PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASO LKA/S 304/83

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY: Telecommunications Network Improvement Project in Greater Colombo

3.SECTOR: Communications & B/Telecommunication

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Sri Lankan Telecommunications Department (SLTD)

7.OBJECTIVES OF STUDY: Feasibility study on "Telecommunications Network Improvement Project in Greater Colombo" as an integral part of the National Development Plan.

8.DATE OF S/W: 1982/12

9.CONSULTANT(S): Nippon Telecommunication Consulting Co., Ltd.

10.STUDY TEAM

No.of Members 15

Period Jan.1983-Nov.1983 (11 months)

Total M/M	Japan	Field
46.30	11.70	34.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	117,636 (¥'000)
Contracted	109,525

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Colombo metropolitan area

2.PROJECT COST (US$1,000) (US$1=270Yen)

	Total Cost	Local Cost	Foreign Cost
1)	38,333	4,526	33,807
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

(1) Junction Network
Junction cable installation: 109.1km
(The above includes optical fiber cable installation for 11.7km.)
PCM system establishment: 781 systems
PCM repeaters: 1,411 pcs
Manhole construction: 327 pcs
Duct installation: Installation length 59.7 km, Pipe length 230km

(2) Subscriber Network
Primary cable installation: 147km
Secondary cable installation: 950km
Cross-connecting cabinet establishment: 187 locations
Number of lead-in cable pairs to exchanges: 67,900 pairs
Manhole construction: 450 pcs
Duct installation: Installation length 96km, Pipe length 490km

Imp. Period: 1986.8-1988.11

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	29.70	FIRR1)	15.20
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Assumptions]
1)The project life is set at 20 years after service-in.
2)The prices used in the financial analysis were converted to 'the border price' by multiplying by the standard conversion factor. As for this project, the border prices happen to be the same as the domestic market prices.
3)Economic benefits consist of consumer's surplus and the operating revenues calculated in the financial analysis.
[Development Impacts]
1) Improvement of telecommunication service in the Metropolitan areas;
2)The greater ease of emergency access to medical institutions is conducive to protection and rescue of human lives;
3)Upgrading and diversification of government services including improvement of security;
4)Increased supply of information;
5)Activation of economic activities;
6) Creation of employment oppotunity.

5.TECHNICAL TRANSFER

1) Joint preparation of the report
2) On the job training (SLTD counterparts)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - ○ Completed
  - ❶ Partially Completed
  - ○ Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

May 1985 OECF loan agreement (10,359 million yen) (Ph-1)
Mar.1991 Construction completed
Mar.1991 OECF Loan Agreement (Ph-II)
Dec.1991 Consulting Service Agreement
Jul.1995 Scheduled to be completed

(FY 1992 Overseas Survey)
Jun.1993 Detailed Design and start of construction
Dec.1994 Implementation scheduled to be completed

(FY1993 Overseas Survey)
Jan.1995 Implementation scheduled to be completed.

(FY1995 Domestic Survey)
It is under implementation. Construction period is extended until Mar., 1996.

(FY1995 Overseas Survey)
Apr. 1996 Implementation scheduled to be completed.

2.MAJOR REASONS FOR PRESENT STATUS

High priority; This project is considered top priority by the Government of Sri Lanka.
The greater Colombo area is the center of political and economic activites in the country, and the outdated and insufficient telecommunications system had become a major bottleneck to be overcome by the early 1980s.

3.PRINCIPAL SOURCE OF INFORMATION

①、②、④

(F/S,D/D)

和名 大コロンボ電気通信網整備計画

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASO LKA/S 303/83

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY
Colombo-Katunayake Expressway and New Port Access Road Project

3.SECTOR
Transportation/Road

4.REFERENCE NO.

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
Greater Colombo Economic Commission (GCEC)

7.OBJECTIVES OF STUDY
Technical and economical feasibility study for the expressway connecting the international airport and the port of Colombo with a distance of 30km.

8.DATE OF S/W: 1982/9

9.CONSULTANT(S)
Japan Bridge and Structure Instituted, Inc.

10.STUDY TEAM
No.of Members 21
Period Dec.1982-Jan.1984(13 months)

Total M/M	Japan	Field
65.59	7.49	58.10

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic and geological survey

12.EXPENDITURE

Total	203,467 (¥'000)
Contracted	193,010

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Colombo metropolitan area

2.PROJECT COST (US$1,000) (US$1/225Yen=23Rs)

	Total Cost	Local Cost	Foreign Cost
1)	51,080	19,790	31,290
2)	236,517	129,779	106,738
3)			

3.CONTENTS OF MAJOR PROJECT(S)
The budget 1) is for F/S and 2) for D/D.
[Project A]
1) Main Road 25.4km
K-1:Dalugama IC - Ragama IC 7.1km; K-2:Ragama IC - Ekala IC 8.4km
K-3:Ekala IC - Airport 9.9km
2) Alternatives and affiliated roads
K-4:Wewelduwa - Kiribathgoda(Access Road to Biyagama) 1.7km
K-5:Ekala IC - Negombo(A3)Road 3.1km; K-6:Dandugam - Airport 9.5km
K-7:KIPZIC - Canada Sri Lanka Friendship Road 1.6km
[Project B] 1) Main Road 5.7km
P-1:Colombo Port - Prince of Wales Avenue 1.6km
P-2:Prince of Wales Avenue - Peliyagoda 1.5km
P-3:Peliyagoda - Dalugama(Along Kandy) 2.9km
2) Alternative and affiliated roads
P-4:Peliyagoda -Dalugama (Along Kandy) 2.6km
P-5:Peliyagoda - Wattala 1.0km

Imp. Period: 1986.1-1989.12

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	18.50	FIRR1)	
EIRR2)	19.04	FIRR2)	0.51
EIRR3)		FIRR3)	

Conditions and Development Impacts:
The IRR 1) is for F/S and 2) for D/D.
[Conditions]
Start of operation in 1990; the project life of 25 years; opportunity cost of capital at 12%.
[Development Impacts]
1) Establishment of an efficient road network through the separation of passing traffics and large vehicles.
2) Productivity improvement in the GCEC area and Gampaha District as the result of transport connection.
3) Inducement of new industrial investments to Katunayake Investment Promotion Zone and elsewhere.
4) Expansion of the regional market due to the construction of new roads, particularly of the expressway.
5) Shortening of the commuting time within GCEC area and Gampaha District, and the resulting population diffusing effect.

5.TECHNICAL TRANSFER
1) Participation of 2 trainees in JICA training program
2) OJT

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [ ] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- [ ] Promoting
- [x] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
The D/D of the port access road (1.5km) of Project B was undertaken as part of the OECF loan on the Colombo Port improvement (L/A in Oct.1987, 1,955 million yen).

Mar.1990 OECF E/S loan agreement (520 million yen) on Colombo - Katunayake Express way
Jun.1990 D/D started
Dec.1992 D/D completed

(FY1993 Overseas Survey)
Land acquisition and resettlement are in progress.

(FY1994 Domestic Survey)
The environmental report regarding this Project has been officially announced by the Gov't of Sri Lanka on Mar.1994.

(FY1995 Domestic Survey)
At present, the new Government is checking and re-investigating the priorities of all existing projects. This project particularly faces on many problems such as environmental matters, resettlement of the inhabitants and so on. Additionally, the security circumstances go from bad to worse.

(FY1995 Overseas Survey)
This project is suspended due to strong public protest for land acquesition surveys.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 コロンボ周辺道路網整備計画

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1988
Revised Mar.1996

ASO LKA/S 101/85

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY
Master Plan for the Domestic Telecommunication Network

3.SECTOR
Communications & B/Telecommunication

4.REFERENCE NO.

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY
Ministry of Posts and Telecommunications Development.

7.OBJECTIVES OF STUDY
To study the Master Plan for telecommunications development in the year 2000.

8.DATE OF S/W: 1984/8

9.CONSULTANT(S)
Nippon Telecommunication Consulting Co., Ltd.

10.STUDY TEAM
No.of Members 12
Period Dec.1984-Oct.1985(11 months)

Total M/M	Japan	Field
	28.22	21.80

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	136,112 (¥'000)
Contracted	128,045

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Whole country

2.PROJECT COST

(US$1,000) (US$=26.00Rp)

	Total Cost	Local Cost	Foreign Cost
1)	29,307		
2)			

3.CONTENTS OF MAJOR PROJECT(S)
To propose 100% of Digitalization of Trunk Network in the year 2000 and the network development for the following towns
(1) Greater Colombo Area Telecommunications Improvement Project-2
(2) SLTD Organization Improvement project
(3) Subscriber's line expansion project and Telecommunications network expansion project for rural towns/villages

4.CONDITIONS AND DEVELOPMENT IMPACTS
[Conditions]
To realize 100% of demand fulfillment and 100% of digitalization in the year 2000

[Impacts]
To decrease the difference in Quality between Urban area and Rural area.

5.TECHNICAL TRANSFER
1) Trainee acceptance: 3 counterparts invited Japan
2) On the job training (SLTD counterparts)

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
Mar.1991 OECF Loan Agreement (Phase II, 10,968 million yen)
Dec.1991 Consulting Service Agreement
Jul.1995 Implementation scheduled to be completed

(FY 1993 Overseas Survey)
No additional information.

(FY1995 Domestic Survey)
M/P and F/S are now repeatingly implemented again since Mar., 1995 in order to fit for the political and economical change of recent years.

(FY1995 Overseas Survey)
1) Trunk Transmission Network Development Project was undertaken with ADB funding and is nearing completion by now.
2) Greater Colombo Area Telecommunication Project-2 was undertaken with OECF funding and it is scheduled to be completed in March, 1995
3) SLTD Organization Improvement Project was undertaken with the World Band funding in FY1993/94 and was successfully completed.

2.MAJOR REASONS FOR PRESENT STATUS
(1) Effectiveness (2) High priority

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 全国電気通信網整備計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASO LKA/A 304/85

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY: Rehabilitation of Tank Irrigation Project

3.SECTOR: Agriculture/Irrigation, Drainage & Reclamation

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Ministry of Lands and Land Development

7.OBJECTIVES OF STUDY
To stabilize agricultural products and increase incomes and living standard

8.DATE OF S/W: 1984/6

9.CONSULTANT(S)
Japan Engineering Consultants Co., Ltd.
Kyowa Engineering Consultants Co., Ltd.

10.STUDY TEAM
No.of Members 10
Period Jan.1985-Mar.1986(15 months)

Total M/M	Japan	Field
50.29	18.33	31.96

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic and Geological Survey

12.EXPENDITURE

Total	198,301 (¥'000)
Contracted	184,918

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Minipe scheme 6,800ha
Nagadeepa scheme 2,400ha

2.PROJECT COST
(US$1,000)
US$1=27.5Rs

	Total Cost	Local Cost	Foreign Cost
1)	16,830	9,370	7,460
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

	Minipe	Nagadeepa
1.Canal System		
Main Canal	55.3km	11.6km
Branch Canal	-	6.3km
D Canal	70.3km	20.0km
F Canal	42.0km	42.9km
Heen Ganga Intake	7.4m(H) X 74m(L)	
2.Road System		
Rehabilitation of Road	18.8km	5.9km
Bridge	-	4 X 50m

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	17.10	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
Agricultural products and farmers' income are expected to go up by
(a) extending irrigation areas during the dry season.
(b) growth of yield per unit area
(c) agricultural diversification

[Development Impacts]
Stabilizing agricultural products and upgrading the income by
(a) rehabilitating the existing irrigations and the road system
(b) ensuring proper operation and maintenance of the system

5.TECHNICAL TRANSFER
1)OJT
2)Acceptance of Trainees (1 person)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
- ○ Completed
- ○ Partially Completed
- ● Implementing
- ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
(FY 1992 Overseas Survey)
The project has been implemented with the OECF loan and the Japanese grant aid.
Jul.1988 OECF L/A signed (1,850 mil. yen)
The loan covers the rehabilitation of main canals (73.3km) and roads, branch canals (90km) and roads, etc.
Construction scheduled to be completed in 1994.
Apr.1989 Grant Aid E/N signed (449 mil. yen)
Minipe and Nagadeepa Rural Developement
Phase I: Improvement of roads and digging of wells
Completed
Jun.1989 Grant Aid E/N signed (709 mil. yen)
Phase II: Improvement of roads and digging of wells
Completed

(FY1993 Overseas Survey)
Sep.1995 Scheduled to be completed.

(FY1994 Domestic Survey)
No additional information.

(FY1995 Domestic Survey)
It is planned to extend the OECF financing period until Mar., 1998. And the period of the agreement with consultant is also extended until Dec., 1996.

(FY1995 Overseas Survey)
May 1995 Grant Aid E/N signed (2,200 mil.yen) for the construction of Mahaweli Bridge.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④

和名 農業用貯水池復旧計画

[F/S,D/D]

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

ASO LKA/A 101/87

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Integrated Rural Development Project for Gampaha District

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Rural Development Bureau, Ministry of Finance, Planning, Racial Problems and State Unification (former Ministry of Project Planning and Implementation)

7.OBJECTIVES OF STUDY
District-wide integrated rural development

8.DATE OF S/W 1986/4

9.CONSULTANT(S)
Chuo Kaihatsu International Corp.

Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 13
Period Jul.1986-Mar.1987(9 months)

Total M/M	Japan	Field
54.27	23.24	31.03

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic and Geological Survey

12.EXPENDITURE

Total	168,183 (¥'000)
Contracted	146,293

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Gampaha district(1,600sq.km, 1.4 million population)

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=28Rp.in 1987	1)	22,046	512	21,534
	2)	10,710		

3.CONTENTS OF MAJOR PROJECT(S)
5 long term and 20 short term objectives were set.
3 priority projects were selected from the short term projects for early development.
Short term projects:
1.Development of Agricultural Production
2.Development of Agricultural Infrastructure
3.Development of Rural Industries
4.Development of Human Resources
5.Development of Social Infrastructure
Priority projects:
1.Model Project for Improvement of Agricultural Production
2.Development of Human Resources
3.Development of Social Infrastructure
The Cost 1) above pertains to the short-term plan, and the Cost 2) to the total of priority projects.

4.CONDITIONS AND DEVELOPMENT IMPACTS
Implementation of the priority projects is prerequisite for later implementation of all the short term projects which will nurture a condusive socio-economic and physical infrastructure to realize the latter.
(Development Impacts)
1.Increased production(minor export crops, general upland crops, paddy)
2.Increased farmers income
3.Social benefit (Improved diet, increased employment opportunities, upgrading of education level, and improved health)

5.TECHNICAL TRANSFER
1)Training in Japan
2)One through the preparation of the study report
3)Instructions for equipment or materials donated upon the completion

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
In 1987, the Sri Lankan government selected the Model Project for Improvement of Agricultural Production which is one of the priority projects based on this master plan as the first priority project for implementation, and made request to the Japanese government for grant aid to materialize it.
Basic design was completed in January 1989. For Phase I, E/N was signed in June 1989 (996 mil. yen) and the construction was completed in February 1991. For Phase II, E/N was signed in June, 1990 (1,075 mil. yen) and the construction was completed in October 1991
As of the present, formal request has been made by the Sri Lankan government for project technical cooperation for the project.

(FY1991 Overseas Survey)
No additional information

(FY1992 Overseas Survey)
A formal request for a project-type technical cooperation was made, and a pre-development study mission was dispatched in March 1993. A request for a Grant Aid was made in February 8 1993, for construction and renovation of bridges and improvement of link roads (A total cost of Rp. 370.4 mil.).

(FY1993 Overseas Survey)
Project-type technical cooperation has not yet commenced.

(FY1994 Domestic Survey)
The Basic design was completed in January 1994, E/N was signed in April 1994 (Grant Aid 1195 million Yen for Phase I) and E/N was signed in Sept. 1994 (Grant Aid 531 million Yen for Phase III). Phase I work is under implementation and phase II work is under tendering. At present Project-type technical cooperation is proceeding for the first part of the project for Improvement of Agricultural production.

(FY1995 Domestic Survey)
On Aug., 1995, the Sri Lankan Office submitted a request fo Survey work to review a M/P project of 1987, about 10 years ago, to the Embassy of Japan.

(FY1995 Overseas Survey)
Phase II was commenced in 1994 and is about to complete now. 16bridges have been constructed and a set of equipment has been provided for each local council and Western Province Road Development Authority.

