PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1990
Revised Mar.1993

ASE MYS/S 207B/88

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Flood Mitigation of the Klang River Basin

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Economic Planning Unit (Prime Min. Dept.)
Drainage and Irrigation Detp. (DID)

7.OBJECTIVES OF STUDY
Flood control

8.DATE OF S/W Mar.1987

9.CONSULTANT(S)
Pacific Consultants International
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 12
Period Sep.1987-Jan.1989(17 months)

Total M/M	Japan	Field
89.56	43.39	46.17

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
topographic survey
installation of water meters

12.EXPENDITURE

Total	272,978 (¥'000)
Contracted	264,888

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Klang Valley basin (1,288 sq.km)

2.PROJECT COST
(US$1,000)
US$1=130yen=M$2.55

	Total Cost	Local Cost	Foreign Cost
1)	75,729	60,332	15,397
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1) River Improvement: Enlargement, deepening and embankment of Klang River(1.3 km in the dity area), Gombak River(2.5 km of mid-stream stretch) and Batu River(6.6km of mid-stream strech).

2) Diversion Channel: Construction of diversion channel connecting Gombak River with retention pond near Batu River(L=3.25km Design discharge 60 m3/s)

3) Batu Retention Pond: Construction of multi-purpose retention pond using ex-miniq pond, with flood control capacity of 2.7 million m3 and total area of 113.4 ha including park area.

4) Drainage Facilities: Inner water drainage facilities in Kampung Baru area: (35 ha): Construction of pumping station of 2 m3/s, and underground pond with 32,700m3.

Imp. Period: .1993-.1997

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

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

Conditions and Development Impacts:
Conditions:
1) The land use pattern projected for the year 2005
2) Benefits will accrue in the 5th year and on.
3) Opportunity cost of 13%
4) Project life of 50 years
5) B/C ratio of 1.24; NPV of US$13 million
Social impacts:
Approximately 100 sq.km will be protected from 100-year probability floods and the available land will be used for productive activities.

5.TECHNICAL TRANSFER
1) OJT for the counterparts
2) Training of 2 counterparts in Japan (JICA program) 3) A seminar

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
Most of the recommendations in the JICA Study are being implemented in stages with emphasis on the priority areas with frequent flooding.

1. Detailed design studies were conducted by local consultants on the Batu retention pond and the Gombak diversion channel. The two projects will be implemented in stages as and when funds are made available. The retention pond has been tendered out to a local contractor, while the diversion channel will soon be tendered out.

2. The proposed channel improvement for the Klang, Gombak and Batu Rivers is under inhouse implementation in stages by the DID.

3. The Federal Government is providing funds for implementation. The Economic Planning Unit is also negotiating with Asian Development Bank to finance some of the flood mitigation projects.

2.MAJOR REASONS FOR PRESENT STATUS
(FY1992 Overseas Survey)
Urgent needs to alleviate the flooding problms that presently affect the low-lying areas in the Klang Valley.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 クラン川流域治水計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASE MYS/S 314/88

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
National Tourism Development Plan

3.SECTOR
Tourism/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Culture Arts and Tourism
Tourism Promotion Corporation

7.OBJECTIVES OF STUDY
Formulation of a medium-term tourism development plan

8.DATE OF S/W Nov.1986

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 20
Period Mar.1987-Feb.1989(24 months)

Total M/M	Japan	Field
93.00	38.00	55.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Marine resource survey

12.EXPENDITURE

Total	295,306 (¥'000)
Contracted	283,884

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
International beach resort area in Desal Area in the southeastern part of Malay Peninsula

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	453,400	453,400	
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Construction of Desaru New Tourism Core:
1. Construction of infrastructure
 - road: 399m
 - jetty: 5 spots
 - water supply: 31,021 cu.m/day
 - sewage system: 11,028 cu.m/day
 - solid waste disposal system: 56.8 ton
 - power supply: 31,530KVA
 - telecommunication: 584 lines(up to May, 1995)
2. Middle class and high class resort hotels (total; 1,800 rooms)
3. Other tourism facilities such as sports and recreational facilities

Imp. Period: .1989-.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	18.80	FIRR1)	16.10
EIRR2)		FIRR2)	20.70
EIRR3)		FIRR3)	19.30

Conditions and Development Impacts:
Total construction costs exclude the costs to be borne by the local inhabitants according to the users-pay principle.
The calculation of benefits is derived from the tourists expenditures and the revenue structure of the hotels in 1987/1988, and tourists projections are derived from the present structure of destinations after adjusting by the impact of the proposed Desal new tourism core. Development impacts:
1) Stimulation of the development in low-income areas
2) Creation of employment
3) Encouragement of population movement from the urban areas to the region.
4) Foreign exchange earnings

Note: FIRR 1) is for hotels, FIRR 2) for developers and FIRR 3) for joint ventures. EIRR is for the entire development.

5.TECHNICAL TRANSFER
On-the-job training

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
The Ministry of Culture, Arts, and Tourism still adheres to the policy of dividing the country into six tourism regions (Central Peninsula, West Peninsula, South Peninsula, East Peninsula, Sabah and Sarawak). The JICA study evaluated the South Peninsula Tourism Region (South PTR) as the first priority region.
JICA proposals were accepted in principle by the Johor State Government and are now at various states of implementation. Detailed design studies for infrastructure development have been undertaken by the Public Works Dept., the Drainage and Irrigation Dept., or other relevant departments, and the projects have been implemented in stages with government funds under the 5th and 6th Malaysia Plans.
Hotels and recreational facilities have been developed by the private investers. A consortium of private developers which was awarded the contract to develop the Desaru area ran into financial difficulties in 1992, but the contract was reawarded to a new consortium of developers, and two hotels (each with about 600 rooms) will be completed by 1994, "Visit Malaysia Year II". The State Government is one of the shareholders of this redevelopment project, which is estimated to cost $300 million.

2.MAJOR REASONS FOR PRESENT STATUS
1. The land planned for tourism developmnt is governmnt-owned.
2. The existing infrastructure is managed by KEJORA,a statutory body.
3. Management of hotels and transportation means are increasingly privatized.
4. South PTR is close to Singapore to tap its thriving tourism market (both Singaporeans and visitors from other countries).
5. The project has positive socio-economic impacts in employment creation and economic activation.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 地域総合開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 209A/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Solid Waste Management for Pulau Pinang and Seberang Perai Municipalities

3.SECTOR
Public Utilities/Urban Sanitation

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Local Government Division of Ministry of Housing and Local Government Health Service Depts. of Pulau Pinang and Seberang Perai Municipalities

7.OBJECTIVES OF STUDY
Planning solid waste Management of the Municipalities

8.DATE OF S/W Oct.1987

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 13
Period Jan.1988-Aug.1989(20 months)

Total M/M	Japan	Field
84.30	32.10	52.20

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Land Use Survey
Study of Policy and Budget system in Malaysia

12.EXPENDITURE

Total	267,199 (¥'000)
Contracted	235,971

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Pulau Pinang and Seberang Perai
Area 1030sq.km ,population 1,090,600 persons

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	42,240	42,240	
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The planning period up to 2005 is divided into three Phases. The Plan proposes the improved efficiency and quality of waste collection, improved street sweeping services, construction of final disposal sites, and a gradual shift from open dumping to sanitary landfilling for urban environmental consideration. The Plan also proposes the review of assessment tax and the introduction of a fee collection system for securing finical resource for project implementation.

	Phase I	Phase II	Phase III
Collection:	*Intro. of large-sized collection vehicles & Impr. of collection frequency	*Partial introduction of stational collection system	*Full introduction of stational collection system
St. Sweeping:	*Review of sweeping frequency *Private sector participation		
Final Disposal:	*1st stage construction of disposal site *Intro. of semi-sanitary landfilling	*2nd stage constr. *Shift to sanitary landfilling	*3rd stage constr. *Implementation of landfilling
Investment:	US$9.73 million	US$17.76 million	US$14.75 million

The investment is assumed to be financed with funds from the federal government.

4.CONDITIONS AND DEVELOPMENT IMPACTS

Conditions:
1) Financial base for solid waste management will be strengthened with a review of the rate of assessment tax and with introduction of fee collection system of waste collection service.
2) Investments costs for renewal of collection vehicles and construction of final disposal site is supposed to be financed with grants or low interest loans by supports of the central government.

Development Impacts:
1) Sizable cost reduction can be realized by introducing the proposed system of waste collection and street sweeping. A certain counter-measure should be taken against unemployment of surplus workers after the introduction.
2) Negative environmental impacts can be minimized and the environmental conditions around final disposal sites will be conserved by introducing sanitary landfilling.

5.TECHNICAL TRANSFER

Training of counterpart 2 times 4 persons
Seminar and workshop 1 week

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
A feasibility study was subsequently undertaken.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ペナン廃棄物処理計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 209B/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Solid Waste Management for Pulau Pinang and Seberang Perai Municipalities

3.SECTOR
Public Utilities/Urban Sanitation

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Local Government Division of Ministry of Housing and Local Government, Health Service Dept. of Pulau Pinang and Seberang Perai Municipalities

7.OBJECTIVES OF STUDY
Planning solid waste Management of the Municipalities

8.DATE OF S/W Oct.1987

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 13

Period Jan.1988-Aug.1989(20 months)

Total M/M	Japan	Field
84.30	32.10	52.20

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Land Use Survey
Study of Policy and Budget system in Malaysia Topographic Survey

12.EXPENDITURE

Total	267,199 (¥'000)
Contracted	235,971

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Pulau Pinang and Seberang Perai
Area 1030sq.km ,population 1,090,600 persons

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	9,730	9,730	
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1. Improvement of soild waste collection
   (1) Introducton of a three-times-a-week collection system in the housing area
   (2) Introduction of plastic bags
   (3) Change from side loaders to compact cars (10 cu.m.)
   (4) Transfer to a stational collection system (20P/station)
2. Implementation of sanitary landfill (Establishment of final disposal sites for sanitary landfill with drainage circulation system)
3. To strengthen management of project operation
   (1) Establishment of "Department of Municipal Service"
   (2) Specialization of technical staff
   (3) Regional escalation of the project
4. To secure budget for sanitation project
   (1) To secure tax income from the fix property tax
   (2) Recheck of fee system

Imp. Period: .1991-.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

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

Conditions and Development Impacts:
1) Cost reduction and improvement of efficiency by introduction of proposed waste collection system and street sweeping system.
2) Sanitary waste disposal by construction of three final disposal sites and environmental conservation at present sites.
3) Strengthening self-financial resource by introduction of a fee collection system
   a) Improvement of efficiency of solid waste collection and street sweeping
   b) Improvement of sanitation conditions at final disposal sites
   c) Systematic function of project operation management
   d) Better understanding and cooperation of residents on waste disposal projects
   e) Improvement of budgetary base for waste disposal projects

By the improvement of waste collection and street sweeping, M$95.3 million in Pinang City and M$16.5 million in Seberang City can be reduced in the cost for waste management. The projects are judged as economically feasible because of the reduction. All the investment costs are supposed to be financed with sub-ports by the central government, and the conditions of loans are assumed as follow:
Long Term: grant period-three years, 20 years repayment, 7% interest
Medium Term: grant period-two years, 10 years repayment, 9% interest
Short Term: repaid in the next year, 13.5% interest

5.TECHNICAL TRANSFER
Training of counterpart 4 persons
Seminar and workshop 1 week

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
Only a few of the recommendations made in the JICA Study have been adopted.

