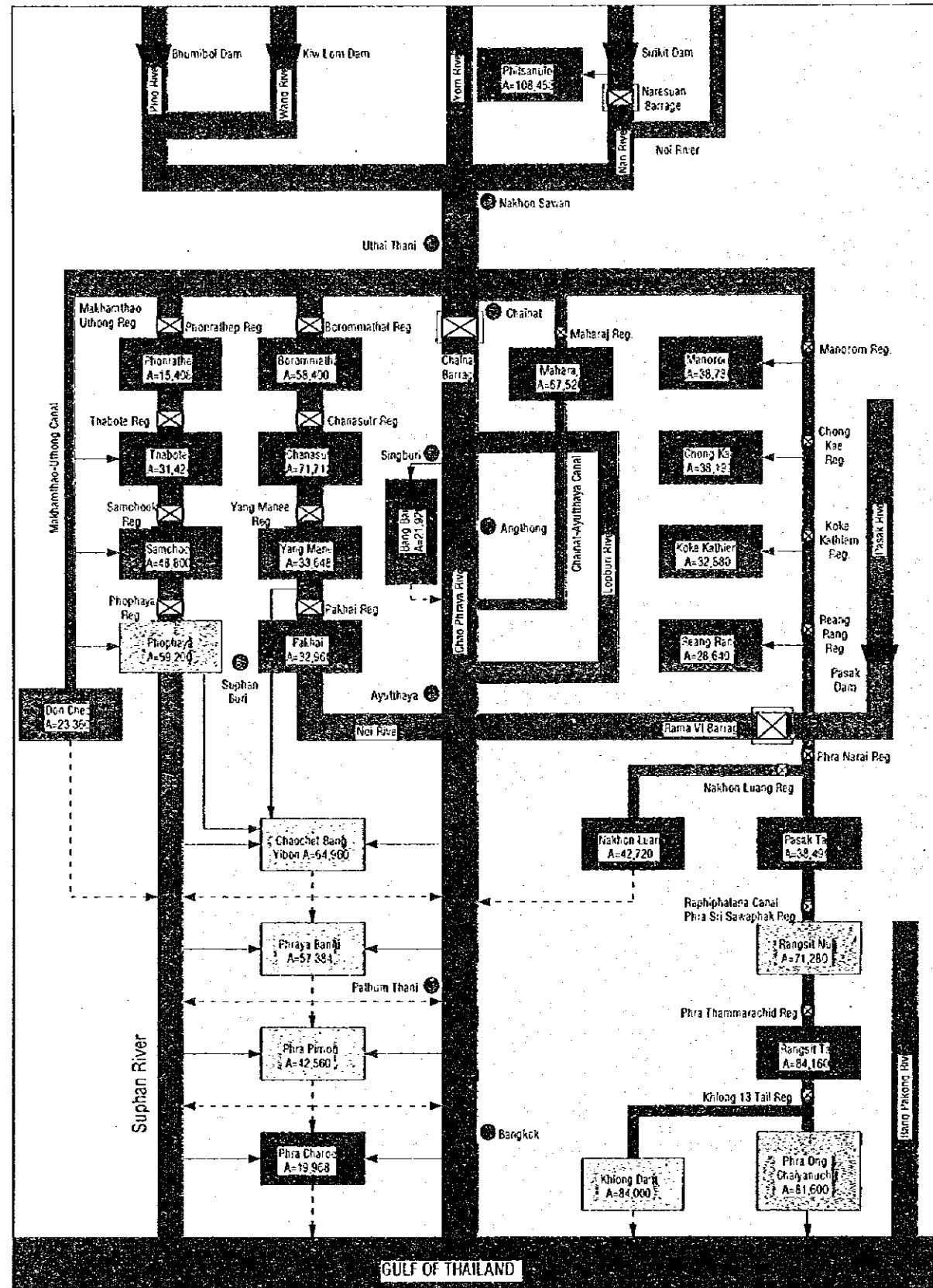


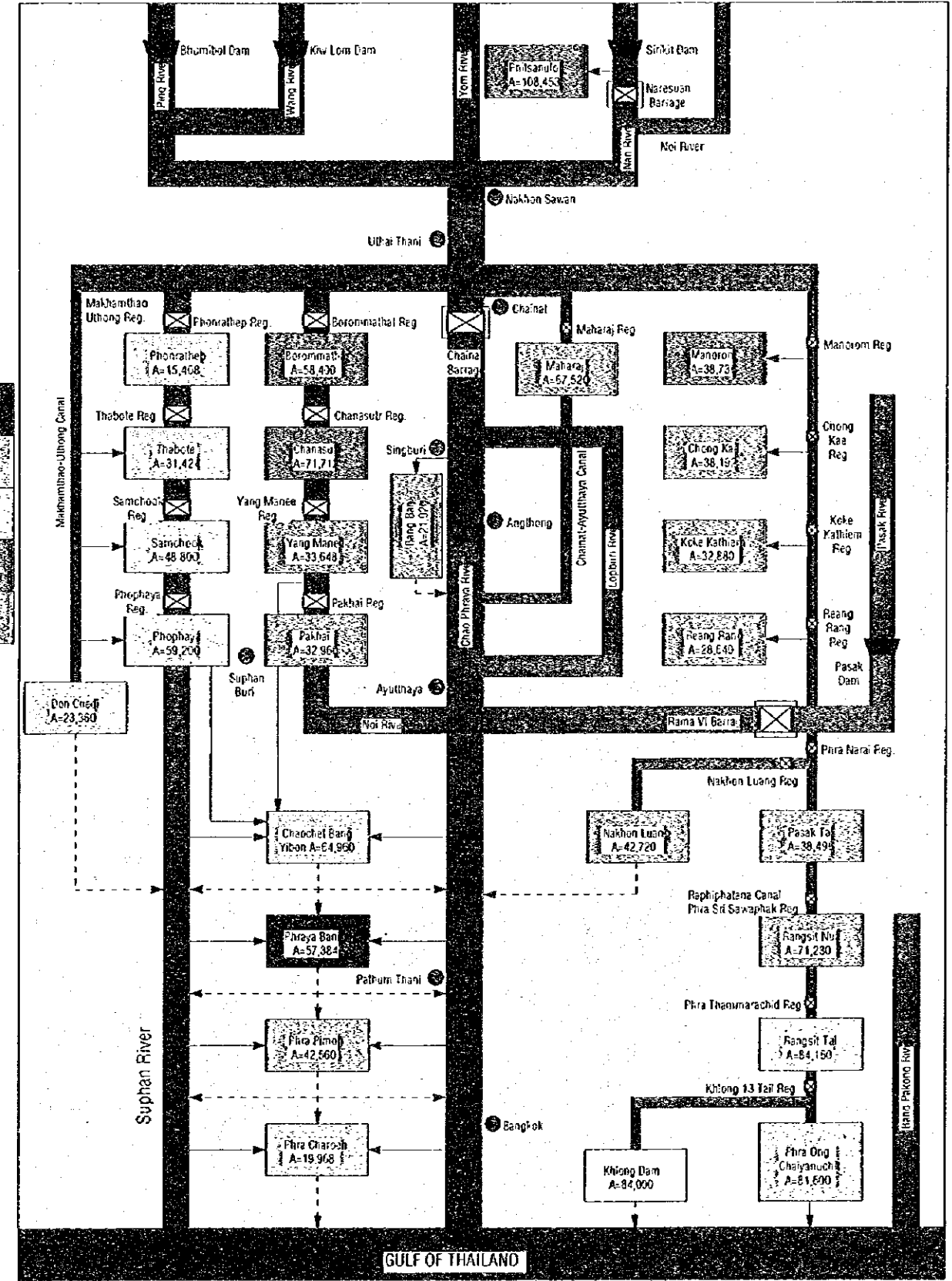
Irrigation Intensity in Wet Season



A = Irrigable Area in ha

Data Source : O/M Division, RID

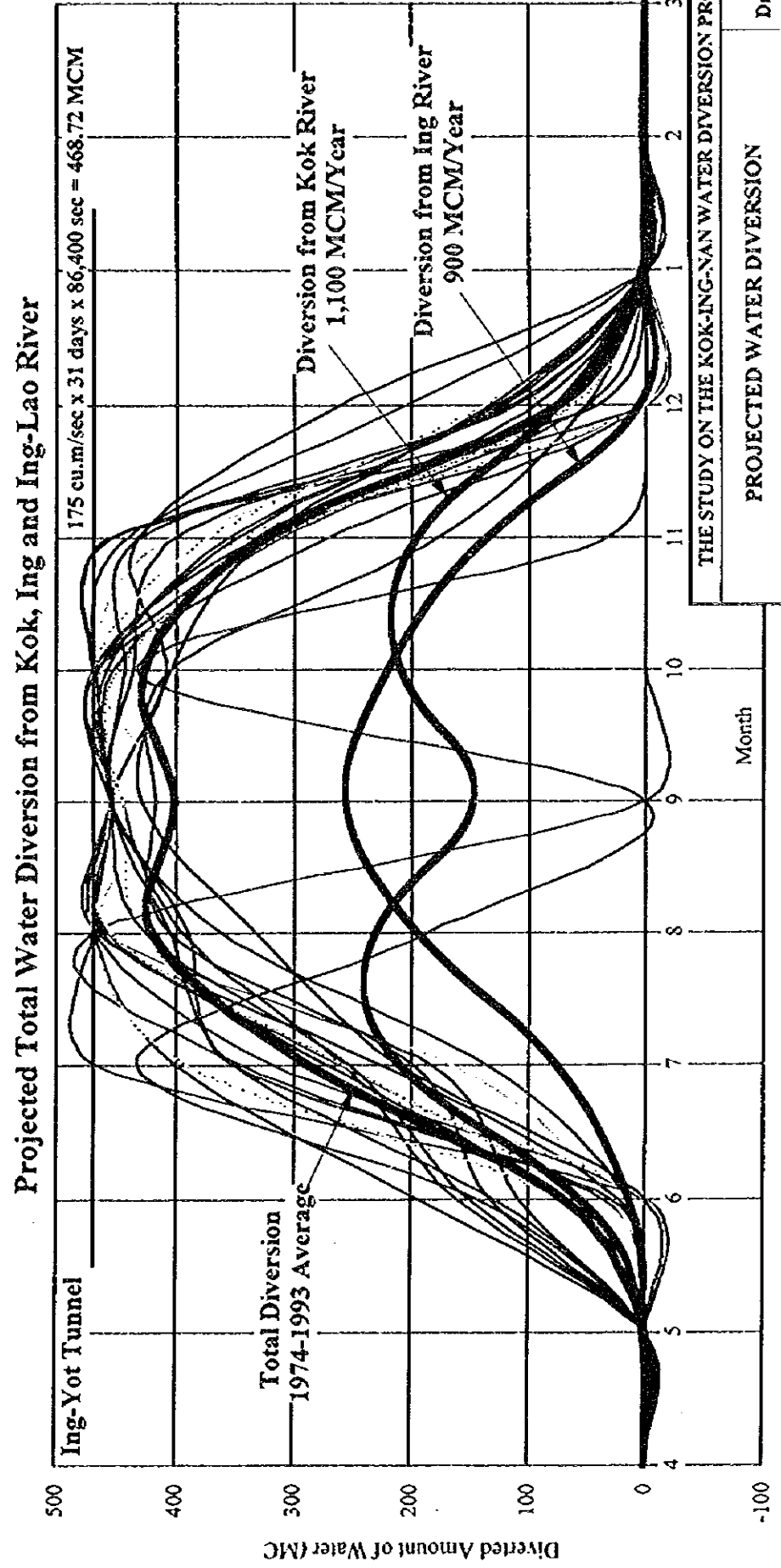
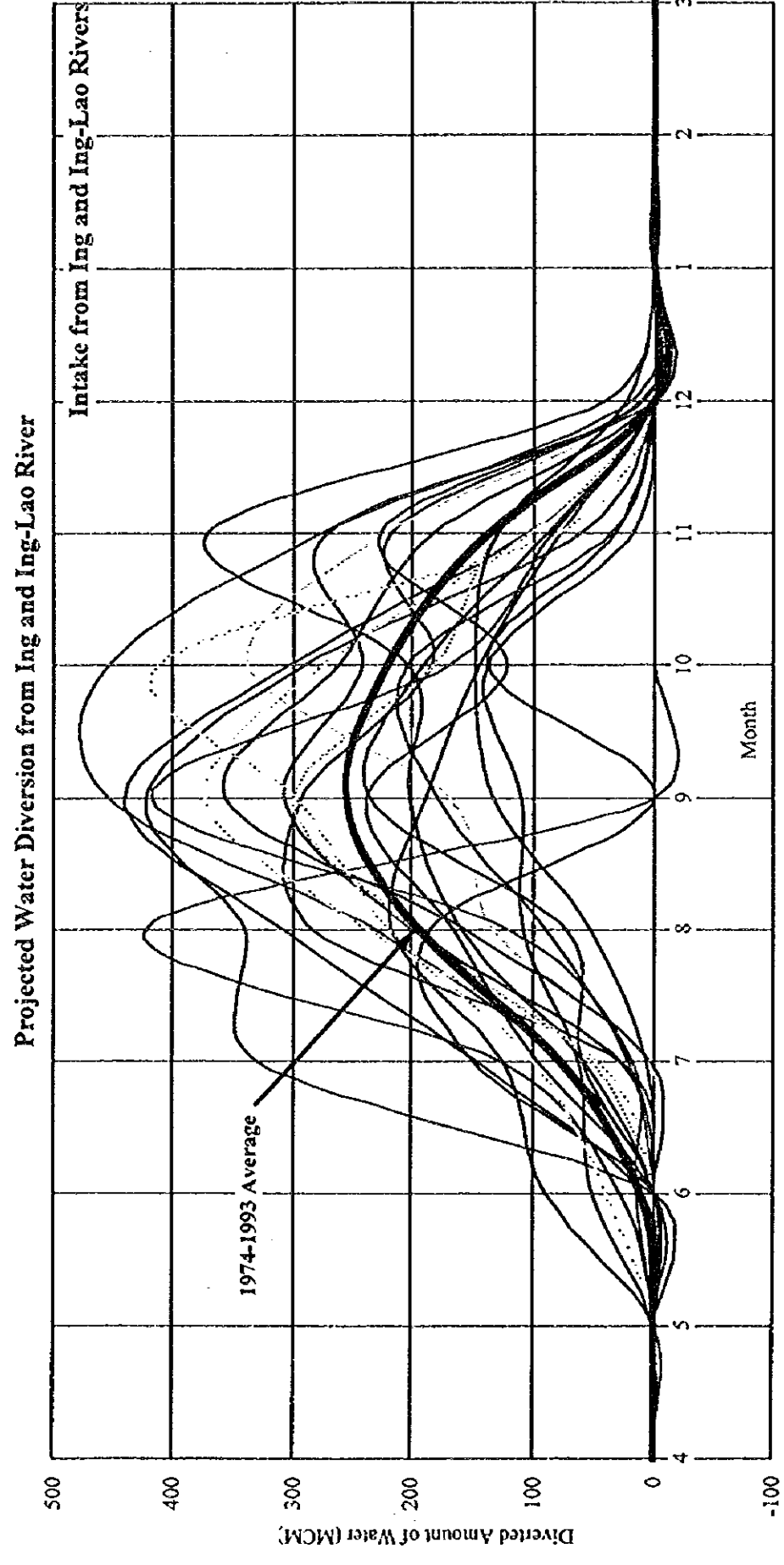
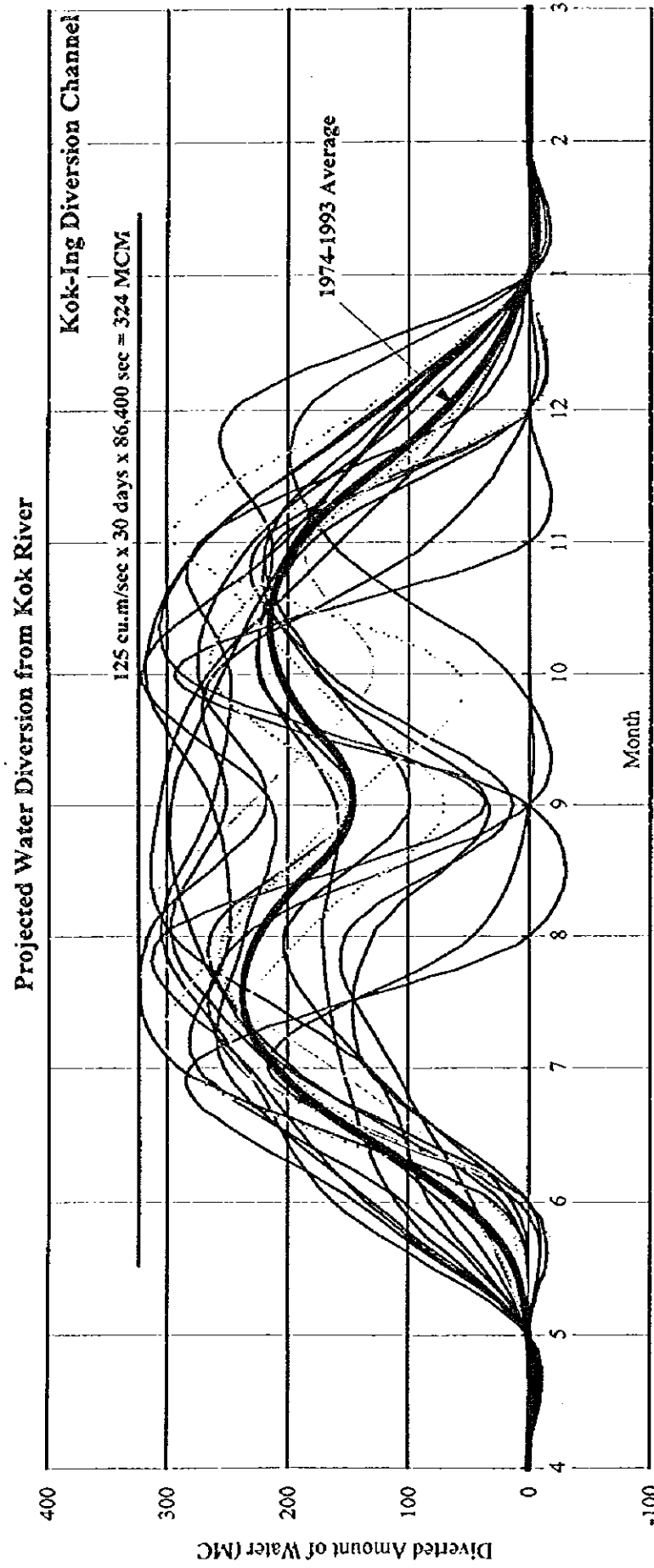
Irrigation Intensity in Dry Season



A = Irrigable Area in ha

Data Source : O/M Division, RID

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
IRRIGATION INTENSITY IN THE CHAO PHRAYA DELTA AREA	
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)	
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	
Map & Drawing No.	
Figure W-27	



THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

PROJECTED WATER DIVERSION

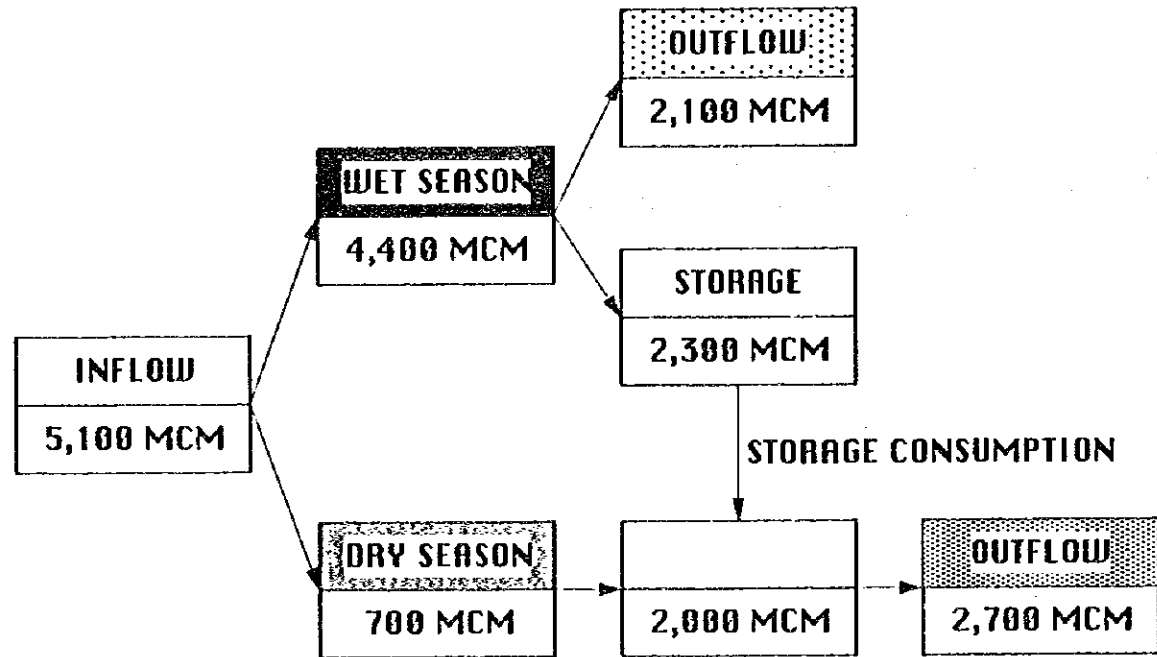
Map & Drawing No.

