

F I G U R E

1



Fig. 3-3 PROFILE OF THE KINABATANGAN RIVER AND TRIBUTARIES

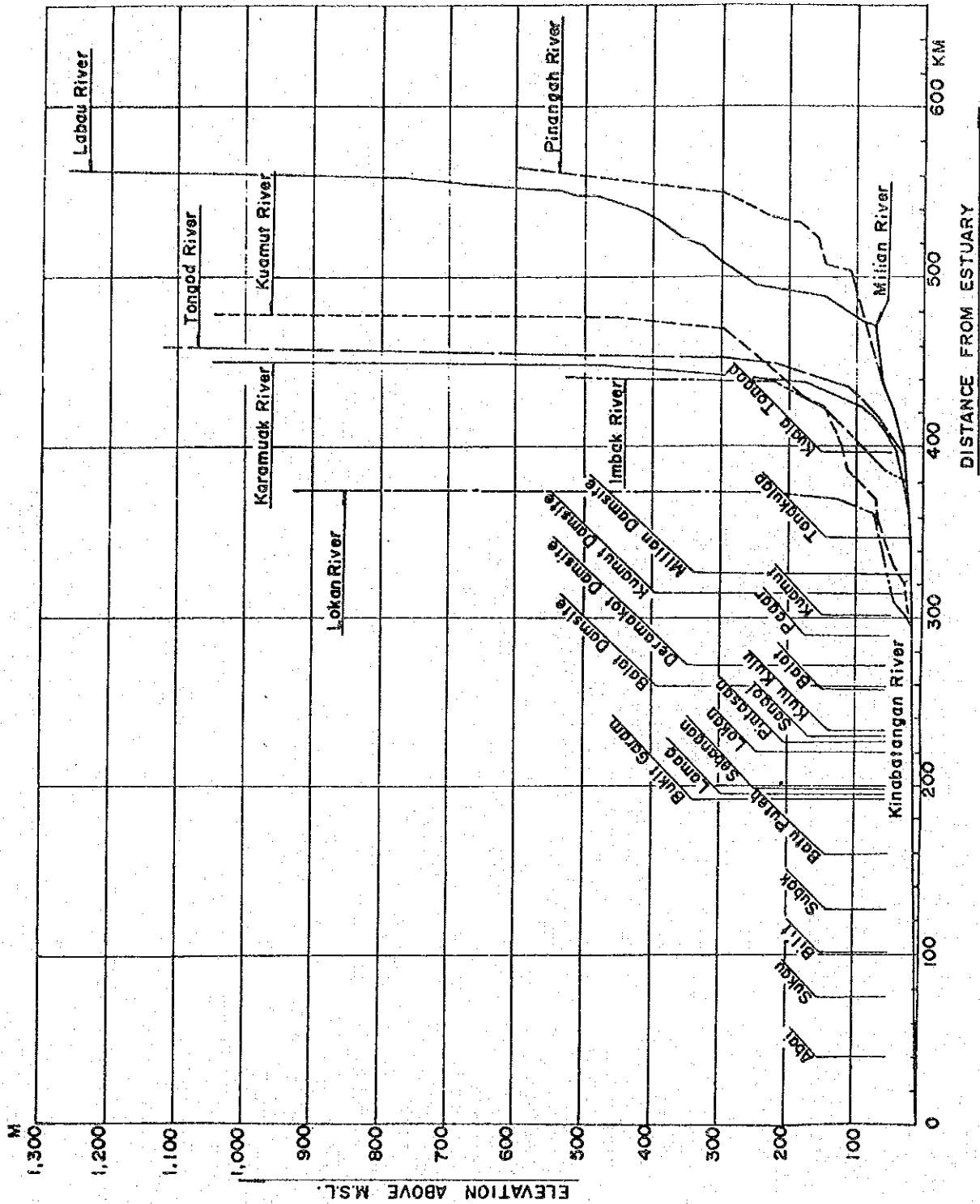


Fig. 3-4 CHANNEL WIDTH DISTRIBUTION

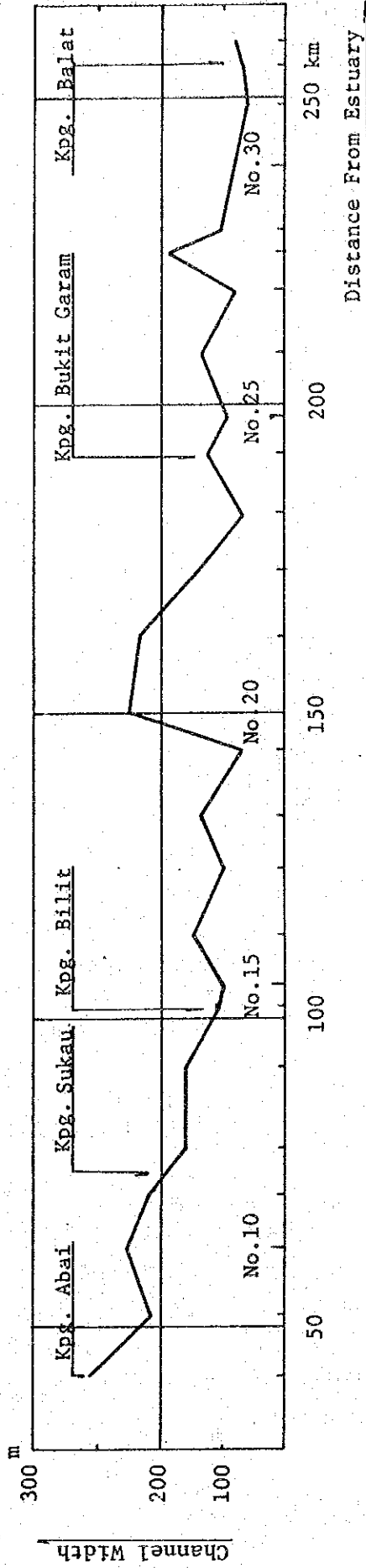
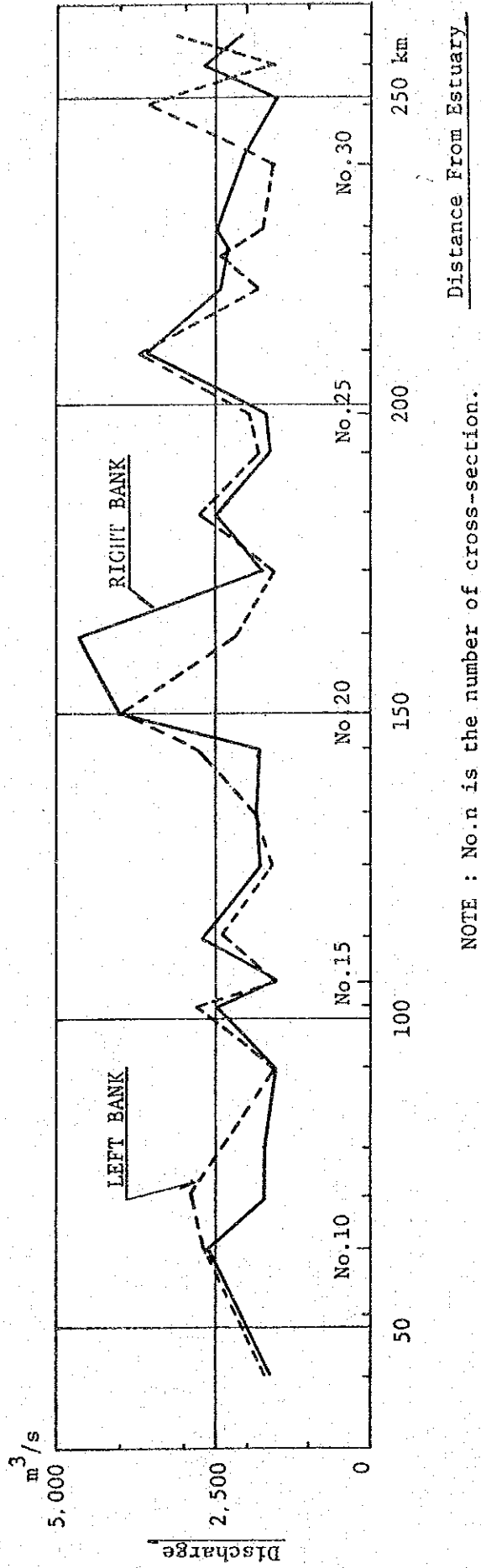


Fig. 3-5 PRESENT FLOW CAPACITY



NOTE : No.n is the number of cross-section.

