

Fig. 3-4
Distribution of Monthly Rainfall

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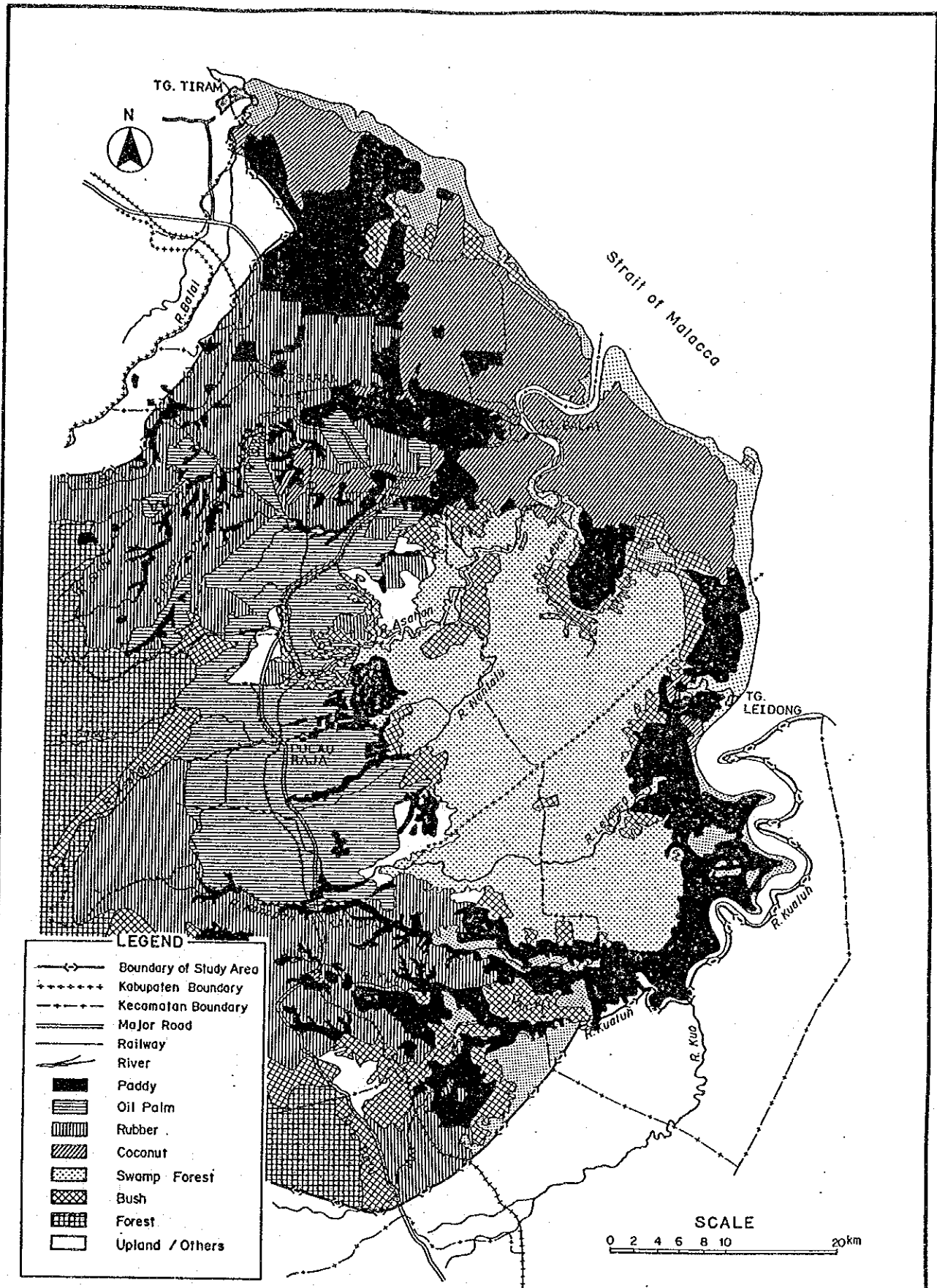


Fig. 3-5
Present Land Use

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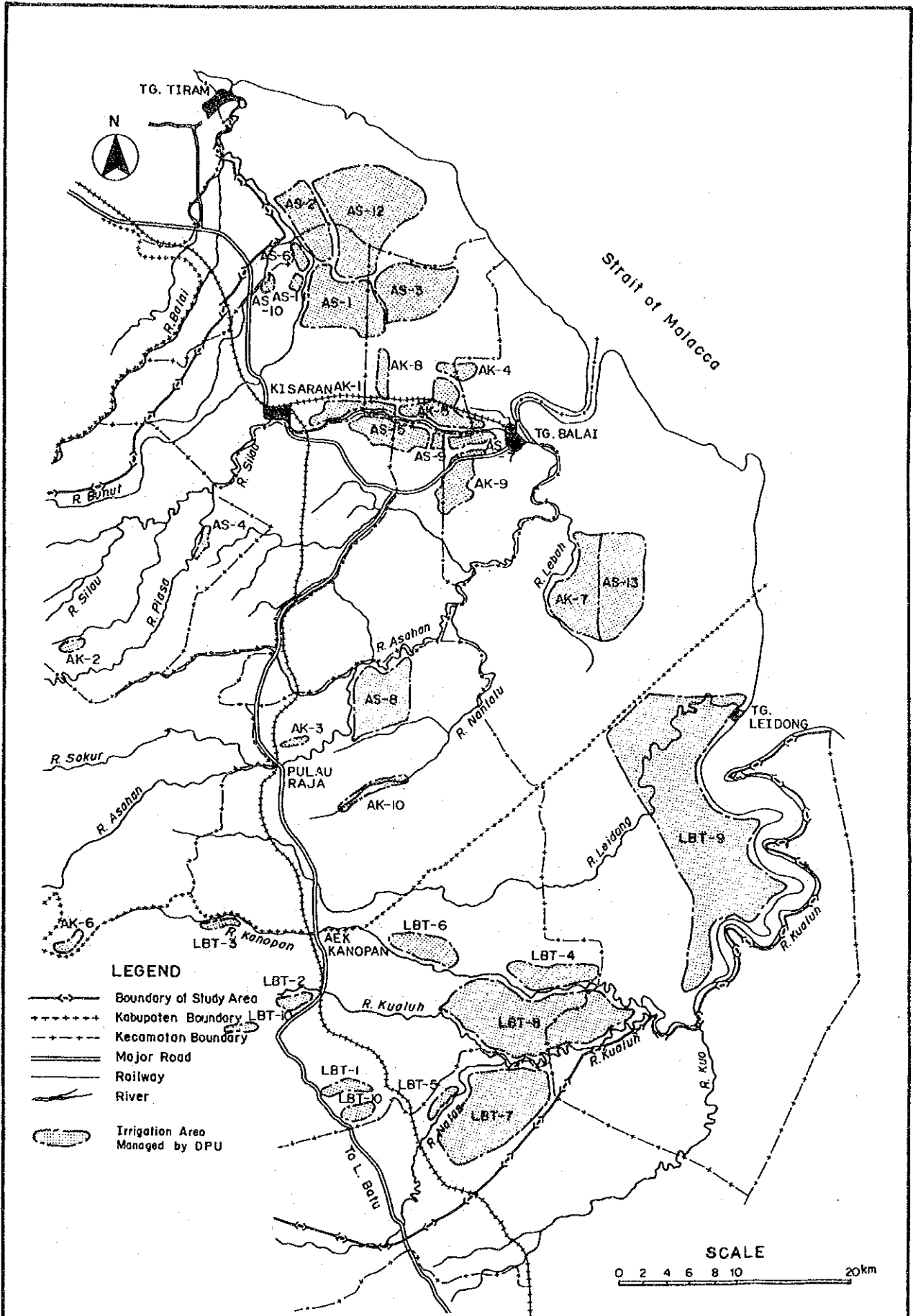
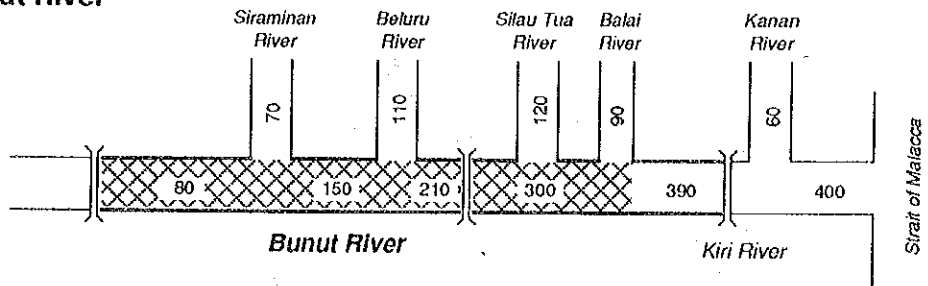


