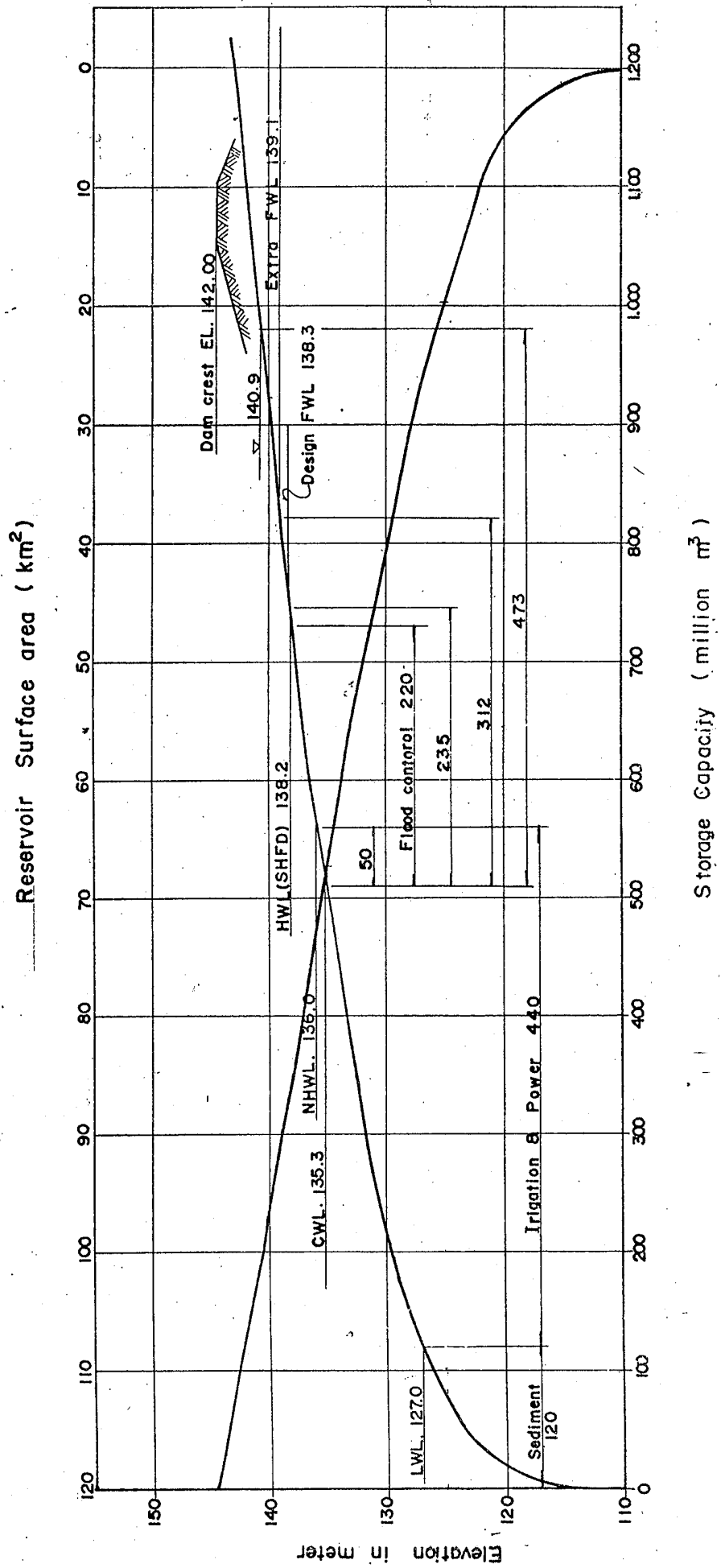


図 3-2-1 ウォノギリダム貯水池の水位 - 容量 - 湛水面積曲線 (1980 年時点)



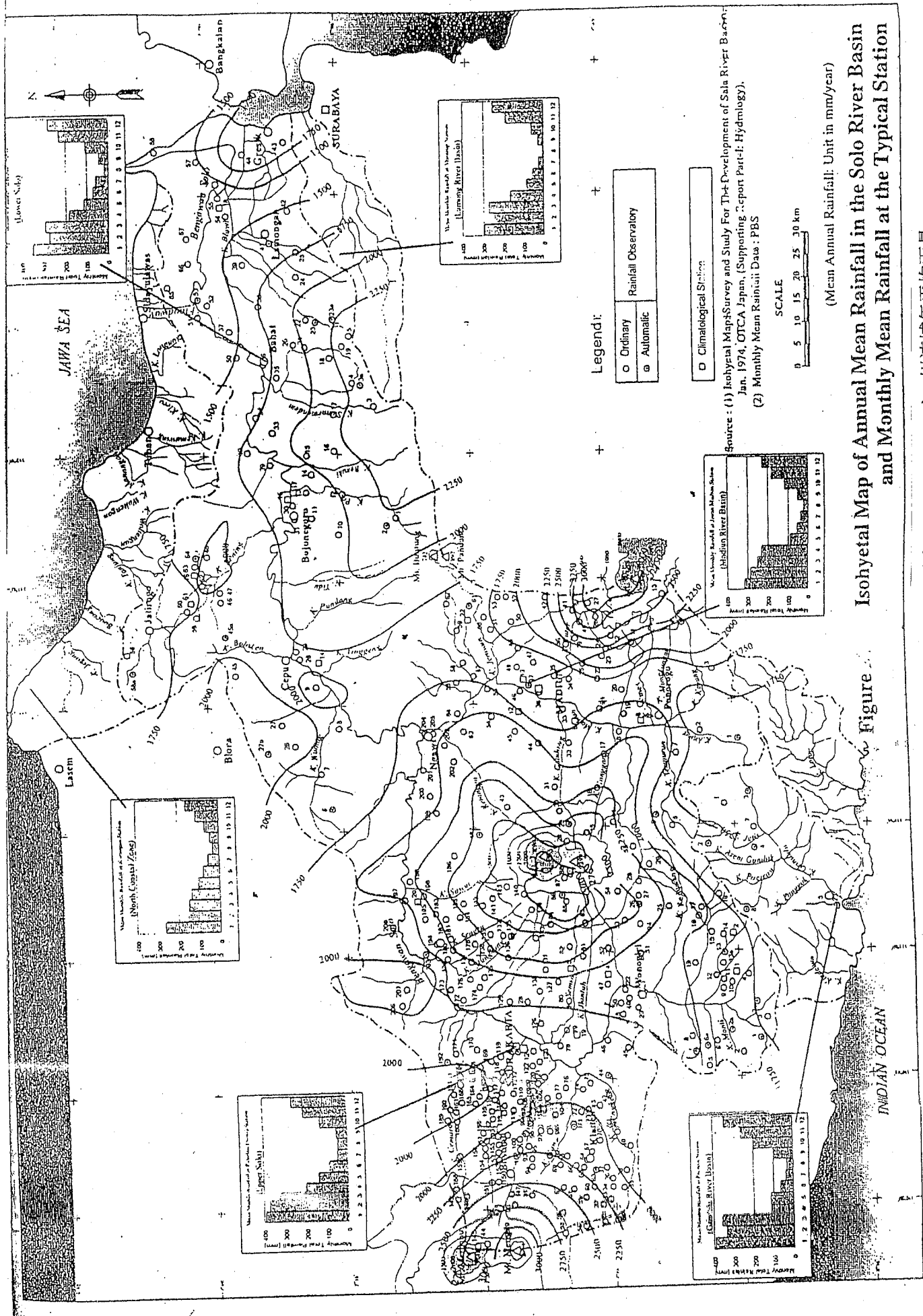


図 3-2-2 ソロ川流域年平均雨量

0 A

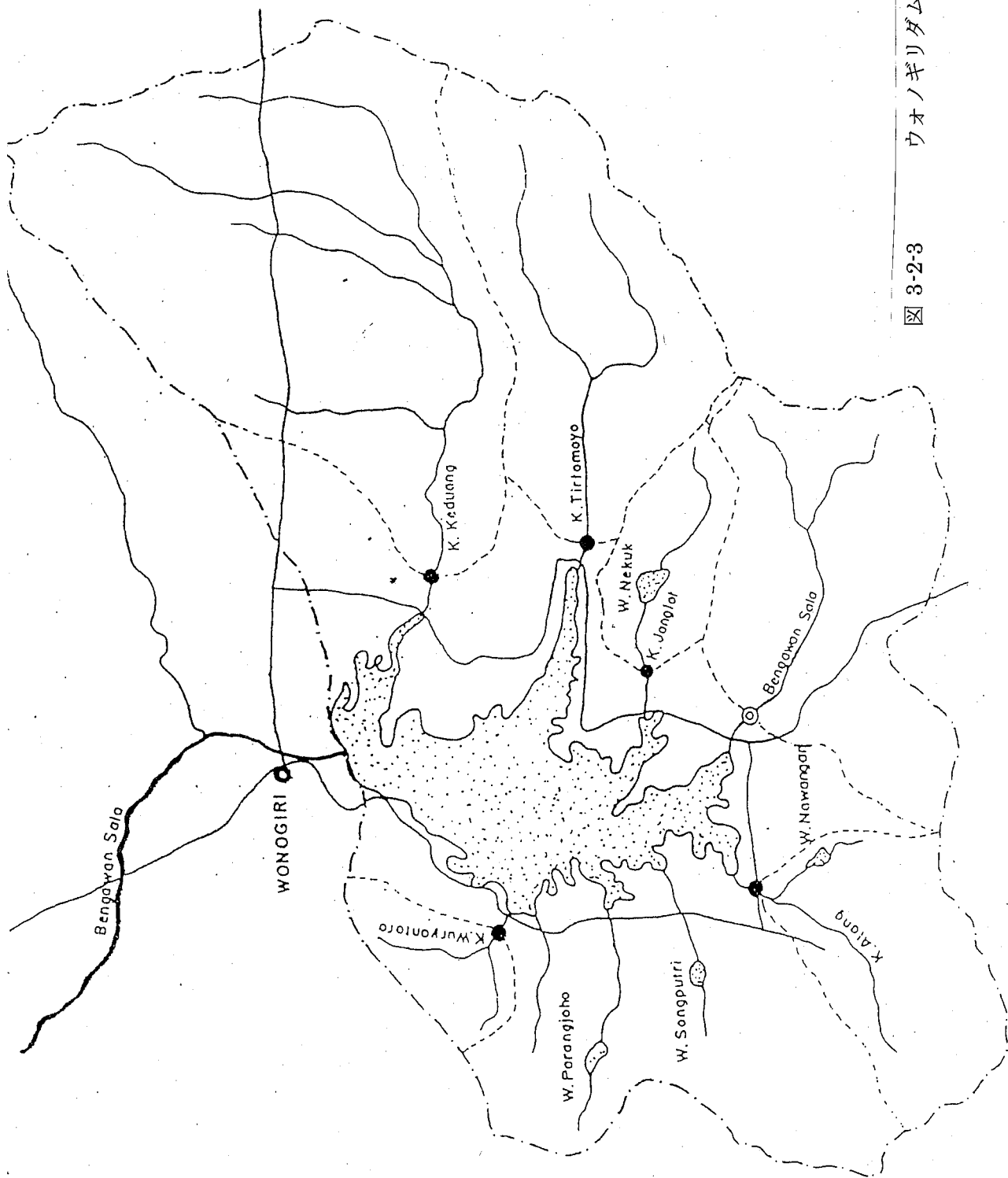
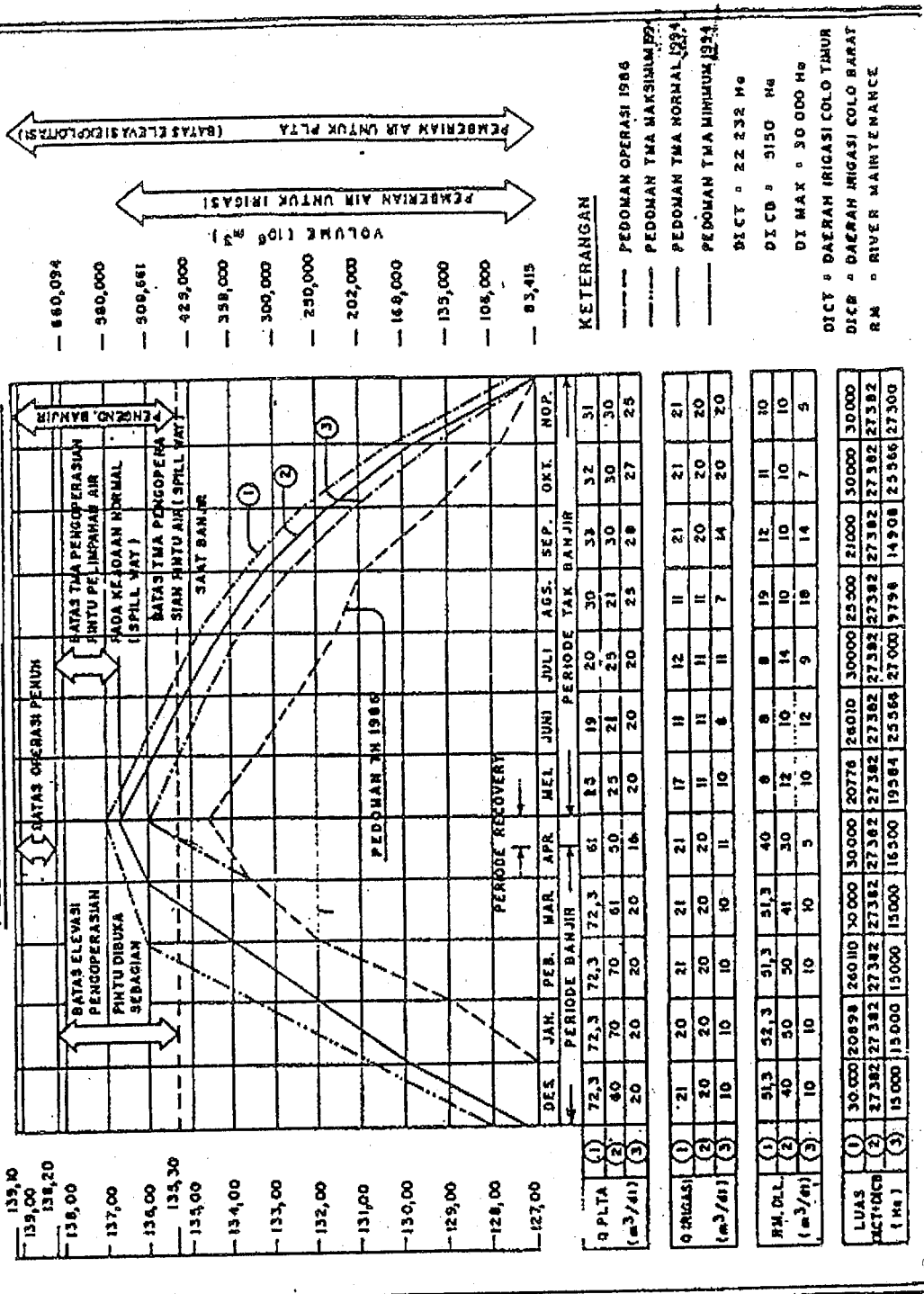