Distance From Estuary

Fig. 3-6 INUNDATION AREA IN THE LOWER BASIN

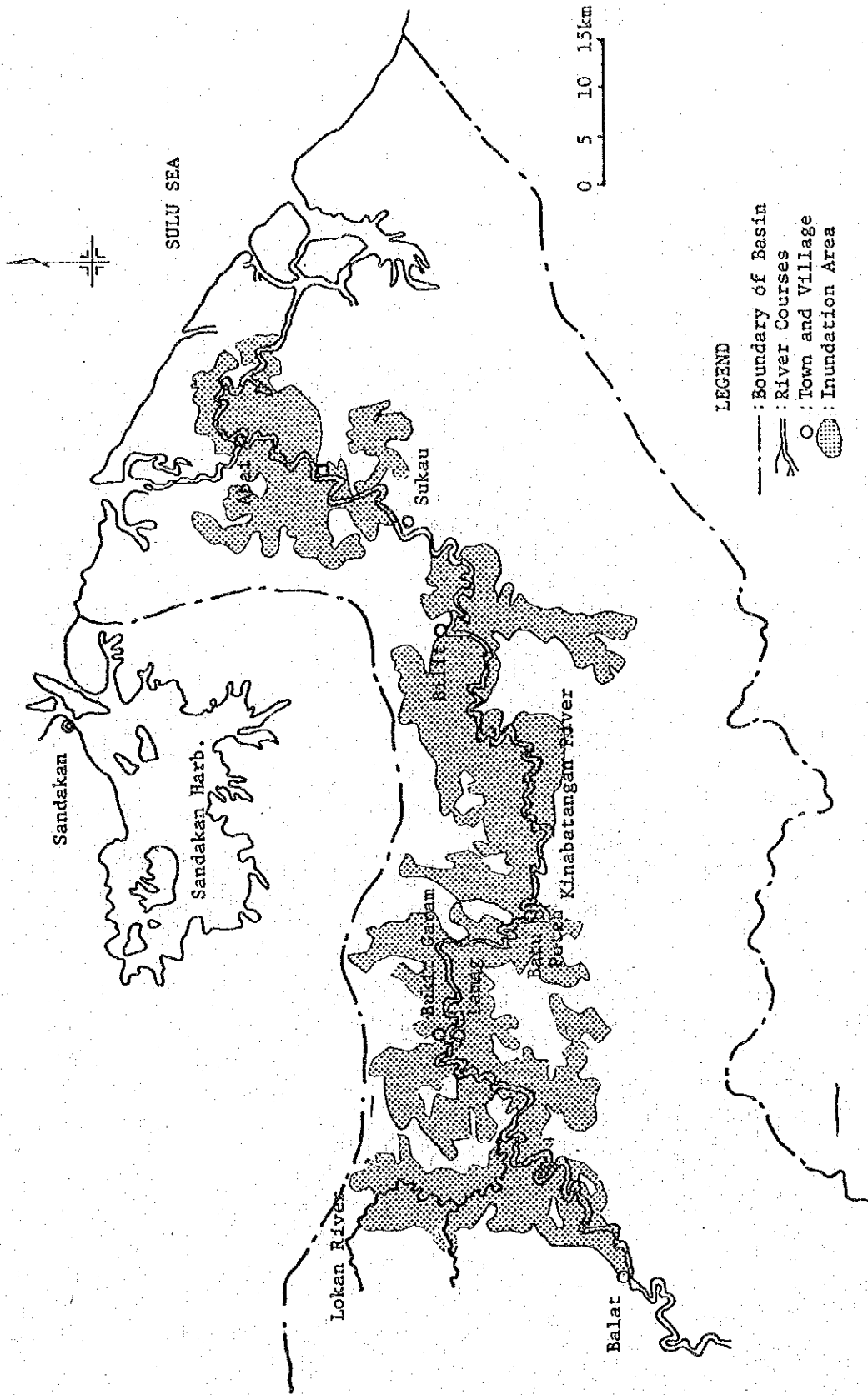


Fig. 3-7 PRESENT CROPPING PATTERN

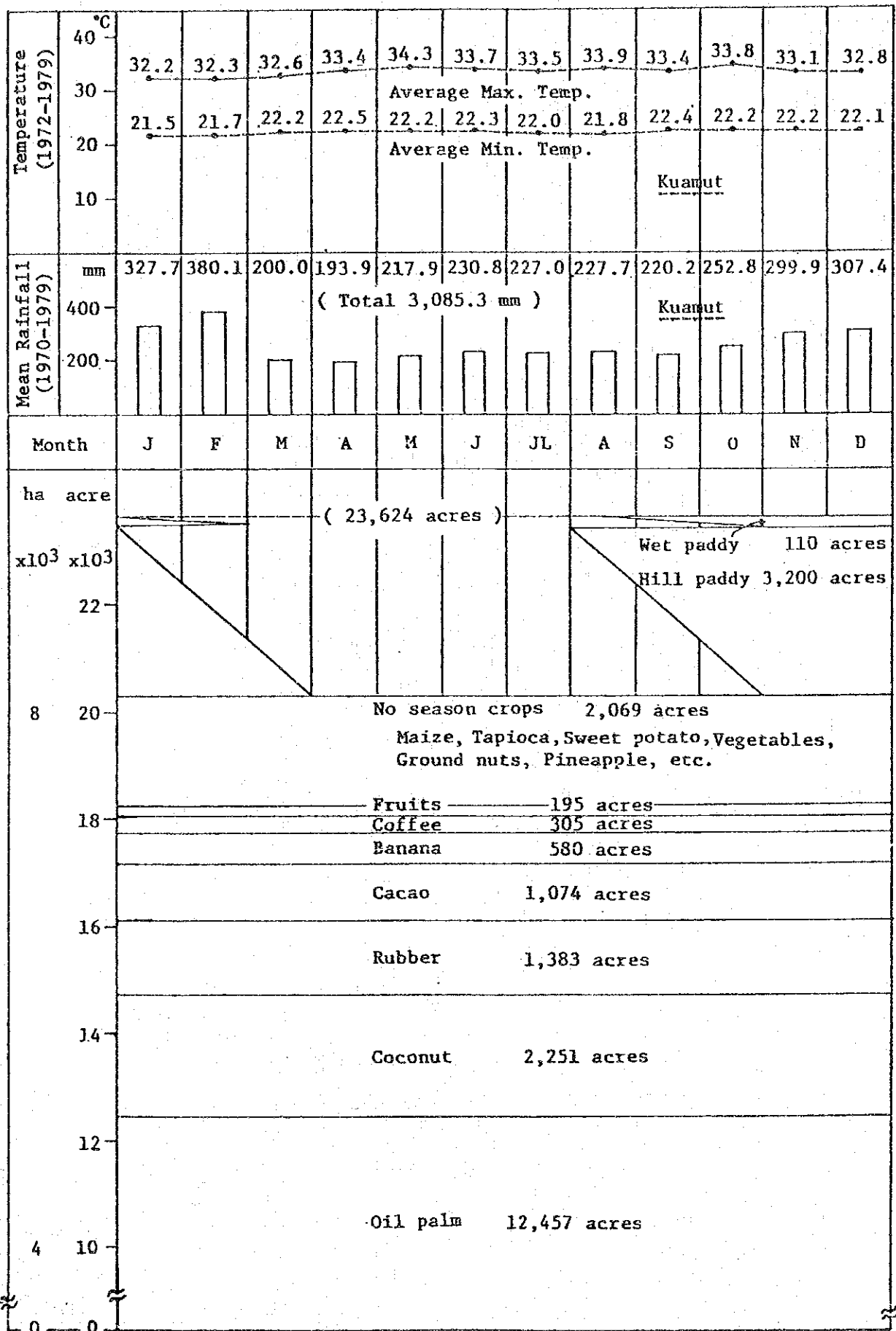


Fig. 3-8 ADMINISTRATIVE DIVISION

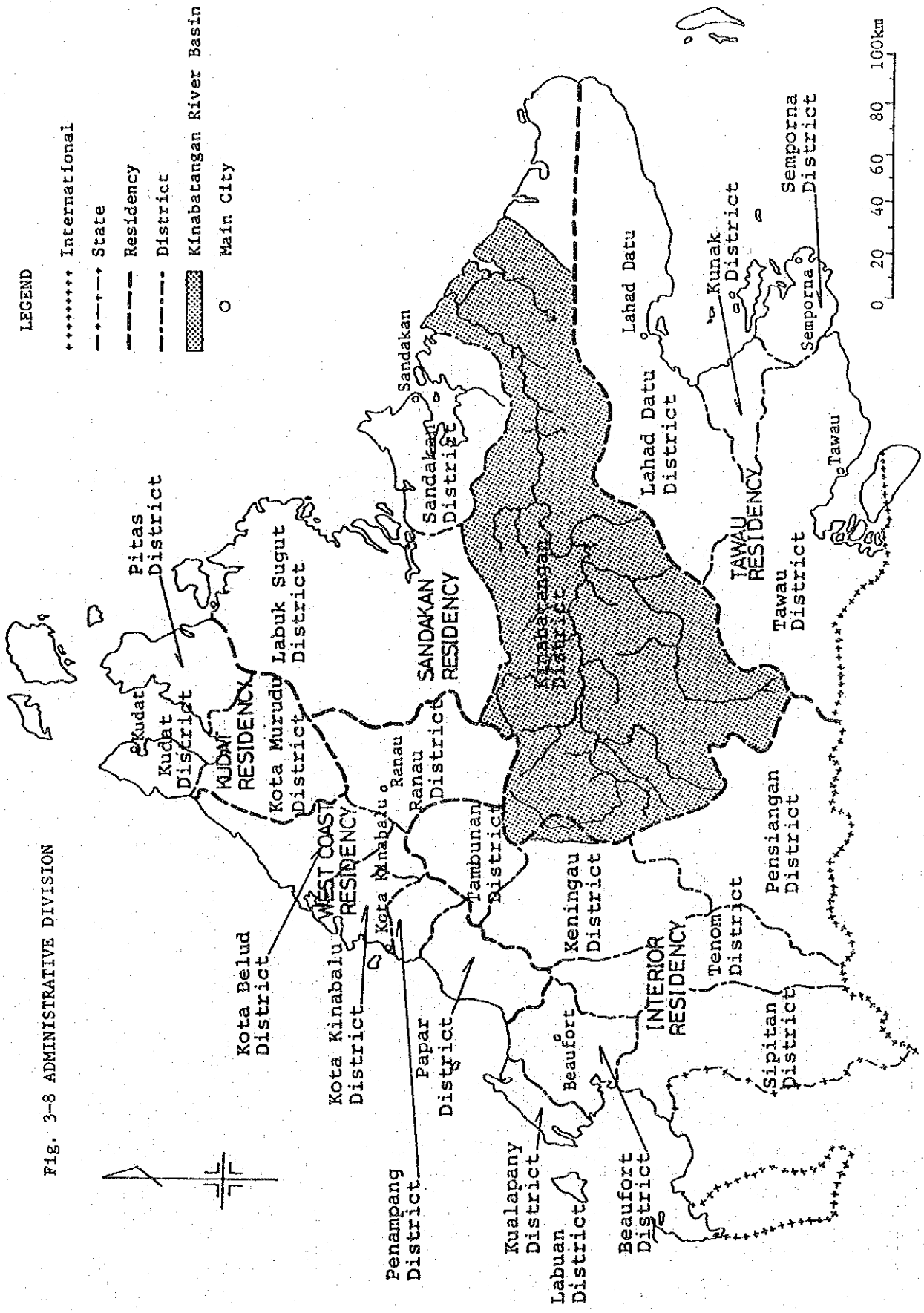


Fig. 3-9 SABAH GENERATING STATIONS, 1978

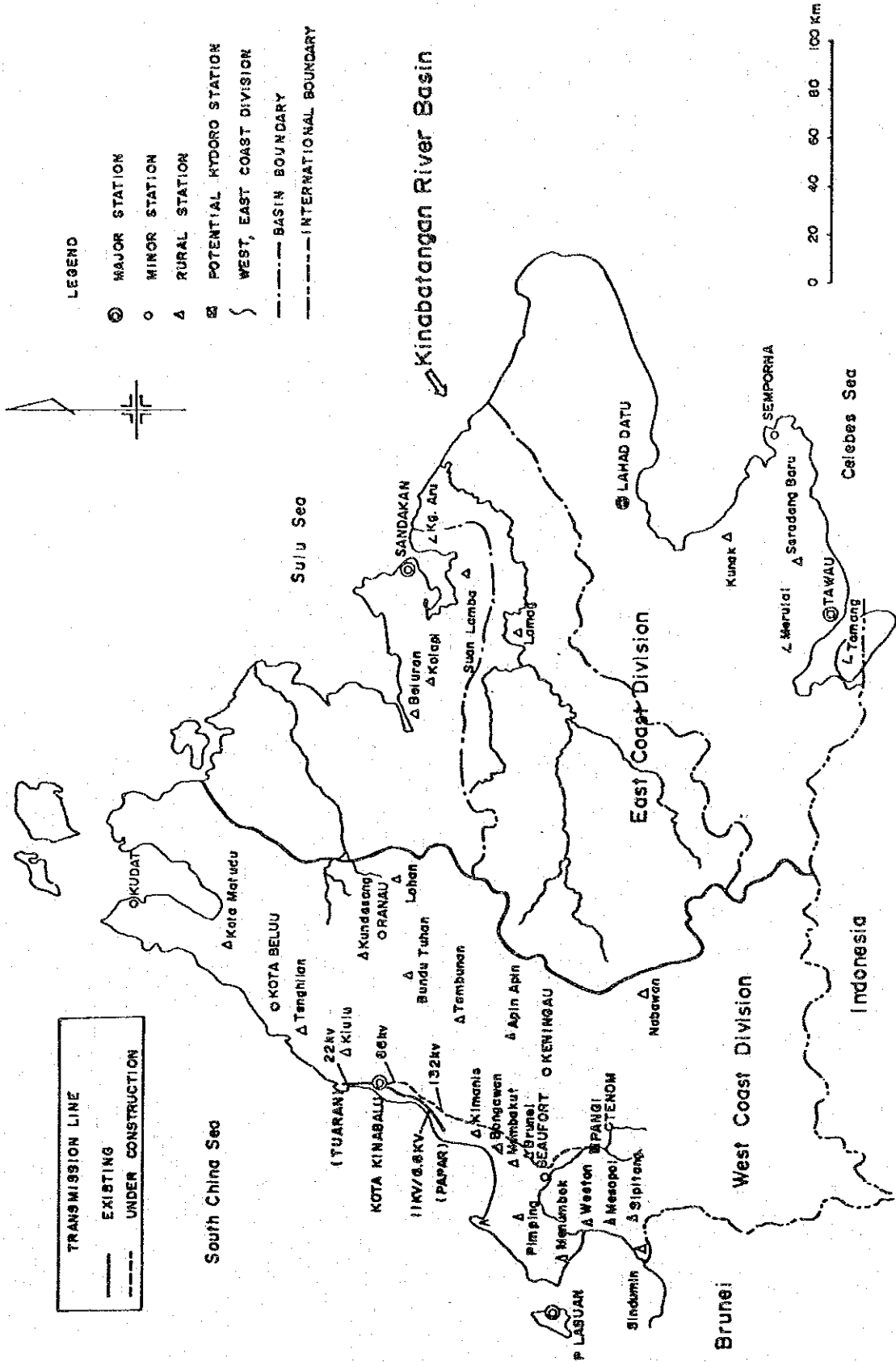


Fig. 3-10 DAIRY LOAD CURVE OF SANDAKAN

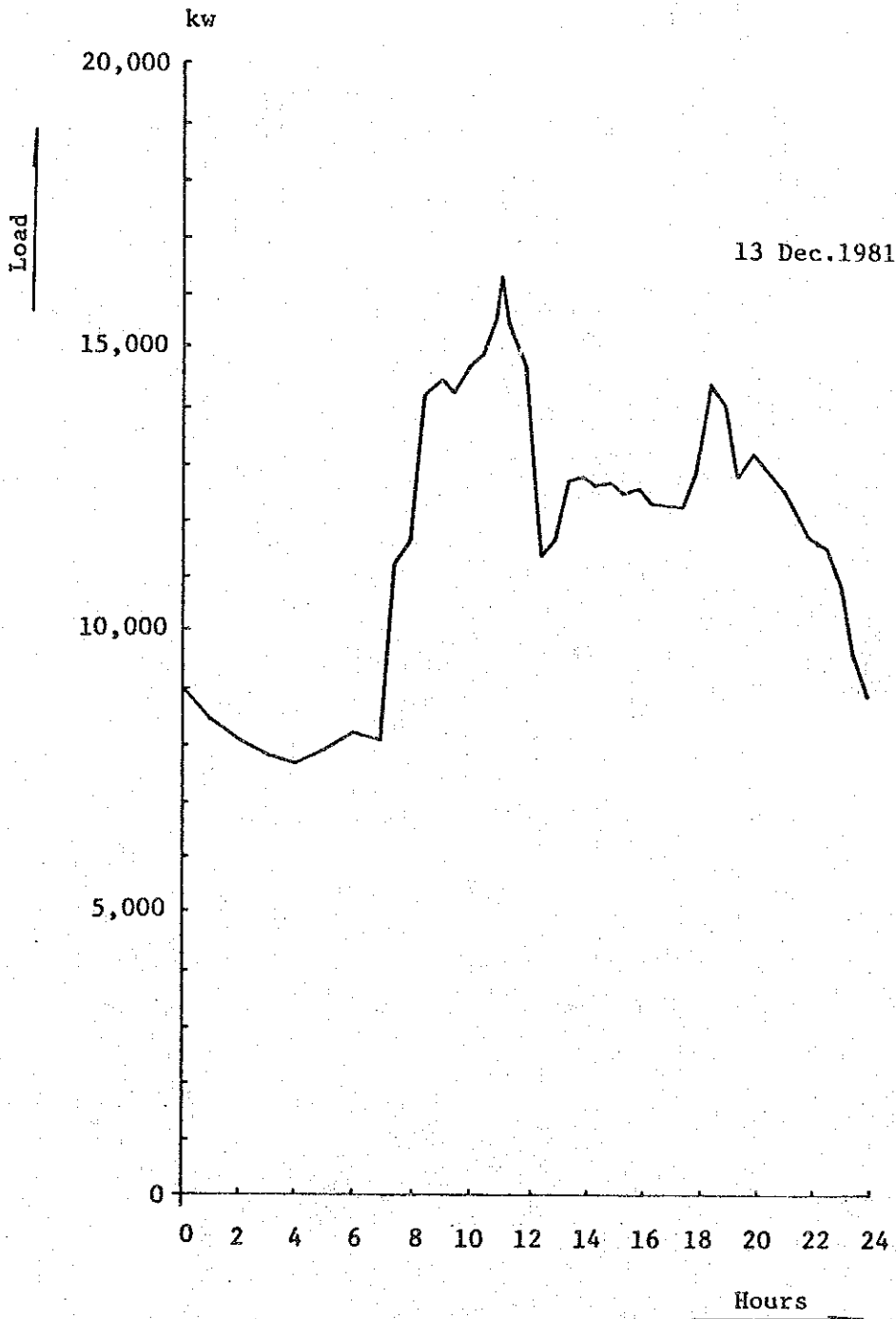


FIG. 4-1 LOCATION OF POSSIBLE DAMSITES

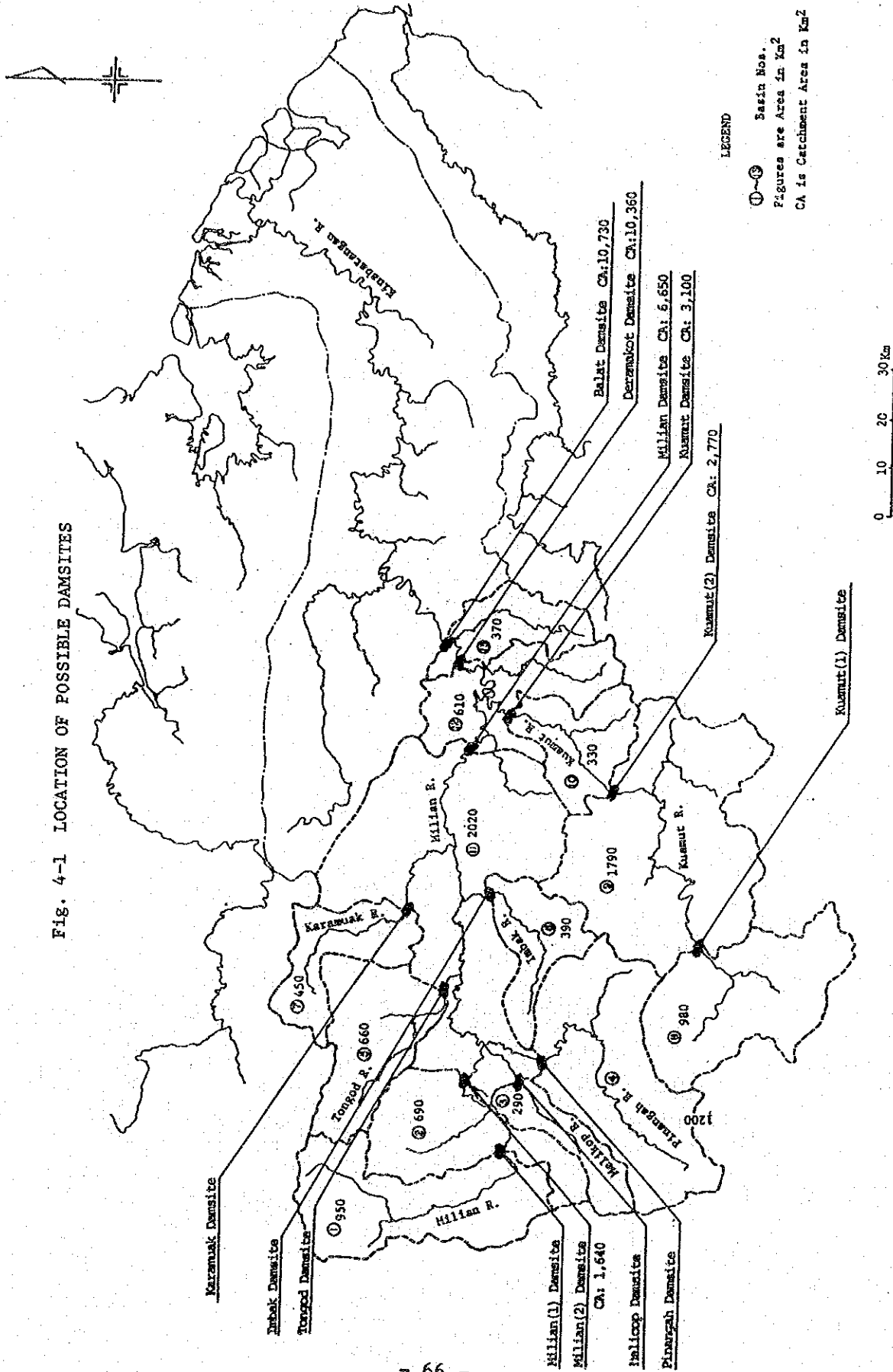