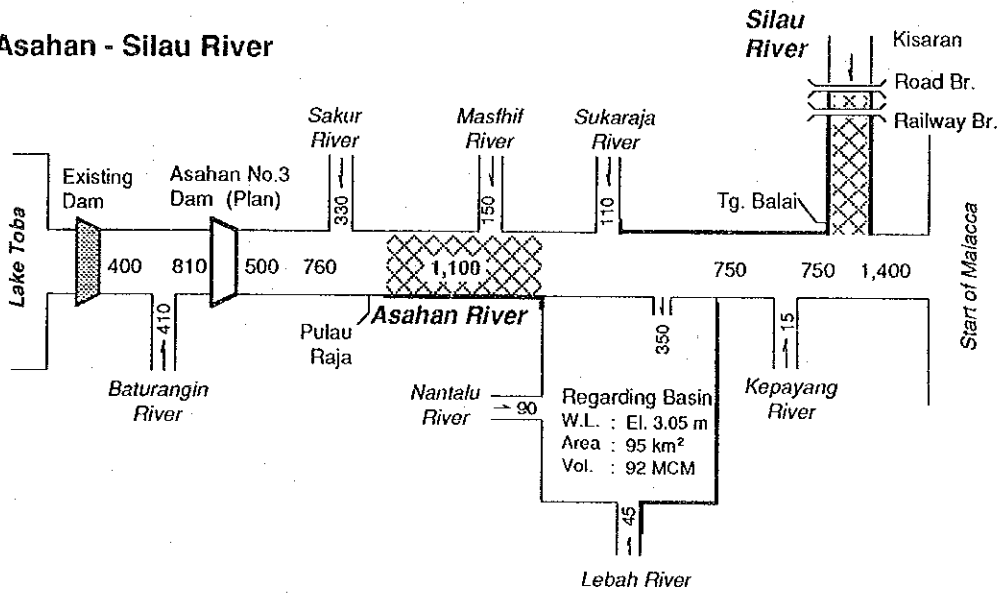
Fig. 3-6
Irrigation and Drainage Schemes
Maintained by DPU

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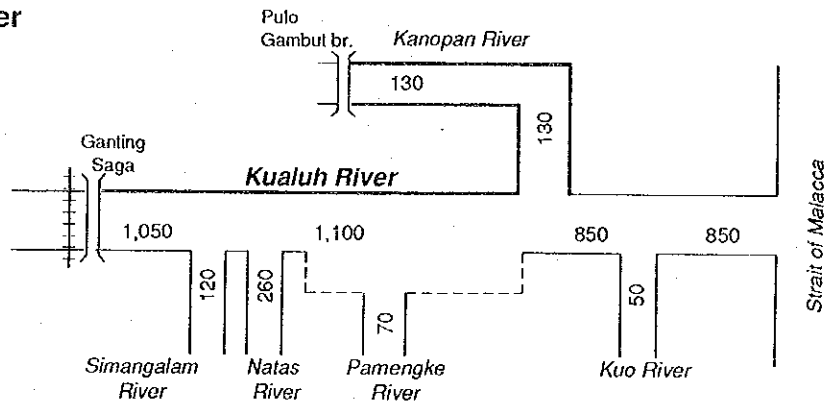
Bunut River