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.

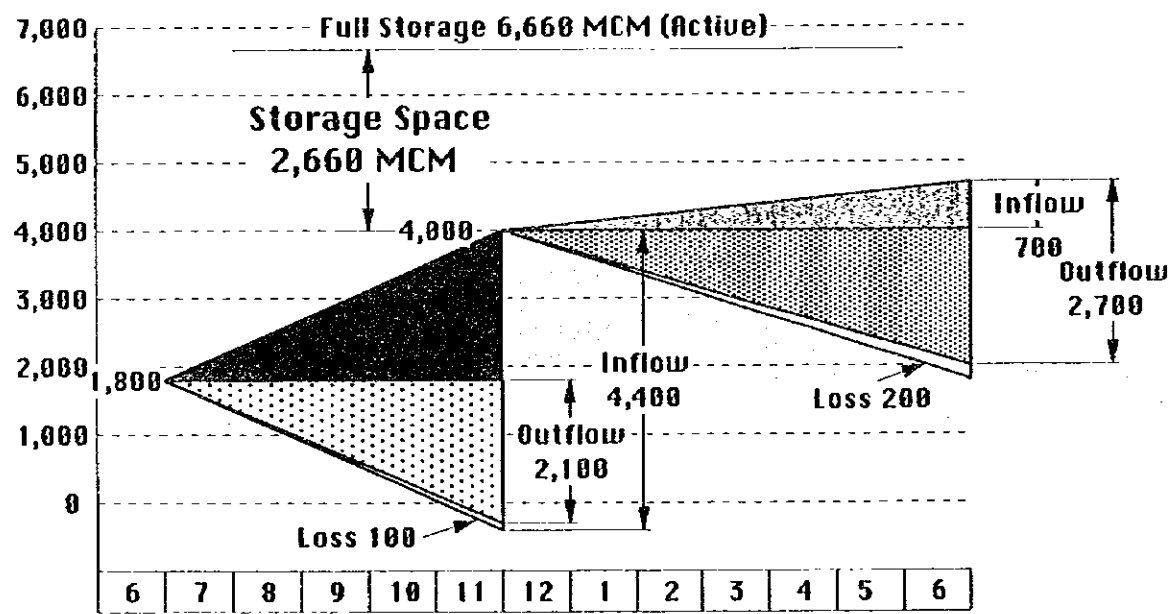
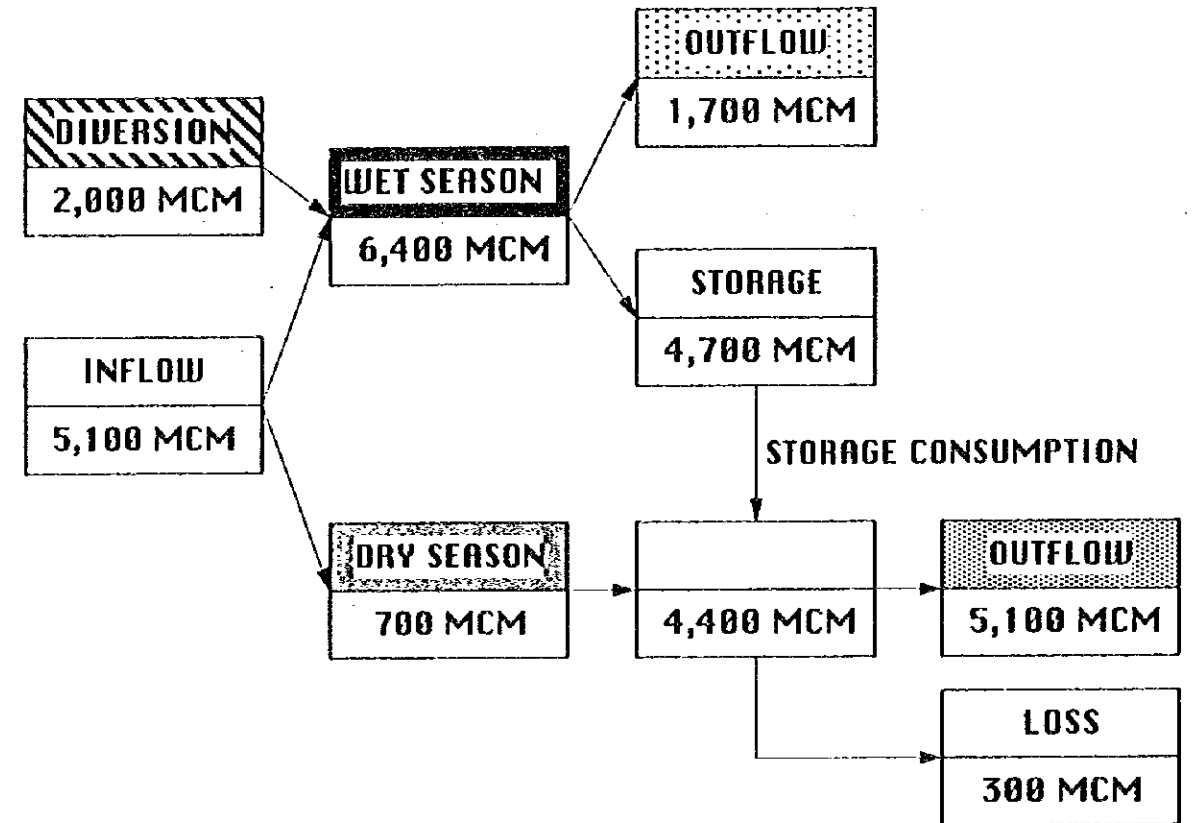
Figure W-28

EXISTING FUNCTION OF SIRIKIT RESERVOIR

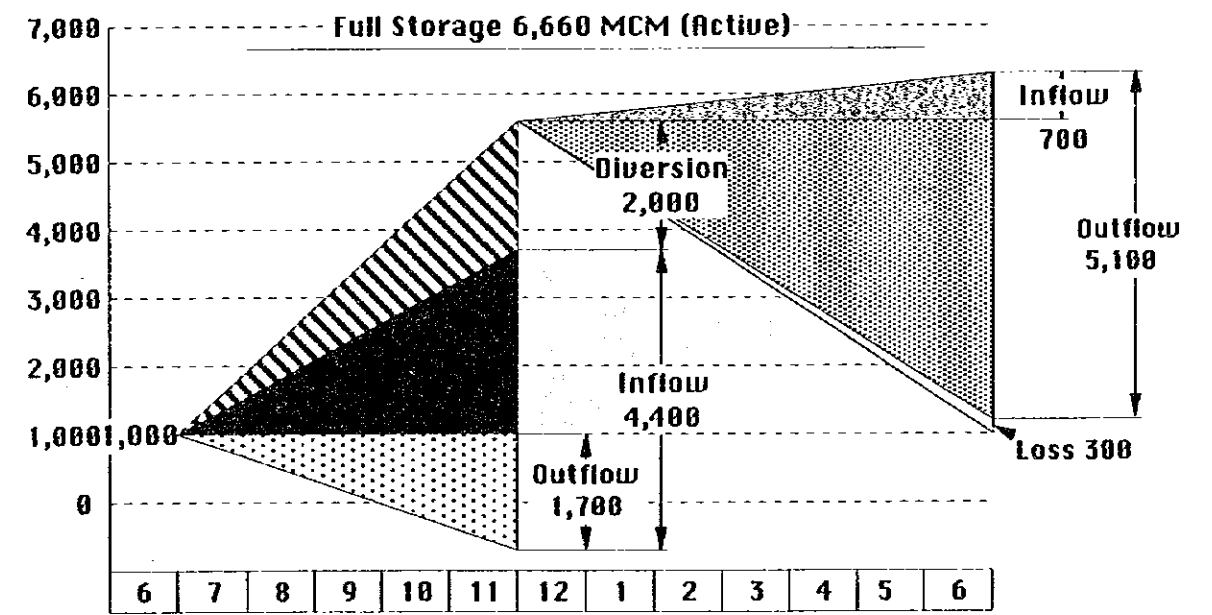


(FIGURES ARE AVERAGE 1974-1993)

PROPOSED FUNCTION OF SIRIKIT RESERVOIR



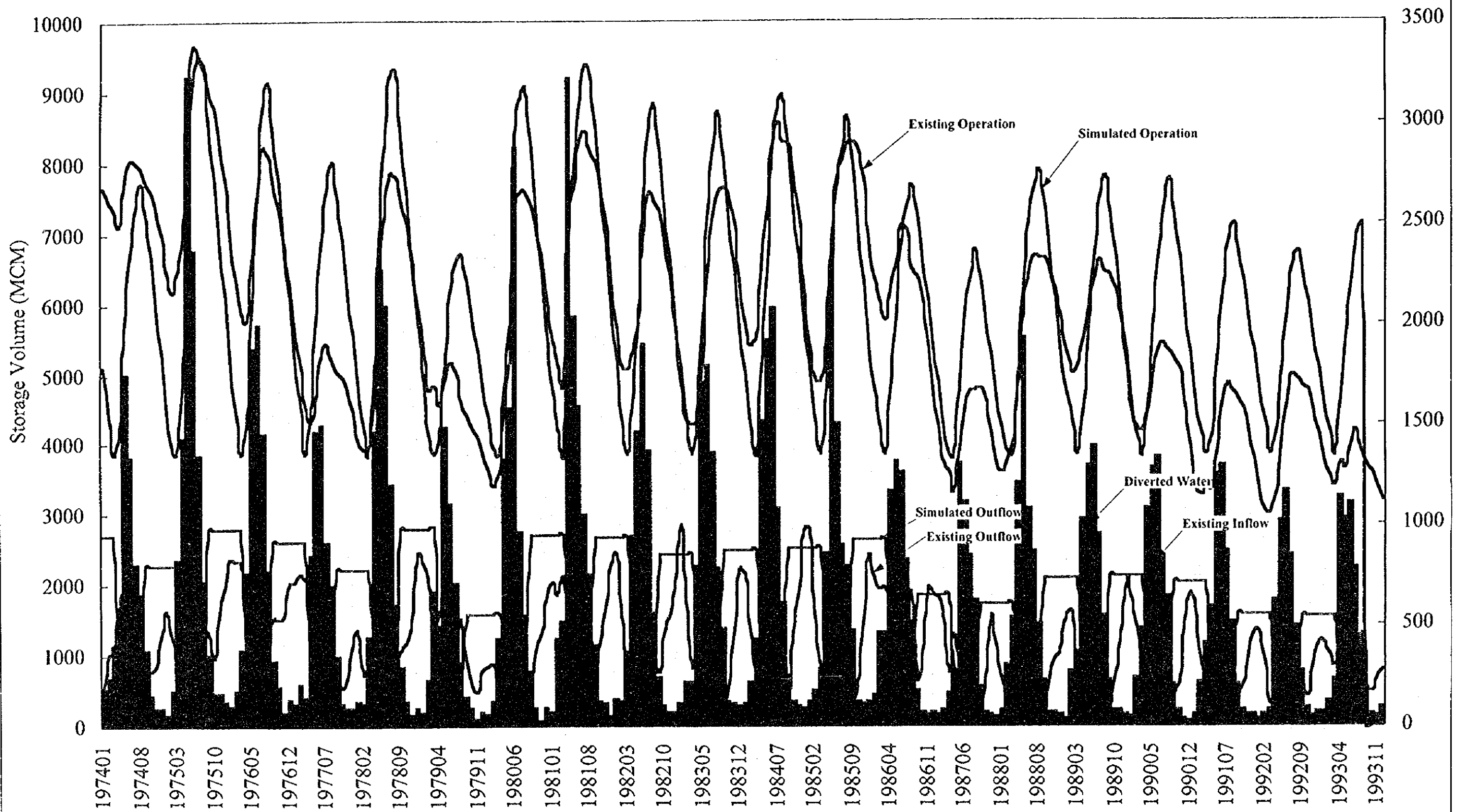
Existing Situation of Sirikit Operation



Existing Situation of Sirikit Operation

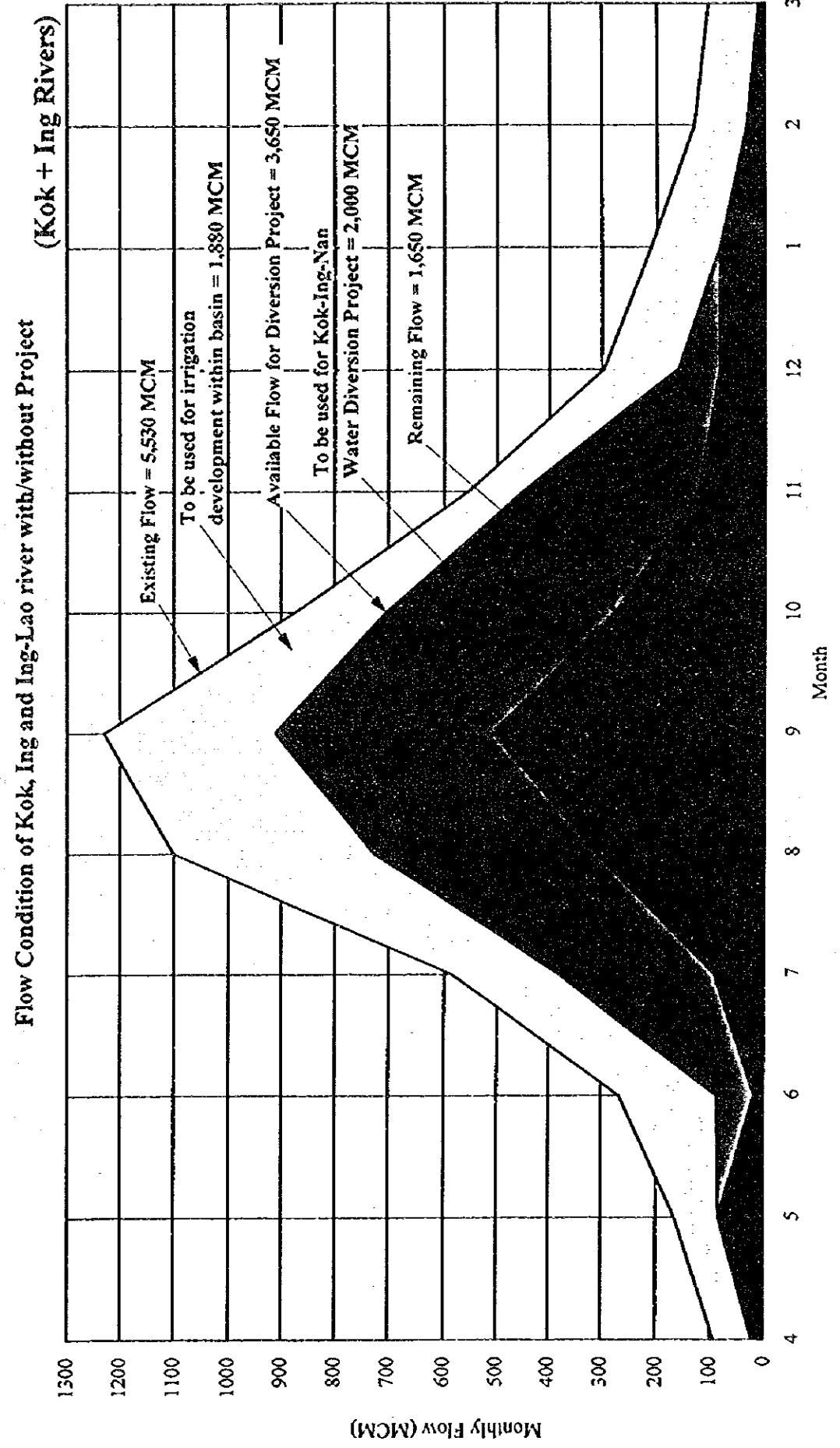
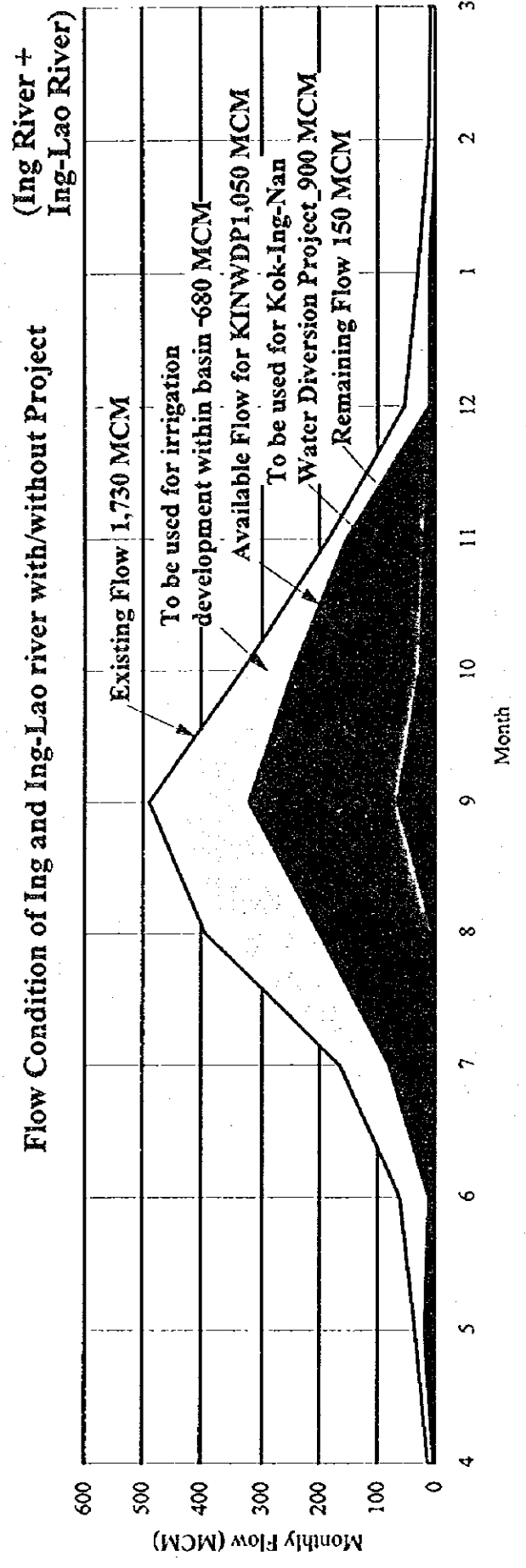
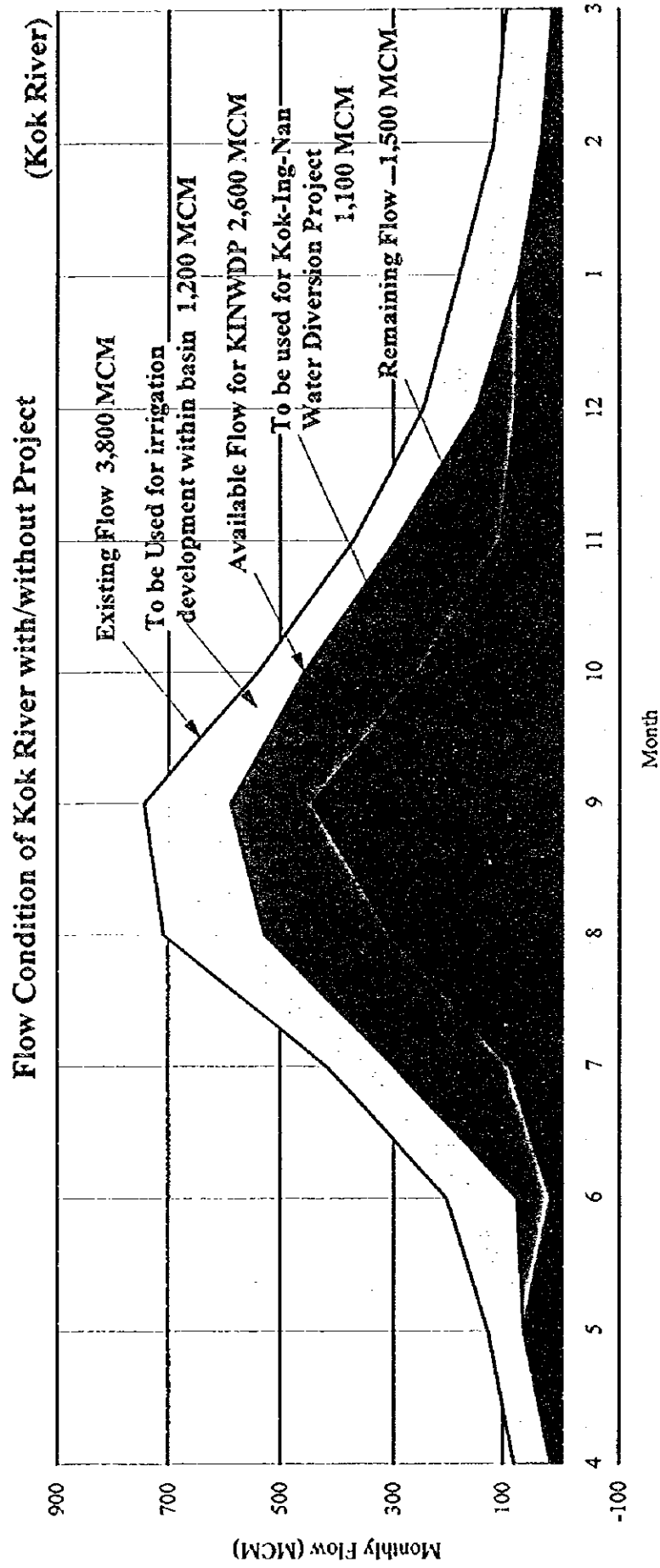
THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
EXISTING AND PROPOSED FUNCTION OF SIRIKIT RESERVOIR	Map & Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	Figure W-29
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	

