

## Annex - 1

## Industries Directly Taking Water from Brantas River (1/2)

(Unit : m<sup>3</sup>/year in 1996)

No.	Name of industry	Location	Type of Product	Amount of water taken
1	PT. TJIWI KIMIA I	Sidoarjo	Paper	12,648,960
2	PG. GEMPOLKEREK	Mojokerto	Sugar	8,823,985
3	PG. KREBET BARU	Malang	Sugar	8,377,560
4	PG. Mrican	Kediri	Sugar	7,300,800
5	PT. Surabaya Agung Ind	Gresik	Paper	7,179,540
6	PG. TJUKIR	Jombang	Sugar	6,566,400
7	PT. AJINOMOTO INDONESIA	Mojokerto	MSG	6,505,700
8	PT. Miwon Indonesia	Gresik	MSG	5,855,763
9	PG. Tjandi	Sidoarjo	Sugar	5,710,694
10	PT. AJINEX INTERNATIO	Mojokerto	Cane mollasses	5,278,900
11	PG JOMBANG BARU	Jombang	Sugar	4,928,856
12	PT. PETRO KIMIA GRESIK	Gresik	Fertilizer & other	4,928,139
13	PG. LESTARI	Nganjuk	Sugar	4,716,400
14	PG. NGADIREJO	Kediri	Sugar	4,389,200
15	PG MOJOPANGGUNG	Tulungagung	Sugar	4,340,700
16	PG. Kremboong	Sidoarjo	Sugar	4,125,600
17	PG. Watutulis	Sidoarjo	Sugar	3,582,144
18	PG. KRIAN	Sidoarjo	Sugar	3,537,202
19	PT. AYUWANGI (EKA MAS	Malang	Industrial paper	2,887,706
20	PG. TOELANGAN	Sidoarjo	Sugar	2,739,773
21	PT. SURABAYA MEKA BOX,	Gresik	Industrial paper	2,173,757
22	PT. SUPARMA	Surabaya	Paper	1,897,344
23	PT. PAKERIN I	Mojokerto	Industrial paper	1,826,640
24	PT. Semen Gresik (Pers	Gresik	Portland cement	1,638,558
25	PG. Kebon Agung	Malang	Sugar	1,131,610
26	PT. ISPATINDO	Sidoarjo	Steel profiles	978,907
27	PT. SURYA INDO ALGAS	Surabaya	Seaweed flour	843,264
28	PT. ASIA VICTORY INDUSTRY	Surabaya	Ceramic wall & floor tiles	520,560
29	PT. HANIL DAYA METALWORK	Sidoarjo	Reinforcement bars	479,142
30	PT. IGLAS (Persero)	Surabaya	Glass container	472,456
31	PT. Kedawung Setia INDUSTRY	Surabaya	Enamel ware	330,077
32	PT. ASAHIMAS FLAT GLAS	Sidoarjo	Sheet glass	287,600
33	PT. MULTI BINTANG INDUSTRY	Surabaya	Beer & Soft drink	281,680
34	PT. SMART CORPORATION	Surabaya	Cooking oil	248,294
35	PT. Keramik Diamond Indah	Gresik	Ceramic floor tiles	234,492
36	PT. SIANTAR TOOP	Sidoarjo	Children cookies	210,816
37	PT. Sasa Fermentation	Sidoarjo	MSG	205,632
38	PT. ADYA BUANA PERSADA	Gresik	Ceramic floor tiles	198,468
39	PD. ANEKA KIMIA (PD. ASSEN)	Mojokerto	Alcohol	171,072
40	MEGA SURYA MAS	Sidoarjo	Candy	157,512
41	PT. SURYO SOSRO KENCON	Gresik	Bottled tea	156,079
42	STEEL PIPE INDUSTRY (	Surabaya	Galvanized steel pipes	136,256
43	PT. MULTIPACK UNGGUL (	Gresik	Detergent soap	127,118
44	PT. PRIMA ALOY STEEL	Sidoarjo	Bicycle	106,344
45	PT. KIMIA FARMA	Jombang	Jodium & derivate	98,593
46	PT. IKI MUTIARA	Surabaya	Ceramic	91,812
47	PABRIK TAHU HALIM JAY	Surabaya	Tofu	81,000
48	PT. INDUSTRI SODA (PER	Surabaya	Soda	79,052
49	PT. Wonosari Jaya	Surabaya	Steel wire, steel wire rope	72,000
50	PERSH. TAHU SIDO MAKMUR	Surabaya	Tofu	65,880

## Annex-1

## Industries Directly Taking Water from Brantas River (2/2)

(Unit : m3/year in 1996)

No.	Name of industry	Location	Type of Product	Amount of water taken
51	PT.ASAHIMAS FLAT GLASS	Sidoarjo	Glass sheet	65,800
52	PABRIK ES KALI BRANTAS	Surabaya	Ice block	62,279
53	UD. SU'UD JAYA (AIR MINUM)	Surabaya	Drinking water	60,000
54	PABRIK TAHU SIDOMAKMUR	Surabaya	Tofu	58,320
55	PABRIK TAHU BUDI PURNAMA	Surabaya	Tofu	54,450
56	PT.PAKABAYA CHOPSTICK	Surabaya	Chopstick	53,736
57	PT. WANGSA BRATA	Surabaya	Leather	53,448
58	PABRIK ES SURESJA	Sidoarjo	Ice block	47,030
59	PABRIK TAHU SUMBER KENCONG	Surabaya	Tofu	46,933
60	PABRIK TAHU LEGOWO	Surabaya	Tofu	39,525
61	PT.WARU GUNUNG	Gresik	Plastic footwear	33,327
62	UD. SUMBER AIR	Surabaya	Drinking water	32,400
63	PT. GAWEREJO INDUSTRI	Surabaya	Textile	29,713
64	PT.SODA INDONESIA (II)	Sidoarjo	Soda	25,776
65	PT. BINTANG APOLLO	Surabaya	Cotton weaving & colouring	22,500
66	PABRIK TAHU SOPONYONO	Surabaya	Tofu	21,000
67	PT. UNIVERSAL M.W.	Sidoarjo	Steel wire	19,283
68	PT.Madya Setia Kelapa	Surabaya	Cooking oil	18,144
69	PERUS. KECAP SAMA JAYA	Sidoarjo	Soya sauce	15,810
70	PT. "BLITAR PUTRA"	Blitar	Coffee	15,620
71	PERKB.KOPI ROTOREJO (	Blitar	Coffee	15,552
72	UD.SUMBER REJO	Jombang	Tapioca	13,049
73	PT. JAYA READYMIX	Surabaya	Concrete	12,000
74	PT. TIRTOLANGGENG	Malang	Rice mill	11,763
75	SUHENDRO	Blitar	Coffee	11,664
76	PT SARANA BANGUNAN LOKA	Surabaya	Refractory	10,598
77	PUDYO SARJONO	Malang	Carton	9,990
78	PERUSAHAAN SUSU FARIDA	Sidoarjo	Milk	9,882
79	PT. INDO BATT	Sidoarjo	Battery	7,906
80	PT.JAYABAYA RAYA	Surabaya	Detergent soap	7,228
81	PT. Sari Mas Permai	Surabaya	Cooking oil	7,200
82	PT.Genteng & batubata Bambe	Gresik	Ceramic roof tile	7,200
83	PT. SEPANJANG AGUNG I	Surabaya	Cotton weaving	5,400
84	PT. New Surabaya	Sidoarjo	Sauce pan	4,614
85	PT. Pangestu	Surabaya	Cotton weaving	4,236
86	PT. Karang Pilang Agung	Surabaya	Active coal	4,200
87	PETER WIDARSO	Malang*)	Leather	4,158
88	PABRIK TAHU SUMBER TANI	Surabaya	Tofu	3,294
89	PERUSAHAAN SUSU LANY	Sidoarjo	Milk	2,632
90	PT. Bumi Palapa	Surabaya	Carosery	2,400
91	PT. SUJARU (HADELI LUKITO)	Malang	Leather	2,138
92	PT.TEGEL, LTS.	Surabaya	Floor tile	1,800
93	PABRIK TAHU SUMBER REJEKI	Sidoarjo	Tofu	1,582
94	PT. ADHI PRIMA SUPRINTA	Gresik	Paper	1,250
95	PT. Kertas Leces	Malang	Depithed bagasse	1,000
	TOTAL			130,663,867