Asahan - Silau River



Kualuh River

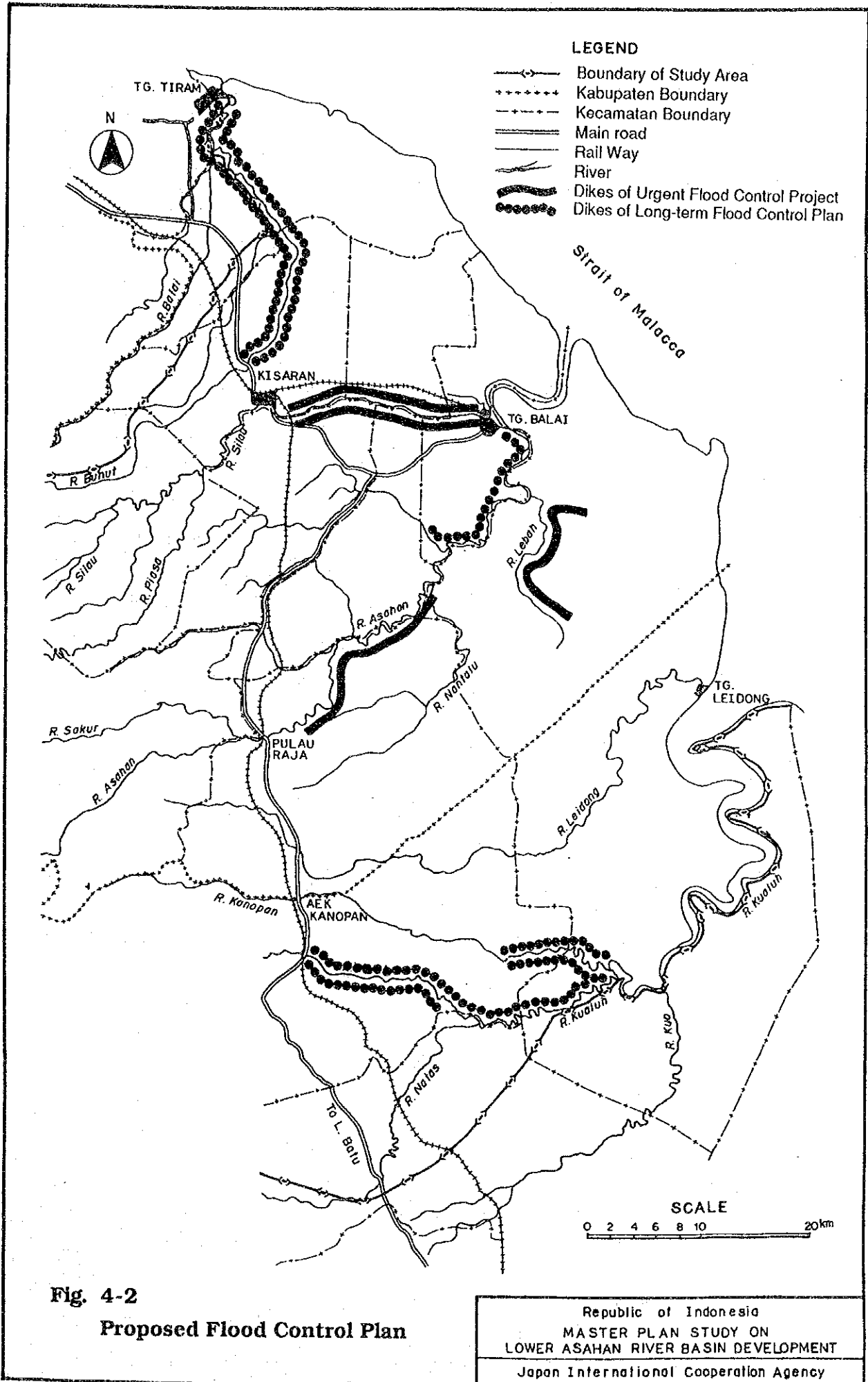


LEGEND

- Dike Construction
- XX Dredging
- 150 Design Flood Discharge (m³/s)

Fig. 4-1
Flood Distribution Plan
(Long-term Plan)

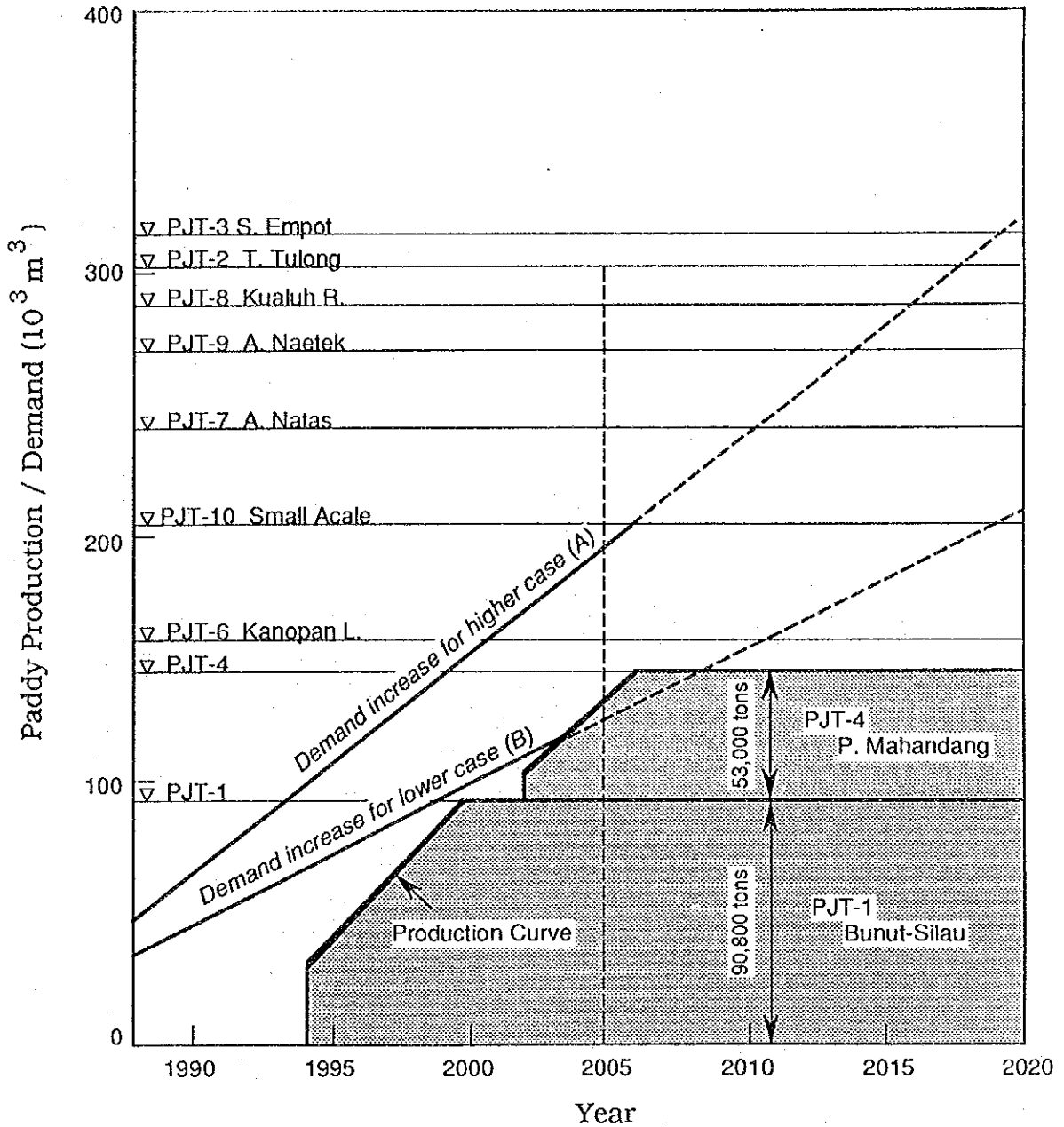
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Demand increase curve

(A): 15% of demand increase in North Sumatra Province is produced in this study area.