図 3-2-3 ウォノギリダム貯水池集水域

Figure
Wonogiri Watershed

PEDOMAN OPERASI WADUK WONGIRI



- 860,094
- 580,000
- 500,661
- 429,000
- 359,000
- 300,000
- 250,000
- 202,000
- 168,000
- 135,000
- 108,000
- 83,415

KETERANGAN

- PEDOMAN OPERASI 1986
- PEDOMAN TMA MAKSIMUM 1974
- PEDOMAN TMA NORMAL 1974
- PEDOMAN TMA MINIMUM 1974
- DICT = 22.232 M³
- DICEB = 9150 M³
- DI MAX = 30.000 M³
- DICT = DAERAH IRIGASI COLO TIMUR
- DICEB = DAERAH IRIGASI COLO BARAT
- RM = RIVER MAINTENANCE

Q PLTA (m ³ /dt)	PERIODE BANJIR												PERIODE TAK BANJIR											
	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.
(1) 72,3	72,3	72,3	72,3	61	13	19	20	30	33	32	31	31	20	19	18	17	16	15	14	13	12	11	10	
(2) 40	70	70	61	50	25	21	25	21	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20	
(3) 20	20	20	20	16	20	20	20	20	25	28	25	28	20	20	20	20	20	20	20	20	20	20	20	

Q IRIGASI (m ³ /dt)	PERIODE BANJIR												PERIODE TAK BANJIR											
	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.
(1) 51,3	51,3	51,3	51,3	40	8	8	8	8	19	12	11	11	11	11	11	11	11	11	11	11	11	11	11	
(2) 40	50	50	41	30	12	10	14	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
(3) 10	10	10	10	5	10	12	9	18	14	14	7	5	14	10	10	10	10	10	10	10	10	10	10	

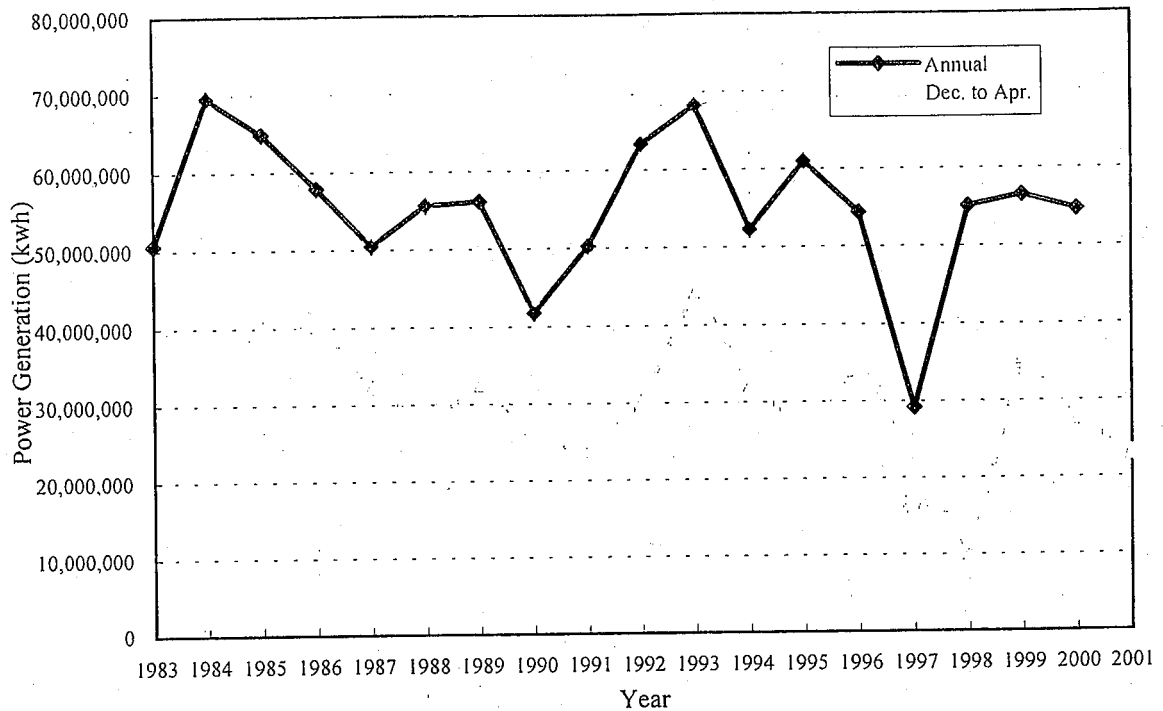
LUAS WADUK (Ha)	PERIODE BANJIR												PERIODE TAK BANJIR											
	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.	DES.	JAN.	FEB.	MAR.	APR.	MEL.	JUNI.	JULI.	AGS.	SEP.	OKT.	NOV.
(1) 30.000	20828	26010	30.000	30.000	20776	26010	30000	25300	21000	50000	30000	30000	20828	26010	30.000	30.000	20776	26010	30000	25300	21000	50000	30000	
(2) 27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	27382	
(3) 15000	15000	15000	15000	15000	16500	19584	25368	27000	19798	14908	25566	27000	15000	15000	15000	16500	19584	25368	27000	19798	14908	25566	27000	

Source: Oranesei Pemeliharaan Air Bendungan Sebeluwa Wongiri, Departemen Pekerjaan Umum Direktorat Jenderal Pengaturan Proyek Induk Pengembangan Wilayah Sungai Bengawan Solo, November 1983

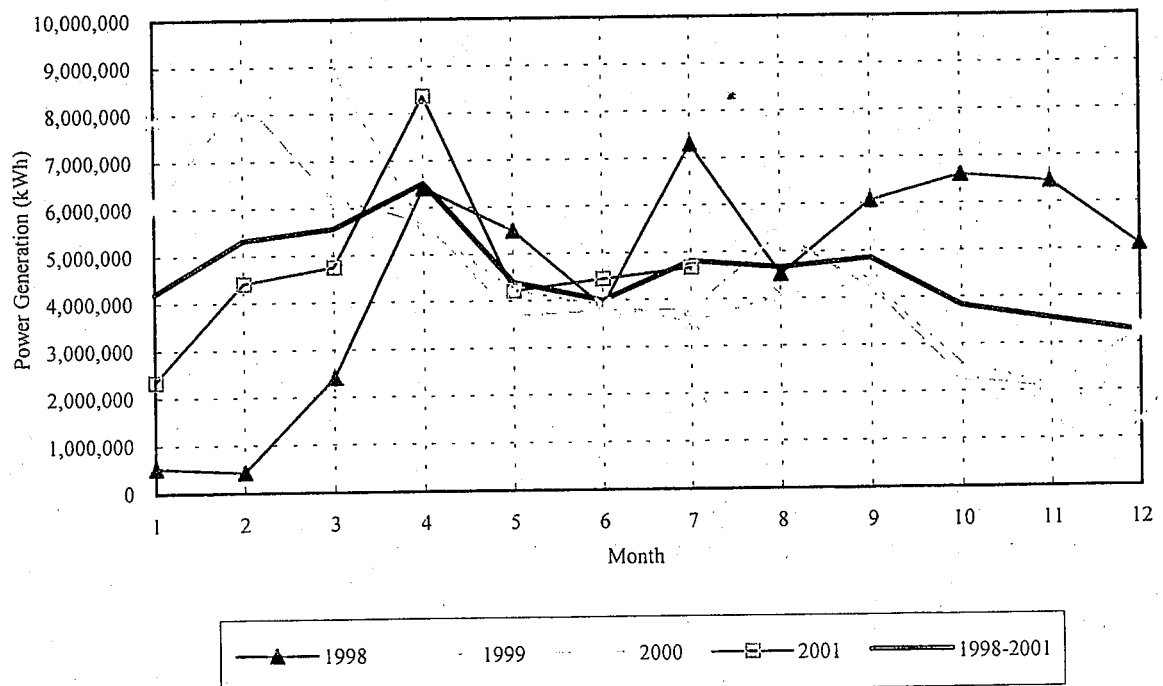
図 3-2-4 ウォノギリダム貯水池運用曲線

インドネシア共和国
 ウォノギリ多目的ダム貯水池緊急砂対策計画
 基本設計調査
 国際協力事業団

☒ PBSにより使用されている貯水池運用曲線



発生電力量の経年変化



過去4年間の月別発生電力量

インドネシア共和国
ウオノギリ多目的ダム貯水池堆緊急砂対策計画
基本設計調査

国際協力事業団

図 3-2-5

発生電力量の推移

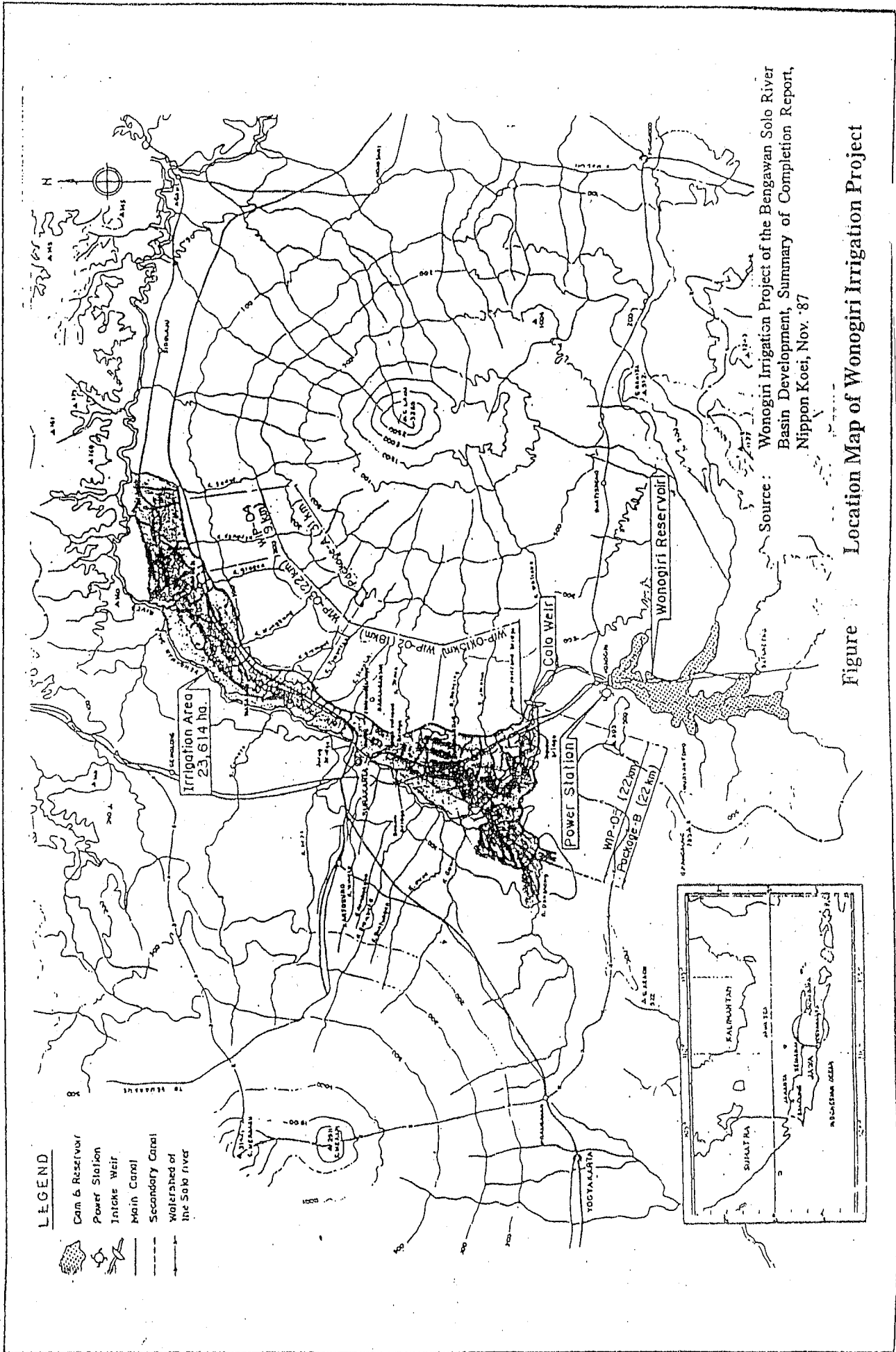
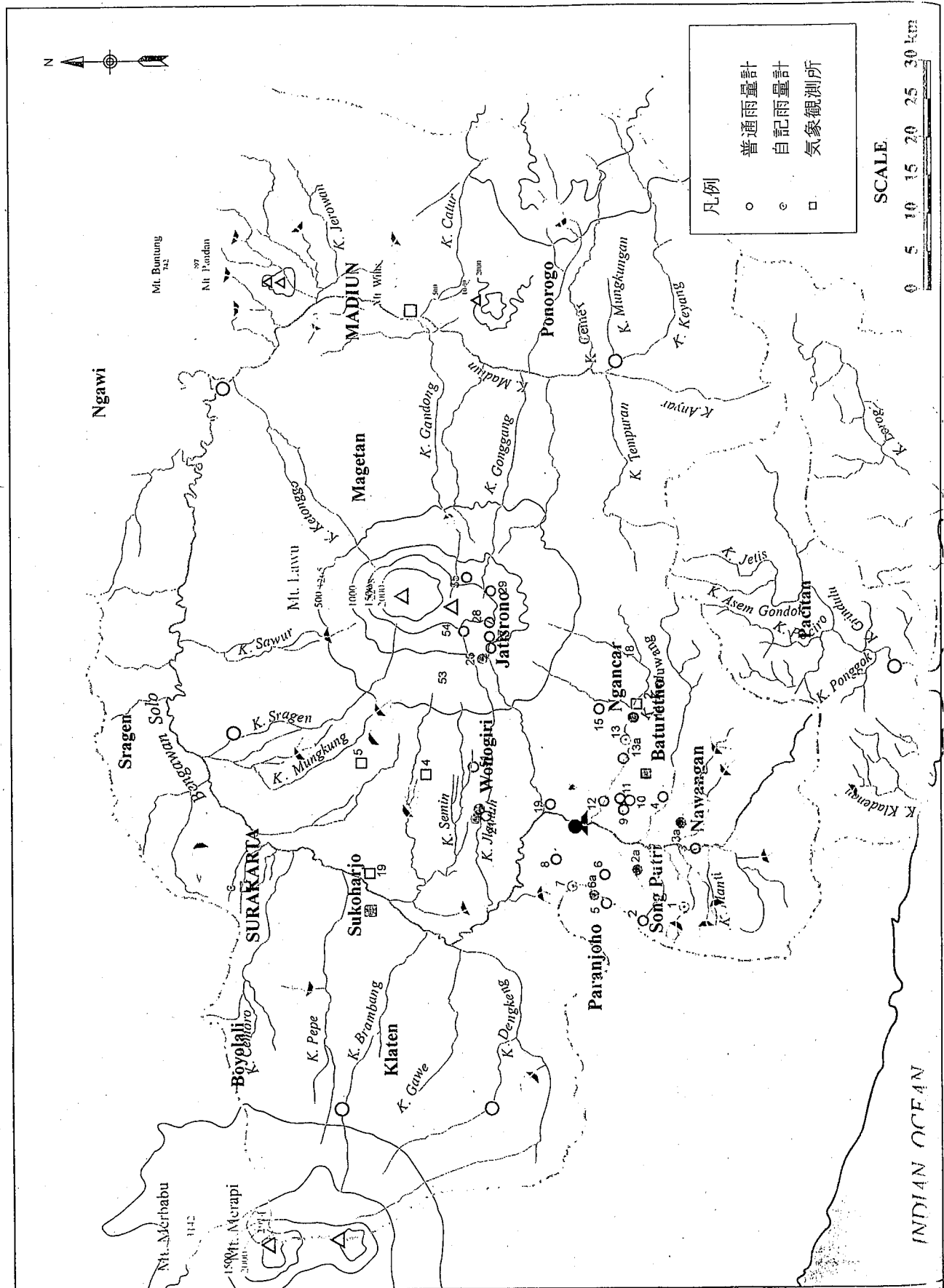