Source : PJT

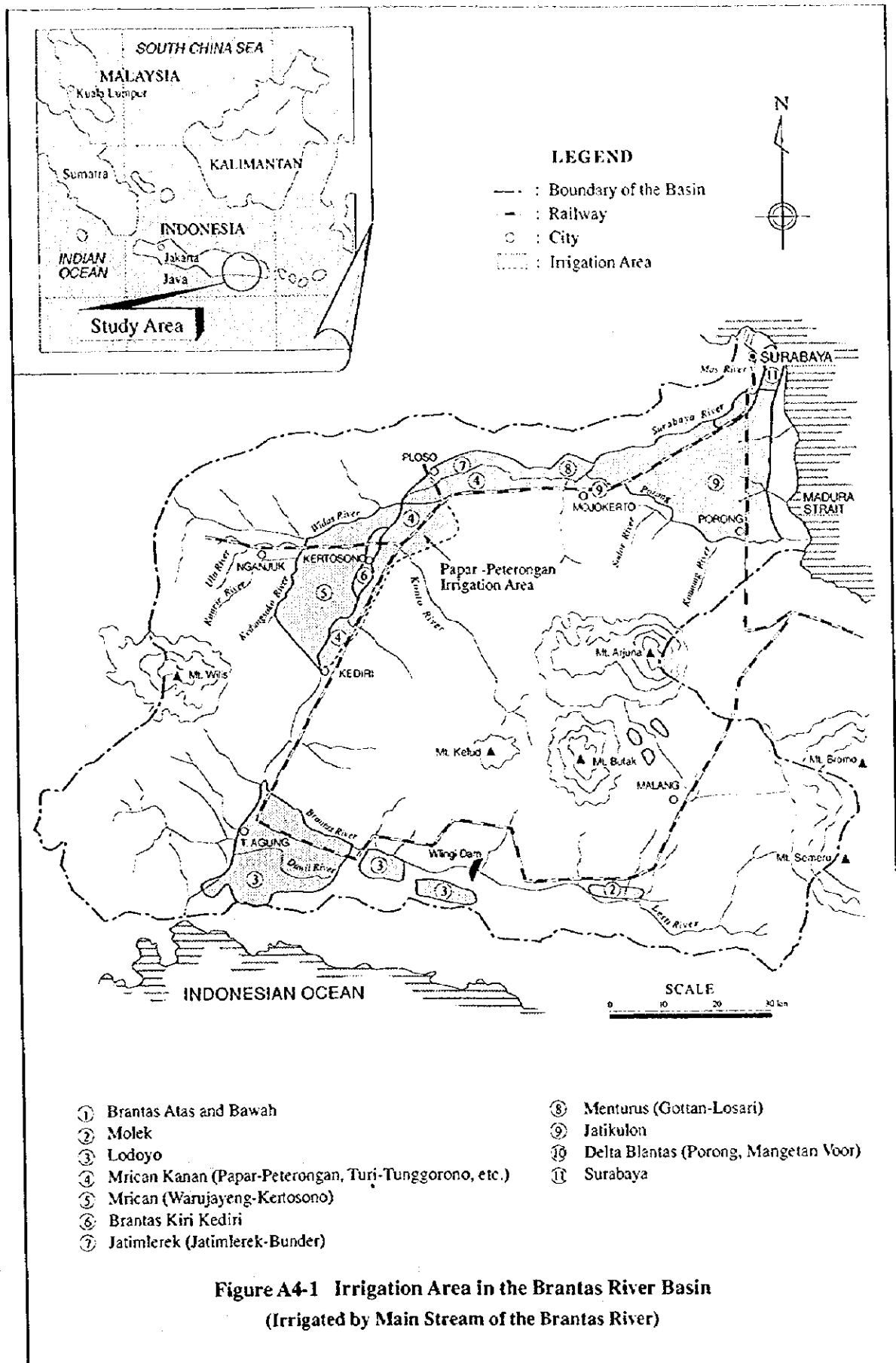
## Annex - 2

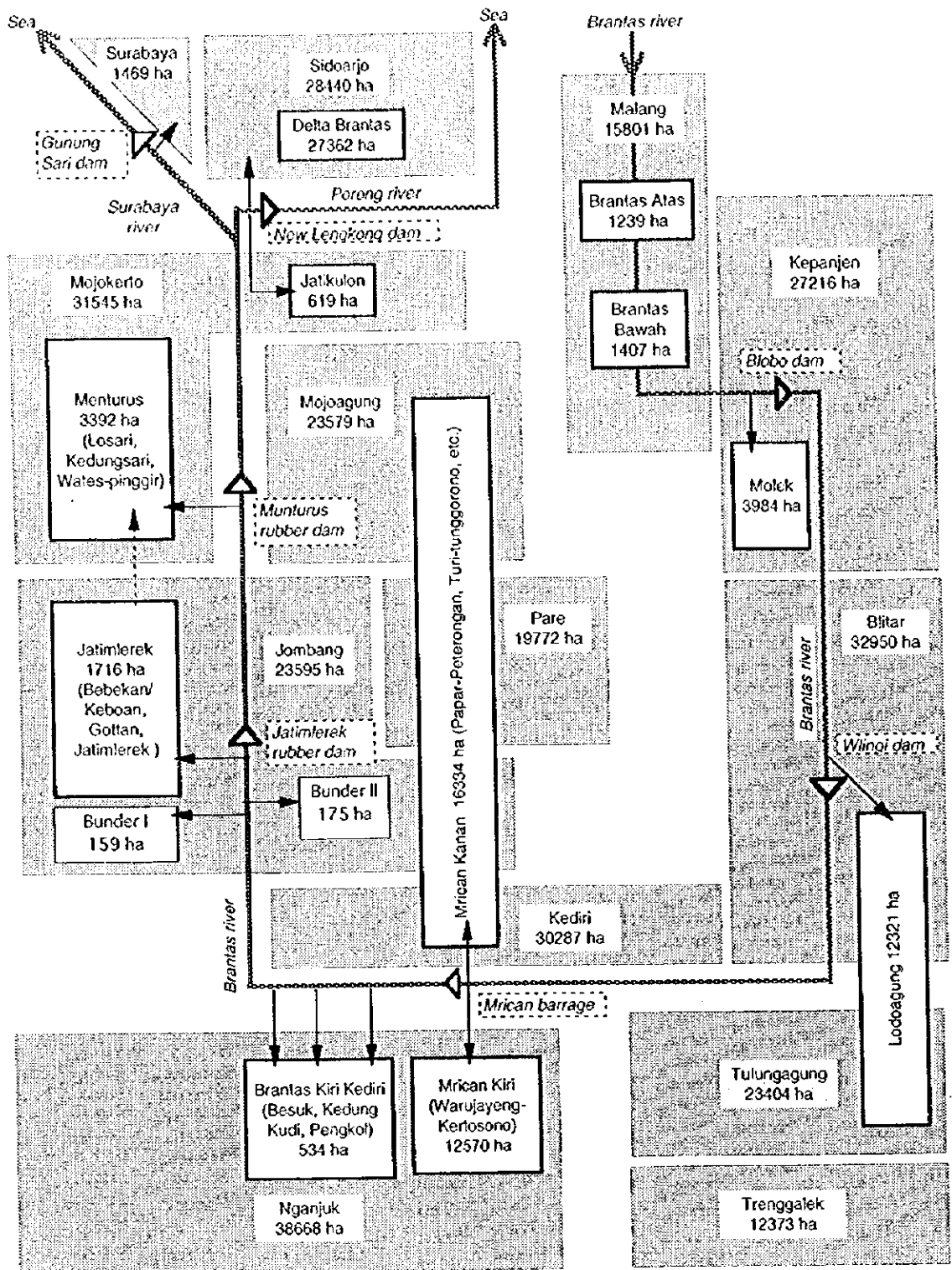
## Non-Industrial Organizations Directly Taking Water from Brantas River in 1996

No.	name	Location	Activity	Amount of water taken	Remarks
1	CITRALAND SURYA	Surabaya	Golf Club	1,108,700	
2	PT.GRAND FAMILY VIEW	Surabaya	Property	657,816	
3	PT. ADHI BALADIKA	Surabaya	Property & golf club	256,128	
4	KEBUN BINATANG SURABA	Surabaya	Zoo	197,640	
5	PT.PATRA INDONESIA	Surabaya	Hotel	158,160	
6	Yani Golf Club	Surabaya	Golf Club	129,600	
7	PT. PAKUWON DARMA	Surabaya	Golf club	125,456	
8	PERKEBUNAN GAMBAR (IM	Blitar	Coffee (Plantation)	36,280 *	
9	H.M. TOELKAH	Malang	Car wash	31,619	
10	AMIR FARKAN	Malang	Car wash	28,728	
11	GUNAWAN	Malang	Piggery	25,848 *	
12	Ny. Tutik	Malang	Piggery	25,848 *	
13	Perk.Kopi JR.Banteng	Blitar	Coffee (Plantation)	23,328 *	
14	WIJAYA INN VILLA	Malang	Villa	20,246	
15	SOEPARNO	Malang	Car wash	19,764	
16	RESTORAN AMSTERDAM	Malang	Restaurant	17,774	
17	PT. "Selecta"	Malang	Tourism	15,840	
18	PUSKUD MINA LESTARI (	Malang	Restaurant	14,945	
19	SUGIANTO	Malang	Fish pond	14,470 *	
20	PT. KARYA MAKMUR	Sidoarjo	Real estate	13,172	
21	SURYA KENCANA PT.(DIANTO	Tulungagung	Piggery	10,496 *	
22	MUSADIK WIRAWAN	Blitar	Piggery	9,072 *	
23	CUCI MOBIL BAKAT MAS	Surabaya	Car wash	8,023	
24	Cuci Mobil RIKAT Mas	Surabaya	Car wash	7,910	
25	A M I R	Malang	Car wash	7,901	
26	PT. ARGO WILIS	Tulungagung	Tea (plantation)	6,882 *	
27	PT. INDOKO	Tulungagung	Rubber(plantation)	6,523 *	
28	HASAN ANWAR	Malang	Car wash	5,922	
29	H.M.M. JAMAL	Malang	Car wash	5,400	
30	ASHARI SOEDIGDO (CUCI MOH	Malang	Car wash	4,598	
31	H.MASOEDI	Malang	Car wash	3,877	
32	CUCI MOBIL PIONER	Surabaya	Car wash	3,000	
33	CUCI MOBIL YUNIOR MOTOR	Surabaya	Car wash	3,000	
34	Sutaman	Malang	Car wash	2,570	
35	EFENDI RAHARJO	Malang	Public bathroom	1,944	
36	Soetodjo	Malang	Car wash	1,927	
37	Abas Sutrisno	Malang	Public bathroom	646	
38	HM. BOSUMI RIFAI	Malang	Public bathroom	324	
	Total			3,011,377	

Note : \* are agriculture and fishery activities

Source : PJT





Note ;

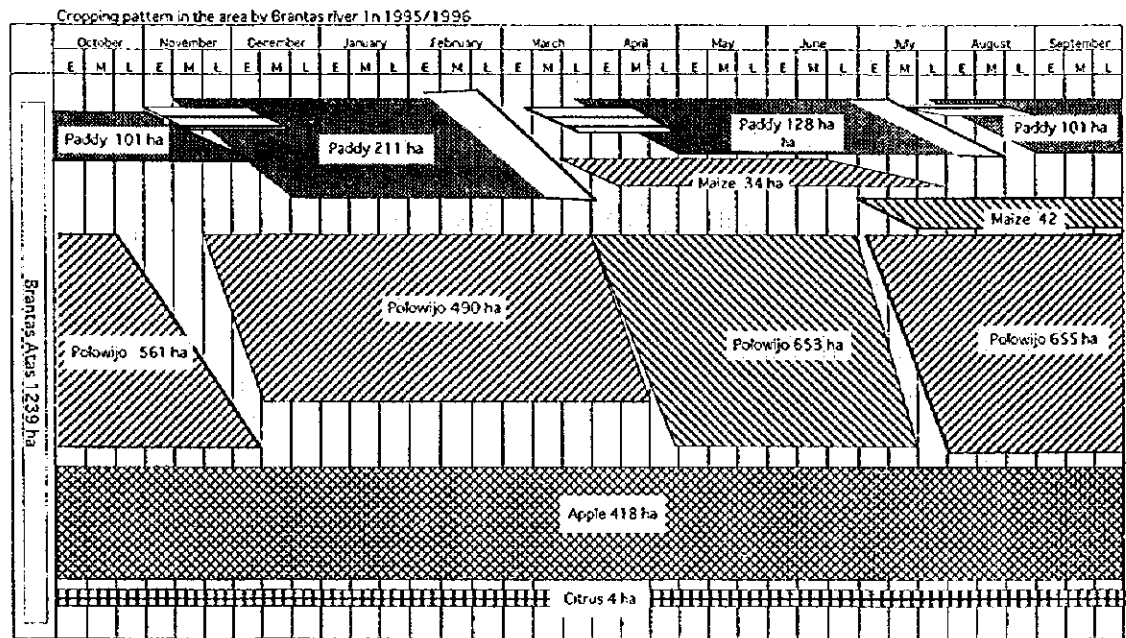
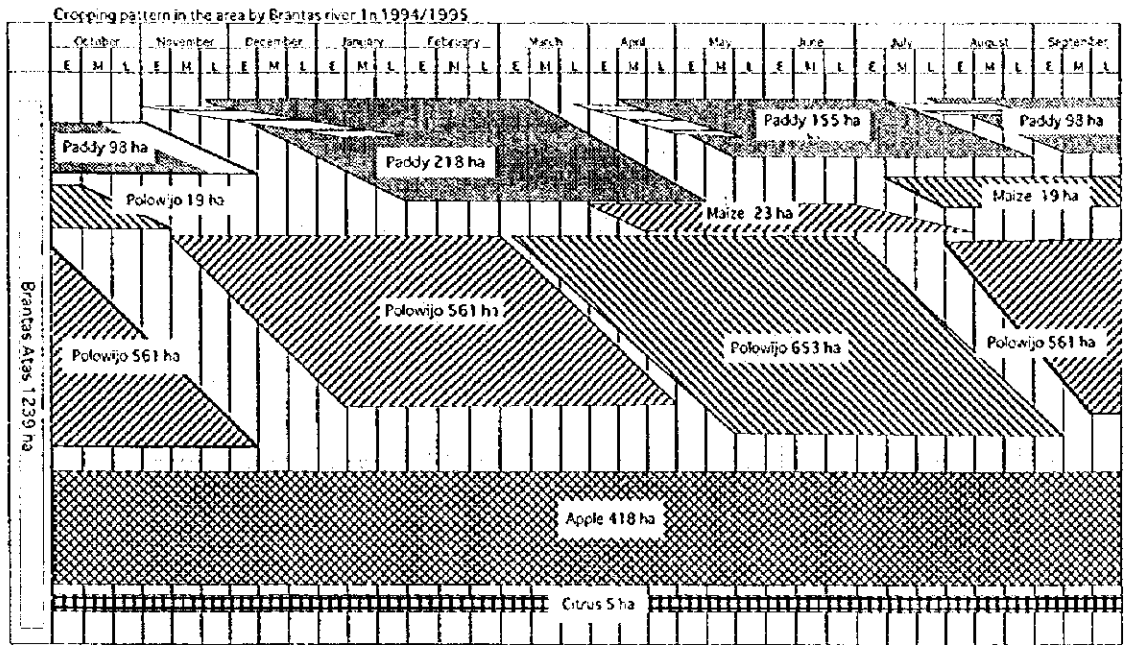
Nganjuk 38668 ha      Name of Water Resources Branch Office (Caban Dinas Pengairan) and its commanding area



Lodoagung 12321 ha      Name of representative irrigation system taking irrigation water from Brantas main stream

Mrican barrage      Name of representative intake structure on the Brantas main stem

Source ;      Daftar Penetapan Baku Sawah Tahun 1996 Dinas Pekerjaan Umum Pengairan Daerah Propinsi Daerah Tingkat I Jawa Timur  
 Illustrated by JICA Study Team