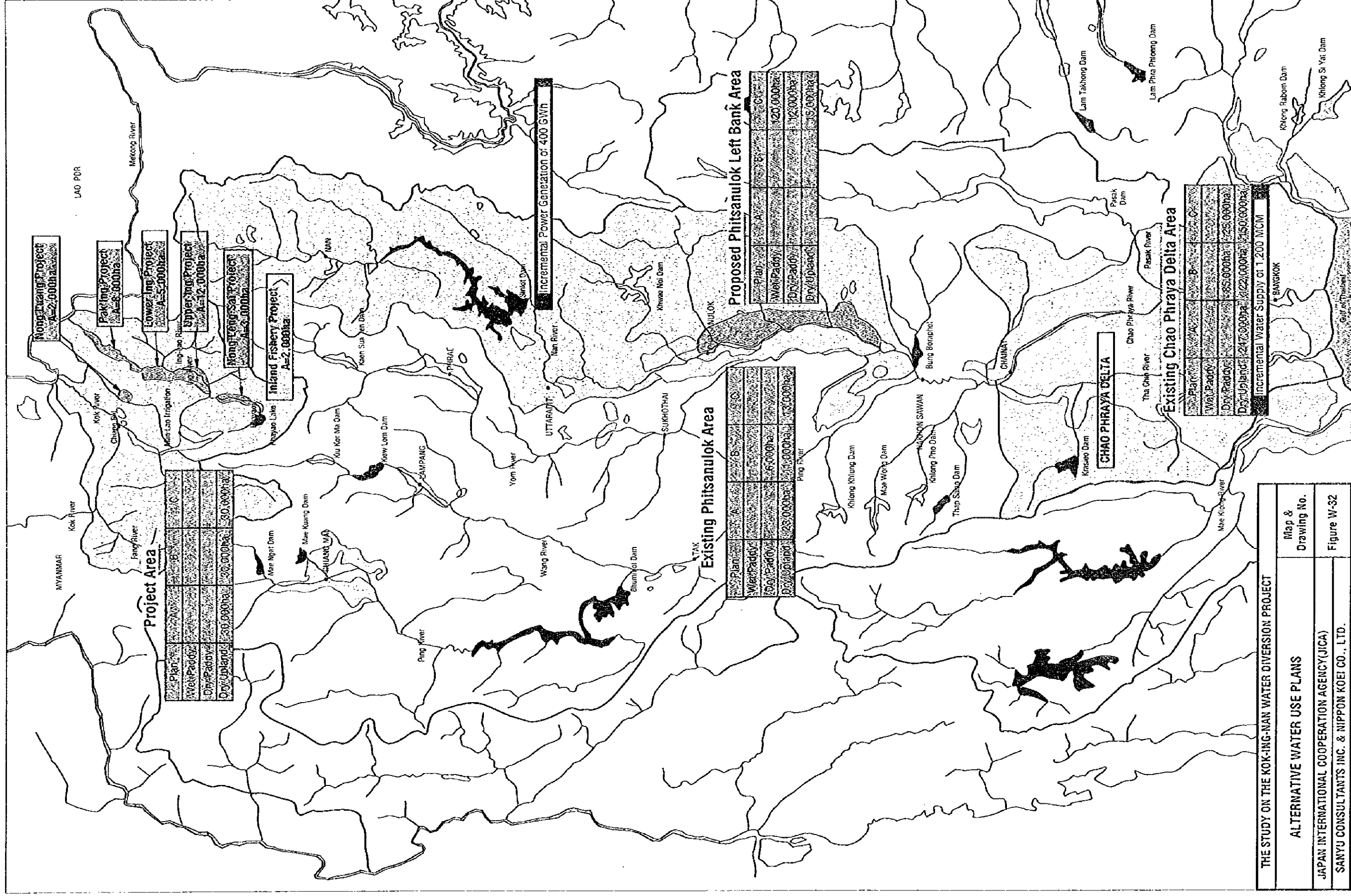
Sirikit Reservoir (Existing/Simulated)



Year/Month

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
EXISTING AND SIMULATED SIRIKIT RESERVOIR OPERATION	
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)	Map & Drawing No.
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	Figure W-30





THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

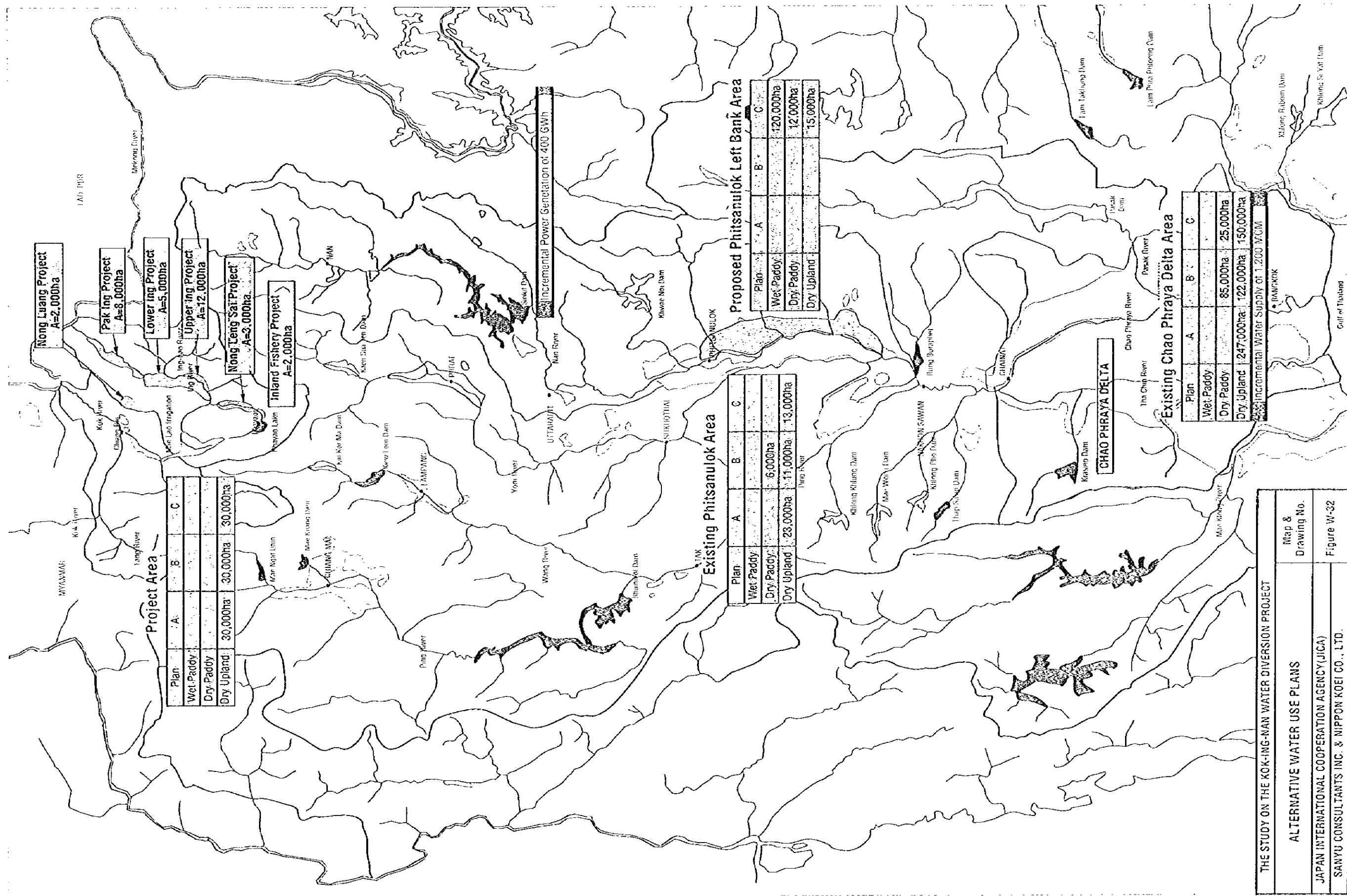
ALTERNATIVE WATER USE PLANS

Map & Drawing No.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.

Figure W-32



Project Area

Plan	A	B	C
Wet Paddy			
Dry Paddy			
Dry Upland	30,000ha	30,000ha	30,000ha

- Nong Luang Project
A=2,000ha
- Pak Ing Project
A=8,000ha
- Lower Ing Project
A=5,000ha
- Upper Ing Project
A=12,000ha
- Nong Leng Sai Project
A=3,000ha
- Inland Fishery Project
A=2,000ha

Incremental Power Generation of 400 GWh

Existing Phitsanulok Area

Plan	A	B	C
Wet Paddy			
Dry Paddy		6,000ha	
Dry Upland	23,000ha	11,000ha	13,000ha

Proposed Phitsanulok Left Bank Area

Plan	A	B	C
Wet Paddy			120,000ha
Dry Paddy			12,000ha
Dry Upland			15,000ha

Existing Chao Phraya Delta Area

Plan	A	B	C
Wet Paddy			
Dry Paddy		85,000ha	25,000ha
Dry Upland	247,000ha	122,000ha	150,000ha

Incremental Water Supply of 1,200 MCM

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

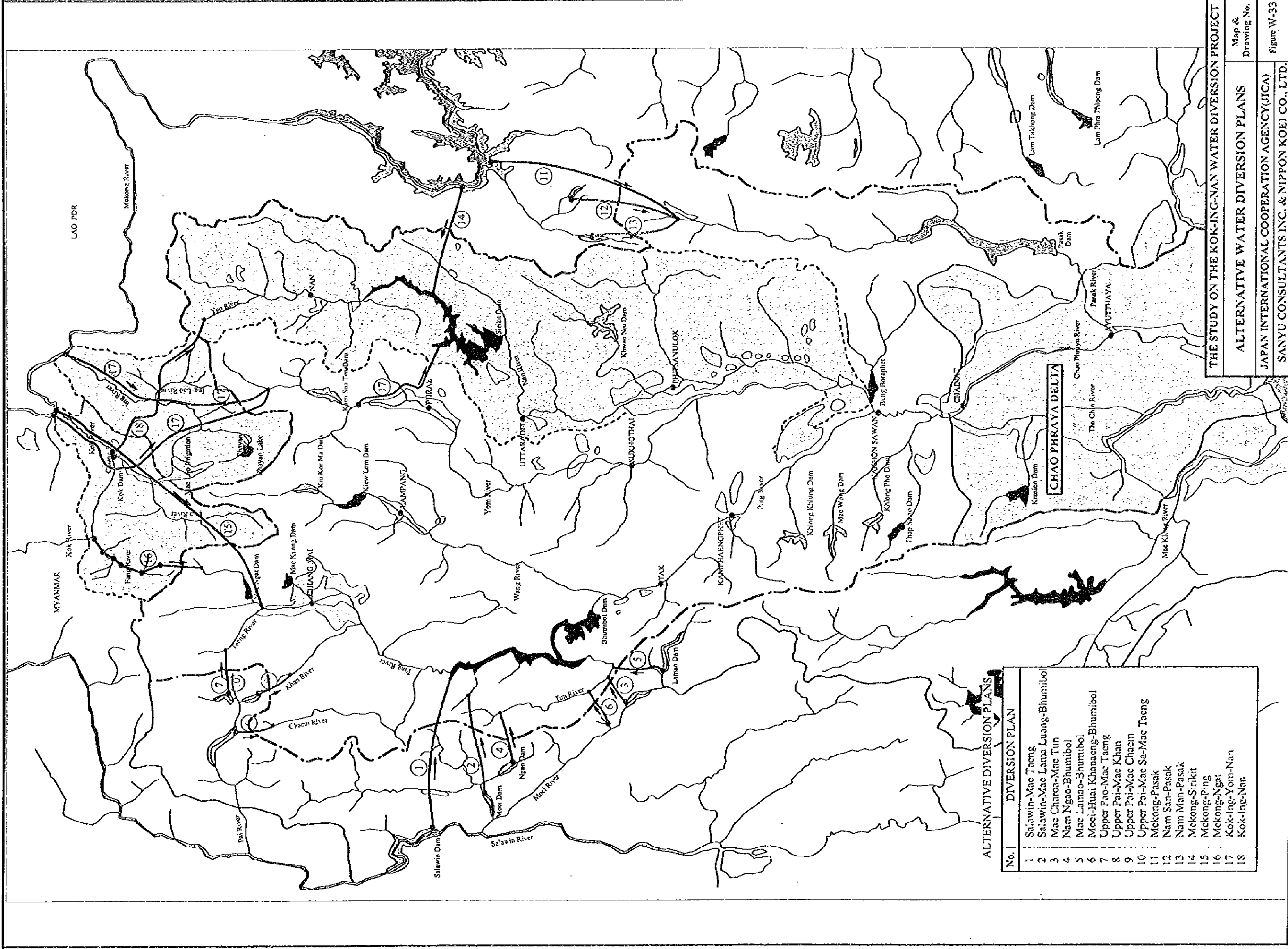
ALTERNATIVE WATER USE PLANS

Map & Drawing No.

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.

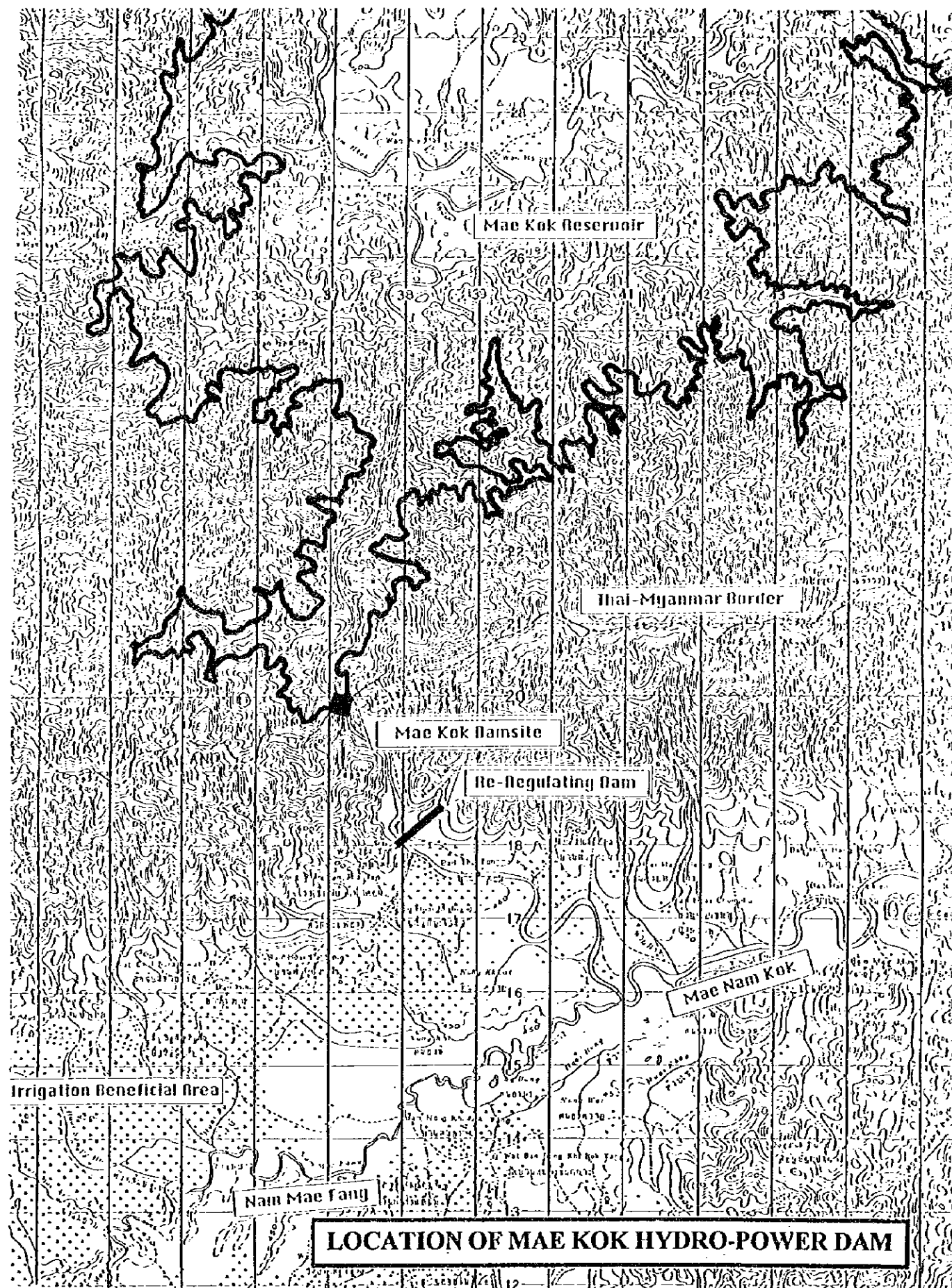
Figure W-32



ALTERNATIVE DIVERSION PLANS

No.	DIVERSION PLAN
1	Salawin-Mae Taeng
2	Salawin-Mae Lama Luang-Bhumibol
3	Mae Charoa-Mae Tun
4	Nam Ngao-Bhumibol
5	Mae Lamao-Bhumibol
6	Moei-Huai Khanaeng-Bhumibol
7	Upper Pao-Mae Taeng
8	Upper Pai-Mae Khan
9	Upper Pai-Mae Chaem
10	Upper Pai-Mae Sa-Mae Taeng
11	Mekong-Pasak
12	Nam San-Pasak
13	Nam Man-Pasak
14	Mekong-Sirikit
15	Mekong-Ping
16	Mekong-Ngat
17	Kok-Ing-Yom-Nan
18	Kok-Ing-Nan