Figure Location Map of Wonogiri Irrigation Project

図 3-2-6 ウォノギリ灌漑プロジェクト



インドネシア共和国
 ウオノギリ多目的ダム貯水池堆緊急砂対策計画
 基本設計調査

国際協力事業団

図 3-2-7

ソロ川上流域の雨量観測所

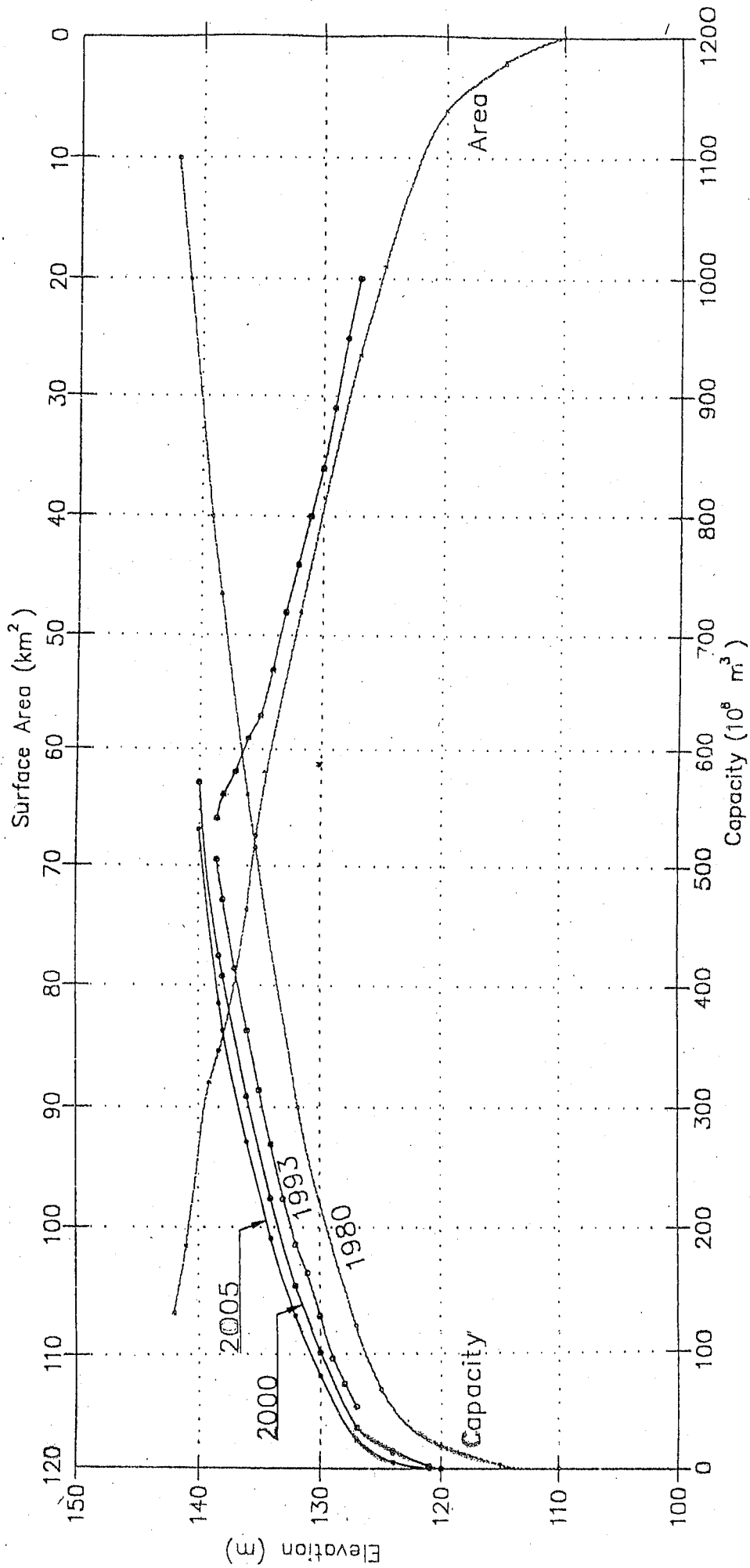


図 3-2-9 ウォノギリダム貯水池の水位 - 容量 - 湛水面積曲線の推移

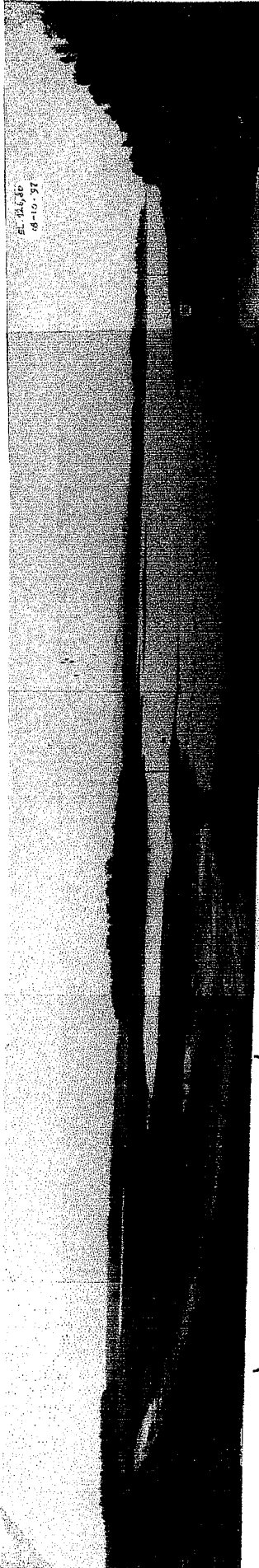
Figure

Wonogiri Dam Reservoir

Measured Elevation - Area - Capacity Curves for 1980 & 1993
and Estimated Curves for 2000 & 2005

Kali Keduang
↓

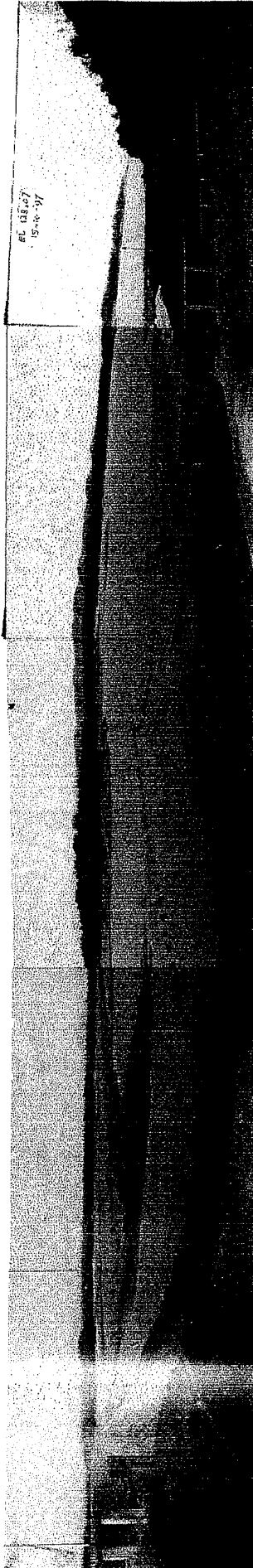
Bengawan Solo
↓



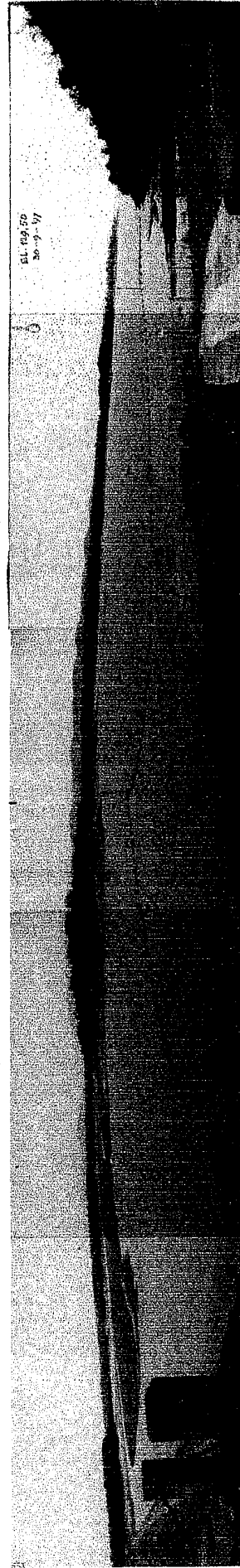
Water Level EL. 126.80 m 18 October 1997