Fig. 4-2 DISTRIBUTION OF KAMPUNG BY GROUND HEIGHT

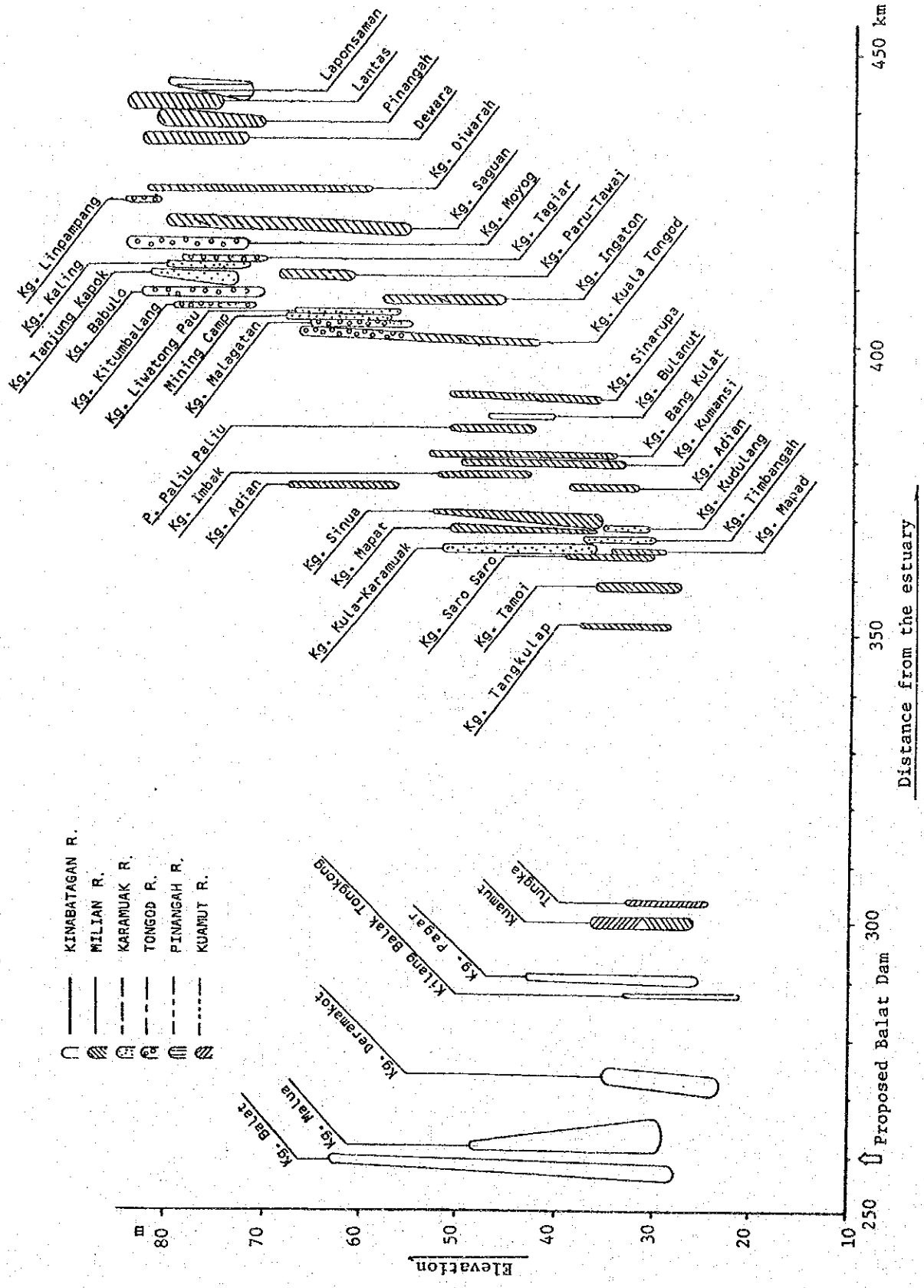


Fig. 4-3 SUBMERGED AREA BY BALAT DAM

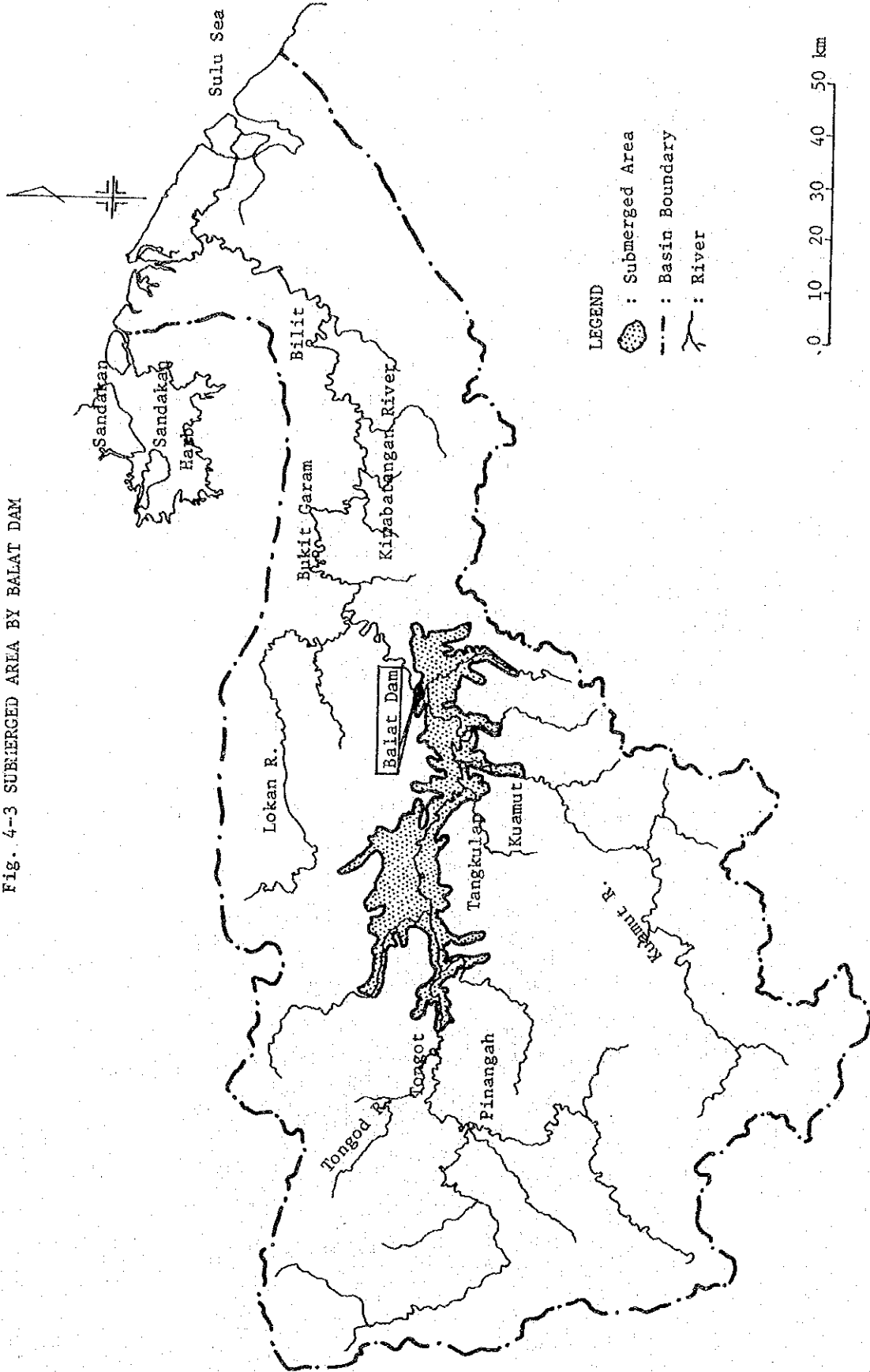


Fig. 4-4 ALLOCATION OF RESERVOIR STORAGE CAPACITY

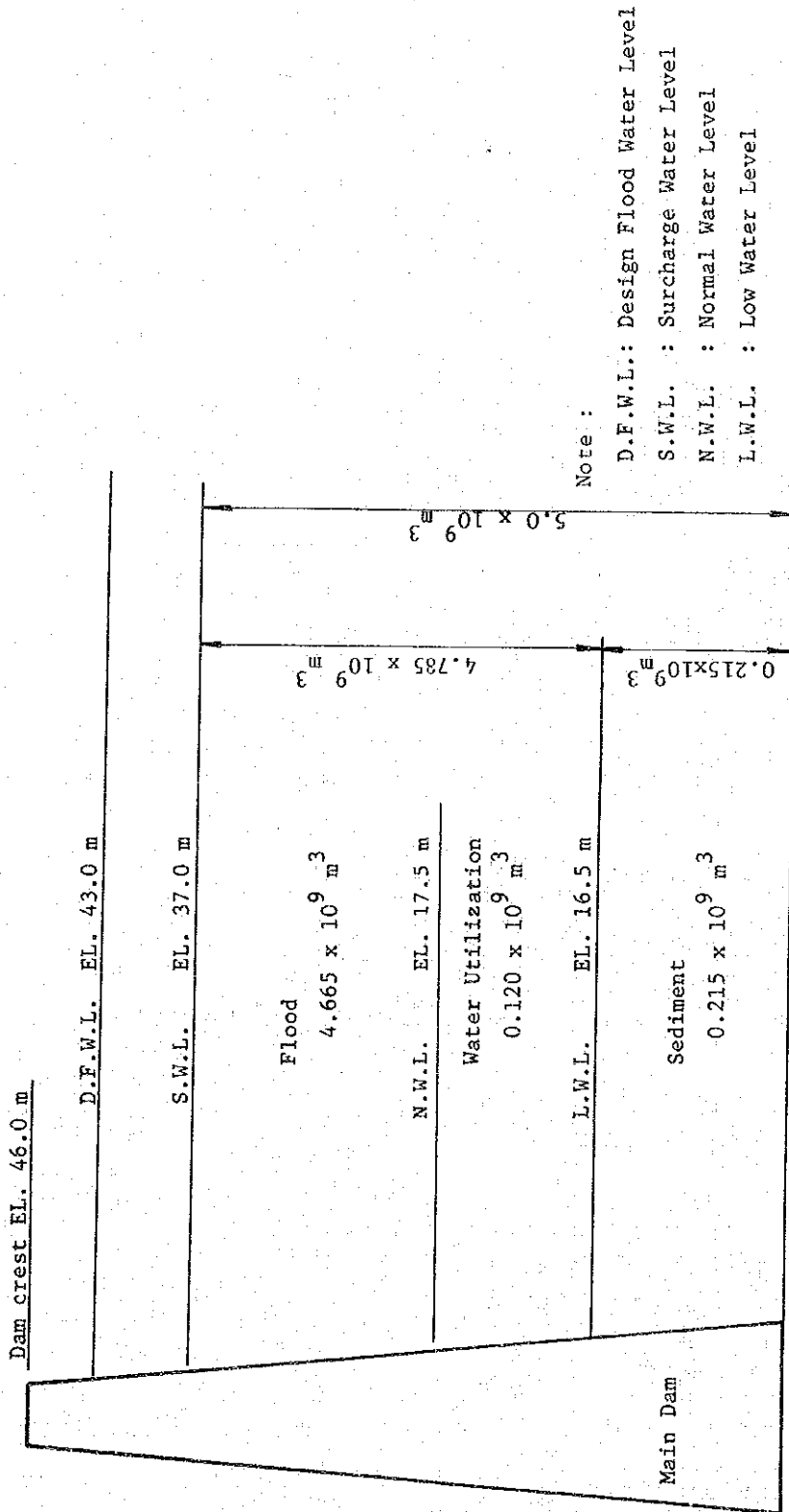


Fig. 4-5 DISTRIBUTION OF STANDARD PROJECT AND DESIGN FLOOD DISCHARGE

Unit : m³/s

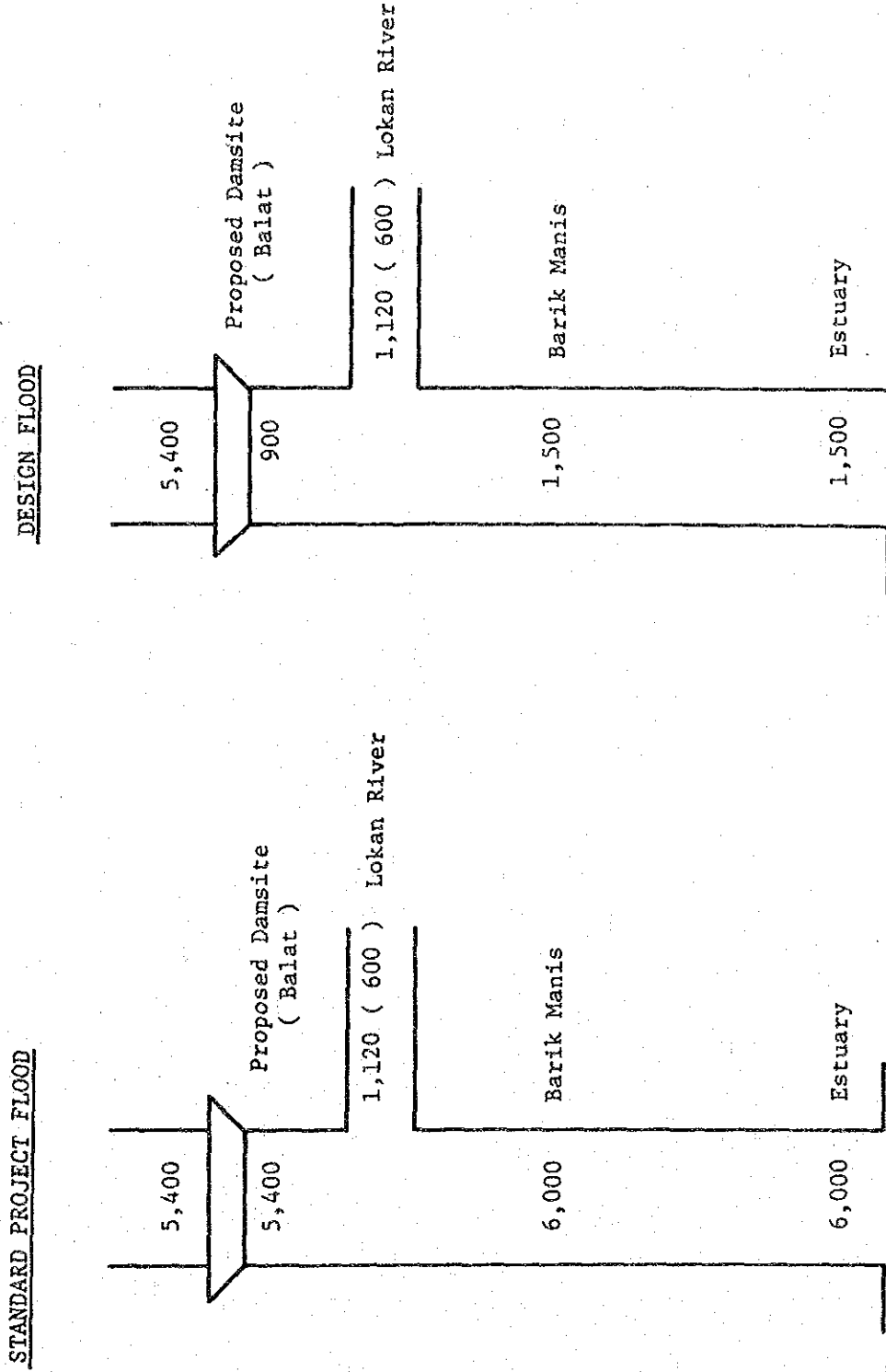


Fig. 4-6 HYDROGRAPHS OF STANDARD PROJECT AND DESIGN FLOOD

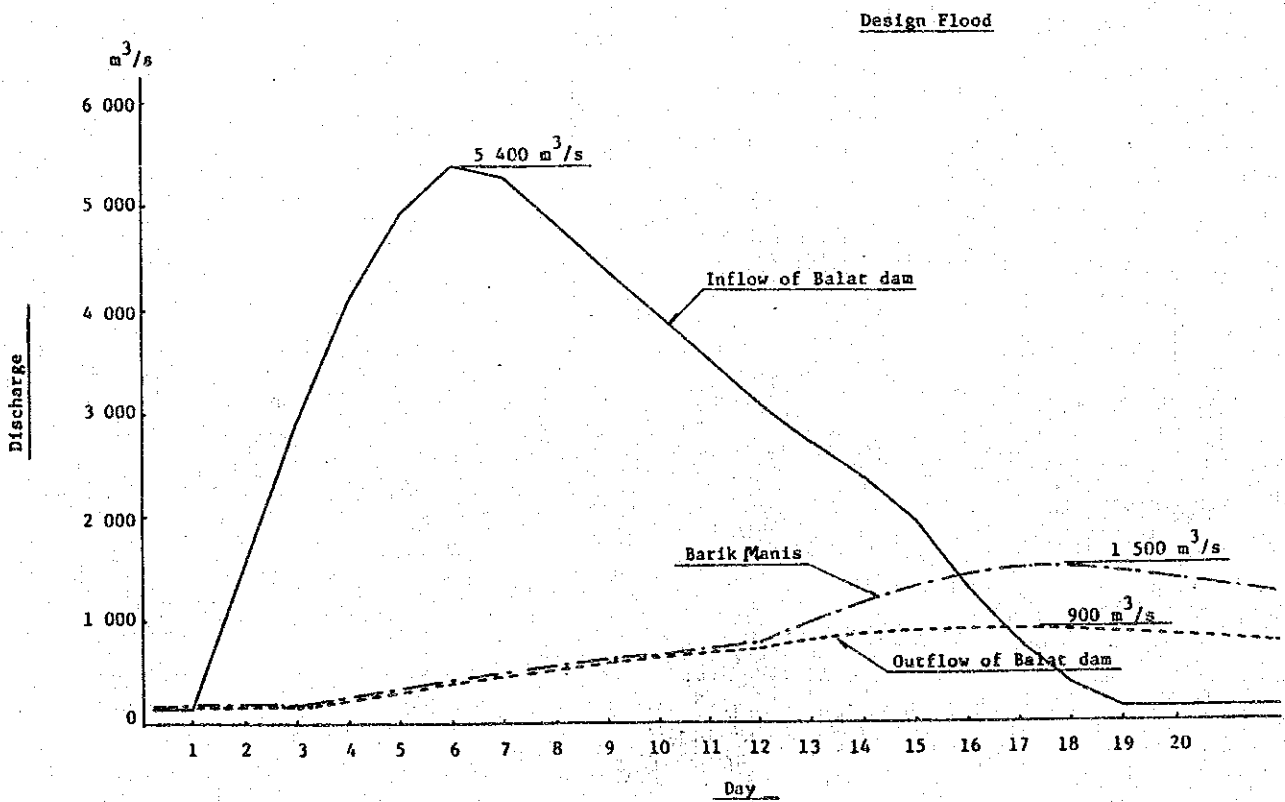
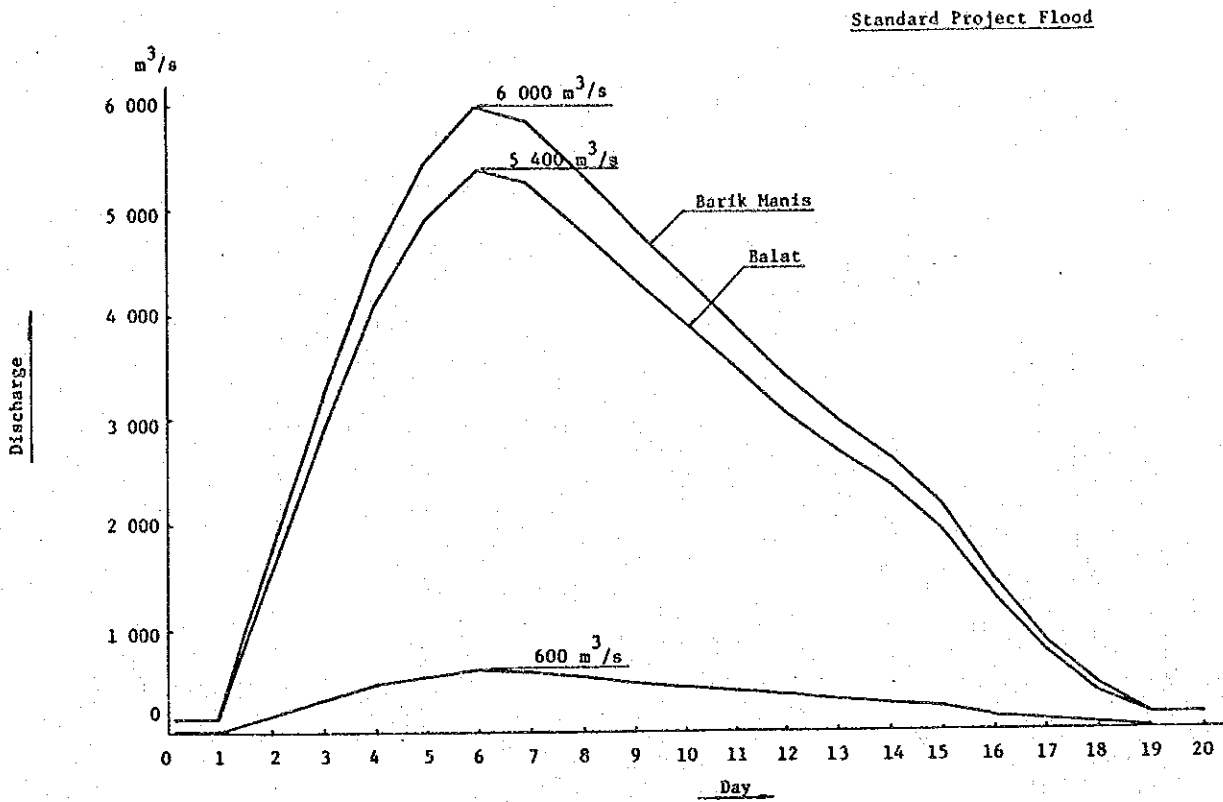


