

THE MINISTRY OF
AGRICULTURE,
INDONESIA

JAPAN INTERNATIONAL
COOPERATION AGENCY,
JICA

MAP

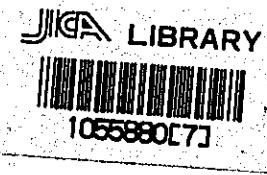
SOUTH SULAWESI REGIONAL AGRICULTURAL DEVELOPMENT PLANNING/ATA-140 PROJECT

FINAL REPORT ON PHASE I
VOLUME V

BASIC MAPS FOR PLANNING ON REGIONAL AGRICULTURAL
DEVELOPMENT IN SOUTH SULAWESI PROVINCE

February 1979

THE TEAM OF THE PROJECT ON SOUTH SULAWESI RADP / ATA - 140
IN UJUNG PANDANG



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A-6 AC

1:500,000

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IN UJUNG PANDANG

國際協力事業団	
受入 月日	54.0. '84.5.25
登録No.	07954
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国際協力事業団
REDACTED NO. 132002 SHIYAMAKU SHI
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I. Introduction

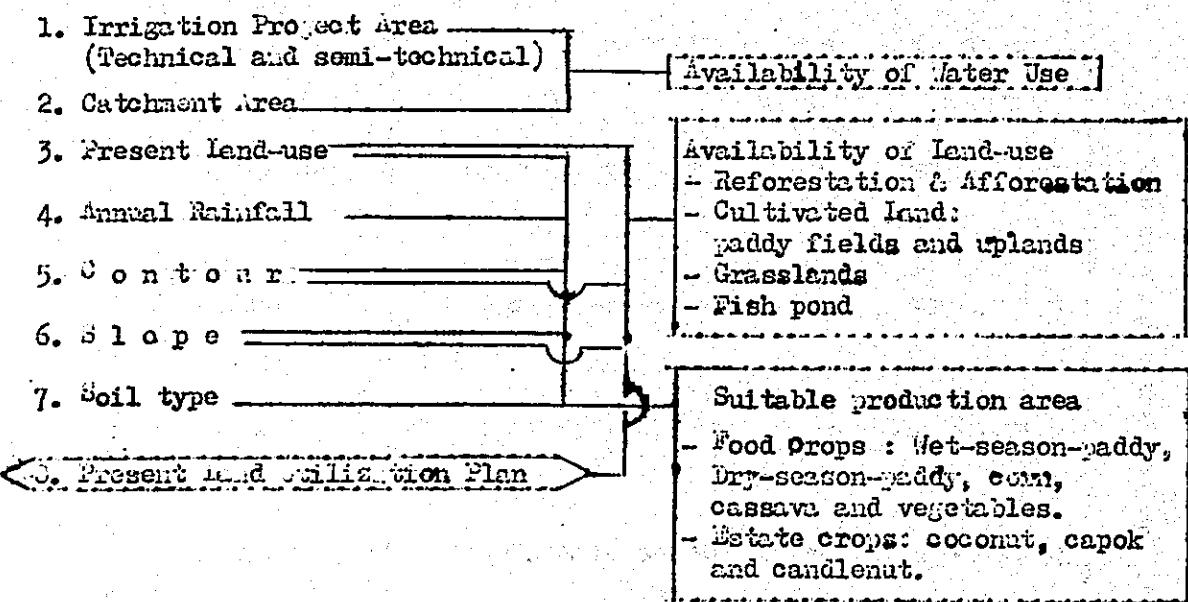
1.1. Introduction

The drawing and reading of maps are necessary ways for the research and analysis of collected data for planning. Many kinds of maps will be required for the planning of regional agricultural development; but seven kinds of maps, to say the least, will be regarded as indispensable maps for the planning (Refer to Fig. 1).

Based on the consideration, mapping activity has been started by the Team, as a step of planning.

Fig. 1 The indispensable maps

Maps for Present Condition



Note: 1 - 7 : These maps have been prepared by the authorities at several scales; thus they have to be drawn at the same scale (1:500,000) by the Team.