1. Of the three sites proposed for landfill, the Pulau Burong Solid Waste Sanitary Landfill will be developed and the Federal Government has allocated RM 1.2 million. Pantai Acheh and Kuala Muda sites have been rejected.

2. The barging concept proposed by the JICA Study has been also rejected, because there was no detailed study on the sea-wave conditions, the landing site was thought not possible and barging is too expensive. Experts who reviewed the JICA Study proposal proposed the use of the Penang Bridge for trucking solid wastes over to Pulau Burong.

Special note:
The authorities responsible for the project implementation answered that the JICA proposals were discontinued.

2.MAJOR REASONS FOR PRESENT STATUS
(FY1992 Overseas Survey)
The Federal Government of late emphasizes privatization alternatives in order to reduce additional government investments in infrastructure development. This is contrary to the JICA recommendation of obtaining a loan from Federal and State Governments. Financially-constrained municipal governments will not be able to implement and operate the project in toto as proposed by the JICA Study.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ペナン廃棄物処理計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 208A/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Kelantan River Basin-Wide Flood Mitigation

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Drainage & Irrigation Department Ministry of Agriculture

7.OBJECTIVES OF STUDY
To formulate a basin-wide flood mitigation plan for Kelantan river bisin

8.DATE OF S/W Nov.1987

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

10.STUDY TEAM

No.of Members 14
Period Mar.1988-Nov.1989(20 months)

Total M/M	Japan	Field
100.74	44.07	56.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
1) Recontracted topographic survey
2) Recontracted topographic survey

12.EXPENDITURE

Total	475,807 (¥'000)
Contracted	247,426

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kelantan river basin having catchment area of 13,100 sq.km and population of 1.1 million

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	482,220	324,810	157,410
2)			

3.CONTENTS OF MAJOR PROJECT(S)
The study formulated a master plan of flood control for the basin area extending 100 km upstream from the mouth of Kelantan River.
Major proposals are Lebir dam (about 70m high) at Lebir River (a branch of Kelantan River) and Kemubu dam (abour 45m high) at Garas River in order to prevent flood.
Furthermore, a river channel improvement of the basin area extending 100km upstream from the mouth of the river increases water volume, which leads the flood water in question flow down safely.

4.CONDITIONS AND DEVELOPMENT IMPACTS
See next page.

5.TECHNICAL TRANSFER
Technical knowledge was transferred to counterpart in each field through analysis, planning and designing during the field works.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
A pre-feasibility study was subsequently undertaken on major structures proposed in the Master Plan.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 クランタン川流域治水計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 208B/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Kelantan River Basin-Wide Flood Mitigation

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Drainage & Irrigation Department Ministry of Agriculture

7.OBJECTIVES OF STUDY
To perform pre-feasibility sutyd for major structures selected in the basin-wide flood mitigation plan

8.DATE OF S/W Nov.1987

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

10.STUDY TEAM

No.of Members 14

Period Mar.1988-Nov.1989(20 months)

Total M/M	Japan	Field
100.74	44.07	56.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	475,807 (¥'000)
Contracted	247,426

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kelantan river basin having catchment area of 13,100 sq.km and population of 1.1 million

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	482,220	324,810	157,410
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1.Protection area: Lower Kelantan river basin
2.Flood mitigation method:
Construction of Lebir dam, Kemubu dam and river improvement
3.Design flood: 10,650 cu.m/ (50-year flood probability)
4.Lebir dam Flood control volume: 860 million cu.m
Type of dam :rockfill, Dam height 70m
Dam volume : 4.9 million cu.m
5.Kemubu Dam Flood control volume: 307 million cu.m
Type of dam :concrete gravity, Dam height 45m
Dam volume: 150,000 cu.m
6.River Improvement
Total levee: 164 km, Emb. vol. 13.2 million cu.m
Verge levee: height 4 m

Imp. Period: .1993-.2010

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	2.20	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
1.Conditions
1) For Lebir dam
-Relocation of 200 houses
-Land acquisition for plantation of 9,000ha
-Compensation for forest of 5,000ha
2) For Kemubu dam
-Relocation of 1,000 houses
-Land acquisition for plantation of 500ha
-Compensation for forest of 800ha
-Relocation of 26km long existing railway
2.Development Impacts
-Increase in irrigation water in dry season
-Creation of employment opportunity
-Enhancement of land use
-Increase in agricultural crop productivity

5.TECHNICAL TRANSFER
Technical knowledge was transferred to counterpart in each field through analysis, planning and designing during the field works.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
1. DID requested that the river improvement component be included in the JICA Study to be taken up in the 6th Malaysia Plan (1991 - 1995).
2. The planning of a feasibility study began in Oct.1992 and 6 consultant teams were invited to visit Kelantan River, Lebir and Kembu dam sites. The consultants' proposals were submitted by 22 Jan.1993. The selection of a consultant is expected to be finalized by April 1993.
3. The feasibility study is scheduled from mid 1993 to the end of 1995 (18 months), with financing by the Federal Government (RM 7 million).
4. The implementation of the project is expected during the 7th Malaysia Plan with the Federal Government funds. The estimated cost is around RM 1.3 billion, including RM 600 million for two dams.

Special note:
For the improvement of Kelantan River, three projects are involved. They are (1) Sungai Golok Project (northern part of Kelantan), (2) ADB-financed Kemasin - Semarak Project (eastern part of Kelantan), and lastly (3) Improvement of the Kelantan River Bank (area along the Kelantan River).

2.MAJOR REASONS FOR PRESENT STATUS
(FY1992 Overseas Survey)
Urgent needs to alleviate the flooding problems in the Kelantan River basin area.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 クランタン川流域治水計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASE MYS/S 316/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Traffic Control and Management System of Malaysian Expressways and Toll Highways

3.SECTOR
Transportation/Road

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Malaysia Highway Authority (MHA)

7.OBJECTIVES OF STUDY
-Formulate Short and Long Term Expressway Traffic Conrtol and Management System Plans
-Prepare an Operation Manual

8.DATE OF S/W Jul.1988

9.CONSULTANT(S)
Fukuyama Consultants International, Inc.

10.STUDY TEAM

No.of Members 9
Period Nov.1988-Nov.1989(12 months)

Total M/M	Japan	Field
44.90	6.00	38.90

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Data collection and preparation of route base maps by local consultants

12.EXPENDITURE

Total	188,346 (¥'000)
Contracted	174,020

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
926km expressways and highways under the Malaysia Highway Authority in Peninsular Malaysia

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	139,540		
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1. Construction of a traffic control and manaqement system for the Malaysian expressways with the lenqth of 915km which is under construction.
   1) Traffic informatoin collection
      a. emerqency telephones b. vehicle detectors
      c. weather forecastinq facilities d. CCTV cameras
   2) Information analyzinq system
      a. traffic control center b. sub-centers
   3) Information dissemination
      a. chanqeable messaqe boards b. chanqeable speed limit siqns
      c. highway radio
2. Establishment of the organization for traffic control

Imp. Period: .1990-.1995 .1990-.1995 .1990-.2005

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

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

Conditions and Development Impacts:
The project is expected to brinq about an efficient operation and manaqement system to the expressways
-Provide counter-measures durinq emerqencies accidents and disasters
-Ensure traffic safety and smooth traffic flow
-Provide efficient traffic operation, manaqement and expressway maintenance

5.TECHNICAL TRANSFER
Two counterpart enqineers from MHA have participated in the study in Malaysia and attended 3 months trainina courses in Japan. A post-study technical seminar was held for the Malaysian personnel involved in traffic control and management.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
Regarding the development of the traffic control and management system for 915km of Malaysian expressways, the concession company Perlembagaan Lebuhraya Utara Selatan (PLUS) is now responsible for the bulk of expressways and highways, excluding the Shah Alam Expressway, Penang Bridge and the Karak Highway which are managed by the Malayian Highway authority (MHA). Most of the on-going project components are under the PLUS. In the case of MHA, some budget allocations are approved under the 6th Malaysia Plan, but the project proposals are still under consideration.

1. Regarding the traffic information collection project, only the emergency telephones and vehicle detectors are being installed in the North-South Highway. The weather forecasting facilities and CCTVs are still under consideration, mainly owing to the financial constraints.
2. Regarding the information analyzing system project, both the traffic control center and the sub-centers are earmarked for implementation and the construction is likely to commence in the near furture.
3. Regarding the information dissemination project, no step has been taken toward implementation.

2.MAJOR REASONS FOR PRESENT STATUS
A major portion of the expressways and highways are still under construction and the total network is expected to be completed by the end of the 6th Malaysia Plan (1991-1995). The development of the traffic control and management system will be implemented in stages along with the construction of expressways and highways.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 高速道路交通管理計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASE MYS/S 315/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Transportation Facilities Projects in Klang Valley

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Klang Valley Planning Secretariat, Prime Minister's Department

7.OBJECTIVES OF STUDY
Feasibility Study on packeged Transportation Project

8.DATE OF S/W Mar.1987

9.CONSULTANT(S)
Fukuyama Consultants International, Inc.
Pacific Consultants International

10.STUDY TEAM

No.of Members 18
Period .1987-Jul.1989(18 months)

Total M/M	Japan	Field
112.20	7.81	104.39

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic Survey

12.EXPENDITURE

Total	431,735 (¥'000)
Contracted	420,480

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Klang Valley Region

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	382,250		
2)	43,070		
3)	11,410		

3.CONTENTS OF MAJOR PROJECT(S)

	Budget	EIRR	FIRR
Highway Project:			
- Shah Alam Highway Project (47.7km)	249,440	25.7	-
- N-S Expressway Link (33.7km)	132,810	28.5	-
Traffic Control System Project:			
- Kuala Lumpur ATC System	22,260	69.1	-
- Petaling Jaya ATC System	5,110	84.6	-
- Highway Traffic Surveillance System	15,700	-	
Freight Terminal Project:			
- KL North Terminal	4,120	32	14.5
- KL South Terminal	3,410	22	13.7
- Klang Terminal	3,880	22	14.9

Imp. Period: .1991-.1999

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

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

Conditions and Development Impacts:

Highway Project -Alleviating traffic congestion
-Development of Highway corridor
-Reduction in Transport Costs
TC System Project -Alleviating traffic congestion
-Traffic Control and Surveillance
-Drivers Information
Freight Terminal Project
-Modernization of Freight Transport Industry
-Reduction in Transport Costs
-Improvement of Living Environment

5.TECHNICAL TRANSFER
1.On-the-job-training
2.Holding Symposium
3.Counterpart training in Japan

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
Only those project components for privatization have been completed or making progress, and the components for government financing are largely held back owing to the lack of funds.

1. Highway project
The Malaysian Highway Authority is engaged in a detailed design study of the Shah Alam Highway (47.7km), and a private company (PLUS) is expected to implement the project. The North-South Highway Project is privatized, to be implemented by PLUS.

2. Traffic Control System Project
The project is still under consideration, and no step has been taken toward its implementation.