(B): 10% of demand increase in North Sumatra Province is produced in this study area.



Implementation Schedule

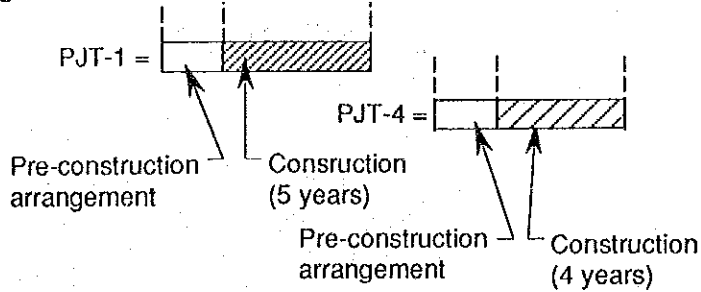


Fig. 5-1

Recommended Paddy Demand and Production Balance

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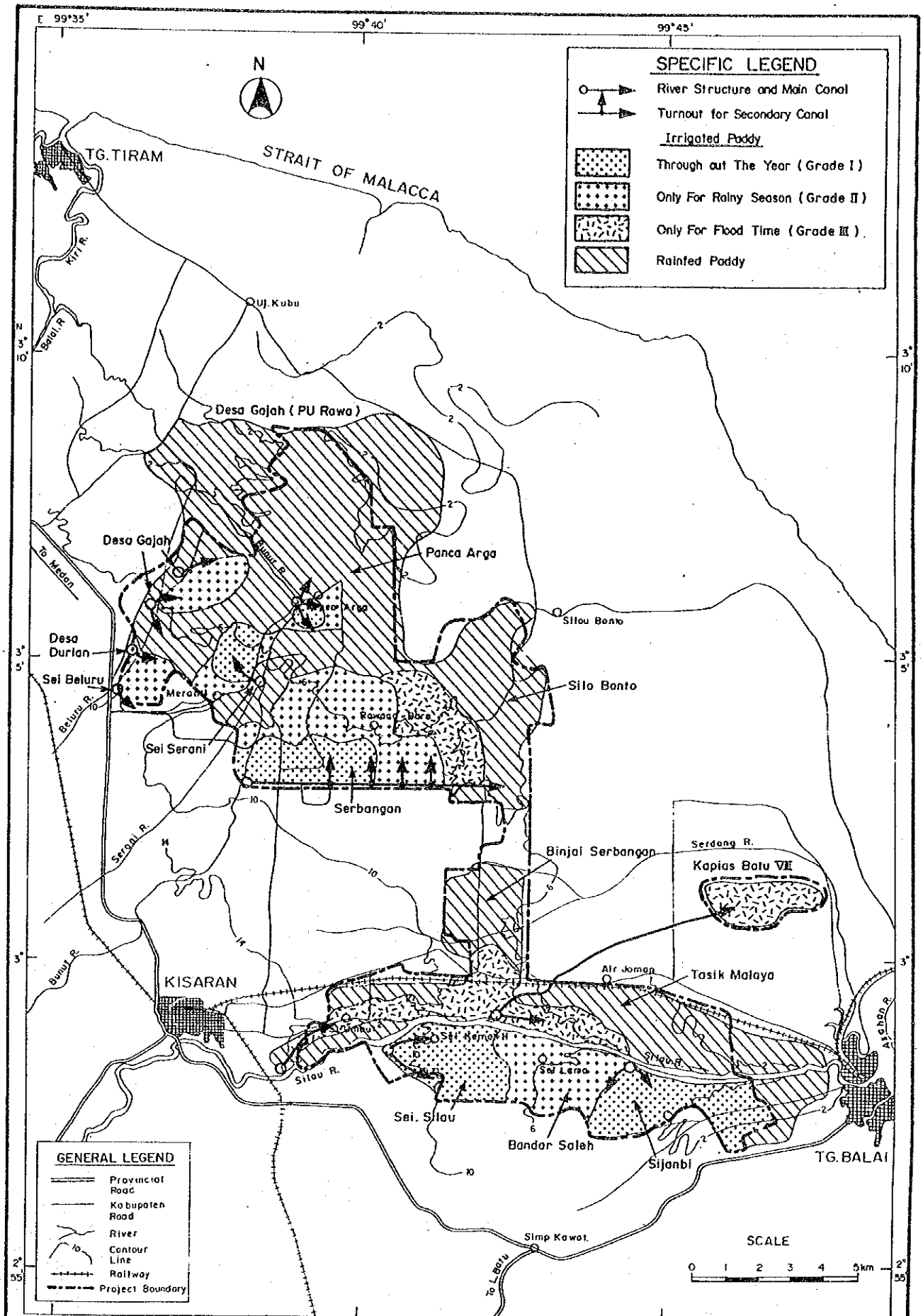


Fig. 5-2
Present Condition of Irrigation
in the Project Area

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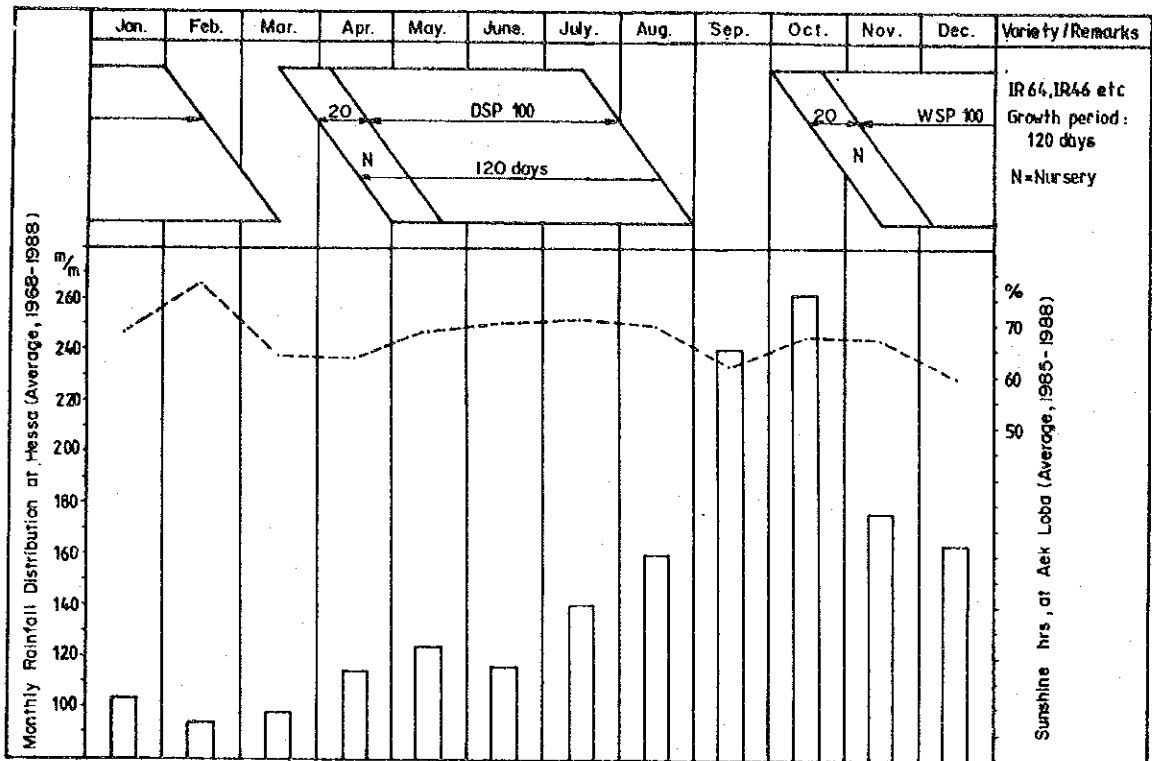


