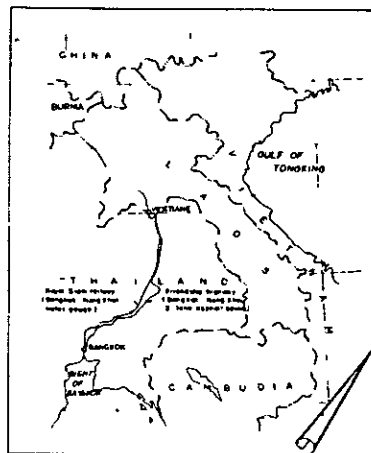
2: *Implementation of the Project*

a.- Ten-Member Survey Team headed by Mr. T. Fukuzawa (Senior Research Officer, Agricultural Land Bureau, MAF) was deputed to the spot for techno-economic feasibility studies and

formulation of development plan based on data made available from such studies, within a month-time, from January 2 to January 30, 1968. Another Team of ten specialists under the same leader stayed in Laos, from November 5 to December 30 1968, to work upon detailed designing of the Model-project through necessary amendments to the original development scheme prepared by the first Team.

b.- The Laotian Government was intimated of a final design thereof by Two-member Team represented by Mr. Fukuzawa, which made the similar technical explanation to the Asian Development Bank which had pledged to bear a portion of the cost of the project. Mission of the Asian Development Bank to Laos eventually gave first priority to our Tha Ngon project after scrutinizing a whole set of Agricultural Development Scheme on the Vientiane Plain. Mr. S. Kanatsu, Senior Irrigation Engineer, Agricultural Development Cooperation Office, OTCA) and another were invited by the Asian Development Bank to come over to Laos for further discussions on Tha Ngon project with its Mission.

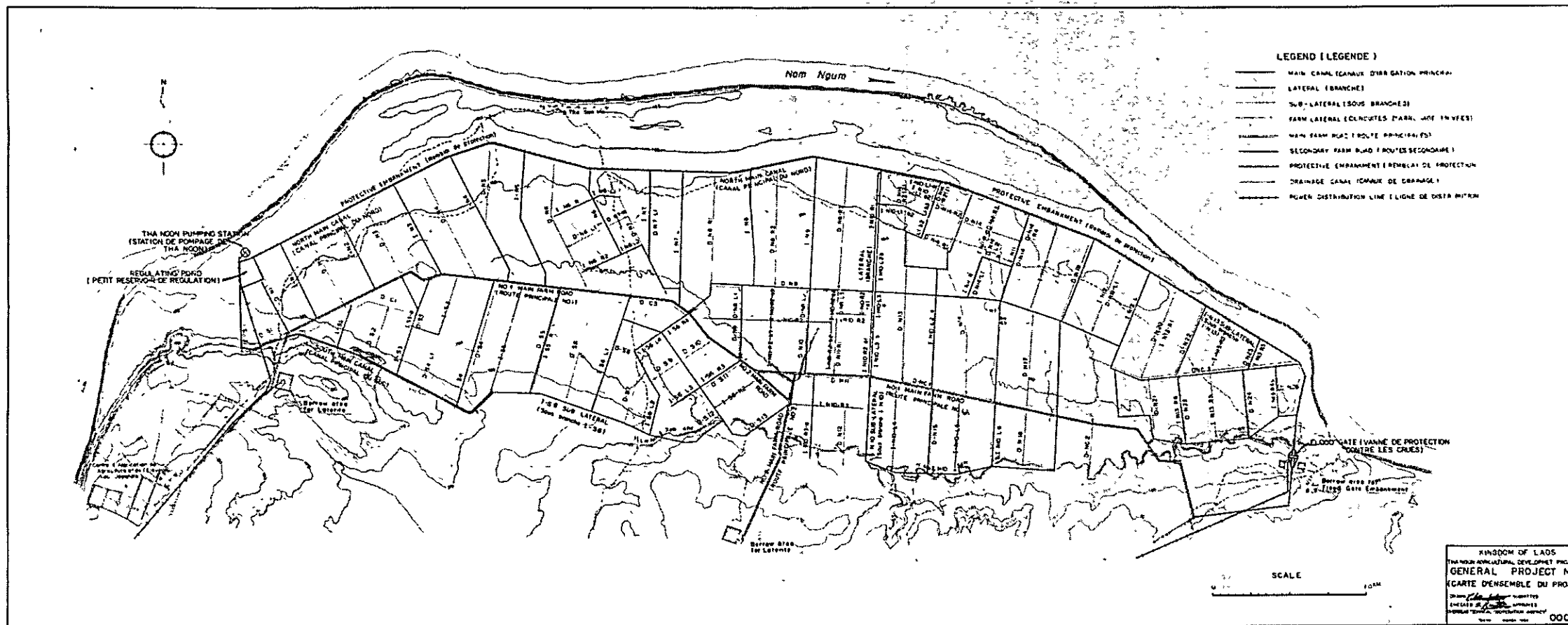
c.- Survey team headed by Mr. T. Sakamoto (Head, Agricultural Development Cooperation Office, OTCA) for establishment of a Pilot-Farm (approximately 100 ha-wide) meant for practical education and training of the local farmers on irrigation-based agricultural practices as well as for bringing up of the extension workers who would be entrusted with farm-management guidance on behalf of the forthcoming settlers, was deputed in June 1969. Thereupon, six specialists will be assigned on duty, with necessary machinery, equipment and materials, for consolidation and management of the said Pilot-Farm for five years to come; their operational headquarters will be located at the existing Agriculture and Livestocks Training Center.



- Main canal (Canaux principaux)
- Lateral and sub-lateral (Branche et sous branches)
- Protective embankment (Remblai de protection)
- Main farm road (Routes vicinales principales)
- Power distribution line (Ligne de distribution électrique à 22 KV)
- Power distribution line, not covered this project (Ligne de distribution électrique à 22 KV, non prévue dans ce projet)
- Irrigable area (Zone irrigable)
- Natural stream (Cours d'eau naturels)
- ▨ Farmers residential area (Quartier résidentiel des fermiers)

SCALE
0 1 2 km

KINGDOM OF LAOS	
THA NOON AGRICULTURAL DEVELOPMENT PROJECT	
LOCATION MAP	
(CARTE DE SITUATION)	
DRAWN <i>[Signature]</i> SUBMITTED	CHECKED <i>[Signature]</i> APPROVED
OVERSEAS TECHNICAL COOPERATION AGENCY	
TCHV0 MARCH 1960	0001



(5) THE PHILIPPINES: Rice Production Centers

I: Background Information & Significance of the Project

The establishment of the Regional Rice Production Centers at two districts of Naujan of the Mindro Island and San Miguel-Alangalang on the Leyte Island was envisaged under the Philippines' Four-Year Plan for Self-Sustenance in Foodstuff. These Centers, when completed, would witness a performance of a comprehensive and coordinated paddy production increase program involving, to start with, the infrastructural renovation through adequate irrigation and drainage works, thereby making double-cropping of paddy a safe and sure perennial farming practice and, then, the potentialities for an increased paddy production thus created being fully exploited through introduction and extension of modern, scientific cultivation techniques, until such yield would be finally garnered into paddy-bins built-in with drying and polishing facilities all in one.

Farm-management knowhow, with which local farmers would be familiarized in making the best of the given facilities, would be imparted on and from each one Pilot-Farm to be established in both of these Centers under the general guidance of a group of Japanese specialists equipped with necessary machinery, equipment and materials for the period of five years.

The outlines of the Regional Rice Production Centers will read as follows:

(1) Naujan District

Project-site is holding a position of vantage from the view-point of demonstration-effects, spreading on some 1,000 ha. plot along the national highway running between Calapan City and Naujan City, in the north-eastern part of the Mindro Island.

It is on an alluvial plain sandwiched by two rivers: the Magasawang (Tubig) River flowing in its northwest and the Pangalan River, in its southeast and is extensively, if not exhaustively, under cultivation even at present. Stabilized yield of 4 ton/ha is aimed at, with dry-season irrigation of 3.5 ton/sec water pumped up from the Magasawan River.