3. Freight Terminal Project
A detailed design study of the Klang Terminal was undertaken by the Port Klang Authority and is under implementation by a private company (KCT Berhad). Kuala Lumpur North and South Terminals are still under consideration and no negotiations have been made so far.

2.MAJOR REASONS FOR PRESENT STATUS
Privatized components are being implmented, because of the increasing demand for physical distribution (Freight Terminal Project), or of the state policy to provide better traffic mobility between major growth areas (Highway Project). The Government contribution to the project implementation was seriously constrained by the shortage of funds.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 クランバレー地域都市交通施設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1992
Revised Mar.1993

ASE MYS/A 101/90

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Fish Marketing and Distribution System

3.SECTOR
Fisheries/Fisheries

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Agriculture
LKIM

7.OBJECTIVES OF STUDY
To provide alternative plans for an efficient marketing and distribution system at the national and regional level.

8.DATE OF S/W Jul.1989

9.CONSULTANT(S)
System Science Consultants

10.STUDY TEAM

No.of Members 9

Period Nov.1989-Mar.1991(17 months)

Total M/M	Japan	Field
64.32	28.62	35.70

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
1. Fish marketing and consumption study
2. Fish quality inspecition

12.EXPENDITURE

Total	217,875 (¥'000)
Contracted	209,606

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Entire country

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

The study proposed strategies for improving FMDS and suggested the alternative plans of improving FMDS's facilities and institutions for the national level and for six model areas (in Kedah, North Trenqganu, East Johor, Sarawak and Sabah States) and six marketing centers elsewhere, covering the following basic components. East Johor was selected as the most effective area for the pilot project of FMDS improvement.

1. Fish landing to be shifted from private jetties to public LKIM complexes
2. Fish marketing:
   -Facilities: expansion of the fish landing-supply jetties and market halls, enlargement of the fuel pump, improvement of handling equipment, provision of a mooring facility, the cold storage and processing facility
   -Operation: systematic sorting/grading and improvement of fish handling on board, and privatization of the part of port facilities
3. Quality control: to reinforce low temperature control of fish before landing
4. Marketing structure: to strengthen wholesale market functions of the LKIM complex
5. Fishermens' associations: improvement of the existing activities (increased utilization by members, introduction of credit system, expansion of fish sales, training of operation/management staff), and promotion of new activities (market development, and promotion of fish processing and of large fishing boats.)

4.CONDITIONS AND DEVELOPMENT IMPACTS

Increase of production and value added, time and cost saving of FMDS, upgrade of fishermen's living standard, and earning of foreign currency, etc., were estimated as its effects though improvements in organization and institution, facilities, and operation will be required.

East Johor has high development potential of fish resources, accessibility to the consumption area and fishermen with advantageous position to the fish dealers etc. In this respect, the effectiveness by implementation of the pilot project may be much higher.

The various methods in operation, maintenance, and management of a distribution facility which will evolve from this pilot project, can be diffused easily to other areas from this site. The fishing technique, and fish marketing and distribution system are not well developed at the present stage in this area. The improvement of fish marketing and distribution system as well as the development of unused resources and adequate management of fishery resources will have high impact on this area and connect to the uplift of income of fishermen.

5.TECHNICAL TRANSFER
1. Counterpart trainning in Japan was impremented in 1990.
2. Technology transfer was conducted through field survey and seminar.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)

Based on the findings and recommendations of the master plan study, the Malaysian Government requested JICA to undertake a feasibility study on the East Johor pilot project. The study was duly conducted during April - May in 1992.

(FY1992 Overseas Survey)

The Fisheries Department (LKIM) has approached the Works Department (JKR) regarding the implementation of the pilot projet in Fast Johor. Financing is to be borne by the EPU (Economic Planning Unit) an possibly by the Ministry of Agriculture, and the LKIM is in the process of negotiation with these agencies. The Government of Malaysia is considering to allocate a budget in the order of RM 35 million, but the amount is yet to be approved. Detailed design of the project has been passed to JKR. The implementation is expected from March 1993 to December 1995.

2.MAJOR REASONS FOR PRESENT STATUS

(FY1992 Overseas Survey)
1. Socio-economic impacts to fishermen and the fishing industry
2. Infrastructure needs of the present fishing industry

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 水産物流通システム総合計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 210A/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Flood Mitigation and Drainage in Penang Island

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Drainage and Irrigation Department, Ministry of Agriculture

7.OBJECTIVES OF STUDY
-Flood Mitigation for 25 rivers in Penang Island
-Drainage in Georgetown

8.DATE OF S/W Mar.1989

9.CONSULTANT(S)
Pacific Consultants International
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members	12	
Period	Jul.1989-Apr.1990(10 months)	
Total M/M	Japan	Field
46.17	22.17	24.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Survey, Water Quality/Riverside Material, Sediments

12.EXPENDITURE

Total	343,426 (¥'000)
Contracted	167,604

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Penang Island

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	102,235		
US$1=140yen=2.7M$	2)			

3.CONTENTS OF MAJOR PROJECT(S)
The Master Plan of river improvement is divided into three phases of implementation, totalling twenty years.
1) Phase 1(Urgent Project) River improvement of Pinang, Keluang, Geluqor and Dua Besar rivers for total length of 22.1km.
2) Phase 2(Mid-term Plan) River improvement works for four grade B rivers and remaining portion of Grade A rivers. Total length of 17.3 km.
3) Phase 3(Long term Plan) River improvement works for fourteen(14) Grade C rivers in the Island. Total length of 13.4km.

Drainage Master Plan
1)Improvement of main drains in Gorge town City Total length of 21.9km.
2)Construction of retention pond of 22,000 cu.m capacity with 6 cu.m/s capacity pumping station.
3)Retention pond of 56,000 cu.m capacity with 2 cu.m/s pumping station
4)Improvement of drainage system in the Island outside of Georgetown City. Length of 4.48km.

4.CONDITIONS AND DEVELOPMENT IMPACTS
1) To mitigate the flood damages in the areas developed.
2) To improve the drainage conditions which may be deteriorated by the proposed land reclaimation project.
3) To improve inundation by high tide.
4) To improve hygiinic condition of under area.
Economic Evaluation
Conditions:
1) Annual operation and maintenance cost is 1.0% of economic construction cost.
2) The Project benefits are realized 5 year later after the commencement of the project implementation.
3) The social discount rate is 8.0%.
4) The opportunity cost of capital is 8.0%.
Results:
EIRR for Pinang river is 15.1% and B/C 1.9
EIRR for Keluang river is 14.6% and B/C 2.15
EIRR for other rivers is below 9.0

5.TECHNICAL TRANSFER
1. To accept a trainee.
2. Provision and instruction for instruments.
3. Cooperated works in collection and analysis of information.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
A feasibility study was subsequently undertaken on priority areas.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ペナン島洪水緩和排水計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 210B/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY: Malaysia

2.NAME OF STUDY: Flood Mitigation and Drainage in Penang Island

3.SECTOR: Social Infrastructures/River & Erosion Control

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Drainage and Irrigation Department, Ministry of Agriculture

7.OBJECTIVES OF STUDY: Flood Mitigation

8.DATE OF S/W: .1989

9.CONSULTANT(S): Pacific Consultants International
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 13

Period Jun.1990-Mar.1991(10 months)

Total M/M	Japan	Field
44.17	16.17	28.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Survey
Water Quality
Geological EIA

12.EXPENDITURE

Total	343,426 (¥'000)
Contracted	167,604

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Georgetown, Penang River, Keluang River

2.PROJECT COST (US$1,000) 1US$=140yen=2.7M$

	Total Cost	Local Cost	Foreign Cost
1)	79,120	56,926	22,194
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. River improvement of Penang and Keluang river systems.
2. Construction of Dondang Retention Ponds.
3. Construction of Air Terjun and Relau diversion channels.
4. Improvement of drains and construction of the retention ponds with pumping facilities for drainage systems. (S-10, S-18, and N-12)

Imp. Period: .1991-.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

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

Conditions and Development Impacts:

Development Impacts:
1. Upgrading of land use value by mitigating the flood damages.
2. Improvement of environment.

Benefits:
Area: 23 sq.km ; Population: 258000

5.TECHNICAL TRANSFER

1. To accept two trainees
2. Workshop training
3. Seminar

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

(FY1992 Overseas Survey)

The State Government applied for a budget for flood mitigation under the 6th Malaysia Plan. The Federal Government approved an allocation of RM 19.81 million for the preparation of detailed designs of four urgent projects and contract/tender documents and for the acquisition of land. A local consulting firm (MINCONSULT Sdn Bhd) was appointed to undertake a detailed design study, during the period from Feb.1993 to Aug.1994 (18 months). The first construction contract is expected to be called in Sept.1993.

2.MAJOR REASONS FOR PRESENT STATUS

(FY1992 Overseas Survey)

The principal reason is the need to reduce flooding problems that affect the local population.

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 ペナン島洪水緩和排水計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/A 202A/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Rationalization and Crop Diversification in Non-granary Irrigated Areas

3.SECTOR
Agriculture/General

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Economic Planning Unit (EPU), Prime Minister's Department
Drainage and Irrigation Dept.

7.OBJECTIVES OF STUDY
Inventory resource survey of all non-granary irrigated schemes

8.DATE OF S/W Jul.1988

9.CONSULTANT(S)
Nihon Koei Co., Ltd.
Hokkaido Engineering Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 10
Period Feb.1989-Oct.1990(20 months)

Total M/M	Japan	Field
70.83	30.17	40.66

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Farmers' Intention Survey done by local consultant

12.EXPENDITURE

Total	231,375 (¥'000)
Contracted	227,613

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
924 non-granary irrigated schemes

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

1. The nationwide inventory survey on 924 non-granary irrigation schemes was carried out to evaluate the present situation and to obtain the various information required for prepairing the crop diversification plan. For effective use of the information collected through the inventory survey, a database was set up to provide users with updated information to facilitate planning and decision making on crop diversification programs.
2. The crop diversification potential of each non-granary irrigation scheme was evaluated by category selecting 1st, 2nd, 3rd and 4th priorities for each scheme.
3. the distribution of non-granary irrigatio schemes with 1st priority are as follows:
(1) Schemes to be converted to high value crop cultivation..... 144 schemes
(2) Schemes to be converted to tree crop cultivation ..... 334 schemes
(3) Schemes with double-cropping system (paddy during the main season and short-term annual crops during the off-season) ..... 46 schemes
(4) Schemes to be maintained for paddy cultivation (minigranary area).. 74 schemes
(5) Schemes to be maintained for paddy cultivation for a definite period of time ..... 172 schemes
(6) Schemes to be converted to housing/industrial and other uses ..... 154 schemes

4.CONDITIONS AND DEVELOPMENT IMPACTS

1. The promotion of crop diversification plan of a particular non-granary irrigation scheme can be achieved with provision of necessary actions.
2. An information management system for the non-granary irrigated areas can be used for monitoring future scheme performance.
3. The idle paddy fields will be gradually phased out and used for production of more remunerative crops than paddy.

5.TECHNICAL TRANSFER
One-week training workshop on proper use of the computalized information management system to 31 participants

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
A feasibility study was conducted on three schemes following the master plan phase of the JICA study.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 非穀倉灌漑地区合理化・作付多様化計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/A 202B/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Rationalization and Crop Diversification in Non-granary Irrigated Areas

3.SECTOR
Agriculture/General

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Economic Planning Unit (EPU), Prime Minister's Department
Drainage and Irrigation Dept.