Fig. 5-3
Proposed Cropping Pattern

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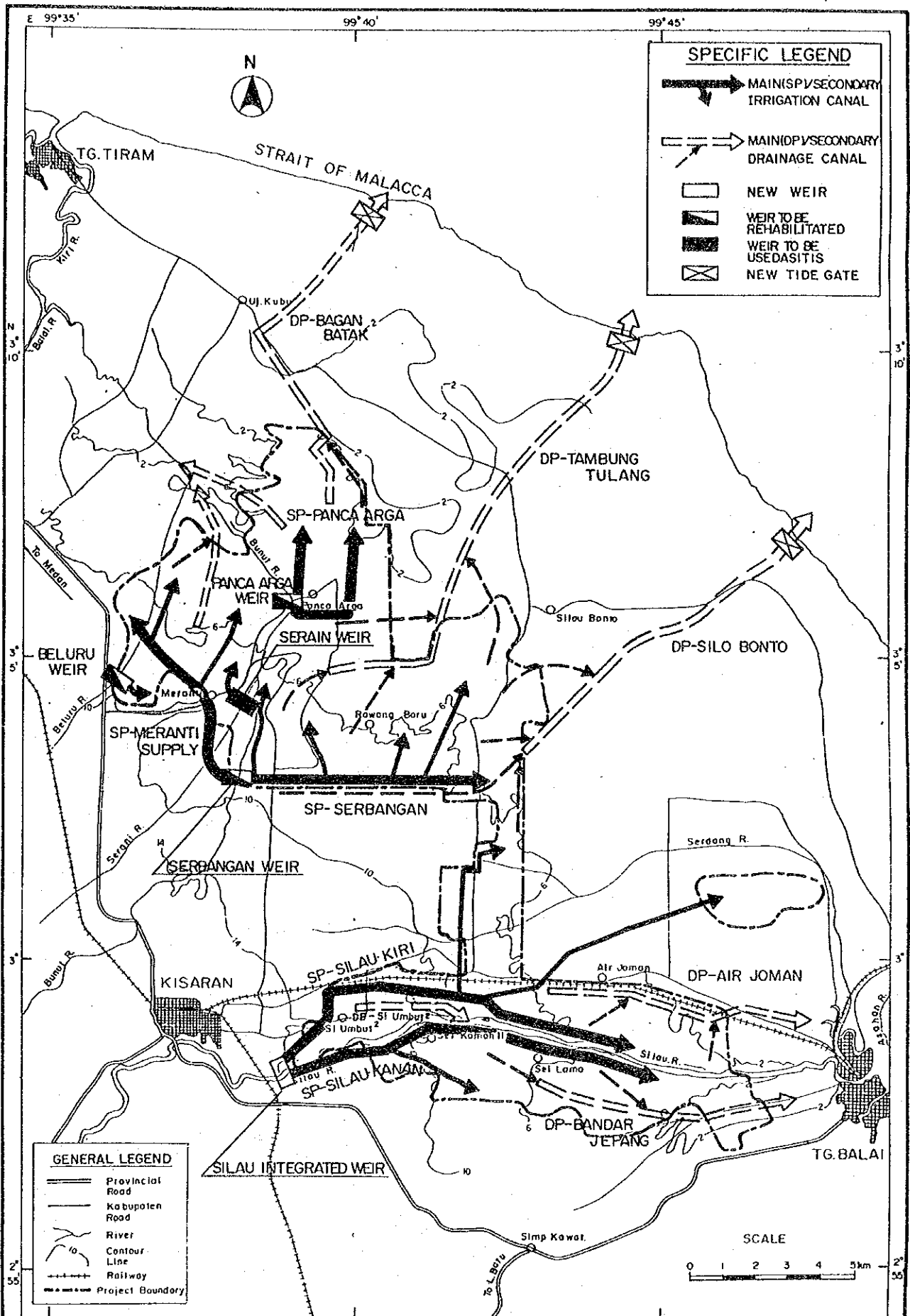