Recapitulation of Naujan Project

Size of project area	Area to be irrigated	Main Objectives	Principal Facilities	Annual Production	Annual Cost-Benefit Ratio	Construction Cost	
						Engineering work	Rice Center
(ha)	(ha)			(ton)		(US\$)	(US\$)
1,336	1,000	Stabilized double-cropping of paddy	Pumping facilities & drainage system, plus Rice Center	7,480	1 : 2.29	531,820	159,205

(2) San Miguel-Alangalang Project

This district is situated at 40 km southwest of Tacloban City to be reached by a road therefrom, on the left bank of the Mainit River. The project area is divided, due to the topographic reasons, into two sections but a provincial road is running through both of them. In spite of its proximity to water-source, the area is least vulnerable to flood-damage and is currently under upland crops. Under the project, 1,086 ha is going to be irrigated by 2.73 ton of water taken from a headwork to be built at the point 1.7 km from the national road bridge on the Mainit River. The network of existing creeks would be utilized, after a bit of engineering work, for drainage purposes. Constant yield of 4 ton/ha would be assured after the completion of the project.

Recapitulation of San Miguel-Alangalang Project

Size of project area	Area to be irrigated	Main Objective	Principal Facilities	Annual production	Annual Cost-benefit ratio	Construction Cost	
						Engineering work	Rice Center
(ha)	(ha)			(ton)		(US\$)	(US\$)
1,430	1,086	Stabilized double-cropping of paddy	Headwork for intake of water, drainage facilities and Rice Center	8,100	1 : 2.63	609,700	160,400

(3) Pilot-Farms in Both of the Project Areas

A plot of land populated by an average-sized rural community would be located nearby each Model District and turned into an experimental farm by itself where sets of advanced farming practices, particularly, rational use and control of water and scientific cultivation techniques would be demonstrated in a course of day-to-day farming operation among the actual farmers there; the fellow-cultivators in its neighboring regions would also benefit by learning better farm-management techniques therefrom

Recapitulation of Pilot-Farm Projects

Division	Coverage	Objectives	Rural Community involved	Principal facilities	Infrastructural renovation cost	Equipment & materials required
Naujan District	(ha) 100	Demonstration of double-cropping of paddy thru pump-irrigation	(household) 29	Pump. 400 m/m 1 Siphon ; Farm-road. 1,320 m	(¥ 1,000) 13,800	(¥ 1,000) 53,000 (initial year only)

Division	Coverage	Objectives	Rural Community involved	Principal facilities	Infrastructural renovation cost	Equipment & materials required
San Miguel-Alangalang District	(ha) 100	Construction of Headwork & double-cropping of paddy thru pump irrigation	(household) 42	Pump: 400 m/m Headwork, Farm-road. 2,400 m	(¥ 1,000) 13,000	(¥ 1,000) 53,000

2. *Implementation of the Project*

a.- Preliminary Survey Team headed by Mr. Sasaki (Asst. Director General, Agricultural Land Bureau, MAF) was deputed to the Philippines, in September 1966, to obtain firsthand background information through extensive field-surveys in order to chalk out the broad outline of Japanese technical cooperation in the Philippines' rice production increase efforts, and to discuss with the authorities there on the basic approaches to the problem.

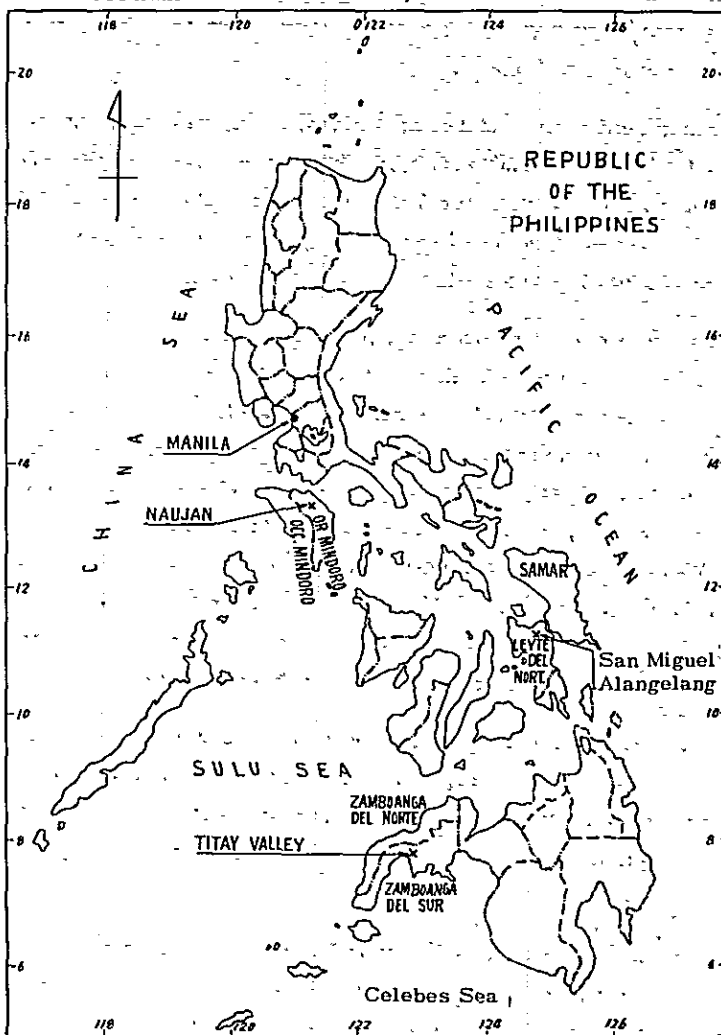
b.- Second Team which was dispatched in April 1967 made, on the basis of the findings submitted by the first Team, a provisional selection of Naujan district and Titay district on the Mindro Island and San Miguel- Alangalang district on the Leyte Island, as three candidatesites falling within the category of small-medium sized blocks of already cultivated land, where irrigation facilities for increased paddy-production could be provided with on the most advantageous techno-economic terms. Upon feasibility survey, the first and the third districts, viz: Naujan district on the Mindro Island and San Miguel-Alangalang district on the Leyte Island, were finally approved of as the project-areas because of techno-economic features favoring irrigation works. The Philippine Government was intimated of a set of schemes to turn them into the Regional Rice Production Centers, through deputation of a team in November 1967.

c.- Project Implementation Team comprising of twentyone specialists, under the leadership of Mr. Takeda (Acting Chief of Designing Div., Agricultural Land Bureau, MAF) spent two months, beginning in March 1968, for an intensive study of the selected sites and completed a final project. Construction part of this Project is going to be financed by the Philippine Government itself.

d.- Another Team was dispatched in September 1968 to finalize Pilot Farm plans, and also to discuss with the Philippine Government on the operational aspects of the project. Perfection of preparatory measures leading to the signing of bilateral agreement was likewise among its terms of the reference.