7.OBJECTIVES OF STUDY
Formulation of Crop Diversification Plan

8.DATE OF S/W Jul.1988

9.CONSULTANT(S)
Nihon Koei Co., Ltd.
Hokkaido Engineering Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 20
Period Feb.1989-Oct.1990(20 months)

Total M/M	Japan	Field
70.73	30.17	40.56

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Detailed farmers' intention survey done by local consultant

12.EXPENDITURE

Total	231,375 (¥'000)
Contracted	227,613

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
12 non-irrigated schemes selected in P.Pinang, Negri Sembiran and Kelantan States

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=2.54M Ringgit	1)	10,576		
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
1. Kulim area (3,223ha)
(1) A stepwise procedure to introduce crop diversification was proposed as follows;
Initial staqe: Introduction of non-paddy crops durinq the off-season
Final staqe: Intensive upland crop cultivation (300% croppinq intensity)
(2) Upqradinq of infrastructures
- On-farm development of 1,474 ha - Rehabilitation of the pump station
- Construction of 3 tidal qates - Rehabilitation of secondary canals
- Rehabilitation of Jarak link canal - Construction of Jarak river bund
2. Mamponq area(517ha)
(1) Present paddy fields will be converted to permanent crop fields
(2) Upqradinq of infrastructures
- Construction of feeder drains(11,500m) - Construction of farm roads(4,600m)
- Constructio of 46 drainaqe control structures
3. Kelantan area (930 ha)
(1) A double-croppinq system such as paddy durinq the main season and short-term annual crops durinq the off-season was proposed.
(2) Provision of intensive on-farm facilities
- 50 m/ha of irriqatio and drainaqe canals - 100 m/ha of farm roads

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)		FIRR1)	27.20
EIRR2)		FIRR2)	12.50
EIRR3)		FIRR3)	22.90

Conditions and Development Impacts:
1. Kulim area
(1) The net incremental benefits "with project" were estimated at 14,799 M$/ha.
(2) The FIRR is estimated at 27.2%.

2. Mamponq area
(1) The incremental benefits for oil palm and cocoa were estimated at 1,252 M$/ha and 2,515 M$/ha, respectively.
(2) The FIRR is estimated by crop as follows:
- Oil palm 12.5%
- Cocoa 23.0%

3. Kelantan area
(1) Annual net benefits "with project" were estimated at 4,157,000 M$.
(2) The FIRR is estimated at 22.9%.

5.TECHNICAL TRANSFER
-National seminar on crop diversification for 3 days with 170 participants.
-Final lecture and discussion with 18 State coordinators for 3 days.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
1. Following the master plan study, major recommendations therein were included under the 6th Malaysia Plan. The implementation is proceeding at a slow pace, because the proposed project involves large tracts of land throughout the peninsula, and requires large outlays of capital. Under the 6th Malaysia Plan, a total of RM 3.5 million has been allocated to promote the implementation.

2. The Drainage and Irrigation Dept.(DID) identified three schemes each with a model farm of approximately 20ha. The engineering surveys have been completed in 1992 on the model farms at the three schemes: namely, Kulim in Kedah, Rapek in Kelantan and Mampung in Negri Semibilan. The model farm at Kulim in under construction.

3. DID has applied to JICA for funds to implement a mini-project type scheme, and also requested for the assistance of a soil/ irrigation and drainage expert.

2.MAJOR REASONS FOR PRESENT STATUS
(FY1992 Overseas Survey)
The pace of project implementation is slow, owing to the shortage of government fund.
The progress of rationalization and diversification projects will depend on the positive response of the farmers concerned, the availability of good infrastructural facilities and farm management and marketing skills, and the establishment of detailed implementation strategies.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 非穀倉灌漑地区合理化・作付多様化計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASE MYS/S 317/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Rail-Based Commuter Services in Klang Valley

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Economic Planning Unit (EPU)

7.OBJECTIVES OF STUDY
F/S on a project for introducing a rail-based commuter service to the Klang Valley Region

8.DATE OF S/W May.1989

9.CONSULTANT(S)
Japan Railway Technical Service
Pacific Consultants International

10.STUDY TEAM

No.of Members 11
Period Jan.1990-Feb.1991(12 months)

Total M/M	Japan	Field
64.44	31.97	32.47

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	214,295 (¥'000)
Contracted	206,389

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
In and around Kuala Lumpur City and in the Klang Valley Region, Malaysia
(Rawang - Kuala Lumpur - Seremban, about 106km)

2.PROJECT COST

(US$1,000) US$1=2.6949M$		Total Cost	Local Cost	Foreign Cost
	1)	228,461	58,158	170,303
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. Improvement of railway facilities: Rawang-Kuala Lumpur-Seremban (106km)
   1) New construction of three halts, and new or additional construction of station buildings and passenger facilities.
   2) New signalling and telecommunications systems (automatic signal, automatic train protection system, etc.)
   3) Commuter train operation by diesel railcars (about 170 cars), and reinforcement of car inspection and storage facilities.
2. Integrated transport (intro. of feeder buses of about 860 cars)

In 1987, a JICA study proposed a Master Plan on transport for the regions concerned for the target year of 2005. The large-volume high-speed railway system to be used for commuter transport was one of the high-priority projects proposed in the Master Plan. In order to strengthen the railway passenger and freight transport capacities in the regions, the Malaysian Government decided moreover to implement the double tracking project (double tracking, modernization of signalling and telecommunications facilities, and introduction of DMUs) to be completed in 1993. In addition, monorail and LRT projects are about to start in order to alleviate the road traffic congestion in and around Kuala Lumpur City. The present Study proposes the reinforcement of railway-based commuter service(RBCS) between Rawang, Kuala Lumpur and Seremban, on the assumption that the Malaysian projects above be completed as scheduled.

Imp. Period: .1993-.2005

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	28.81	FIRR1)	2.84
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
1) The values of investments and maintenance and operation costs are calculated by deducting customs and taxes from commercial prices, and converted to economic prices by using the rates established by EPU (Economic Planning Unit). CIF prices are used for imported materials.
2) Initial investment costs are applied for the replacement of the assets.
3) Project life of 30 years (1993 - 2022)
4) inflation is not considered
5) Foreign exchange rate of September 1990 (MS$1 = 51.5yen)
6) Residual values of the assets to be depreciated are calculated as negative investment, by evaluating the length of remaining service life at the end of project life.

Development Impacts:
1) Alleviation of road traffic congestion by the transport capacity of 4.5 million passenger-km per day in 2005 and also by the train operation at 10 minute intervals during peak hours throughout the year
2) Development of satellite cities along the railway route, development of related industries, and increase in oppotunities of employment
3) Improvement of air pollution by alleviation of road traffic congestion

5.TECHNICAL TRANSFER
1) OJT in respect of railway technologies, methods of demand forecast, regional development planning, etc.
2) One counterpart training on demand forecast in Japan in Nov. 1990

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
This JICA study was conducted simulataneously with another study (the Double Tracking Project) by te Malaysian Government. The programs and projections of the two studies which were deemed suitable were integrated for implementation. The Doubl Tracking Project (DTP) is under implementation, albeit somewhat behind the schedule. Financing was obtained from OECF of Japan and UK's ODA in addition to the Govt. funds. The Rawang - Seremban sections (106km), for which the JICA study proposed various improvements, is being implemented as part of DTP. DTP constitutes the first phase, and the major component, of the railway improvement program of Malaysia, and other programs and recommendations will be implemented after the completion of DTP in mid-1995.
(Related Information)
1. After the start of DTP implementation, the Malaysian Govt. decided on the electrification of the entire sections. Although the OECF loan has not been adjusted to date, the on-going project is being implemented so as to assimilte the electrification.
2. Some relevant proposals have beeen planned for the project area. Firstly, a suburban railway with 5 radial lines and 2 branch lines is proposed in the 25km-radius of KL. A private consortium was awarded the contract to build one of the lines (CBD to Ampang 12km). Secondly, it was decided in 1991 to include medium-volume guided ransport systems, in addition to monorails, as alternatives of

2.MAJOR REASONS FOR PRESENT STATUS

Malaysia is pursuing economic development to become a developed country by the year 2020. As part of their efforts, the Government aims to establish and operate an effective urban transport system in and around Kual Lumpur. The double tracking of national railways and the strengthening of urban and intra-city transport systems are being implemented to alleviate growing road traffic congestions and environmental hazards.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 クランバレー地域鉄道改良計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 211A/91

Compiled Mar.1993
Revised

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Development of Rajang Port

3.SECTOR
Transportation/Port

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Rajang Port Authority, Sarawak

7.OBJECTIVES OF STUDY
Short-term and Long-term Development Plan for the Rajang Port

8.DATE OF S/W Jan.1990

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja
Ocean Consultant Japan Co., Ltd.

10.STUDY TEAM

No.of Members 11
Period Aug.1990-Feb.1992(19 months)

Total M/M	Japan	Field
71.55	35.95	35.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Cargo Flow Survey
- Natural Condition Survey

12.EXPENDITURE

Total	261,452 (¥'000)
Contracted	253,034

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Rajang Port Area and its surroundings, Sarawak State

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	128,879		
2)			

3.CONTENTS OF MAJOR PROJECT(S)
Master Plan (through 2010)

(1) Timber Products Terminal
- Wharves -10m 750m
- -5m 300m
- Yards 335,000m2

(2) Coal Terminal
- Wharves -10m 200m
- -5m 235m
- Yards 71,000m2

4.CONDITIONS AND DEVELOPMENT IMPACTS
Development Impacts:
1. Construction of the timber products terminal will replace the present off-shore cargo handling with modernized cargo handling at the terminal. This will reduce the costs of cargo handling and operating tug boats and barges and save the waiting time of vessels.

2. The economic transportation service provided by the proposed terminals will attract sawmills and other related industries to the Timber Processing Zone, and stimulate the regional development.

5.TECHNICAL TRANSFER
- Lecture on the method of demand forecast in Rajang Port Authority
- Counterpart training :RPAI, EPUI

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
A feasibility study was subsequently undertaken on the short-term developmnt plan.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ラジャン港開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASE MYS/S 211B/91

Compiled Mar.1993
Revised

I. OUTLINE OF STUDY

1.COUNTRY Malaysia

2.NAME OF STUDY
Development of Rajang Port

3.SECTOR
Transportation/Port

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Rajang Port Authority, Sarawak

7.OBJECTIVES OF STUDY
Short-term and Long-term Development Plan for the Rajang Port

8.DATE OF S/W Jan.1990

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja
Ocean Consultant Japan Co., Ltd.

10.STUDY TEAM

No.of Members 11
Period Aug.1990-Feb.1992 (19 months)

Total M/M	Japan	Field
71.55	35.95	35.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Cargo Flow Survey
- Natural Condition Survey

12.EXPENDITURE

Total	261,452 (¥'000)
Contracted	253,034

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Rajang Port Area and its surroundings, Sarawak State, Malaysia

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	51,772	34,505	17,267
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Short-term Plan (through 1997)

(1) Timber Products Terminal
Wharves -10m 300m
-5m 180m
Yards 100,000m2

(2) Coal Terminal
Wharves -10m 165m
-5m 150m
Yards 32,000m2

Imp. Period: .1994-.1996

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	22.20	FIRR1)	10.60
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Development Impacts:
1. Construction of the timber products terminal will replace the present off-shore cargo handling with modernized cargo handling at the terminal. This will reduce the costs of cargo handling and operating tug boats and barges and save the waiting time of vessels.