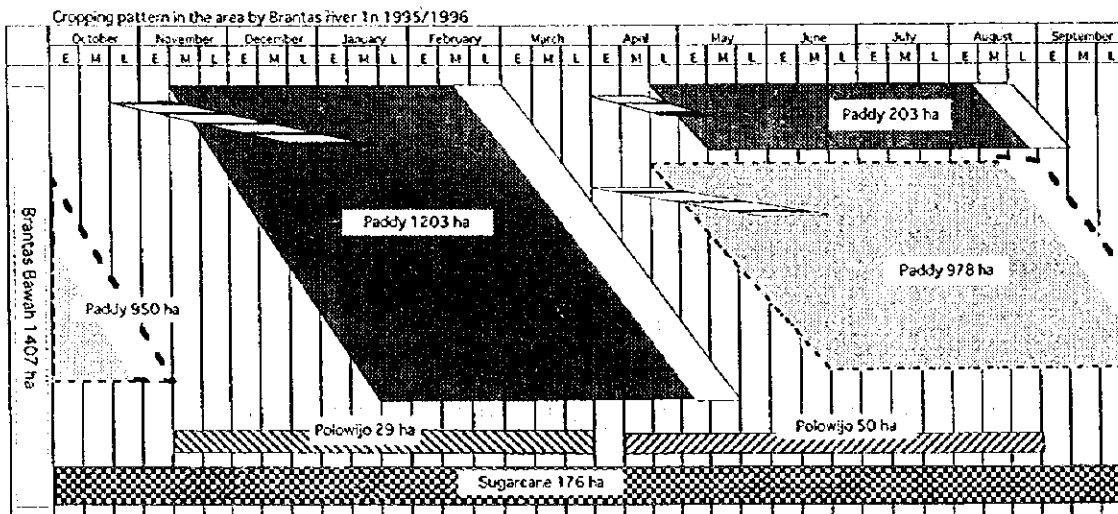
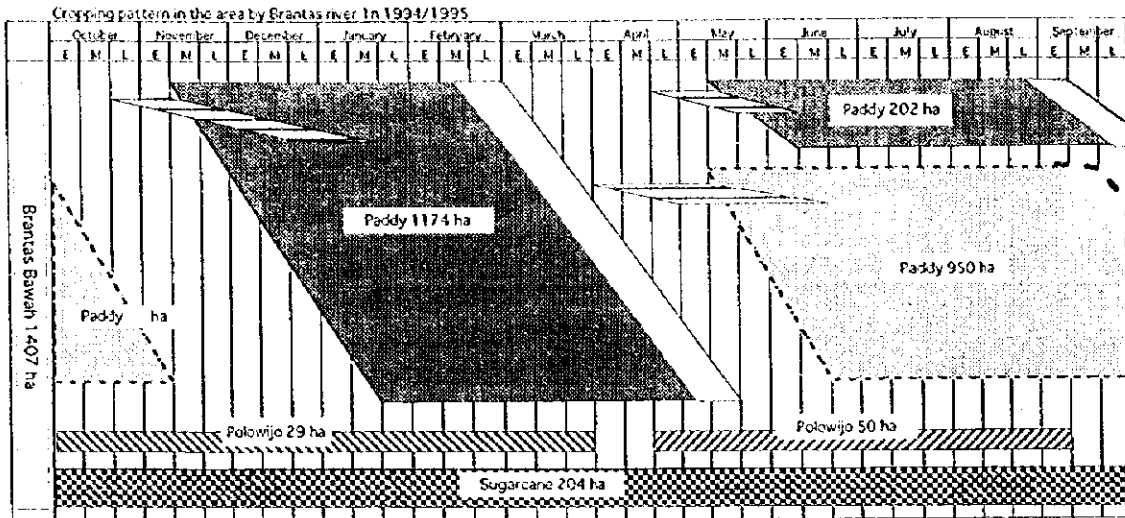
Figure A4-2 Cofiguration of Irrigation Areas Irrigated by The Brantas River Main Stream





 Unlicensed paddy  
 Nursery

Source: Keadaan Irigasi, analysed by JICA Study Team

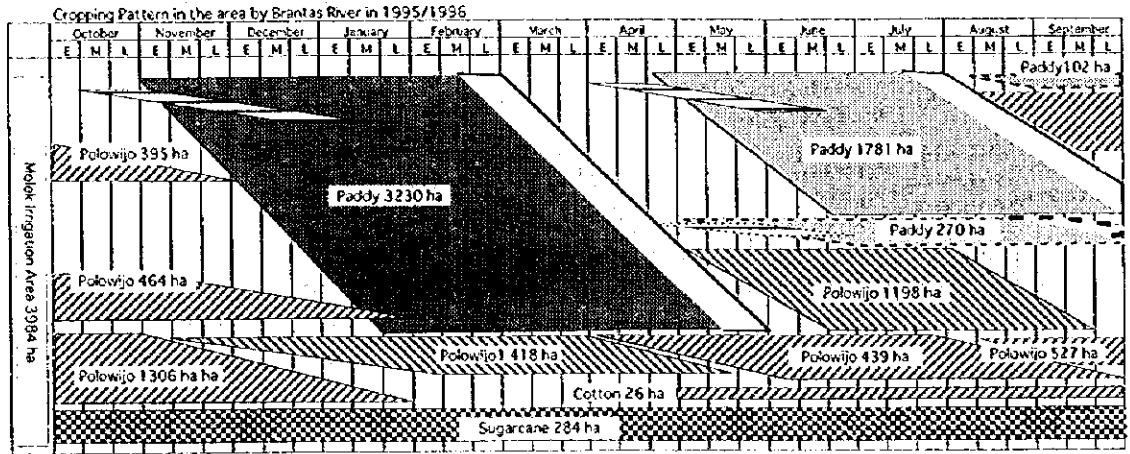
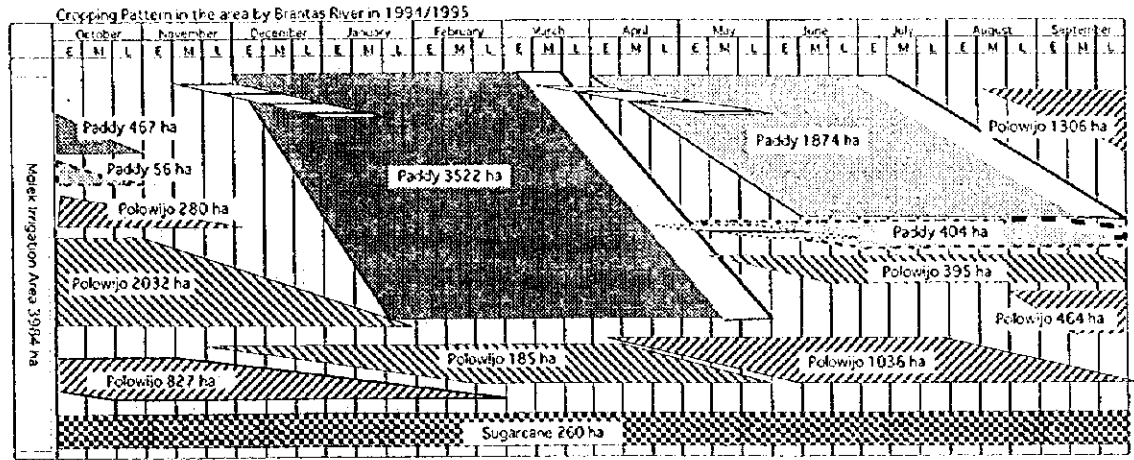
Figure A4-3 (1) Cropping Pattern Irrigated by the Brantas River





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 Nursery

Source: Keadaan Irigasi, analysed by JICA Study Team

Figure A4-3 (2) Cropping Pattern Irrigated by the Brantas River

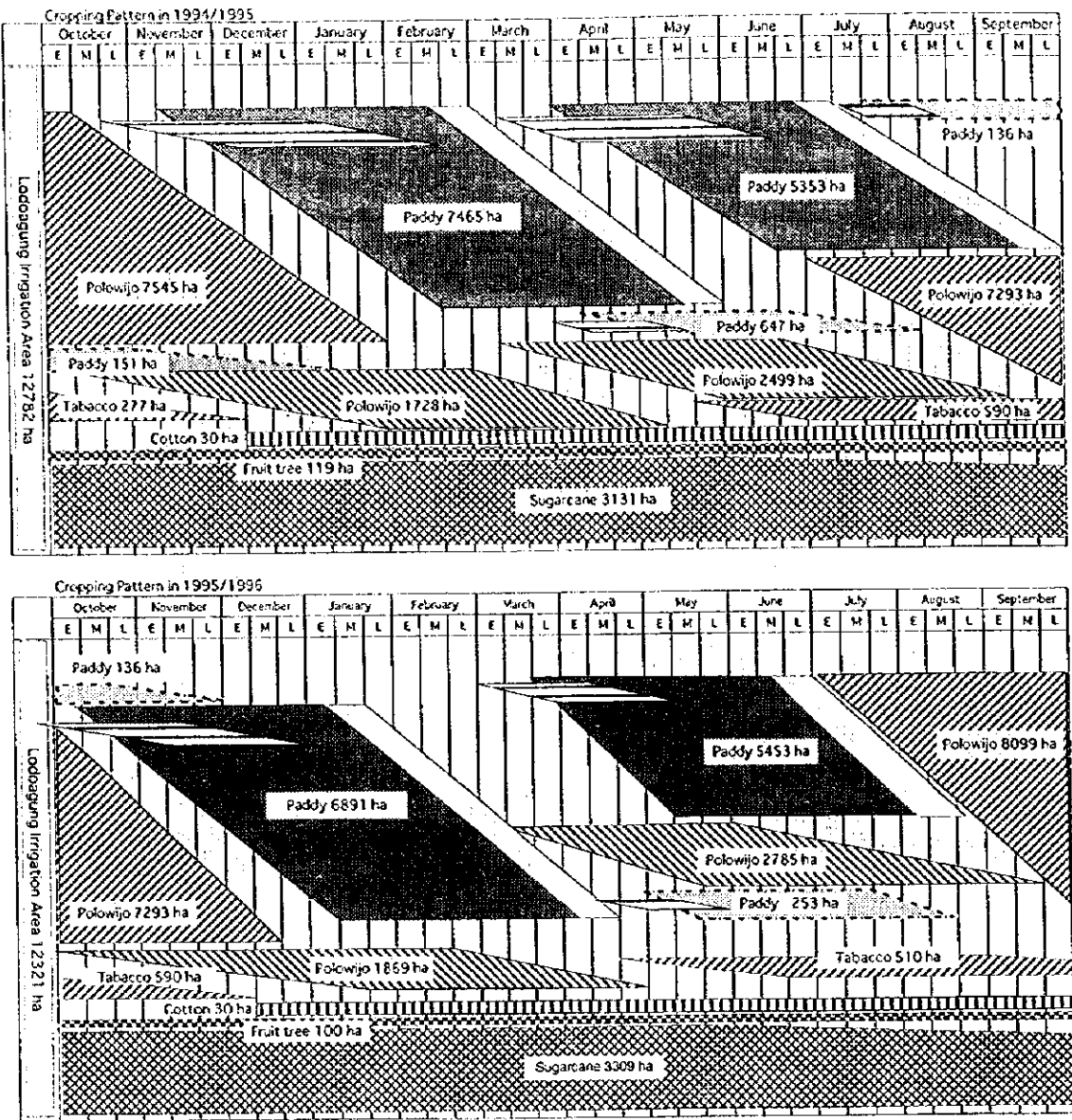


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 Nursery

Source: Kadaan Irigasi, analysed by JICA Study Team

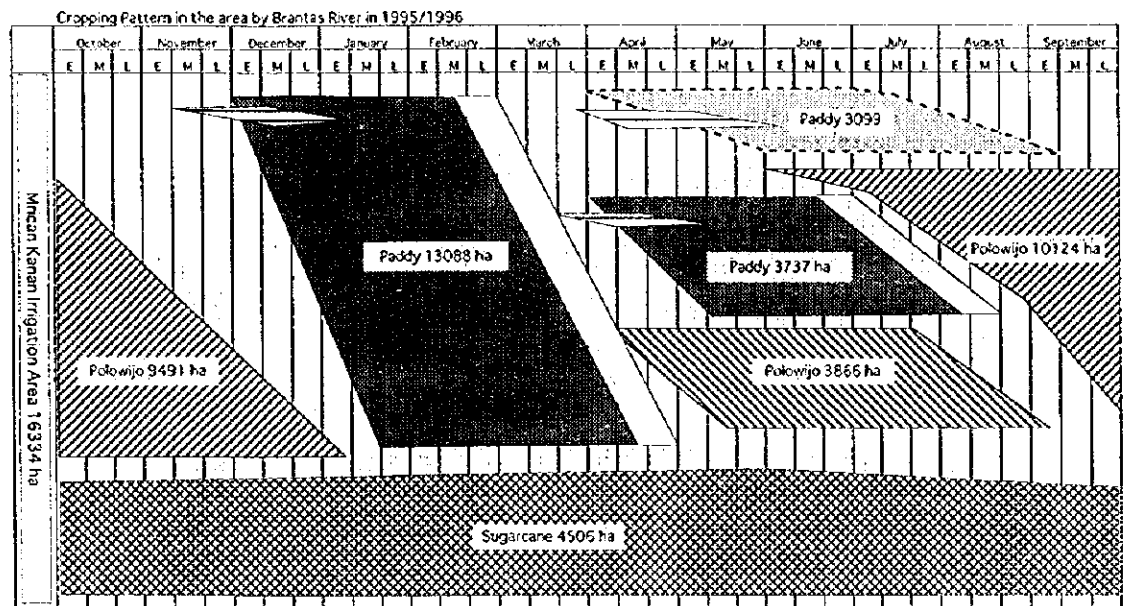
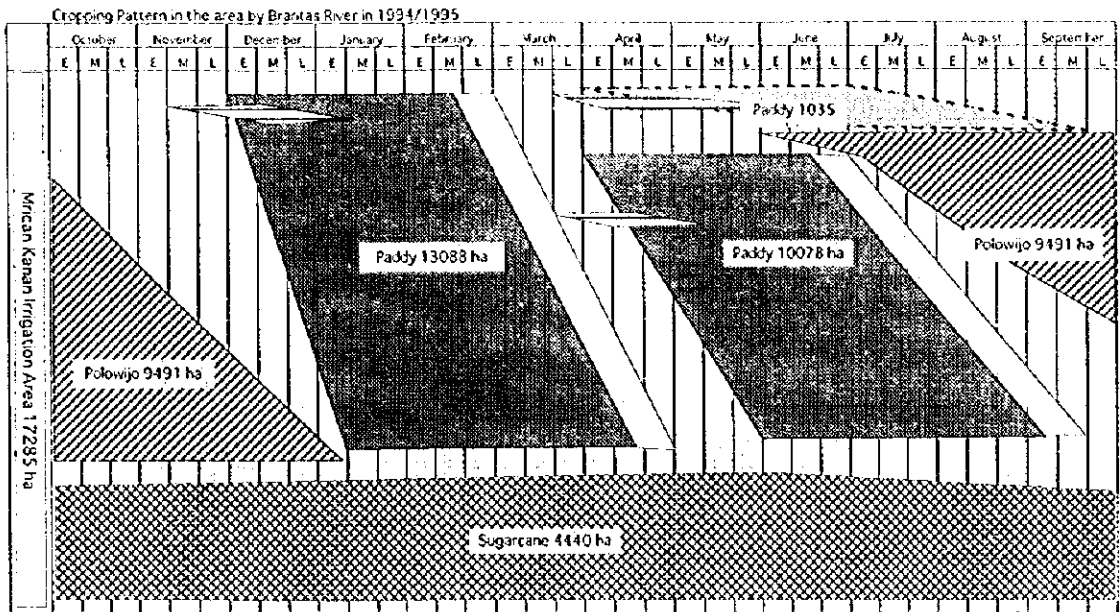
Figure A4-3 (3) Cropping Pattern Irrigated by the Brantas River