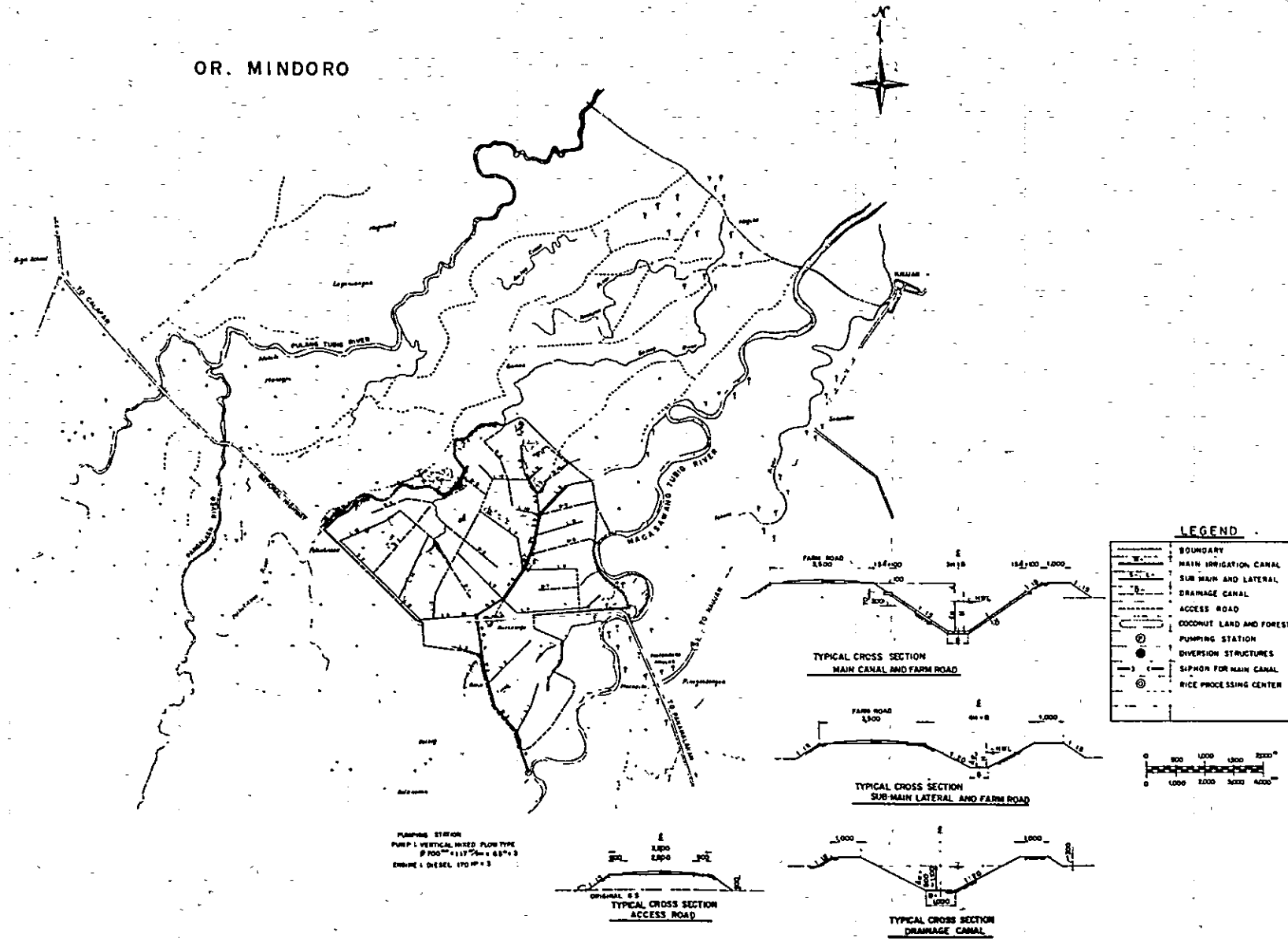
e.- Upon signing of the said Agreement, the both project - areas have been stationed in September 1969 by each team of four Japanese specialists with necessary equipment and materials for the period of five consecutive years.

LOCATION OF RICE PRODUCTION PROJECTS ON THE ISLANDS
OF MINDRO AND LEYTE, P. I.