2. The economic transportation service provided by the proposed terminals will attract sawmills and other relted industries to the Timber Processing Zone, and stimulate the regional development.

5.TECHNICAL TRANSFER
- Lecture on the method of demand forecast in Rajang Port Authority
- Counterpart training :RPAI, EPUI

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
(FY1992 Overseas Survey)
- A steering Committee has been formed by the State Government to consider the findings of the JICA Study. The 1st meeting was held in Jan. 28th 1993.

- Pending the deliberations of the Steering Committee over the submitted JICA Report, the Ministry of Infrastructure Development will prepare a Cabinet Paper for final approval by the State Government.

- At present, it appears likely that the Sarawak Timber Industry Development Corporation (STIDC) be proposed to take over the development of a timber complex at Tanjong Manis.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ラジャン港開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

ASO MYN/A 101/79

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Irrawaddy Basin Integrated Agricultural Development Project

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Agriculture and Forestries

7.OBJECTIVES OF STUDY

8.DATE OF S/W Oct.1977

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 14

Period Feb.1978-Mar.1980(26 months)

Total M/M	Japan	Field
55.36	31.73	23.63

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	293,115 (¥'000)
Contracted	243,519

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
2,900,000ha in the mid-stream basin of Irrawaddy River

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	2,020,000		
2)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation project by dams in 26 sites (including small hydropower generation)
Road project Accomplishment of dry farm land in swamp
Improvement of pilot field Husbandry promotion project

4.CONDITIONS AND DEVELOPMENT IMPACTS
Expansion of food crop production centering on rice is planned by irrigation through constructing dams in 26 sites.
Rise in living standard and income of farmers faminly is planned by promoting agriculture with husbandry and introducing fishery in reservoir ponds.

5.TECHNICAL TRANSFER
1.Acceptance of two trainees
2.Establishing observation equipment of weather and water condition, and training of how to use them

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

Based on the recommendations of the study, F/S and D/D were conducted on the following projects.

South Nawin Irrigation Project:
F/S completed in 1979; D/D completed in 1984; since late 1986, project implementation by OECF funding has been in considerable delay. The detailed design was started on the mini-hydropower plant, but suspended owing to the political destabilization.

Okkan Irrigation Project
F/S completed in 1981; given the funding constraints, the implementation will come after the comletion of the South Nawin project.

(FY1991 Overseas Survey)
The Myanmar Government has named 1992 as the year of economy, and aims to increase the country's agricultural production and exports. Because of the suspension of external assistance on new projects and the shortage of foreign exchange, however, it is unlikely to realize the objectives. The South Nawin project is under constructin with OECF fund, because it was already on-going when the suspension took effect. With regard to the Okkan project and other proposals, there is no definite prospect of implementation because of the suspension.

However, the proposals of the JICA study are integrated into the national plan, and their implementation will be eventually taken up in the future.

2.MAJOR REASONS FOR PRESENT STATUS
The projects proposed by the JICA study are considered essential for agricultural stabilization in the Irrawady Basin. The Government plans to implement them step by step. Due to political and economic destabilization in recent years, however, the implementation will be inevitably delayed.

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 イラワジ川流域農業総合開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

ASO MYN/A 301/79

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Rice Mill Project

3.SECTOR
Agriculture/Agricultural Processing

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Trade

7.OBJECTIVES OF STUDY
F/S on construction of Rice Mills (8 factories)

8.DATE OF S/W .0

9.CONSULTANT(S)
Overseas Merchandise Inspection Co., Ltd.

10.STUDY TEAM

No.of Members 9
Period Jan.1979-Aug.1979(8 months)

Total M/M	Japan	Field
28.17	17.94	10.23

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	72,813 (¥'000)
Contracted	70,733

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kanaunqtoe, Bassein, Kyduktaqa, Kawa, Hlequ, Danubyu, Einme, Deddye

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=6.5K.=200Yen	1)	43,715	21,950	21,765
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
(1)Rice Mills: Output 100 tons/24H, Input 7 tph (6 rice mills)
Output 150 tons/24H, Input 10 tph (2 rice mills)
(2)Power generating facilities (2 r.mills)
(3)Electrical Equipment:
receiving cubicles(6 r.mills), control board(8 r. mills),
lighting and power control cabling(8 r. mills)
(4)Power Transmission Facilities: cable 33KV/11KV,
transformer 33/11KV(5 r. mills), Insulator(6 r.mills), etc.
(5)Paddy Warehouse(Cap. 1,000 tons) (8 warehouses)
(6)Spare Parts Factories for manufacturing: rubber roll factory
(1 r.mills), abrasive roll factory(1 r.mills)
(7)Paddy Landing and Conveying Facilities: conveyors connected with 3 portable augers.(4 r.mills)
(8)Grain inspection and testing room, machine shops and telephone service facilities.(8 r.mills)

Imp. Period: Dec.1979-Oct.1981

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

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

Conditions and Development Impacts:
(Preconditions) Benefits are computed by taking difference between outputs of new rice mills with-project and old ones without-project, on the assumption of putting the same total amount and quality of paddy into each of them.

Benefits Unit:1,000K

Output From	1982	1983	1984	1985
New Rice Mill	290,561	336,270	406,895	489,391
Old Rice Mill	256,924	278,377	309,694	342,054
Benefits	33,637	57,893	97,201	147,337

(Development Impacts) Newly built rice mills improve quality and quantity of milled rice. It has the profound meaning to the country like Myanmar, where rice is the mainstay of her national economy, and the national finance relies greatly on rice exports.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

■ Completed or in Progress
- ● Completed
- ○ Implementing
- ○ Processing

☐ Promoting
☐ Delayed or Suspended
☐ Discontinued or Cancelled

(Description)

Dec. 1979 OECF L/A signed (No.BP-14, 4.35 billion yen)
Jan.1981 - Feb.1982 Detailed Design undertaken by OMIC
Dec.1982 Construction started
Dec.1984 Construction completed

Facilities completed by the OECF loan:
- 6 Rice mills of 7 tph capacity
  2 Rice mills of 10 tph capacity
- Parts manufacturing plant
  Rubber roll manufacturing facility, one unit
  Abrasive roll manufacturing facility, one unit
- Power generating unit utilizing husk, paddy warehouse and paddy unloading equipment were installed at rice mills.

After completion of construction, the project was judged very effective, and the Myanmar Government proposed to use the remaining balance of the OECF loan for the construction of three large-scale rice mills which will process export-quality rice. The detailed design was duly completed, but implementation was suspended after the coup d'etat in 1988.

(FY1991 Overseas Survey)
The suspension still remains in force in early 1992.

2.MAJOR REASONS FOR PRESENT STATUS

1. Increase in output and improvement of quality of milled rice are very important in the national economy, and the government assigned high priority to the proposed project.
2. Political destabilization makes it difficult to implement the construction of three large-scale rice mills. In addition, the Myanmar Government reportedly has decided to implement them with their own funds. (FY1991 Overseas Survey)

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 ライスミル建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/S 301/80

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Rangoon International Airport Development

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Dept. of Civil Aviation, Min. of Transport and Communications

7.OBJECTIVES OF STUDY
Plan facility upgrading : study of economic/financial feasibility and socio-economic effects; recommendation on administrative organization

8.DATE OF S/W Jun.1979

9.CONSULTANT(S)
Japan Airport Consultants, Inc.

10.STUDY TEAM

No.of Members 10

Period Oct.1979-Mar.1980(6 months)

Total M/M	Japan	Field
28.93	20.23	8.70

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic survey

12.EXPENDITURE

Total	67,402 (¥'000)
Contracted	63,466

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Yangon

2.PROJECT COST

(US$1,000)
(US$1=240Yen=6.35Kyat)

	Total Cost	Local Cost	Foreign Cost
1)	127,134	38,156	88,978
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Components	Target year 1995 (Phase I)	Target year 2005 (Phase II)
- Runway (Existing 2,500m x 60m)	3,330m x 60m	3,700m x 60m
- Apron (Existing 175m x 424m)	110,529sq.m	137,529sq.m
- Int'l Terminal Bldg.	9,270sq.m	17,600sq.m
- Control Tower, Administrative Bldg.(Existing 490 m2)	2,800sq.m	2,800sq.m
- Navaids	Renewed for CAT-I	-
- Radio Navigation Aids		
- Meterological Service Facilities		
- Car Parking		
- Fuel Storage		
- Utilities,etc.		

Imp. Period: .1980-.2005

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	12.10	FIRR1)	2.40
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Feasibility Conditional upon:
1) development of tourism resources, hotel capacity, and domestic transportation system to enhance convenience and amenity to tourists;
2) simplification of visa issuance procedures and extension of tourist visa period.

Development Impacts:
1) Enhancement of economic/cultural exchange with foreign countries
2) Enhancement of inter-regional exchange within Myanmar
3) Increase in employment opportunities
4) Increase in fresh foodstuffs exports
5) Time saving increment by overseas direct flights
6) Net increase in tourish income and fuel supply revenue
7) Saved maintenance costs of existing facilities.

5.TECHNICAL TRANSFER
1) OJT; 2) JICA counterpart training; 3) joint work with local consultants; 4) Subcontracting of topographic survey to the local firm

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

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

Apr.1981 OECF E/S loan agreement (500 million yen)
Jan.1984 D/D completed
Aug.1984 OECF loan agreement (14,370 million yen)
May 1985 OECF loan agreement (8,350 million yen)
May 1986 OECF loan agreement (4,450 million yen)

Construction works were suspended in the aftermath of coup d'etat in September 1988.

(FY1991 Overseas Survey)
At the time of the coup d'etat in 1988, two OECF loans had been in the process of implementation. The construction works still remain suspended after three years. In view of the rapid inflation, it will be necessary to redo the costing before resuming construction.

2.MAJOR REASONS FOR PRESENT STATUS
1)Large impact of long-haul service by large jets: 2) reasonable project scale for finance; 3) high priority(requested by Myanmar Communist Party Chairman Ne Win)

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 ラングーン国際空港拡張計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/A 302/80

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
South Nawin Irrigation Project

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Agriculture & Forests, Irrigation Department

7.OBJECTIVES OF STUDY

8.DATE OF S/W Dec.1978

9.CONSULTANT(S)
Sanyu Consultants Inc.
Chuo Kaihatsu International Corp.