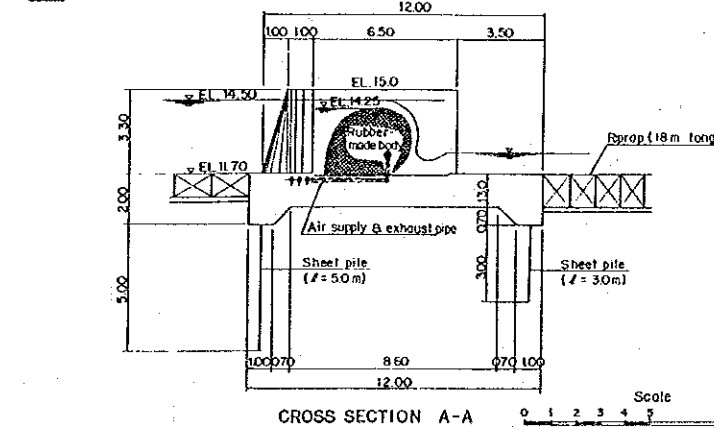
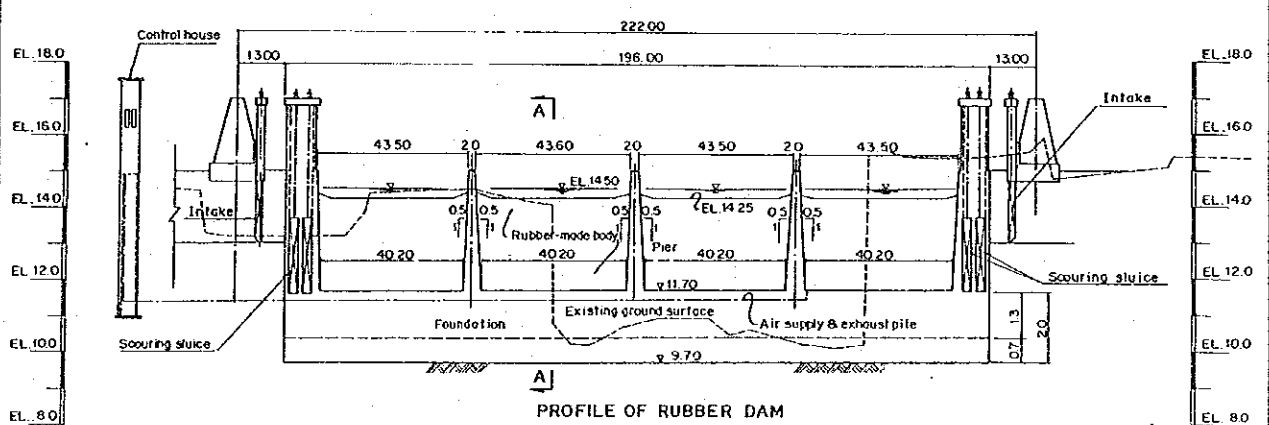
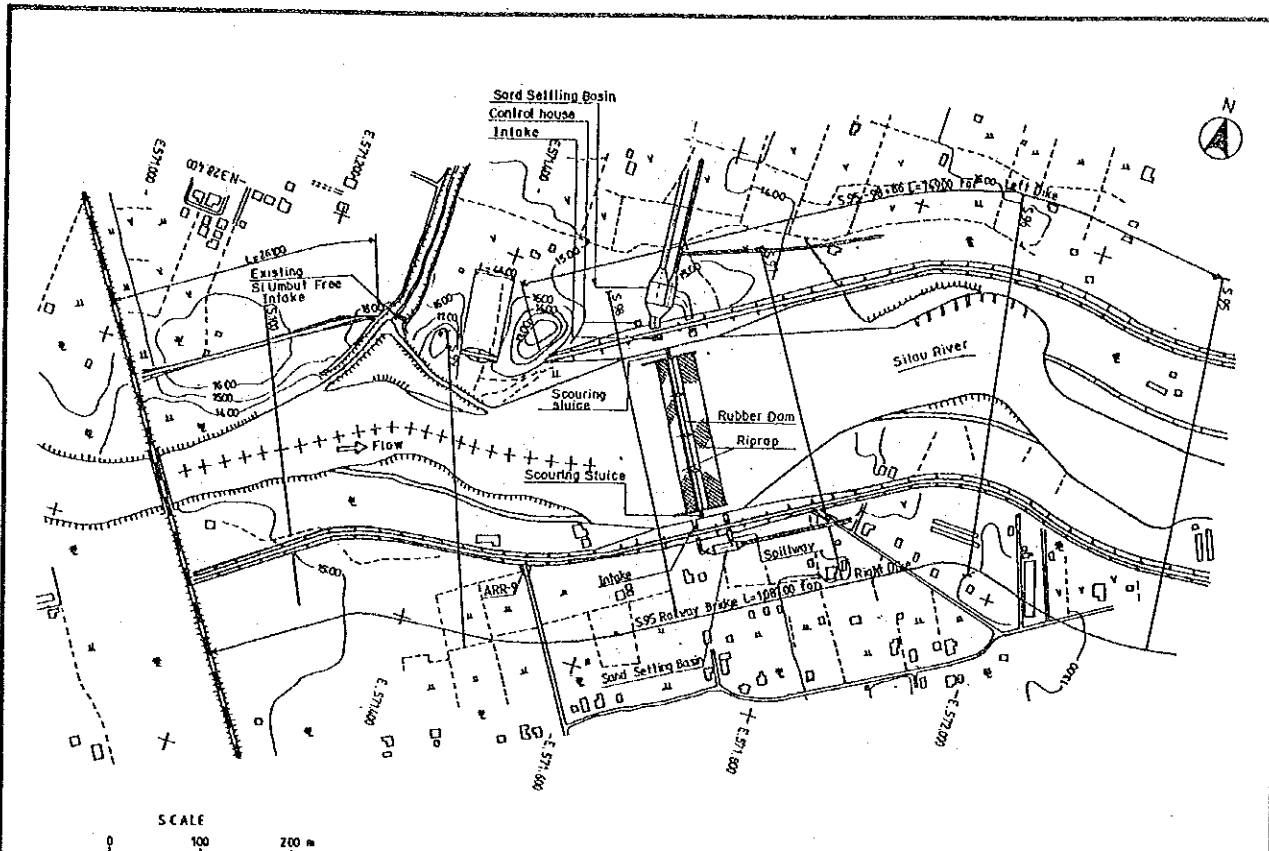