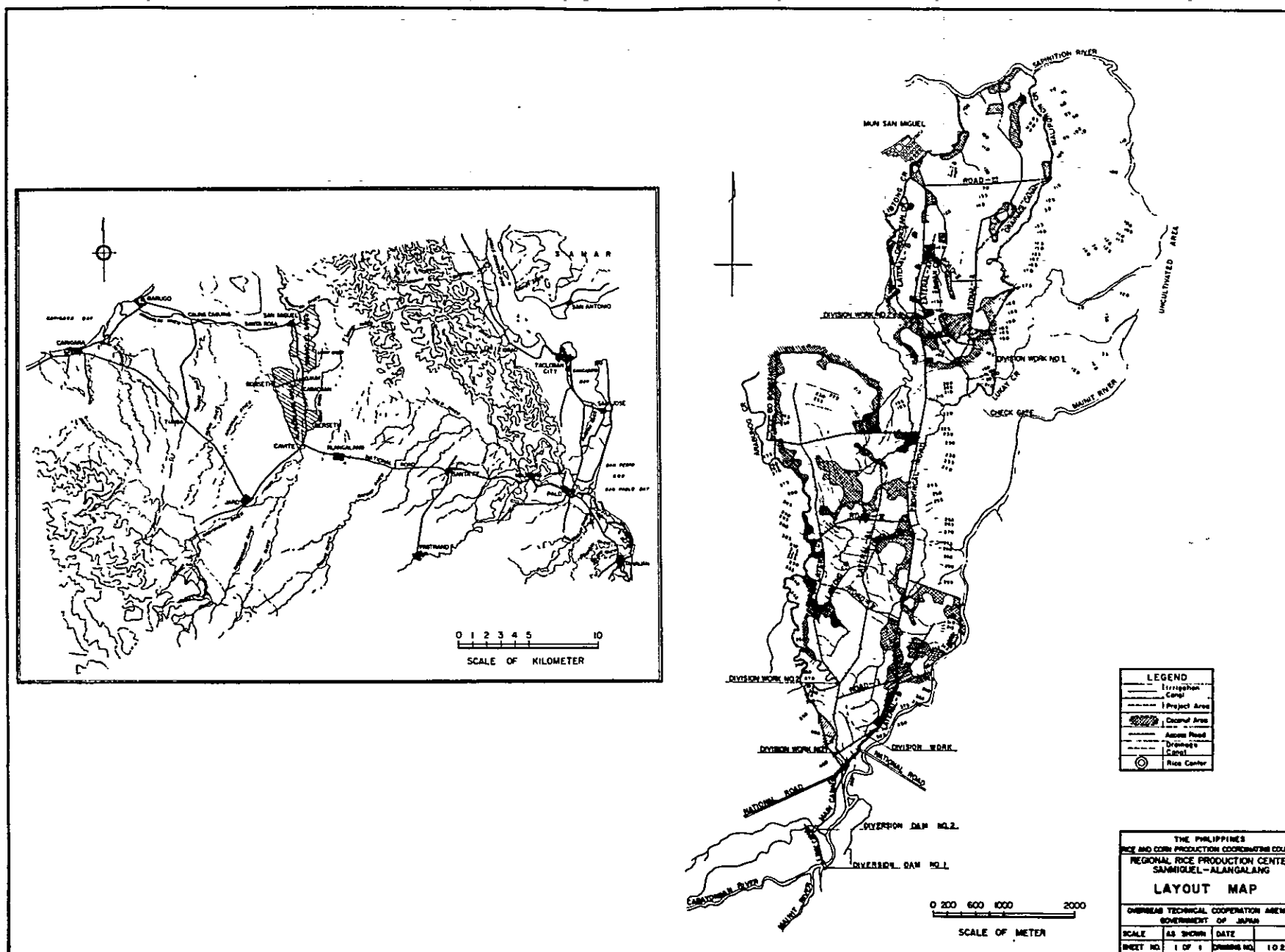


GENERAL PLAN OF NAUJAN RICE PRODUCTION
PROJECT IN THE PHILIPPINES

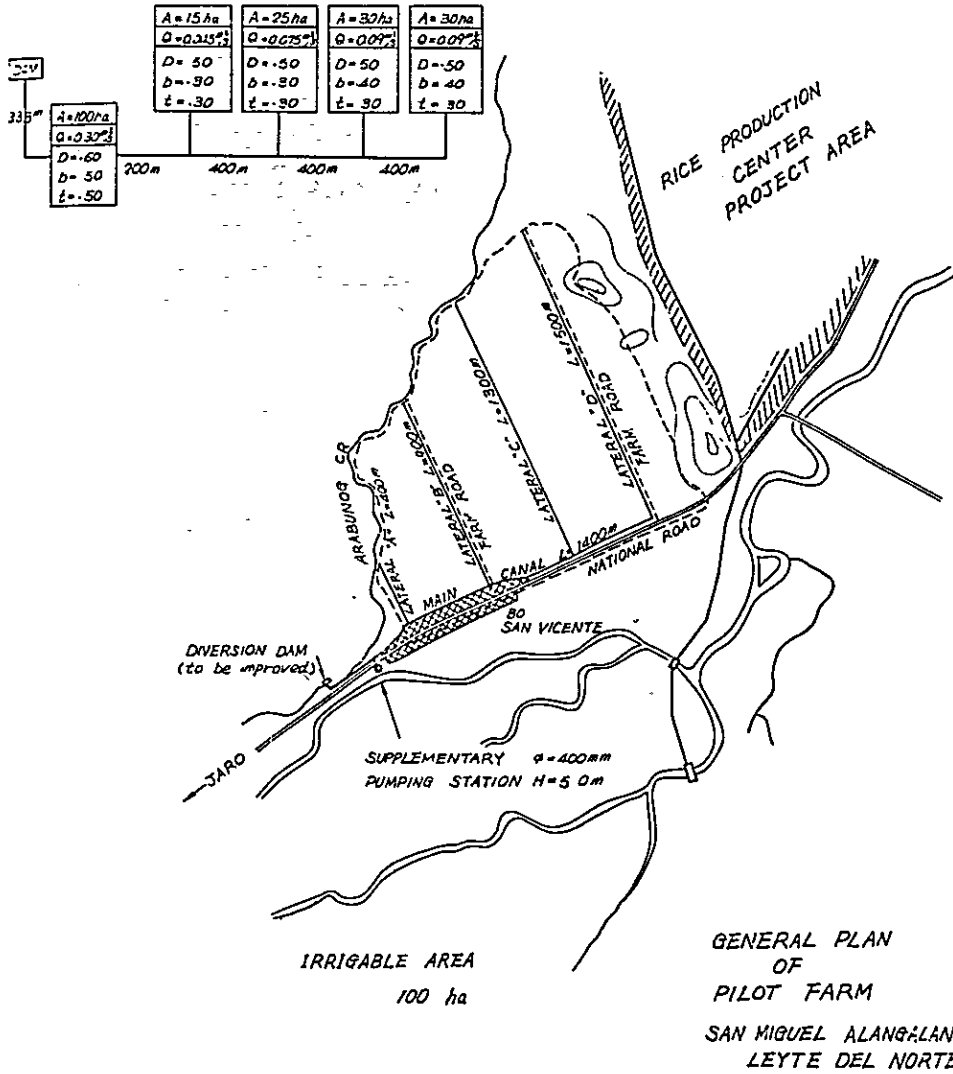
OR. MINDORO



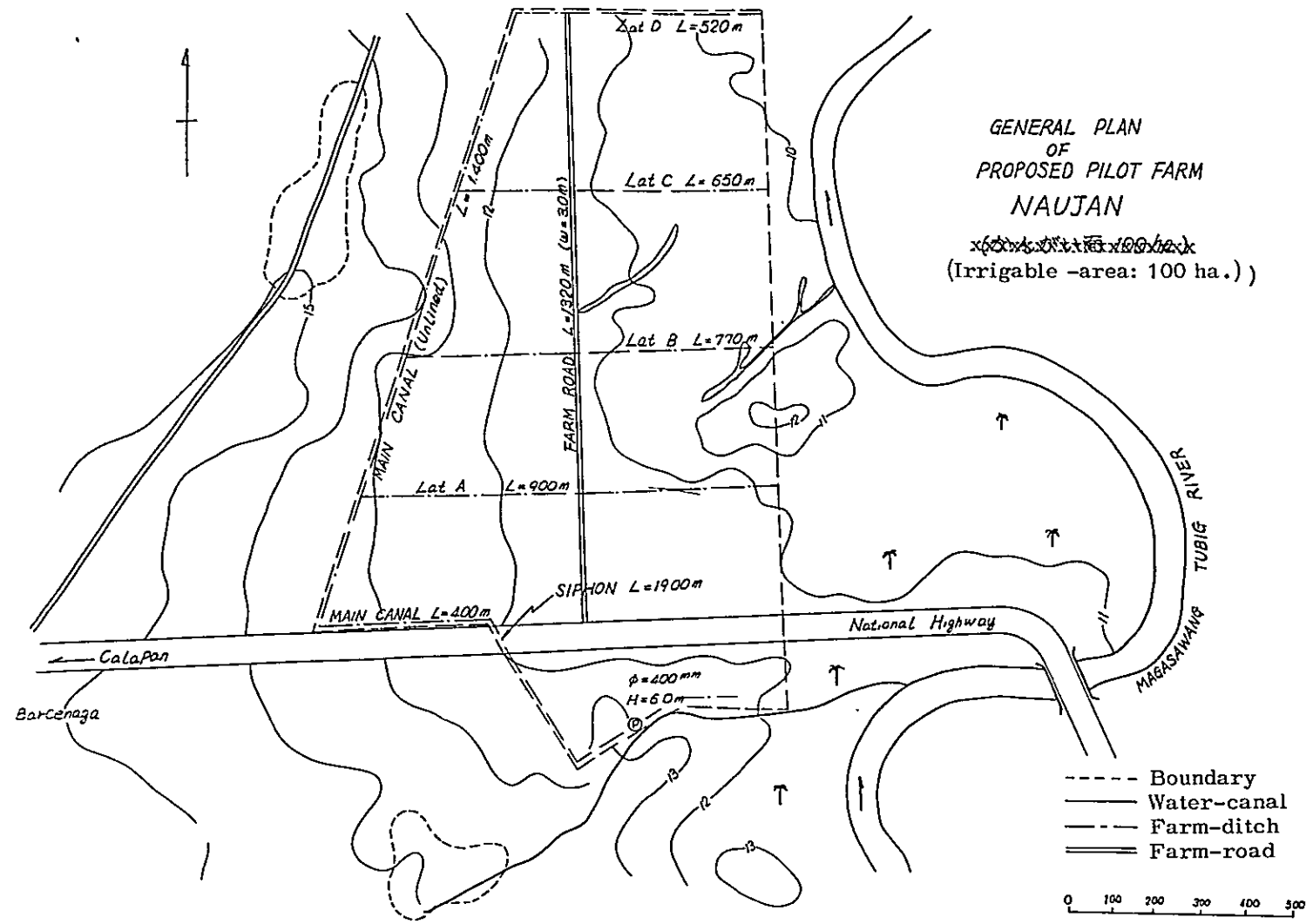
SAN MIGUEL-ALANGALANG RICE PRODUCTION PROJECT
IN THE PHILIPPINES



GENERAL PLAN OF THE PILOT-FARM FOR SAN MIGUEL-ALANGALANG PROJECT



GENERAL PLAN OF THE PILOT-FARM FOR NAUJAN PROJECT



(6) CAMBODIA: Development of Maize Cultivation

1: Background Information & Significance of the Project

In view of rejuvenating the stagnant economy and improving chronically adverse balance of trade of the country, the Royal Government of Cambodia has been assuming positive attitudes in the development of its export crops as witnessed, for example, by the establishment of a Public Corporation named SOCTROPIC, through joint-venture agreement with Japan.

Japan's cooperation in such fervent developmental efforts on the part of Cambodian Government in term of the concentrated technical assistance for production-increase of maize, the most promising export crop of all, with a current annual production of 165,000 tons from approximately 110,000 ha of land, would also be in consonance with the primary products development cooperation policy pursued by our Government since the last several years.

Notes exchanged between these two Governments on November 2, 1968 specified the nature and the content of technical cooperation for development of maize cultivation in Cambodia as follows:

- (1) Japanese participation in research activities for selection of appropriate varieties of maize and establishment of cultivation-standards as well as training of Cambodian technical staff in experimental farm to be opened by the Royal Cambodian Government;
- (2) Betterment of cultivation techniques and extension of improved knowhow among the Cambodian maize producers;
- (3) Rationalization of marketing system of maize in Cambodia, and
- (4) Deputation of Japanese experts equipped with necessary implements and materials for fulfilment of such cooperation project.

2: Implementation of the Project

A series of survey team have been deputed to Cambodia to date. They were:

<u>Year of Dispatch</u>	<u>Designation of the Team</u>	<u>Dispatched from</u>
1961	Primary Products Procurement Team	MITI
1963	Maize Development Planning Team	OTCA
1966	Primary Products Research Team	MITI
1967	Maize Development Survey Team	MAF
1967-8	Maize Development Cooperation Planning Team	OTCA
1968	Maize Development Experimentation-Farm Designing Team	OTCA

Maize Development Cooperation Planning Team lead by Mr. T. Sakamoto (Chief, Agricultural Development Cooperation Office, OTCA) which visited Cambodia during December 1967 and March 1968 carried out scrutinizing spot-surveys of several candidate-sites for the experimentation-farm and, through repeated discussions with the authorities concerned of the Royal Cambodian Government, hinted upon Dei-Eth, 23 km southeast of Phnom-Penh as an ideal-most site. Negotiations for procurement of the candidate-site between the Royal Government of Cambodia and SOCTROPIC as a partner and the owner of the land took sometime before reaching the conclusion when, in October 1968, Maize Development Experimentation-Farm Designing Team was invited to Cambodia for the period of two months for the purpose of completing detailed designing of the Experimentation-Farm and to advise upon additional facilities to be attached to the Farm.