2.MAJOR REASONS FOR PRESENT STATUS
Project implementation is progressing smoothly.
This is due to the fact that the understanding of affected residents was obtained during the master study phase, and that the project places emphasis on the rehabilitation of existing structures.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 ガンパハ県農業総合開発計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P)

Compiled Mar.1991
Revised Mar.1996

ASO LKA/A 102/89

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Sand Drift in the Southeastern Coast

3.SECTOR
Fisheries/Fisheries

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Fisheries and Aquatic Resources
Executing Agency:Ceylon Fishery Harbours Corporation

7.OBJECTIVES OF STUDY
Countermeasure for Siltation

8.DATE OF S/W 1987/10

9.CONSULTANT(S)
Nippon Tetrapod Co., Ltd.

10.STUDY TEAM

No.of Members 6

Period Mar.1988-Dec.1989(16.5 months)

Total M/M	Japan	Field
29.73	16.81	12.92

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Sounding, Topographical survey/Observation of Meteorology and Hydrographic Conditions/Hydraulic model test

12.EXPENDITURE

Total	224,515 (¥'000)
Contracted	203,563

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kirinda Fishery Harbour Southeastern Coast Fishery population 1,408/ Fishing boats 128/Yearly haul 385t

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=35.32Rp in1989	1)	14,437		14,437
	2)			

3.CONTENTS OF MAJOR PROJECT(S)

Extension of Main Breakwater	200m
Improvement of Existing Main Breakwater	100m
Construction of Sub-breakwater	230m
Construction of Jetty	200m

4.CONDITIONS AND DEVELOPMENT IMPACTS
With conducting natural condition survey in the NE & SW monsoon season and clarifying numerical simulation for the sand drift, the following proposals were planned.
(1) By constructing a Groyne at the Kirinda point, the sand drift of the SW monsoon season will be shifted onto an offshore course.
(2) By extension of main breakwater, the coastal sand drift will be prevented and the tranquility within the harbour will be improved for mooring.
(3) By establishing another new sub-breakwater in the north of the existing sub-breakwater, siltation will be prevented at harbour mouth.

5.TECHNICAL TRANSFER
1) Training and study in Japan(2 persons)
2) Guidance about using survey materials and a new method of investigation in Sri Lanka. 3) OJT

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
According to this study results, grant aid was provided in 1991 to conduct the socio-economic survey and the fishery survey and to formulate the rehabilitation project. In January 1992, B/D was commenced. The content of the rehabilitation project is;
Phase I: Extension of the main breakwater by 60m and construction of the sub-breakwater (80m)
Phase II: Extension of the main breakwater by 120m and construction of the jetty (120m) and the sub-breakwater (140m)
Phase III: Extension of the main breakwater by 20m, rehabilitation of the main breakwater (120m) and construction of sub-breakwater
May 1992 E/N signed (2,158 mil. yen, 1992-95)
Mar 1993 Phase I is about to be completed.
Apr 1993- Phase II is commenced. Upon the completion of Phase III, the Kirinda Fisheries will be in full operation.

(FY1993 Overseas Survey)
The project is now in progress according to the masterplan.

(FY1994 Domestic Survey)
The implementation management work has been completed on 12th of Oct.1994.

(FY1995 Domestic Survey)
It became a good and vivid fishery harbour, and it is planned to despatch short-term experts (2 for cold storage and one for coastal survey works) on Jan., 1995.

(FY1995 Overses Survey) No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 南東部沿岸漂砂調査

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1991
Revised Mar.1996

ASO LKA/A 201B/89

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Extension of the Moragahakanda Agricultural Development Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY M/P+F/S

6.COUNTERPART AGENCY
Mahaweli Development Board

7.OBJECTIVES OF STUDY
The most effective use of available water in the Mahaweli River System and priority projects<M/P>
Updating of the previous Feasibility Study made in 1979<F/S>

8.DATE OF S/W 1987/10

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Japan Engineering Consultants Co., Ltd.

10.STUDY TEAM
No.of Members 9
Period Jan.1988-May.1988(5 months)

Total M/M	Japan	Field
21.33	6.45	14.88

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	220,970 (¥'000)
Contracted	213,902

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Amban Ganga and Mahaweli Gang Basins and NCRB area<M/P>
Basin of Amban Ganga and Mahaweli Gang<F/S>

2.PROJECT COST (US$1,000) US$1 = 15.0Rs

		Local Cost	Foreign Cost	
M/P	1)	1,352,000		
	2)			
F/S	1)	310,000	105,500	204,500
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
<M/P>Stage-wise agricultural land development is recommended in NCRB area.

Package 1	Joint Facilities	Kalu ganga dam
		NCP canal
	New Irrigation Area	23,900 ha
	Cashew Farm	10,000 ha
	Rehabilitation	25,500 ha
Package 2	Joint Facilities	NCP canal
		Minipe LB canal
	New Irrigation Area	26,600 ha
	Rehabilitation	38,600 ha
Package 3	Joint Facilities	NCP canal
		Minneriya Pump Station
	New Irrigation Area	27,000 ha
	Cashew Farm	10,000 ha

<F/S>Agricultural Development (62,000ha) in the Amban Ganga basin and hydro-power generation (25MW) by constructing the Moragahakanda dam with a height of 72m.
Principal feature of irrigation and drainage syarwm is as follows:

- Rehabilitation of irrigation canal	60km
- New Construction of irrigation canal	120km
- New construction of O/M roads	150km
- Downstream land development	13,900ha
- Drainage canal	90km

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	9.30	FIRR1)	
EIRR2)	9.20	FIRR2)	
EIRR3)	3.00	FIRR3)	

Conditions and Development Impacts:
<M/P>-Continued Agricultural Development for Rice Self-Sufficiency
Constant development of agriculture, since the population of Sri Lanka is expected to increase from 16.4 mill in 1987 to about 24mill in 2020.
-Secondary Benefits: favorable socio-economic impacts, Foreign exchange saving,increased employments, and improvement of living standard, etc.
1)Expansion of production;Paddy:1,033,000 ton, Onion: 38,000 ton, 2)Chilli: 25,000 ton, Maize: 17,000 ton, Cashew: 20,000 ton
3)Increase in unit yields 4)Paddy: 2.8-1.6 ton/ha, Onion: 5.0 ton/ha, Chilli: 0.4 ton/ha, Sugar cane:46 ton/ha 5)Population in the priority area in 1981 was about 3,370,000.
6)IRR: Phase 1: 9.3%, Phase 2: 9.2%, Phase 3: 3.0%
<F/S> 1)Expansion of planted area: Paddy:38,130 ha
2) Sweet potato, coarse cereals:1,550 ha, Vegetables including onion:9,000 ha 3)Increase in unit yields Paddy: 2.8-1.6 ton/ha, Onion: 5.0 ton/ha 4)Chilli: 0.4 ton/ha, Sugar cane: 46 ton/ha,
Benefited Population would be about 180,000

5.TECHNICAL TRANSFER
Transfer technology to counterpart in the course of the Study.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
☐ Completed or in Progress ■ Promoting
○ Completed
○ Partially Completed ☐ Delayed or Suspended
○ Implementing
○ Processing ☐ Discontinued or Cancelled

(Description)
The Government of Sri Lanka may request the project on loan basis to Japanese Government.

(FY1992 Overseas Survey)
Oct.1. 1992 Fund proposal to Ministry of Finance

(FY1994 Domestic Survey)
An alternative Feasibility Study of KaLu Ganga reservoir construction project for the Moragahakanda Dam project was carried out in 1992-1993 and comparative study in between the Two projects has been conducted in these days.
A conclusive proposal was given on a note for cabinet meeting in July 1994 showing positive suggestion of simultaneous construction plan of the two project considering operational loss of water in case of single dam alternative plan.
But, considering availability of investment for each project and from technical point of view, a phase wise implementation was suggested in the note that the Moragahakanda dam would be constructed as first phase and followed by KaLu Ganga dam.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The review of the Feasibility Study done in May. 1988 has been requested and the request-letter for the 29th OECF Yen Loan has been submitted. At present it is proposed to undertake the construction of the Moragahakanda dam only as the first stage.

2.MAJOR REASONS FOR PRESENT STATUS
1. Priority decreased:
New government in 1989 placed Janasabia-Plan as significant task in policy.
The content of plan: To give Rp 2,200 per month to poverty.
2. Since 1989 structual adjustment proposed by World Bank and IMF has been implemented.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 モラガハカンダ農業開発計画

(M/P+F/S)

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1991
Revised Mar.1996

ASO LKA/S 202B/89

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Development of the Port of Colombo

3.SECTOR
Transportation/Port

4.REFERENCE NO.

5.TYPE OF STUDY M/P+F/S

6.COUNTERPART AGENCY
Sri Lanka Ports Authority

7.OBJECTIVES OF STUDY
F/S, M/P, & ST/P

8.DATE OF S/W 1988/3

9.CONSULTANT(S)
Overseas Coastal Area Development Institute
Japan Port Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 10
Period Nov.1988-Nov.1989 (13 months)

Total M/M	Japan	Field
52.66	28.19	24.47

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Boring, Topographic Survey
Bathymetric Survey

12.EXPENDITURE

Total	175,721 (¥'000)
Contracted	176,480

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Colombo Port

2.PROJECT COST (US$1,000)

		Local Cost	Foreign Cost	
M/P	1)	478,534		
	2)	409,376		
F/S	1)	257,849	42,117	215,732
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P>	Plan A: Cost 1)	Plan B: Cost2)
1)New North Pier		
Berth No.3	-11m x 210m	-
Berth No.4	-7.5m x 130m	-
2)Port container terminal	o	-
3)New Queen Elizabeth Container Terminal(NQECT)		
Berth No.1	-14 x 350m	-14 x 340m
Berth No.2	-14 x 350m	-14 x 330m
Berth No.3	-12 x 300m	-12 x 330m
4)Extension of SW breakwater (550m)	o	-
5)New SW breakwater (510m)	-	o
6)Re-alignment of main entrance channel	o	o
7)Computer communication	o	o
8)Port highway system	o	o

<F/S> 1)Jaye Container Berth (JCT)
Berth No.3 (-13.5m x 330m, planned capacity 300,000TEUs, stacking yards 6,300TEUs)
Berth No.4 (-13.5m x 360m, planned capacity 300,000TEUs, stacking yards 6,150TEUs, feeder berth -9.0m x 170m)
Gantry cranes(Post Panamax):2 units, High speed transfer cranes:6units
2)New North Pier(NNP)
Berth No.1: -7.5m x 130m, Warehouse: 40m x 160m
Berth No.2: -11.0m x 210m, Warehouse: 40m x 160m
3)Pipe line for the new oil terminal: 700m
4)Rehabilitation of Queen Elizabeth Quay: Berths No.4 and No. 5, etc.

Imp. Period: 1989. -1995.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	21.40	FIRR1)	8.70
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

(Planning Conditions)
1)Sri Lanka's political stability improves to secure project implementation
2)Relative importance of the Port in the international container shipping network will not change significantly
3)Further development beyond the plan should be coordinated with the development of the Port of Galle

(Development Impacts)
1)Increased handling of container cargo transshipments
2)Reduction of transport costs
3)Increased foreign exchange earnings
4)Activation of international trade in Sri Lanka and neighboring countries
5)Promotion of export processing industries around the Port of Colombo
6)Improved reliability of the port of Colombo

5.TECHNICAL TRANSFER
1)On-the-Job training
2)JICA counterpart training

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [x] Completed or in Progress
- [ ] Promoting
- ○ Completed
- ● Partially Completed
- [ ] Delayed or Suspended
- ○ Implementing
- ○ Processing
- [ ] Discontinued or Cancelled

(Description)
Oct. 1989 OECF loan agreement on Jaya Container Terminal No.3 (6,200 million yen)
Mar. 1990 OECF loan agreement (Phase I 3,000 million yen)
Oct. 1991 Construction work of JCT No.3 was commenced
Mar. 1991 OECF loan agreement (Phase II 10,968 million yen)
Mar. 1992 OECF loan agreement (Phase III 21,055 million yen)
Aug. 1993 OECF loan agreement (Phase IV 7,728 million yen)

(FY 1992 Overseas Survey)
1) JCT No.4 and communications system: under construction
2) Rehabilitation of Queen Elizabeth Quay: completed
3) Pipe laying and dredging: scheduled to be implemented
4) New North Pier: in progress

(FY1993 Overseas Survey)
Dec.1994 JCT No.3 is scheduled to be completed
Dec.1995 JCT No.4 is scheduled to be completed

(FY1994 Domestic Survey)
Jul. 1994 OECF L/A was concluded (Development of the Project of Colombo, 5,668mil. Yen).
Contents of Project:(1) Construction of the General Cargo Berth at the North Pier as the alternative from QEQ. (2)Redevelopment of QEQ to be containarized.

(FY1995 Domestic Survey)
JICA is implementing "Development of the New Port of Colombo Project" as for the survey work of FY1995.

(FY1995 Overseas Survey)
1997 NNP1 and 2 is scheduled to be completed Pipelaying dredging and communication systems projects are in progress.

2.MAJOR REASONS FOR PRESENT STATUS
The project was commenced on good timing for adapting to the change of containerization in the world

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 コロンボ港開発計画

[M/P+F/S]

PROJECT SUMMARY (M/P)

Compiled Mar.1993
Revised Mar.1996

ASO LKA/S 102/91

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY
Development of the Port of Galle

3.SECTOR
Transportation/Port

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY
Sri Lanka Ports Authority

7.OBJECTIVES OF STUDY
1. F/S formulated with a target year of 1997
2. Technical transfer to the counterparts

8.DATE OF S/W: 1990/4

9.CONSULTANT(S)
Overseas Coastal Area Development Institute
Japan Port Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Sep.1990-Nov.1991(13 months)

Total M/M	Japan	Field
68.72	39.65	29.07

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Bathymetric Survey
Topographic Survey
Boring

12.EXPENDITURE

Total	232,251 (¥'000)
Contracted	226,013

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Port of Galle

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
(US$1=Rs41)	1)	334,612	89,321	245,291
	2)			

3.CONTENTS OF MAJOR PROJECT(S)
Master Plan:
(1)Southwest Breakwater : 1,500m(protection from SW Monsoon)

(2)Container Terminal : 3 berths(-14m, 1,090m), container yard(2,200 slots) Cargo handling machinery(containner cranes, transtainers, tractor trailers), other related facilities and buildings

(3)General/Bulk Cargo : 2 berths(-14m x 270m, and -12m x 240m), storage sheds, handling machinery(unloaders, belt conveyors, forklifts)

(4)Bunker Oil Berth : 1 Dolphin-type berth(-7.5m x 120m)

4.CONDITIONS AND DEVELOPMENT IMPACTS
[Development impacts]
1)It will enable the direct access to foreign markets from the southern region(e.g., Galle, Matara and Hambantota), contributing to the restructuring and rational function arrangement of Sri Lanka Forts.
2)It will relieve the crowdedness of the Port of Colombo and meet future demands.
3)It will decrease the traffic load of the National Road A2 (from Colombo to Hambantota via Galle) and the coastal railroad, meeting the increase of traffic demands and motorization.
4)It will develop benefits fo contaniners with the improvement of service standards and cost conditions for the shippers and consigness in the hinterland of Galle.
5)The funcitons of international shipping base of the port of Galle will promote the regional economy.
6)It will be conductive to the development of Kegalla export processing district in the Galle region. The port development will increase the number and production of factories in the Kegalla region.
7)It will build a development core in the southern region, activating the economy through industrialization. Especially the develcpment of cement factories in behind the port and milling factories close to the port will proceed in the future.
8)The agriculture in the southern region will be favorably influenced from the cost reduction of inland transportation compared with the case of using the Port of Colombo.
9)The port construction and management along with regional industrial development will increase employments and income level in the region.

5.TECHNICAL TRANSFER
Through discussion with counterparts, technical transfer was conducted by transmitting the method of development planning, calmness analysis and so on.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
In this study, the urgent plan (breakwater 350m) was formulated. After the completion of this study, the implementation of that was requested from Sri Lankan Government.
If the breakwaters are constructed, the SLPA says that a foreign shipping line will call at the Port of Galle.

(FY1992 Overseas Survey)
The Sri Lankan government is now under consideration to adopt the BOT schemes in order to implement this project and will select an implementing firm in June. At the same time, it is examining the possibility to apply for OECF Loan.

(FY1994 Domestic Survey)
No additional information.

(FY1995 Domestic Survey)
The firm to implement the development works is not selected as yet. However, the Governmental authorities concerned are continuously investigating the way to materialize this project,i.e, to accept project plans from foreign firms such as "new development of the Port of Galle".