Source: Keadaan Irigasi, analysed by JICA Study Team

Figure A4-3 (4) Cropping Pattern Irrigated by the Brantas River

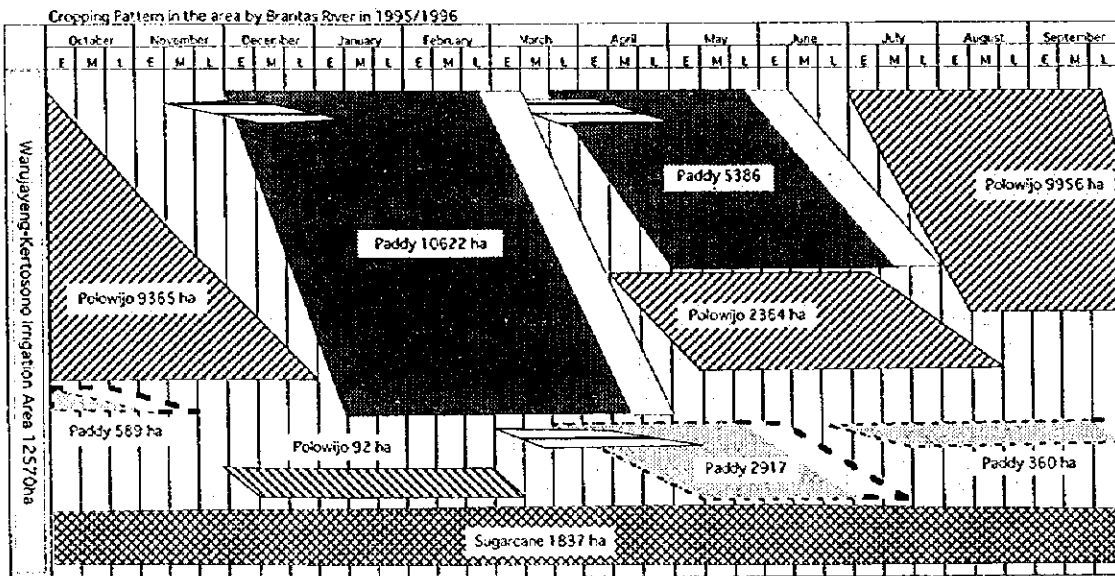
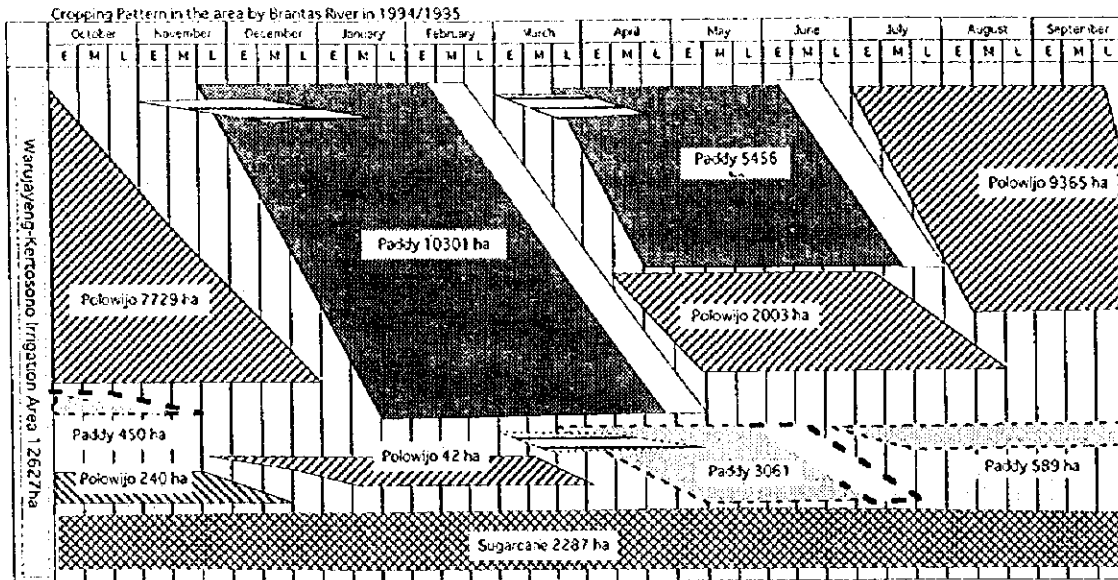


 Uncensored paddy

 Nursery for paddy

Source: Kadaan Irigasi; analysed by JICA Study Team

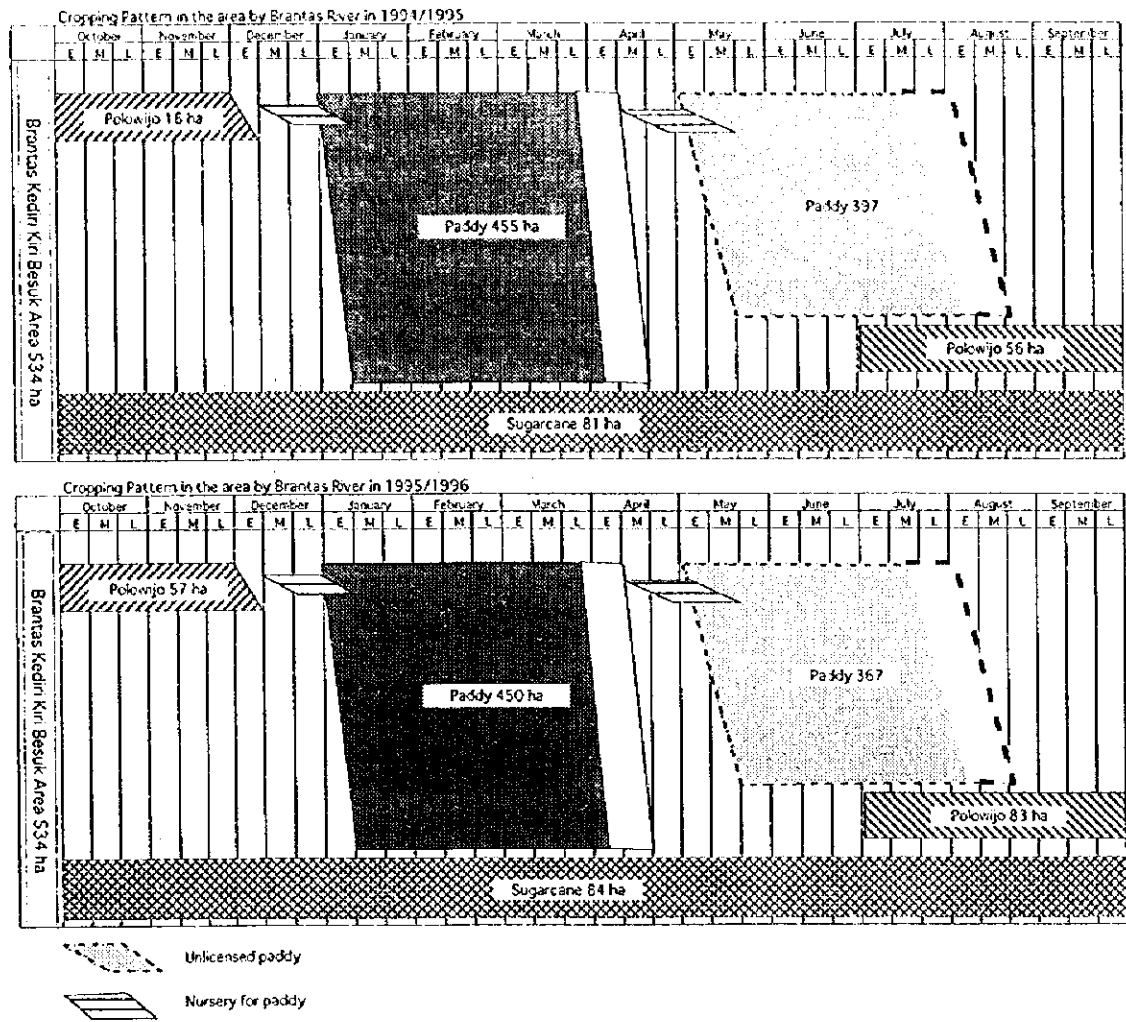
Figure A4-3 (5) Cropping Pattern Irrigated by the Brantas River



- Unlicensed paddy
- Nursery for paddy

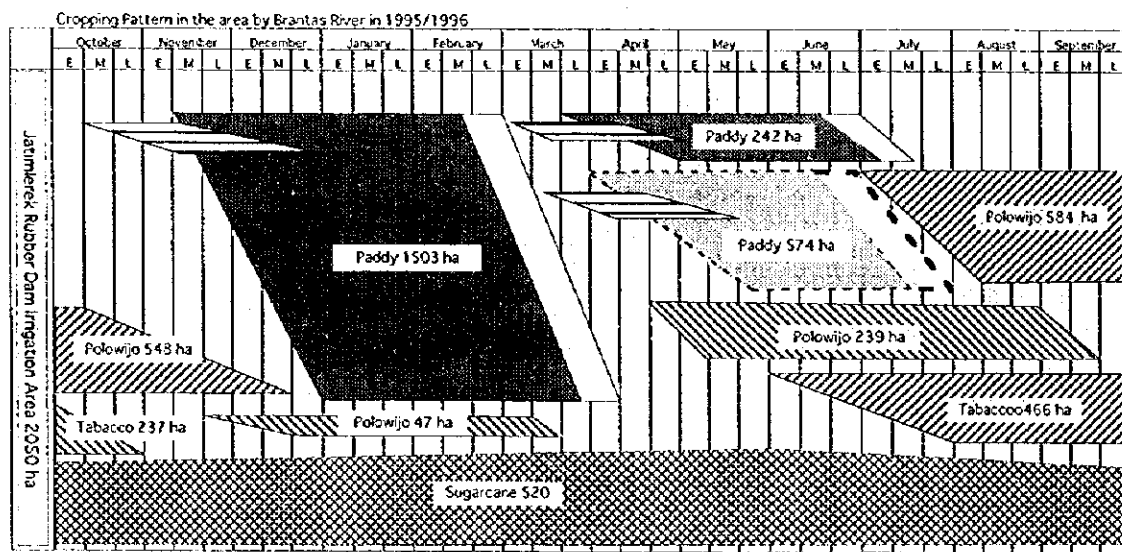
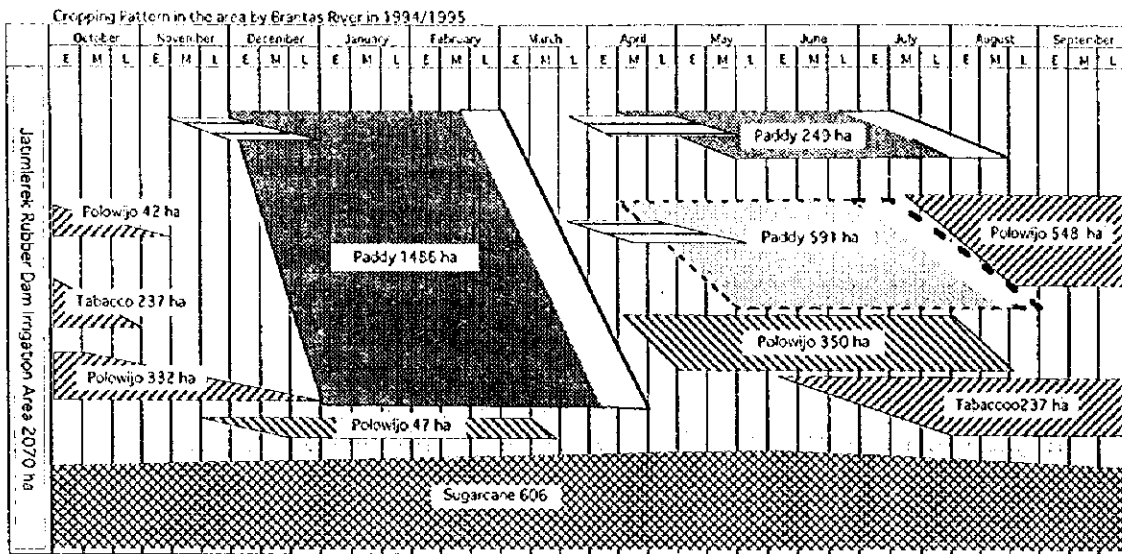
Source: Keadaan Irigasi, analysed by JICA Study Team