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT
 ALTERNATIVE WATER DIVERSION PLANS
 JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
 SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.
 Map & Drawing No.
 Figure W-33



Outline of Mae Kok Hydro-Power Dam Project

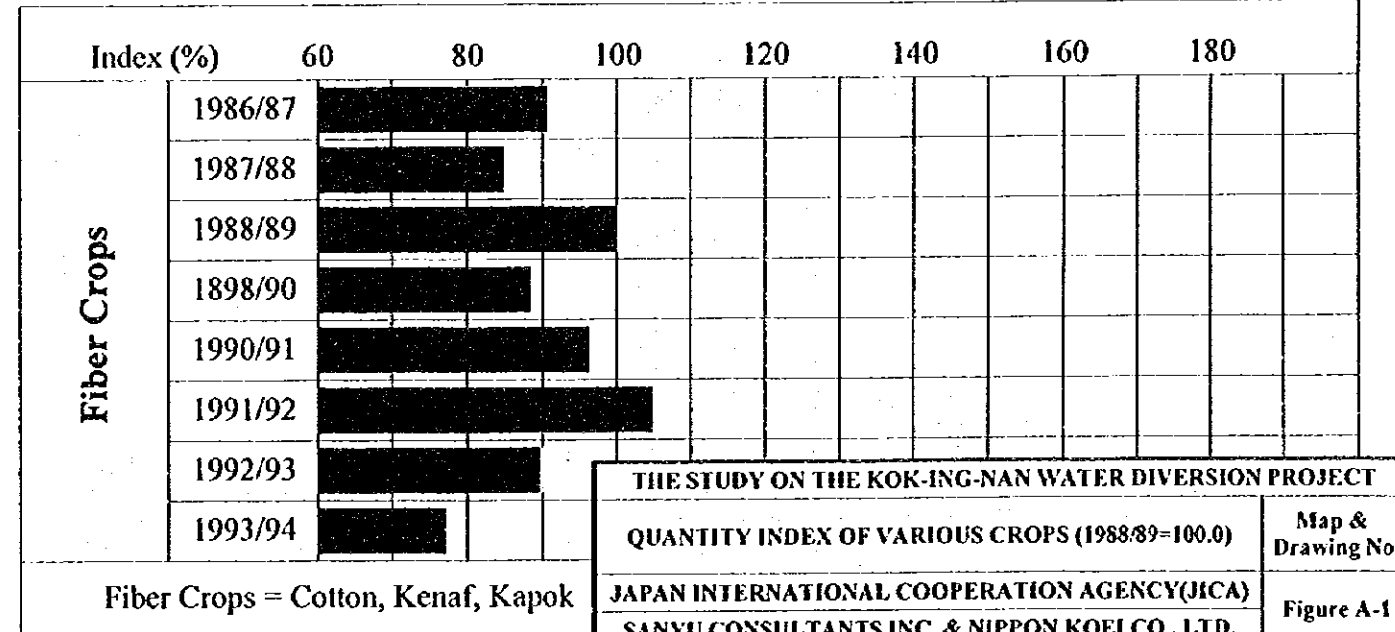
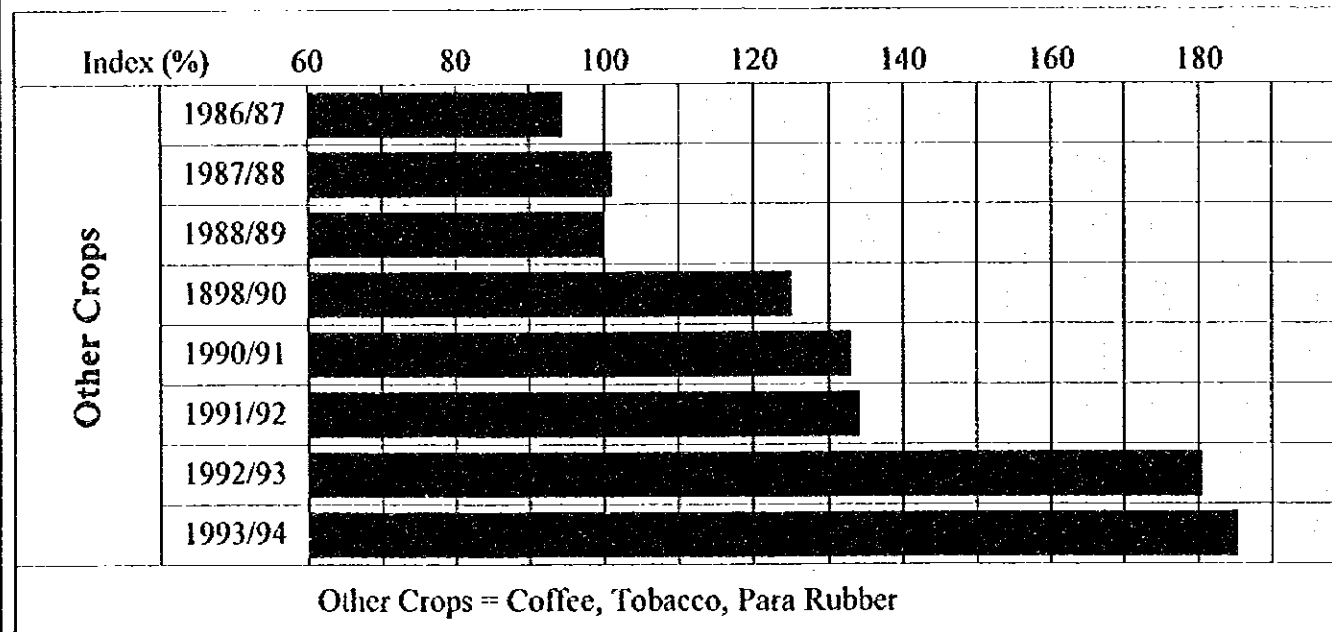
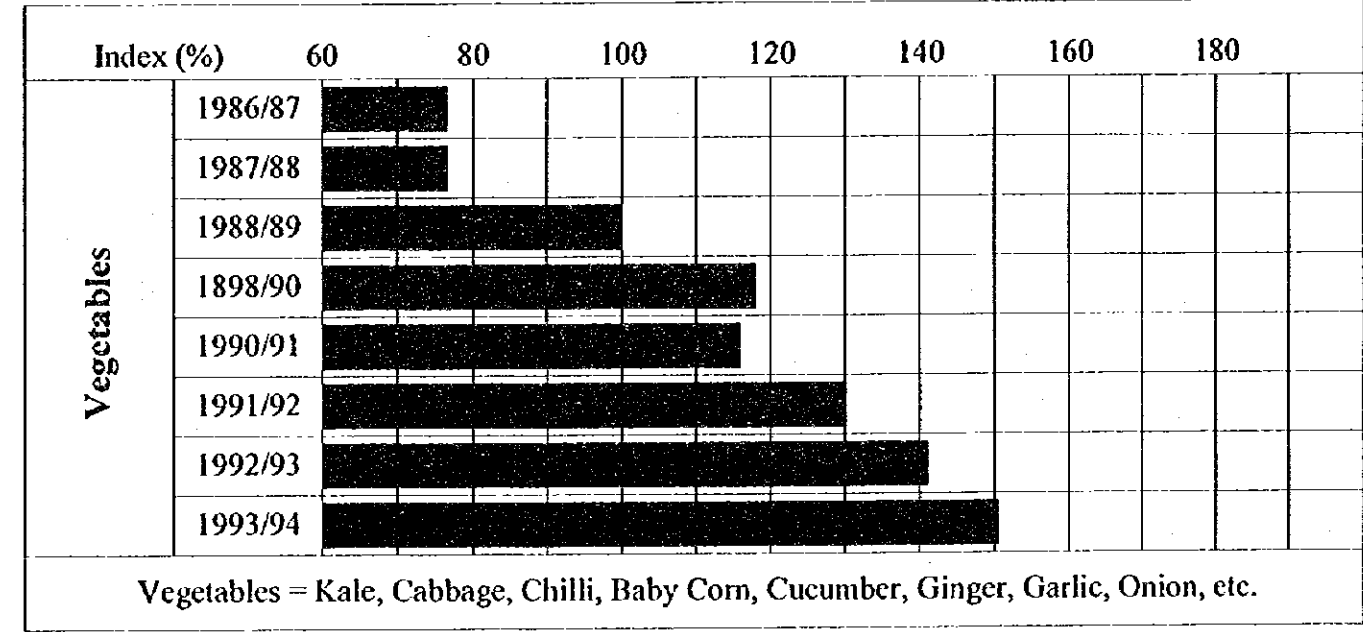
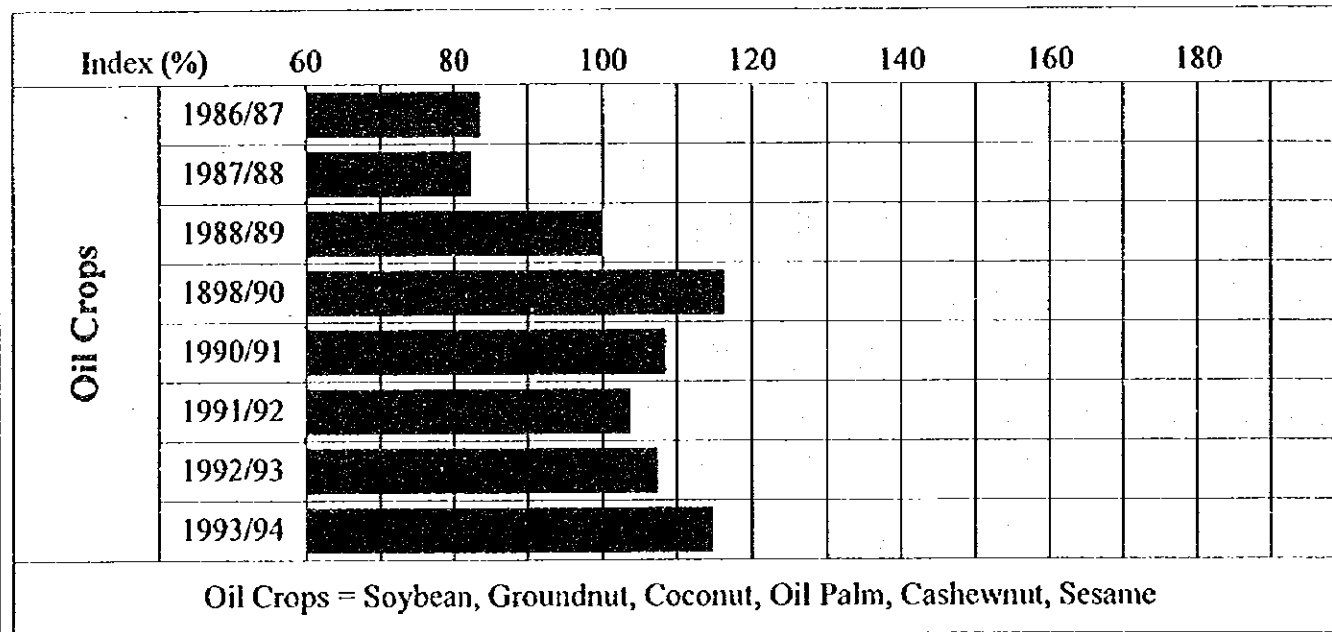
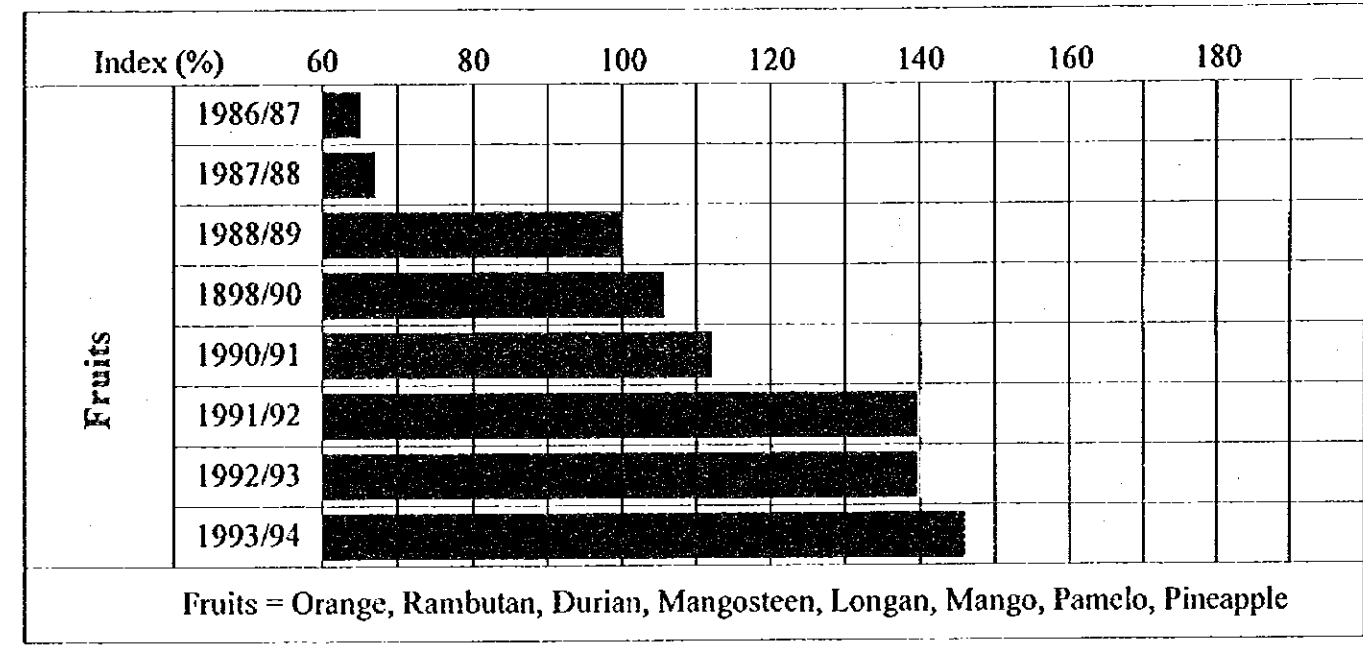
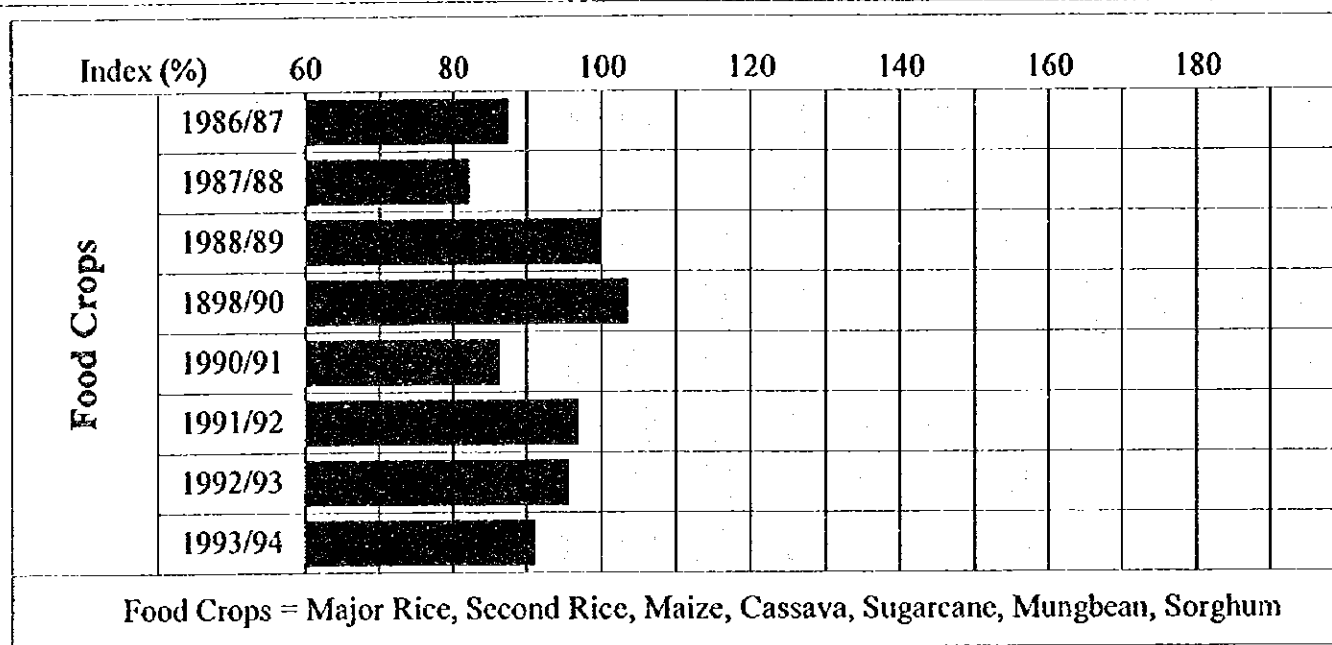
Reservoir	Drainage Area at Damsite	2,980 km ²
	Annual Inflow	2,230 MCM
	Full Water Level	570 m, MSL
	Low Water Level	550 m, MSL
	Gross Storage Capacity	4,650 MCM
	Effective Storage Capacity	1,650 MCM
Dam	Crest Elevation of Dam	575 m
	River Bed Elevation	450 m
	Dam Height	125 m
Hydro-Power	Maximum Outflow Discharge	300 m ³ /sec
	Effective Power Head	112 m
	Installed Power Capacity	290 MW
	Annual Energy Production	637 GWH