Fig. 4-7 LEAST CONSTRUCTION COST OF DAM AND RIVER IMPROVEMENT

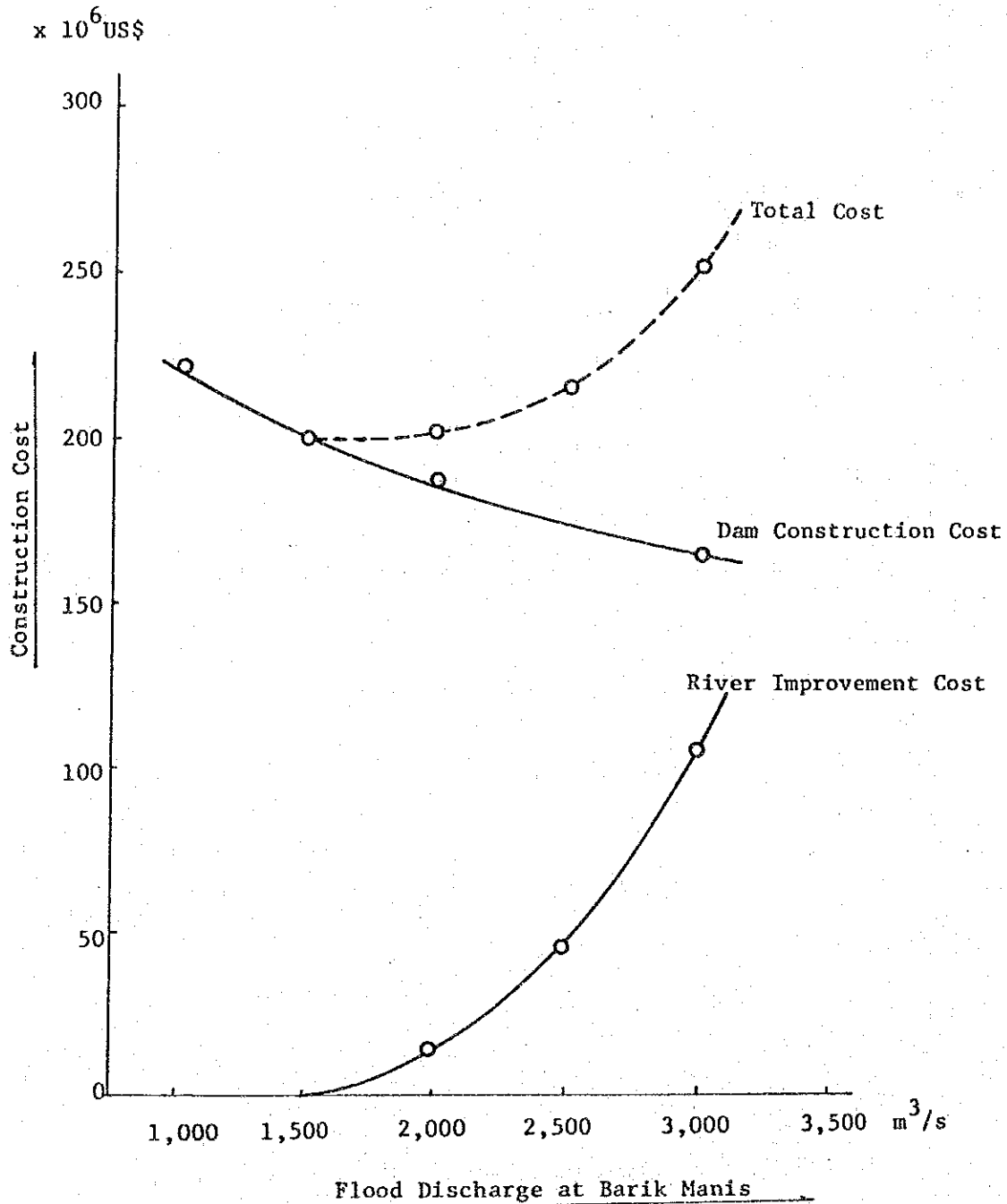


Fig. 4-8 POTENTIAL AGRICULTURAL DEVELOPMENT AREA

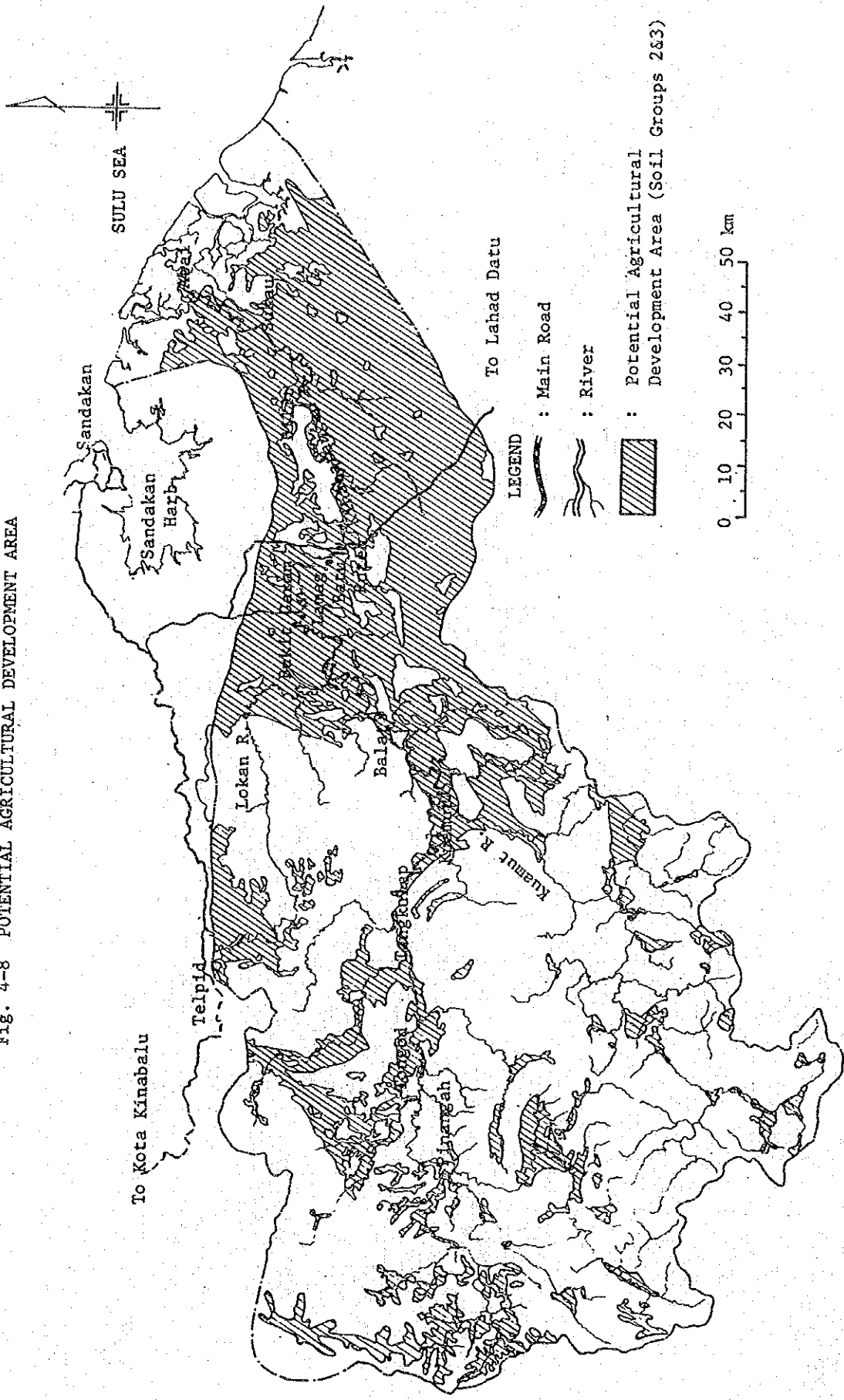
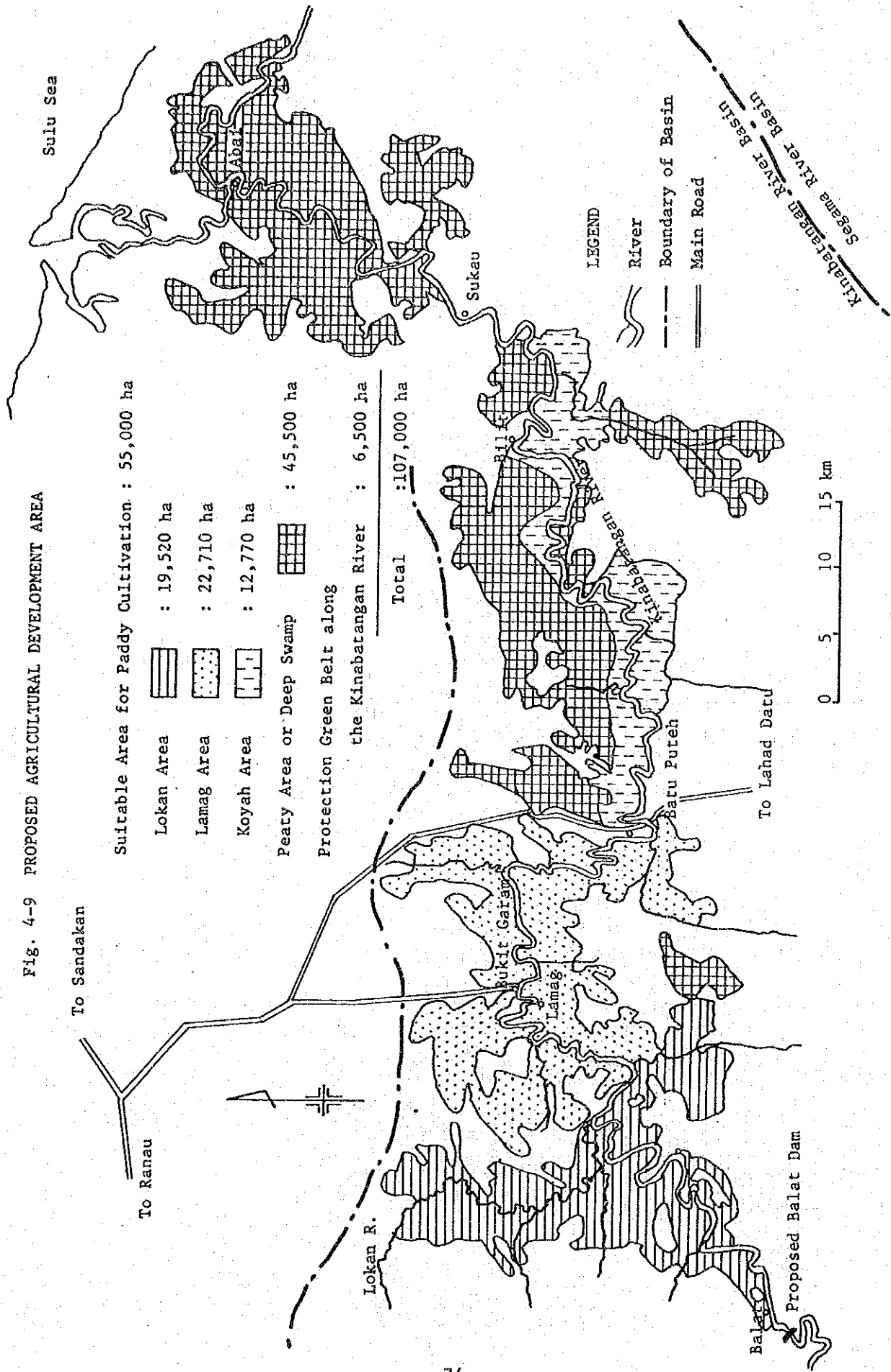


Fig. 4-9 PROPOSED AGRICULTURAL DEVELOPMENT AREA



Suitable Area for Paddy Cultivation : 55,000 ha

Lokan Area : 19,520 ha

Lamag Area : 22,710 ha

Koyah Area : 12,770 ha

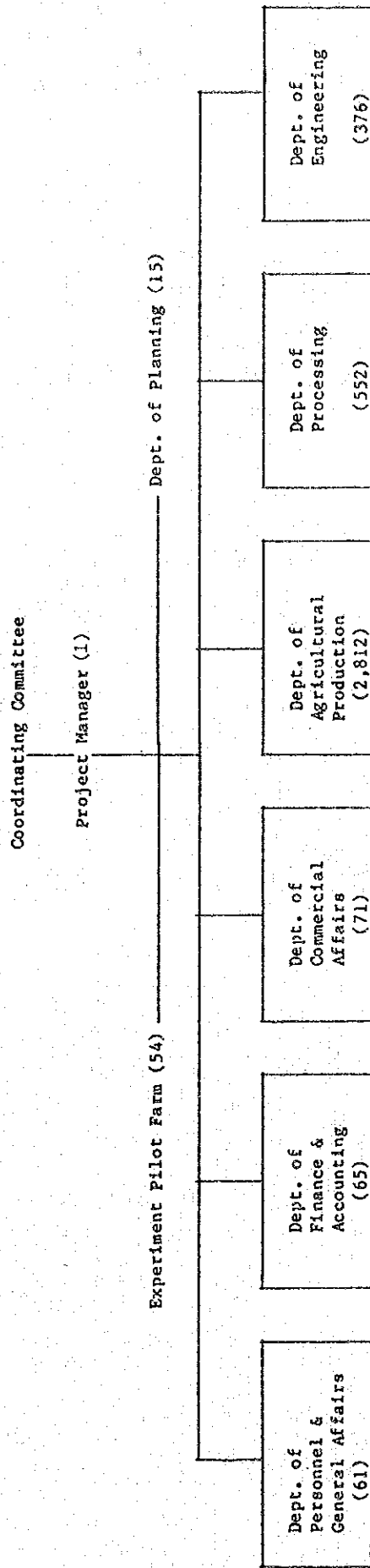
Peaty Area or Deep Swamp : 45,500 ha

Protection Green Belt along

the Kinabatangan River : 6,500 ha

Total : 107,000 ha

Fig. 4-10 FARMING ORGANIZATION



Note : Total required manpower would be 4007.

() ; Number of required stuff.