(FY1995 Overseas Survey) No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
The project for development of the Southern district is given very important position as for one of the big political items of the State. And the development of the Port of Galle is considered as one of the main component.

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名：ゴール港整備計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1994
Revised Mar.1996

ASO LKA/A 305/92

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Walawe Irrigation Upgrading and Extension Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Mahaveli Authority of Sri Lanka

7.OBJECTIVES OF STUDY
Increasing agricultural production, incomes of rural people, and employment opportunities in the Project and through grading and extention of irrigation facilities and provision of rual infrastructure

8.DATE OF S/W 1990/11

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Naigai Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 8
Period Jun.1992-Nov.1992(18 months)

Total M/M	Japan	Field
29.31	11.50	17.81

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Natural Environment (Vegetation, Animals, Socio-economic Environment) Surveys.

12.EXPENDITURE

Total	183,493 (¥'000)
Contracted	90,005

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Left bank of the Walawe river 180km southeast Colombo

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	66,045	41,273	24,773
2)	12,841	7,841	5,000
3)	45,727	18,023	27,705

3.CONTENTS OF MAJOR PROJECT(S)
(1) Upgrading and rehabilitaion of existing irrigation facilities in the MEA are of 2,900 ha, including a total of 190 km of the left bank main canal and sobordinate canals and 2,200 related structures;
(2) Construction of irrigation and drainage facilities in the Edension and MEA areas of 6,380 ha including 25 km of the left bank rasis canal 313 km of sobordinate irigation canals, 47 tanks 254 km of drainage canals, about 1,000 structures, and 322 km of canal inspection roads;
(3) Land reclamation for 5,240 ha of paddy and upland fields and construction of on-farm works for 6,380 ha;
(4) Provision of information including preparation of 1,200 ha of land for 22 villages, 28 schools, 12 health & medical care facilities, 22 drinking water supply system, 140km of roads, 22 administration offices, 6 agro-extension facilities and a development center.

Imp. Period: 1993.10-1995.3 1995.1-1997.12 1997.1-1999.12

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	17.30	FIRR1)	
EIRR2)	14.20	FIRR2)	
EIRR3)	13.60	FIRR3)	

Conditions and Development Impacts:
1) Based on the estimated banefits and costs
2) Benefit reduction of 10%, cost rise of 10%
3) Benefit reduction of 10%, cost rise of 15%

5.TECHNICAL TRANSFER
1) Survey/Investigation and planning method, and its evaluation.
2) Training in Japan.
3) One through the preparation of the study report.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ◉ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
Basic design is being carried out under grant aid. It consists of main rural roads of 31 km including a bridge across the Walawe river and a water purification plant in Suriyawewa. A request of technical assistance improvement of the exsisting area was submitted to official, and an appraisal mission was sent.

(FY1993 Overseas Survey)
An application has been made to OECF for financing & implementation of the Project which includes detailed designs, preparation of contract document and supervision of construction.

(FY1994 Domestic Survey)
Since January 1994, this project has been under implementation by grant aid.
1994.1.21:Grant Aid E/N 968 million yen (Stage I)
1994.7.28:Grant Aid E/N 1,018 million yen (Stage II)
Major components: Construction of main rural roads of 31km including a bridge across the Walawe river and a water purification plant in Suriyawewa
1994.6:OECF loan agreement (E/S) 379 million yen Major components: Rehabilitation of irrigation facilities in the existing irrigation area (2,900ha), Rearrangement of irrigation/drainage water network in a part (1,040ha) of the rain water dependent area, execution of the farm land renovation, stabilization of irrigation water, Upgrading of land use efficiency.Datailed design which includes preparation of environmental monitoring plan, study and proposal of O&M system, and preparation of agricultural extension plan for the Walawe Left Bank Irrigation Upgrading and Extension project. Loan is to be used for consulting/service fees of the D/D etc.

(FY1995 Domestic Survey)
Apr., 1995 D/D commenced (up to Nov., 1996)
Aug., 1995 A review report is submitted to MASL.

(FY1995 Overseas Survey)
June 1994 The project for improvement of rural infrastructure in Walawe Left Bank is started with the Grant Aid (Dec. 1995 scheduled to be completed)
July 1997 Walawe Left Band irrigation upgrading and extension project is scheduled to be started with the OECF Loan and the own fund of GOSL (3,940ha). (June 2005 scheduled to be completed)
July 1999 Walawe Left Band irrigation upgrading and extension project is scheduled to be started (5,340ha). (June 2003 scheduled to be completed. Not financed yet.)

2.MAJOR REASONS FOR PRESENT STATUS
The southern area development plan is given top phority in the National Development Plan.

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 リラウエ農業開発計画

Continued on (F/S,D/D)

状況（要約表添付文書）

ASO LKA/A 305/92 (F/S)

Name of Walawe Irrigation Upgrading and Extension Project
Study

Country Sri Lanka

Type of Study F/S

Sector Agriculture/(Agriculture in)General

Present Status: Implementing

(Description)

Basic design is being carried out under grant aid. It consists of main rural roads of 31 km including a bridge across the Walawe river and a water purification plant in Suriyawewa. A request of technical assistance improvement of the exsisting area was submitted to official, and an appraisal mission was sent.

(FY1993 Overseas Survey)
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Suriyawewa
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(FY1995 Domestic Survey)
Apr., 1995 D/D commenced (up to Nov., 1996)
Aug., 1995 A review report is submitted to MASL.

(FY1995 Overseas Survey)
June 1994 The project for improvement of rural infrastructure in Walawe Left Bank is started with the Grant Aid (Dec. 1995 scheduled to be completed)
July 1997 Walawe Left Band irrigation upgrading and extension project is scheduled to be started with the OECF Loan and the own fund of GOSL (3,940ha).
(June 2006 scheduled to be completed)
July 1999 Walawe Left Band irrigation upgrading and extension project is scheduled to be started (5,340ha).
(June 2003 scheduled to be completed. Not financed yet.)

PROJECT SUMMARY (M/P)

Compiled Sep.1995
Revised Mar.1996

ASO1LKA/A 103/94

I. OUTLINE OF STUDY

1.COUNTRY Sri Lanka

2.NAME OF STUDY
Agricultural and Rural Development for Up-country Peasantry Rehabilitation Programme

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Inland Farming villages' Restration

7.OBJECTIVES OF STUDY
Formulation of a Master Plan of rural development, mainly consisted of the development of agricultural industry and farm villages, considering the mintenance of environment

8.DATE OF S/W 1992/11

9.CONSULTANT(S)
Nippon Koei Co., Ltd.

10.STUDY TEAM
No.of Members 8
Period Feb.1993-Jul.1994(18 months)

Total M/M	Japan	Field
70.03	44.53	25.50

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Survey of Farmhouse, Soil Analysis, Topographic Survey

12.EXPENDITURE
Total 233,429 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Central Uva and Sabaragamuwa Provinces
(Total area approx. 19,000 sq.km)

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	34,800	14,300	7,400
2)	18,200	20,500	10,800

3.CONTENTS OF MAJOR PROJECT(S)

	District-1	District-2
Renovation of the irrigation facilities	766ha	214.2ha
Renovation of the rural farm roads	128.8km	67.0km
Renovation of the water supplying facilities for the farm villages	915m	2,822m
Renovation of the various facilities	9places	14places
Preservation of agricultural field	100ha	50ha

4.CONDITIONS AND DEVELOPMENT IMPACTS

[Development Impacts]
Estimated number of beneficiaries

1.Agricultural activities	
Facilities of the market of farm village	43,560
Storage house for agricultural products	69,578
Storage house for materials	35,214
Agricultural training center	28,500
Inspection station for the seedings	60,600
2.Renovation of the irrigation system	4,630
3.Infrastructure for farm villages	
Water supply	12,704
Rural roads	23,280

5.TECHNICAL TRANSFER
1) Training in Japan
2) OJT
3) One through the preparation of the study results

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
A part of the proposed project for District-I is in process in order to be implemented as a grant aid project.

(FY1995 Overseas Survey)
The main report has been distributed among the relevant Ministries, Department and Institutions. Data and statistics have been used and an action has been taken to implement a proposed project. A request for grant aid has been submitted to the Japanese government.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、日本工営（株）スリランカ事務所

和名 内陸部農村復興計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Sep.1995
Revised Mar.1996

ASO LKA/S 306/94

I. OUTLINE OF STUDY

1.COUNTRY: Sri Lanka

2.NAME OF STUDY: Kalu Ganga Water Supply Project for Greater Colombo

3.SECTOR: Public Utilities/Water Supply

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: National Water Supply and Sewage Corporation (NWSDB)

7.OBJECTIVES OF STUDY: To carry on a Feasibility Study on the water supply system of Kalu Ganga to find out an adequate scale in order to supply enough amount of water for greater Colombo Zone after 2000.

8.DATE OF S/W: 1993/8

9.CONSULTANT(S): Nippon Jogesuido Sekkei Co., Ltd.
Nippon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Dec.1993-Dec.1994(13 months)

Total M/M	Japan	Field
52.30	23.10	29.20

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Survey works for water quality, environment, Topography and geology

12.EXPENDITURE

Total 92,979 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Greater Colombo Zone

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	14,305	10,797	3,508
2)	10,258	7,148	3,110
3)			

3.CONTENTS OF MAJOR PROJECT(S)

To establish water supply system from the Kalu Ganga as the water resources.

(Main Facilities)
- Taking in facility : 191,000cu.m/d
- Water conducting pipe : 1,500mm dia., 7,670m in length
- Filtration plant : 182,000cu.m/d
- Clean water reservoir : 30,000cu.m
- Water supplying pipe : 1,650-200mm dia., 37,130m in length
- Water distribution pipeline : 700-90mm dia., 192,200m in length

Imp. Period: 1996. -2001. 1999. -2005.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)		FIRR1)	10.00
EIRR2)		FIRR2)	12.30
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Development Impacts]
By means of establishment of the water supply system from Kalu Ganga as the water resources, water will be supplied to the southern part, where do not have water supply as yet, and keep enough amount of water good for the total demand of water of the greater Colombo Zone even after 2000. This project will contribute to the improvement of the health and welfare of inhabitants and to the promotion of the local industries.

5.TECHNICAL TRANSFER

1) OJT
2) Training in Japan
3) One through the preparation of the study report.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [ ] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- [■] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
As for the 1st stage of the project implementation, a grant aid cooperation was requested to the Government of Japan for water intake, water conducting pipeline and filtration plant. For the water supplying and distribution pipelines, Yen Credit have been requested to OECF. The authorized organization in charge of implementation is eagerly hoping to make a part of the project by means of grant aid since they face the financial difficulty.

(FY1995 Overseas Survey) No addetional information.

2.MAJOR REASONS FOR PRESENT STATUS

The project has been included in the National Development Plan as a priority project.

3.PRINCIPAL SOURCE OF INFORMATION

①、②

和名 大コロンボ圏給水拡張計画調査

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1988
Revised Mar.1996

ASE THA/S 301/76

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Project of Strengthening and / or Replacement of Steel Bridges on the State Railway

3.SECTOR: Transportation/Railway

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: State Railway of Thailand

7.OBJECTIVES OF STUDY
Investigation, from the aspects of design and work execution, of the existing 214 spans of steel bridges requiring strengthening and/or replacement

8.DATE OF S/W: 1975/10

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 17

Period Jan.1976-Nov.1976(10 months)

Total M/M	Japan	Field
87.27	66.60	20.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	106,843 (¥'000)
Contracted	108,230

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA

Southern line	1,159 km	110 bridges
Northern line	751 km	22 bridges
Northeastern line	1,205 km	45 bridges

2.PROJECT COST

(US$1,000) (US$1=20Bahts)		Total Cost	Local Cost	Foreign Cost
	1)	16,683	8,656	8,027
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

The number of steel bridge on the whole railway in Tailand become 1,397 (2,853 span) at the end of 1976. 169 of them (214 span) are recommended to need improvement by the study of VKRAS(England). After this study, government of Thailand proposed gov. of Japan to cooperate a now detailed study of strengthening and replacement of them.

So the purpose of this study are following;

1) Evaluating strength of 214 span
2) Suggesting a standard design and method of improvement / strengthening / replacement.
3) Estimating a cost of this project.

Proposals:
Of the 214 spans:
197 spans are to be repaired and strengthened.
17 spans are to be replaced with the construction of new bridges

Imp. Period: 1977. -1981.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:

1)Improvement of bridges constituting greater danger to train operation will be given high priority.
2)Disturbance to train operation during the works will be minimized.
3)According to the current traffic density, the lines considered likely to generate more profit through improvement work will be given priority.
4)The work is scheduled to be accomplished in five years.
5)The work is planned in relation to the schedule for replacement of timber bridges.
6)Steel materials will be imported,but the processing of the members for repair and strengthening will be done by fabricators in Thailand.
7)The new bridges required for replacement will be inported from foreign countries.

The cost estimation is based on prevailing rate during April 1976, with assumption of 10% per year as the rate of subsequent price escalation.

It was considered beneficial for SRT to receive a few advisors for its technical and financial needs for the initial one or two years.

*Above implementation period is 5 year

[Development Impacts]

The nation's railway capacity and it operation would be improved so much by implementation of this bridge project.

5.TECHNICAL TRANSFER

Investigations were conducted with the cooperation of counterparts. Methodology training for strengthening steel bridges in Japan (5 trainees).

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - ○ Completed
  - ◉ Partially Completed
  - ○ Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

The project has been under implemetation by the government funds since 1979.
Based on the recommendations of the study, 104 bridges have been strengthened so far. 17 of them were replaced by steel bridges. Furthermore, additional 37 bridges have been under various stages of implementation by the national budgets during 1987 and 1991. The remaining 25 are expected to be built after 1992.

(FY1991 Overseas Survey)
The strengthening works on the eastern line is not concluded yet, because the traffic density remains low. Construction of other parts will be finished in 1993.

(FY1993 Overseas Survey)
The project except bridges on eastern line is scheduled to be completed in 1996. SRT budgeted at 300 million bahts. To increase loading capacity, the old steel bridges needs strong thening. Otherwise, speed restiction has to be introduced.

(FY1994 Domestic Survey)
The strengthening works on the main lines was already finished. For the eastern line, the strengthening works have been performed by construction a new prestressed concrete bridge up to Khlong Sip Kao Station (KM.84) in order to upgrade the track standard to match with the new line construction Klong Sip Kao-Kaeng Khoi which will open in near future. Upgrading of the remaining Steel bridge on this line shall be subjected to the result of the Eastern Railway Corridor Study conducted by TDRI. Moreover, the strengthening of some remaining steel bridges on the branch lines have to be revised due to budget constraint and if it is necessary the works will be integrate in the track rehabilitation scheme.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Interview Survey)
The reinforcement of 214-span-bridge was designed on DL-16 standand weight. Most all of the bridges has been reinforced or replaced already.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 鉄道橋梁改良計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 301/77

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Irrigated Agricultural Development Project in the West Bank Tract of the Greater Chao Phraya

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Agricultural Land Reform Office, Ministry of Agriculture and Cooperative

7.OBJECTIVES OF STUDY
To study the agricultural developmen ofirrigation area in the west bank tract of the Greater Chap Phraya

8.DATE OF S/W /

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM
No.of Members 10
Period Oct.1976-Jul.1977(10 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	86,198 (¥'000)
Contracted	80,831

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
West bank tract of the Greater Chao Phraya, center of Ayutthaya Province

2.PROJECT COST

(US$1,000) US$1=20B in 1985		Total Cost	Local Cost	Foreign Cost
	1)	36,200	17,640	18,560
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation Area: 10,542 ha Circle Embankment : 114.5 km
Pump station for irrigation and drainage :3 station
Main irrigation canal/secondary, tertiary canal :36km/432km
Main drainage canal/secondary, tertiary canal:30km/494km
Main street/farm road : 177km/404km
Village water supply : 4 places

* Above project costs are in 1985 prices.

Imp. Period: 1977.10-1983.9

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	16.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
1.Pilot farm of about 500ha to show intensive irrigated agriculture
2.Cultivation of double cropping of paddy (HYV) under the sufficient management of water
3.Dissemination of agricultural technology and establishment of training center
4.Establishment of farmers' organization such as maintenance management and agricultural cooperative
5.Implementation of village development plan including improvement of agricultural environment
[Development Impacts]
Advancement of land use, Increase of agricultural production, Increase of farmers' income, Reduction of flood damage, Rise in living standards

5.TECHNICAL TRANSFER
1)OJT
2)Training in Japan (6 trainees)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ● Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)

1979.6.14 OECF L/A signed (E/S, 150 million yen)
1979.6-1982.2 Detail design undertaken (Sanyu Consultants Inc.)
1982.7.16 9th OECF L/A signed (2.65 billion yen)
Of which, construction equipment 2.02 billion yen
consultation service 390 million yen
contingency 240 million yen
1982.6 Construction started
1988.7 Yen loan expired. Construction continued by ALRO.