In the meanwhile, the Notes on maize development through Japan-Cambodia technical cooperation was signed at Phnom-Penh on November 2, 1968 which specified, as the Cambodian part of obligation under the Agreement, the procurement of the land and construction of the Experimentation-Farm thereupon and, as the Japanese part, deputation of one expert (plus three additional specialists from Agricultural Development Cooperation Office, OTCA) and provision of ¥ 82,383,000 worth equipment and materials (including transport-cost) within 1968 fiscal year.

Four experts (two irrigation engineers on short-term assignment and the leader and a crop-cultivation specialist on long-term assignment) and additional supply of equipment and materials will follow in the fiscal year of 1968.

Composition of Japanese Specialists working on the Farm

<u>Name</u>	<u>Affiliation</u>	<u>Specialty</u>	<u>Duty</u>
YAMAKI, Tetsuji	Chief, Plant-Breeding Div., Ibaragi Prefectural Agricultural Experimentation Station	Agronomy	Leader
ABE, Mikio	Crop No. 1 Section, Hokkaido Agricultural Experimentation Station, MAF	Agronomy	Crop-cultivation
KATSUYA, Keizo	(ex) OTCA	Agronomy	Plant-breeding
TANIMOTO, Kazuaki	Engineer, Damage Restoration Div., Construction Dept., Agricultural Land Bureau, MAF	Irrigation engineering	

(7) CAMBODIA: Agricultural Technical Center in Battambang and Livestock Breeding Center in Kompong Cham

I: Background Information & Significance of the Project

These two Centers owe their existence to the Agreement on Economic and Technical Cooperation between Japan and Cambodia which, being signed on March 2, 1959 in token of Japan's appreciation of Cambodian waiver of her right for war reparations, provided for techno-economic assistance amounting to ¥ 1,500 million. One Medical Center was likewise established under the same Agreement.

According to this Agreement, Japanese techno-economic assistance would consist of: (a) construction of Agricultural Technical Center and Livestock Breeding Center; (b) deputation of Japanese specialists, and (c) provision of necessary machinery, equipment and materials, for the period of seven years, commencing on July 6, 1959 and ending on July 5, 1966. Due to such delays as in institutional preparation for receiving this kind of aid and selection of proper sites for the establishments, which subsequently caused their implementation plans to be completed only after a great lapse of time, the Centers in question had their buildings completed only in March 1964 and, awaiting deputation of the specialists and shipment of the requisite machinery, equipment and materials which took place since July the same year, their inauguration could have been solemnized simply on July 8, 1965.

The allowance of time-factor given for operation of the Centers, not more than a single year of net cooperation starting from the date of their inauguration till the termination of the period of assistance which the Agreement specified as falling in July 1966, was obviously too meagre to expect any worthy achievement on the part of the donar or the preparedness to take over the responsibilities of the Centers' management, on the part of the donee.

Consequently, additional three-year assistance towards these Centers was agreed upon through the exchange of notes under the provision of the Agreement of Economic and Technical Cooperation between the Government of Japan and the Royal Government of Cambodia, on September 30, 1966

(1) Agricultural Technical Center of Friendship between Japan and Cambodia

It is situated at Tuol Samrong, Battambang Province, approximately 350 km northwest of Phnom-Penh. On some 300 ha of the farm, there are 24 establishments with the total floor-space of 7,130 m².

<u>Buildings & Facilities</u>	<u>Floor-space (M²)</u>
Office-cum-Experimentation Station	1,496
Administrators' Living Quarters	2,331
Lecture-Rooms	369
Trainees' Living Quarters	1,046.4
Club-House	240
Workers' Room	120
Farm Machinery Show-Room	240
Workshop	200
Screened Rooms	97.2
Meteorological Observatory	12
Warehouse	369
Fuel Store-Room	30
Cattle-Sheds	120
Barnyard-Manure Storage	120
Power-House (2,100 kw Generators)	120

In the field, on a plot of land about 5 ha in size, experimental studies with both the Japanese and the local varieties of paddy are being conducted on such as fertilizer-application, test cultivation, mechanization, soil, and pests and diseases. A seed-farm meant for multiplication of the improved, high-yielding varieties of paddy under artificial irrigation, has been almost completed.

(2) Livestock Breeding Center of Friendship between Japan and Cambodia

This Center is located on the State-owned land in Kg.cham Province, about 130km east of Phnom-Penh. The Center's estate extending on some 900 ha is claimed to be submerged under the flood-water originating at the Mekong River during each rainy season. 36 buildings including Office, Staff & Trainees' Living Quarters, sheds for cattles and poultry, hatchery (poultry incubator), store-rooms for machinery and implements, feedstuff godown, etc. with a total floor-space of 700 m² are conveniently layed out on the estate.

Not less than 150 ha of land has been so far developed but 50 ha of which is used to be water-logged during the rainy season, while another 50 ha is too sandy for cultivating fodder crops.

2: *Implementation of the Project*

The content of technical cooperation for the both Centers can be summarized as follows

- a.- Research & experimentation on technical improvement aimed at the increased agricultural as well as livestock production;
- b.- Training on behalf of technical personnel engaged in agricultural cultivation and livestock breeding, and its extension, and
- c - Practical demonstrations.

Operational characteristics of each one of these Centers may be introduced in the below

(1) Agricultural Technical Center

The general targets of this Center at its outset were :

- a - Research and experimentation on fertilizer-application and nurturing of the soil, breeding, mechanization, pests & diseases control, with both the Japanese and the local varieties of paddy,
- b.- High-yielding paddy cultivation and its demonstration on the Pilot-Farm, second cropping in dry-season through proper water-control, and
- c.- Test-cultivation of sugar-cane, maize and vegetables on the upland field.

However, under the pressing need of bringing up the productivity of paddy in Cambodia, three years out of the co-operation period as specified by the Notes were decided to be devoted at completion of a Seed-Farm where the high-yielding paddy seeds would be mass-produced for distribution among the wider circles of farmers.

Due to reasons not excluding those related to budgetary execution on Cambodian part, all what could have been done has been limited to

- a - Collection and classification of the existing varieties of paddy in Cambodia and selection of appropriate varieties deemed suitable to the local soil and climate;
- b.- Classification and analysis of the soil and consolidation of techniques required for fertilizer-application and other means to nurture the fertility of the soil,
- c.- Classification of the farm-machinery and their repairing techniques (overall mechanization seems to be pre-mature) and
- d.- Completion of 300 ha-wide Farm (including bund-raising, digging of intake canals of pumped-up water and farmroad construction)

Successful introduction of new varieties of seed would require selection of suitable varieties through a series of basic research, and their breeding accompanied by studies and experiments conducted in ascertaining their adaptability to the local soil and climate. For such varieties to bring about net contribution to an overall production-increase in the country, cultivation-standards need to be established, side by side, with worthy system for multiplying the seeds in question and the advanced cultivation-techniques have to be extended among the common farmers. All these involve a considerably long time. Therefore, full implementation of the Center's targets would not be feasible within the time-limit given by the Notes.