Fig. 5-4
Proposed Irrigation and Drainage Systems

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Scale
0 10 20 30 40 50 100m

Note : This cross section is traced based on the cross section of S.98 in Lower Asahan River Control Project.

Fig. 5-5
Proposed Silau Integrated Weir

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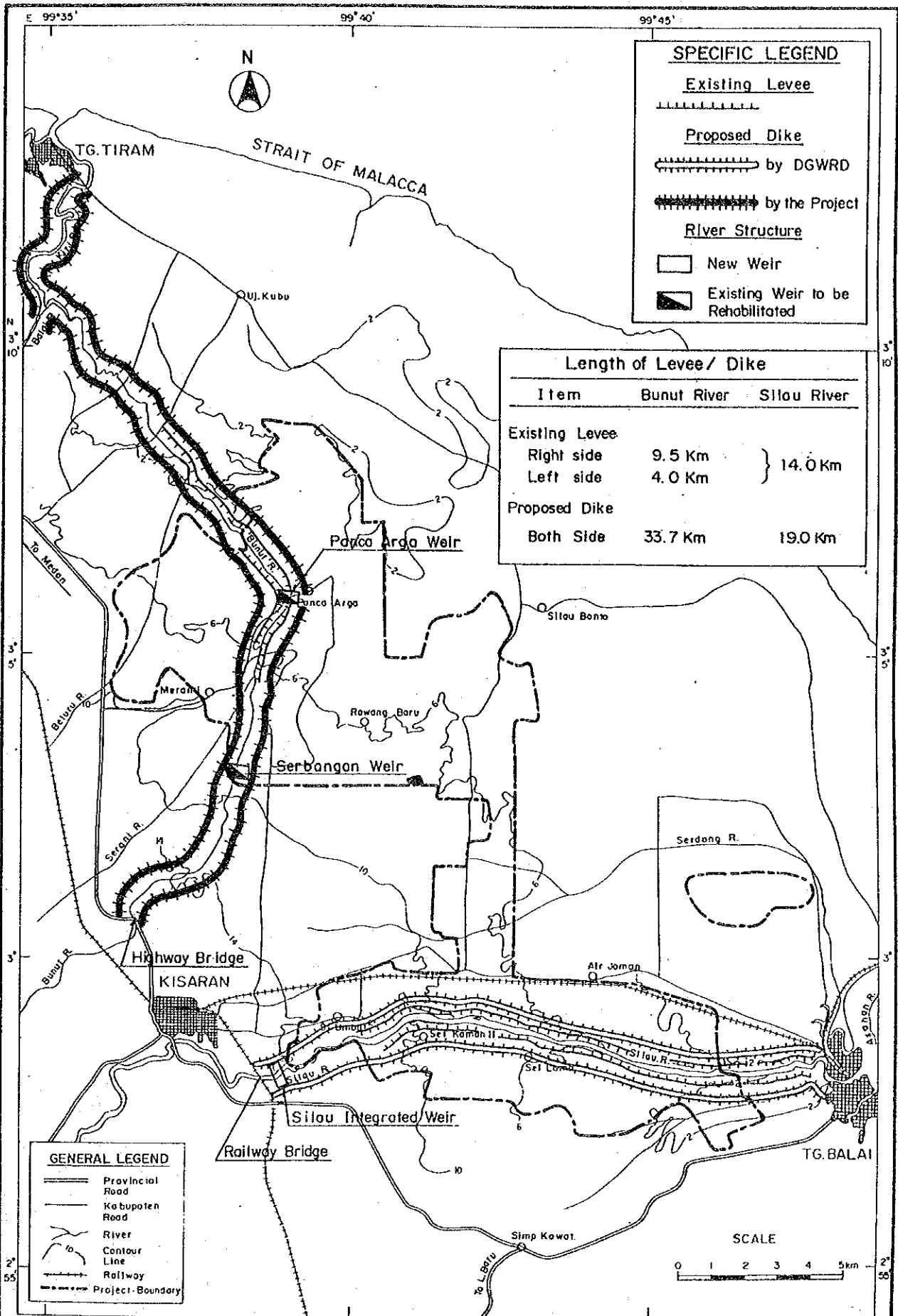


Fig. 5-6
Existing and Proposed
Flood Control Dikes

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| Description | Unit | Q'ty | Year in order | | | | | | | | | | |
|---|------|-------|---------------|---|---|---|---|--------------|--------------|--------------|--------------|---------|---------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1. Detailed Design | | | | | | | | | | | | | |
| (1) Budget Arrangement | | | █ | | | | | | | | | | |
| (2) D/D work | | | █ | █ | | | | | | | | | |
| 2. Construction Works | | | | | | | | | | | | | |
| (1) Implementation Program | | | | █ | | | | | | | | | |
| (2) Budget Arrangement | | | | █ | | | | | | | | | |
| (3) Pre-construction Arrange. | | | | | █ | | | | | | | | |
| 1) Tendering | | | | | █ | | | | | | | | |
| 2) Preparatory works | | | | | █ | | | | | | | | |
| 3) Land acquisition | | | | | █ | █ | | | | | | | |
| (4) Construction Works | | | | | | █ | █ | | | | | | |
| 1) Silau river system | ha | 4,250 | | | | █ | █ | | | | | | |
| - Integrated weir | no | 1 | | | | █ | | | | | | | |
| - Canal networks | km | 139 | | | | █ | █ | | | | | | |
| - On-farm works | ha | 3,860 | | | | █ | █ | █ | | | | | |
| | | | | | | | | | (1,200) | (1,330) | (1,330) | | |
| - Land reclamation | ha | 670 | | | | | | | █ | | | | |
| 2) Bunut river system | ha | 6,050 | | | | | | | | | | | |
| - Inter-basin canal | km | 8.3 | | | | | █ | | | | | | |
| - Rehabilitation of weirs | no | 3 | | | | | █ | █ | | | | | |
| - Canal networks | km | 212 | | | | | █ | █ | | | | | |
| - On-farm works | ha | 5,650 | | | | | █ | █ | █ | | | | |
| | | | | | | | | | | (1,400) | (1,430) | (1,420) | (1,400) |
| - Flood dike | km | 35 | | | | | █ | █ | | | | | |
| (5) Construction of Silau Dike by Directorate of River, DGWRD | | | | | | | ▨ | ▨ | ▨ | ▨ | | | |
| 3. Training of Government Staff and Farmers | | | | | | | | | | | | | |
| | | | | | | | | █ | █ | | | | |
| 4. O&M Works | | | | | | | | | | | | | |
| | | | | | | | | █ | █ | █ | █ | | |
| 5. Development Area under the Project | | | | | | | | | | | | | |
| (1) Silau River Sytem | ha | | | | | | | 1,590 | 1,330 | 1,330 | | | |
| (2) Bunut River System | | | | | | | | 1,800 | 1,430 | 1,420 | 1,400 | | |
| <u>Total</u> | | | | | | | | <u>3,390</u> | <u>2,760</u> | <u>2,750</u> | <u>1,400</u> | | |
| (Accumulated area) | | | | | | | | (3,390) | (6,150) | (8,900) | (10,300) | | |