(FY 1991 Overseas Survey)
Construction completed in 1990 by the OECF loan.

OECF Loan:
- Circle embankment
- Pump stations
- Irrigation and drainage canals
- On-farm development (tertiary irrigation and drainage canals and farm roads)
- Rehabilitation and improvement of rural roads and bridges.

(FY 1993 Overseas Survey)
No additional information.

(FY1994 Domestic Survey)
No additional information after the completion of the project in 1990.

2.MAJOR REASONS FOR PRESENT STATUS
A part of land for irrigation canal cannot be purchased due to rise in land price in and around Bangkok recently, and construction has not been completed.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 チャオピヤ川西岸地区かんがい農業開発計画

(F/S,D/D)

PROJECT SUMMARY (D/D)

Compiled Mar.1990
Revised Mar.1996

ASE THA/S 401/77

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Bangkok Telephone Network Project : Junction Lines

3.SECTOR:
Communications & B/Telecommunication

4.REFERENCE NO.:

5.TYPE OF STUDY: D/D

6.COUNTERPART AGENCY:
Telephone Organization of Thailand (TOT)

7.OBJECTIVES OF STUDY:
D/D of junction cable network and five local cable networks

8.DATE OF S/W: 1977/2

9.CONSULTANT(S):
Nippon Telecommunication Consulting Co., Ltd.

10.STUDY TEAM

No.of Members 13

Period May.1977-Feb.1978(9 months)

Total M/M	Japan	Field
	29.73	70.77

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	260,588 (¥'000)
Contracted	251,129

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Bangkok Metropolitan Area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Contents	Scale
Construction of Junction cable	250,000 Pair-km

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
-To full of demand in site area
-This project come under construction of junction network for 3rd M/P Package 1, Phase 1

5.TECHNICAL TRANSFER:
Many counterparts engineers participated in preparation of D/D

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing .
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
Jul. 1978 OECF loan agreement (1,464 million yen)

2.MAJOR REASONS FOR PRESENT STATUS:
Telephone demand in the metropolitan area is urgent.

3.PRINCIPAL SOURCE OF INFORMATION:
①④

和名 バンコク市内線路網実施設計

[F/S,D/D]

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 304/78

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Rural Long Distance Public Telephone Service

3.SECTOR: Communications & B/Telecommunication

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Telephone Organization of Thailand

7.OBJECTIVES OF STUDY: To recommend the optimum transmission system to TOT.

8.DATE OF S/W: 1979/7

9.CONSULTANT(S): Nippon Telecommunication Consulting Co., Ltd.

10.STUDY TEAM

No.of Members 6

Period Aug.1978-Mar.1979(8 months)

Total M/M	Japan	Field
		27.03

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	75,078 (¥'000)
Contracted	79,180

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Each place of the country

2.PROJECT COST (US$1,000) (US$1=180Yen)

	Total Cost	Local Cost	Foreign Cost
1)	385,008	54,618	330,390
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. Installation of telephones
   Long distance telephone circuits, including public telephones, in major rural districts without telephones for the purpose of improving the telephone service in 469 rural areas. Telephone exchanges in 18 districts in 1989, and in 187 more districts in 1994.
2. Transmission system: Terrestrial transmission system UHF (900 MHz band)
3. Modulation system
   No much difference between FDM and PCM system from technical and economic viewpoints
4. Equipment shelter
   Communication equipment Staton inclusive of power plant: This is to reduce construction cost and civil work period to the possible minimum.
5. System maintenance
   The existing maintenance organization and practices can be applied to each Maintenance Center by increasing maintenance staffs to some extent

Imp. Period: 1981. -1982.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	11.30	FIRR1)	18.22
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Conditions]
1. Forecasted circuit requirements

1984	1989	1994
2,513	3,763	8,218

2. Alternative proposal
1) Two terrestrial radio system
2) One domestic satellite system

[Development impacts]
1. Connection to the national network
2. Increase in the quality of telecommunication
3. Public telecommunication services for 469 sites where telephone service is unavailable.

5.TECHNICAL TRANSFER
(1) Trainee acceptance;
2 engineer(TOT) invited to Japan
(2) On the Job Training(TOT counterparts)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

Sep. 1984 OECF loan agreement (3,090 million yen)
Dec. 1986 Contract on construction
Sep. 1999 Construction completed

2.MAJOR REASONS FOR PRESENT STATUS

High priority: The project was realized by the strong request from the King.

3.PRINCIPAL SOURCE OF INFORMATION

①、④

和名 長距離市外電話網

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 305/78

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Phetchabun - Chai Badan Highway Project

3.SECTOR
Transportation/Road

4.REFERENCE NO.

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
Department of Highway

7.OBJECTIVES OF STUDY
Road Construction

8.DATE OF S/W: 1978/2

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Katahira & Engineers International

10.STUDY TEAM

No.of Members 12
Period Mar.1978-Mar.1979(9 months)

Total M/M	Japan	Field
44.33	26.33	18.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	108,742	(¥'000)
Contracted	101,688	

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Phetchanbun - Chai Badan, Northern Region

2.PROJECT COST (US$1,000) (US$1=20Bahts)

	Total Cost	Local Cost	Foreign Cost
1)	16,600	9,400	7,200
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Three Alternatives of route: I Improvement of local community II New land development
III Improvement of transportation

1.Optimal route (I+II)
Tha Maduk - Rang Yoi - Si Thep - Wichian Buri - Sap Bon - Nong Daeng - Pak Bot - Noen Sadao - Khok Charoen - Yang Lat - Tham Nam Bang - Nam Ron - Phetchabun
2.Road length
1)Improvement 130.1 km (85%)
2)New construction 21.2 km (15%)
Total 151.3 km
3.Pavement type
1)SBST (asphalt) 94.2 km (62%)
2)Laterite 57.1 km (38%)
Total 151.3 km
4.Road width
1)Formation width 9.0 m
2)Pavement width 5.5 m

Imp. Period: 1980.4-1982.12

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	20.40	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
Traffic forecast
1)Passenger traffic forecasted by trip rates obtained from a home interview survey and projected population increase.
2)Freight traffic forecasted by transportation demand of agricultural products.

[Development impacts]

1.Benefits (million baht)	1983	1989	1997
1)Road users' cost saving	47.8	55.3	62.4
2)Incremental net added value of agricultural products	15.2	51.0	46.3

2.Improvement of regional communication
3.Saving transportation cost
4.Increase in farmers' income
5.Development of better transportation
6.Reduction of running cost

5.TECHNICAL TRANSFER
(1)OJT
(2)JICA training
(3)Joint reporting

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
1)D/D completed by DOH
2)OECF loan(E/N 1980 July; 8,160 million yen)
3)Construction from June 1981 to September 1983
4)The total cost of the Project was made up of 50% of OECF Loan & 50% of DOH budget.
*OECF Loan target (The Productive Road Construction Project, L/A in Aug.1980, 8,160 mil.Yen) : The expence for the road improvement works from single to simple double lanes paved road for the existed non-improved 27 routes in the northern, north-eastern and central areas.

(FY1991 Oversees Survey)
No additional information.

(FY1992 Overseas Survey)
1,366 million yen was appropriated for this project from the OECF loan. The total cost for the project was 171.42 million bahts.
The construction was started in June 1981 for the Yang Lat-Phechabum route and was completed in September 1981 for Sithep-Wichian Buri route. The total length was 149.2 km.

(FY1994 Domestic Survey)
No information.

2.MAJOR REASONS FOR PRESENT STATUS
(1) Big Development effects
(2) Favorable financial status
(3) High priority
(4) Strong promotion by department of Highway

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④

和名 ペチャブン～チャイバダン道路建設計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 303/78

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Separate System of Metropolitan Water Supply in Bangkok

3.SECTOR: Public Utilities/Water Supply

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Metropolitan Water Works Authority

7.OBJECTIVES OF STUDY: Water Service plan

8.DATE OF S/W: 1977/1

9.CONSULTANT(S): Pacific Consultants International

10.STUDY TEAM

No.of Members 14

Period May.1977-Jul.1978(15 months)

Total M/M	Japan	Field
24.30	7.20	17.10

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	143,869 (¥'000)
Contracted	44,780

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Bangkok metropolitan area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	73,121		
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

1.Project: Separate System of Metropolitan Water Supply Project surrounding Bangkok
2.Area: The 9 Amephoes surrounding Bangkok city and the related housing and industrial
project areas (168sq.km)
3.Target year: Completion set at 2000 (Start to work in 1982)
4.Water source: 8 Amphoes (excluding Nong Khaem) and Bang Chan from groundwater.
The others from Central System.
5.Groundwater: 33 Deep Wells built in 9 areas.

Imp. Period: 1981. -2000.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:

[Conditions]
1.Population density in served area: 1,500/sq.km (minimum)
2.Population in served area: 363,900 (in 2000)
3.House connecton ratio: 75% (in 2000)
4.Daily max. demand: 77,800cu.m

[Development impacts]
1.Supply of clean water
2.Rational system realized
This plan was independent system; but will be advanced in connection with existing Central Water Supply System in Bangkok city.

5.TECHNICAL TRANSFER

- Overseas training for counterpart staff
- Inspection of water purification plant

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ■ Discontinued or Cancelled

(Description)

The project was completed by the OECF financing.
Jun.1979 OECF L/A signed(8,400 million yen)
Sep.1984 OECF L/A signed(10,710 million yen)Completed in 1989
Oct.1985 OECF L/A signed(2,985 million yen)Completed in 1989
Nov.1988 OECF L/A signed(4,380 million yen)To be completed in June 1993
Sep.1991 OECF L/A signed(8,638 million yen)Scheduled to be completed in Aug.1995
Jan.1993 OECF L/A signed(16,969 million yen)
Sep.1993 OECF L/A signed(5,599 million yen)

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.The central System in carrying on for the implementation of this Project.

(FY1995 Overseas Survey)
MWA has been implementing Bangkok Water Supply Project since 1980. The most parts of the project is through Central System. The project is financed by MWA for 25% of the total cost, OECF for 30-40%, and bond issuance for the rest. JICA studied Separate System, however OECF finance is for Central System.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①、③、④

和名 首都圏周辺市街地区水道拡張計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 302/78

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Pattaya Tourism Development

3.SECTOR: Tourism/(Tourism in)General

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Dept. of Tourism

7.OBJECTIVES OF STUDY: Establishment plan of infrastructure for tourism

8.DATE OF S/W: 1976/11

9.CONSULTANT(S): Pacific Consultants International
Nippon Tetrapod Co., Ltd.

10.STUDY TEAM

No.of Members 12

Period Dec.1976-Dec.1977(12 months)

Total M/M	Japan	Field
118.13	88.73	29.40

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	335,524 (¥'000)
Contracted	206,380

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Pattaya, Ko Ian Island

2.PROJECT COST (US$1,000) (US$1=20Bahts)

	Total Cost	Local Cost	Foreign Cost
1)	368,000	193,000	175,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

-Infrastructure
-Water supply and sewerage
-Water drainage system
-Solid waste management
-Road, power, communication
-Port

Imp. Period: 1977. -1996.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: No

EIRR1)	26.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Private investment has been made in tourism industry while public sector has not invested; therefore, inappropriate development continues and tourism resource has not been utilized. This project aims to utilize this resource and contribute to tourism development.

5.TECHNICAL TRANSFER: Overseas training for 6 trainees

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [ ] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [■] Discontinued or Cancelled

(Description)
The project is under construction with government funds.

(FY1991 Overseas Survey)
The Thai Government (National Economic and Social Development Board) applied for an OECF Loan in 1979 but was no accepted. A new local administrative office was established according to the new development plan and the new detailed design prepared by the Department of Town and Country Planning.

The project has been revived in a new JICA study 'Pattaya Tourism Development.'

(FY1994 Domestic Survey)
No information.

2.MAJOR REASONS FOR PRESENT STATUS
- Good financial condition
- High priority

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 パタヤ地区基盤整備計画

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 101/79

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Irrigated Agricultural Development in the Greater Mae Klong River

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY
To formulate the on-farm improvement plan of Mae Klong area in order to increase the rice production and the efficiency of water usage.

8.DATE OF S/W 1977/7

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 20
Period Dec.1977-Mar.1980(28 months)

Total M/M	Japan	Field
130.19	45.83	84.36

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	346,684 (¥'000)
Contracted	242,550

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Mid and down stream of Mae Klong River Basin : area 490,000ha

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	441,300	264,780	176,520
2)	285,300	171,180	114,120

3.CONTENTS OF MAJOR PROJECT(S)
1.Short-term development plan
 1) Improvement of field of 185,900ha
 2) Repair of irrigation and drainage canals of 1,082km
2.Long-term development plan
 1) Improvement of field of 174,200ha
 2) Repair of irrigation and drainage canals of 56km
 3) Construction of irrigation and drainage canals of 345 km

* Cost 1) is for the short-term development plan and cost 2) is for the long-term development plan excluding the short-term development plan.

4.CONDITIONS AND DEVELOPMENT IMPACTS
1.The production of rice will be 1.7 times in 30 years
 (total amount 2,400,000t)
2.The production of Sugarcane will be 1.3 times in 30 years
 (total amount 1,400,000t)
 * Of 2,400,000t of rice production, 1,000,000t will be possible to be exported.
3.EIRR 26.5%

5.TECHNICAL TRANSFER
OJT

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- [x] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)

A feasibility study was conducted in 1979 on Kamphaeng Saen irrigation and agricultural development, but the project was not implemented, partly owing to the change of government policy.

(FY 1991 Overseas Survey)
The Phase II Development Program is being undertaken and will be finished in 1994. A review study may be necessary in the near future.

(FY 1994 Domestic Survey)
This project targeted the land consolidation (about 2,000,000 rai) on the left bank of Greater Mae Klong river. The right bank area (700,000 rai) of the river had been implemented using IBRD loan as the Phase I.
Following this, the project area was also decided to be implemented with IBRD loan.

(FY1995 Domestic Survey)
The construction works of the Phase-II, which are targeted the land consolidation for about 2,000,000 rai on the left bank of Greater Mae Klong River, has been commenced the implementation on 1990, and will be completed on 1995. Total budget of this construction is about 1.944 billion bahts from the World Bank Loan and the allocated budget by the government.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 メクロン川マスタープラン

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 101/79

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Bangkok Suburban Transportation Project

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Expressway and Rapid Transit Authority(ETA), Royal State Railway of Thailand(SRT)

7.OBJECTIVES OF STUDY
Transportation Plan

8.DATE OF S/W 1978/7

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 7
Period Oct.1978-Aug.1979(11 months)

Total M/M	Japan	Field
46.57	35.50	11.07

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	90,378 (¥'000)
Contracted	85,377

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Bangkok Metropolitan Area

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	834,400		
(US$1=260Yen)	2)			

3.CONTENTS OF MAJOR PROJECT(S)

Formulation of Master Plan for large scale transportation for Bangkok and its surrounding areas.
Basic policy is to make the utmost use of existing railway system as the transportation means for people commuting to work.

Main components are:
Suburban lines(new construction)
6 lines(11 segments) total length 102.8km
Improvement of existing lines
(double track,new stations, signal and communication) total length 151 km
Rolling stock(Year 2000)
Suburban line 756 or 478 (depending on fare)
Existing national railway 318

4.CONDITIONS AND DEVELOPMENT IMPACTS

This project is expected to mitigate trettic cagestin in inner city and suburban area in BANGKOK>
Furthermore, utilization of existing rail line is also expected to contribute to improve financial condition of SRT, and to contribute to induce urban structure of Bangkok to appropriate direction with corridor development.

5.TECHNICAL TRANSFER
Training in Japan

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)

The project proposed by the study was not included in the Sixth National Development Plan.
No progress was made in upgrading the railway service in downtown Bangkok.

(FY 1991 Overseas Survey)
The project was integrated in the Infrastructure Section of the Fourth National Economic and Social Development Plan.

(FY1993 Overseas Survey)
Because of the following two reasons, the project didn't continue.

- Government gave the first priority to solve traffic problems in town.
- The existing railway system in the suburbanarea could be used.

SRT officials said that no new lines in Bangkok suburban were to be built.

(FY1994 Domestic Survey)
No information.