Advantage of the Mae Kok Hydropower Dam Project for KINWDP

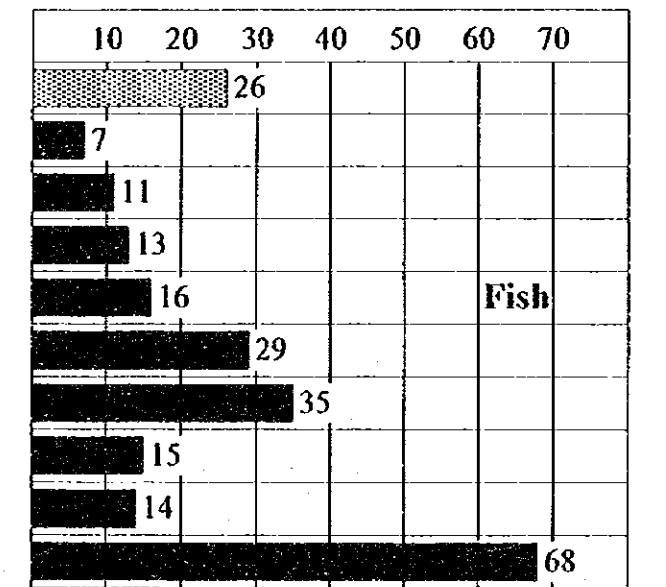
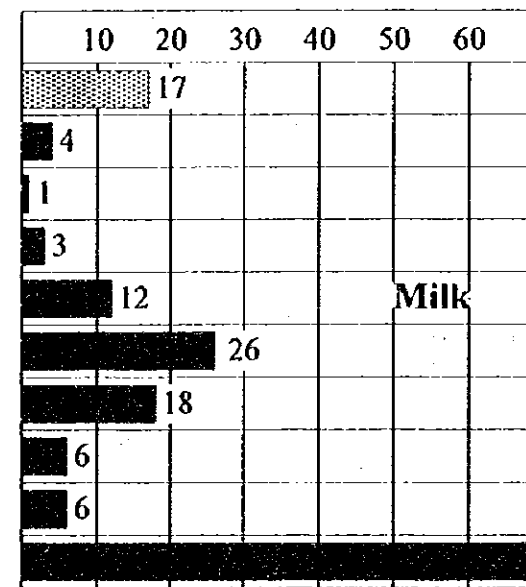
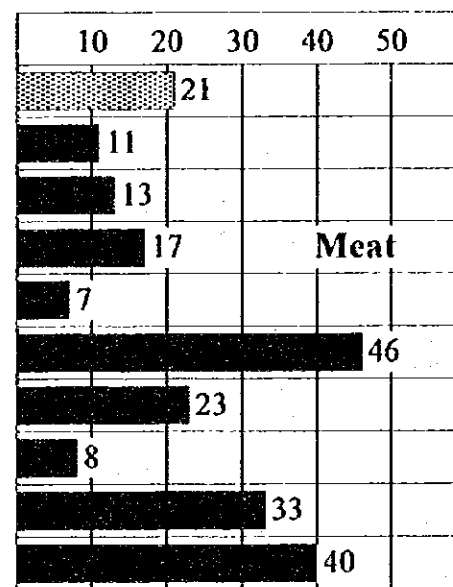
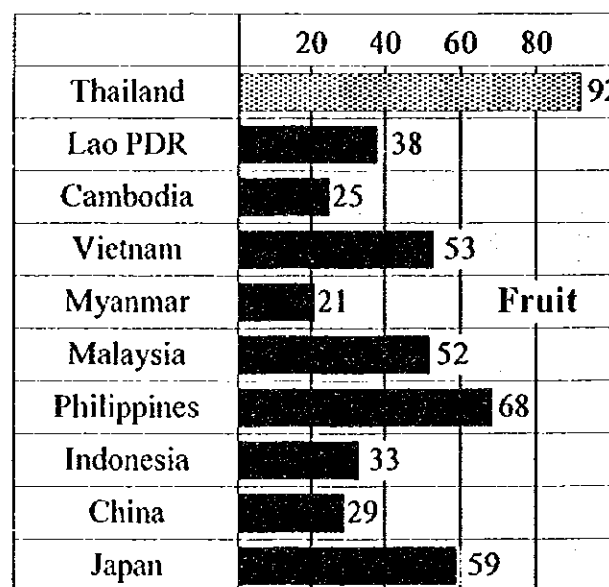
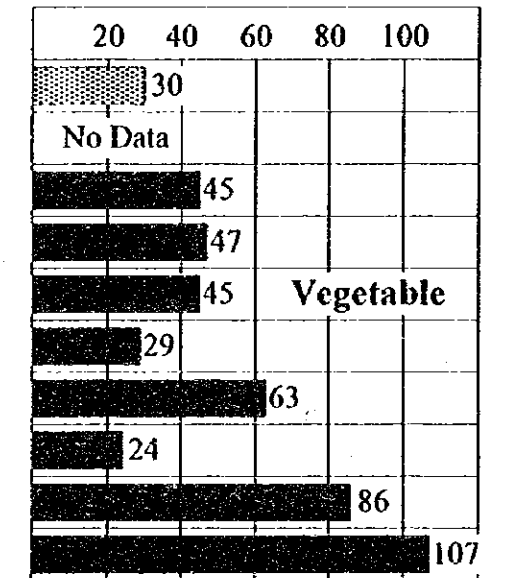
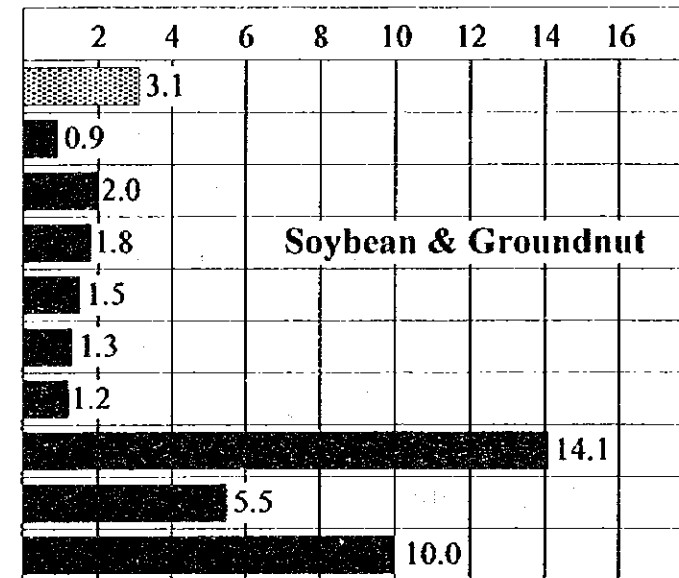
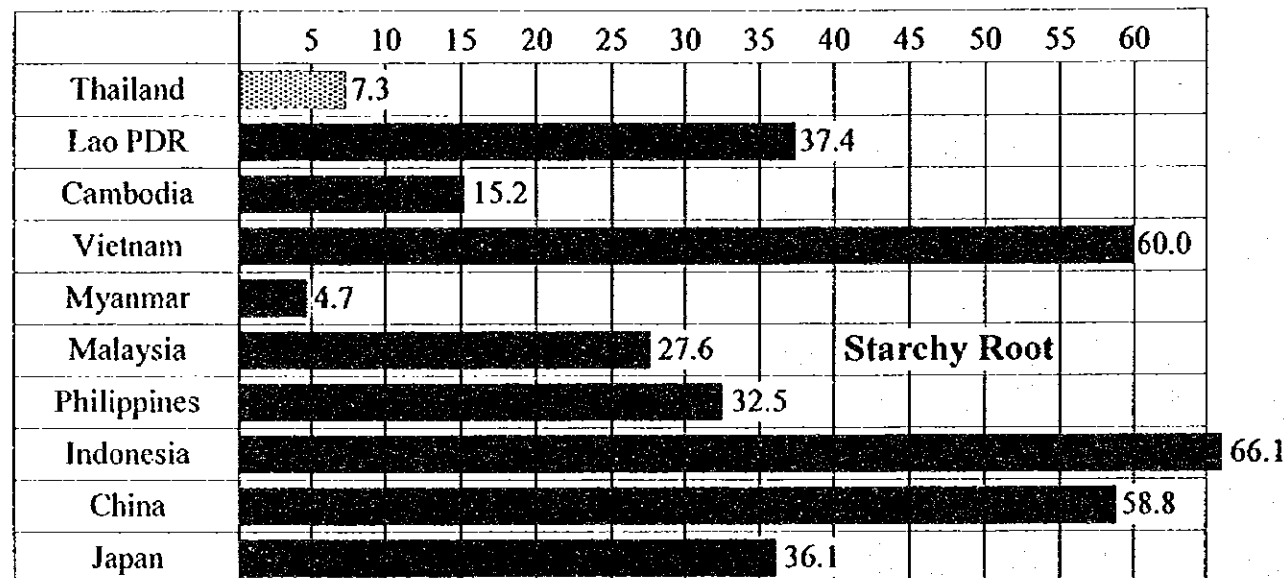
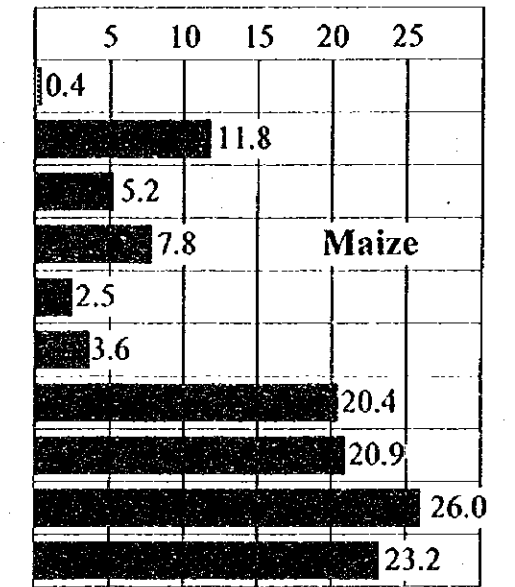
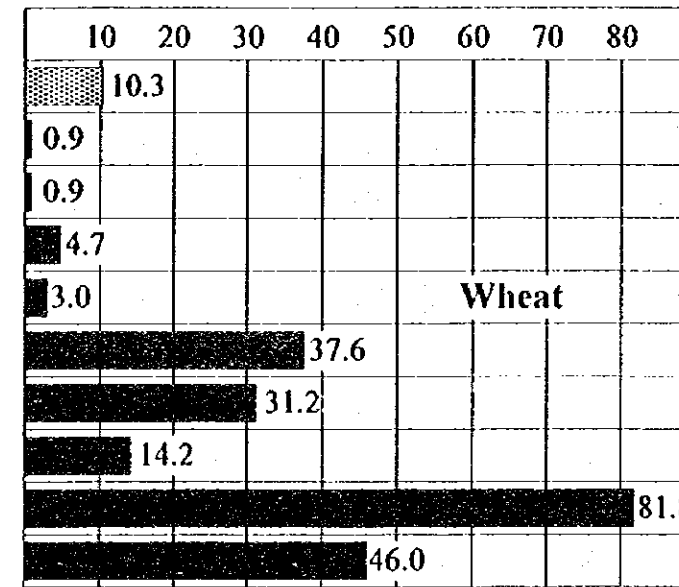
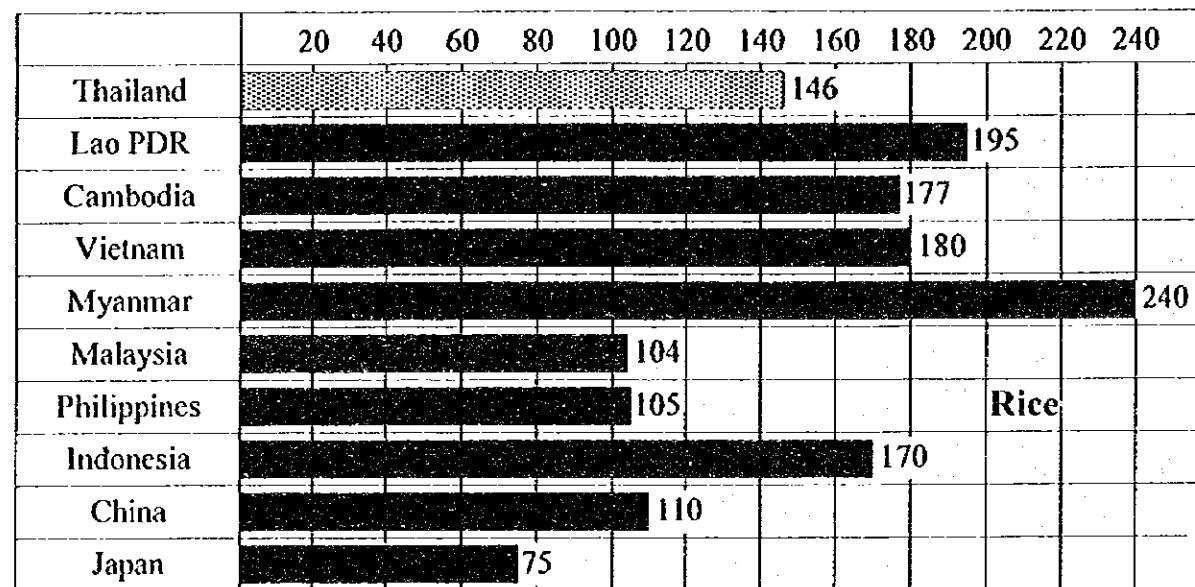
- (1) The proposed Mae Kok dam would release about 1,000 MCM of water in wet season and some 1,200 MCM in dry season in accordance with its rule of operation for hydro-power generation.
- (2) Out of 1,200 MCM of water to be released from the dam in dry season, about 600 MCM could be used for irrigation covering an area of more than 50,000 ha in both Kok and Ing basins if a re-regulation dam/reservoir of about 6.5 MCM capacity is constructed at the appropriate location downstream of the proposed Mae Kok dams site, and the remaining 600 MCM could possibly be diverted transbasin to irrigate the upper Nan basin or into Sirikit reservoir.
- (3) On the other hand in wet season, about 3,000 MCM of water, consisting of 1,000 MCM released from the dam and 2,000 MCM drained from downstream areas between the Mae Kok dam and Chiangrai weir, will be available sufficient to cover the design discharge of water diversion for the proposed Kok-Ing-Nan Water Diversion Project.

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
Outline of Mae Kok Hydro-Power Dam Project	Map & Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Figure W-34
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	

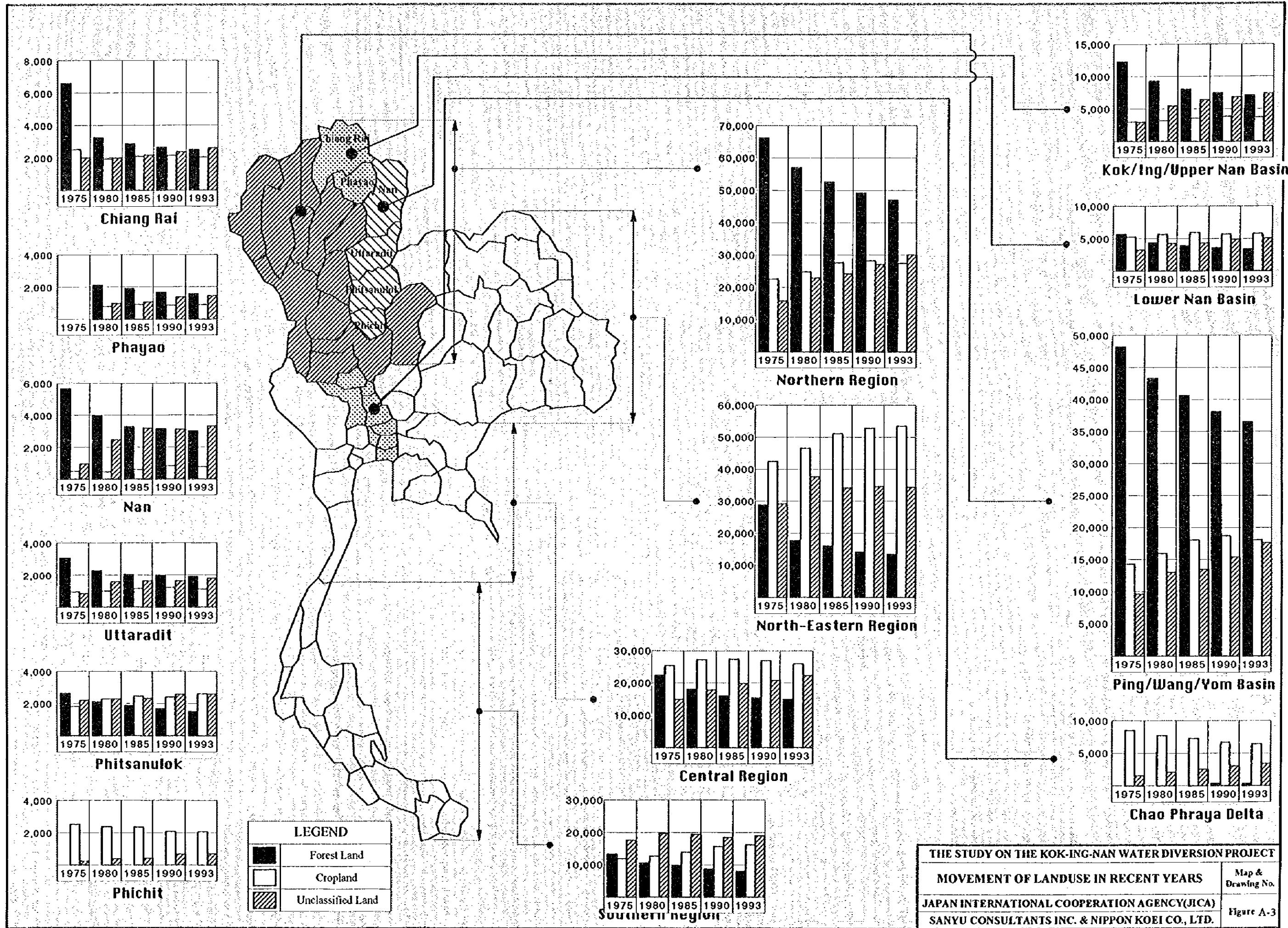
PART III	AGRICULTURAL DEVELOPMENT
Figure A-1	Quantity Index of Various Crops
Figure A-2	Food Supply per Capita per Year
Figure A-3	Movement of Land Use in Recent Years
Figure A-4	Existing Land Use Map of Kok Basin
Figure A-5	Existing Land Use Map of Ing Basin
Figure A-6	Existing Land Use Map of Upper Nan Basin
Figure A-7	Land Use Suitability Map of Kok Basin
Figure A-8	Land Use Suitability Map of Ing Basin
Figure A-9	Land Use Suitability Map of Upper Nan Basin
Figure A-10	Present and Proposed Cropping Pattern
Figure A-11	Unit Irrigation Water Requirement in Kok, Ing and Chao Phraya Delta Area



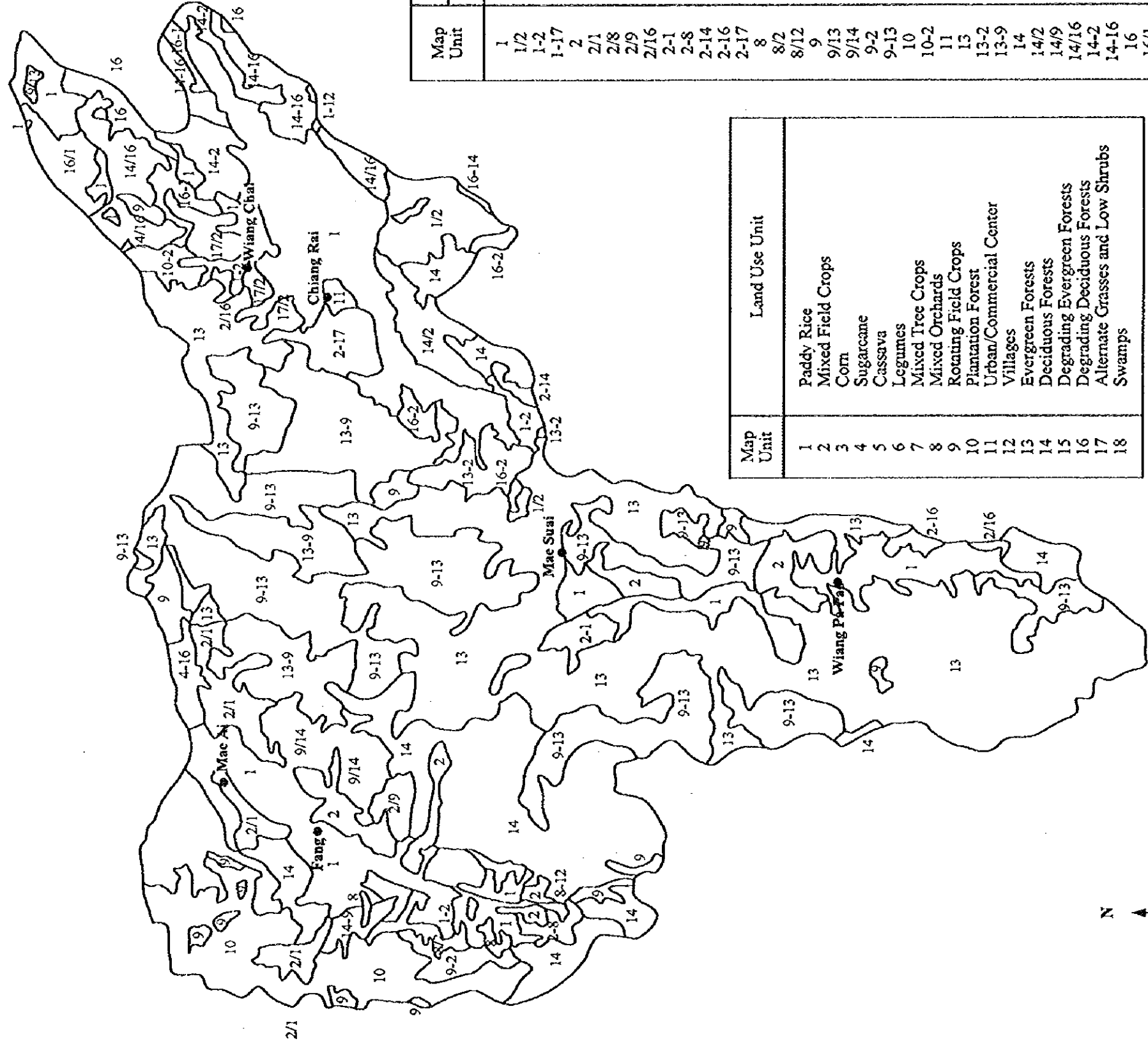
THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT
 QUANTITY INDEX OF VARIOUS CROPS (1988/89=100.0) Map & Drawing No.
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) Figure A-1
 SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.