Fig. 4-11 PROPOSED CROPPING PATTERN AND METEOROLOGICAL CONDITION

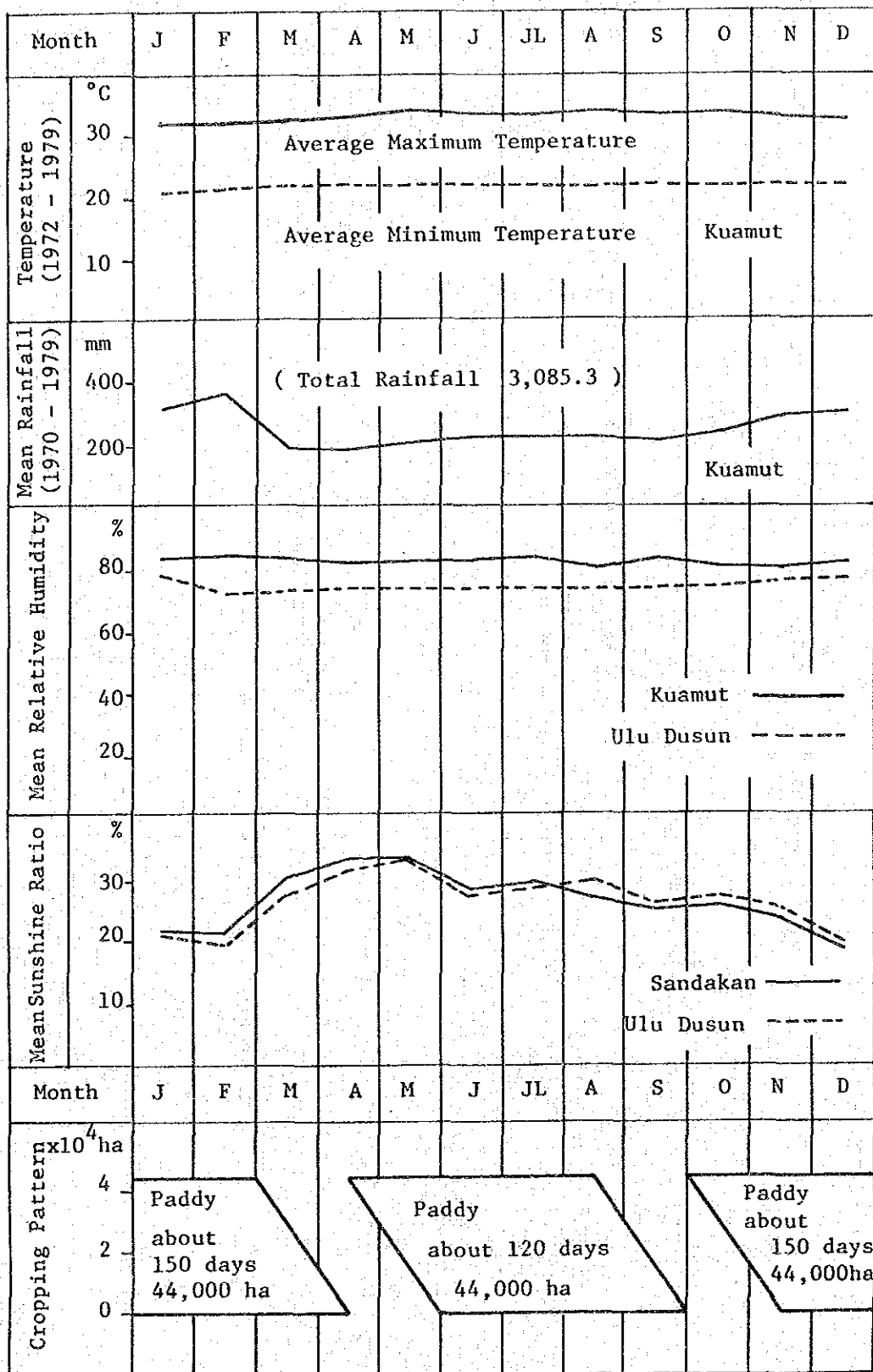


Fig. 4-12 PROPOSED AREA FOR PADDY DEVELOPMENT

Lokan Area :		Lamag Area :		Koyah Area :		LEGEND	
Block No.	Area (ha)	Block No.	Area (ha)	Block No.	Area (ha)	○	Block Number (23 blocks)
1	860	10	1,860	17	2,160	●	Proposed Rice Mill (11 places)
2	960	11	2,960	18	1,010	★	Proposed Pumping Station (23 stations)
3	2,750	12	4,240	19	1,000		
4	3,780	13	2,780	20	1,860		
5	1,130	14	2,120	21	1,180		
6	2,220	15	2,960	22	1,610		
7	1,880	16	1,240	23	1,390		
8	1,240						
9	810						
Total	15,630	Total	18,160	Total	10,210		

Proposed area for paddy development : 44,000 ha.

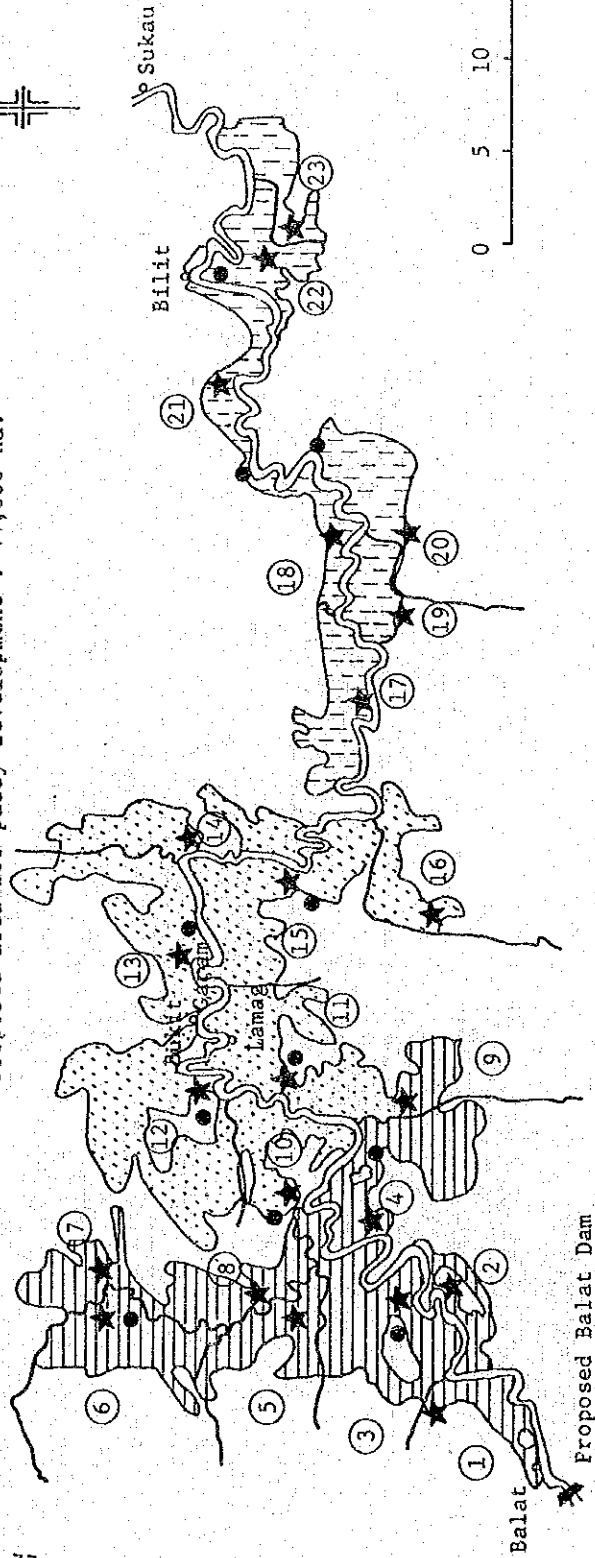


Fig. 4-13 REQUIRED RESERVOIR CAPACITY FOR WATER REQUIREMENT

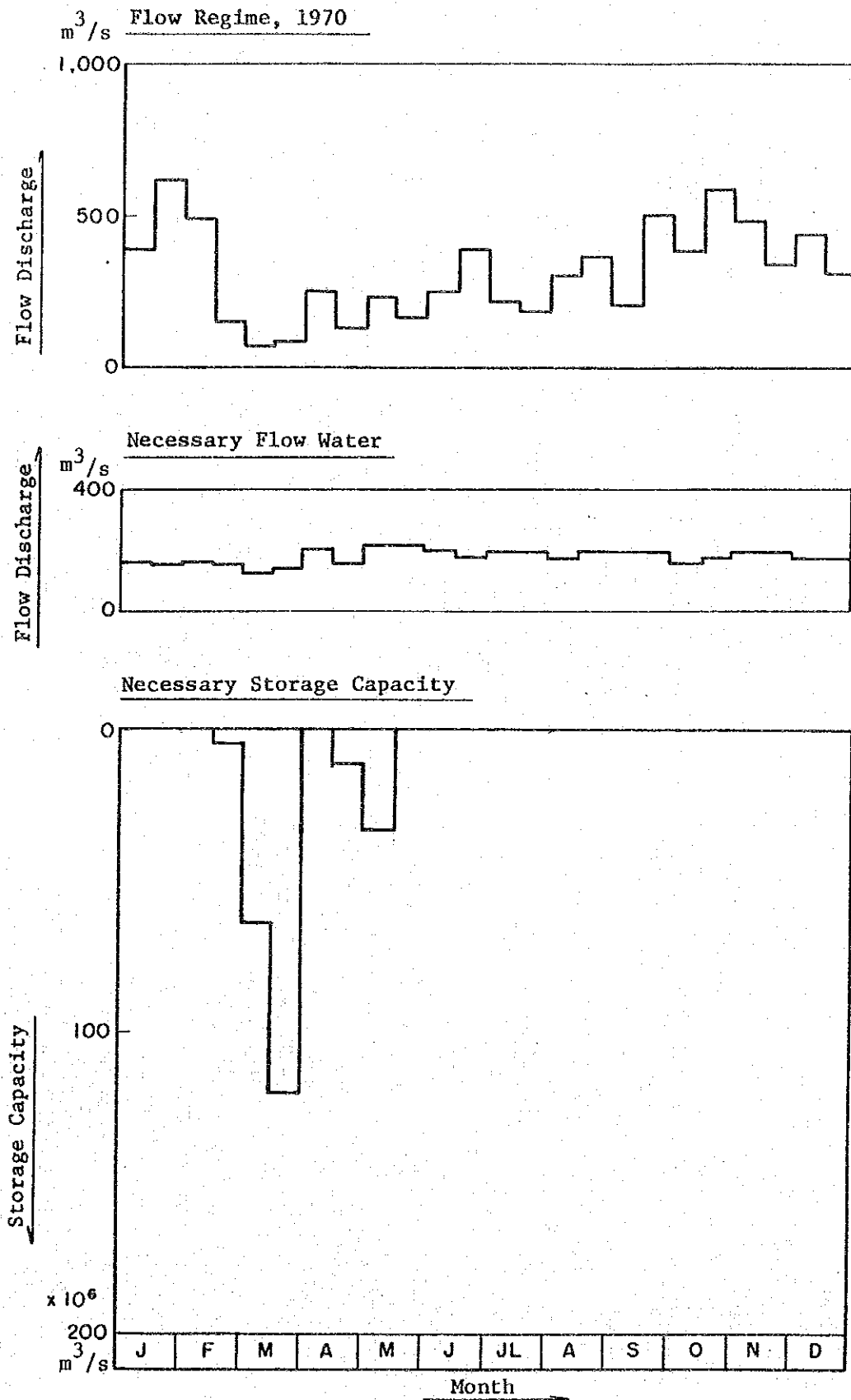


Fig. 4-14 FLOW DIAGRAM OF MAXIMUM DIVERSION REQUIREMENT

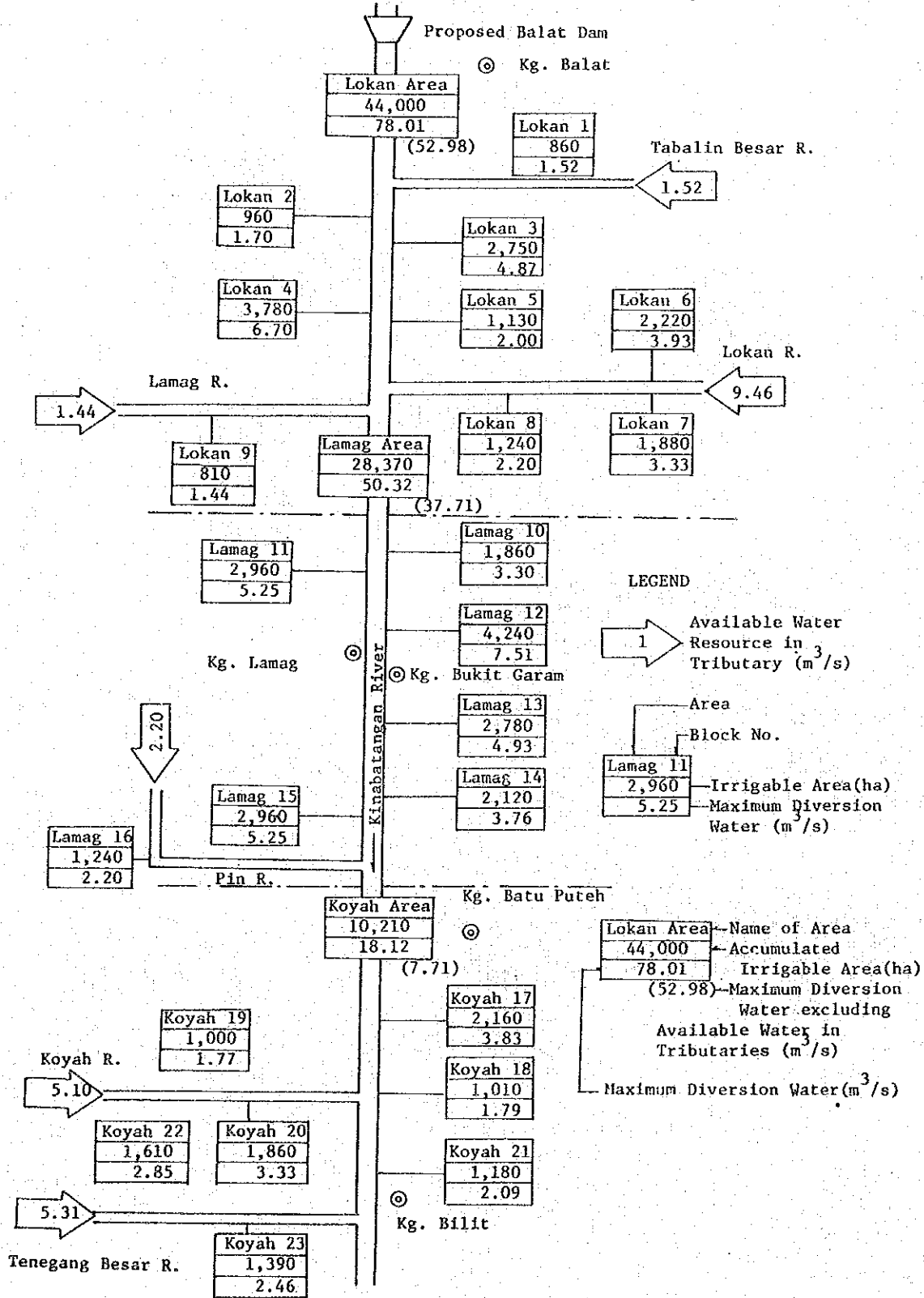
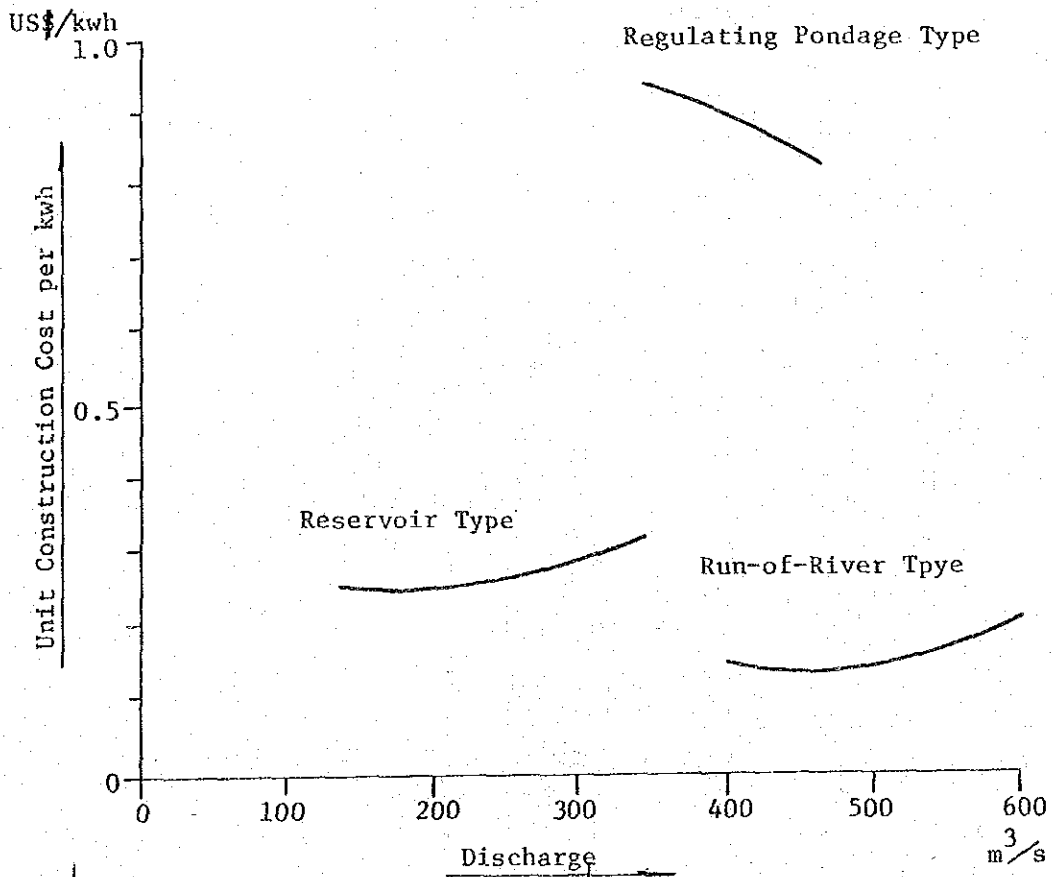