←→ : This map will have to be rearranged by the Team, based on the plan made by related authorities.

[] : These maps were done in detail by the Team.

1.2. Classification of farmland

The estimation of land utilization in the future is suggested by Mr. M. FUNADA, a short-term Expert for soil and vegetation, and is formulated for principal crops based on soil altitude, slope, texture, fertility and acidity.

The standard for the estimation of land utilization which has been established by Mr. M. FUNADA and his counterparts, based on discussions with Ir. Farid A. Pakar, Agronomist and Ir. E.O. Momuat, Head of Department of Soil and Soil fertility, L.P.P.M., is shown as follows:

- 1) Collection of standard maps from authorities concerned;
- 2) Preparation of base maps, based on the natural conditions mentioned above;
- 3) Examination of each item by each commodity using table 2;
- 4) Group formation using table 3;
- 5) Land classification for farming, applying Table 1.

Table 1. Indices for land/soil utilization

Best : All "0" - "0" 4 + "Δ" 2

Better : "0" 3 + "Δ" 3 - "0" 1 + "Δ" 5

Good : All "Δ" 2 + "Δ" 3 - "X" 1

Less Good : "X" 2

1) Less Good : May not be used

2) Good : The counter effects against it should be considered.

According to the method of classification for paddy fields, the condition of water resources is not included as the item in the standard mentioned above; the working plan in DPUP of South Sulawesi is expected as the more realistic data in stead of the hydrologic analysis at present, because the effective observation networks have been systematized quite recently in the Province.

Land/Soil Utilization Standard (A) Soil Type.

Commodity		Soil Type	Gley	Hitosol	Rigosol	Gumusol	Indosol	Rensina	Mediterran	Iatosol	Lateritik	Podsolik
Seasonal crops:												
Paddy	0	0	X	A	A	A	A	A	0	X	0	
Paddy Gogo	0	X	A	A	A	A	A	A	0	X	0	
Corn	0	X	A	A	A	A	A	A	0	X	0	
Beans	0	X	A	A	A	A	A	A	0	X	0	
Cassava	0	X	A	A	A	A	A	A	0	X	0	
Estate crops: (Sugar cane, Tobacco etc.)	0	A	A	A	A	A	A	A	0	A	A	A
Vegetables:	0	A	A	X	A	A	A	A	0	A	A	A
Perennial crops:	0	A	X	A	A	A	A	A	0	X	A	A
Coconut tree	0	A	X	A	A	A	A	A	0	X	A	A
Citrus fruit	A	A	X	A	A	A	A	A	0	X	A	A
Clove	A	X	A	X	A	A	A	A	0	X	A	A
Coffee	A	X	A	X	A	A	A	A	0	X	A	A

Note: 0=good for use; A ≠ suite for use; X= not exactly to be use.

Land/Soil Utilization Standard (3) Soil Condition.

Commodity	Items	Altitude (m)		Gradient (%)		Soil condition *	Soil fertility **	Soil acidity ***			
		500	500/-1,000	0-3	3-15			Fertile	Medium	Sandy	Very calcareous
Seasonal crops:											
Rendengan	0	A	X	A	A	X	A	A	A	X	X
Paddy Gogo	0	A	A	0	0	A	0	0	0	A	X
Corn	0	0	A	0	A	X	0	0	0	A	X
Beans	0	0	A	0	A	X	0	0	0	A	X
Tuber-crops	0	0	A	0	0	A	0	0	0	A	X
Estate crops:	0	A	X	0	0	A	0	0	0	A	X
Sugar cane etc.	0	A	0	0	A	A	0	0	0	A	X
Vegetables:	X	0	A	0	0	A	0	0	0	A	X
Perennial crops:	0	A	X	0	0	A	0	0	0	A	X
Coconut tree	0	A	X	0	0	A	0	0	0	A	X
Citrus fruit	A	0	X	0	0	A	0	0	0	A	X
Clove	A	0	X	0	0	A	0	0	0	A	X
Coffee	A	0	A	0	0	X	0	0	0	A	X

Note: *) Locally: heavy soil/Medium: clay -/(sandy loam) sand/

**) Fertile: no deficiency of 3 main elements/Medium: lacking one of the 3 main elements/

Poor: deficiency of more than 2 elements.