Forebay

Water intake



Water Level EL. 128.07 m 15 October 1997

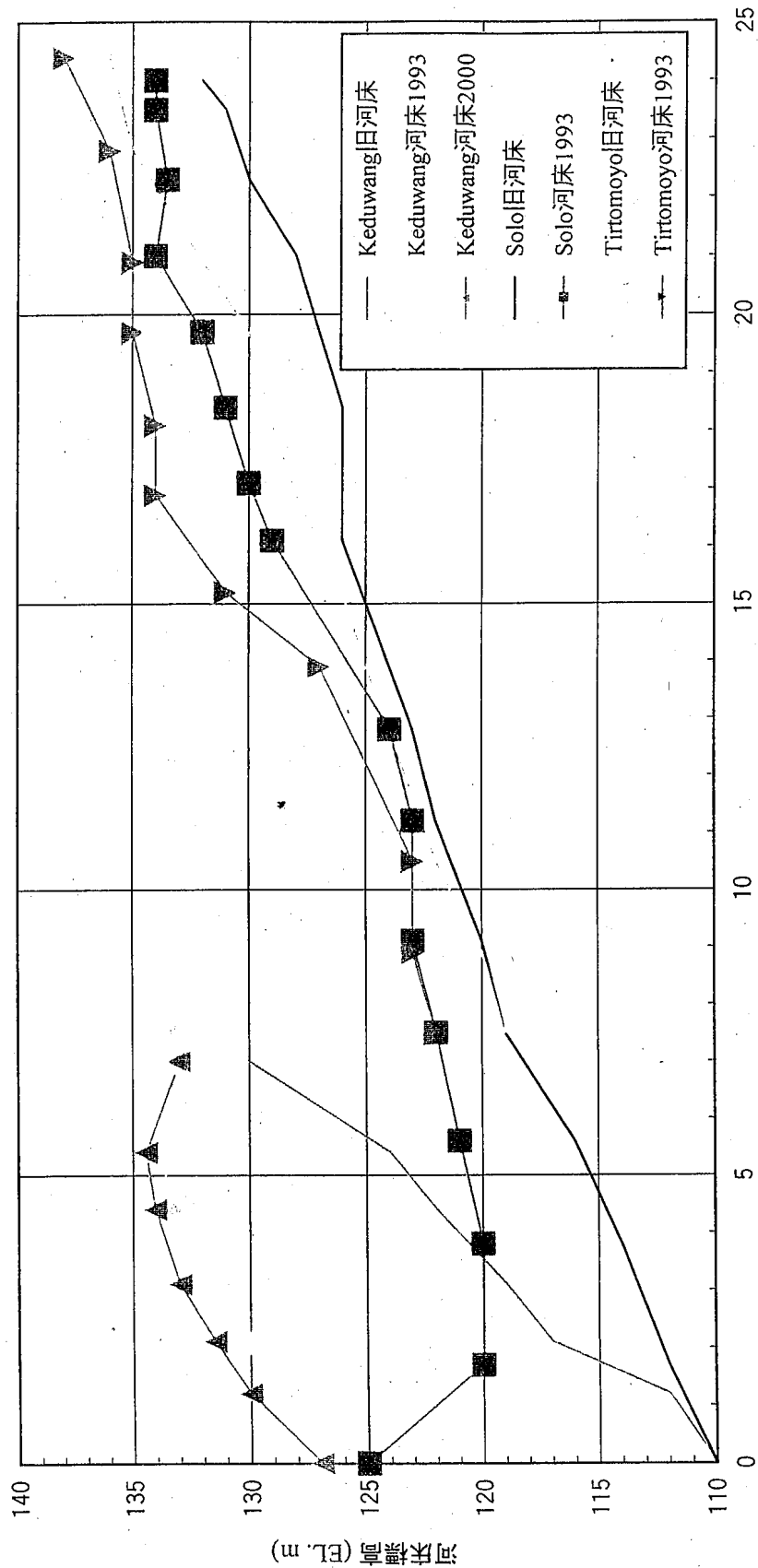


Water Level EL. 129.50 m 30 September 1997

1997 Panorama of Wonogiri Reservoir
Viewed from Dam

ウオノギリダム貯水池取水口周辺の堆砂状況 (1997年渇水時)

図 3-2-10



ダムからの距離 (km)

図 3-2-11 ウォノギリダム上流支流における河床上昇

インドネシア共和国
ウォノギリ多目的ダム貯水池堆砂緊急砂対策計画
基本設計調査

国際協力事業団

貯水池内堆砂状況

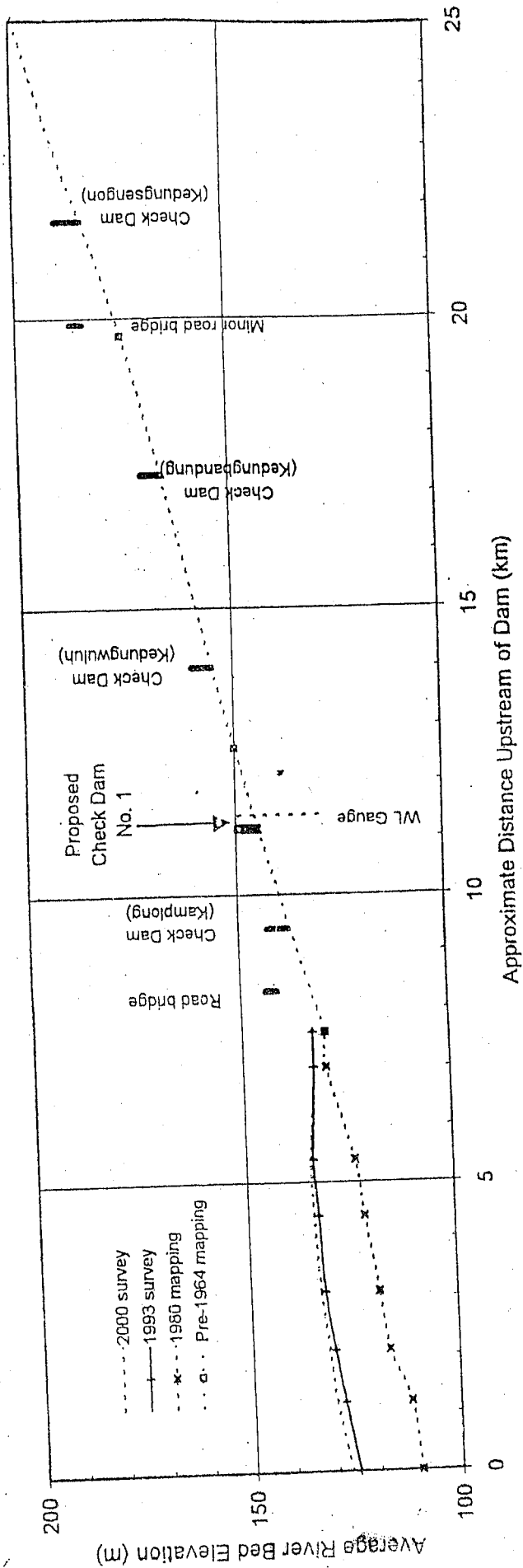


図 3-2-12 ダム直上流支流クドゥアンの川の堆砂状況

Figure 3-2-12
Kali Keduang Profile
showing Location of Existing Structures
and Proposed Structures

0 1 2 3 4 km

Legend

- Sections
- Rivers
- Contour El. 140 m
- Road

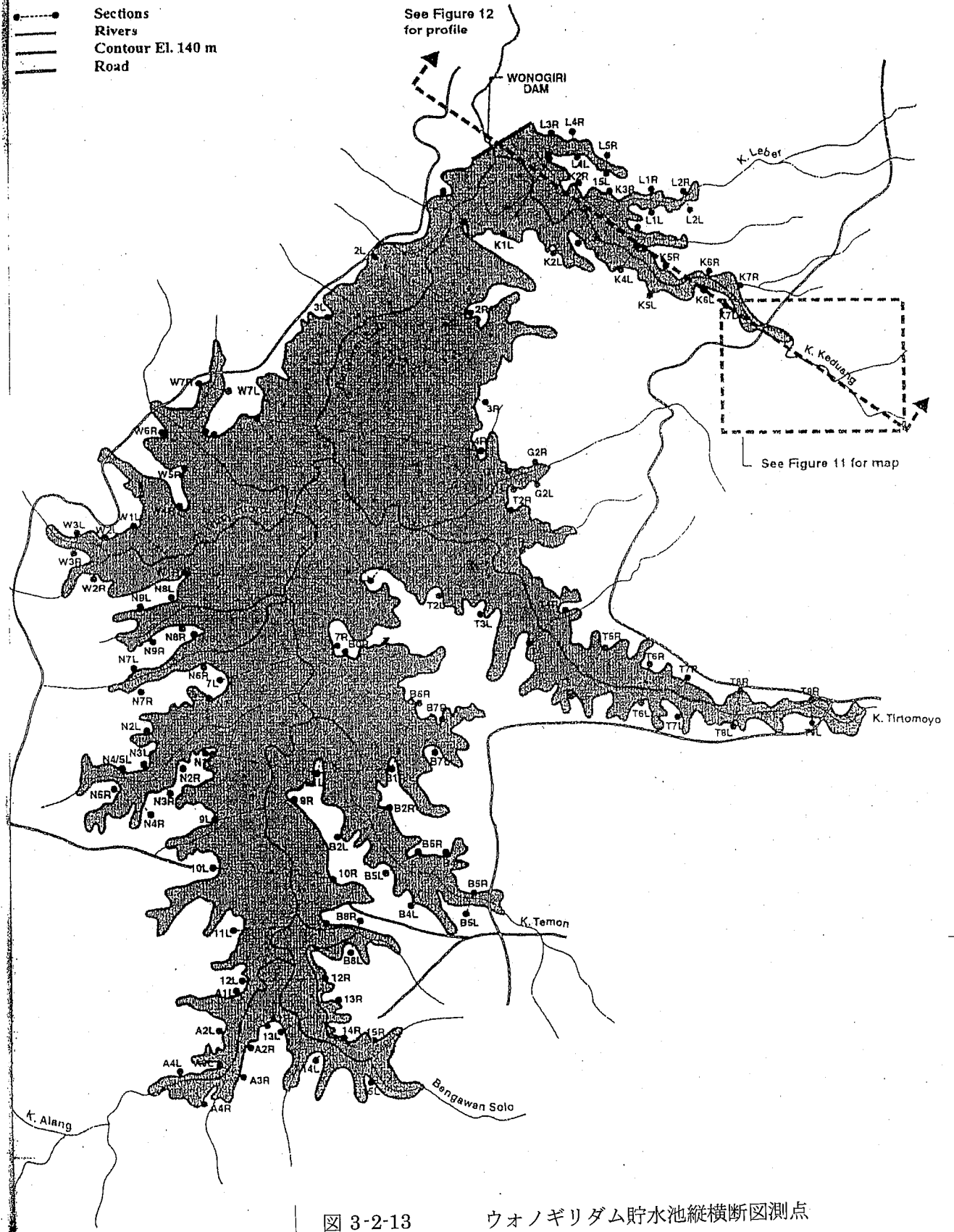


図 3-2-13 ウォノギリダム貯水池縦横断面図測点

Figure
Wonogiri Reservoir

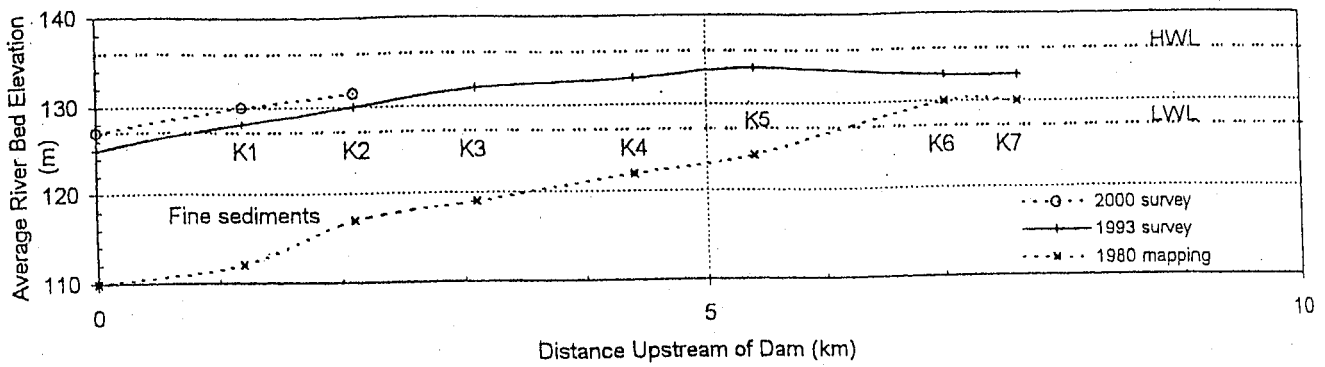
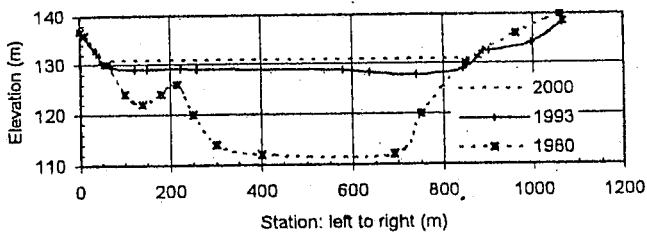
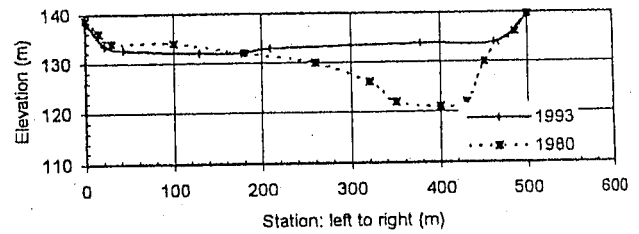