Figure A4-3 (6) Cropping Pattern Irrigated by the Brantas River



Source: Kadaan Irigasi; analysed by JICA Study Team

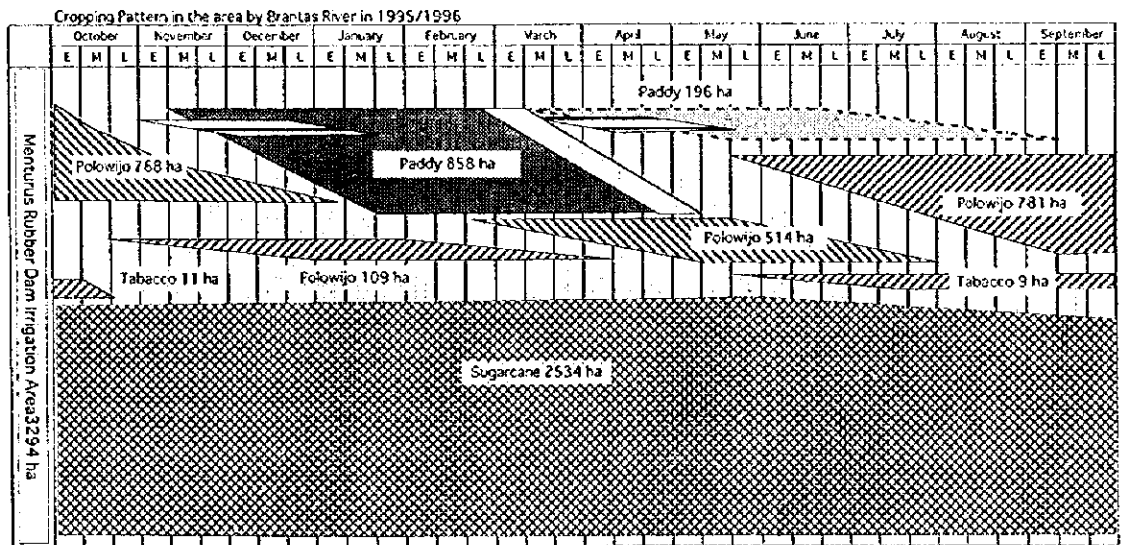
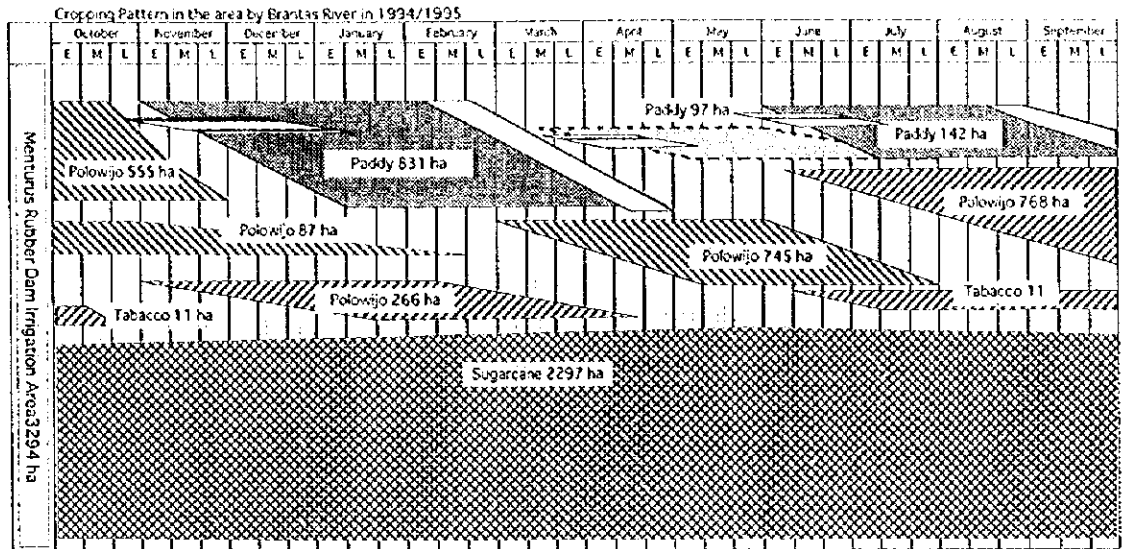
Figure A4-3 (7) Cropping Pattern Irrigated by the Brantas River





 Unicersed paddy  
 Nursery

Source: Keadaan Irigasi, analysed by JICA Study Team

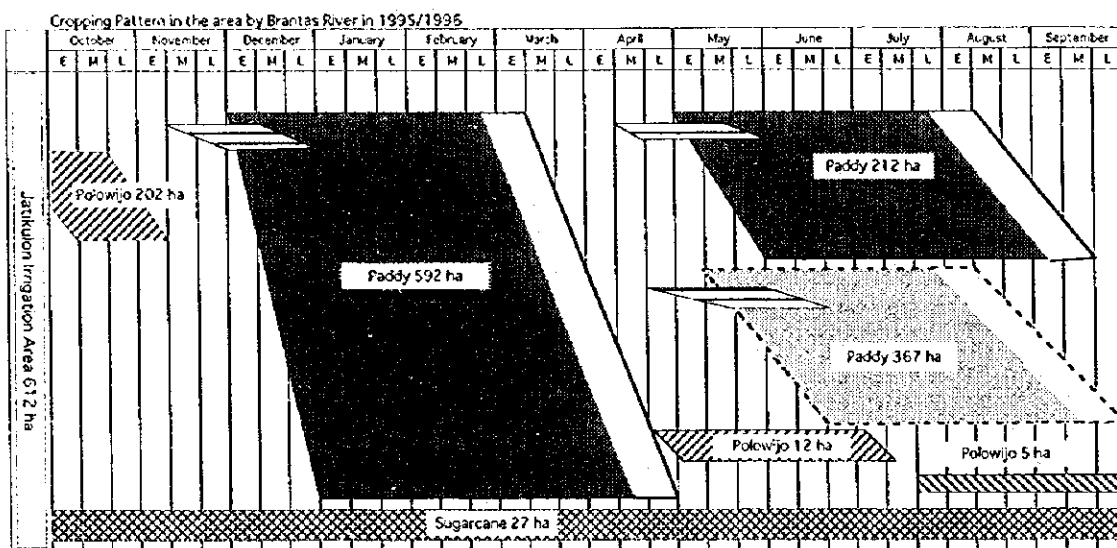
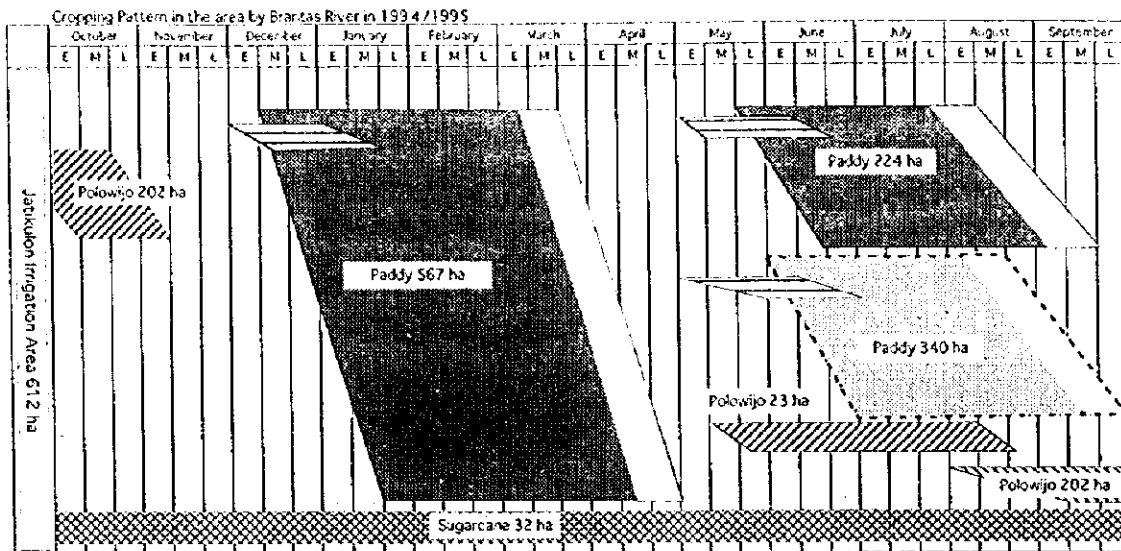
Figure A4-3 (8) Cropping Pattern Irrigated by the Brantas River





 Uncultivated paddy  
 Nursery

Source: Keadaan Irigasi, analysed by JICA Study Team

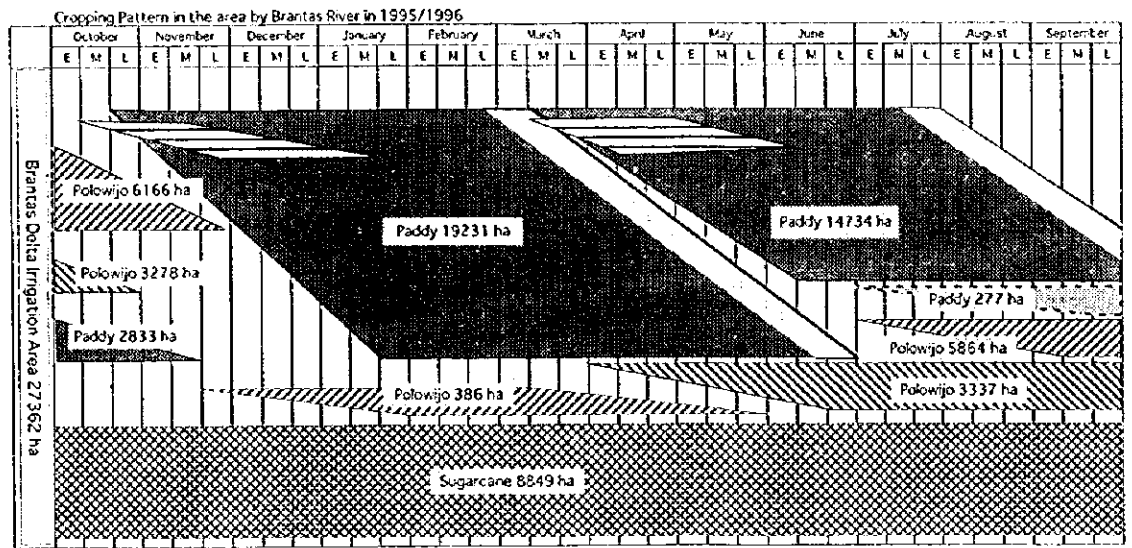
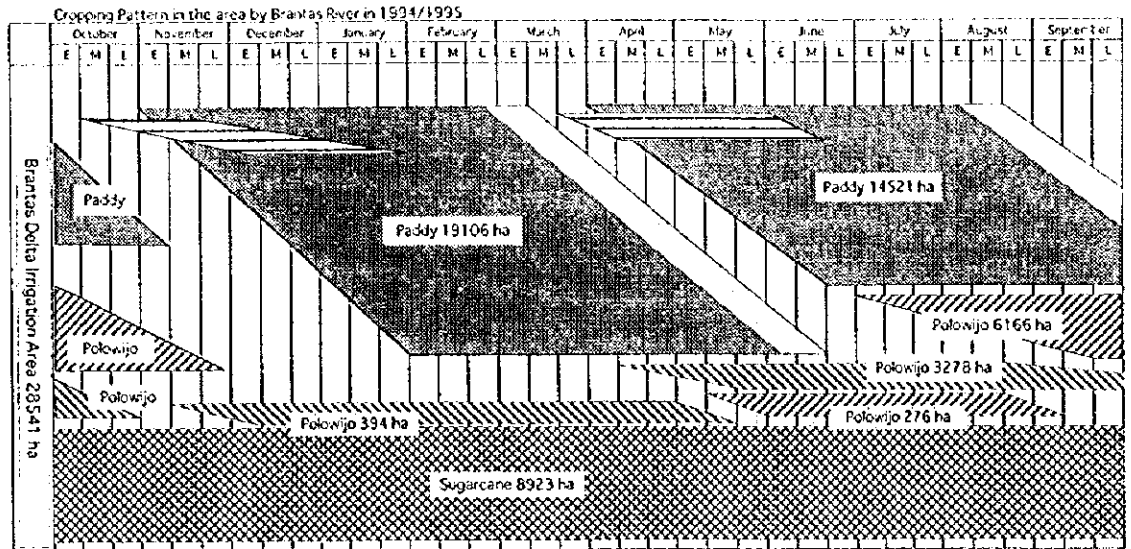
Figure A4-3 (9) Cropping Pattern Irrigated by the Brantas River