***) Alcali: PH 7.5 /Medium: PH 7.5 - 6.0 /Little acid: PH 4.5

Very alcali: 7.5 - 8.6 /Alcali: 6.6 - 7.5 /Medium: 5.6 - 6.6 /Little acid : 4.6 - 5.5 /Very acid: 3.6 - 4.5

1.3. Forest management in water reservation areas

In the South Sulawesi Province, rainfall condition is highly variable.

Under such circumstance, the treatments of the forests lands in water reservation area for flood control, water resource conservation and soil conservation have been studied. The function of soil and water conservation by forest is subject to soil covering and infiltration capacity of the soil. Therefore the best forest possible should be made and maintained in stabilized conditions for years.

Especially in a scarce rainfall area where water resources area highly needed, it is recommended to select the trees which have the characteristics of a little interception and transpiration loss, and to conduct sparsely spaced planting.

Due to the difficulties in measuring the natural conditions, reliable data on transpiration of tree species are hitherto scarce. *Pinus merkusii* which is widely planted in the region is adaptable to dry fields; however, interception and transpiration losses of this tree species are considered to be of medium level.

The outline of management guide shall be decided by following three steps based on the recommendation made by a short-term Expert, Dr. H. MURAI:

Step 1 : The whole area of the South Sulawesi Province is divided into two zones (I, II) by the mean annual rainfall. Namely, zone I is the area of over 2,500 mm. and zone II is that of less than 2,500 mm. annual rainfall. The map used for this work should have a scale of 1 : 500,000.

Step 2 : The map is subdivided by meshes of 1 cm². Soil conditions (fertility and depth) and elevation in each mesh is classified by several categories as follows:

Table 1. Categories of soil condition and elevation

Division	Annual rainfall (mm)	Soil condition (Fertility and depth)			Elevation (M)		
		A	B	C	500 A	500-1000 A	1000 X
I	2,500	0	A	X	0	A	X
II	2,500	0	A	X	0	A	X

Note : If data on soil depth are not available, the judgement of soil conditions could be conducted by means of soil fertility alone.

Step 3 : As the result of combination by evaluated physical factors, a management guide is determined by the following table (Table 2).

Table 2. A management guide of each condition

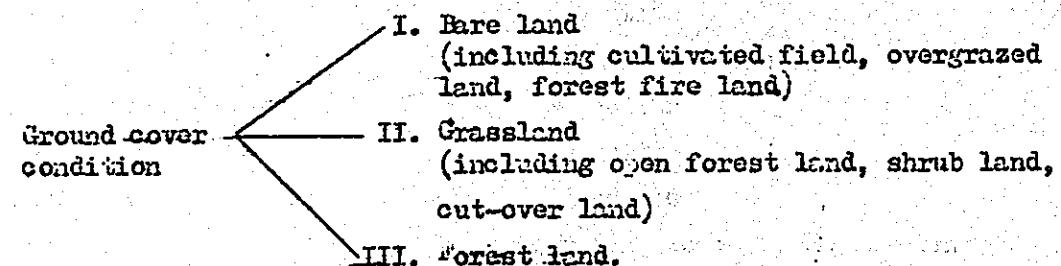
Division	Combination of physical factors			Sub-div.	Method of regeneration	Management guide	
	Soil con-	Elev-	ation			Planting density	Trees introduced and the ratio
I	0	0	I ₁	Artificial reproduct	2,500/ha.	Economical tree species (only)	(more than 2 kinds mixed in belts)
I	Δ	Δ	I ₂	ditto	ditto	Economical tree species (70%). Soil improving tree species (30%) (mixed in belt)	
I	X	0	I ₃	Natural regeneration		Raise natural useful trees to good forest	
II	0	0	II ₁	Artificial reproduct.	400/ha.	Economical tree species (70%). Soil improving tree species (30%)	
II	Δ	Δ	II ₂	ditto	ditto	Economical tree species (50%). Soil improving tree species (50%)	
II	X	Δ	II ₃	Natural regeneration		Raise natural useful trees to good forest	

1.4. A countermeasure for the restoration of denuded forest lands

As the outline of erodible degree, the following three steps are to be decided, based on the recommendation made by Dr. H. MURAI.