(Unit: Kg/Person/Year)

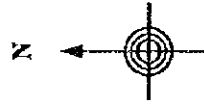


THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT
 MOVEMENT OF LANDUSE IN RECENT YEARS
 JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
 SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.
 Map & Drawing No.
 Figure A-3

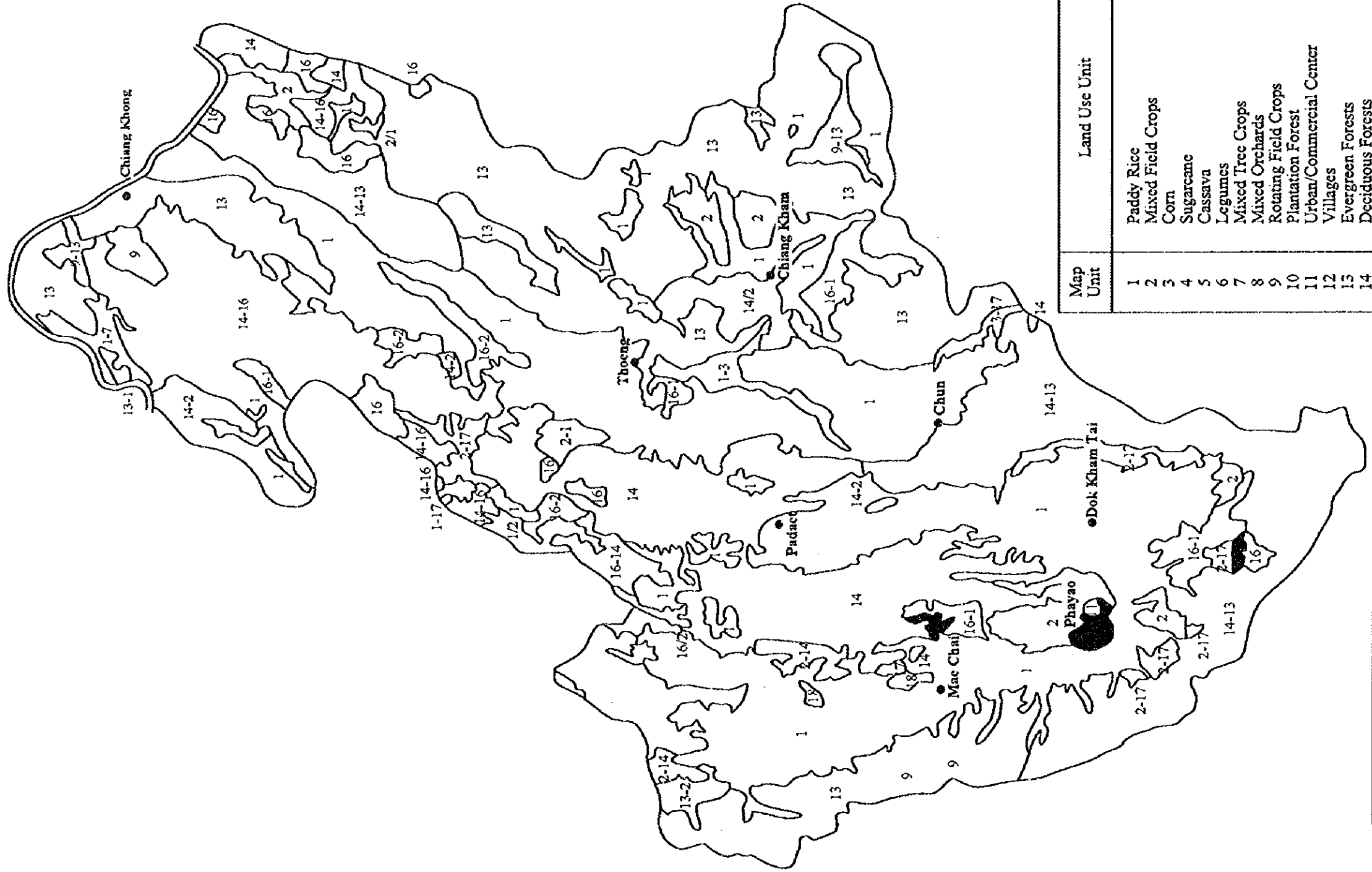


Map Unit	Land Use Unit
1	Paddy Rice
2	Mixed Field Crops
3	Corn
4	Sugarcane
5	Cassava
6	Legumes
7	Mixed Tree Crops
8	Mixed Orchards
9	Rotating Field Crops
10	Plantation Forest
11	Urban/Commercial Center
12	Villages
13	Evergreen Forests
14	Deciduous Forests
15	Degrading Evergreen Forests
16	Degrading Deciduous Forests
17	Alternate Grasses and Low Shrubs
18	Swamps

LEGEND	
1/2	1=50%, 2=50%
1-2	1=70%, 2=30%



Map Unit	Area Extent	
	%	Ha
1	13.79	108,879
1/2	1.44	11,407
1-2	0.51	4,022
1-17	0.03	219
2	2.57	20,255
2/1	1.84	14,551
2/8	0.23	1,828
2/9	0.42	3,291
2/16	0.13	1,023
2-1	0.61	4,826
2-8	0.30	2,340
2-14	0.15	1,170
2-16	0.24	1,901
2-17	0.91	7,239
8	0.20	1,536
8/2	0.41	3,217
8/12	0.08	658
9	1.81	14,259
9/13	0.07	585
9/14	1.60	12,650
9-2	0.69	5,411
9-13	13.81	109,025
10	4.39	34,660
10-2	0.45	3,546
11	0.23	1,828
13	23.14	182,805
13-2	1.01	7,970
13-9	7.74	61,130
14	11.36	89,648
14/2	1.16	9,140
14/9	0.36	2,998
14/16	1.77	13,966
14-2	1.42	11,188
14-16	1.30	10,310
16	0.06	439
16/1	1.03	8,117
16-1	0.40	3,144
16-2	0.45	3,546
16-14	0.04	293
17/2	1.07	8,487
18	0.63	4,972
Water	0.13	1,022
Total	100.0	789,500



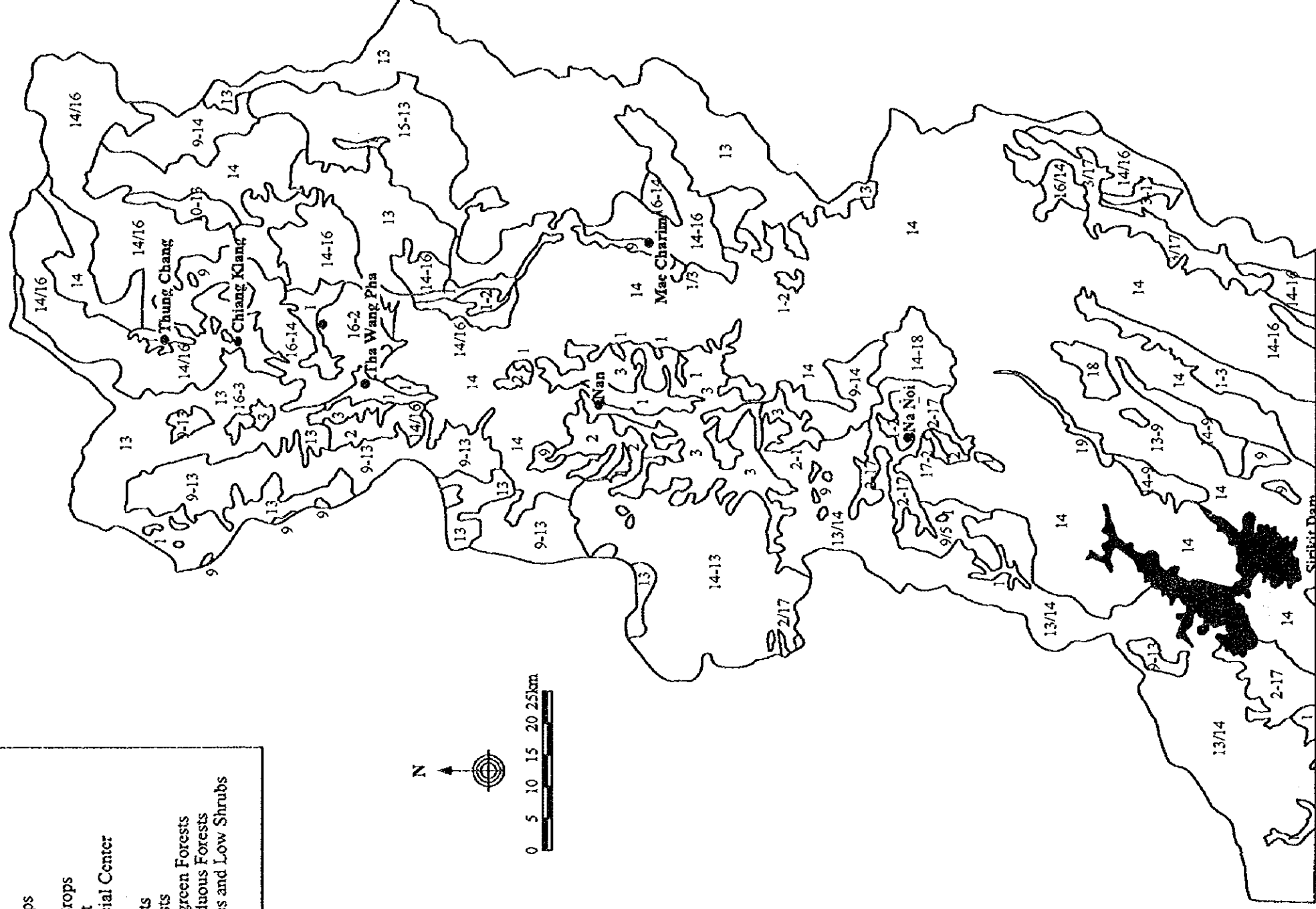
LEGEND	
1/2	1=50%, 2=50%
1-2	1=70%, 2=30%

Map Unit	Land Use Unit
1	Paddy Rice
2	Mixed Field Crops
3	Corn
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5	Cassava
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7	Mixed Tree Crops
8	Mixed Orchards
9	Rotating Field Crops
10	Plantation Forest
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17	Alternate Grasses and Low Shrubs
18	Swamps

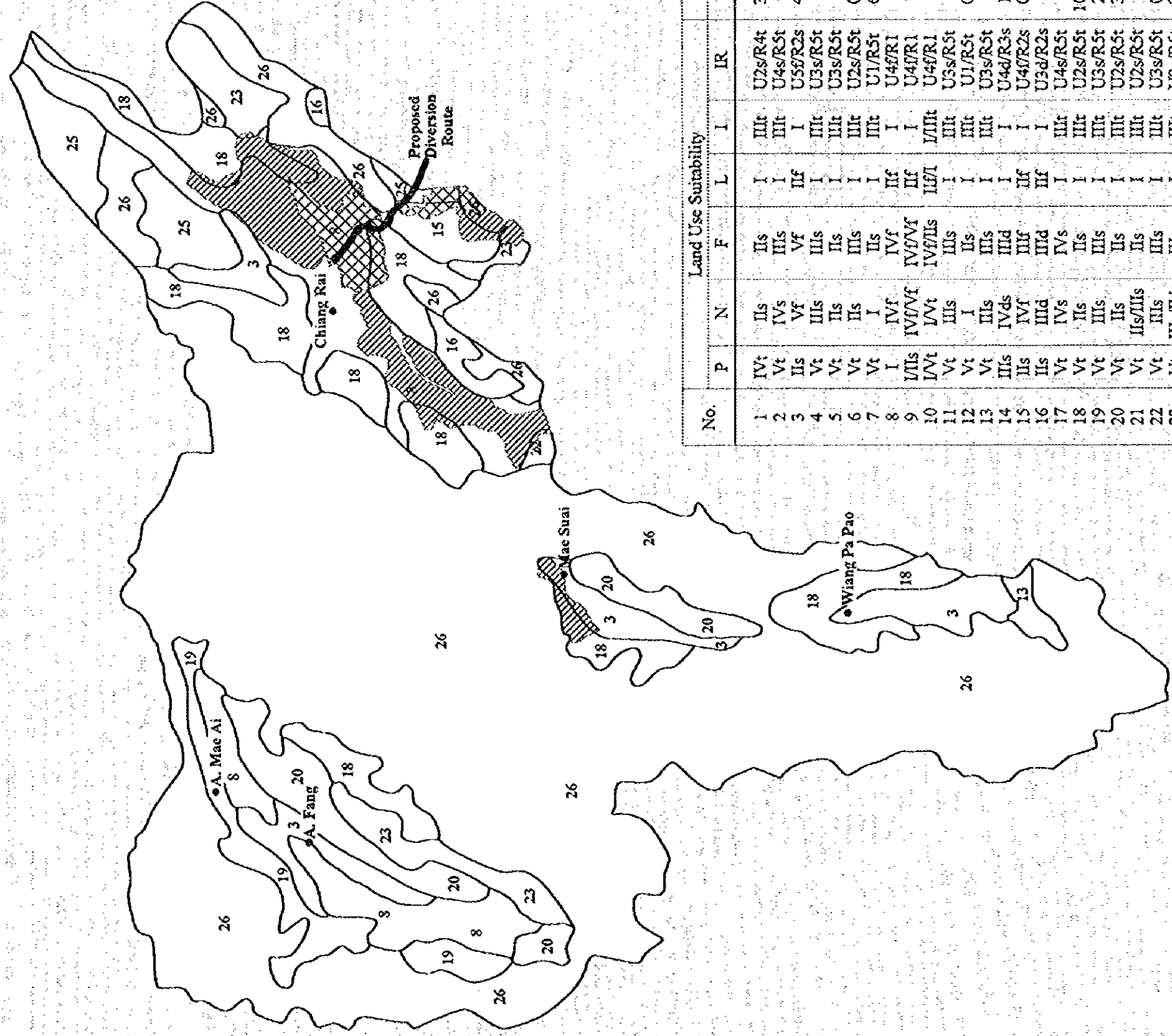
Map Unit	Area Extent	
	%	Ha
1	26.41	195,112
1/2	0.47	3,458
1-3	0.18	1,328
1-7	0.50	3,665
1-17	0.09	634
2	2.54	18,752
2/1	0.08	584
2-1	0.50	3,665
2-14	0.38	2,815
2-17	1.40	10,359
7/2	0.12	850
9	0.45	3,293
9-13	0.60	6,003
11	0.07	478
13	18.50	136,679
13-2	0.35	2,550
14	10.80	79,895
14/2	1.58	11,687
14/16	0.32	2,390
14-1	0.10	797
14-2	1.20	8,818
14-3	41.40	84,196
14-16	7.26	53,652
15	0.76	5,631
15-1	0.10	794
16	1.30	9,668
16/2	0.14	1,009
16-1	2.24	16,520
16-2	0.60	4,409
16-14	5.90	43,559
18	1.80	13,280
18-1	0.86	6,374
18-2	0.43	3,187
Water	0.37	2,709
Total	100.0	738,800

Map Unit	Land Use Unit
1	Paddy Rice
2	Mixed Field Crops
3	Corn
4	Sugarcane
5	Cassava
6	Legumes
7	Mixed Tree Crops
8	Mixed Orchards
9	Rotating Field Crops
10	Plantation Forest
11	Urban/Commercial Center
12	Villages
13	Evergreen Forests
14	Deciduous Forests
15	Degrading Evergreen Forests
16	Degrading Deciduous Forests
17	Alternate Grasses and Low Shrubs
18	Swamps

Map Unit	Area Extent	
	%	Ha
1	17.47	599,697
1/2	0.03	943
1/3	0.91	31,258
1/4	0.51	17,381
1/8	0.23	7,949
1-2	0.21	7,141
1-3	0.79	27,149
1-8	0.10	3,503
2	3.53	121,260
2-1	0.05	1,549
2-17	1.81	62,247
3	2.67	91,686
3/1	0.69	23,646
3/8	0.16	5,457
3/16	0.39	13,541
3/17	0.63	21,557
3/18	0.02	651
3-5	0.38	13,203
3-9	0.31	10,509
4	1.43	49,043
4/5	0.28	9,768
5-17	1.54	53,017
6-4	2.59	88,858
7	0.01	202
8	0.04	1,482
8-1	0.10	3,503
9	0.68	23,444
9/3	0.25	8,556
9/13	0.25	8,556
9-2	0.16	5,591
9-13	1.72	59,013
9-14	1.58	54,095
10	0.30	10,307
11	0.05	1,549
13	11.84	406,355
13/14	4.74	162,758
13-9	0.02	651
13-14	0.41	14,181
13-15	1.40	48,167
14	22.79	782,463
14/13	2.60	89,328
14/16	4.59	157,570
14-9	0.34	11,789
14-13	2.10	71,948
14-16	2.01	68,916
15	0.12	4,177
16	0.47	16,033
16/14	0.26	8,825
16-2	0.60	20,547
16-3	1.30	44,529
16-13	0.14	4,918
17	0.41	13,861
17/2	0.99	33,885
17-2	0.02	649
18	0.08	2,829
Water	0.90	30,989
Total	100.0	3,433,000



LEGEND	
1/2	1=50%, 2=50%
1-2	1=70%, 2=30%



No.	Land Use Suitability							Area Extent	
	P	N	F	L	I	IR	%	Ha	
1	IVt	IIs	IIs	I	IIIc	U2s/R4t	3.08	24,286	
2	Vt	IVs	IIIc	I	IIIc	U4s/R5t	-	-	
3	IIc	Vf	Vf	IIc	I	U5f/R2s	4.08	32,234	
4	Vt	IIIc	IIIc	I	IIIc	U3s/R5t	-	-	
5	Vt	IIc	IIc	I	IIIc	U3s/R5t	-	-	
6	Vt	IIc	IIIc	I	IIIc	U2s/R5t	0.42	3,298	
7	Vt	I	IIc	I	IIIc	U1/R5t	6.71	53,044	
8	I	IVf	IVf	IIc	I	U4f/R1	-	-	
9	IIIc	IVf/Vf	IVf/Vf	IIc	I	U4f/R1	-	-	
10	IVt	IVt	IVf/IIc	IIIc	I/IIIc	U4f/R1	-	-	
11	Vt	IIIc	IIIc	I	IIIc	U3s/R5t	-	-	
12	Vt	I	IIc	I	IIIc	U1/R5t	0.42	3,298	
13	Vt	IIIc	IIIc	I	IIIc	U3s/R5t	-	-	
14	IIIc	IVds	IIIc	I	I	U4d/R3s	1.04	8,171	
15	IIc	IVf	IIIc	IIc	I	U4d/R2s	0.56	4,423	
16	IIc	IIIc	IIIc	IIc	I	U3d/R2s	-	-	
17	Vt	IVs	IVs	I	IIIc	U4s/R5t	-	-	
18	Vt	IIc	IIc	I	IIIc	U2s/R5t	10.51	82,983	
19	Vt	IIIc	IIIc	I	IIIc	U3s/R5t	2.54	20,015	
20	Vt	IIc	IIc	I	IIIc	U2s/R5t	3.18	25,114	
21	Vt	IIIc/IIIc	IIIc	I	IIIc	U2s/R5t	-	-	
22	Vt	IIIc	IIIc	I	IIIc	U3s/R5t	0.14	1,124	
23	Vt	IIIc/IVs	IIIc	I	IIIc	U3s/R5t	3.07	24,213	
24	Vt	IIIc	IIIc	I	I	U3s/R5t	-	-	
25	Vt	IIc	IIc	I	IIIc	U2s/R5t	1.36	10,720	
26	Vt	Vt	Vt	IIIc	III	U6t/R5t	62.53	490,526	
27	Urban and Commercial Centers							0.25	1,828
-	Water Areas							0.13	1,024
	Total							100.0	789,500



THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

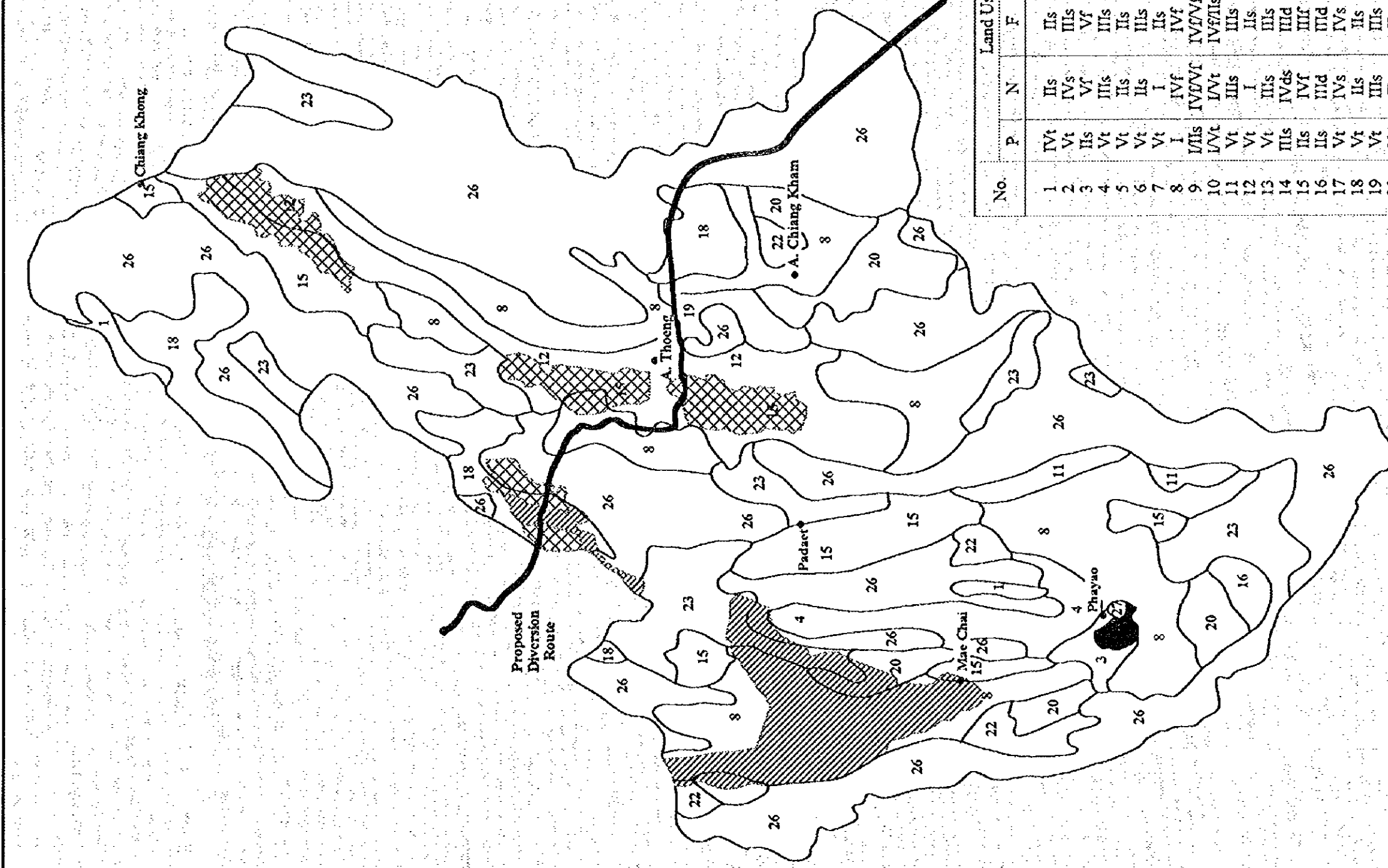
LANDUSE SUITABILITY MAP OF KOK BASIN

Map & Drawing No.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Figure A-7

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.



No.	Land Use Suitability							Area Extent	
	P	N	F	L	I	IR	%	Ha	
1	IVt	IIs	IIs	I	III	U2s/R4t	0.88	6,469	
2	Vt	IVs	IIIs	I	III	U4s/R5t	-	-	
3	IIs	Vt	Vf	III	I	U5f/R2s	0.38	2,844	
4	Vt	IIIs	IIIs	I	III	U3s/R5t	1.96	14,454	
5	Vt	IIs	IIs	I	III	U3s/R5t	-	-	
6	Vt	IIs	IIs	I	III	U2s/R5t	-	-	
7	Vt	I	IIs	I	III	U1/R5t	-	-	
8	I	IVf	IVf	III	I	U4f/R1	17.21	127,174	
9	III	IVd/Vf	IVd/Vf	III	I	U4f/R1	-	-	
10	IVt	IVt	IVf/IIIs	III	I/III	U4f/R1	-	-	
11	Vt	III	III	I	III	U3s/R5t	0.86	6,469	
12	Vt	I	III	I	III	U1/R5t	3.41	25,178	
13	Vt	IIs	III	I	III	U3s/R5t	-	-	
14	III	IVds	III	I	I	U4d/R3s	-	-	
15	II	IVf	III	III	I	U4f/R2s	9.49	70,115	
16	II	III	III	III	I	U3d/R2s	0.43	3,206	
17	Vt	IVs	IVs	I	I	U4s/R5t	-	-	
18	Vt	II	II	I	III	U2s/R5t	4.78	35,319	
19	Vt	II	II	I	III	U3s/R5t	0.97	7,169	
20	Vt	II	II	I	III	U2s/R5t	3.69	27,277	
21	Vt	II/III	II	I	III	U2s/R5t	-	-	
22	Vt	III	III	I	III	U3s/R5t	2.46	18,298	
23	Vt	III/IVs	III	I	III	U3s/R5t	8.93	65,977	
24	Vt	III	III	I	I	U3s/R5t	-	-	
25	Vt	II	II	I	III	U2s/R5t	-	-	
26	Vt	Vt	Vt	III	III	U6t/R5t	44.06	325,659	
27	Urban and Commercial Centers							0.07	478
-	Water Areas							0.36	2,709
Total							100.00	758,800	

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

LANDUSE SUITABILITY MAP OF ING BASIN

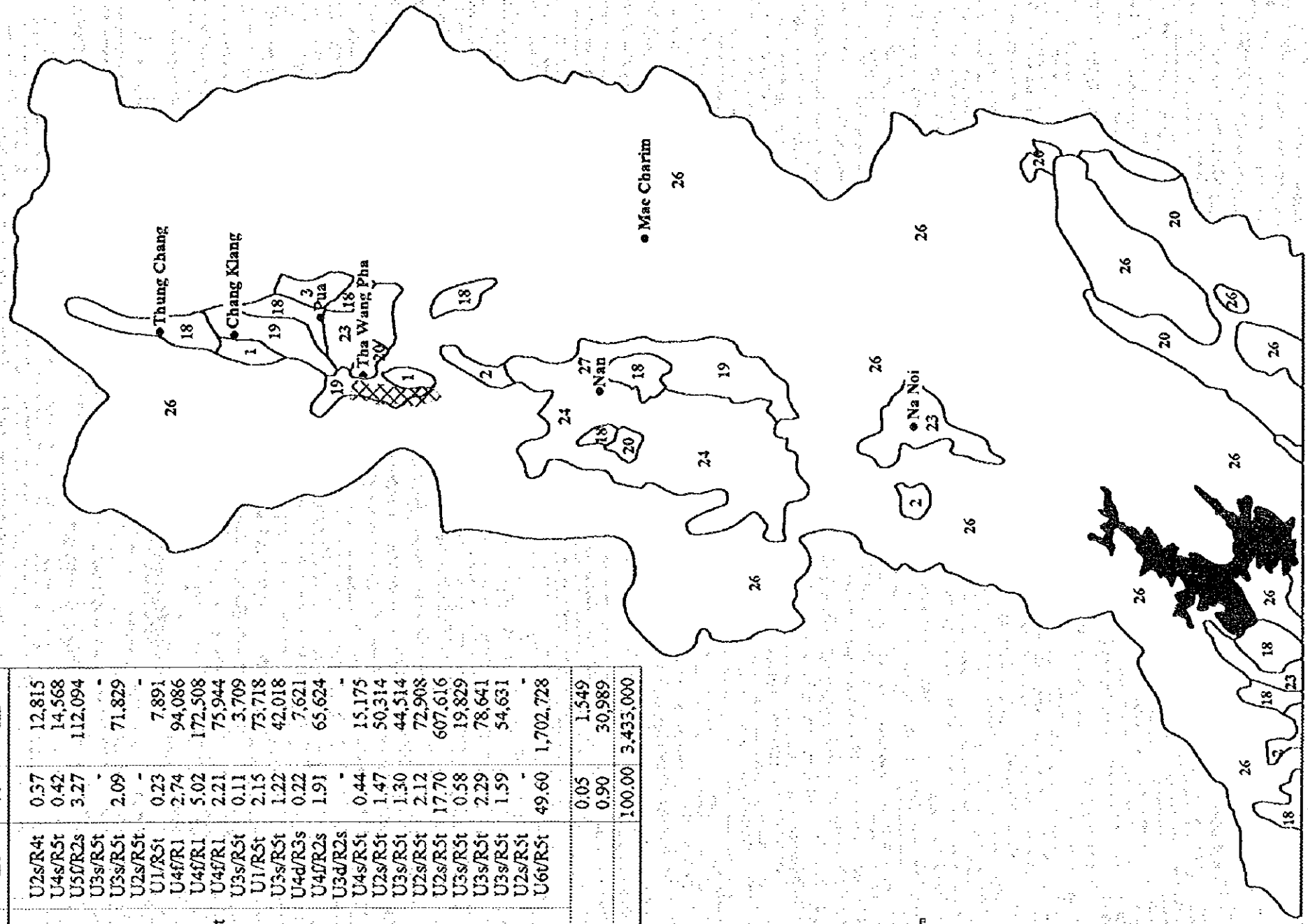
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.

Map & Drawing No.

Figure A-8

No.	Land Use Suitability					Area Extent		
	P	N	F	L	I	IR	%	Ha
1	IVt	IIs	IIs	I	IIIr	U2s/R4t	0.57	12,815
2	Vt	IVs	IIIs	I	IIIr	U4s/R5t	0.42	14,568
3	IIs	Vf	Vf	III	I	U5f/R2s	3.27	112,094
4	Vt	IIIs	IIIs	I	IIIr	U3s/R5t	-	-
5	Vt	IIs	IIs	I	IIIr	U3s/R5t	2.09	71,829
6	Vt	IIs	IIIs	I	IIIr	U2s/R5t	-	-
7	Vt	I	IIs	I	IIIr	U1/R5t	0.23	7,891
8	I	IVf	IVf	III	I	U4f/R1	2.74	94,086
9	IIIs	IVf/Vf	IVf/Vf	III	I	U4f/R1	5.02	172,508
10	IVt	IVt	IVt/Is	III	I/IIIr	U4f/R1	2.21	75,944
11	Vt	IIIs	IIIs	I	IIIr	U3s/R5t	0.11	3,709
12	Vt	I	IIs	I	IIIr	U1/R5t	2.15	73,718
13	Vt	IIs	IIIs	I	IIIr	U3s/R5t	1.22	42,018
14	IIIs	IVds	III	I	IIIr	U4d/R3s	0.22	7,621
15	IIs	IVf	III	I	I	U4f/R2s	1.91	65,624
16	IIs	III	III	I	I	U3d/R2s	-	-
17	Vt	IVs	IVs	I	IIIr	U4s/R5t	0.44	15,175
18	Vt	IIs	IIs	I	IIIr	U2s/R5t	1.47	50,314
19	Vt	IIIs	IIIs	I	IIIr	U3s/R5t	1.30	44,514
20	Vt	IIs	IIs	I	IIIr	U2s/R5t	2.12	72,908
21	Vt	IIs/IIIIs	IIs	I	IIIr	U2s/R5t	17.70	607,616
22	Vt	IIIs	IIIs	I	IIIr	U3s/R5t	0.58	19,829
23	Vt	IIIs/IVs	IIIs	I	IIIr	U3s/R5t	2.29	78,641
24	Vt	IIIs	IIIs	I	I	U3s/R5t	1.59	54,631
25	Vt	IIs	IIs	I	IIIr	U2s/R5t	-	-
26	Vt	Vt	Vt	III	III	U6f/R5t	49.60	1,702,728
27	Urban and Commercial Centers						0.05	1,549
-	Water Areas						0.90	30,989
	Total						100.00	3,433,000



THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT
 LANDUSE SUITABILITY MAP OF UPPER NAN BASIN
 JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
 SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.
 Map & Drawing No.
 Figure A-9

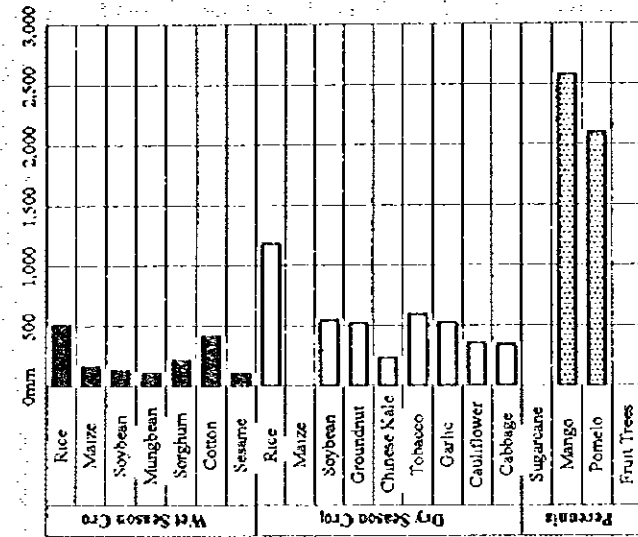
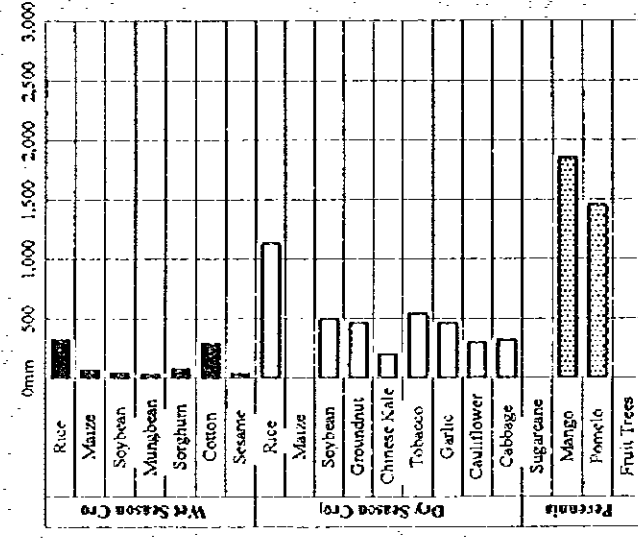
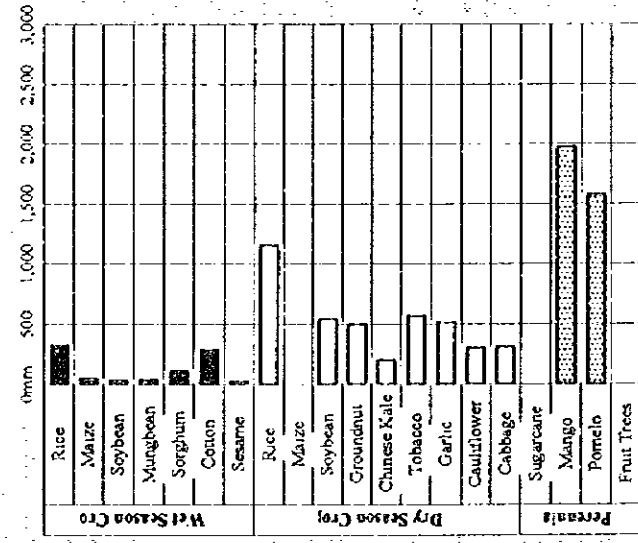
Present Cropping Pattern in Kok, Ing and Nan River Basins

Crops	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Inside and Outside Irrigated Area (Lowland)												
Wet Season Rice												
Dry Season Rice												
Field Crops (Soybean, Mungbean, Peanut, Corn etc)												
Vegetables (Shallot, Garlic, Common Ginger etc)												
Rainfed Agricultural Land (Upland)												
Corn, Soybean, Peanut												
Mungbean												
Cotton												
Common Ginger												
CANAVA												
Sugarcane												
Vegetables												
Fruit Trees and Perennial Crops												

Proposed Cropping Pattern In Irrigation Area

Crops	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Lowland (80%)												
Rice - Field Crops												
Rice - Vegetables												
Cropping Intensity=150%												
Upland (40%)												
Field Crops - Field Crops												
Fruit Trees/Perennial Crops												
Cropping Intensity=160%												
Lowland (68%)												
Rice - Field Crops												
Rice - Vegetables												
Cropping Intensity=150%												
Upland (32%)												
Field Crops - Field Crops												
Fruit Trees/Perennial Crops												
Cropping Intensity=165%												
Lowland (35%)												
Rice - Field Crops												
Rice - Vegetables												
Cropping Intensity=150%												
Upland (65%)												
Field Crops - Field Crops												
Fruit Trees/Perennial Crops												
Cropping Intensity=165%												