Figure
Kali Keduang Profile

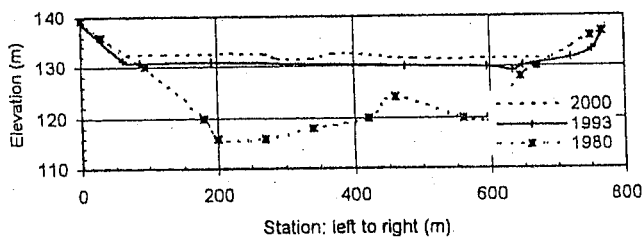
Kali Keduang: CS K1



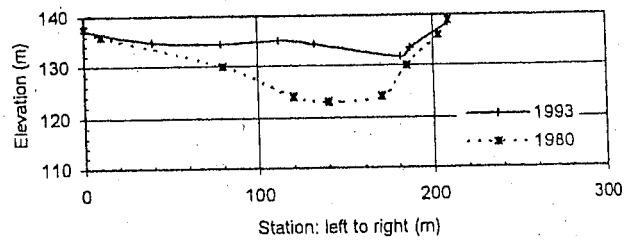
Kali Keduang: CS K4



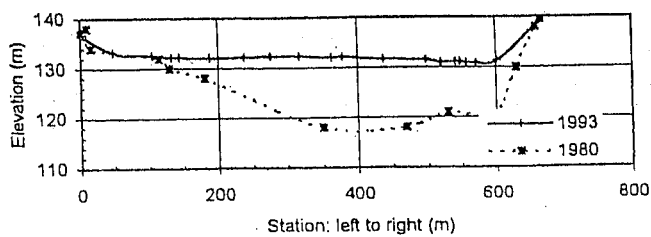
Kali Keduang: CS K2



Kali Keduang: CS K5



Kali Keduang: CS K3



Kali Keduang: CS K6

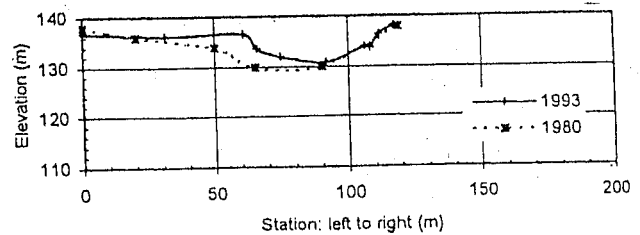


Figure
Kali Keduang Cross-Sections

図 3-2-14

クドウアン川縦横断面図

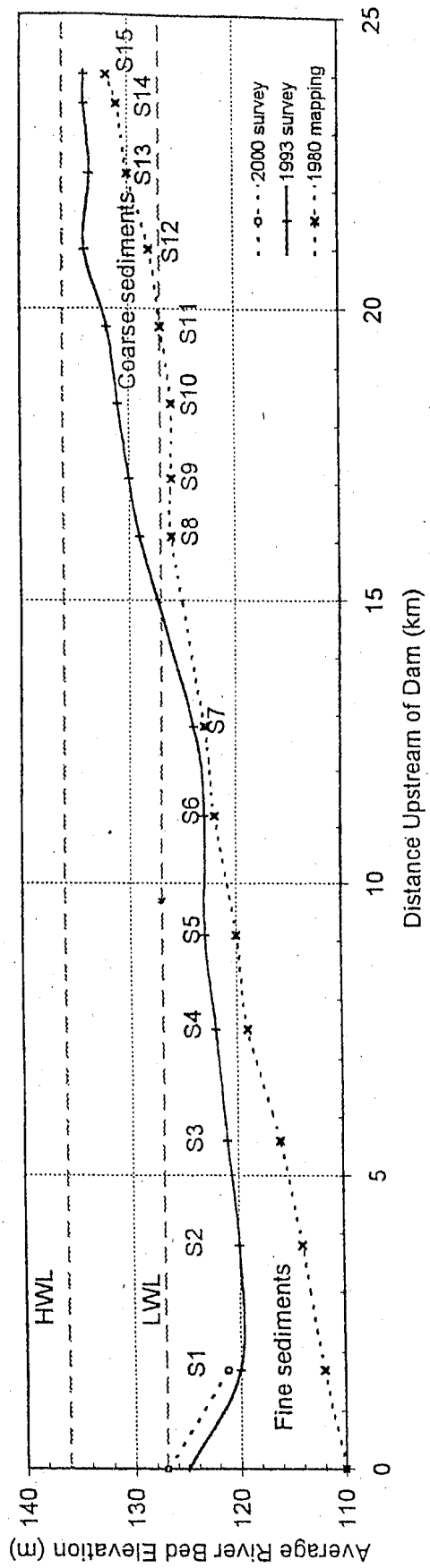


図 3-2-15 ソロ川本流縦断面図

Figure 3-2-15 Solo River Profile

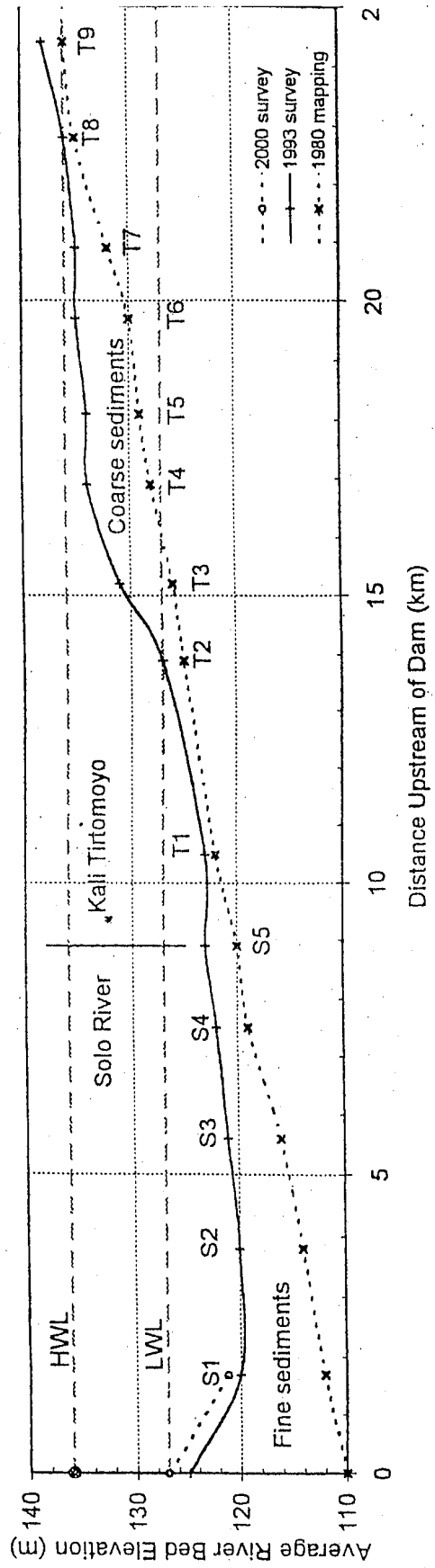


図 3-2-16 トリトモヨ川縦断面図

Figure
Kali Tirtomoyo Prof

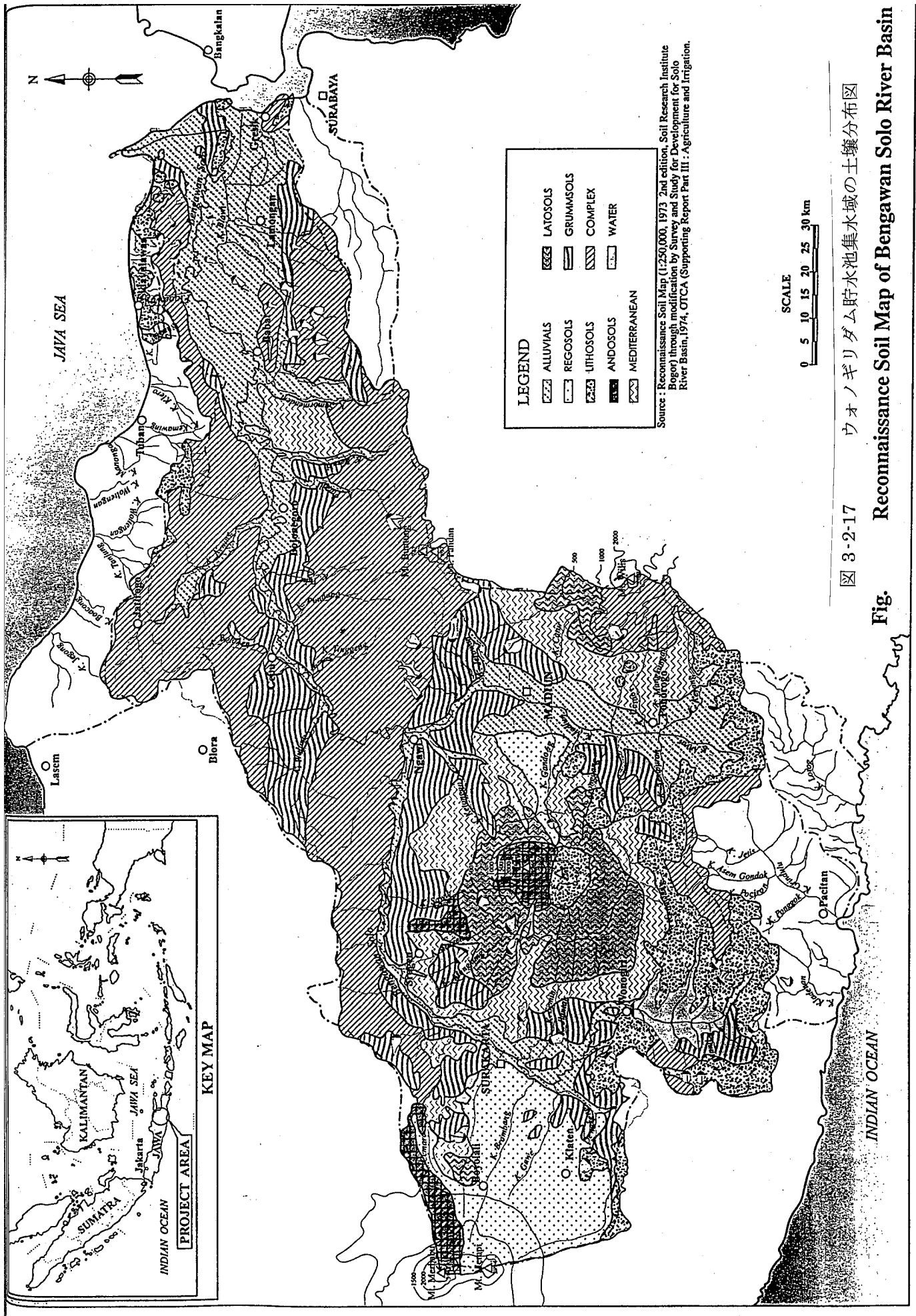
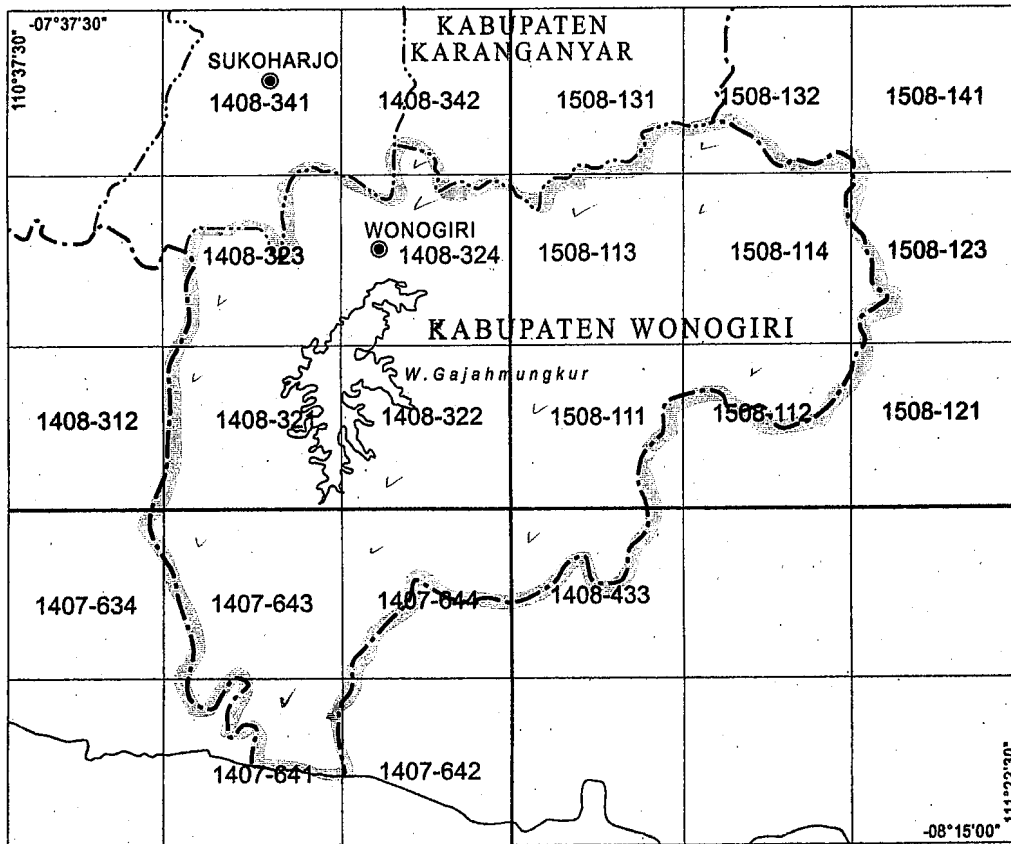


図 3-2-17 ウォノギリダム貯水池集水域の土壌分布図
 Reconnaissance Soil Map of Bengawan Solo River Basin

Peta Index Skala 1:25.000
KABUPATEN WONOGIRI
 PROPINSI JAWA TENGAH



14 sheet

図 3-2-18 ウォノギリダム貯水池集水域の地形図番号 (2万5千分の1)