Fig. 4-15 COMPARISON OF GENERATING TYPE



Sulu Sea

Fig. 4-16 ROUTE MAP OF TRANSMISSION LINE

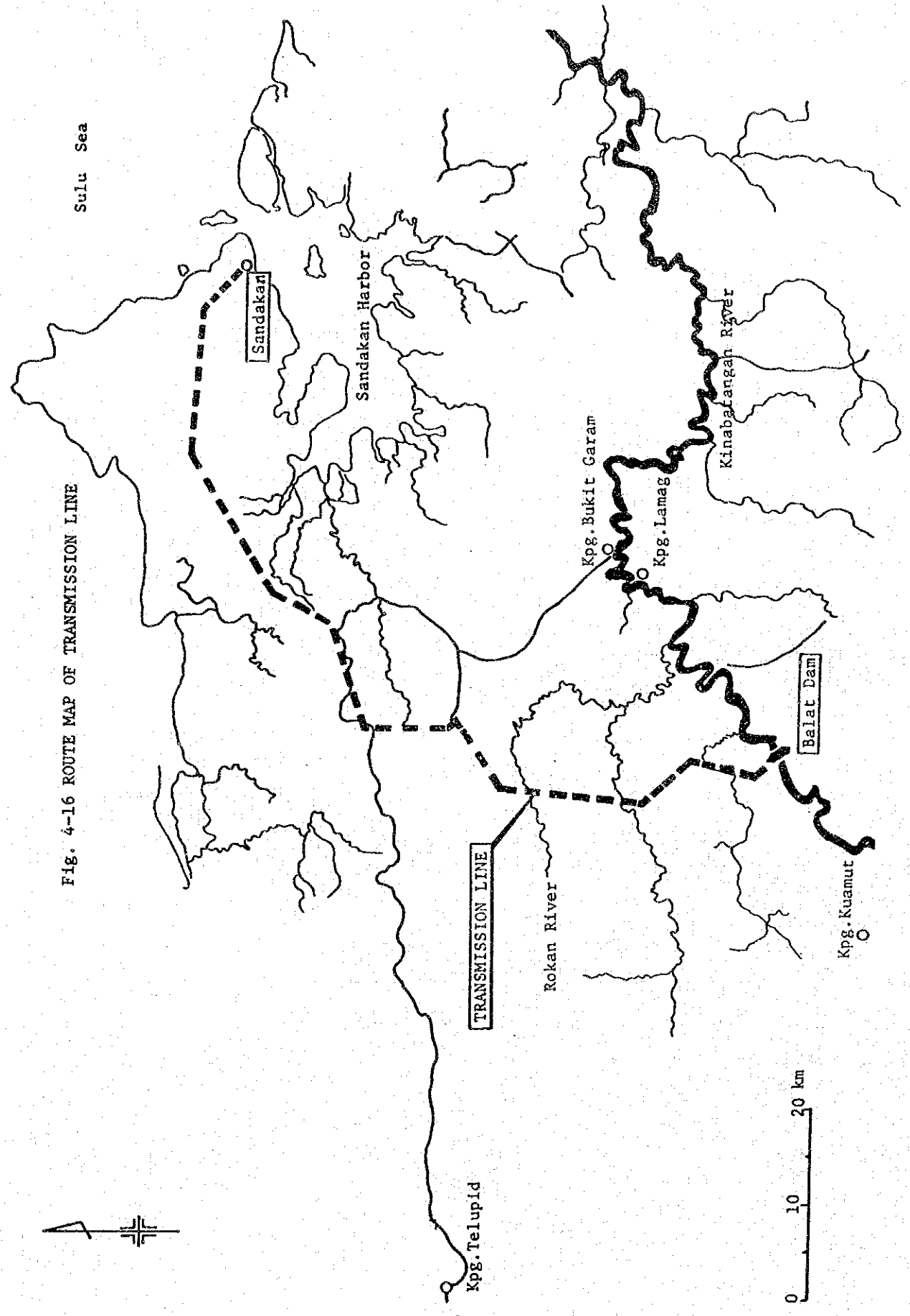


Fig. 5-1 PLAN OF BALAT DAM

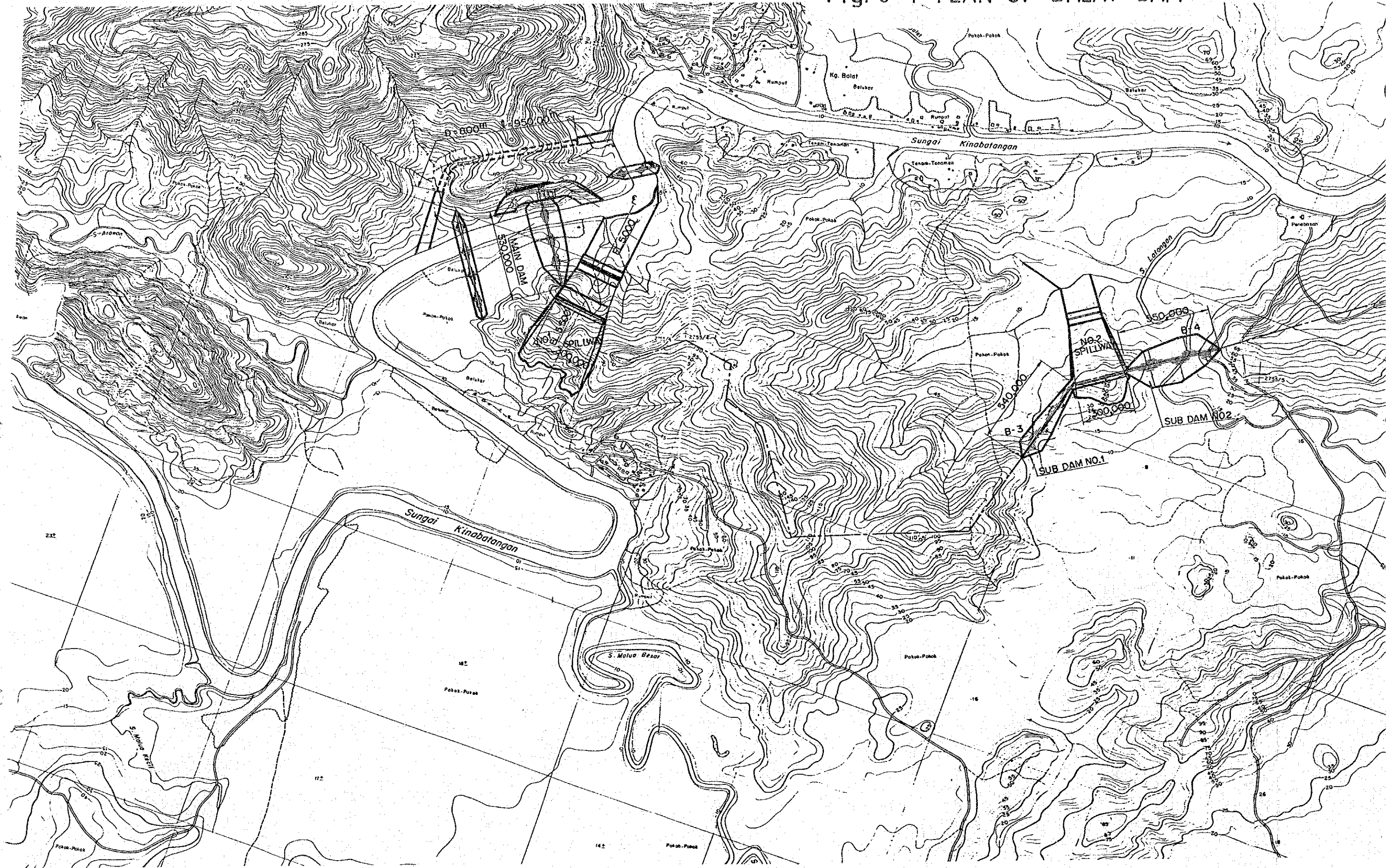
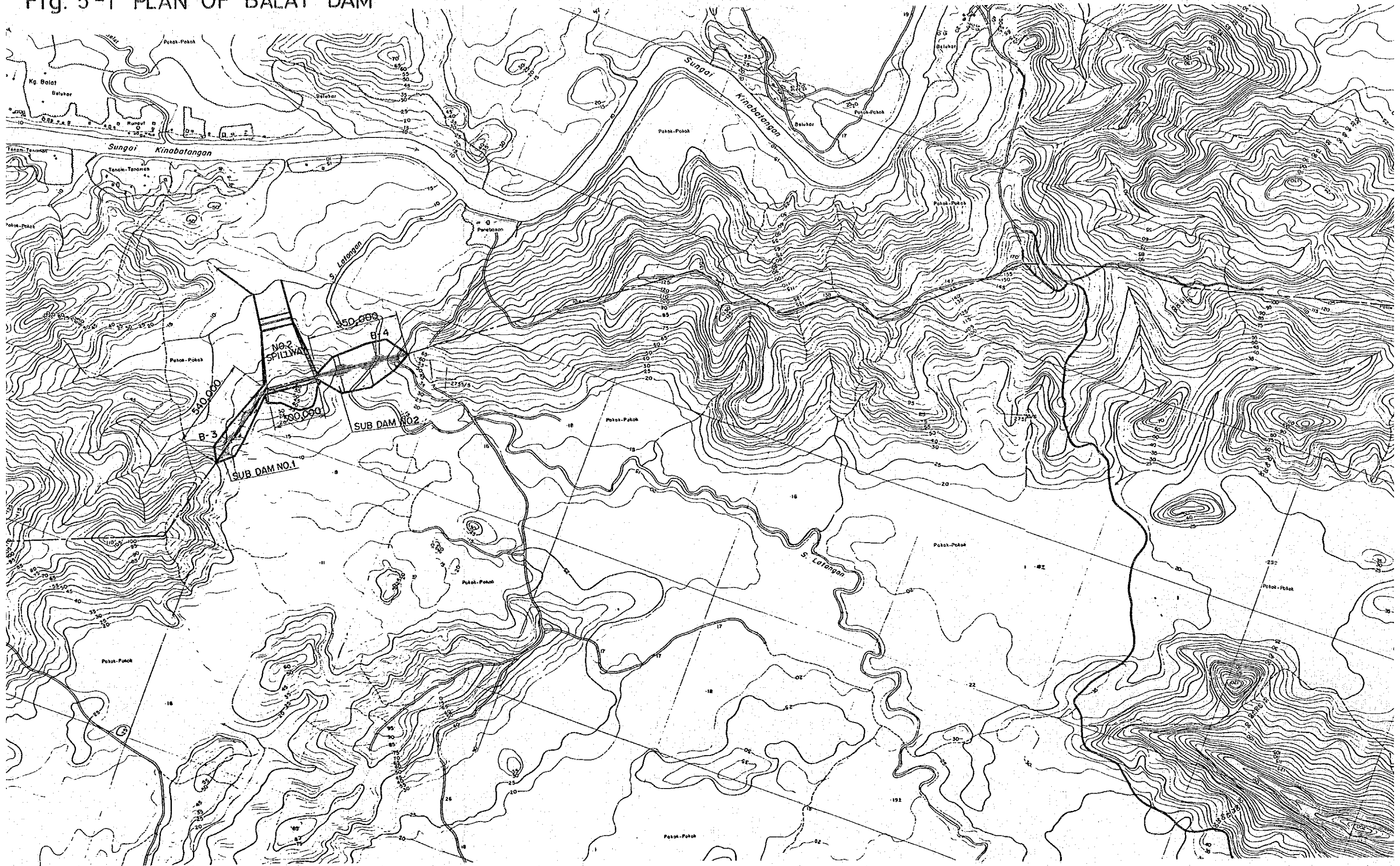
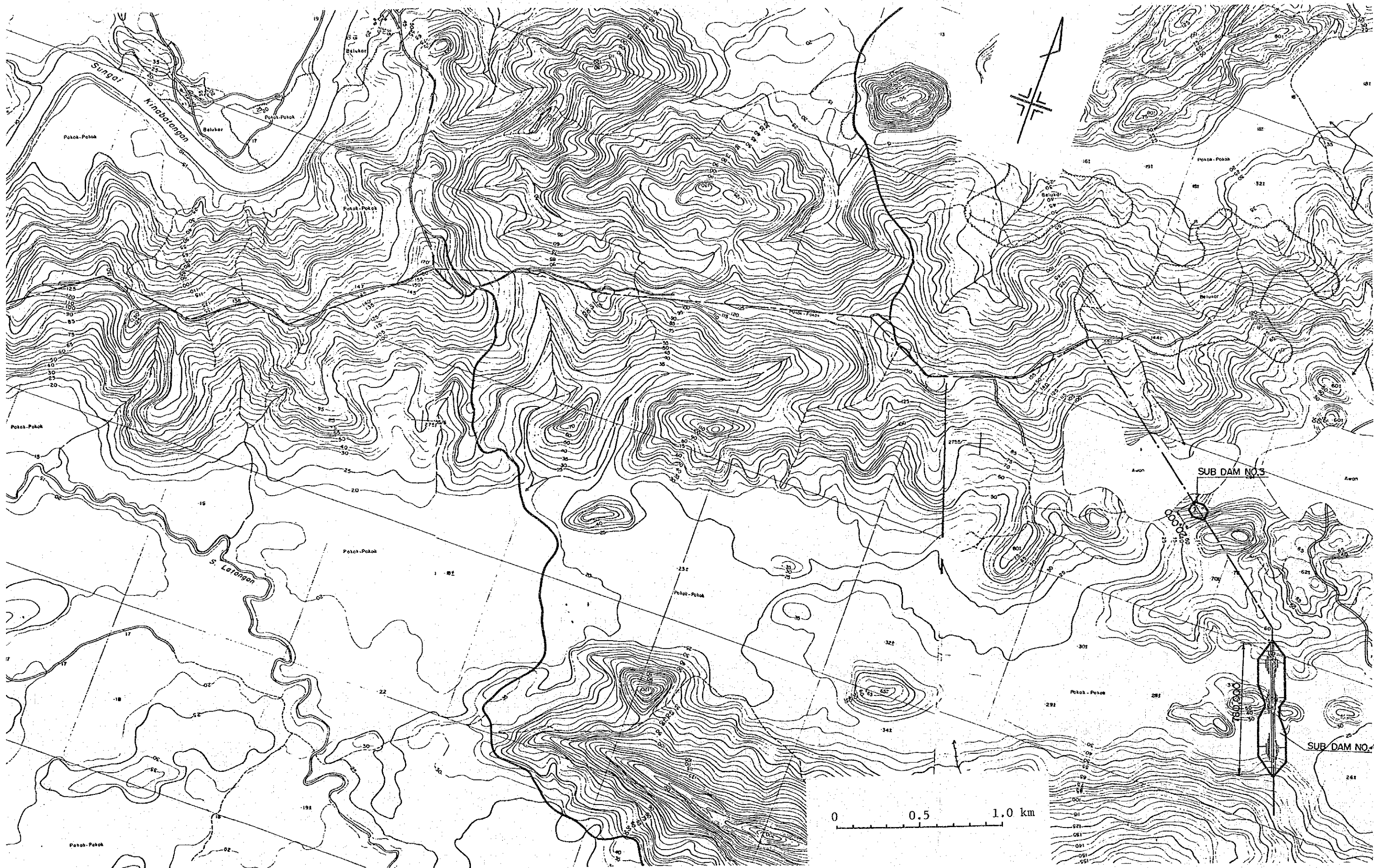