10.STUDY TEAM

	Total M/M	Japan	Field
No.of Members 12			
Period Jan.1979-Mar.1980(15 months)			

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	163,131 (¥'000)
Contracted	130,809

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
74,000acre southwest of Prome City, left bank of Irrawaddy River, 160 miles north northwest of Rangoon, population 96000

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=6.44kyats	1)	7,900	2,900	5,000
	2)	88,000	36,600	51,400
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation : first crop (paddy) 24,000ha
second crop (farm) 22,660ha, total 46,660ha
1)Main dam : Zoned type filldam, height 41.5m, length 5,120m, volume 5.10million cu.m capacity
2)Diversion dam: Zoned type filldam, height 30.2m, length 1,224m, volume 1.03million cu.m capacity
3)Power station : Kaplan type 2,300 KVA x 1 unit
4)Irrigation canal (main 51.5km, branch 41.1km, distributor 205.6, main water course 233.9km, supplimental water course 1,309.8km)
5)Drainage canal (main 37km, sub 86.3km, ditch 266.7km)
6)Road 597km
7)Field improvement
Note: The project cost1) above is for the pilot project, and 2) is for the whole projects.

Imp. Period: .1979-.1988

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	13.50	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
Economic benefits consist of agricultural benefits and benefits from electric power generation. Net benefits per acre are used as agricultural benefits.

Net Benefits(KS/ac)	Paddy	Peanuts	Sesami	Gram
Without project	1,951	139	429	293
With project	2,200	404	520	249

[Development Impacts]
(1)Increased agricultural productivity
(2)Improved living standard of people in rural areas
(3)Increased all year employment opportunities

5.TECHNICAL TRANSFER
(1)Acceptance of one trainee
(2)Supply of equipments and training of how to use them
(3)Cooperation in writing a report

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
The proposed project has been under implementation with the OECF loan and the Japanese grant aid.

OECF Loan:
Jan.1981 Loan agreement signed for E/S (250 million yen)
Apr.1983 - Apr.1984 Detailed design undertaken (Sanyu Consultants, Inc.
and Chuo Kaihatsu)
May 1985 Loan agreement signed (8,150 million yen) for the construction of the Main Dam and irrigation and drainage canals
Nov.1986 S/V started
Jun.1988 - Oct.1989 Construction suspended owing to the domestic problem of Myanmar.
Construction was subsequently resumed, and is scheduled to be completed in March 1994.

Grant aid:
Aug.1980 E/N signed (873 million yen) for on-farm development
1980 B/D and D/D undertaken
1981 - 1982 Construction undertaken

(FY1991 Overseas Survey)
Because of the shortage of diesel oil and construction materials,

2.MAJOR REASONS FOR PRESENT STATUS
1. The project is integrated into the national development plan and high in priority.
2. In recent years, extreme foreign exchange constraint has made it difficult to import necessary construciton materials and equipment.

(FY1992 Overseas Survey)
The Myanmar economy is based on agriculture, and the national economy can be developed after the completion of this project, which is considered top priority.

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 南ナウインかんがい計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/A 303/81

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Okkan Dam Irrigation Project

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Minstry of Agriculture and Forestry,
Department of Irrigation

7.OBJECTIVES OF STUDY
Increase of rice production

8.DATE OF S/W Nov.1980

9.CONSULTANT(S)
Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 10

Period Jan.1981-Nov.1981(11 months)

Total M/M	Japan	Field
37.85	19.46	18.39

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	105,200 (¥'000)
Contracted	94,376

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
About 21,000ha in Myitmaka River left bank
(80km north northwest of the capital, Rangoon)

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	54,000	29,000	25,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation area: 21,000ha
Water resource facility : Okkan Dam(pondage 240 X 1,000,000 cu.m)
Diversion weir : height 9m, bank length 44m,
max. intake discharge Q=22.5cu.m/sec
Irrigation and drainage canals : irrigation 225.6km
drainage 135.5km
Terminal facilities : irrigation canal 1,426 km,
drainage canal 236.9km
Waterpower generation : water mill 2,450kw, 1 unit, electric
transmission wire 33kv, 32.6km

Imp. Period: .1981-.1989

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	26.15	FIRR1)	
EIRR2)	10.53	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Condition:
Opportunity cost of capital 11%
Development Impacts:
The increase of farms' profit will be planned through water resource development, building of irrigation and drainage facilities, completion of terminal facilities, improvement of road network and introduction of two kinds of planting in one field and HYV.

*EIRR 2) above is only for water power project.

5.TECHNICAL TRANSFER
Through assisting engineers and specialists in Myanmar Government in the fields of final decision, construction supervision and extension services.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
After completion of the study, the Myanmar Government planned to apply for OECF funding, but because of the subsequent economic and political destabilization, the attempt fell through.

(FY1991 Overseas Survey)
The Myanmar Government retains an interest in the implementation of the proposed project, and continues to expect Japanese technical and financial assistance on its detailed design and construction.
The master plan prepared by the JICA study (Irrawaddy Basin Integrated Agricultural Development Project) indicated that this Okkan dam irrigation project would be more feasible than the on-going South Nawin irrigation project. However, the South Nawin project was first requested for, and approved of, OECF funding for a political reason (South Nawin being the birthplace of Ne Win). The request for OECF funding on the Okkan project was in the pipeline after the approval and implementation of the South Nawin project, but the subsequent action has been suspended due to the continued political and economic instability since the coup d'etat in 1988.

2.MAJOR REASONS FOR PRESENT STATUS
Continuing political and economic destabilization makes it difficult to resume the loan application.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 オカンダムかんがい計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/S 303/84

Compiled Mar.1988
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Electrification of Rangoon Circular Railway Line

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Burma Railway Corporation

7.OBJECTIVES OF STUDY
Electrification project to strengthen transport capacity and modernize the national railway in the Rangoon city area

8.DATE OF S/W Aug.1983

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 12

Period Feb.1984-Mar.1985(13 months)

Total M/M	Japan	Field
44.12	29.52	14.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	124,018 (¥'000)
Contracted	123,136

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Rangoon city area

2.PROJECT COST
(US$1,000)
(US$1= 229Yen)

	Total Cost	Local Cost	Foreign Cost
1)	79,480	25,410	54,070
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
- Power transmission wire: 5.95km, 2 circuits
- One substation(for power source and feeding)
- Catenary (25KV, simple system): 176km in length
- Track(including civil works): 2km of new construction, 1.7km relocated, 15.5km of roadbed
- Rolling stock: Introduction of electric locomotives and passenger cars
- Other improvements: Repair of facilities, etc.

Imp. Period: Oct.1986-Jan.1990

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	15.40	FIRR1)	5.10
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

1. Preconditions
The project period was set to last until 2019, with the start of construction to begin in Oct.1986 and electrified service to be offered in 1990. Traffic volume in Rangoon was forecasted for 1990, 2000, 2010, and 2020 for the "with" and "without" cases. Based on the results, the feasibility was studied by applying cost-benefit analysis. The cost-benefit items taken up were travel time saving , railway investment, railway operation cost, and road investment.
2. Development impacts
1) Restoration of the railway's role as a mass transport mode, which will contribute to smooth urban traffic; 2) alleviation of road traffic congestion; 3) reduction of air pollution; 4) fuel savings; 5) Creation of employment opportunities; 6) stimulus to technical development; and 7) Promotion of development around Rangoon

5.TECHNICAL TRANSFER
1. One JICA counterpart training; 2. OJT

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

After the completion of the study, no progress has been made. The Myanmar Government once tried to include the project in the application list for OECF yen credit, but because of the growing arrears in loan repayment, new projects were not accepted.

(FY1991 Overseas Survey)

No action has been taken since the coup d'etat in 1988. Even if the suspension of assistance by the donor countries is to be lifted some time in the future, the electrification of the circular railway would not be effective, given the extremely poor status of power supply in Rangoon. The project scale will have to be reduced with more emphasis on track improvement and other modifications.

The priority of this project is considered lower than "Track, Telecommunication and Signalling Improvement Project," on which the JICA study was undertaken in 1986-87.

2.MAJOR REASONS FOR PRESENT STATUS

Due to the delay of the loan repayment, Myanmar has been classified as LLDC.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ラングーン鉄道環状線電化計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/S 302/84

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Myanmar

2.NAME OF STUDY: Construction of Dry - Dock Project

3.SECTOR: Transportation/Marine Transportation & Ships

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Burma Dockyards Corporation

7.OBJECTIVES OF STUDY: Feasibility study of a dock yard

8.DATE OF S/W: Apr.1983

9.CONSULTANT(S): Overseas Ships Building Cooperation Center

10.STUDY TEAM

No.of Members 8

Period Aug.1983-Jul.1984(12 months)

Total M/M	Japan	Field
39.00	24.70	14.30

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	111,982 (¥'000)
Contracted	92,466

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Chilawa in Rangoon

2.PROJECT COST (US$1,000) (US$1=150Yen)

	Total Cost	Local Cost	Foreign Cost
1)	145,000	33,000	112,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Dry Dock for 20,000 DWT-class ships
(200m x 30m x 10.5m depth)

Imp. Period: Apr.1986-Apr.1990

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	13.50	FIRR1)	8.70
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

The future demand is projected for the period of 1989 - 2018, based on the performance during the 3rd and 4th Development Plans.

The project will expand the repair capacity from the present 1,500 DWT to 20,000 DWT.

5.TECHNICAL TRANSFER: OJT for counterparts

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

1985 May OECF E/S loan agreement (533 million yen)
and the budget allocation of 1 million Kyats
1985 Sept. E/S started
1986 Sept. E/S completed

(Fy1991 Overseas Survey)
The Myanmar Government applied for an OECF loan in 1989, but failed to get the approval. No action has been taken since then.

2.MAJOR REASONS FOR PRESENT STATUS

Political destabilization since the coup d'etat of 1988 precludes the resumption of ODA.

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 船舶修理ドックヤード

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/S 304/86

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Irrawaddy River Bridge Construction Project

3.SECTOR
Transportation/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Construction Corporation

7.OBJECTIVES OF STUDY
Economic analysis Planning of bridge construction

8.DATE OF S/W Jun.1985

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 12
Period Nov.1985-Mar.1987(17 months)

Total M/M	Japan	Field
62.09	19.74	42.35

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographie survey
Geological survey

12.EXPENDITURE

Total	206,045 (¥'000)
Contracted	194,957

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Vicinity of Prome City, approx.400km from Rangoon, the middle of the Irrawaddy River

2.PROJECT COST
(US$1,000)
(US$1=7.5Kyat)

	Total Cost	Local Cost	Foreign Cost
1)	81,200	21,467	59,733
2)	101,200	20,533	80,667
3)			

3.CONTENTS OF MAJOR PROJECT(S)
The study analyzed two alternatives:
1) a road bridge and 2) a road and railway bridge, and recommended that a regional development plan be formulated for implemention to improve the feasibility of the project.

The cost 1) is for the road bridge, and the cost 2) for is the road and railway bridge.

Imp. Period: .1987-.1992

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: No

EIRR1)	2.00	FIRR1)
EIRR2)		FIRR2)
EIRR3)		FIRR3)

Conditions and Development Impacts:
The project is not feasible, under the prevailing conditions.

5.TECHNICAL TRANSFER
Traffic demand forecast

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
Based on the trend projection of future growth in the surrounding areas to be serviced by the proposed bridge, the study concluded that the project would be low in economic feasibility. The Government of Japan formally notified the Myanmar Government in June 1987 that it would not consider the project funding for the time being, allowing a possibility of reconsideration in the future if and when the surrounding areas grow sufficiently to justify the project.