(2) Livestock Breeding Center

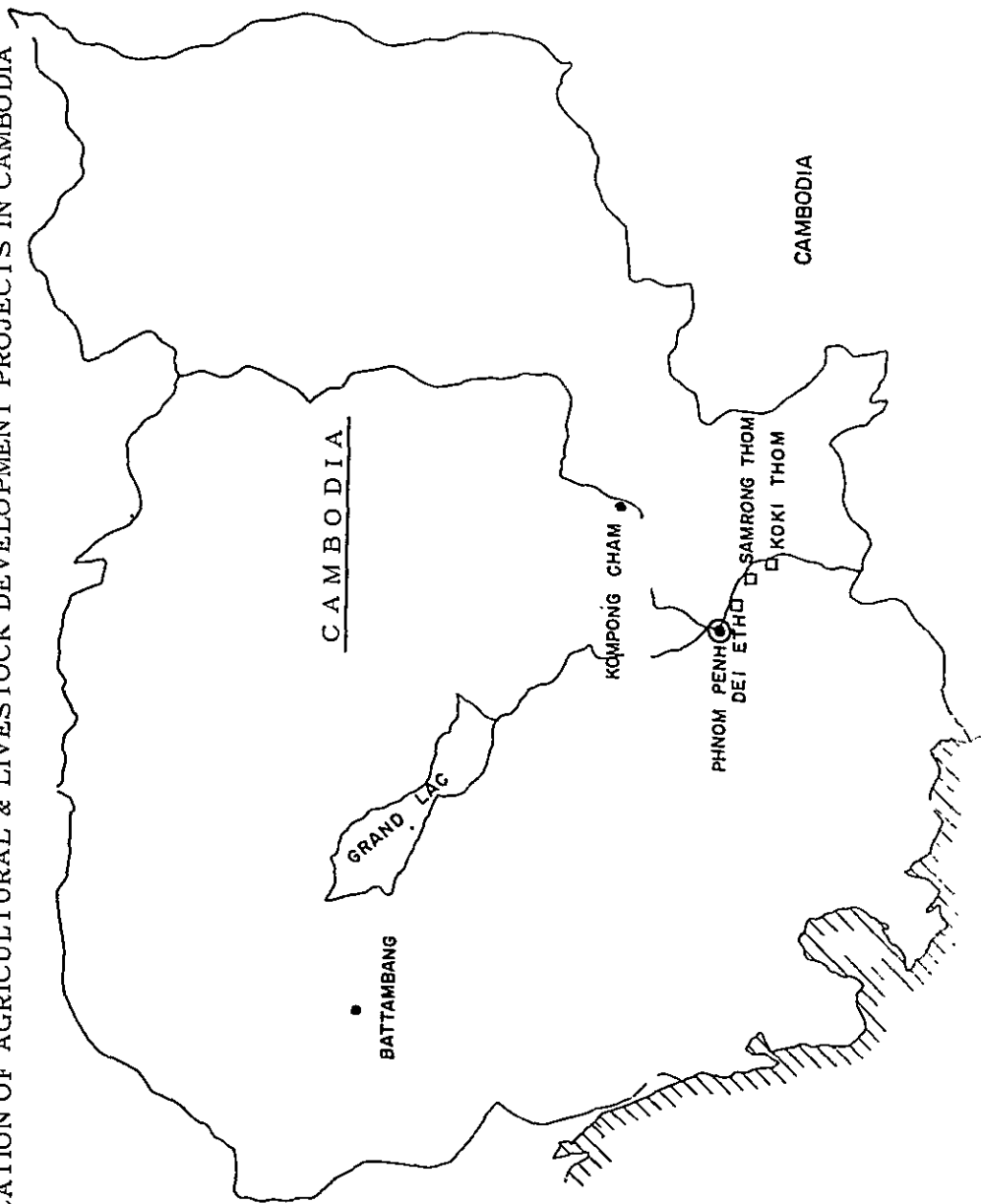
- a.- Production and distribution of breeding-stocks,
- b - Research activities aimed at improvement of breeding method of stock-cattles, and
- c.- Studies aimed at betterment of feedstuff.

Completion of FAO's Milk Processing Plant in Cambodia has helped enhance the significance of this Center at once as a reliable raw-milk supplier and twice as a station where technical improvement of milch-cow multiplication is seriously being taken up. The Center's scale and function needs both enlargement and replenishment to justify such a trust. measures towards strengthening of cattle-management, particularly better controlled pasturage with increased number of shelter-sheds and fencing of the pasture-land are being adopted, side by side, with the further multiplication of stock-milch-cows.

Swine branch of the Center is likewise being enhanced as the Cambodian Government has determined, in appreciation of the good works done by the Center, to concentrate the swine breeding activities of different breeding stockyards over the country at this Center.

For the perfection of a set of advanced livestock-breeding techniques ideally suitable to the tropical condition, with particular emphasis on the improvement of milch-cow there, would require, as in the case of the Agricultural Technical Center, a continuing technical assistance from Japan, in whatsoever form or forms deemed proper, even after the expiration of the co-operation-period as specified in the Notes.

LOCATION OF AGRICULTURAL & LIVESTOCK DEVELOPMENT PROJECTS IN CAMBODIA



(8) THAI : Sericultural Development in the North-Eastern Region

1 Background Information & Significance of the Project

In continuation of its First Six-Year Plan for Economic Development (1961–66), the Thai Government is determinedly propelling its Second Five-Year Plan from the year 1967 onward. In the current Economic Development Plan, Agriculture poses as one of the top-most subjects of national importance and, in this very context, North-Eastern Region of the country is attracting a serious attention for urgent development.

Bordering onto Laos and Cambodia, with merciless Nature which denies adequate rainfall on already poor soil, a majority of the inhabitants of the North-Eastern Region are still confined within a kind of subsistence economy based on slender paddy cultivation. Sericultural industry of Thai has been developing in this North-Eastern Region as a main production-center. Its growth, though very much wished for under the circumstances such as an explosive international reputation of Thai Silk and the corresponding export demand in a steady increase which, if wisely prevailed upon, would doubtlessly help establish sericulture as a most lucrative rural industry, is basically handicapped by its unit of production which is far too small to be technoeconomically justifiable and its technique which is still stagnant on a rudimentary level. No wonder that little surplus of cocoon is available beyond the sericulturist-families' domestic consumption

Thai Government, thereupon, embarked upon a positive program of sericultural development in view of improving the terms of trade in general and encouraging economic betterment and stabilization of livelihood of the people in the North-Eastern Region, in particular. Japan's part of technical cooperation in this connection would be:

(1) To establish a fully equipped Sericultural Research & Training Center meant for technical development and training of technical personnel at Korat, the heart of the North-Eastern Region, with the ultimate purpose of accelerating a rapid progress of sericultural industry of the country;

(2) To reorganize and replenish the three existing Sericultural Experimentation Stations in the country into Branch-Offices of Korat Center so that they would fulfil three broad functions of: (i) multiplication of the improved varieties of mulberry-trees to be developed by Korat Center; (ii) studies relating to aptitude or adaptability of the new techniques successfully experimented in Korat Center, and (iii) technical training on behalf of the local farmers

and extension workers;