Fig. 5-1 PLAN OF BALAT DAM





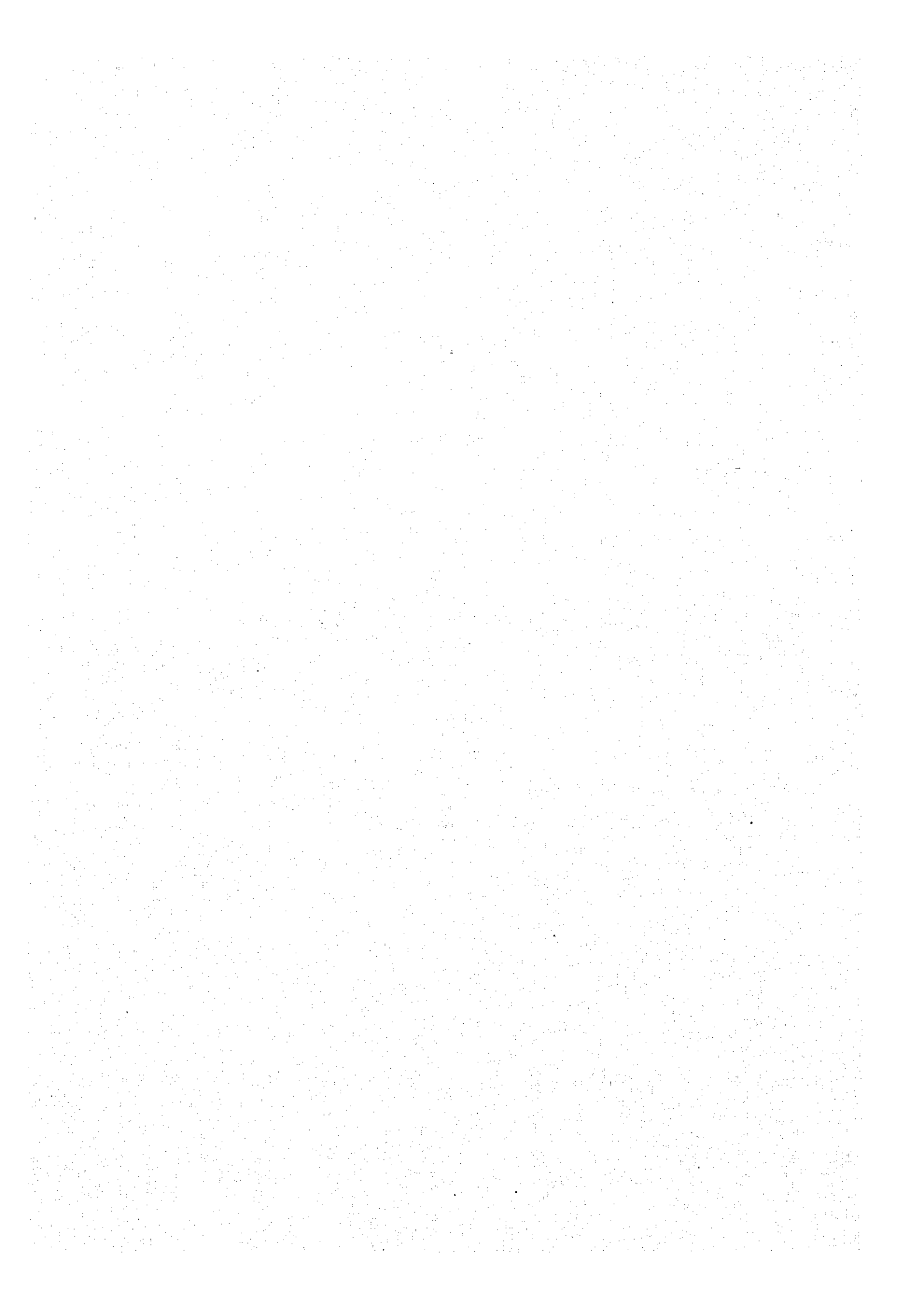


FIG. 5-2 PROFILE ALONG AXIS OF DAM

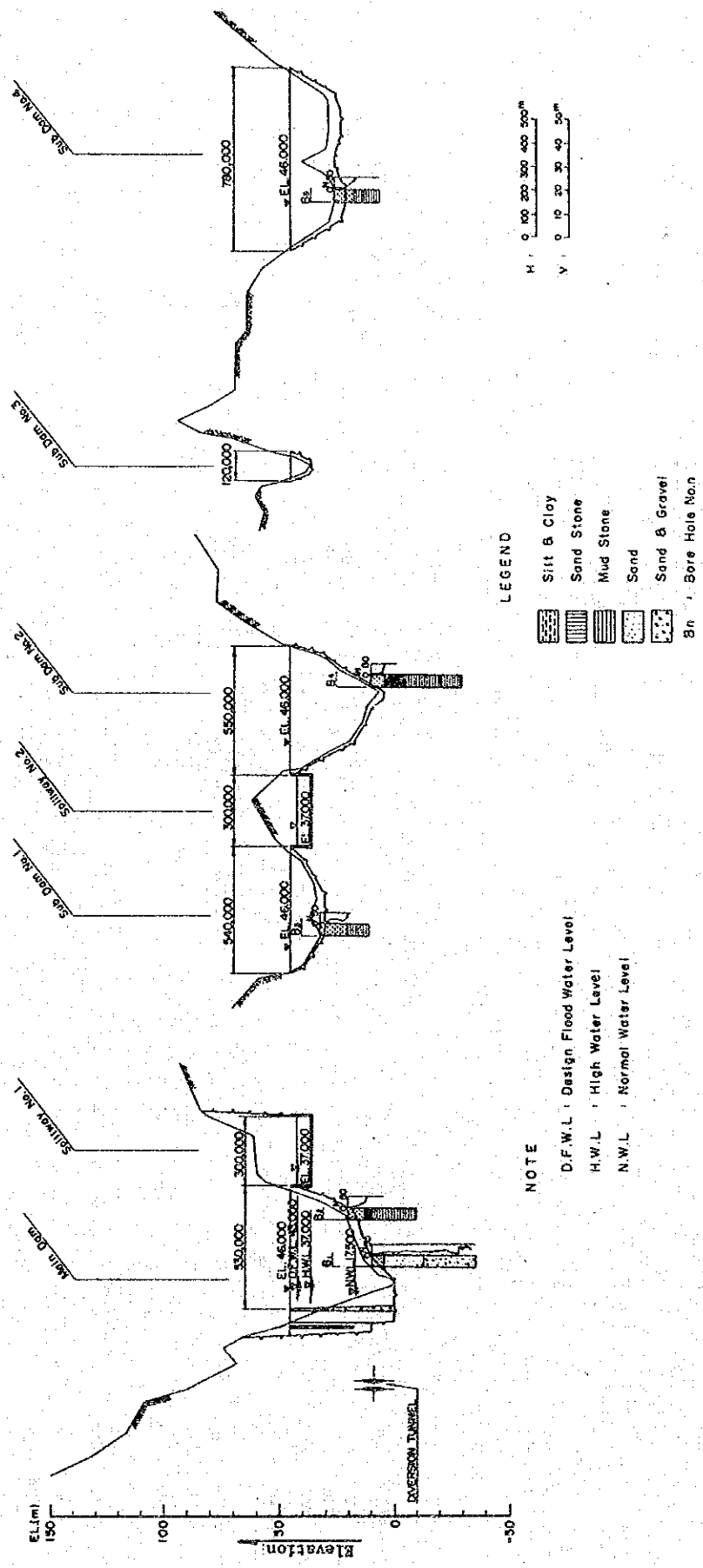


Fig. 5-3 TYPICAL CROSS-SECTION OF DAM

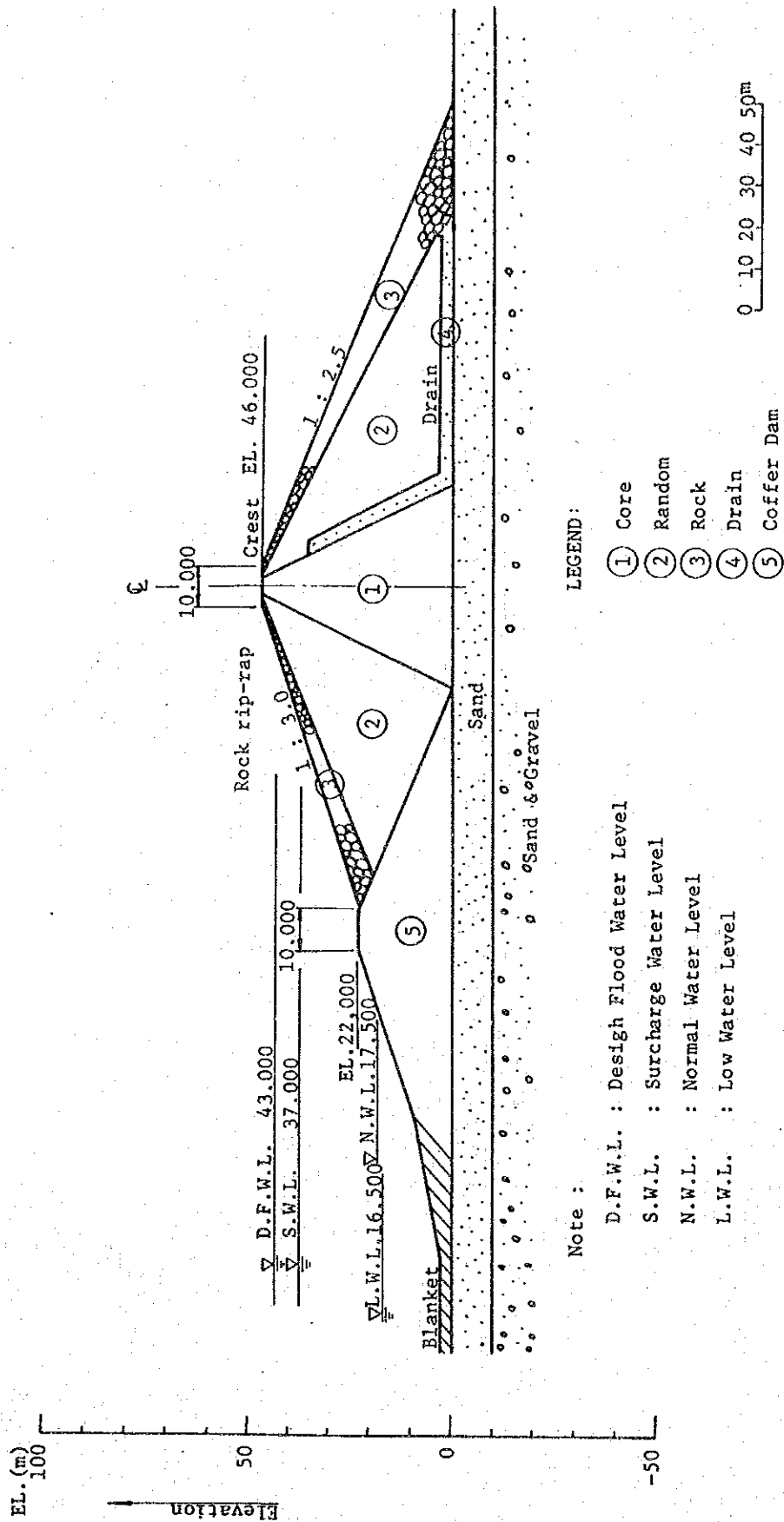


Fig. 5-4 PLAN OF OUTLET FACILITY

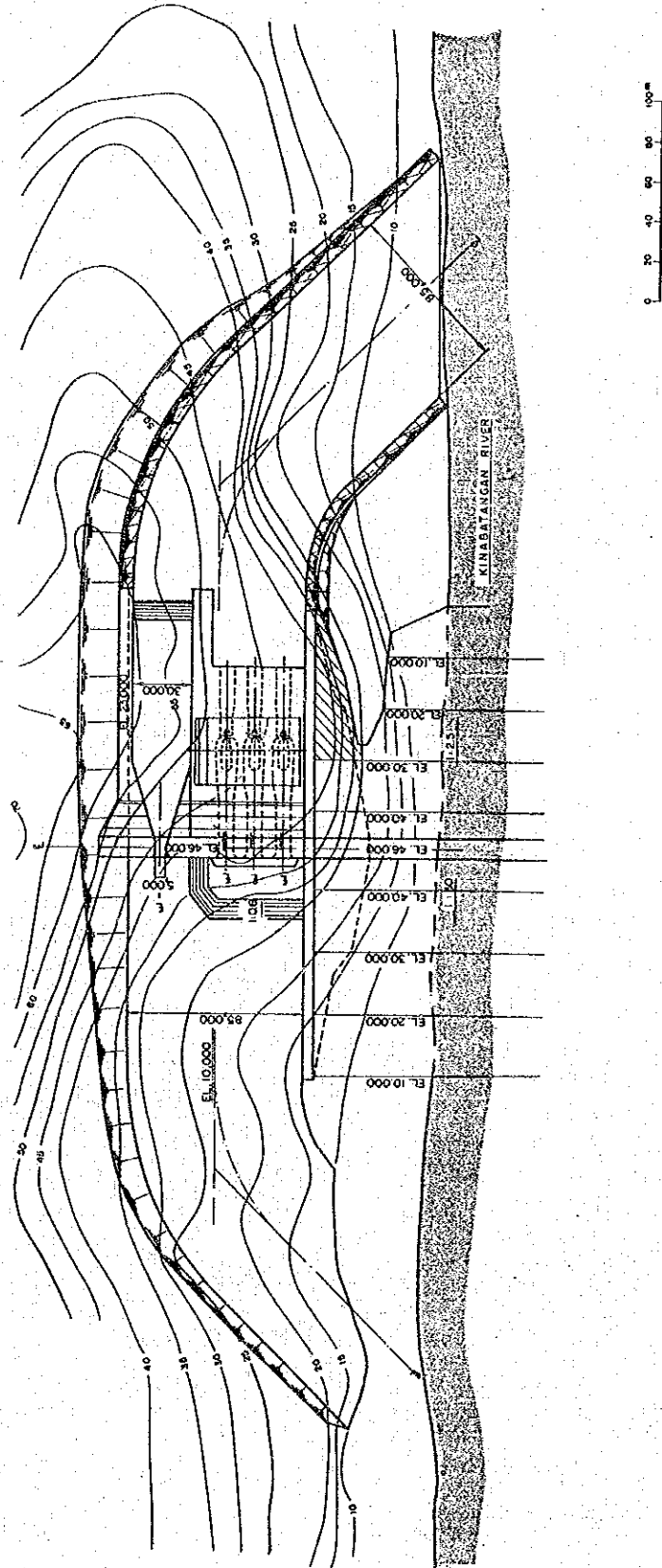


Fig. 5-5 TYPICAL LAYOUT OF FIELD STRUCTURE

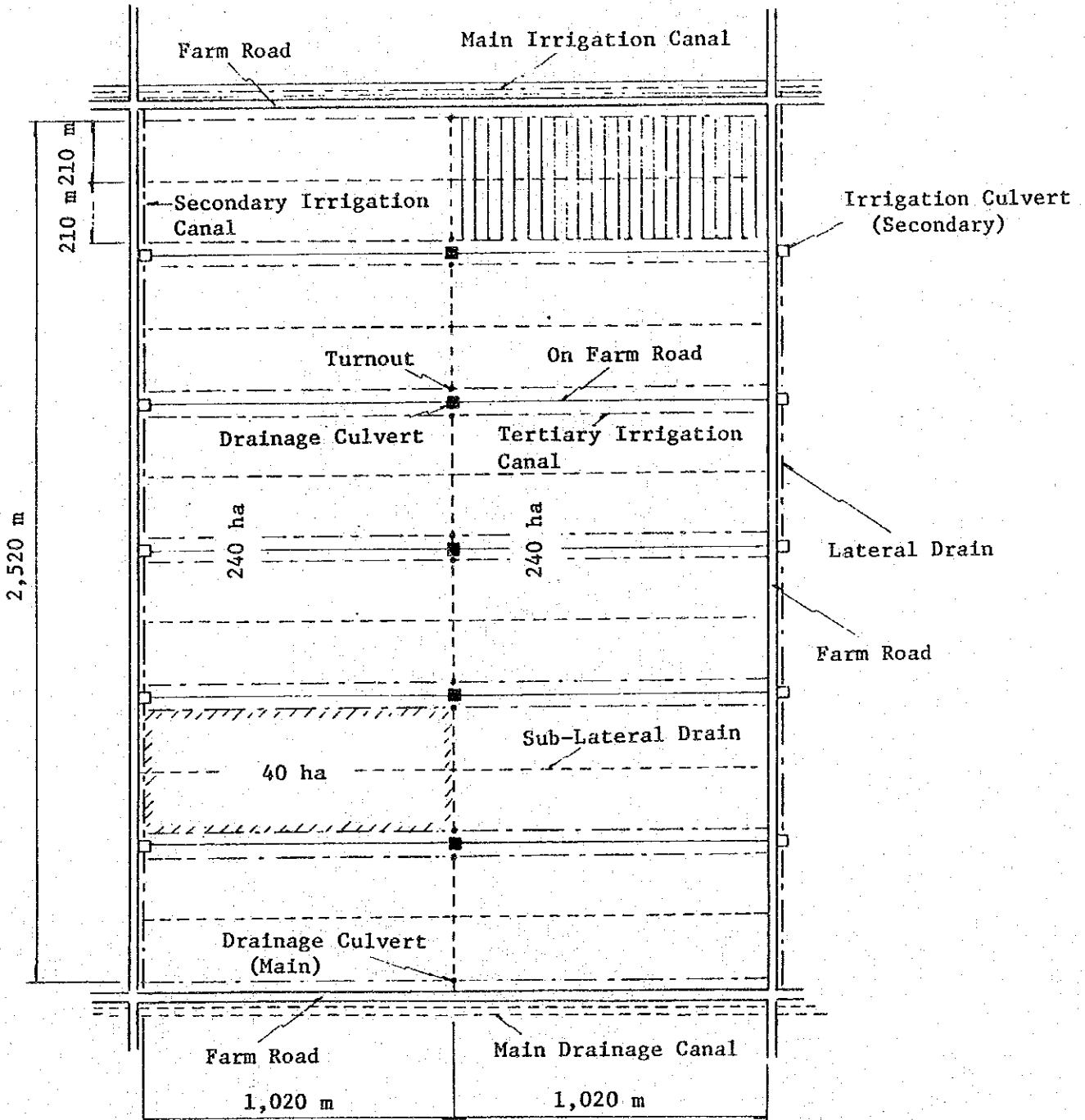
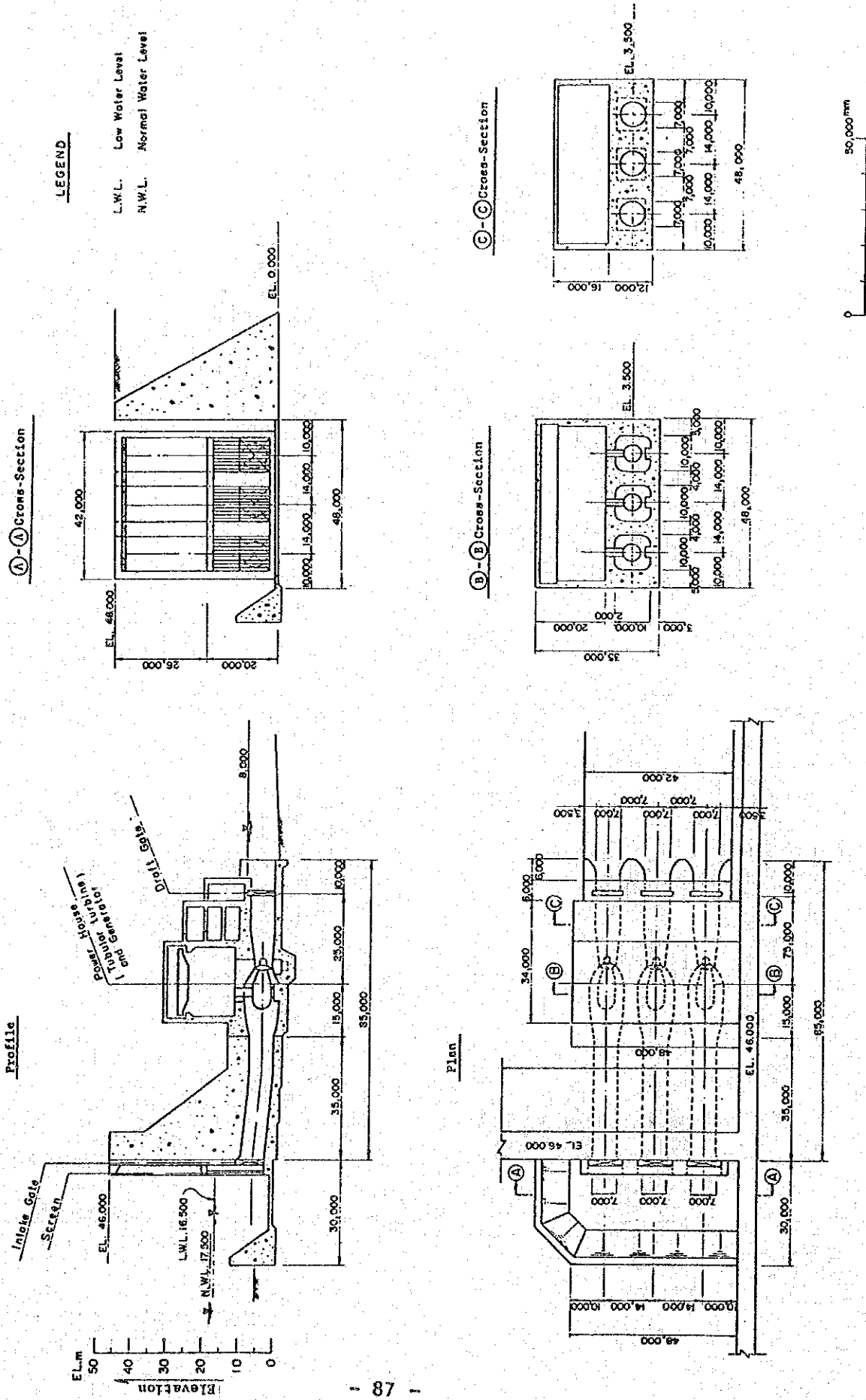