(FY1991 Overseas Study)
The Myanmar Government retains a continued interest in the project, but is unable to implement without external assistance. The growth of the surrounding areas still remains inadequate.
Given the current political conditions, early resumption of external assistance appears unlikely.
The president of the construction Corporation was appointed Minister of Construction in January 1992. He has been a strong supporter for the Japanese cooperation in the sphere of bridge construction, and if external assistance be resumed at a future date, the proposed project is likely to be included in the application list.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 イラワジ河橋梁建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO MYN/S 305/86

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Myanmar

2.NAME OF STUDY
Track, Telecommunication and Signalling Improvement Project

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Burma Railway Corporation

7.OBJECTIVES OF STUDY
Formulation of a long-term and short-term development plan for tracks, signalling and telecommunication equipment

8.DATE OF S/W Aug.1985

9.CONSULTANT(S)
Japan Railway Technical Service
Pacific Consultants International

10.STUDY TEAM

No.of Members 12
Period Jan.1986-Feb.1987(14 months)

Total M/M	Japan	Field
90.40	53.34	37.06

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	247,477 (¥'000)
Contracted	242,970

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Rangoon - Mandalay, Pegu-Martaban, Rangoon - Prome, Myohaung Junction - Minati

2.PROJECT COST
(US$1,000)
(US$1=199Yen)

	Total Cost	Local Cost	Foreign Cost
1)	163,000	57,000	106,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
The master plan study on 4 lines.
The feasibility study on Rangoon - Mandalay line, with following components:
- Track improvement (800 km)
- Signal improvement (4 stations, signal replacement, 20 crossings)
- Telecommunication improvement (transmission 620 km, exchange and relay equipment)
- Other related facilities

Imp. Period: .1986-.2001

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	10.70	FIRR1)	2.80
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Benefits:
1) Saving of the investment in rolling stock
2) Time saving of passengers
3) Saving of railway operating costs
4) Saving of road investment

Impacts:
1) Restoration of the railway's role as a mass transport mode
2) Reduction of railway accidents
3) Saving of fuel costs
4) Reduction of manpower requirements

5.TECHNICAL TRANSFER
Participation of a counterpart in JICA training program

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
After the completion of the study, the Myanmar Government considered the possiblity of applying for yen credit, but the attempt was suspended because of the accumulated debt problems and political destabilization.

(FY1991 Overseas Survey)
No progress has been made since the coup d'etat in 1988. Priority of the proposed project remains high. However, the road conditions have been improved considerably since 1988, and it will be necessary to revise the framework of assumptions used in the JICA study, as well as updating the relevant data.
As a result of administrative reorganization, the Ministry of Railways was newly created in January 1992, separating from the Ministry of Transport and Communications. The Myanmar Government retains strong commitment to railway improvement, as evidenced in their continued imports of rolling stock and rails under the extreme foreign exchange constraints. Upon resumption of external assistance, the proposed project (especially the section between Yanglo and Mandalay) would be given high priority for funding application.

2.MAJOR REASONS FOR PRESENT STATUS
1) Political destabilization;
2) designation as an LLDC country;
3) under the military regime, all projects except the on-going projects are suspended

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 幹線鉄道整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO NPL/S 301/83

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Nepal

2.NAME OF STUDY: Rural Telecommunications Network Projct

3.SECTOR: Communications & Broadcasting/Telecommunication

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Nepal Telecommunicating Corporation (NTC)

7.OBJECTIVES OF STUDY:
To determine the technical and economic feasibilities of the project to improve the Rural Telecouunnunications

8.DATE OF S/W: Sep.1982

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

10.STUDY TEAM

No.of Members 13

Period Nov.1982-Oct.1983(12 months)

Total M/M	Japan	Field
24.20	11.50	12.70

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	81,960 (¥'000)
Contracted	48,007

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Whole country

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

	Total Cost	Local Cost	Foreign Cost
1)	34,963		34,963
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Contents
- Construction of the National Radio Telecommunications Network with 53 Radio Stations

Imp. Period: Jan.1986-Mar.1989

4.FEASIBILITY AND ITS ASSUMPTIONS: Feasibility: Yes

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

Conditions and Development Impacts:
The National Radio Telecommunications Network is to be constructed under the 6th national development plan (1980-85), in order to increase productivity and employment opportunity and to improve the economic infrastructure.
The project may have impacts on not only communications but also on education, medical treatment, agriculture, and tourism.

5.TECHNICAL TRANSFER
OJT was conducted for the counterpart staff.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
The project was implemente with Japanese grant aid.

Jun.1984 E/N of grant aid signed (154 million yen)
Mar.1985 D/D completed
Oct.1985 E/N of grant aid signed (4,376 million yen)

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
- large impacts
- high priority

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 地方電気通信網整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

ASO NPL/S 101/84

Compiled Mar.1988
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Kosi River Water Resources Development

3.SECTOR
Social Infrastructures/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Department of Electricity
Ministry of Water Resources

7.OBJECTIVES OF STUDY
Hydropower;irrigation

8.DATE OF S/W Feb.1983

9.CONSULTANT(S)
Chuo Kaihatsu Cor.

Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 22
Period Jun.1983-Mar.1985(21 months)

Total M/M	Japan	Field
57.50	37.50	20.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	491,986 (¥'000)
Contracted	181,019

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
42,000 sq.km in eastern Nepal

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

1.Arun 3 hydropower development project
This porject aims to develop 200MW of the most cost-effective hydropower potential out of the total estimated potentials (at 53 sites) of 11,000MW in the hydropower development plan for the Kosi river catchment.

2.Sun Kosi diversion project
72 cubic meters/second will be diverted from the Sun Kosi (catchment area of 30,000 sq.km) by a tunnel of 16km to the Terai Plains and utilized to irriqate 175,000ha of farm land. The project will increase the aqricultural production from the present 350,000 tons to 1,000,000 tons/year.

4.CONDITIONS AND DEVELOPMENT IMPACTS

Development impacts
(1) supply of abundant, low cost power
(2) large scale irriqated aqricultural development
(3) reqional development throuqh access road construction

5.TECHNICAL TRANSFER

1) Training of 4 counterparts personnel on power development planning; 2) Supply and training in use of drilling equipment

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

This is the first integrated development study in the region. In particular, the Arun 3 project has been the focus of attention owing to the large potential for cheap power supply.

At the request of the Nepalese government, an F/S for the Arun 3 project(Arun 3 Hydropower Development Project) was carried out by JICA.

D/D of the Arun 3 was undertaken jointly by West Germany(Lahmeyer/ Energy Engineering) and Japan (EPDC/ CKC) during Oct.1988-Apri.1991

(FY1991 Overseas Survey)
The Nepalese Government has requested external funding from ADB, Germany (Kfw) and Japan (OECF) for the implemntation of the Arun 3 project. Construction is to start in 1992 and to be completed in 2001.

The Nepalese Government has repeatedly requested a JICA F/S on the Sun Kosi Diversion Project, but has been unsuccessful, partly because the expected cost of construction could be as large as US$500 million.

2.MAJOR REASONS FOR PRESENT STATUS

1) The Arun 3 hydropower project is the most economically viable project among projects surveyed in Nepal; 2) Implementation of Arun 3 will promote the development of other hydropower projects; 3) Sun Kosi: Diversion Project is important partly for its impact on food production and partly for environmental conservation in the Himalayas.

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 コシ河流域水資源開発基本計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASO NPL/S 201A/87

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Development Plan of Television Network

3.SECTOR
Communications & Broadcasting/Broadcasting

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Nepal Television Corporation

7.OBJECTIVES OF STUDY
Formulation of a development plan of TV broadcasting network

8.DATE OF S/W Feb.1987

9.CONSULTANT(S)
Integrated Technology Inc.

10.STUDY TEAM

No.of Members 24
Period Jun.1987-Mar.1988(10 months)

Total M/M	Japan	Field
33.68	17.53	16.15

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Cross-cut topographic mapping

12.EXPENDITURE

Total	128,937 (¥'000)
Contracted	99,420

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kathmandu and east and west Terai

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	41,700	5,900	35,800
(US$1=130Yen)	2)			

3.CONTENTS OF MAJOR PROJECT(S)
See next page

4.CONDITIONS AND DEVELOPMENT IMPACTS
The proposed TV network will play an important role in the national development, by improving the level of education and literacy and vocational training.

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

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
Followed by F/S.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 テレビジョン放送網開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASO NPL/S 201B/87

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Nepal

2.NAME OF STUDY: Development Plan of Television Network

3.SECTOR: Communications & Broadcasting/Broadcasting

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY:

7.OBJECTIVES OF STUDY:

8.DATE OF S/W: Feb.1987

9.CONSULTANT(S): Integrated Technology Inc.

10.STUDY TEAM

No.of Members 24

Period Jun.1987-Mar.1988(10 months)

Total M/M	Japan	Field
33.68	17.53	16.15

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	128,937 (¥'000)
Contracted	99,420

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Kathmandu and east and west Terai

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	41,700	5,900	35,800
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

TV Studio (Kathmandu) : 4 studios
Broadcasting stations : 2 stations
Relay stations : 16 stations
Outdoor relay vans : 1 vehicle

Imp. Period: .1989-.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)		FIRR1)	18.60
EIRR2)		FIRR2)	-4.90
EIRR3)		FIRR3)	

Conditions and Development Impacts:

FIRR will be 18.6% if grant aid is used for investment, and -4.9% if a loan is used.

Development impacts:
- Speedy dissemination of information and strengthening of effective communication means
- Improvement of school education
- Improvement of agricultural extension services
- Diffusion of family planning, health care and hygiene
- Integration of different ethnic and cultural communities

5.TECHNICAL TRANSFER:

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

The Government of Nepal (GON) requested a Japanese grant, but was notified by the Japanese Government that the project would not be funded immediately.

The GON then requested a grant aid from France, which subsequently agreed to undertake an F/S on TV broadcasting network. The GON is expecting a Japanese aid on studio equipment.

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

The Nepalese side is very eager to implement the project, but the Japanese grant aid program for Nepal is already fully committed to the other projects for the next three years.

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 テレビジョン放送網開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

ASO NPL/S 302/88

Compiled Mar.1986
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY: Nepal

2.NAME OF STUDY
Sindhuli Road Construction Project

3.SECTOR
Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY
Dept. of Road, Ministry of Works and Transport

7.OBJECTIVES OF STUDY
Road improvement and construction

8.DATE OF S/W: Jul.1986

9.CONSULTANT(S)
Nihon Koei Co., Ltd.
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 21

Period Nov.1986-Jun.1988(20 months)

Total M/M	Japan	Field
98.80	40.20	58.60

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Traffic survey
Geological survey

12.EXPENDITURE

Total	406,657 (¥'000)
Contracted	414,063

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Between Bardibas and Dhulikhel in the Central Development Region

2.PROJECT COST

(US$1,000)
(US$1=130Yen=21.0Rps.)

	Total Cost	Local Cost	Foreign Cost
1)	207,000	29,000	178,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
- Construction of trunk road (155 km, two-lane, paved) connecting the East-West Highway in the Terai Plains and the Kathmandu region
- The project is divided into two sections
  Section I: From Bardibas of the East-West Highway Bazar to Shindhuli
  Section II: Shindhuli Bazar - Khurkot - Nepalthok - Dhulikeli of Kodari Road
- A operation & maintenance training center

Imp. Period: .1989-.2000

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	9.60	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
- The project will contribute to the improvement of marketing agricultural products, especially increased producer price in Terai and decreased consumer price in Kathmandu concerning rice.
- The project will provide the link from Kathmandu to Calcutta, promoting trade, and reduce the travel time.
- The project will promote the development efforts along the way (e.g. construction of dams)
- The indirect effects of the project are estimated to be US$78 million.