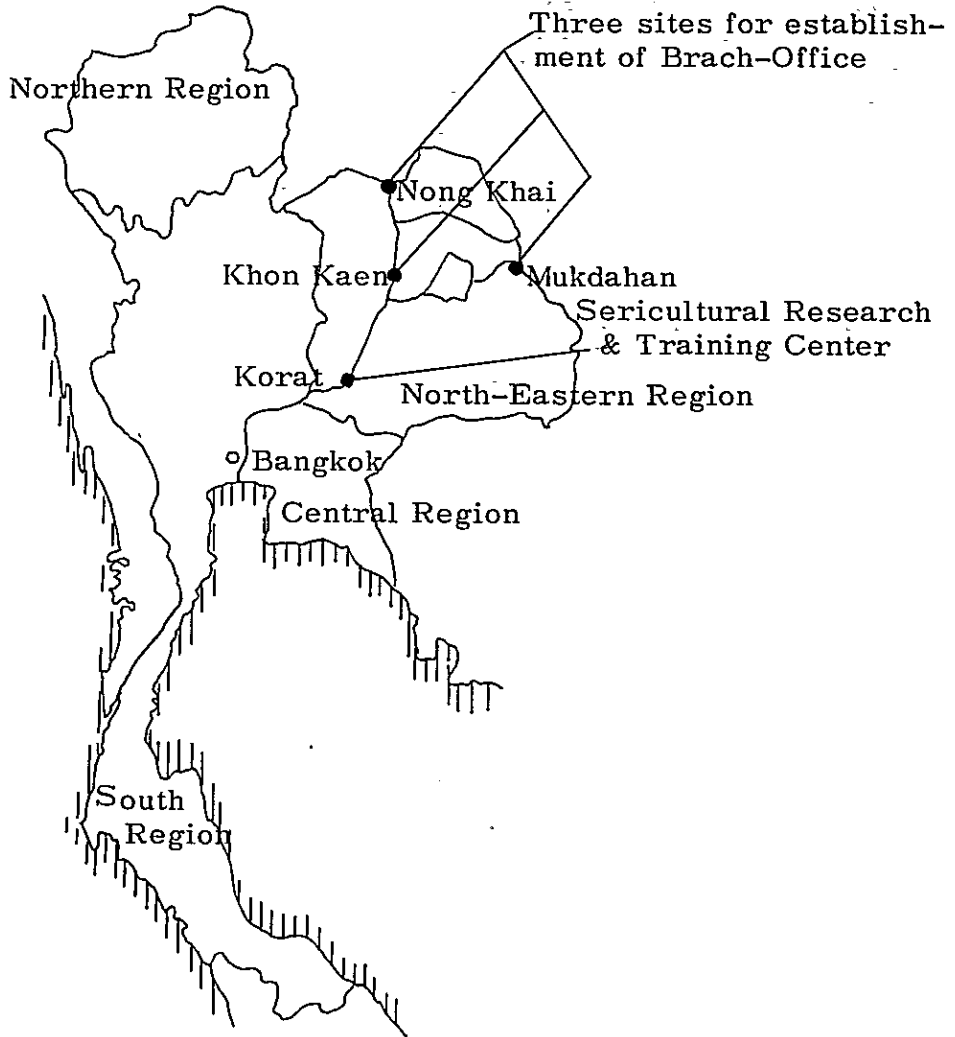
(3) To select three rural communities where the technical innovations due to researches and trainings in Korat Center and its branch-offices would be brought down to the grass-root farmers to see if such technical innovations should be once made popular and twice tested of their adaptability, among the rural populace; these Model Settlements would receive an intensive expert-guidance in sericultural practices with joint-young silk-worm rearing facilities as the nuclei of advanced sericultural techniques.

Services of the experts as resource-persons in providing pertinent advices and guidance and the machinery, equipment and materials deemed necessary for implementation of the above project will be supplied from Japan.

2. *Implementation of the Project*

(1) Agricultural Development Cooperation Basic Survey Team lead by Dr. Ishikura (Asst. Director-General on Research, MAF) visisted Thailand in July 1968 to obtain firsthand information on feasibility of sericultural development in the country, side by side, with irrigation potentialities of paddyland there. The same Team returned to Japan with a firm conviction that this kind of technical cooperation would rank among those most welcomed for agricultural development of Thailand and also conveyed the eagerness on the part of Thai officials to see this project implemented. Consequently, in February 1969, another Team under the leadership of Dr. Ohmura of the Japan Raw Silk Corporation, was deputed to Thailand with terms of reference which included, among other things, an intensive study-tour in the North-Eastern Region with the intent of formulating a sericultural development project centering in the said area, the discussions with the authorities concerned of Thailand on the concrete methods of cooperation, and the signing of Record of Discussions thereof.

(2) Deputation of experts and shipment of implements and materials would ensue upon receipt of the routine application-forms under the Colombo Plan to be filled by the Thai Government.



(9) CEYLON : Dewahuwa Rural Development Project

1. *Background Information & Significance of the Project*

Dewahuwa is one of the major colonization schemes undertaken by the Government of Ceylon and our project-area thereof which is 150 km northeast of Colombo is consisting of some 700 acres of paddyland plus 100 acres of upland-field. Development of its rural community as a whole is the established guideline of this project which synthesizes into one organic entity the number of independent pieces of developmental works as briefed in the below:

- 1) Physical infrastructural improvement through replenishment of irrigation-drainage facilities and betterment of farm-roads;
- 2) Lift-irrigation towards highland and upland-fields;
- 3) Farm-management guidance, including introduction of mechanical farming;
- 4) Experimentation-cum-demonstration on the Pilot-Farms, the one on the paddyland and the other on upland-field;
- 5) Strengthening of Agricultural Co-operatives for improved services in credit, marketing and supply, rural industries, etc., and
- 6) Better-Living campaign, including supply of domestic water to the villagers.

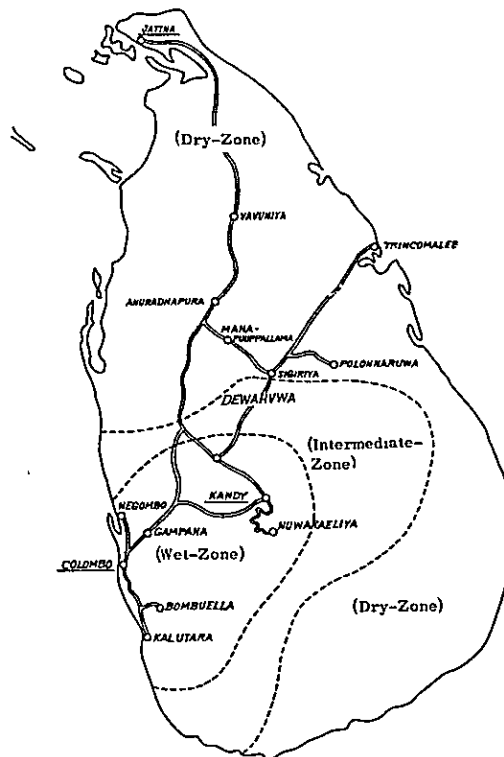
2: *Implementation of the Project*

Dr. Shiroshi Nasu, Professor Emeritus of Tokyo University, lead a team of experts to Ceylon at mid-July 1968 and engaged at three-week study-tour to ascertain an effective-most means of Japanese cooperation for agricultural development there. His Report and Recommendations dwelt, beside other things, upon the significance of a Community Development Program to be concentrated at a sizeable village where big-calibred experts could make the maximum use of whatsoever monetary and material resources as made available, so that the beneficial results originating at the project-area would be given spill-over effects upon the neighboring area until influencing the agricultural development efforts of the whole country.

Welcoming the idea expressed in the Nasu Report, and with high hopes for its materialization, the Government of Ceylon selected eight candidate-sites for such a Community Development Scheme and asked for Japan's choice. Consequently, another team headed by Prof. Dr. H. Fukuda, in the initial stage, and Mr. M. Ohto of OTCA in its closing stage, visited Ceylon at mid-February 1969 and, in full coordination with the authorities and officers concerned of the Ceylonese Government, fulfilled its terms of reference as briefed in the below, within less than two months;

- 1) Finalization of project-area at Dewahuwa after scrutinizing eight candidate-sites;
- 2) Grass-root surveys in the selected area in three broad branches of physical infrastructure, farm-management and rural institutions;
- 3) Assimilation of research-data into a skeleton project for submittance to the Government of Ceylon in the form of Memorandum, and
- 4) Signing of the Record of Discussions.

A third team has been sent out at mid-June 1969 for detailed designing and pre-Project preparations which reached at mutual agreement with the Government of Ceylon on the ways and means of implementing the project, including the time of its commencement, the quantity and quality of works to be shared between the two as well as number and kinds of participants to be assigned from both sides, the material-requirements called for its implementation, etc., within 50 days of its stay there.



(10) INDIA : Agricultural Extension Center

1: Background Information & Significance of the Project

Eight Agricultural Technical Centers, scattering over the subcontinent of India under the name of "Indo-Japanese Agricultural Demonstration Farms", were in operation under a series of bilateral agreements between the Governments of Japan and India. They invariably achieved brilliant success in demonstrative cultivation of paddy through Japanese method, reaping three to four times higher yield than the local averages, through necessary acclimatization efforts by the Japanese specialists working there. Every one of these Farms attained its ultimate purpose of "Demonstrative cultivation of paddy through advanced technology" well within the course of time-limit as specified in the Agreement, and its operational responsibilities have been transferred to India during 1967-68.

There existed no difference of opinion between the two governments, however, that the superior sets of paddy-cultivation techniques so far developed in these Agricultural Demonstration Farms would contribute not in an insignificant degree to food-production campaign all over India, if proper means of their extension could be organized. Eventually, two Demonstration Farms out of the four which had been operating under the initial Agreement were reorganized, upon expiration of their term, into the Agricultural Extension Centers, side by side, with the two out of another four which were functioning under the second Agreement.