(FY1995 Overseas Survey)
This project was transfered from ETA to MRTA (Metropolitan Rapid Transit Agency) in 1992. Some part of the "Hopewell", proposed projects, such as Ban Su-Don Muang line, were implemented by a Hong Kong firm, Hopewell.

2.MAJOR REASONS FOR PRESENT STATUS

This project is an extension from downtown to suburban areas. Therefore, F/S is unlikely to be conducted unless progress is made on projects for the downtown area.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 首都圏交通計画

[M/P,Basic Study,Other]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 302/79

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Kamphaeng Saen Irrigated Agriculture Development Project in the Mae Klong River Basin

3.SECTOR: Agriculture/(Agriculture in)General

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: RID (Royal Irrigation Department), Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY:
Making an integral agricultural.
Development plan based on newly developed farm land.

8.DATE OF S/W: /

9.CONSULTANT(S): Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 10
Period Jan.1979-Oct.1979(10 months)

Total M/M	Japan	Field
23.87	19.50	4.37

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Mapping with a scale of 1/10,000

12.EXPENDITURE

Total	94,709 (¥'000)
Contracted	88,926

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Kamphaeng Saen District, Mae Klang River Basin, western part of Central Thailand, area 28,000ha, population 65,500

2.PROJECT COST

(US$1,000) US$1=230Yen		Total Cost	Local Cost	Foreign Cost
	1)	32,705	18,710	13,995
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

- Improvement of irrigation and drainage facilities constructed under the development project in Mae Klong River Basin.: 16,380 ha
- Improvement of terminal facilities such as irrigation and drainage ditches, farm roads, etc. : 16,380 ha

The project area is estimated about 28.000ha, being the east part of B. Mae Klang area and located at the north of Nakhan Pathom. Proposed irrigation area is 17,200ha within 22,800ha of available farming area. Proposed terminal irrigation plan, including land consolidation and related supporting facilities are as follows;
- Renewaling canal : 48km
- Improvement of drainage : 176km
- flood preventation, road : 24.8km
- land consolidation : 17,200ha

Imp. Period: 1981. -1986.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	27.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Cultivated land area will be increased from 13,400 ha to 16,380ha by improving irrigation facilities.

The land use rate will be heightened to 195% (currently 120%) by flood prevention of paddy field of 5,300ha through construction of flood prevention embankment, and improvement of terminal facilities.

Agricultural productivity will be improved by various techniques and facilities.
Especially a plan for introduction of market - oriented crops will lead to raise income of farm household.

5.TECHNICAL TRANSFER: cooperation in writing a report

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ● Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

The proposed project was suspended owing to the policy change of the Thai Government.

(FY 1991 Overseas Survey)
No additional information.

(FY 1993 Overseas Survey)
Due to the changes in development policy of the government of Thailand, the priority of the project is ranked low and there is no possibility of the project to be implemented. Previously, Land consolidation was one of the most important targets in the development policy of agriculture secotr, however higher priority has been given to small irrigation development since 5th 5 year National Development Plan.

(FY1994 Domestic Survey)
The planned area of this project was initially 28,000ha. But it has changed after the completion of main facilities such as renewaling canal.
Land consolidation is low priority to be implemented by the change of government agricultural policy.

(FY1995 Domestic Survey)
The planned area of this project is a part of the Phase-II and planned to be completed on FY1995. Originally, it was planned to make land consolidation for an area of 175,000 rai by Extensive method, however, only 3,500 rai have been practically implemented and the remainder was completed by means of the Ditch and Dyke method.

2.MAJOR REASONS FOR PRESENT STATUS

(FY 1991 Overseas Survey)
The improvement of the existing irrigation facilities continues to be one of the national develoment strategies, but the project in question is not ranked high in priority.

3.PRINCIPAL SOURCE OF INFORMATION: ①、②、③

和名 メクロン川流域カンペンセンかんがい農業開発

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 306/79

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Nong Bua - Ban Lam Chi Bon Highway Project

3.SECTOR:
Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY:
Department of Road Ministry of communication

7.OBJECTIVES OF STUDY:
Provincial road improvement

8.DATE OF S/W: 1978/7

9.CONSULTANT(S):
Nippon Koei Co., Ltd.
Katahira & Engineers International

10.STUDY TEAM

No.of Members 11
Period Jun.1979-Feb.1980(8 months)

Total M/M	Japan	Field
43.40	18.50	24.90

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Topographic Survey
Traffic Survey

12.EXPENDITURE

Total	104,520 (¥'000)
Contracted	103,547

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Nakkon Sawan Prefecture, Chiyaphum Prefecture

2.PROJECT COST (US$1,000) US$1=20Bahts

	Total Cost	Local Cost	Foreign Cost
1)	30,600	17,300	13,300
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Three alternatives of route: I Nong Bua-Wang Wat II Wang Wat-Tha Pong III Tha Pong-Lup Pho

1. Objective: The project aims at accelerating socio-economic development in rural areas and, at the same time, at providing an inter-provincial road, in an east-west direction, to supplement the existing highway network which are mainly of radial type connection with Bangkok.
2. Optimal route: Nong Bua-Nong Ngu Luam-Sap Bon-Wang Wat-Tha Pong-Nong Bua Rave-Lup Pho
3. Road length
1) Improvement: 41.9km
2) Newconstruction: 112.8km total 154.7km
4. Road width
1) Formation width: 9.0-10.0m
2) Pavement width (SBST): 5.5-6.0m
5. Surface treatment
1) SBST: 105.0km (68%)
2) Soil aggregate surface: 49.7km (32%)

Imp. Period: 1981.4-1983.12

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	21.70	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Conditions]
1. The method of optimum route salection
Evaluation of the alternatives was made mainly according to the following three factors; 1) Construction cost 2) Route length which reflects on the road users' costs 3) Availability of newly cultivatable land along the route which reflects the magnitude of agricultural benefits.
2. Uncultivated land available for future development: 286,000 rai
3. Estimation of passenger traffic was based on the projected population and the person trip rate model derived from the home interview survey.

[Development impacts]

	1984	1990	1998
1. Benefits (million Baht)			
Road users' cost saving	113.6	130.7	161.6
Agricultural development benefit	1.2	58.8	55.4

2. Agricultural development
1) Increase of productivity (paddy)
2) Acceleration of rate of opening of new land
3) Increase of farm gate price

5.TECHNICAL TRANSFER
(1) OJT: Discussion about route selection.
Traffic forecast and development benefits.
(2) Trainee: 1 engineer

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [x] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
1983 Sep. OECF loan agreement (5,770 million yen)
1984 Dec. D/D completed
1986 Feb. Construction commenced
1988 Aug. Construction completed
* Contents of OECF Loan(The Productive Road Construction Project 3)
1. prefectural road construction in the northern and north-eastern Thailand.(165km)
2.rehabilitation works of 8 routes in the northern area.(293.9km)
3.consulting costs.

(FY1991 Overseas Survey)
No additional information.

(FY1992 Overseas Survey)
2,517 million yen was appropriated for the project from the OECF loan. The total cost for the project was 348.70 million bahts.
The total length was 162.2 km.

(FY1994 Domestic Survey)
No information.

2.MAJOR REASONS FOR PRESENT STATUS
- large development impact
- good linkage with other major road
- high priority
- effective administration

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④

和名 ノンブアーバンラムチポン道路建設計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 303/80

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Mae Wang-Kew Lom Irrigated Agriculture Development Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
RID (Royal Irrigation Department), Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY
To make integrated agricultural development plan bythe improvement of agricultural imfrastructure based on the field renovation.

8.DATE OF S/W 1979/2

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM
No.of Members 10
Period Jul.1979-Mar.1980(9 months)

Total M/M	Japan	Field
47.04	21.97	25.07

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE
Total 115,644 (¥'000)
Contracted 107,095

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Lampang City, Lampang Province, northern part of Thailand area
22,700 ha

2.PROJECT COST (US$1,000)
US$1=20B in 1979

	Total Cost	Local Cost	Foreign Cost
1)	34,880	19,506	15,374
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation area : 22,700ha
Main irrigation canal : 100.12 km
Tributary irrigation canal : 79.65 km Main drainage canal : 240.77 km
Field improvement : 15,400 ha

* Above costs are in 1979 prices.

Imp. Period: 1980.10-1987.9

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	27.10	FIRR1)	
EIRR2)	25.30	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
Considering the production of paddy crop is relatively high, promotion of production during dry season is planned by utilizing the water of Kiv Lom Dam. To do this field improvement should be implemented.

Development Impacts:
Large increase of benefit by double cropping through effective use of existing water resource is expected.

5.TECHNICAL TRANSFER
Training of and technical transfer to staffs of RID in Thailand and Japan.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)

At the time of the JICA study, the Thai Government enacted the Law of Agricultural Infrastructure Improvement, and was vigorously promoting the improvement of agricultural infrastructure to expand the area of double cropping.
However, the proposed project was not implemented, partly because it presupposed farmers' sharing of the development cost, which turned out to be much higher than expected, and partly because the external debts of the Thai Government increased.

(FY 1991 Overseas Survey)
No additional information.

(FY 1993 Overseas Survey)
E/S by OECF loan (L/A in 1982. July 16 of 430 million USD) was conducted in 1982, however due to changes in development policy of the government of Thailand and the suspension of construction of Kuu Khong Ma Dam which was suposed to be one of the water source for the project, the project was not implemeted yet.

(FY1994 Domestic Survey)
The priority of the on-farm development which is major component of this project is low became of the change of government policy about agricultural development strategy.
F/S of Kew Kohma dam was decided to start by a local consulting firm with the budget of 23 million Baht.

(FY1995 Domestic Survey)
On-farm development project has been suspended due to changes in policy. The F/S of Kiew Kor Mah Dam, as for a new water resources, will be commenced by a domestic consultant on Oct., 1995.

2.MAJOR REASONS FOR PRESENT STATUS
There are no plans to revive the project because of the reasons noted above.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④

和名 メソンかんがい農業開発計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 307/80

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Bangkok Urban Truck Terminals Construction Project

3.SECTOR
Transportation/Land Transportation

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
Department of Land Transport

7.OBJECTIVES OF STUDY
Traffic plan

8.DATE OF S/W: 1979/1

9.CONSULTANT(S)
Pacific Consultants International
Nittsu Research Center Inc.

10.STUDY TEAM
No.of Members 9
Period Aug.1979-Mar.1980(8 months)

Total M/M	Japan	Field
32.60	22.90	9.70

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE
Total 83,169 (¥'000)
Contracted 79,340

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Bangkok metropolitan area

2.PROJECT COST
(US$1,000)
(US$1= 20 Bahts)

	Total Cost	Local Cost	Foreign Cost
1)	42,033		
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Description	Scale
Truck terminal	Cargo handling: 12,000 t/day
Parking	
Public parking	
Maintenance facilities	
Warehouse district	

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: No

EIRR1)	10.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
(Condition) Target year 2000
Project road includes intra urban tollway, circumferencial road, outer ring road Development Impacts:
-Increase of profit to the owner by regular operation
-Decrease in accidents by supplying welfare facilities to drivers
-Increase in operation time by improving inspection and maintenance

5.TECHNICAL TRANSFER
Technical advice on demand forecasting, traffic survey, and economic analysis.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ▩ Discontinued or Cancelled

(Description)
Detailed design was partially undertaken by local consultants. In June,1987 Ministry of Transport and Communication has approved the commencement of the construction.
Private investment have been promoted for the construction of truck terminals. So far, contracts have been signed on two of the four sites.
Due to rapid urbanization, some sites proposed for terminals have been already used for other purposes.
JICA is conducting a restudy of Bangkok urban truck terminals since Dec. 1991, in which suggestions will be made to expedite the project implementation.

(FY1991 Overseas Survey)
Project scale was reduced from four terminals to three.

(FY1994 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The Thai Government ratifyed to construct truck terminal by its own budget. After the ratification, this project moved into implementation according to the JICA's study. September 1995, D/D was completed but land acquisition was not finished yet.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

{F/S,D/D}

和名 首都圏トラックターミナル建設計画

PROJECT SUMMARY (D/D)

Compiled Mar.1990
Revised Mar.1996

ASE THA/S 402/80

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Bangkok Telephone Network Project: Local Cable Network

3.SECTOR:
Communications & B/Telecommunication

4.REFERENCE NO.:

5.TYPE OF STUDY: D/D

6.COUNTERPART AGENCY:
Telephone Organization of Thailand

7.OBJECTIVES OF STUDY:
Detailed designs for 8 telephone exchanges

8.DATE OF S/W: 1978/7

9.CONSULTANT(S):
Nippon Telecommunication Consulting Co., Ltd.

10.STUDY TEAM

No.of Members 12
Period Aug.1978-Jun.1979(22 months)
Oct.1979-Aug.1980

Total M/M	Japan	Field
107.79	49.63	59.16

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	278,789 (¥'000)
Contracted	277,097

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Bangkok Metropolitan Area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1) Detailed design of local cable network for five exchanges (Pronchit, Chinwatana, Packrett, Ramintra, and Onutt-I)
2) Additional detailed designs for three exchanges (Kurontoi, Labrana and Ekachai)

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
Detailed designs are based on the program in the 4th National Economic Development Plan.
Five exchanges correspond to Package I of Phase 2 and three additional exchanges to Package II of Phase 1.

5.TECHNICAL TRANSFER
OJT for counterparts

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☒ Completed or in Progress
  - ● Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
1987 Jul. OECF L/A completed for extending telecommunication network

2.MAJOR REASONS FOR PRESENT STATUS
Urgency of the problem

3.PRINCIPAL SOURCE OF INFORMATION
①、④

和名 バンコック市内線路網実施設計

[F/S,D/D]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 304/81

I. OUTLINE OF STUDY

1.COUNTRY	Thailand
2.NAME OF STUDY	Kaeng Khoi-Ban Mo Pumping Irrigation Project
3.SECTOR	Agriculture/(Agriculture in)General
4.REFERENCE NO.	
5.TYPE OF STUDY	F/S
6.COUNTERPART AGENCY	RID (Royal Irrigation Department), Ministry of Agriculture and Cooperatives
7.OBJECTIVES OF STUDY	Feasibility study on irrigated agricultural development project
8.DATE OF S/W	1981/2
9.CONSULTANT(S)	Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 10
Period Jun.1981-Jan.1982(8 months)

Total M/M	Japan	Field
37.55	17.80	19.75

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	96,370 (¥'000)
Contracted	90,677

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA

Right bank of PaSak River, SaraBuri Province

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	40,700	24,500	16,200
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

The objective of the project is to encourage the agriculture in the project area through stable irrigation water supply to the entire beneficial area together with introduction of the dry season crop as much as possible.
Proposed cropping plans are about 14,000ha in wet season and 2,800ha in dry season within limited water resources allocation.

Major facility of the project is summarized as follows;

- Main pumping station: 1,000mm x 560kw,Q=17.5cu.m/sec, H-16.5m, 7 units
- Irrigation canal : 148km including lateral canals
- Drainage canal : 22km
- Demonstration farm : 260ha

Imp. Period: 1983. -1988.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	16.90	FIRR1)	
EIRR2)	14.30	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Conditions]
- Available water resources of the project are quite limited due to runoff discharge fluctuation of the Pasacu river until construction of storage dam on the river.
- Extension and educaton of the beneficial farmers are very important role for introduction of irrgated agricultural development.
- Urgent resolution of the available water resources for the project
- Detailed design of the project has been finished by the government of Thailand supported by OECF engineering service loan.

[Impacts]
-Planting of 100% in rainy season and 20% in dry season will be done by completion of irrigation facilities to increase agricultural profit.
-Training related to improvement of terminal facilities, water management and culture technique will be done in demonstration farm.

*EIRR calculated (14.3%) includes on-farm.

5.TECHNICAL TRANSFER

Transfer to staffs of RID in Thailand and Japan was done.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ○ Partially Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)

The detailed design was undertaken by Sanyu Consultants Inc.and Chuo Kaihatsu Corporation during the period from July 1984 to June 1985, with the E/S loan from OECF. However, the project implementation was delayed, because the adjustment of water rights (with beneficiaries of the waterway between Chainat and PaSak) was not settled.

July 1982 OECF loan agreement signed (E/S, 190 million yen)

(FY 1991 Overseas Survey)
No additional information.

(FY 1993 Overseas Survey)
D/D by OECF Loan (L/A on 1982 July 16 of 190 million USD) was conducted during July 1984 to June 1985, however, due to the suspension of Nakhon Nayok Dam construction of Pasak River delayed the implementation of the project. The government of Thailand is planning to initiate construction of Nakon Nayok Dam to solve serious water shortage in thesee days. Once the dam construction is initiated, the project proposed by JICA Study can be implemented.