5.TECHNICAL TRANSFER
OJT on traffic survey and analysis, road engineering technology, etc.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
The Government of Nepal assigns top priority to this project among various trunk road projects, and is requesting Japanese grant aid.

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
New government of Nepal has given high priorities to the development of road transport and drinking water facilities.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 シンズリ道路建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

ASO NPL/A 101/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Integrated Rural Development Project in the Lumbini Zone

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Development of Planning Local Development

7.OBJECTIVES OF STUDY
Formulation of the Master Plan for the Integrated Rural Development Project in the Lumbini Zone

8.DATE OF S/W Jun.1988

9.CONSULTANT(S)
Nihon Koei Co., Ltd.
Hokkaido Engineering Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Sep.1988-Nov.1989(15 months)

Total M/M	Japan	Field
52.91	21.32	31.59

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Rural socio-economy.
Groundwater survey.

12.EXPENDITURE

Total	193,376 (¥'000)
Contracted	180,337

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Gulmi, Arghakhanchi, Kapilvatsu and Marchawar area of Rupandehi disctict

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	136,000		
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The master paln was formulated for 15 years from 1990 to 2005, and 33 projects of central government level and 137 projects of local government level were included in the plan. The proposed high priority development projects are as follows:

Irrigation rehabilitaion project	Rajikdwa	2,400 ha
Rural road rehabilitation project	Tansen to Tanqas	75 km
	East-west highway to Sandikharka	69 km
Rural water supply	Banganga and Gajeda	for 11,900 population
	Material supply program	for two districts of hill area
Agriculture production promotion	Improvement of agri.-extension services	3 distrit offices
	Ilaka service centre	22 Ilakas
	Veterinary service centre	1-Reqional centre 3-District centre 27-Ilaka centre
Improvement of plan implementation	Institutional improvement	Central and

4.CONDITIONS AND DEVELOPMENT IMPACTS

M/P is formulated for 15 years from 1990 to 2005 in three stages. Basic concepts of M/P are Improvement of Agricultural Production, Improvement of Living Standard, Improvement of Infrastructures and Strengthening of Rural Development Support System and Institutions.
The development plan is formulated to follow the stagewise development process based on not only yearly order but to fulfil the following targets at all administration levels:
1) Consolidation of development infrastructure provision and training,
2) Intitiation of the induced development-gradual shiffs to autonomous development, and
3) Realization of self-sustaining development.

Project impacts;
Farmers income will be increased twice of the present level by the projects, Rural road development will improve not only marketing of agricutural inputs and out puts but also to improve communication in culture and information, and to contribute to improve social welfare. Living standard, especially in hygienic condition will be improved by supplying clean domestic water. Strengthening plan implementation capacity of local government will realize self-sustaining continuous development.

5.TECHNICAL TRANSFER
Technology transfer to counterpart inthe course of the study.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)

F/S on Rajikduma Project is being conducted under Japanese technical assistace (1992.6-1993.9).

(FY1991 Overseas Survey)

The Government of Nepal plans to incorporate the proposals of the present study into the forthcoming 8th five-year plan, and hopes for a small team of JICA experts who will advise on the annual planning of the proposals. The Government plans to request the grant commitment for the project implementation.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ルンビニ県農村総合開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASO NPL/S 202A/89

Compiled Mar.1991
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Development of Civil Aviation

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Department of Civil Aviation, Ministry of Tourism

7.OBJECTIVES OF STUDY
Over-all development of air transport system in Nepal

8.DATE OF S/W Feb.1988

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 8

Period Aug.1988-Sep.1989(14 months)

Total M/M	Japan	Field
50.14	31.49	18.65

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic Survey and Soil Investigation

12.EXPENDITURE

Total	167,332 (¥'000)
Contracted	155,142

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
The whole area of Nepal

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	888,000	192,000	696,000
2)			

3.CONTENTS OF MAJOR PROJECT(S)

1.Kathmandu International Airport Development Project:
- Construction of Domestic Passenger Terminal Building (3,200 sq.m)
- Expansion of Apron (B747 class x 4 spots, B757 class x 5 spots, etc.)
- Installation of Air Navigation System (MLS, etc)
- Construction of Cargo Terminal Building (27,000 sq.m)
- Construction of Maintenance Hangar (B767 calss)

2.New Pokhara Airport Development Project:
- Runway 1,900m, Apron (B757 class x 1 spot, HS748 class x 1 spot)
- Terminal Building (1,000 sq.m), Air Navigation System (VOR/DME, etc.)

3. Runway extension at Jomson and Simikot Airports
- Runway pavement and Apron expansion at Lukla Airport
- Runway relocation at Syangboche Airport

4.CONDITIONS AND DEVELOPMENT IMPACTS

Conditions:

	Future Traffic Demand			
	Annual Int'l passenger (1000)	Domestic	Annual Int'l cargo(ton)	Domestic
Kathmandu				
2000	1,234	333	69,000	2,400
2010	1,946	444	138,000	2,900
New Pokhara				
2000	-	80	-	330
2010	-	108	-	440

Development impacts:
1. Improvement of the function and capacity of the existing airport facilities
2. Improvement of safety and punctuality of aircraft operations
3. Contribution to the public welfare in remote districts
4. Promotion of the tourism sector

Conditions:
Future Treffic Demand

		Annual Int'l	Passenger(1000) Dom	Annual Int'l	Cargo(ton) Dom
Kathmandu	2000	1,234	333	69,000	2,400
	2010	1,946	444	138,000	2,900
New Pokhava	2000	-	80	-	330
	2010	-	108	-	440

5.TECHNICAL TRANSFER
Counterpart training in Oct. and Nov. 1988 which consists of lectures on airport plannings, discussion on the study, and inspection of the airport in Japan

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
Followed by F/S.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 国内航空網整備計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

ASO NPL/S 202B/89

Compiled Mar.1991
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Development of Civil Aviation

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Department of Civil Aviation, Ministry of Tourism

7.OBJECTIVES OF STUDY
Examination of the feasibility on the priority plans.

8.DATE OF S/W Feb.1988

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 8

Period Aug.1988-Sep.1989(14 months)

Total M/M	Japan	Field
50.14	31.49	18.65

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	167,332 (¥'000)
Contracted	155,142

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kathmandu, Pokhara, Jomsom, Simikot, Lukla, and Syangboche airports

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	246,300	55,600	190,700
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. Kathmandu International Airport Project:
   a. Total floor area 3,200 sq.m, One and half level concept
      Annual passenger handling capacity 330 thousand
   b. DC10 class x 2 spots, B767 class x 1 spot, and B757 calss x 5 spots for international flight
      HS748 class x 2 spots and DHC6 class x 1 spot
   c. Installation of LLZ/DME, renewal of DVOR/DME, Renewal of Aeronautical ground lights.
2. New Pokhara Airport
   Runway length 1,900m Apron(HS748 x 2 spots and DHC6 x 1 spot),
   Terminal building 800sq.m, Air navigation system VOR/DME,NDB etc.
3. Runway extension at Jomson and Simikot Airports
   Runway pavement and apron expansion at Lukla Airport, and Runway relocation at Syangboche Airport.

Imp. Period: .1989-.1994 .1990-.1994 .1990-.1993

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	19.70	FIRR1)	3.00
EIRR2)	2.10	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions: Financial assistance from foreign country;
Land acquisition for New Pokhara Airport

Development impacts:
- Improvement of the functions and capacity of the existing airport facilities
- Improvement of safety and punctuality of aircraft operations
- Contribution to the public welfare in remote areas
- Promotion tourism

Conditions for EIRR calculation:
Evaluation period: 25 years
Life time of investment: 40 years
Standard conversion factor: 0.88
Exchange rate: US$1.00= NRs25.0

Note: EIRR for Jomsom, Lukla, Simikot and Syangboche are 13.1% , 19.0%, 9.6% and 5.0% respectively.

5.TECHNICAL TRANSFER
Counterpart training from Aug. to Oct.1989 which consists of lectures on airport plannings, discussion on the study, and inspection of the airport in Japan

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

(FY1991 Overseas Survey)
The Government of Nepal requested for Japanese financial assistance on several occasions, but has failed to elicit a favorable response. The Government plans to submit funding proposals to possible donor agencies.

In response to the request of the Nepalese Government, JICA agreed to undertake studies (M/P, F/S and B/D) on the development of the Kathmandu Airport.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 国内航空網整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1992
Revised Mar.1993

ASO NPL/S 102/90

I. OUTLINE OF STUDY

1.COUNTRY Nepal

2.NAME OF STUDY
Groundwater Management Project in the Kathmandu Valley

3.SECTOR
Social Infrastructures/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Nepal Water Supply Corporation (NWSC)

7.OBJECTIVES OF STUDY
To evaluate the groundwater and other water resources for domestic use.
To prepare optimum management of water resources.

8.DATE OF S/W Sep.1988

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

10.STUDY TEAM

No.of Members	13		
Period	Dec.1988-Nov.1990(24 months)		
	Total M/M	Japan	Field
	95.54	44.41	51.13

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Topographic survey; Geological borings; Waterwell drillings; Installation of water level gauges and rainfall gauges

12.EXPENDITURE

Total	359,969 (¥'000)
Contracted	344,544

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Kathmandu valley

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	106,491	29,717	76,774
	2)			

3.CONTENTS OF MAJOR PROJECT(S)
As the result of comparative examination for many available implementation plans, the following implementation order is recommednded:
1. Mahankal Chaur
2. Bansbari/Maharajqunj
3. Shainbhu
4. Balaju
5. Lambagar
6. Sundarijal
7. Manohara
8. Balkhu

4.CONDITIONS AND DEVELOPMENT IMPACTS
Condition:
-The additional water resources from outside of the valley will become available after the year 2001.
-Abstruction of qroundwater will be reduced from the current production amount, and the level of the qroundwater shall not be allowed to be lower than the yield computed by sumulation.
-The available capacity of the surface water will have a high level of monthly variation so the water supply facilities to be established shall be coordinated with the planned monthly water supply.
-The qroundwater shall, without exception, be treated with bio-filters to remove ammonia and iron.
Development Impacts:
-The development plan for water resources to meet future water demand by constructing new facilities to supply safe and potable water.

5.TECHNICAL TRANSFER
Technical transfer was performed by the study team through field works such as field reconnaissance, purification experiment and water quality analysis.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
The basic design study on the construction of two new treatment plants (at Mahankal Chaur and Bansbari) was conducted in 1991 as part of the Japanese grant aid program.

(FY1992 Overseas Suuvey)
Conducted under Groundwater Management Project, the implementation of the Mahankel Chaur Project has already been started under Japanese Government grant aid and an action is being taken to start the Bansbari/Maharajgunj Project in the fiscal year of 1993.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 カトマンズ盆地地下水開発計画

{M/P,M/P+(F/S),Basic Study,Other}