Through the additional supplies of agricultural machinery, equipment and materials called for such functional development and the replacement of experts suitable for the purpose, the Agricultural Extension Centers in India are now in a good shape to under take the following assignments:

- i) Practical training on advanced paddy-cultivation techniques on behalf of agricultural technicians and progressive farmers;
- ii) Practical research and experimentation on paddy-cultivation technology;
- iii) Field-tests and operative demonstrations with the improved agricultural machinery and implements.

2: Implementation of the Project

Japan's technical cooperation with India in her agricultural development efforts has been rendered under two Agreements, the one which was signed in April 1962 and the other, in December 1964.

(1) Cooperation under the Initial Agreement (of April 1962)

Individual Agricultural Demonstration Farms in four different States of West Bengal, Orissa, Bihar and Gujarat were opened up, for whose operation the Japanese specialists sixteen in total, that is, four per Farm, and the machinery, equipment and materials totalling at ¥ 36,970,000 were provided with. Prior to an expiry of the agreed cooperation-period in April 1964, an Evaluation Team was sent over to India for a month. India Government's request, based upon good appreciation of the achievements done by the Agricultural Demonstration Farms, for furtherance of Japanese agricultural cooperation, and Japanese Government's willingness to accommodate such, brought about a decision to reorganize two of the Agricultural Demonstration Farms (the one at Surat in Gujarat State and the other at Shahabad in Bihar State) into the Agricultural Extension Centers.

Upon conclusion of the Agreement to this effect in March 1966, seven experts in two groups were deputed to take up their assignment since July 1966 and an aggregate material assistance amounting to ¥ 34,000,000 (including power cultivators, sprayers and dusters, harvestors, etc.) was made during the fiscal year of 1966.

These two Centers are now busy with an intensive training on paddy cultivation as well as extension-work among the selected cultivators in some villages chosen in their neighborhood.

(2) Cooperation under the Second Agreement (of December 1964)

Remarkable achievement attained by four Agricultural Demonstration Farms established under the initial Agreement of April 1962 moved the Governments of India and Japan to conclude the Second Agreement for starting the similar Agricultural Demonstration Farms in four additional States of Maharashtra, Kerala, Mysore and Andhra Pradesh. Sixteen specialists, four in each Farm, and ¥ 46,901,000-worth material cooperation in term of agricultural implements were rendered for their establishment and operation. Similar decision as to the enlarged reorganization of the Agricultural Demonstration Farms into the Agricultural Extension Centers was made when the Evaluation Team visited India prior to the termination of the project which fell in April – June 1958, this time for Khopoli (Maharashtra) and Mandia (Mysore). Immediately upon signing of the Agreement to this effect in December 1968, four experts per Center were assigned on duty who were equipped with agricultural implements and materials amounting to ¥ 31,938,000, during 1968 fiscal year.

Four Agricultural Extension Centers due to the above-mentioned two Agreements and the Japanese experts stationed there were visited by an Observation-cum-Coordination Mission which was deputed to India in February 1969 for the period of five weeks, under the leadership of Mr. K. Yanagiya (Chief, Technical Cooperation Section, Ministry of Foreign Affairs).

LOCATION OF AGRICULTURAL EXTENSION CENTERS



(11) INDIA : Dandakaranya Agricultural Development Project -

1: Background Information & Significance of the Project

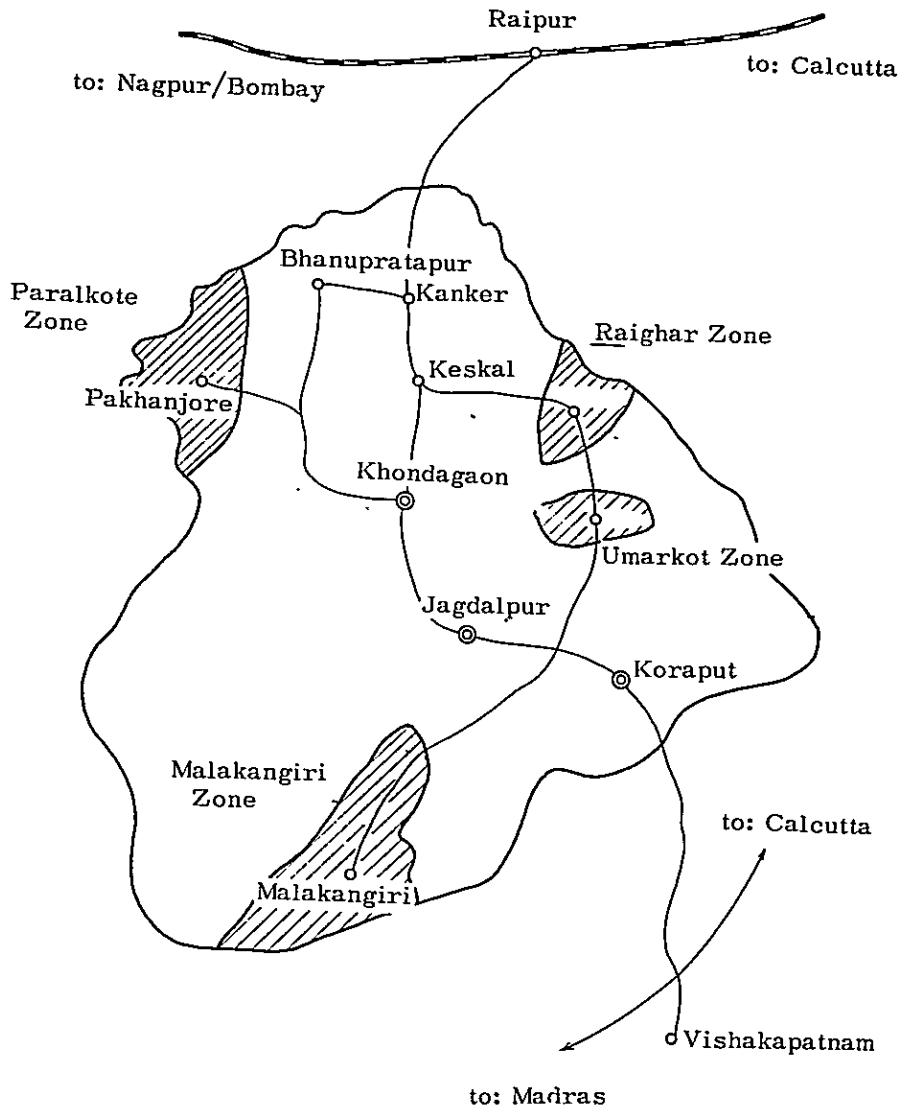
Since 1958, the Government of India has taken upon itself an ambitious Colonization Scheme, primarily meant for rehabilitation of refugees and resettlement of tribal people, in the hilly region extending over three States of Orissa, Madhya Pradesh and Andhra Pradesh. It is known by the name of Dandakaranya Development Scheme, a centrally administered project towards 80,000 ha-wide Special Development Area which consists of four zonal tracts of Raigar, Umerkote, Paralkote and Malakanagiri. Dandakaranya Development Authority in New Delhi is its administrative brain, while Area Headquarters in Korat and each one zonal headquarters in the above-mentioned four zonal tracts are working as its limb. It is indeed a well-knit organizational body for administration, technical guidance and extension.

2. Implementation of the Project

Japan's cooperation in Dandakaranya Development Scheme would start with a preliminary survey in Paralkote zone which, in its 6th year of colonization, is offering over 4,000 settlers' families on 30,000 ha a gross-income which compares more favorably than all-India average. Paralkote district has so many village-wise small dams and reservoirs and, on and above this, a new large dam called Paralkote Dam is expected to be completed in June 1970, bringing some 12,000 ha under irrigation, therefore, new crop-rotation system needs to be introduced within coming one year.

Through our preliminary survey, a specific project area would be selected and an outline of our concrete cooperation approach towards its development would be chalked out, to be followed in due course of time by working-out of its Implementation Scheme.

MAP OF DANDAKARANYA DEVELOPMENT SCHEME



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