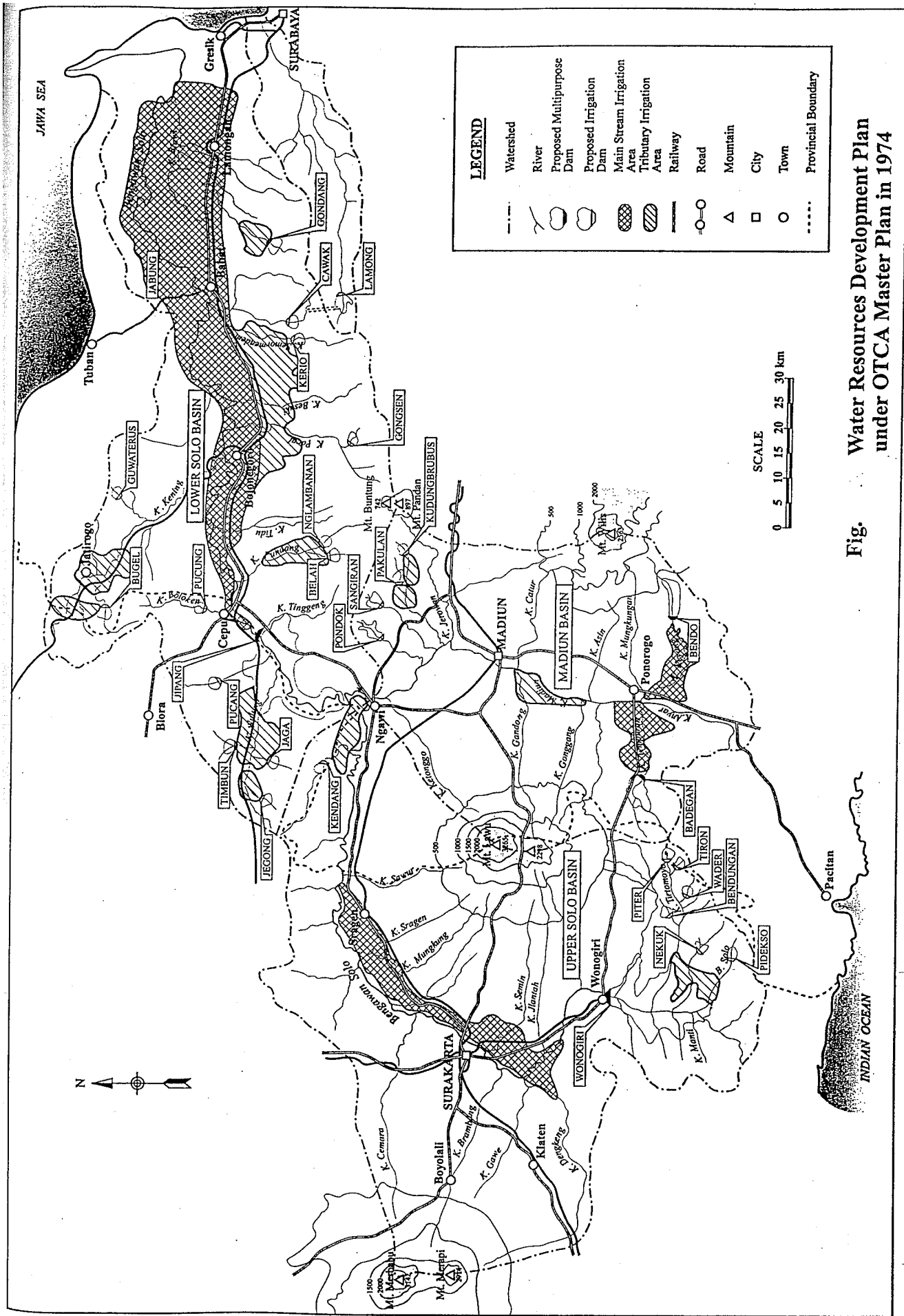
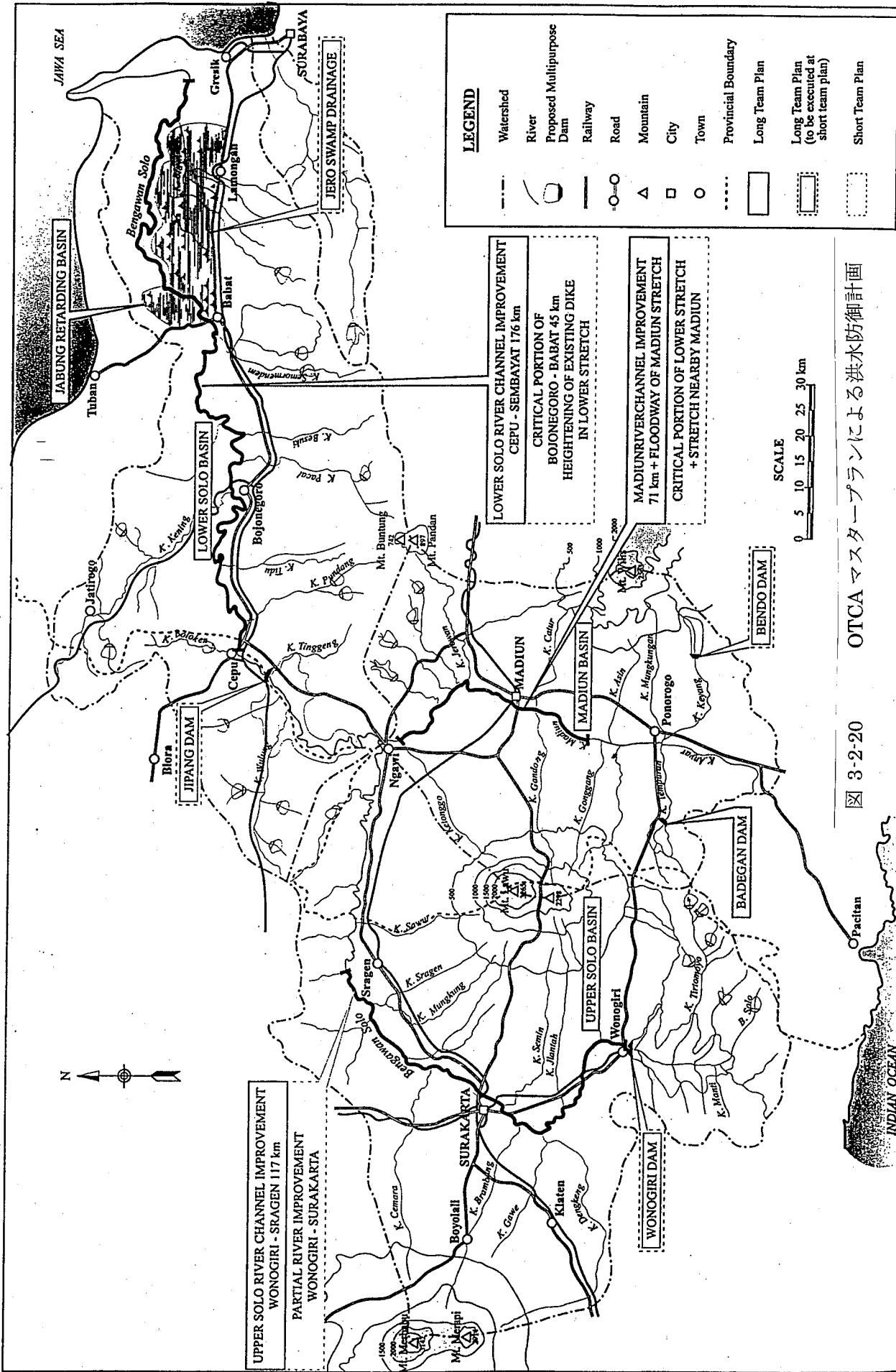


Fig. Water Resources Development Plan under OTCA Master Plan in 1974



LEGEND

Watershed	— · — · — ·
River	—
Proposed Multipurpose Dam	○
Railway	—+—+—+—+—
Road	—○—○—○—○—
Mountain	△
City	□
Town	○
Provincial Boundary	·····
Long Team Plan	▭
Long Team Plan (to be executed at short team plan)	▭ (dashed)
Short Team Plan	▭ (dotted)