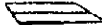


 Unlicensed paddy  
 Nursery

Source: Kadaan Irigasi, analysed by JICA Study Team

Figure A4-3 (10) Cropping Pattern Irrigated by the Brantas River



-  Unlicensed paddy
-  Nursery for paddy

Source: Keadaan Irigasi, analysed by JICA Study Team

Figure A4-3 (11) Cropping Pattern Irrigated by the Brantas River



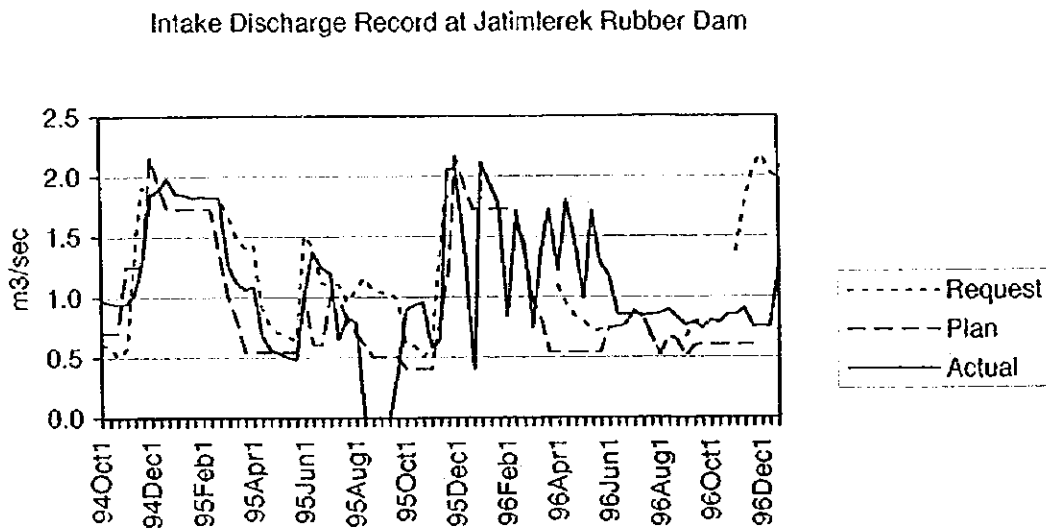
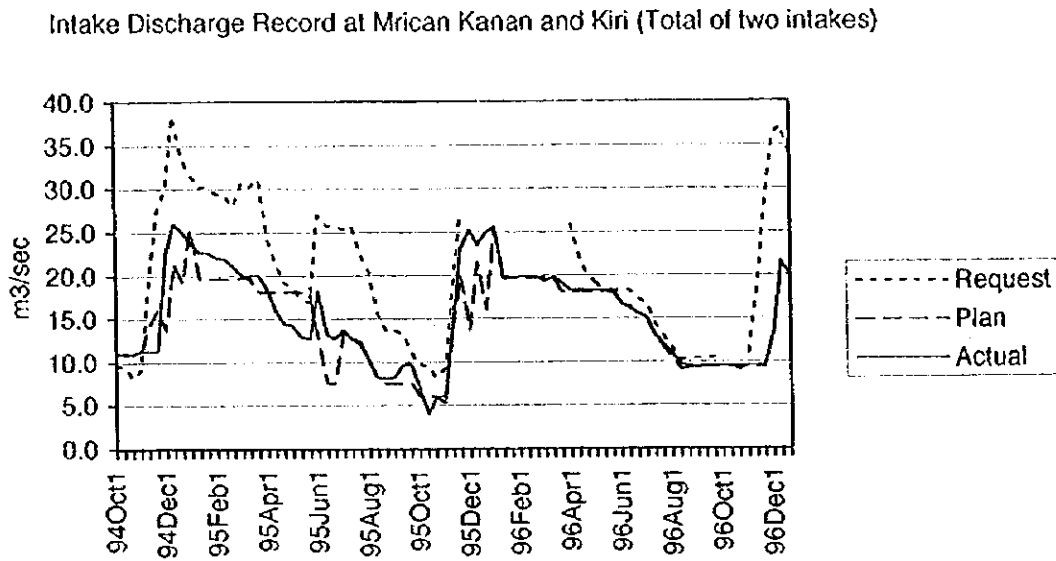
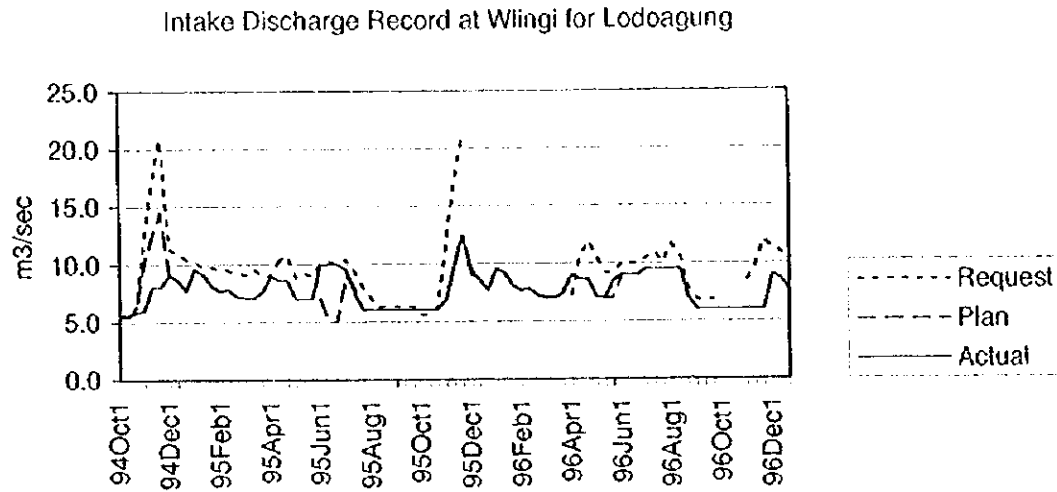
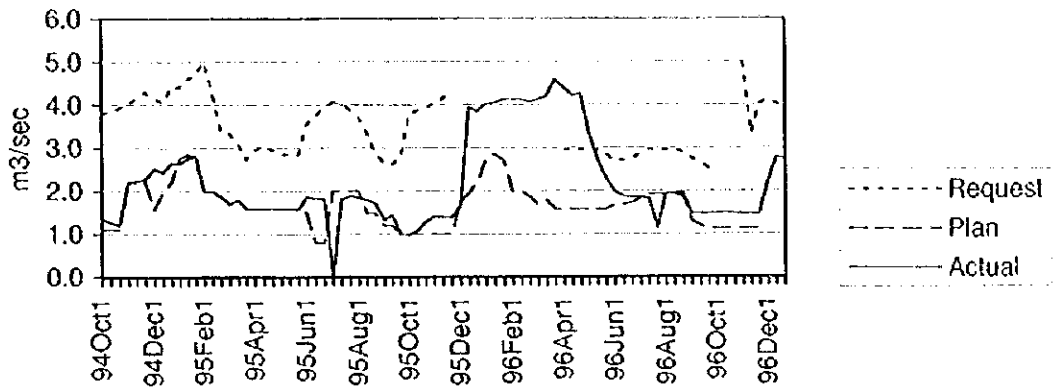
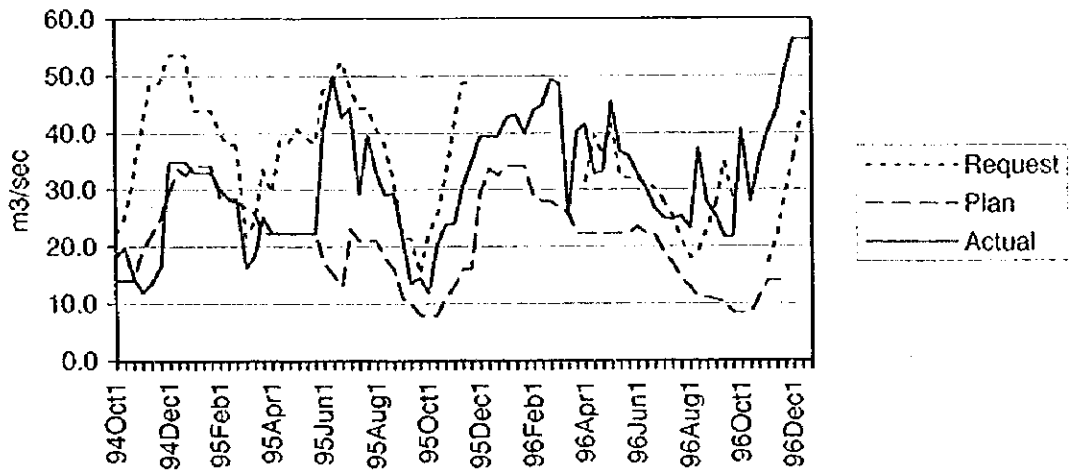


Figure A4-4 (1) Intake Discharge Records on the Brantas River

Intake Discharge Record at Menturus Rubber dam



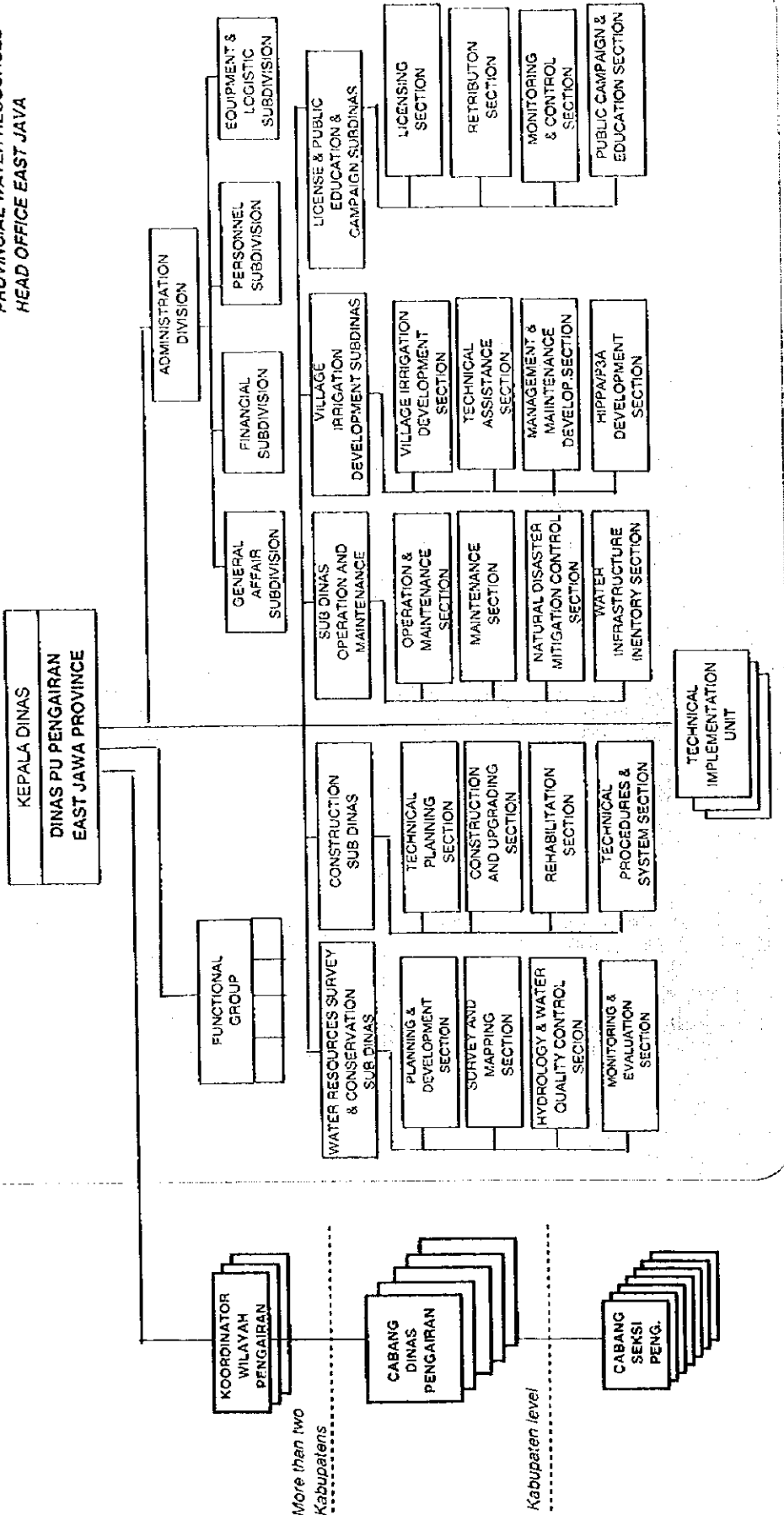
Intake Discharge Record for Brantas Delta