(FY1994 Domestic Survey)
Dam project on the main stream of Pasak River has been started in 1994. Therefore, the basic conditions were settled for this project. RID intends to implement the project under OECF loan and is planned to be up-dated the last detailed design.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①、②、③、④

和名 ケンコイ・バンモーポンプかんがい計画

{F/S,D/D}

PROJECT SUMMARY (Basic Study)

Compiled Mar.1990
Revised Mar.1996

ASE THA/S 501/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Water Supply Project to Laotian Displaced Persons:Nakhon Phanom Camp and Pak Chom Camp

3.SECTOR:
Social Infrastructu/Water Resource Development

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY:
Ministry of Interior

7.OBJECTIVES OF STUDY:
Survey of underground water resources

8.DATE OF S/W: 1982/1

9.CONSULTANT(S):
Japan Engineering Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 8
Period Feb.1982-Nov.1982(10 months)

Total M/M	Japan	Field
36.66	2.96	33.70

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Purchase of Equipment and Materials

12.EXPENDITURE

Total	100,465 (¥000)
Contracted	98,916

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Two camps for Laotian refugees in the northeastern part of Thailand

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

1st phase study:
Underground water survey at Nakhon Phanom Camp (test boring at 4 sites and identification of 2 sites for tube wells)
2nd phase study:
Underground water survey at Pak Chom Camp (test boring at 4 sites and identification of 2 sites for tube wells)

4.CONDITIONS AND DEVELOPMENT IMPACTS:
The project will supply potable water for Laotian refugees (20,000 persons at Nakhon Phanom and 50,000 persons at Pak Chom).

5.TECHNICAL TRANSFER:
None

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS:
- [x] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
After the completion of the study, the proposed tube wells were constructed by the Japanese grant aid.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS:

3.PRINCIPAL SOURCE OF INFORMATION:
①

和名 ラオス難民生活用水供給計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 201B/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Agricultural Cooperative Promotion

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+F/S

6.COUNTERPART AGENCY
Cooperatives Promotion Department MOAC

7.OBJECTIVES OF STUDY
To raise the agricultural production of cooperative member farms and to improve their socio-economic well-being.

8.DATE OF S/W: 1981/7

9.CONSULTANT(S)
The Institute for the Development of Agricultural

10.STUDY TEAM

No.of Members 6

Period May.1980-Feb.1982(23 months)

Total M/M	Japan	Field
37.21	27.36	9.85

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	127,935 (¥'000)
Contracted	107,192

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
2 places in each part of north, central, northeast, south, totaling 8 places.<M/P>
In the districts of north, central, northeast, south, where four proposed

2.PROJECT COST

(US$1,000) (US$1=23Bahts)		Local Cost	Foreign Cost	
	M/P 1)			
	2)			
	F/S 1)	45,508	6,478	39,030
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
<M/P> We pointed realities and problems of organization, operations and management of agricultural cooperative of Thailand, and proposed basic idea for their improvement, based on case studies in each area.
1. Basic idea to strengthen the function of agricultural cooperative four strategic targets, streng thening of member's organization base, promotion of regional agriculture by conducting guidance of agriculture management, expansion of sales and purchase abiding by fair rule, realization of comprehensive agricultural financial sytsem, are shown, and "total system" to facilitate all of them in a comprehensive way was proposed.

2. Establishment of Agricultural Cooperative

<F/S>
1.Projects to nurture agricultural cooperative
2.Establishment of consultant units and traveling guidance
3.Strengthening of training by agricultural cooperative training centers
4.Improvement of facilities of agricultural cooperative
5.Comprehensive financial measures

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
<M/P>1.We proposed that establishment of model Agricultural Cooperative should be chosen taking into consideration the difference of regional character and basic condition of each area.
2.Development effect of promoting agricultural cooperative is expected by planning of agricultural cooperative promotion, guidance to implement the plan, and dissemination of the fruits of model agricultural cooperative to neighboring cooperatives.
<F/S>[Conditions] 1.Establishment of promoting system in CPD.
2.Guidance of agricultural management and strengthening of sales activities.
3.Financial back up by the government
4.Cooperation with ACFT and CLT
[Development Impacts]
1.Improvement of management by agricultural cooperatives
2.Increase of employment opportunities, Increase of income, Decreasing the difference of income.

5.TECHNICAL TRANSFER
- Transfer of research method during the period of F/S.
- Discussion and cooperative operation in writing a report accepting two trainees.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
<M/P> A Feasibility study was subsequently undertaken.
1. Thai Government requested Japanese Government for cooperation on the establishment of model agricultural cooperatives based on the final master plan report of Feb.1981
2. An S/W mission was sent to Thailand on an F/S in July 1981. After the S/W was concluded and the study was conducted from July to Sept.
3. The final report of F/S was submitted in Mar.1982, and Japanese experts were assigned for one year and a half from Dec. 1982. The project-type technical cooperation (5 years) began in July 1984.

<F/S> The proposals of the study was implemented with the Japanese techinical cooperation and grant aid.
1. Thai Government requested Japanese Government for a project-type technical cooperation and grant aid in June 1983.
2. R/D for technical cooperation was concluded in July 1984, and the five-year project began. The project was completed in July 1989, but extended for two years for the follow-up cooperation
3. In 1985, the Agricultural Cooperative Training Center of Northeast Thailand was established by the Japanese grant (598 million yen)

Investment Cost (thousand Baht)

	JICA	RTG	Total
May -Nov.87	3,711	---	3,711
Jan.-Jun.87	4,489	175	4,664
FY 87, 88	4,000	233	4,233
FY 89	4,000	200	4,200
Total	16,000	608	16,809

Thai side appreciate the model project of the agricultural cooperative development.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 農業協同組合組織育成計画

{M/P+F/S}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 203B/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Bangkok Solid Waste Management

3.SECTOR: Public Utilities/Urban Sanitation

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+F/S

6.COUNTERPART AGENCY: Public Cleansing Dept., BMA

7.OBJECTIVES OF STUDY:
To fomulate M/P of inproving waste disposal sistem and feasibility study of it.

8.DATE OF S/W: 1979/3

9.CONSULTANT(S):
Tokyo Metropolis Environmental Service Corporatio

10.STUDY TEAM

No.of Members 55

Period Aug.1979-Feb.1980(36 months)
May.1980-Sep.1982

Total M/M	Japan	Field
278.08	124.54	153.54

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Geological Survey, Characteristic Analysis of the Solid Waste

12.EXPENDITURE

Total	491,070 (¥'000)
Contracted	447,098

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
City of Bangkok

2.PROJECT COST (US$1,000) (US$1=26.25B)

M/P	1)	17,248 Local Cost	8,667 Foreign Cost	8,581
	2)			
F/S	1)	578,712	352,590	226,122
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P>The master plan to improve waste disposal system by the year of 2000 and 67 immediate action programmes.
(1) The master plan includes construction and introduction of;
5 composting plants, 2 incineration plants,
3 final disposal sites,1,190 collection vehicles,
88 road sweepers, 5 river cleaning boats,
110 barges, 25 dump trucks, 18 bulldozers
(2) The immediate action programmes in which 3 levels of priority is shown include improvements in :
1] discharge and collection system
2] transport and transferring system
3] composting plants
4] final disposal system
5] administrative system
6] countermeasures to floods
The total cost above pertains to the short-term improvement plan.
<F/S>
Construction of final disposal site 3 1,500t/d
Construction of refuse incineration plant 2 1,500t/d X2
Construction of rapid type composting plant 2 800t/d

Imp. Period: 1985. -2000.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:

[Conditions]<M/P,F/S>
To properly dispose of whole waste targetting the completion in the year 2000 and considering local economic situations.

[Impacts]<M/P,F/S>
As the development impacts, public health and living environment for citizens are remarkably improved by modernization of waste disposal systems.

5.TECHNICAL TRANSFER
(1) training to the local staff through OJT.
(2) reception of trainees ,6 local staff
(3) effective application of local consultants.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ● Partially Completed
- ○ Implementing
- ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
A Japanese expert was sent to BMA in 1983 - 1989, and the short-term measures proposed by the study were implemented during the period.
The Phase II study was underteken during FY1989 - FY1992 bu the JICA team. Another Japanese expert was posted to BMA.

(FY 1991 Overseas Survey)
Most of the short-term improvement plan recommended in the original master plan was already been brought into practice, such as introduction of compact trucks, collection by boats, uniform supply for collection workers, etc. This study was revised in the phase II study completed in 1991.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Sunrey)
Except the contribution of ten used trucks from Tokyo Municipality, BMA bought Japanese trucks. The major component of the long term plan is construction of incinerator, however, the plan was not realized because of the difficulty of acquisition of land. Regarding compost plant, a new plant is under construction in On Nut (1,000t/d) and will be completed in 1995. Composting plants in Ram Intra and Nong Kean were also constructed, the total capacity is 2,000t/d. They were financed by the central government for 60% and BMA for the rest.

2.MAJOR REASONS FOR PRESENT STATUS
(1) Waste disposal systems shall be updated according to economical development as waste are continuously generated.
(2) High priority: One of 5 major projects in Bangkok metropolis 5 year plan.
(3) Implementation: recommendations will be wisely implemented by National Ministry of Thailand and Bangkok Metropolitan Administration
(FY 1991 Overseas Survey)

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 バンコク市都市廃棄物整備計画

{M/P+F/S}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 202B/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY: Bangkok Sewerage System Project

3.SECTOR: Public Utilities/Sewerage

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+F/S

6.COUNTERPART AGENCY: Department of Drainage and Sewerage, BMA

7.OBJECTIVES OF STUDY:
Planning on the countermeasure of pollution and flood.
F/S on first phase program, as recommended in M/S.

8.DATE OF S/W: 1979/3

9.CONSULTANT(S): Nihon Suido Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Aug.1979-Feb.1980(29 months)
Jul.1980-Jul.1982

Total M/M	Japan	Field
186.30	114.30	72.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Topographic survey

12.EXPENDITURE

Total	397,120 (¥'000)
Contracted	377,556

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Bangkok City and Thonburi area located at the other side of Chao Phaya river.<M/P>
Bangkok City<F/S>

2.PROJECT COST (US$1,000) (US$1=27.3B)

M/P	1)	116,160	Local Cost	69,100	Foreign Cost
	2)				47,060
F/S	1)	32,300		23,200	
	2)				
	3)				

3.CONTENTS OF MAJOR PROJECT(S)

<M/P> Bangkok City has some problems such as flooding in rainy season and water pollution of river in dry season.Several studies on those problems have been carried out. This study was to review the previous study reports and to make new master plan in order to obtain the practical plan.
Scope of the study is limited for sewerage system planning.

<F/S>
Project area : 970 ha
Intercepting sewer : d 3,000-2,400mm for L=7,100m
Combined sewer : d 8,500-2,000mm for L=1,300m
Intermediate Pumping Station: 3 stations,Q=13-24cu.m/min
Plant : Q=135,000 cu.m/day
Inf.BOD= 160 mg/l
Eff.BOD= 60 mg/l
(Modified aeration process: grit chamber, aeration tank, final sedimentationbasin, basin, chlorination chamber, digester,etc.)

Imp. Period: 1984. -1988.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
<M/P> Study area is 37,000 ha, same as previous CDM plan,which was divided into 10 sewerage districts. Separate systems have been fundamentally adopted for the system. In central area of the city, however,a combined system has been temporarily adopted. Treatment plant is located at the vacant lot of the Tabacco Public Corporation. Treatment method is modified aeration system.
<F/S> In 1982, the celebration of the 200th anniversary of Bangkok as Capital of Thailand, sewerage project was focussed to cope with the water quality problem of canal in the city.
Sewerage project and Water Disposal Plan were made as a pair. F/S was conducted for the area selected by the investment efficiency as recommended in M/P. Development impacts are expected with pollution prevention of canal and decrease of inundation problem, which area, however, can not be scaled quantitatively.

5.TECHNICAL TRANSFER
(1)Carried out training program for two persons (2)Employment of the local consultant for land survey (3)Equipment granted and instructed for water quality tests (4)Report writing

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [x] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ● Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
<M/P> A feasibility study was subsequently implemented and Japanese experts went to Thailand for technical assistance.

(FY1993 Overseas Survey)
DDS had reviewed the M/P since 1990 and formulated following 5 projects.
- Si Praya : 92-93, BMA budget (284 mil, Baht)
- Yannawa : 94-96, BMA (25%) and Central Government (75%) budget (4,700 mil. Baht)
- Bangkok Waste Water Treatment Project Phase I: 94-96, BMA(25%) and Central Government (75%) budget (6,300 mil.Baht)
- Rattanakosin Project (D/D): 91-92, Central Government budget (11 mil. Baht)
- Nongkham - Pasicharoen - Ratburana: scheduled to be approved in FY 1994, BMA (25%) and Central Government (75%) budget (7,000 mil Baht)

<F/S> Bangkok Metropolitan Administration(BMA) undertook D/D on two sewage treatment plants (the capacity: 30,000 cu.m/day and 25,000 cu.m/day). In late 1990, BMA was preparing a request to Japanese assistance on another treatment plant with a capacity of 60,000 cu.m/day.

(FY1991 Overseas Survey)
The Department of Drainage and Sewerage has modified the study, by rearranging the Bangkok Sewerage Area into 6 areas. Detailed design is under implementation for each area and the implementation will begin before long.

(FY1994 Domestic Survey)
A part of the above project is under way.

(FY1995 Domestic Survey) No additional information.

(FY1995 Overseas Survey)
Si Pharaya plant completed in 1993 by BMA budget of 284 million Baht. Construction of collection system is being done between 1994 and 1996. Treatment process is Contact Stabilization Activated Sludge Process. Treatment capacity is 30,000m3/day.
Rattanakosin plant; will be completed in 1995 by the central government budget of 883 million Baht. Treatment process is Two Stage Activated Sludge Process. Treatment capacity is 40,000m3/day.
Din Daeng; will be completed in Dec. of 1996 by the central government budget for 75% and BMA for 25% (total 6.382 billion Baht).

2.MAJOR REASONS FOR PRESENT STATUS
A feasibility study was subsequently implemented and Japanese experts went to Thailand for technical assistance.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 バンコック市下水道整備計画

Continued on (M/P+F/S)

状況（要約表添付文書）

ASE THA/S 202B/82 (M/P+F/S)

Name of Study: Bangkok Sewerage System Project

Country: Thailand

Type of Study: M/P+F/S

Sector: Public Utilities/Sewerage

Present Status: Implementing

(Description)

<M/P> A feasibility study was subsequently implemented and Japanese experts went to Thailand for technical assistance.

(FY1993 Overseas Survey)
DDS had reviewed the M/P since 1990 and formulated following 5 projects.
- Si Praya : 92-93, BMA budget (284 mil, Baht)
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- Nongkham - Pasicharoen - Ratburana: scheduled to be approved in FY 1994, BMA (25%) and Central Government (75%) budget (7,000 mil Baht)

<F/S> Bangkok Metropolitan Administration(BMA) undertook D/D on two sewage treatment plants (the capacity: 30,000 cu.m/day and 25,000 cu.m/day). In late 1990, BMA was preparing a request to Japanese assistance on another treatment plant with a capacity of 60,000 cu.m/day.

(FY1991 Overseas Survey)
The Department of Drainage and Sewerage has modified the study, by rearranging the Bangkok Sewerage Area into 6 areas. Detailed design is under implementation for each area and the implementation will begin before long.

(FY1994 Domestic Survey)
A part of the above project is under way.

(FY1995 Domestic Survey) No additional information.

(FY1995 Overseas Survey)
Si Pharaya plant completed in 1993 by BMA budget of 284 million Baht. Construction of collection system is being done between 1994 and 1996. Treatment process is Contact Stabilization Activated Sludge Process. Treatment capacity is 30,000m3/day.
Rattanakosin plant; will be completed in 1995 by the central government budget of 883 million Baht. Treatment process is Two Stage Activated Sludge Process. Treatment capacity is 40,000m3/day.
Din Daeng; will be completed in Dec. of 1996 by the central government budget for 75% and BMA for 25% (total 6.382 billion Baht). Treatment process is Taper Conventional Activated Sludge Process. Treatment capacity is 350,000m3/day.
Yannawa; started in 1995 by the central government budget for 60% and BMA for 40% (total 4.552 billion Baht). Treatment process is Sequencing Batch Reactor Activated Sludge. Treatment capacity is 200,000m3/day.
Nongkham-Phasichroen-Ratburana; will be finished by 2000 by the centralgovernment budget for 60% and BMA for 40% (total 7.094 billion Baht). Treatment capacity is 157,000m3/day (Nongkham-Phasicharoen), 65,000m3/day (Ratburana).