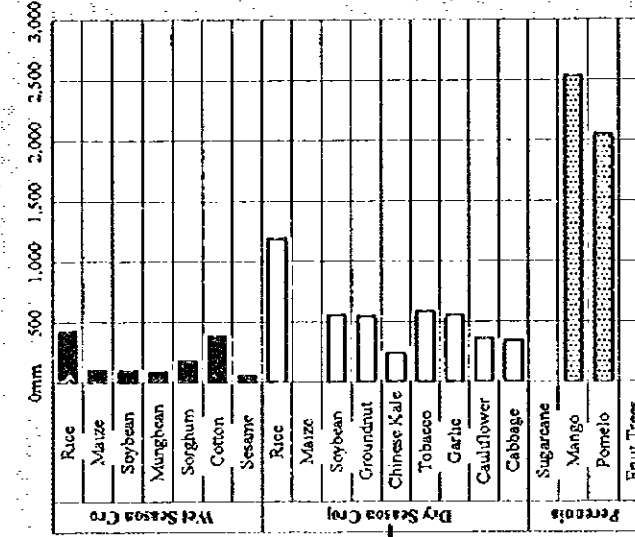
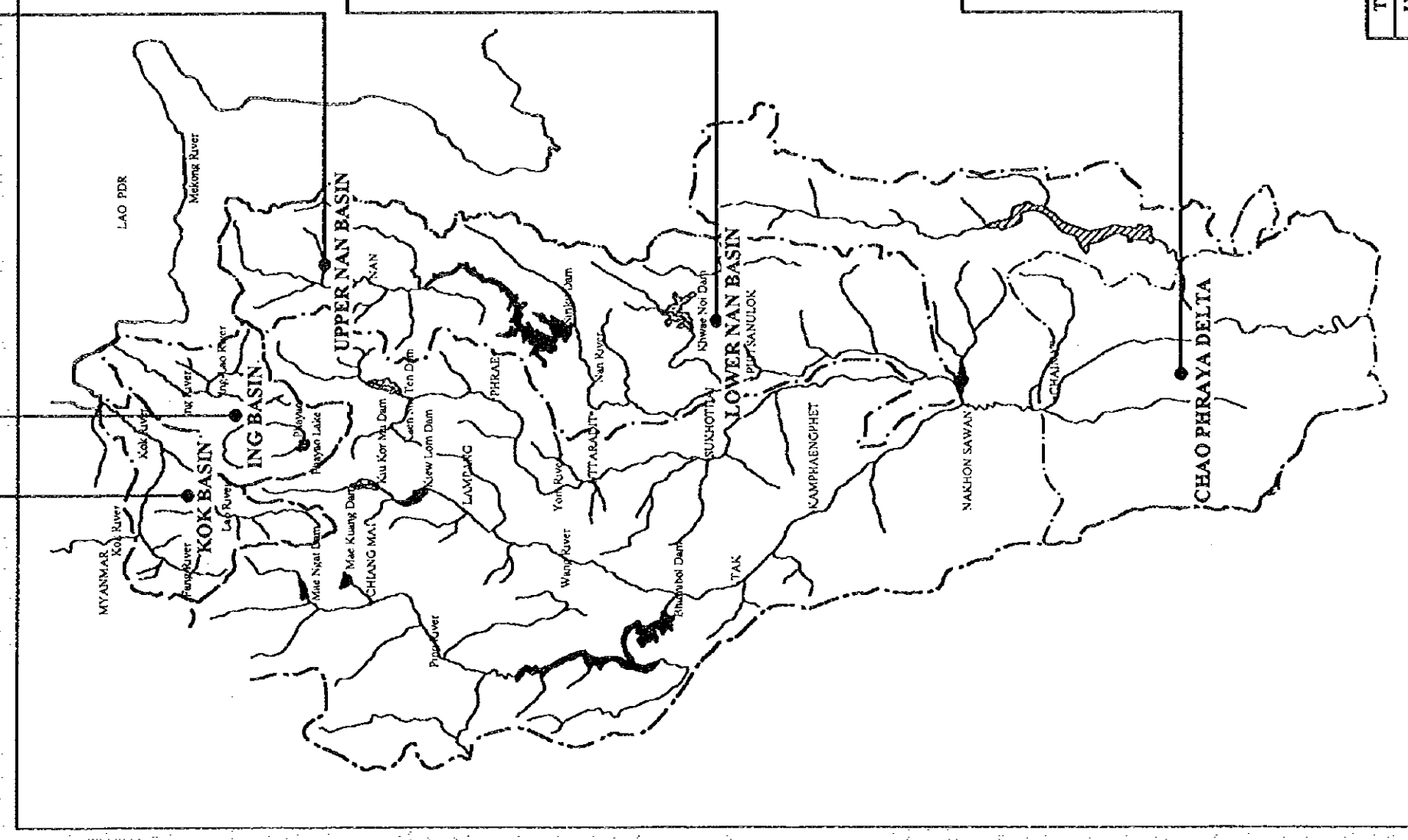
Crops	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Lowland												
Rice - Rice												
Rice - Field Crops												
Rice - Vegetables												
Cropping Intensity=160%												
Upland												
Field Crops - Field Crops												
Fruit Trees/Perennial Crops												
Cropping Intensity=165%												
Wet Season Rice (Native Variety) (25%)												
Areal Extent (%)												
Wet Season Rice (RD Variety) (64%)												
Areal Extent (%)												
Dry Season Rice (RD Variety) (31%)												
Areal Extent (%)												
Wet Season Rice (Native Variety) (18%)												
Areal Extent (%)												
Wet Season Rice (RD Variety) (47%)												
Areal Extent (%)												
Dry Season Rice (RD Variety) (42%)												
Areal Extent (%)												



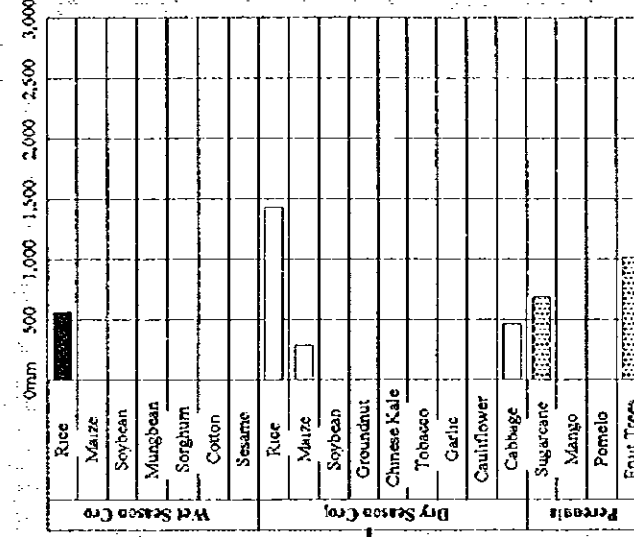
Kok River Basin

Ing River Basin

Upper Nan River Basin



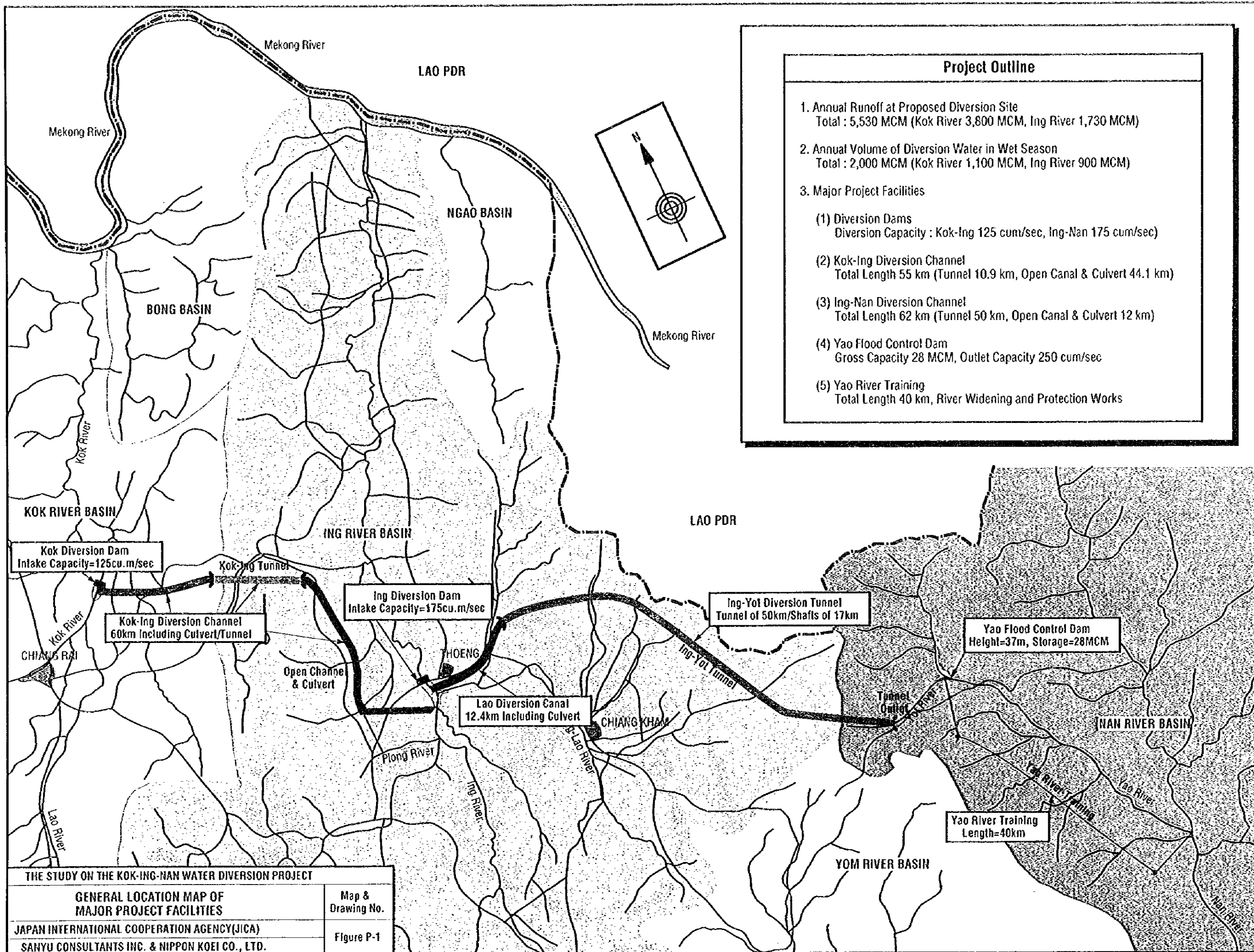
Lower Nan River Basin



Chao Phraya Delta Area

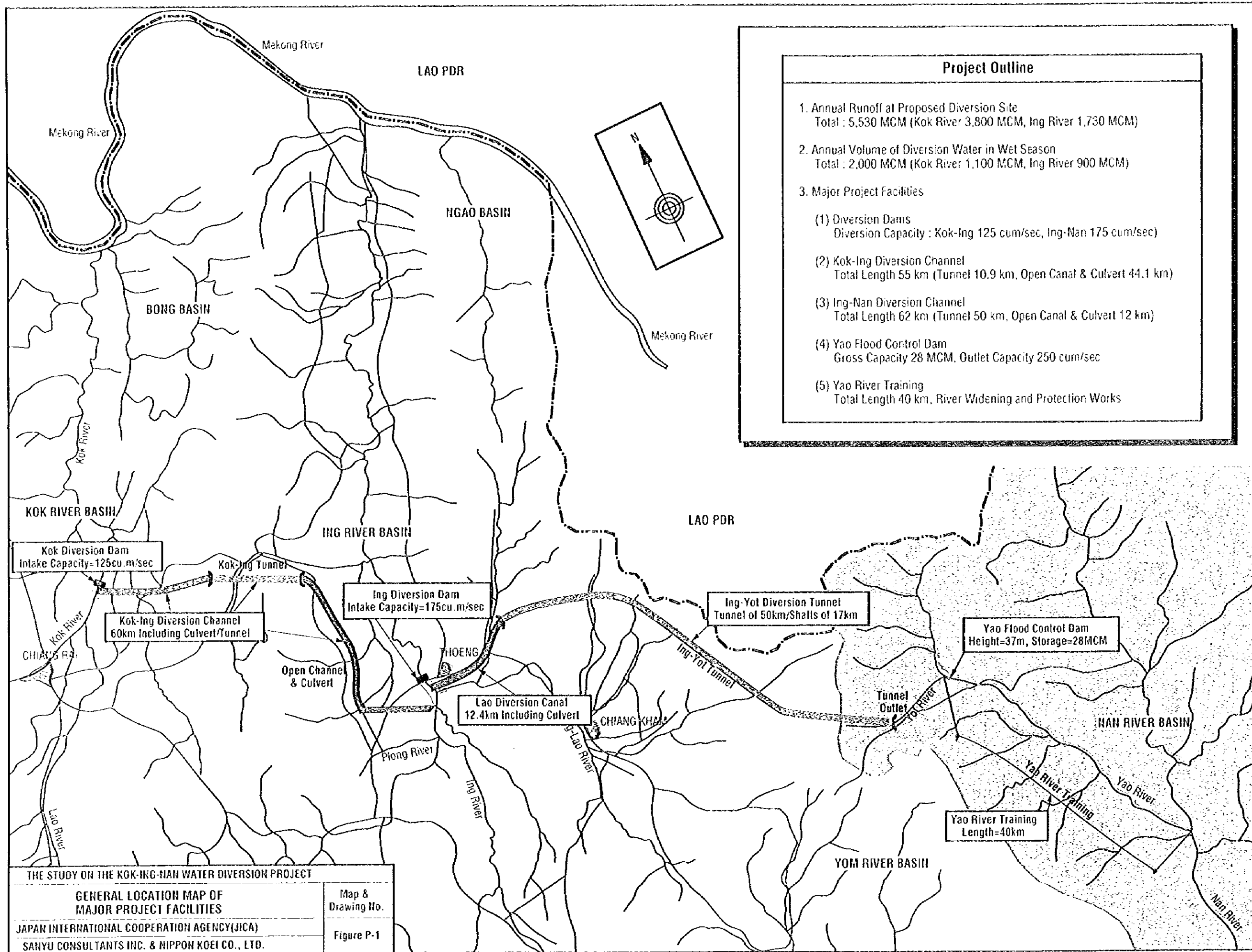
PART IV**PROJECT FACILITY**

Figure P-1	General Location Map of Major Project Facilities
Figure P-2	Location of Existing Kok Diversion Dam and Intake
Figure P-3	Location of New Kok Diversion Dam and Intake
Figure P-4	Plan, Profile and Cross Section of Kok Diversion Dam and Intake
Figure P-5	Plan and Profile of Kok Intake
Figure P-6	General Plan of Ing Diversion Dam
Figure P-7	General Plan of Yao Flood Control Dam
Figure P-8	Route Map (1/4) Upstream of Kok-Ing Diversion Canal
Figure P-9	Route Map (2/4) Downstream of Kok-Ing Diversion Canal
Figure P-10	Route Map (3/4) Upstream of Ing-Yot Diversion Canal
Figure P-11	Route Map (4/4) Downstream of Ing-Yot Diversion Canal
Figure P-12	Profile of Diversion Canal Alignment (1/4) Original Route B
Figure P-13	Profile of Diversion Canal Alignment (2/4) Route A and Route A-R
Figure P-14	Profile of Diversion Canal Alignment (3/4) Route B and Route B-J
Figure P-15	Profile of Diversion Canal Alignment (4/4) Route B-P
Figure P-16	Hydraulic Profile
Figure P-17	Typical Cross Section (1/2) (Open Canal)
Figure P-18	Typical Cross Section (2/2) (Culvert)
Figure P-19	Presumption of Grade of Ground for Tunnels
Figure P-20	Pattern Diagram of Kok-Ing Tunnel (1/3)
Figure P-21	Pattern Diagram of Kok-Ing Tunnel (2/3)
Figure P-22	Pattern Diagram of Kok-Ing Tunnel (3/3)
Figure P-23	Pattern Diagram of Ing-Yot Tunnel (1/3)
Figure P-24	Pattern Diagram of Ing-Yot Tunnel (2/3)
Figure P-25	Pattern Diagram of Ing-Yot Tunnel (3/3)
Figure P-26	Location of River Training in Huai Nam Yao
Figure P-27	Yao River Profile
Figure P-28	Typical Cross Section of the Kok, Ing and Yao River



Project Outline	
1. Annual Runoff at Proposed Diversion Site	Total : 5,530 MCM (Kok River 3,800 MCM, Ing River 1,730 MCM)
2. Annual Volume of Diversion Water in Wet Season	Total : 2,000 MCM (Kok River 1,100 MCM, Ing River 900 MCM)
3. Major Project Facilities	
(1) Diversion Dams	Diversion Capacity : Kok-Ing 125 cum/sec, Ing-Nan 175 cum/sec
(2) Kok-Ing Diversion Channel	Total Length 55 km (Tunnel 10.9 km, Open Canal & Culvert 44.1 km)
(3) Ing-Nan Diversion Channel	Total Length 62 km (Tunnel 50 km, Open Canal & Culvert 12 km)
(4) Yao Flood Control Dam	Gross Capacity 28 MCM, Outlet Capacity 250 cum/sec
(5) Yao River Training	Total Length 40 km, River Widening and Protection Works

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
GENERAL LOCATION MAP OF MAJOR PROJECT FACILITIES	Map & Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)	Figure P-1
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	



Project Outline	
1. Annual Runoff at Proposed Diversion Site	Total : 5,530 MCM (Kok River 3,800 MCM, Ing River 1,730 MCM)
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THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT

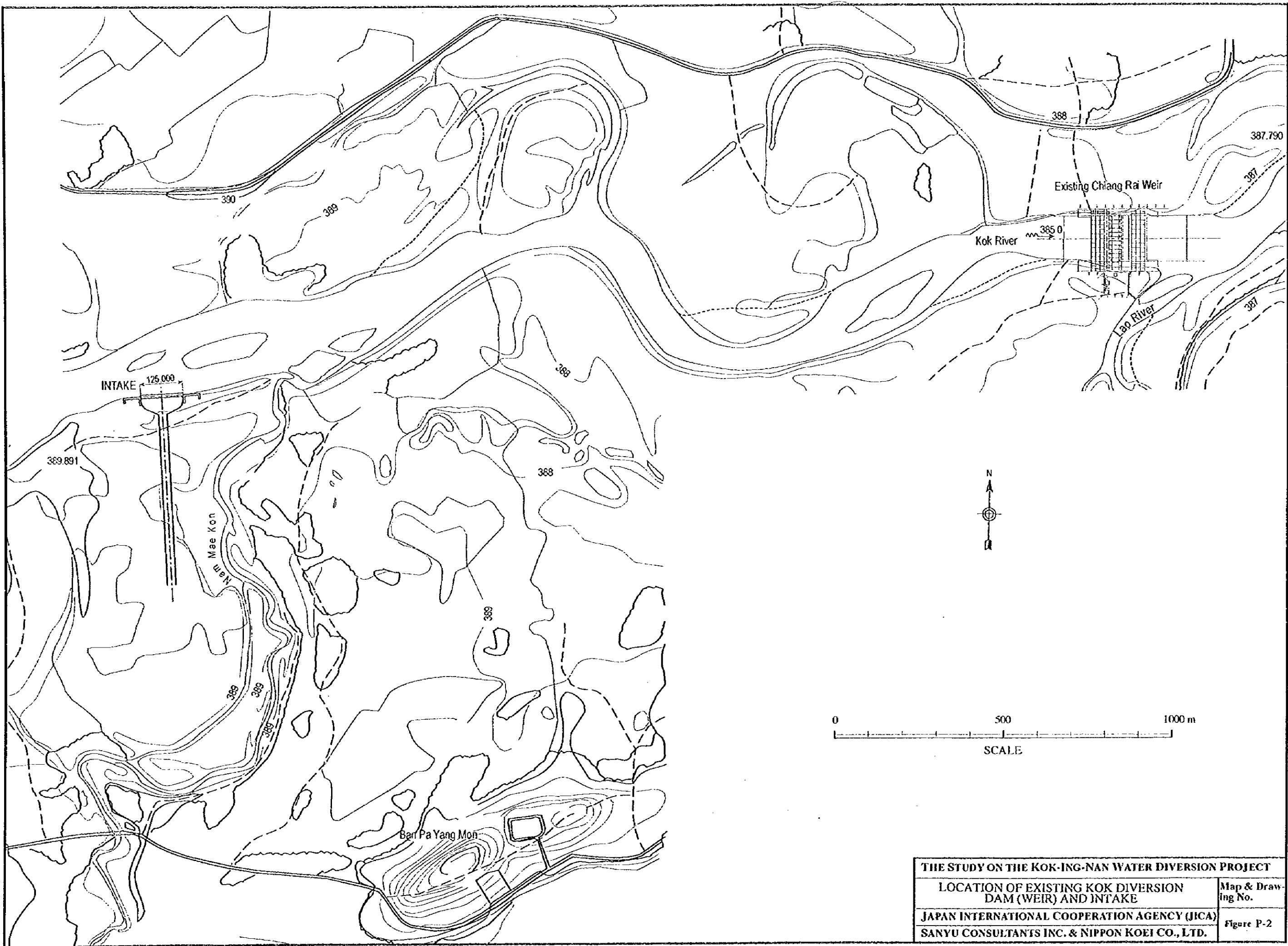
GENERAL LOCATION MAP OF MAJOR PROJECT FACILITIES

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.

Map & Drawing No.

Figure P-1



THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT	
LOCATION OF EXISTING KOK DIVERSION DAM (WEIR) AND INTAKE	Map & Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Figure P-2
SANYU CONSULTANTS INC. & NIPPON KOEI CO., LTD.	