Fig. 5-6 PLAN AND CROSS-SECTION OF HYDRO POWER STATION



LEGEND

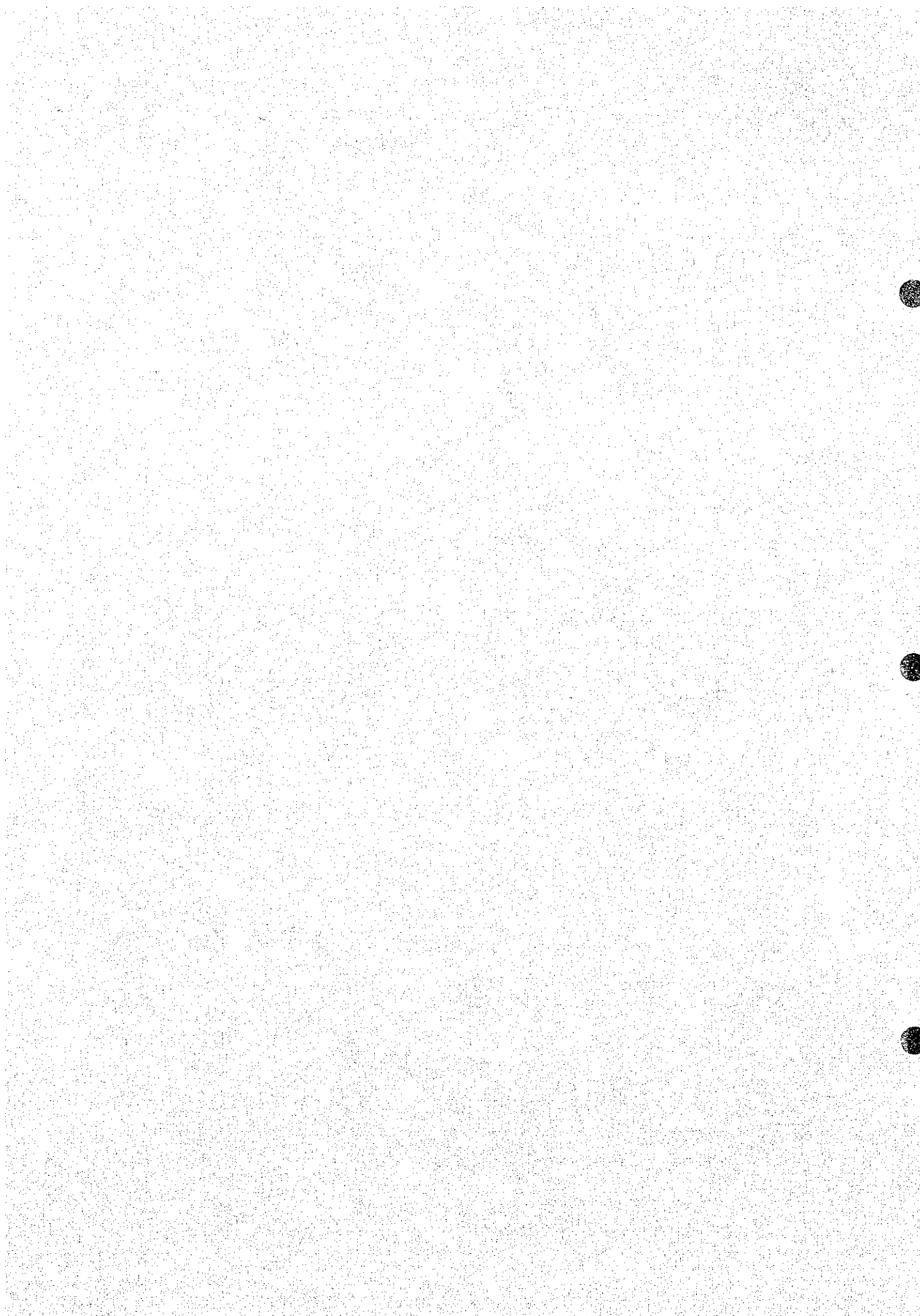
L.W.L. Low Water Level
 N.W.L. Normal Water Level



Fig. 6-1 CONSTRUCTION SCHEDULE

WORK ITEM	1982 1st YEAR		1983 2nd YEAR		1984 3rd YEAR		1985 4th YEAR		1986 5th YEAR		1987 6th YEAR		1988 7th YEAR		1989 8th YEAR		1990 9th YEAR		1991 10th YEAR		1992 11th YEAR			
	4	7	10	4	7	10	4	7	10	4	7	10	4	7	10	4	7	10	4	7	10	4	7	10
F/S																								
PREPARATION	For Detailed Design For Construction																							
ENGINEERING SERVICE	For Detailed Design For Construction																							
LAND ACQUISITION	[Bar chart showing activity from 1984 to 1992]																							
ACCESS ROAD	[Bar chart showing activity from 1985 to 1987]																							
PREPARATORY	[Bar chart showing activity from 1985 to 1987]																							
RIVER DIVERSION	[Bar chart showing activity from 1985 to 1987]																							
COFFER DAM	[Bar chart showing activity from 1985 to 1987]																							
OUTLET WORKS	[Bar chart showing activity from 1985 to 1987]																							
MAIN DAM	[Bar chart showing activity from 1985 to 1987]																							
SUB DAM	[Bar chart showing activity from 1985 to 1987]																							
SPILLWAY	[Bar chart showing activity from 1985 to 1987]																							
RESETTLEMENT	[Bar chart showing activity from 1985 to 1987]																							
PREPARATORY	[Bar chart showing activity from 1985 to 1987]																							
JUNGLE CLEARING & LEVELLING	[Bar chart showing activity from 1985 to 1987]																							
IRRIGATION DRAINAGE & ROAD	[Bar chart showing activity from 1985 to 1987]																							
PROJECT BUILDING, etc.	[Bar chart showing activity from 1985 to 1987]																							
RICE MILL & FARM MACHINERY	[Bar chart showing activity from 1985 to 1987]																							
PREPARATORY	[Bar chart showing activity from 1985 to 1987]																							
CIVIL WORKS	[Bar chart showing activity from 1985 to 1987]																							
GENERATING EQUIPMENT	[Bar chart showing activity from 1985 to 1987]																							
POWER HOUSE	[Bar chart showing activity from 1985 to 1987]																							
TRANSMISSION LINE	[Bar chart showing activity from 1985 to 1987]																							

付 録



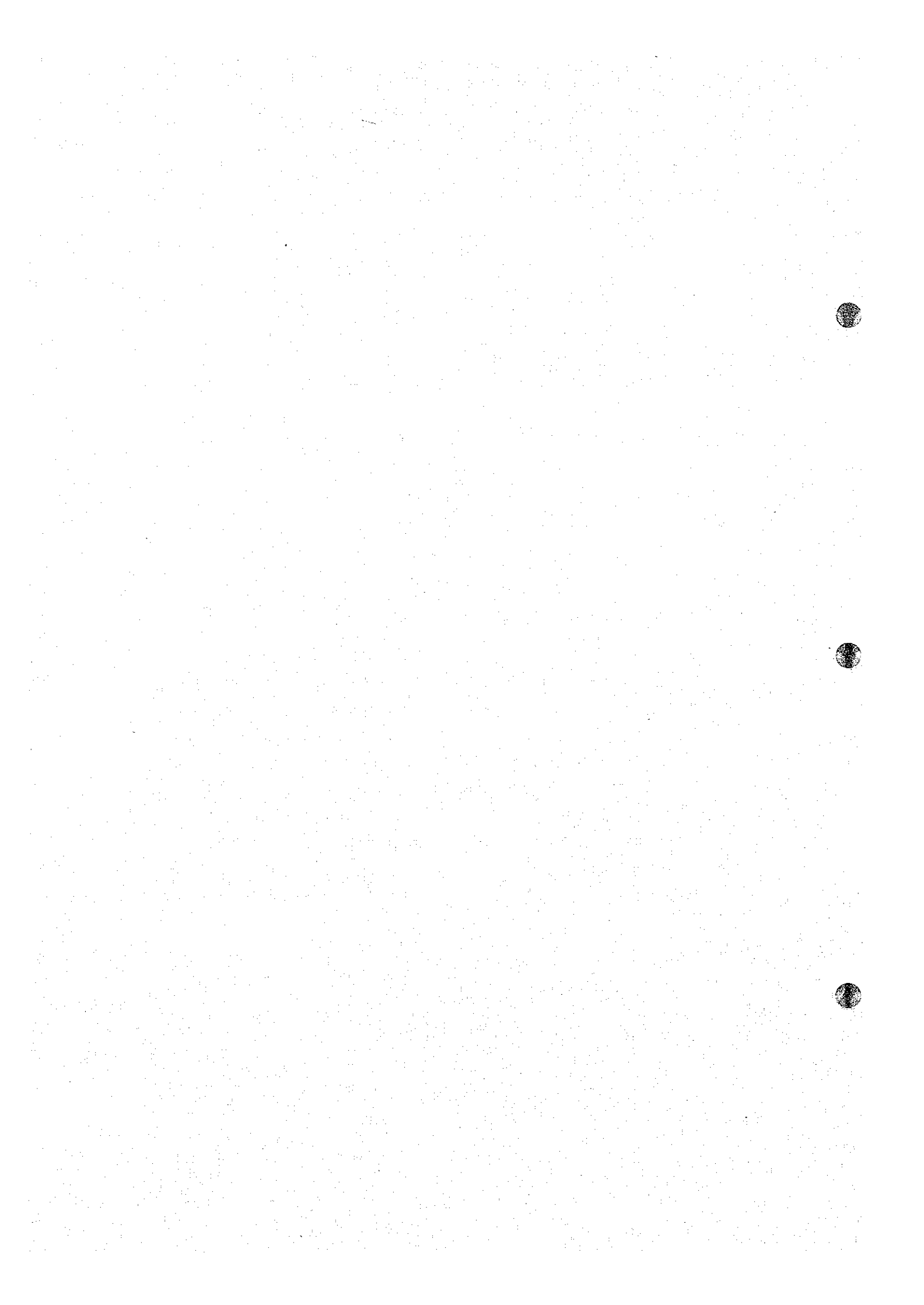
付録 管理委員会および調査団名簿

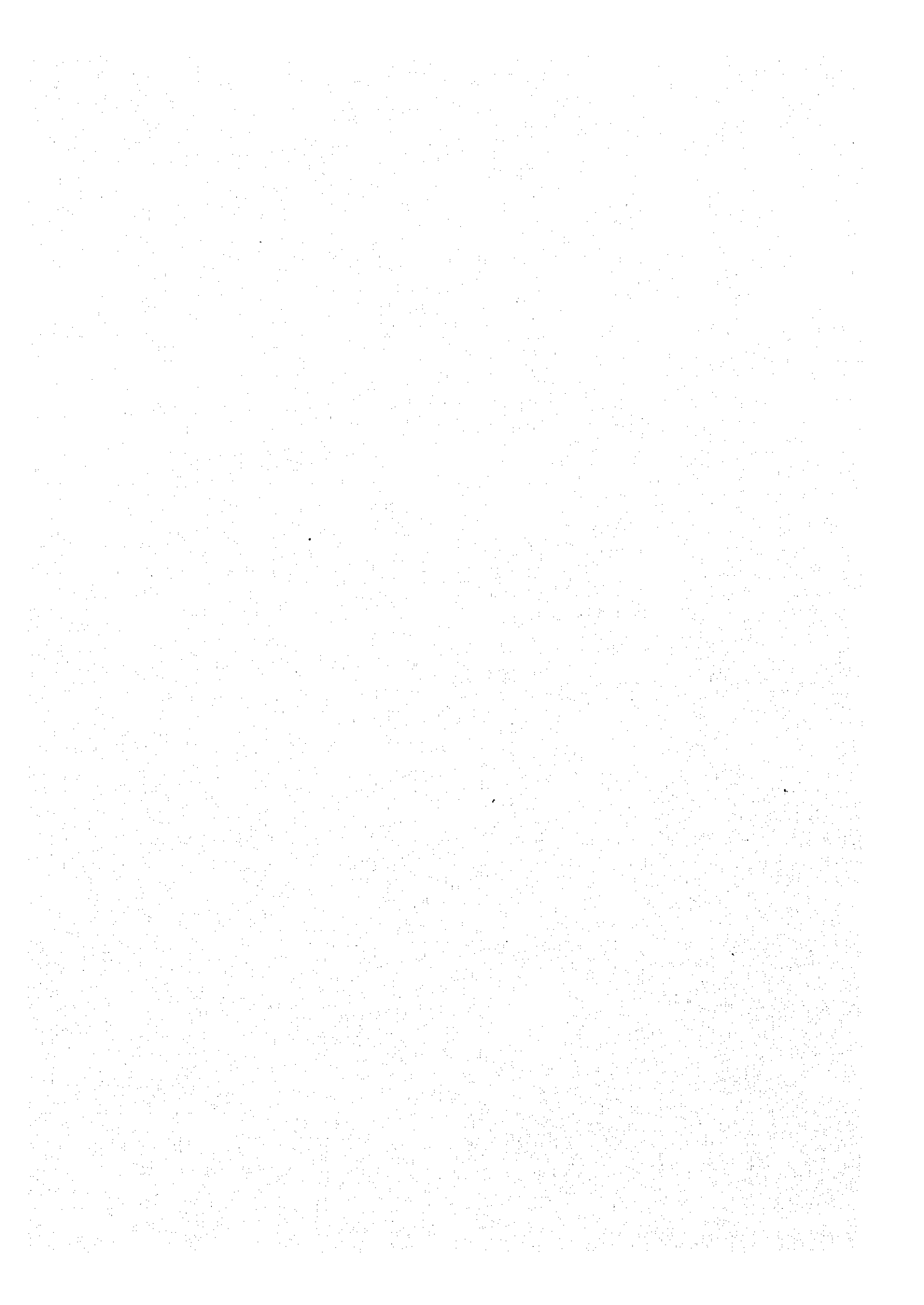
Advisory Committee

Head	Mr. Eiichi Yoshitake
Flood Control	Mr. Mitsuaki Mizuno
Regional Plan	Mr. Keiichi Inoue
Agricultural Development Plan	Mr. Masataka Kurosawa
Hydro Power	Mr. Masatoshi Furuichi (1st Stage)
- do -	Mr. Isao Yamamoto (2nd Stage)
Power Development Plan	Mr. Masao Makino
Coordinator	Mr. Hitonori Ono

Survey Team

Team Leader	Mr. Katsuhisa Abe
Hydrologist	Mr. Makoto Migita (1st Stage)
- do -	Mr. Kazumi Nobe (2nd Stage)
Geologist	Mr. Takuji Murakami
Flood Control Engineer	Mr. Akio Shichijugari
Dam and Hydro Power Engineer	Mr. Tadashi Kudo
Irrigation Engineer	Mr. Takafumi Suzuki
Agronomy	Mr. Keisaku Kobayashi
Regional Planner	Mr. Eiji Nishita
Socio-Economist	Mr. Yoshiharu Matsumoto





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