OTCA マスタープランによる洪水防衛計画

3-2-20

Fig. Flood Control Plan under OTCA Master Plan in 1974

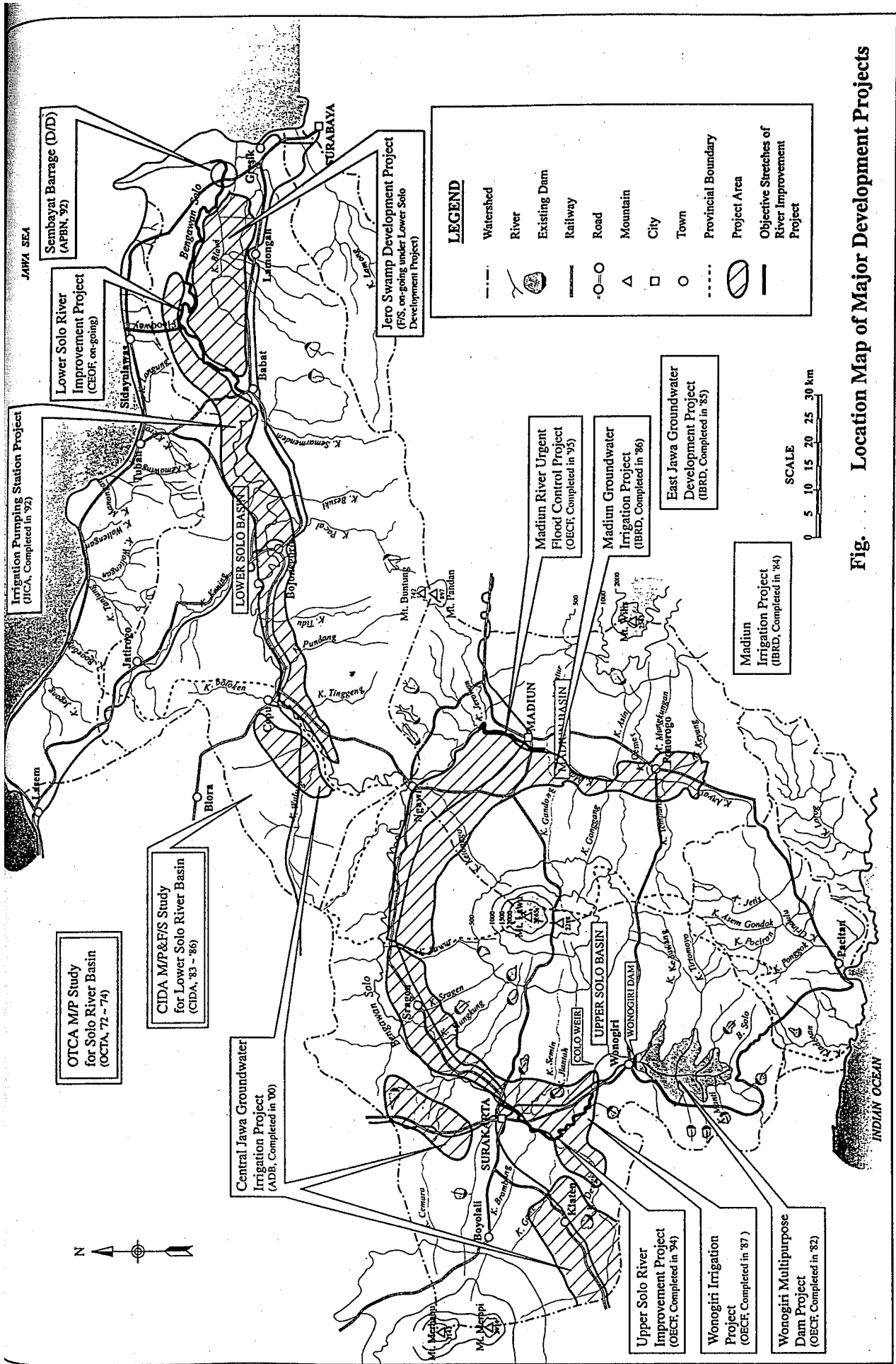


図 3-2-21 ソロ川流域の主要な開発プロジェクト

図 3-2-21 ソロ川流域の主要な開発プロジェクト

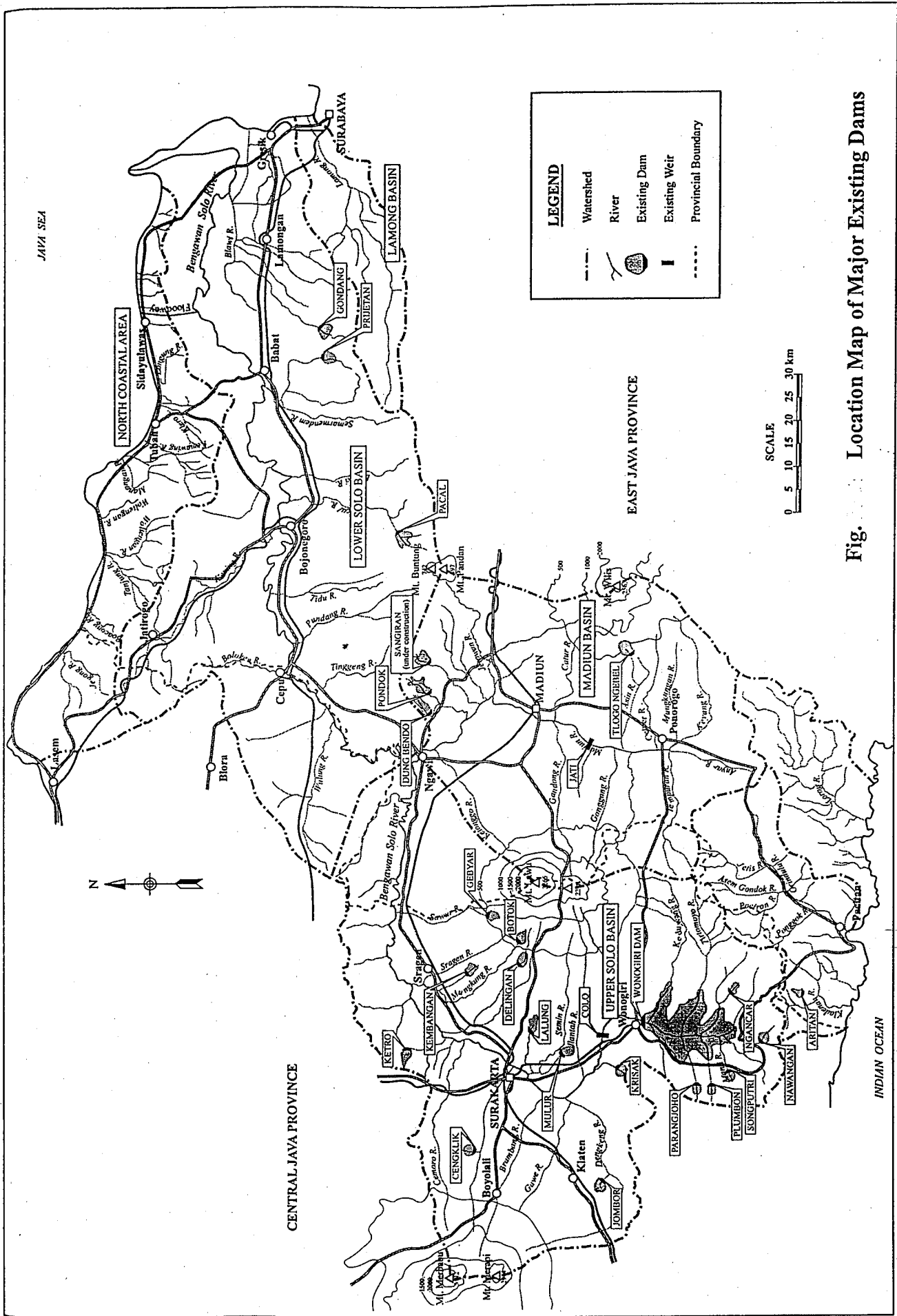


図 - 3-2-22 ソロ川流域の主要な既存ダム

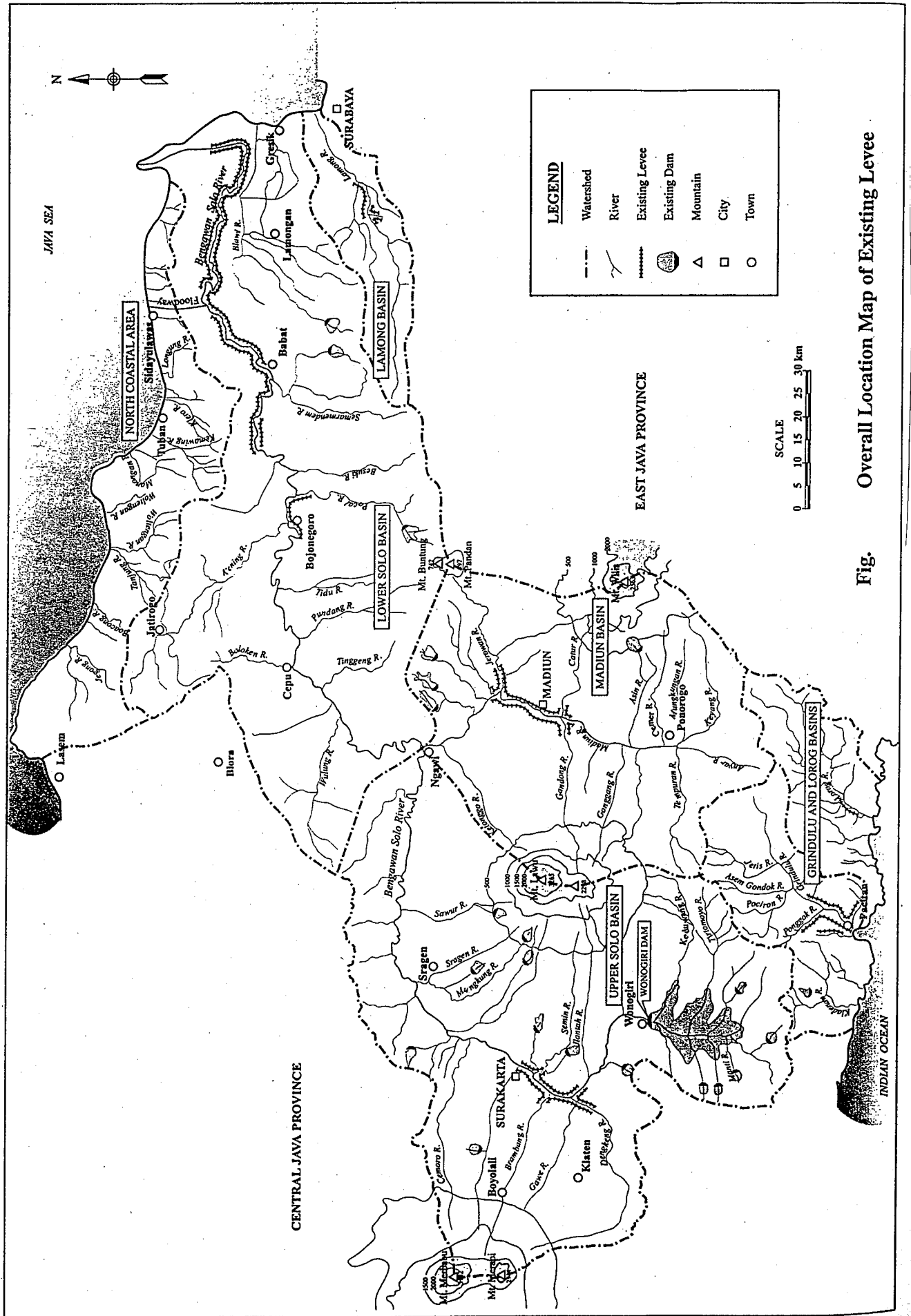
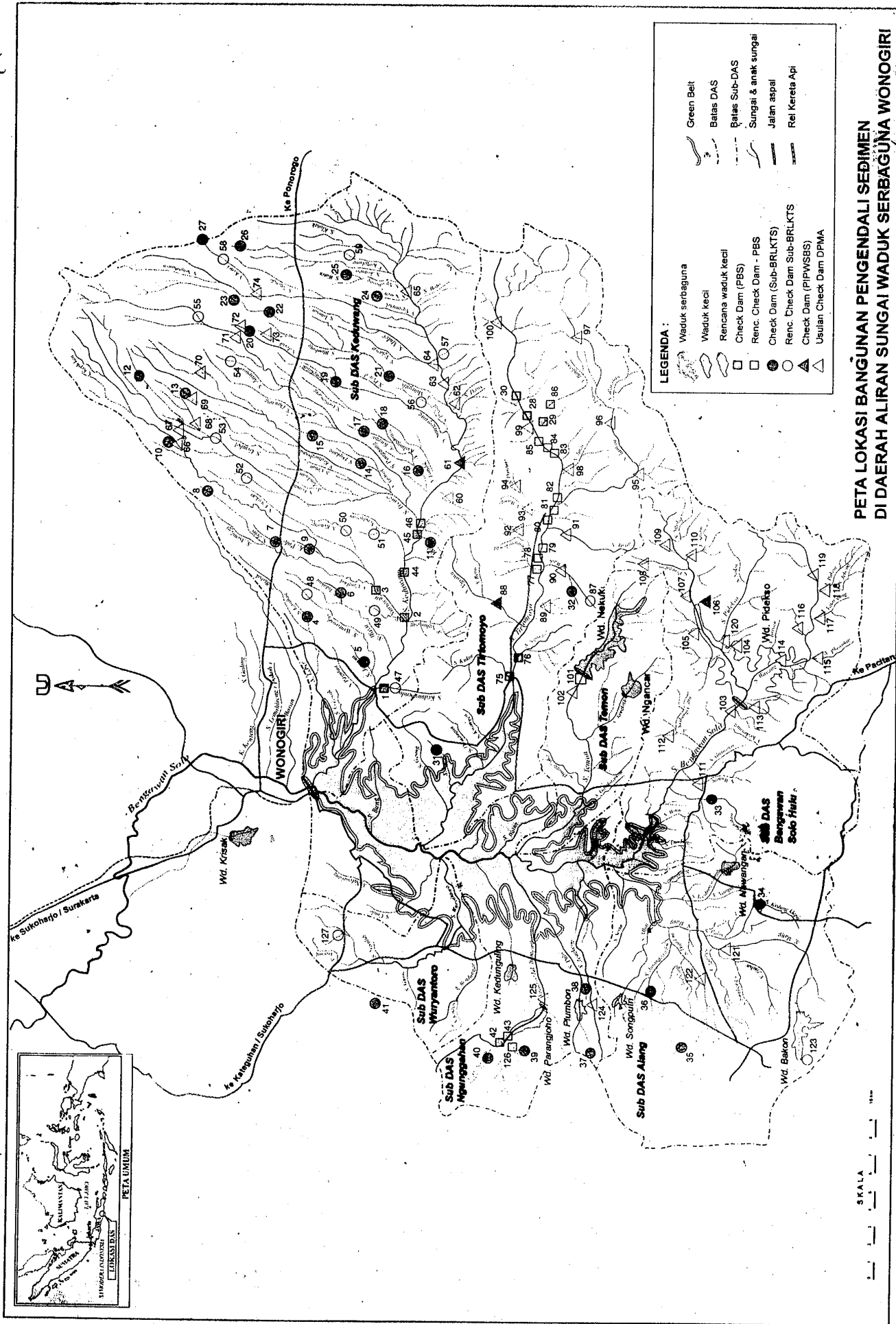


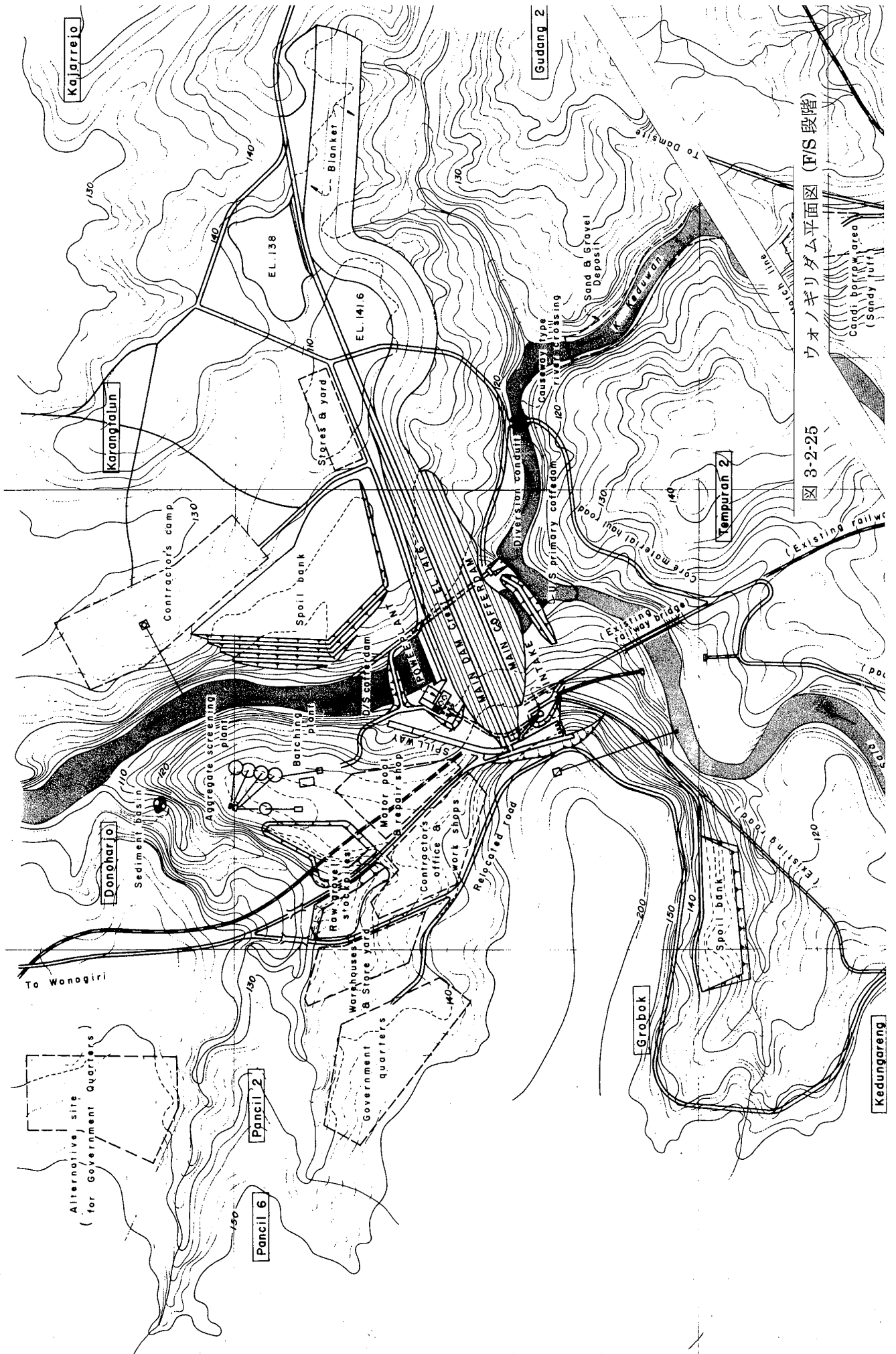
Fig. Overall Location Map of Existing Levee



**PETA LOKASI BANGUNAN PENGENDALI SEDIMEN
DI DAERAH ALIRAN SUNGAI WADUK SERBAGUNA WONOGIRI**

ウオノギリダム貯水池上流の砂防ダム (既存及び計画)

図 3-2-24



Alternative site
(for Government Quarters)

Pencil 2

Pencil 6

ウォノギリダム平面図 (F/S 段階)

3-2-25

Candi area
(Sandy Turf)