- Source:
- Recana Air Irigasi Musim Hujan 1994/1995 (PJT)
  - Evaluasi Pemberian Air Irigasi di Sepanjang Kali Brantas Musim Kemarau Tahun 1995 dan Rencana Musim Kemarau 1996 (PJT)
  - Evaluasi Pemberian Air Irigasi di Sepanjang Kali Brantas Musim Hujan Tahun 1995/1996 (PJT)
  - Evaluasi Pemberian Air Irigasi di Sepanjang Kali Brantas Musim Kemarau Tahun 1996 (PJT)

Figure A4-4 (2) Intake Discharge Records on the Brantas River

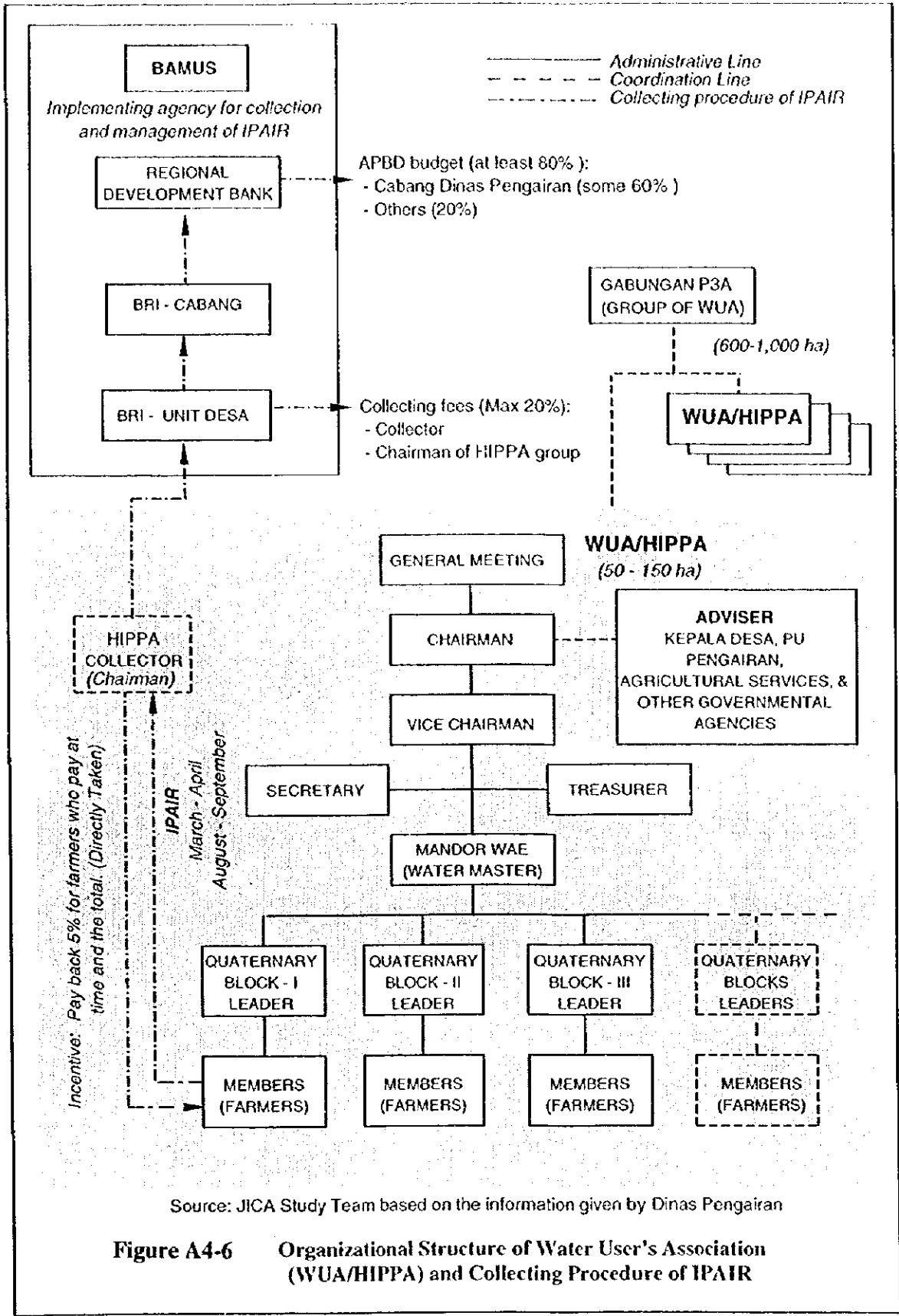
PROVINCIAL WATER RESOURCES  
HEAD OFFICE EAST JAVA



Source: JICA Study Team

Figure A4-5 Organization Structure of Provincial Public Works for Water Resources in East Java Province (Dinas PU Pengairan)

Note  
Dinas PU Pengairan Dati II Kabupaten Sidoarjo has been established under Bupati as a pilot scheme of decentralization. Former Cabang Dinas PU Pengairan Sidoarjo has been abolished accordingly.



**Figure A4-6** Organizational Structure of Water User's Association (WUA/HIPPA) and Collecting Procedure of IPAIR

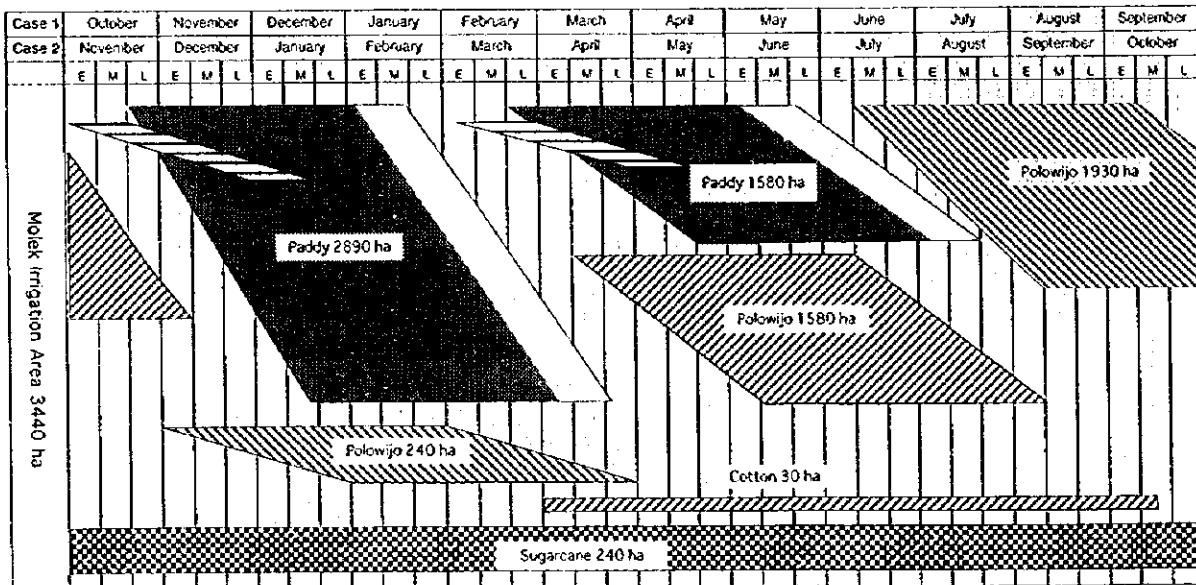
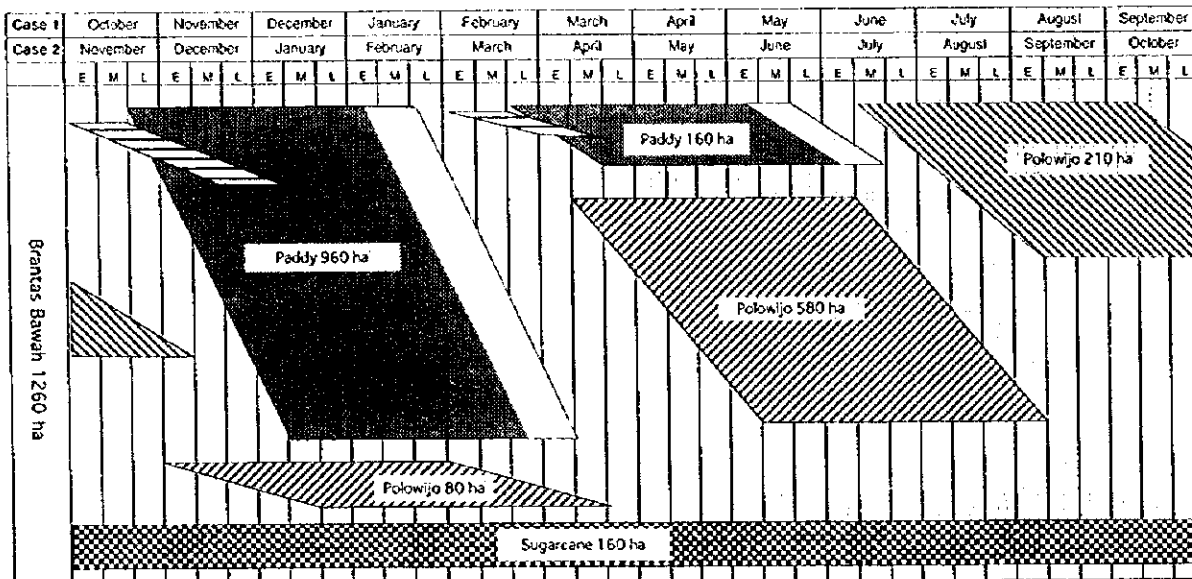
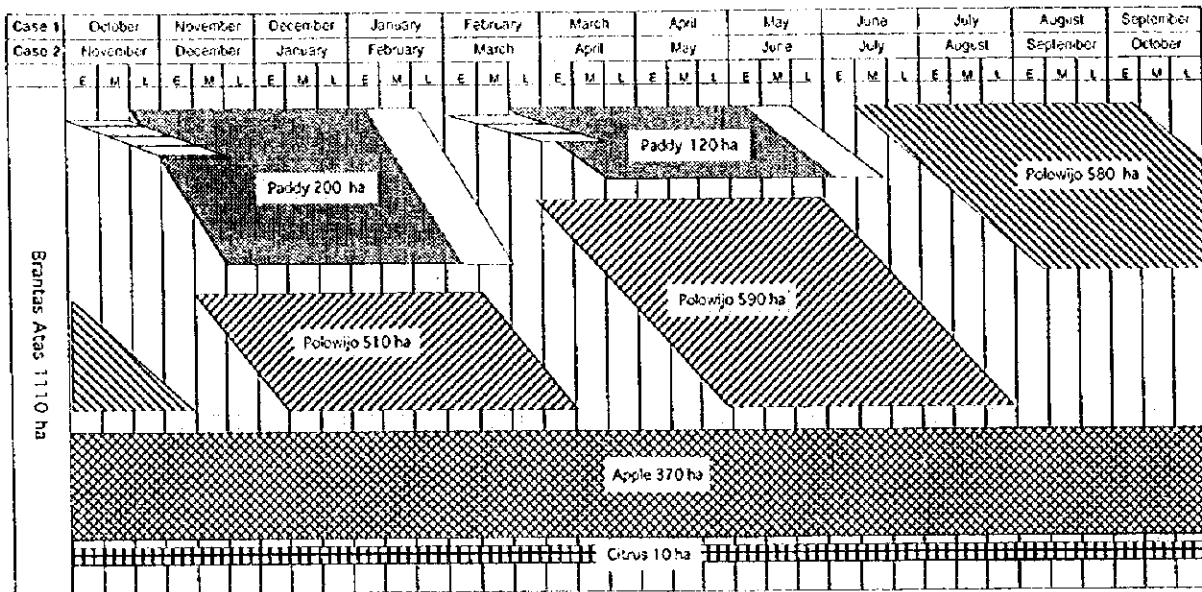