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 201B/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Road Development in the Northern Region

3.SECTOR:
Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+F/S

6.COUNTERPART AGENCY:

7.OBJECTIVES OF STUDY:
Formulation of a master plan for highway development and feasibility analysis of priority road sections (new construction and improvement)

8.DATE OF S/W: 1979/12

9.CONSULTANT(S):
Nippon Koei Co., Ltd.
Katahira & Engineers International

10.STUDY TEAM

No.of Members 12

Period Jun.1980-Mar.1982(22 months)

Total M/M	Japan	Field
140.33	16.03	124.30

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Agricultural data collection

12.EXPENDITURE

Total	385,805 (¥'000)
Contracted	381,842

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
17 changwats of the Norther Regions (170,000 sq.km)

2.PROJECT COST (US$1,000) (US$1=23Bahts)

	Local Cost	Foreign Cost	
M/P 1)	36,500		
2)			
F/S 1)	58,913	44,822	14,091
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P> The study selected priority road sections by taking into account development potentials by area. 44 links (total length 1,200km) were selected for improvement or for new construction. A pre-feasibility study was undertaken on 31 links (860km) which were considered for short- and medium term implementation and narrowed down to 16 links (410km) for the subsequent feasibility study.

<F/S> The feasibility study was undertaken on 14 links(417.2km) requested by DOH. The analysis indicated the following 12 links (393.8km) as feasible.

11 links(F4 standard) Total 378.1km:
1)Khanu Woralaksa Buri ~ Kao Lieo ~ Rt. 117 46.0km;
2)B.Wang Chik ~ Rt.117(B. Pa Daeng) 13.0km;
3)B. Wang Tham ~ B. Tha Makham 8.3km;
4)B. Kiu Phrao ~ B. Kaen Tai 55.0km;
5)Rt. 115(B. Thung Maha Chai) ~ B. Nong Takhian 53.5km;
6)B. Thung Ngiu ~ B. Chomphu 47.8km; 7)A. Wang Chin ~ Thoen 54.0km;
8)B. Nong Khanak ~ B. Wang Pong 21.0km;
9)B. Pong Sua Ten ~ B. Huai Khom 13.2km;
10)A Phrom Phiram ~ Rt.11(B.Nong Makhang) 14.4km;
11)Rt.12(Muang Kao, Sukhothai) ~ Si Satchanarai 51.9km

1 link (F5 standard):A. Wat Bot ~ B. Nakham 15.7km.

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:

[Conditions]<F/S>
1) The Northern Region has limited availability of arable land because of difficult topography and has been underdeveloped. The proposed project will provide transport infrastructure and stimulate productive activities;
2) In order to establish a framework of balanced regional growth through better inter-regional communication, the study formulated a optimum plan to strengthen the road network, and proposed priority short- and medium-term routes.
[Development impacts]<M/P,F/S> 1) The project will stimulate the regional stagnation caused by the shortage of productive land and low income by providing better transport infrastructure; 2) The project will contribute to the productivity improvement and diversification of agricultural production.; 3) The road density of the Northern Region is lower than elsewhere, and the project will promote better communication.
Five sections with higher EIRRs are a)28.5,b)22.5,c)20.6,d)20.3,e)20.2(%)

5.TECHNICAL TRANSFER

1) OJT for the counterparts on the method of selecting priority road sections
2) Participation of 1 counterparts in the JICA training program

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
1983 - 1986 D/D completed by DOH
Sep. 1983 OECF loan agreement (5,770 million yen)
Jan. 1986 Construction started
Aug. 1988 Construction completed

* Contents of OECF Loan(The Productive Road Construction Project 3)
1. prefectural road construction in the northern and north-eastern Thailand.(165km)
2. rehabilitation works of 8 routes in the northern area.(193.9km)
3.consulting costs.

(FY1991 Overseas Survey)
The construction was financed by OECF, IBRD and Thai Government.

(FY1992 Overseas Survey)
The construction was completed in December 1991. 3,241 million yen was appropriated for the project from the OECF loan.
For the project, OECF loan (491.3) million bahts), World Bank loan (40 million baths) and DOH budget (89.20 million bahts) were appropriated.

(FY1994 Domestic Survey)
No information.

2.MAJOR REASONS FOR PRESENT STATUS

1) Large impact: substantial contribution to the alleviation of regional disparities which was one of the major objectives of the 4th and 5th development plans.
2) Linkage with other projects: the proposed priority links were consistent with other priority road development projects.
3) Consistency with government policy: the Government of Thailand has been emphasizing public investments in the operation and maintenance of the existing roads, and the projects proposed by the study were

3.PRINCIPAL SOURCE OF INFORMATION

①、②、③、④

和名 北部地方道路網整備計画

[M/P+F/S]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 306/82

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Mae Kuang Irrigated Agriculture Development Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
RID (Royal Irrigation Department), Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY

8.DATE OF S/W 1980/12

9.CONSULTANT(S)
Sanyu Consultants Inc.
Taiyo Consultants Co., Ltd.

10.STUDY TEAM
No.of Members 14
Period Feb.1981-Feb.1982 (13 months)

Total M/M	Japan	Field
57.09	21.57	35.32

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE
Total 193,441 (¥'000)
Contracted 165,175

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Chieng Mai and Lampoon Provinces

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	204,400	126,600	77,800
2)	223,600	138,700	84,900
3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. The dimension of dam

	Crest elevation (m)	Embankment volume (MCM)	Dam height (m)	Dam length (m)
1) Left saddle dam	395.0	2.26	52.0	650
2) Main dam	395.0	5.58	77.0	645
3) Right saddle dam	395.0	1.44	41.0	655

2. Main irrigation canal: 87.4km
3. Lateral irrigation canal: 146.6km
4. The capacity of hydropower generation
   1) Optimum installed capacity: 3.7MW
   2) Annual energy: 16.3GWH
5. New cropping patterns
   Rice-Rice, Rice-Groundnut, Rice-Soybean, Rice-Sweet corn, Rice-Tobacco,
   Rice-Garlic, Rice-Vegetables, Soybean-Tobacco, Soybean-Groundnut and Longan

Imp. Period: 1976.1-1988.9

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	17.70	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
1. Economic cost: Baht 2,521.4 million (1980 price)
2. Maintenance cost: Baht 17.4 million/year (after 1991)

[Development impacts]
1. The increase of agricultural productivity
2. The increase in employment opportunities for some 14,300 farm families.
3. Flood control: annual average flood damage reduced by 38%
4. The increase in farmer's income: can reserve about Baht 13,700 as net profit.

5.TECHNICAL TRANSFER
1.Acceptance of one trainee
2.Several seminars held in RID during the period of the survey

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
  - ● Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
The project is under implementation in three stages with the OECF loans.
Detailed Design:
Jul. 1982 OECF loan agreement signed for E/S (940 million yen), of which 190 million used for the project. D/D undertaken by Sanyu Consultants, Inc.
First Stage Construction:
Sep. 1984 OECF loan agreement signed (2,300 million yen) Left saddle dam constructed. Construction was under direct management of RID and supervised by Sanyu Consultants, Inc.
Second Stage Construction:
Oct. 1985 OECF loan agreement signed (9,197 million yen) Main and Right saddle dam constructed. Construction undertaken by a Chinese company, supervised by Nippon Koei Co. Inc.
Third Stage Construction:
Sep. 1987 OECF loan agreement signed (2,805 million yen) Main and tributary canals have been under construction by an Italian company with supervision by Sanyu Consultants.

(FY1993 Overseas Survey)
Construction work has completed.

(FY1994 Domestic Survey)
All the project components including the Phase-1 (left dam), Phase-2 (Rightdam and main dam) and Phase-3 (main canal) have been completed in 1993.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 メイクワンかんがい農業開発計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

ASE THA/A 307/82

Compiled Mar.1990
Revised Mar.1996

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Upper Pasak Medium Scale Irrigation Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Royal Irrigation Department, Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY
Feasibility Study
-to identify the order of priority
-to formulate an irrigated agricultural development project and identify the feasibility of the project

8.DATE OF S/W 1981/4

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Chuo Kaihatsu International Corp.

10.STUDY TEAM
No.of Members 34
Period Aug.1981-Mar.1983(20 months)

Total M/M	Japan	Field
72.48	21.06	51.42

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	188,810 (¥'000)
Contracted	175,942

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Upper Pasak river basin under PHETCHABUN Province (about 330km north from Bangkok)

2.PROJECT COST

(US$1,000) US$1=23B		Total Cost	Local Cost	Foreign Cost
	1)	195,000	107,000	88,000
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

Sub-Project	Huai Saduang Yai	Huai Khon Kaen	Huai Yai	K.Chaliang Lab
1.Irrigation Area(ha)	5,400	5,100	1,800	1,200
2.Dam 1)Type	Earthfil	Earthfil	Earthfil	Earthfil
2)Height(m)	38	57	38	35.3
3)Crest Length(m)	467	950	816	1,259
3.Irrigation Canal(km)	-	105.2	26.6	21.2
4.Drainage Canal	-	72.3	36.7	20.0

* Below implementation period is 10 years.

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	13.90	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Condition]
Agricultural benefit is estimated as a difference of both benefits accrued under with and without conditions.
In addition, irrigation water supply to lower basin and drinking water supply to the Lom Sak municipality are assessed as a direct benefit from the project.

[Development Impacts]
1) Increase of agricultural production
2) Rasing of the living standard of the regional inhabitants
3) Supplemental water supply to urban area

5.TECHNICAL TRANSFER
To undertake on-the-job training of the government's officials in the course of the survey and study.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ● Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
The Royal Irrigation Development has been implementing the project with its own funds based on the results of the JICA Study.

(FY1991 Overseas Survey)
D/D Period : 1986-1992
Consultant's country : Thai
Source of finance : Thai

Construction Period : 1988-1996
Country of main contractors: Thai

(FY1993 Overseas Survey)
F/S review and D/D were conducted by government budget (180 million Bhats) in 1988 and dam construction in Pai Khon Ken and Khulong Charian Rab project sites was initiated by government budget. In Pai Khon Ken , the construction was initiated in 1990 and is to be completed in 1995 and total project cost is 500 million Bhats. In Khulong Charian Rab, the construction was initiated in 1993 and to be completed in 1996 and the total project cost is 146 million Bhats.

(FY1994 Domestic Survey)
The D/D and Construction Works which have been proposed has been implementing by the Gov't of Thailand on the basis of the Development Study conducted by JICA.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

和名 パサック河上流中規模灌漑計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

ASE THA/A 305/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Phetchaburi-Kaeng Krachan Irrigated Agriculture Development Project

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
RID (Royal Irrigation Department), Ministry of Agriculture and Cooperatives

7.OBJECTIVES OF STUDY
Feasibility study for irrigation and drainage system improvement and prmotion of land consolidation

8.DATE OF S/W: /

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM
No.of Members 11
Period Nov.1980-Mar.1982(17 months)

Total M/M	Japan	Field
50.73	18.36	32.37

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Leaching Test, Construction of Testing Agricultural Fields

12.EXPENDITURE

Total	201,291 (¥'000)
Contracted	167,094

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Phetchaburi River Basin, area : 52,600 ha, population: 192,000

2.PROJECT COST
(US$1,000)
US$1=23B=230Yen

	Total Cost	Local Cost	Foreign Cost
1)	233,865	163,396	70,469
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Development of irrigation agriculture centering on improvement of irrigation canal for Phetchaburi irrigated area of 45,000ha and new development of 7,100ha, and terminal facilities.

The Project aims to increase agriculture production in the project area with improvement and for readjustment of irrigation and drainage system in proper combination with existing facilities, those are Fechi Head Works and the Irrigation System constructed in 1950, Kan-Kra thang Peservoir constructed in 1966 and the sea dike.

Irrigation System		Farm Land	
new canal	: 120 km	land consolidation	: 52600 ha
canal lining	: 167 km		
canal improvement	: 128 km		

Imp. Period: 1987. -1998.

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	26.00	FIRR1)
EIRR2)		FIRR2)
EIRR3)		FIRR3)

Conditions and Development Impacts:
- The increase of paddy proudction by 98,000t annualy
- Introduction of improved seeds to 48,700ha paddy
- Expansion of cultivation in dry season
- Total agriculture production and I.R.R. are estimated as;

Total Project Cost : 22200 Million Yen (1us$=230Yen)
Increment of Production : 584 Million Bahts
Total Production : paddy rice 240 mung bean 7
(x 10^3 ton) fluit 16 vegetable 48
Estimated IRR : 24%

(FY 1993 Domestic Survey)

5.TECHNICAL TRANSFER
Training to engineers

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ☐ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
The proposed project has been suspended because of the change in Thai Government policy on farmland consolidation.

(FY 1991 Overseas Survey)
No additional information.

(FY 1993 Overseas Survey)
Due to the changes in development policy of the Thai Government and difficulty in financial arrangement, implementation of the project is suspended. There is no possibility of the project to be implemented.

(FY1994 Domestic Survey)
The project aims mainly at the development of on-farm facilities. Due to the policy by the Government that higher priority is to be given in water resources development, not to the on-farm development, implementation ofthe Project is not ready in near guture. Up to the year 1994, there has been no positive action taken for the Project implementation.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
The thai government intends that farmland consolidation and agriculture infrastructure improvement to be undertaken by private sectors instead of the government. Besides this case, projects of farmland consolidation and agriculture infrastructure improvement are executed by organizations of farmers financed by private banks.

3.PRINCIPAL SOURCE OF INFORMATION
①、②

{F/S,D/D}

和名 ペチャブリかんがい農業開発計画

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 309/82

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
East Coast Water Resources Development Project

3.SECTOR
Social Infrastructu/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Royal Irrigation Department

7.OBJECTIVES OF STUDY
Water Resources Development covering Rayong, Nong Pla Lai, Chon Buri Changwats

8.DATE OF S/W 1980/12

9.CONSULTANT(S)
CTI Engineering Co., Ltd.
Sanyu Consultants Inc.
Nomura Research Institute

10.STUDY TEAM
No.of Members 11
Period Feb.1981-Mar.1982(13 months)

Total M/M	Japan	Field
61.79	26.54	35.25

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Geological survey

12.EXPENDITURE

Total	165,176 (¥'000)
Contracted	149,826

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
East Coast Region (changwats Rayong and Chon Buri)

2.PROJECT COST

(US$1,000) (US$1=230Yen=23B)		Total Cost	Local Cost	Foreign Cost
	1)	242,000	103,870	137,700
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
1. Nong Pla Lai Sub-project
a. Reservoir and dam:
Catchement Area 426 sq.m, Gross reservoir storage 200,700,000 sq.m; Dam type-Earth fill type with cut-off trench, Crest elevation EL. 49.0 m, Max. dam height 31.0 m, Crest length 4,000m
b. Water transmission system:
Supply to Mab Ta Pud: Design discharge 3.63 cu.m/s, Total length 27.6 km
Supply to Sattahip from Mab TA Pud: Design dicharge 1.09 cu.m/s, Total length 21.9 km
Supply to Laem Chabang: Design discharge 1.01 cu.m/s, Total length 53.0 km
c. Irrigation and drainage system
Irrigation area 3,650 ha, Irrigation canal: Main length 46.2 km, Lateral length 20 km Drainage area: Insige the project area 21.3 sq.m, Outside the project area 14.9 sq.m;
Drainage length 6.5 km
2. Ban Bung Sub-project
Reservoir and dam: Catchment area 53 sq.m, Gross reservoir storage 21,900,000 cu.m;
Dam type-Earth fill type with cut-off trench, Crest elevation EL. 86.3 m, Max. dan height 21.5 m, Crest length 2,800 m

Imp. Period: 1983.1-1986.11

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	10.50	FIRR1)	4.90
EIRR2)	8.20	FIRR2)	1.80
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions] The proposed industrial development project in the east coast region be progressed as originally scheduled.