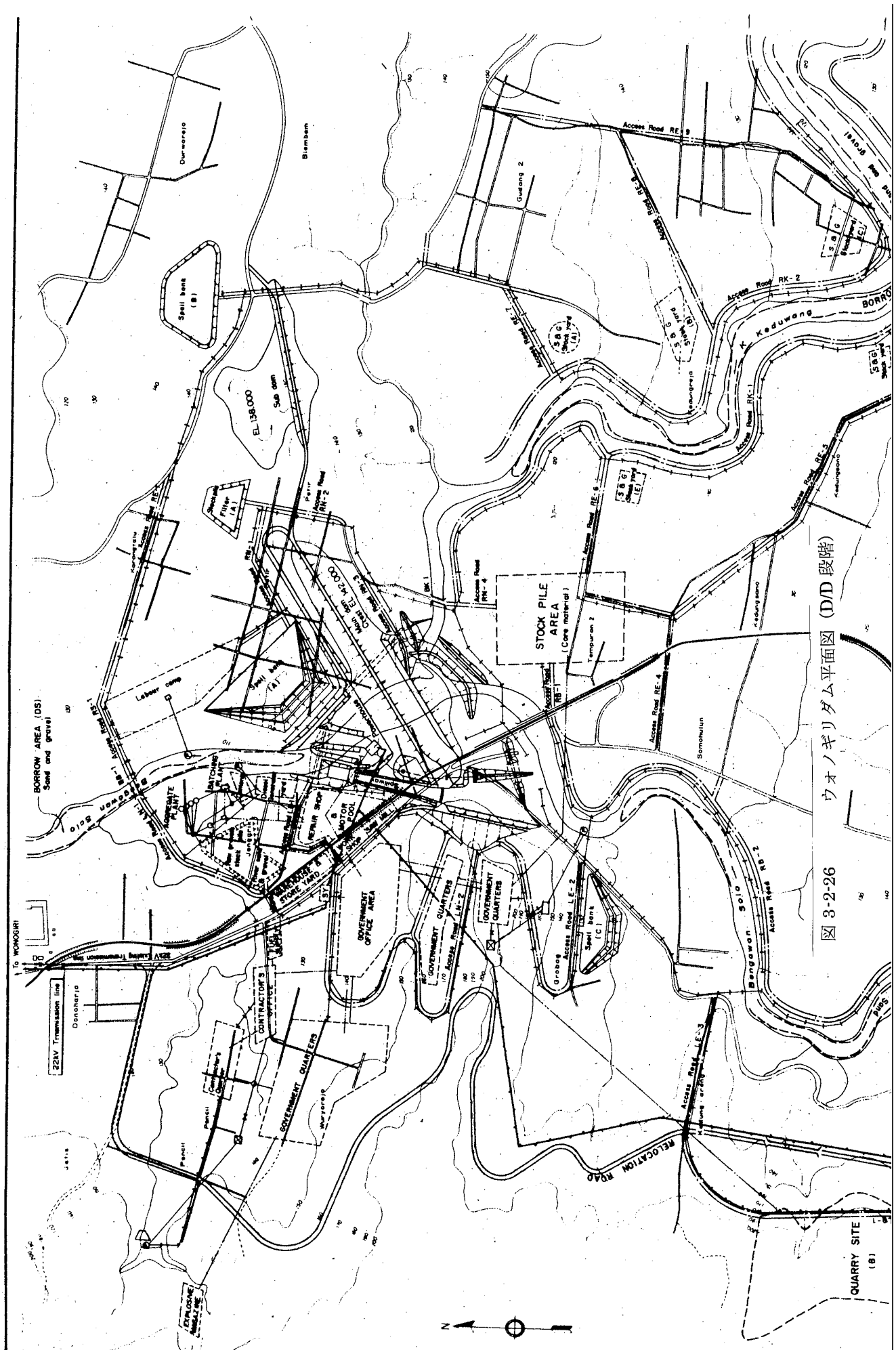


図 3-2-26 ウォノギリダム平面図 (D/D 段階)

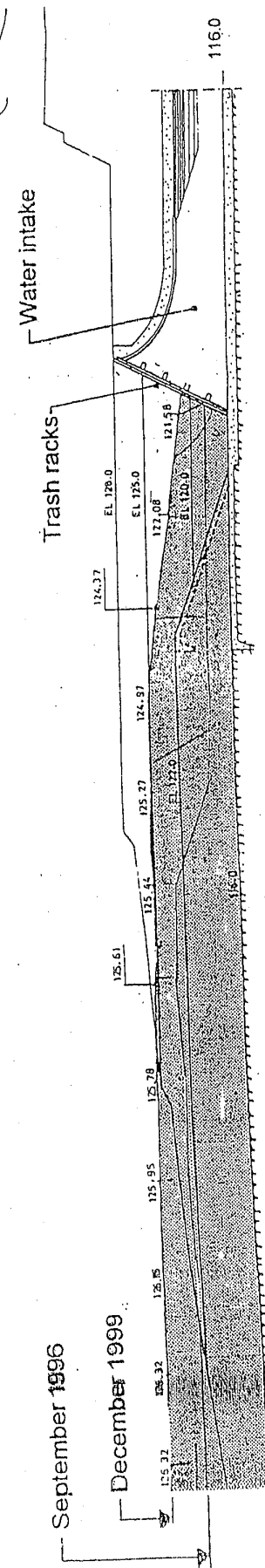
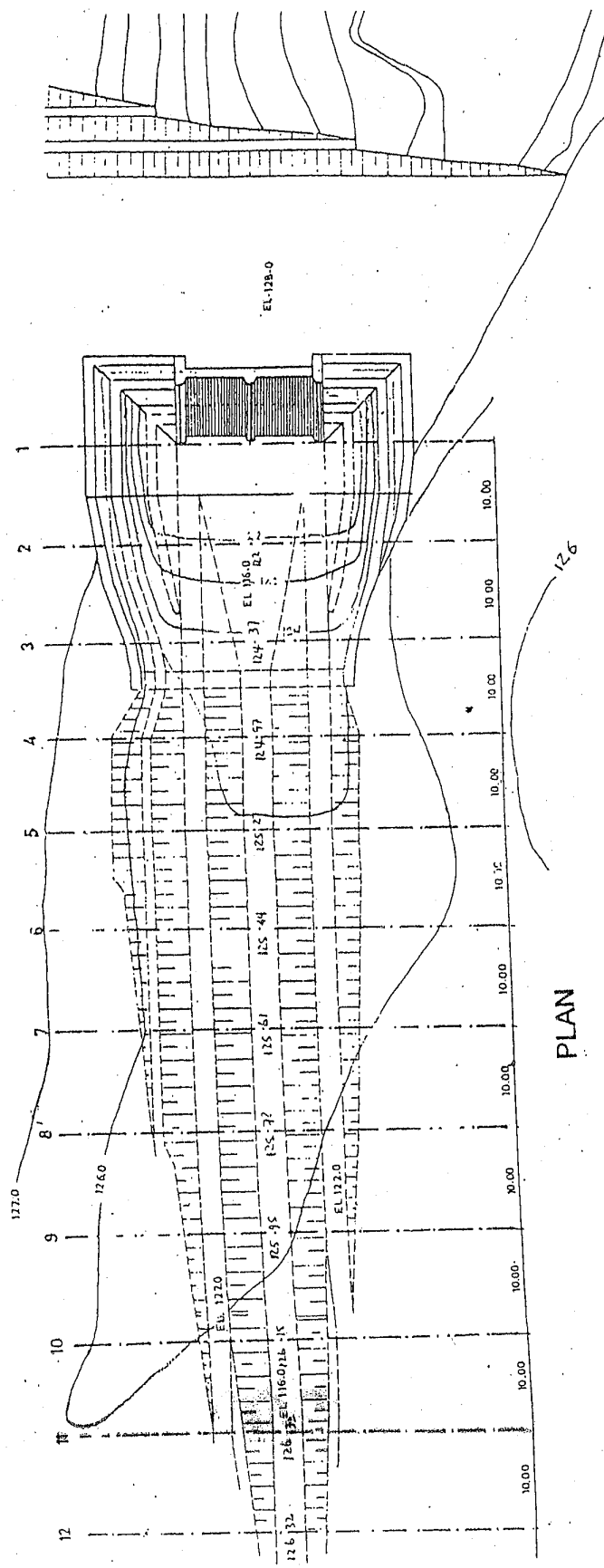


図 3-2-27 ウォノギリダム前庭取水口の堆砂状況 (1996 年及び 1999 年調査時)

Figure 3-2-27
Wanogiri Forebay Water Intake Approach
1996 & 1999 Bed Surveys

Source: PLTA Wanogiri

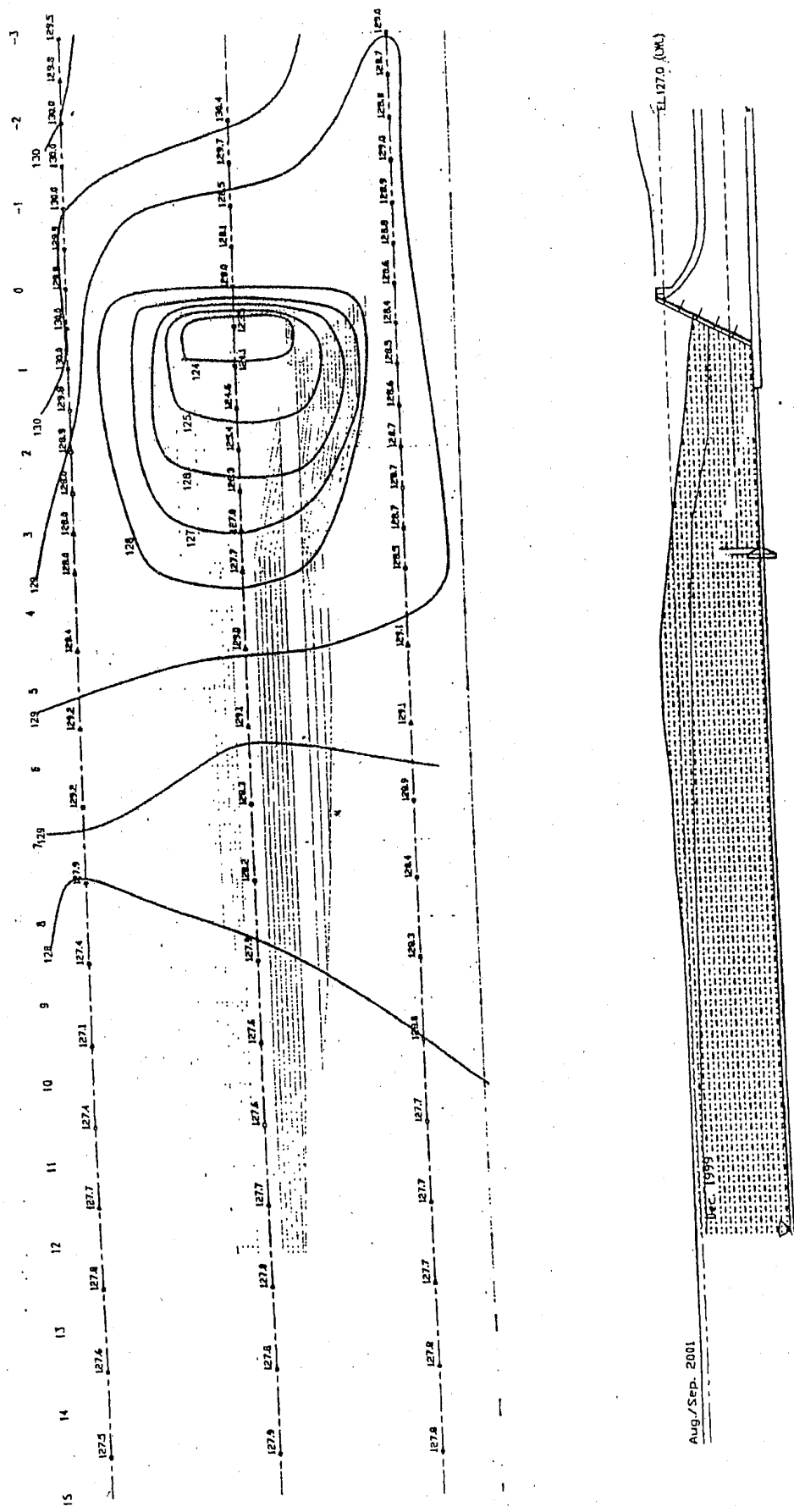


Fig. 3-2-28 Sounding Survey Data in front of intake (September 2001)

ウオノギリダム取水口の堆砂状況 (2001年9月)

図 3-2-28

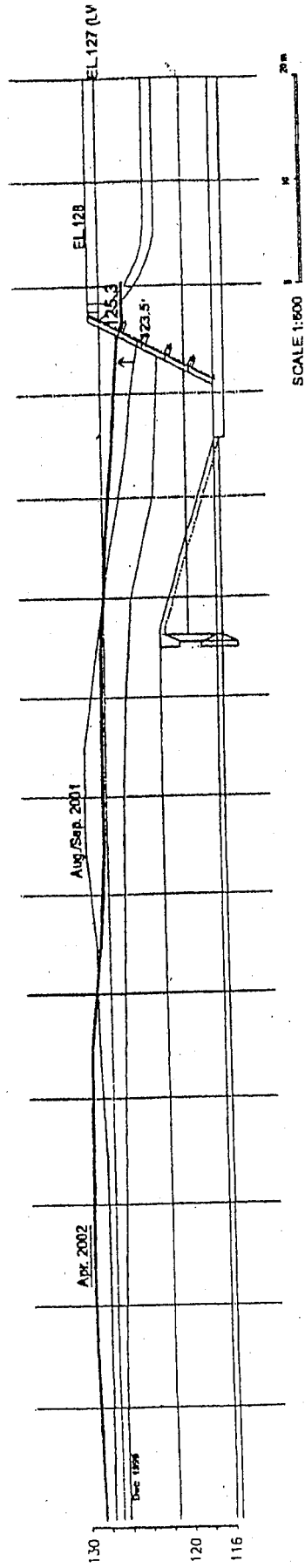


図 3-2-29 ウォノギリダム取水口の堆砂状況 (2002年4月)

Fig. Profile of Sedimentation Condition along intake Center Line (April 2002)