Figure A4-7 (1) Estimated Cropping Pattern in the Year 2020 (Case 1 and 2)

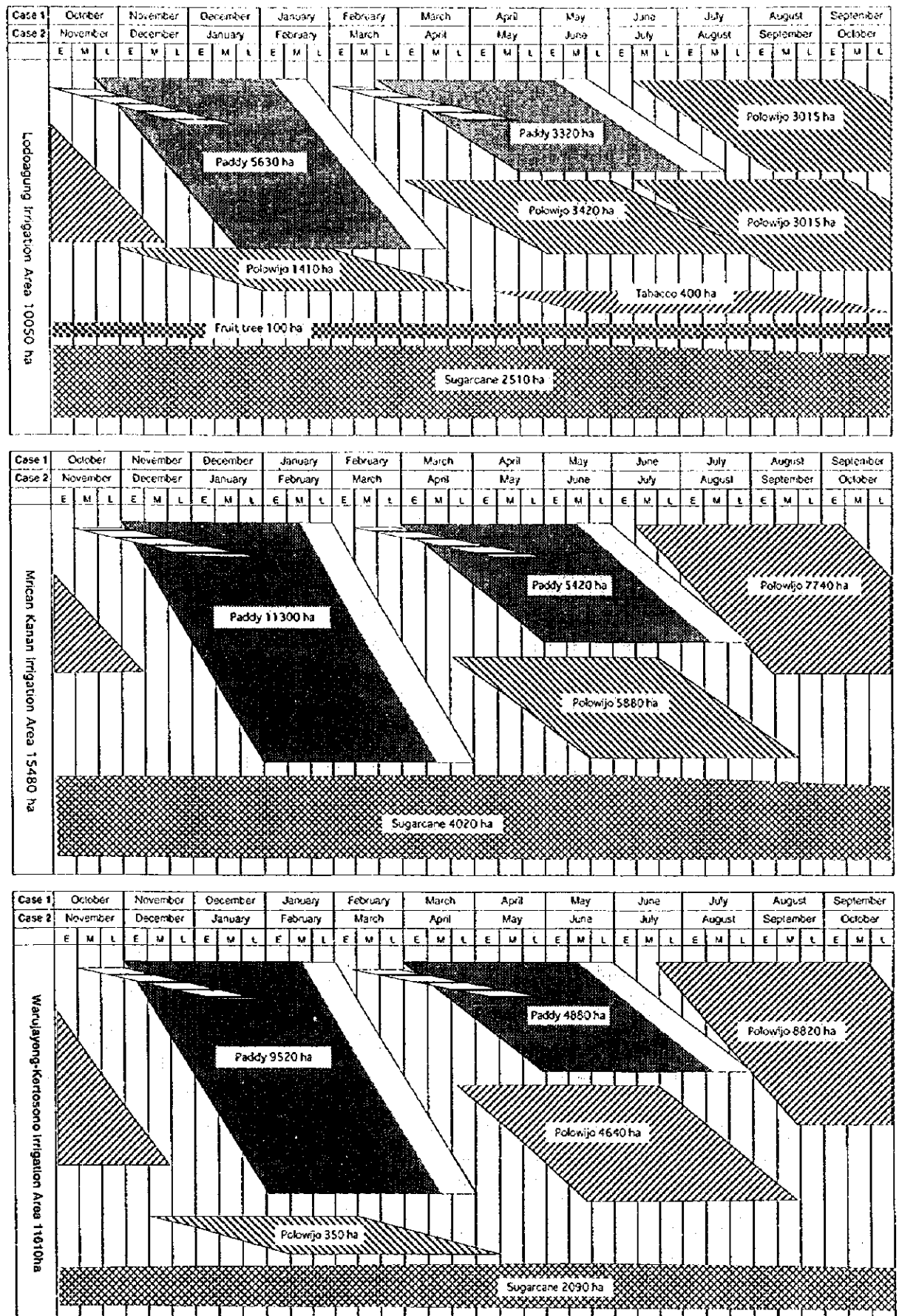


Figure A4-7 (2) Estimated Cropping Pattern in the Year 2020 (Case 1 and 2)

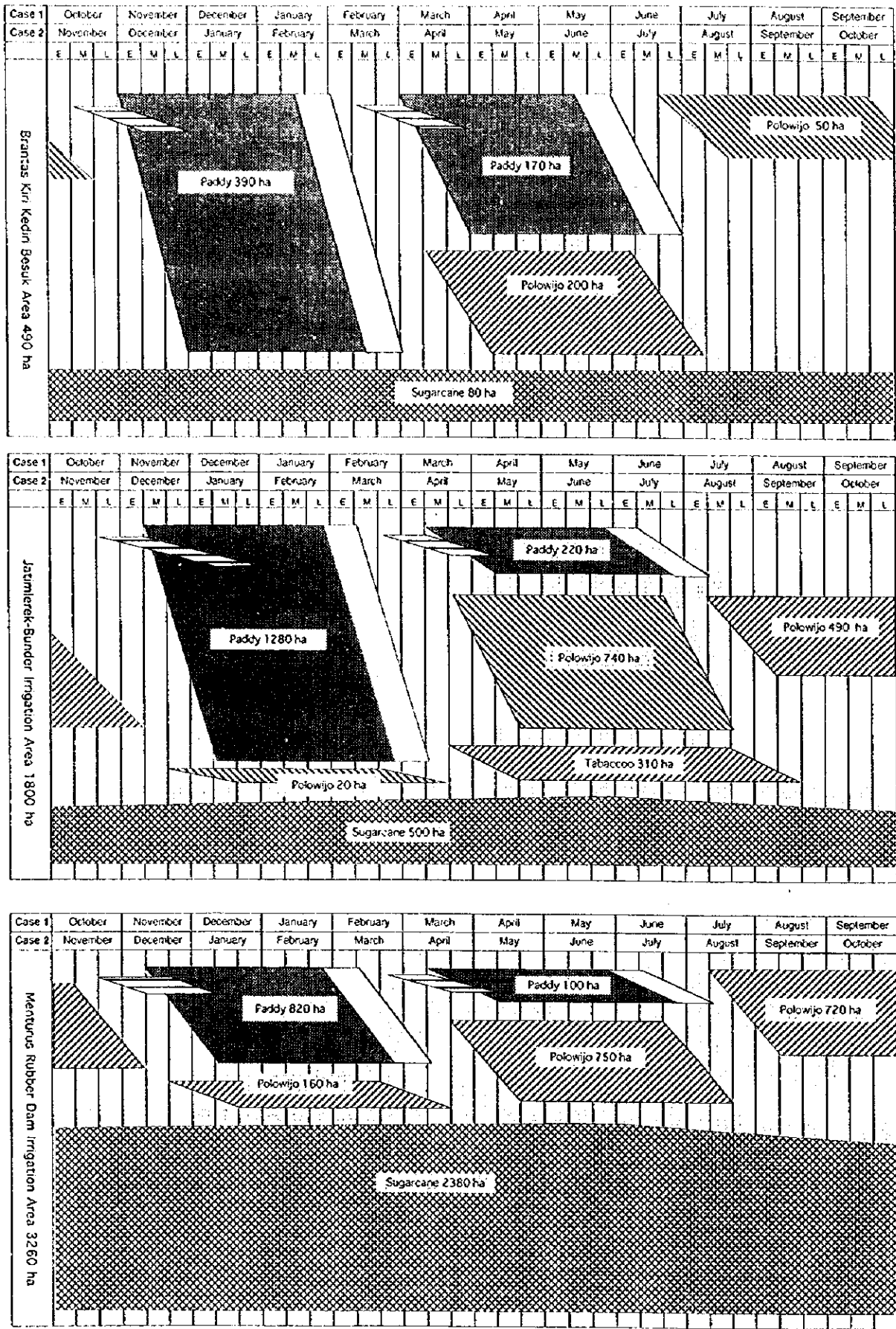


Figure A4-7 (3) Estimated Cropping Pattern in the Year 2020 (Case 1 and 2)

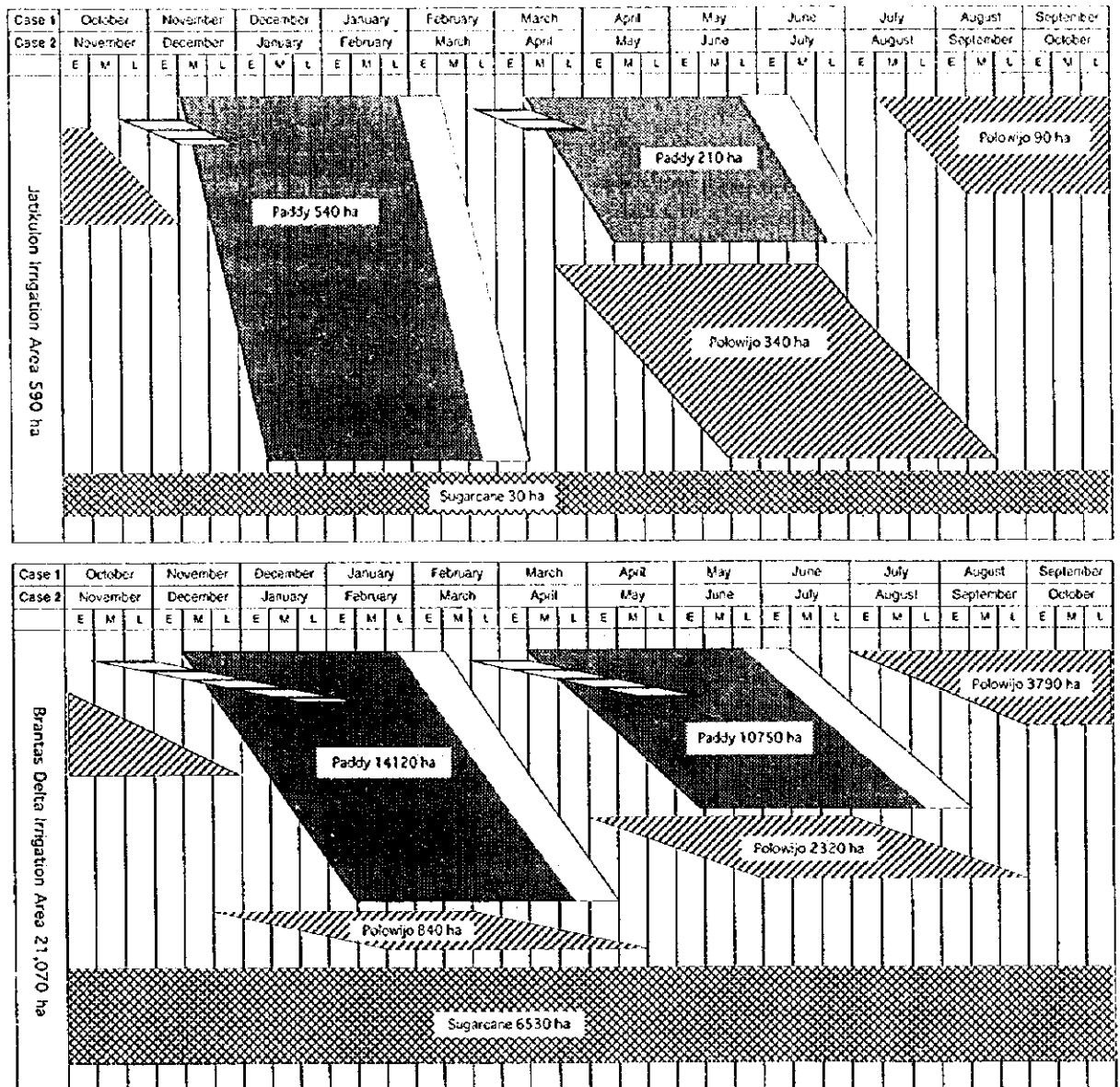


Figure A4-7 (4) Estimated Cropping Pattern in the Year 2020 (Case 1 and 2)



Figure A4-8 Implementation Schedule of Canal Lining Works

Name of area	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Arrangement of consultants 	Arrangement of fund, procurement 				Arrangement of fund, procurement of consultants 							
Brantas Atas, Bawah, Molek													
Lodoagung													
Mirican Kanan													
Warujayeng-Kertosono													
Brantas Kiri Kedirik, Jatimirek, Menturus, Jatikulon													
Delta Brantas													

Field investigation, justification study, detailed design, etc.

Tender and contract award

Construction works