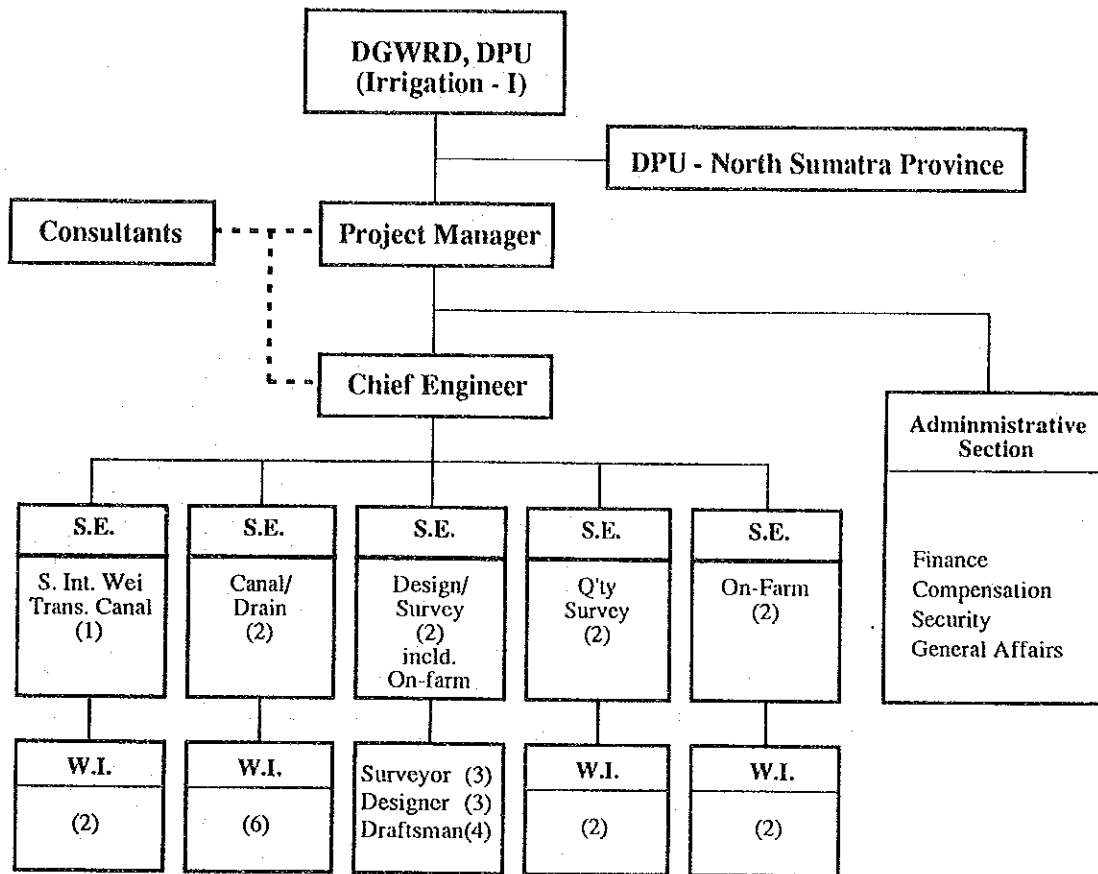
Note  Project Work
 Implemented under Lower Asahan River Flood Control Project, Directorate of River, DGWRD, DPU.

Fig. 5-7

Implementation Schedule of the Project

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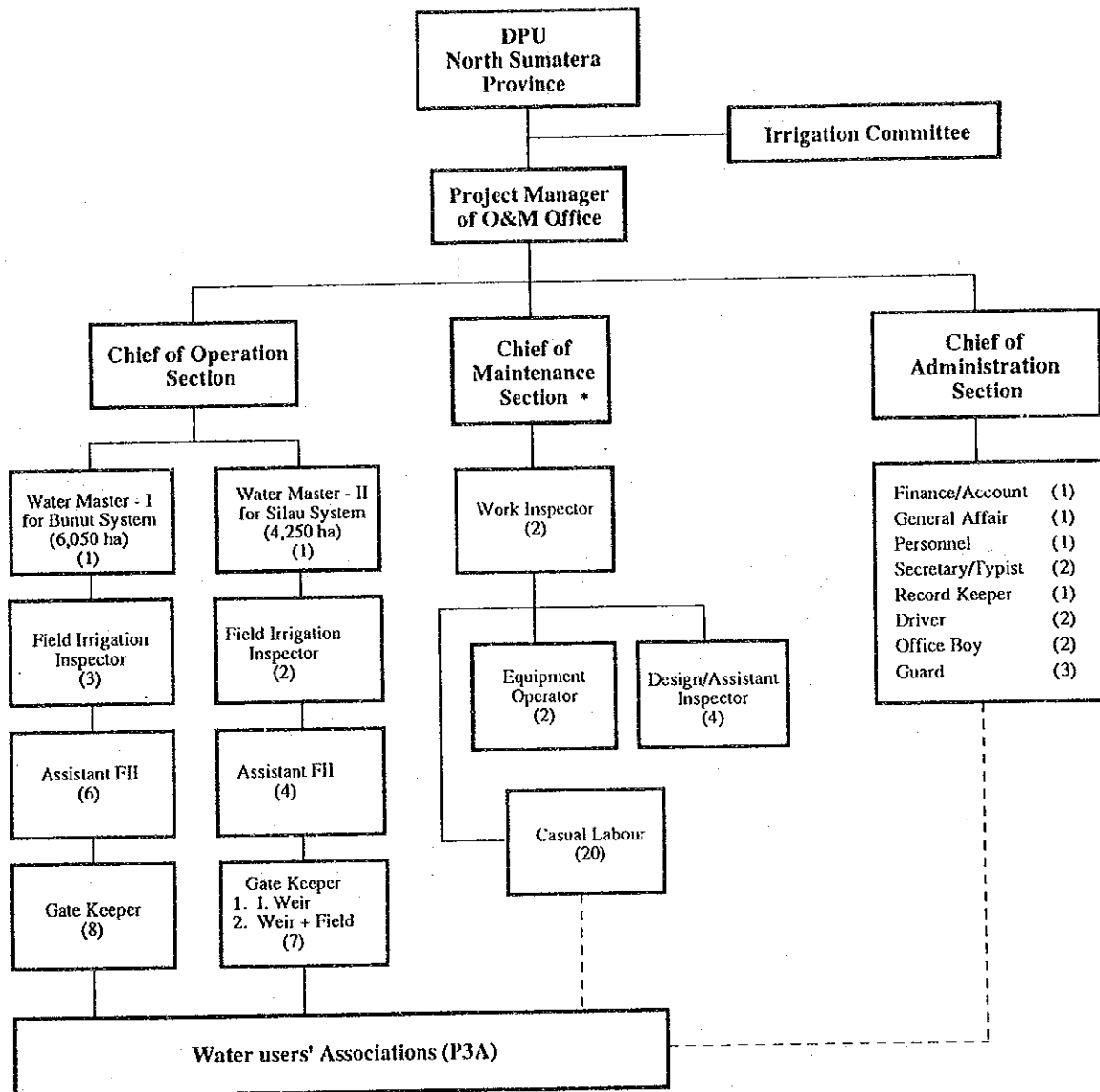


Note: S.E. : Site Engineer
W.I. : Work Inspector

Fig. 5-8

**Proposed Organization of
Project Construction Office**

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Note: FII : Field Irrigation Inspector

* : Repair and periodical maintenance of O&M equipment will be subject to local workshop in Medan

Fig. 5-9

Proposed Organization of Project O&M Office

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