[Development Impacts]
1. Direct impacts a. Municipal and industrial water consumption; b. Production of paddy and groundnuts; and c. Flood control
2. Indirect impacts
a. Promotion of industrial development (gas separation & petrochemical plant, soda ash plant, chemical fertilizer plant, sponge iron plant, industrial estate, deep sea port, etc.); b. Improvement of living standard and c. Land enhancement by flood control

Notes: Above EIRRs and FIRR are for 1) Nong Pla Lai Sub-project and 2) Ban Bung Sub-project.
The respective EIRRs of the sectors are:
1. Nong Pla Lai Sub-project: Industrial and municipal water-10.4%, Irrigation-12.1%, and Flood control-3.5%; 2. Ban Bung Sub-project: Industrial and municipal water-8.3%, and Flood control-2.9%.

5.TECHNICAL TRANSFER
Acceptance of Trainees: for about three months, four trainees despatched from the Government of Thailand pursued the study and training mainly field survey of water supply systems. In the long view, it is considered profitable to the trainees.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
- ○ Completed
- ○ Partially Completed
- ● Implementing
- ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Jul.1982 OECF loan agreement on the pipeline (6,570 million yen)
Jul.1982 OECF loan agreement on E/S of Nong Pla Lai Dam (320 million yen)
Sep.1982 D/D completed
Jun.1984 Construction completed
Sep.1988 OECF loan agreement on the dam(4,357 million yen)
Sep.1989 OECF loan agreement on construction of Mab Ta Phud - Sattahip Pipeline (1,750 million yen)
Dec.1990 Construction of the pipeline (Mab Ta Phud - Sattahip) is under implementation

(FY 1991 Overseas Survey)
The construction is under implementation from 1989 to 1993 .

(FY 1993 Overseas Survey)
No additional information.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
(1) High degree of priority: The industrialization of the east coast region was the No.1 priority project of the Government of Thailand.
(2) RID was directly commissioned by the Prime Minister to push forward the project.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 東部水資源開発計画

{F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 308/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Rama VI Bridge Construction Project

3.SECTOR
Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
Public Works Dept.(PWD), Ministry of Interior

7.OBJECTIVES OF STUDY
Alleviation of traffic congestion in Bangkok, with the bridge serving to complete the middle ring road

8.DATE OF S/W: 1981/3

9.CONSULTANT(S)
Chiyoda Engineering Consultants Co.,Ltd.
Japan Overseas Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 12
Period Jun.1981-Mar.1982(10 months)

Total M/M	Japan	Field
38.05	3.55	34.50

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Traffic survey, topographic survey and geological survey

12.EXPENDITURE

Total	124,023 (¥'000)
Contracted	116,682

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Northern area of Bangkok

2.PROJECT COST
(US$1,000)
(US$1=230Yen)

	Total Cost	Local Cost	Foreign Cost
1)	34,000	19,100	14,900
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1)New Highway Bridge
Main Bridge: total length 290m, width 29.1m (6 Lanes+pedestrian), 85m+120m+85m=290m long(3 spans) (Freyssinet cantilever erection method)
Approach Bridge: width 23.3m (6 Lanes), total length 650m
2)New Railway Bridge
width 12.5m total length 71.9m(dual track)
(3 span continuous prestressed concrete girder)
3)New Roads
width 9.4m ~ 5.7m, total length 3,900m
4)Other structures
Riverfront, side ditch, drainage network, pump station, utilities, electricity, water and telecom (Total 5,700m), parking spaces, park, landscaping, pedestrian bridges, signal, etc.

Imp. Period: 1983.10-1986.3

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	20.30	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
1) Traffic volume projections for 1985, 1990 and 2000
2) Standard running speed of cars at 50km/hour
3) Traffic volumes of passengers and goods are projected on the basis of the O/D survey.
[Development impacts]
1) Alleviation of traffic congestions in Bangkok and its adjacent areas
2) Industrial and residential development of the area along the Middle Ring Road because of an expansion of the traffic capacity of the road

5.TECHNICAL TRANSFER
1) OJT
2) Participation of counterparts in the JICA program.
3) Employment of local consultants

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

Sep. 1983	OECF (10th) E/S loan agreement (170 million yen)
Aug. 1986	D/D on New Rama IV Bridge completed
Sep. 1987	OECF (11th) loan agreement on the new bridge (5,599 million yen)
Dec. 1988	PQ for construction completed
Jun. 1989	Tender for construction closed
Nov. 1989	Construction contract completed
Jan. 1990	Notice to proceed received by the contractor
Sep. 1992	Construction to be completed

Up to now 70 percent of the work completed. Construction and construction supervision are in progress satisfactorily and smoothly.

(FY 1992 Overseas Survey)
The project is included in the 5th and 6th National Social and Economic Development Plan.

(FY1994 Domestic Survey)
The maintenance period ended in Sep.1993 after the completion of this Project in Sep.1992. The consulting work for this Project has been completed.

2.MAJOR REASONS FOR PRESENT STATUS
1) Large impact: stimulation of the regional economy by the alleviation of congestion and the reduction of travel time
2) High priority: the completion of the Middle Ring Road ensures the balanced growth of the metropolitan area of Bangkok.
3) Administrative expertise: PWD has experiences in bridge construction (already constructed 5 bridges across Chao Phraya River)

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④

和名 チャオピア河架橋計画（ラマ六世橋建設計画）

{F/S,D/D}

PROJECT SUMMARY (D/D)

Compiled Mar.1988
Revised Mar.1996

ASE THA/S 403/82

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Rama VI Bridge Rehabilitation Project

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY: D/D

6.COUNTERPART AGENCY
State Railway of Thailand

7.OBJECTIVES OF STUDY
D/D and cost estimation, etc., for preparing bidding documents on the rehabilitaion of the Rama VI bridge,which was in danger of collapse

8.DATE OF S/W: 1981/3

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 18

Period Jan.1982-Dec.1982(11 months)

Total M/M	Japan	Field
46.54	35.50	11.04

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
-Survey by divers
-Vibration survey
-Excavation survey on bridge piers

12.EXPENDITURE

Total	87,560 (¥'000)
Contracted	81,093

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
The Rama VI bridge and neighboring areas, northern Bangkok

2.PROJECT COST

(US$1,000) (US$1=26 Bahts)		Total Cost	Local Cost	Foreign Cost
	1)	1,353	1,353	
	2)	142		
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
(1) Survey to confirm present status riverbed scouring; Geological survey; Vibration survey
(2) Analysis of causes of deformation
(3) Study on repair policies ; (4) Basic design
(5) Study on construction methods
(6) Approximate calculation of costs
(7) Detailed design
(8) Preparation of calculation sheets for work execution
(9) Cost estimation
(10) Preparation of specifications
* cost 1) above is for bridge piers and cost 2) for shoe resetting
** Implementation periods below are 1) for 10 months and 2) for 3 months.

Imp. Period: 1983.1

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
In the short term, the current restrictions on large rolling stock and train speed are to be continued.
In the long term, such measures as the repairing of bridge piers and shoe resetting are to be implemented.

5.TECHNICAL TRANSFER
1)OJT and JICA training program for counterparts
2)Employment of local consultants

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
Short-term plan
* Completed with domestic funds --- the purpose of the project was tentatively attained.
* Repair work on bridge piers and shoe resetting were implemented and the restriction on train speed lifted.

Long-term plan
* Double-tracking has not yet started due to its relation with a new road bridge. However, it seems that the State Railway of Thailand has started to make budgetary arrangements to repair the Rama VI Bridge and double-track it, in order to implement the double-tracking after construction of the New Rama Bridge that is now under way.

(FY1993 Overseas Survey)
Double - Tracking is scheduled to start soon after the approval of budget. It will cost 44 million baht. Construction period will be from Feb.94 to Aug.95.

(FY1994 Domestic Survey)
The construction works of RAMA VI bridge for track doubling has been started in May 1994 and scheduled to complete in September 1995 with the amount of Baht 43,750,000. The work is progressed by 51% as of October 1994.
The approach at Bangkok side was designed to use composite bridges similar to the existing track which is in parallel. The work progress is about 61% as of October 1994 and expect to be completed by June 1995 with the total cost of Bath 45,207,500.
The approach at Thonburi side (the other side) is now under designed.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The double-trucking started in May, 1994, and completed in July, 1995. It costed 47 million baht and was financad by SRT.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③

(F/S,D/D)

PROJECT SUMMARY (D/D)

Compiled Mar.1990
Revised Mar.1996

ASE THA/S 404/82

I. OUTLINE OF STUDY

1.COUNTRY Thailand

2.NAME OF STUDY
Dok Krai - Mab Ta Pud Water Pipe Line Project in the East Coast Area

3.SECTOR
Social Infrastructu/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY D/D

6.COUNTERPART AGENCY
Royal Irrigation Department (RID)

7.OBJECTIVES OF STUDY
Executive design for construction of pipeline between Dok Krai reservoir and Mab Ta Pud

8.DATE OF S/W 1980/10

9.CONSULTANT(S)
CTI Engineering Co., Ltd.
Sanyu Consultants Inc.
Nihon Suido Consultants Co., Ltd.

10.STUDY TEAM
No.of Members 22
Period Nov.1981-Aug.1982 (10 months)

Total M/M	Japan	Field
87.00	39.00	48.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Survey Geological Survey

12.EXPENDITURE

Total	223,594 (¥'000)
Contracted	206,221

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Eastern Coastal Zone of Thailand between Dok Krai and Mab Ta Pud

2.PROJECT COST
(US$1,000)
(US$1=230Yen=23B)

	Total Cost	Local Cost	Foreign Cost
1)	39,214	13,026	26,188
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Nong Pla Lai Dam:	200MCM
Pipeline:	27.6 km
Irrigation Water Drainage System:	3,650 ha

Imp. Period: 1983.3-1984.8

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	11.20	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
After deducting tax, insurance subsidy and indemnity from the construction cost reckoned on the preliminary design as the basis.

Regional development of the eastern coastal zone is anticipated by the supply of municipal, industrial and irrigation water.

5.TECHNICAL TRANSFER
OJT and JICA training program for counterparts

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ● Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Date of completion of detail design : Sep.1982
Date of conclusion of L/A of the requested loan granted by the Japanese Government (320 million yen): Jul. 1982
Date of completion : Jun. 1984
Date of commencement of service : Sep. 1983

(FY 1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
(1) High degree of priority: The industrialization of the east coast region was the No.1 priority project of the Government of Thailand
(2) RID was directly commissioned by the Prime Minister to pushing forward of the project.

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 東部海岸パイプライン建設実施設計

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

ASE THA/S 102/83

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY
Road Development in the Northeastern Region

3.SECTOR
Transportation/Road

4.REFERENCE NO.

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY
Dept. of Highways, Ministry of Communications

7.OBJECTIVES OF STUDY
Formulation of a master plan for road development in the Northeastern Region

8.DATE OF S/W: 1981/11

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Katahira & Engineers International

10.STUDY TEAM

No.of Members 11
Period Mar.1982-Mar.1983(12 months)

Total M/M	Japan	Field
79.20	14.60	64.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	224,974 (¥'000)
Contracted	216,437

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
16 changwats of the Northeastern Region (169,000 sq.km)

2.PROJECT COST

(US$1,000) (US$1=23B)		Total Cost	Local Cost	Foreign Cost
	1)	55,200	55,200	
	2)			

3.CONTENTS OF MAJOR PROJECT(S)
The study proposed the following priority projects.
- New construction and improvement 18 routes (666.9km)
- Rehabilitation 25 routes (468.0km)

4.CONDITIONS AND DEVELOPMENT IMPACTS
[Development impacts]
1) Narrowing of regional disparities
2) Stimulation of agricultural production
3) Development in poorer areas

[Social impacts]
1) Alleviation of social and political isolation
2) Improvement of health services
3) Improvement of education
4) Reduction of income disparities

5.TECHNICAL TRANSFER
1) OJT of the methods for selecting priority roads and for measuring social impacts
2) Participation of 2 counterparts in the JICA training program

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- [x] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
Based on the recommendations of the study, a feasibility study was subsequently undertaken on 15 routes for new construction and improvement (502.1km) and 8 routes for rehabilitation (90km).

(FY1993 Overseas Survey)
See the page on its feasibility study.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 東北部道路網整備建設計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

ASE THA/S 204B/83

I. OUTLINE OF STUDY

1.COUNTRY: Thailand

2.NAME OF STUDY:
Development Project of the Industrial Port on the Eastern Seaboard

3.SECTOR:
Transportation/Port

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+F/S

6.COUNTERPART AGENCY:
Industrial Estate Authority of Thailand, Port Authority of Thailand

7.OBJECTIVES OF STUDY:
Establishing the Master Plan for Maptaput Port as an Industrial Port and feasibility study of the priority projects.

8.DATE OF S/W: 1982/5

9.CONSULTANT(S):
Overseas Coastal Area Development Institute

10.STUDY TEAM

No.of Members 9

Period Jul.1982-Nov.1983(17 months)

Total M/M	Japan	Field
65.31	36.60	28.71

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
None

12.EXPENDITURE

Total	412,019 (¥'000)
Contracted	411,680

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Coastal Area, Layon Province

2.PROJECT COST (US$1,000) (US$1=239.2Yen)

M/P	1)	883,220 Local Cost	570,800 Foreign Cost	56,560
	2)			
F/S	1)	1,808,940	668,491	1,140,449
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P>Development of Layon Province, Composed of Industrial Base, Port, Residential Area. The target year of the M/P is 2000.
1)Industrial Development: Gas separation plant, Soda ash plant, Petro chemical complex, Fertilizer complex, Iron & steel complex, Supporting industries, Down stream industries, Other industries.
2)Port development: Amount of cargo handled 23 million tons annually, 45 berths, total length 5,750m.
3)Urban Plan: New town 575ha, Population 71,500
Number of household 17,340
4)Infrastructure: Road, Water supply, Sewerage, Waste treatment, Railway(branch of the Chachoengsao - Sattaship line, length 25km, annual traffic volume transported 3.7 million tons)
Electricity(total demand 1,354MW) Telephone(number of lines 10,000) Telex/Telegram, terminals and other services 4
<F/S>1)Industrial Development:
petorochemical, fertilizer, soda ash, various supporting industries, industrial estate Area 410ha, Quay wall 820m
2)Port Development: Quay-wall 850m, wharf 280m, breakwater 3,000m total length of berths 1,750mamount of cargo handled 4 million tons annually
3)Urban Development: Area 131ha, population 18,300 Number of Household 4,360
4)Infrastructure: Road, Water Supply, Sewerage, Waste treatment, Railway(Extension 24km, annual traffic volume transported 2 million tons), Electricity(total demand 133.5MW), Telephone(number of lines 3,000) Telex/Telegram terminals and other services(23)

Imp. Period: 1984.1-1987.12

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	15.70	FIRR1)	19.80
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

<M/P>[Impacts]1)Promotion of the Heavy industry at Eastern Seaboard Development. 2)Establishment of industries utilizing natural gas resources.
3)Acceleration of the region's urban-industrial development.
4)Increase in the economic growth of the nation and employment.
<F/S>[Conditions]for Cargo Forecast:1986 GDP=4,350 A Bahts 2000 2000 GDP=11,200 A Bahts
[Conditions of Industrial Development]
GNP Growth (1981 - 1986) 6.6%(per annum)
Manufacturing sector growth 7.6% Export oriented Industry 15.0%
[Conditions] The value added which will be generated by the productive activity of the planned factories will be counted as the total benefit of this project. The benefits are caluculated as the difference between the With-project and the Without-project conditions.
[Impacts]1)Acceleration of regional development(esp. Map Ta Phut area).
2)Development of coastal shipping and port-related industries.

5.TECHNICAL TRANSFER:
Giving lecture on methods for Planning Ports and Industrial Estates

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
The project is under implementation with the OECF financing.

Sep.1983 OECF E/S loan (1,720 million yen)
Sep.1984 OECF loan on Map Ta Phut Industrial Port (5,610 million yen)
Oct.1985 OECF loan on Map Ta Phut Industrial Port (16,050 million yen) and Industrial Estate (3,207 million yen)
Oct.1985 D/D on Map Ta Phut Port completed
Jan.1986 D/D on Industrial Estate completed
Dec.1987 Construction of the Industrial Estate commenced
Nov.1988 OECF loan on Satahip-Map Ta Phut Railway (3,002 million yen)

(FY1991 Overseas Survey)
1989 Construction of the Port commenced (-1992)
1990 Construction of the Industrial Estate First Stage completed
1991 Construction of the Industrial Estate Second Stage commenced
Scheduled to be completed in 1992

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
Four(4) million tons of cargo could be handled in Laem-Chabang Port in 1995.

2.MAJOR REASONS FOR PRESENT STATUS
(1)To formulate the core of development
(2)High priority in Thailand National Plan

3.PRINCIPAL SOURCE OF INFORMATION
①、②、③、④