Step 1 : Judgement by potential factors. Map on a scale of 1 : 500,000 is subdivided into meshes of 1 cm² and each physical factor in the mesh is read; potential erodible degree is classified by the score of each category as shown on Table 6.

Step 2 : Judgement by actualized factor is to be made as follows:



Step 3 : Synthetic judgement by combination of the potential and actualized factors is to be made as the following.

Table 3. Category and score of each physical factor

Item	1) Annual rainfall (mm)	2) Gradient (%)	3) Soil structure	4) Geologic al structure	Count of score
Category	2,000 2,000-3,000 3,000	15-40 15-40	Clay Loamy Sandy	Others Tertiary Quaternary	Range: 1-2-3-4 (4-12)
Score	1 2 3	1 2 3	1 2 3	1 2 3	

Note: Classify by the total score as follows:

12, 11, 10 9, 8, 7, 6, 5, 4,

I II III

Table 4. Erodible degree & probability of erosion development.

Step 1	Step 2	Erodible degree	Probability of erosion development
I	I	HH	Spread rapidly
I	II	H	Newly occurred or danger of spreading
I	III	M	Little occurred as long as undisturbed
II	I	H	Danger of spreading
II	II	M	Little occurred as long as undisturbed
II	III	L	No occurrence as long as undisturbed
III	I	H	Possible for natural regreening
III	II	L	Keep stable despite some disturbance
III	III	L	Keep stable despite some disturbance

Note: HH > H > M > L

As for the restoration works on denuded forest land, the first step is classification of bare and critical lands by the level of denudation.

The methods of restoration should be selected and decided according to the level of their denudation. Grasses have the function of erosion control suitable for the introduced trees at the first stage of bare land improvement.

II. Analyzed data on the planning

2.1. List of map

(scale 1/50,000)

No. Name of Map

1. Present land use

Source of original data/maps

Agrarian Service of South Sulawesi & Lembaga Penelitian Tanah

2. Annual rainfall

Institute of Meteorology

3. Altitude

Agrarian Service

4. Gradient

ditto

5. Soil type

Lembaga Penelitian Tanah

6. Soil texture

ditto

7. Soil fertility

ditto

8. Soil acidity

ditto

9. Geology

Direktorat Geologi, Departemen Pertambangan

10. Land classification
for paddy field area

Map No. 3 - No. 8

11. Land classification for
upland paddy

Map No. 2 - No. 8

12. Land classification for
corn

ditto

13. Land classification for
cassava

ditto

14. Land classification for
peanut

ditto

15. Land classification for
horticulture

ditto

16. Land classification for
citrus fruit

ditto

17. Land classification for
estate crops

ditto

18. Land classification for
coconut

ditto

19. Land classification for
coffee

ditto

20. Land classification for
clove

ditto

No. Name of Map

21. Land classification for erodible
degree in forest area

Map No. 1-No. 3, No.6, No.9

22. Land classification for
management guide of forest area

Map No.1 - No.3, No.7

23. Land classification for
reclamation in forest area

Map No.1 - No.4, No.6, No.7,
No. 21

24. Land classification for
reclamation in grass land area

Map No.1 - No.4, No.6, No.7,
No.12 - No.16, No.21

25. Land classification for
suitable cultivated area in
shifting cultivation area

Map No.1, No.3, No.12 - No.16

26. Land classification for
suitable cultivated area in
upland area

Map No.1, No.3, No.12 - No.16

27. Irrigated area

Map No.1,
D.P.U. Pengairan, Sulsel.

28. Land use Plan map

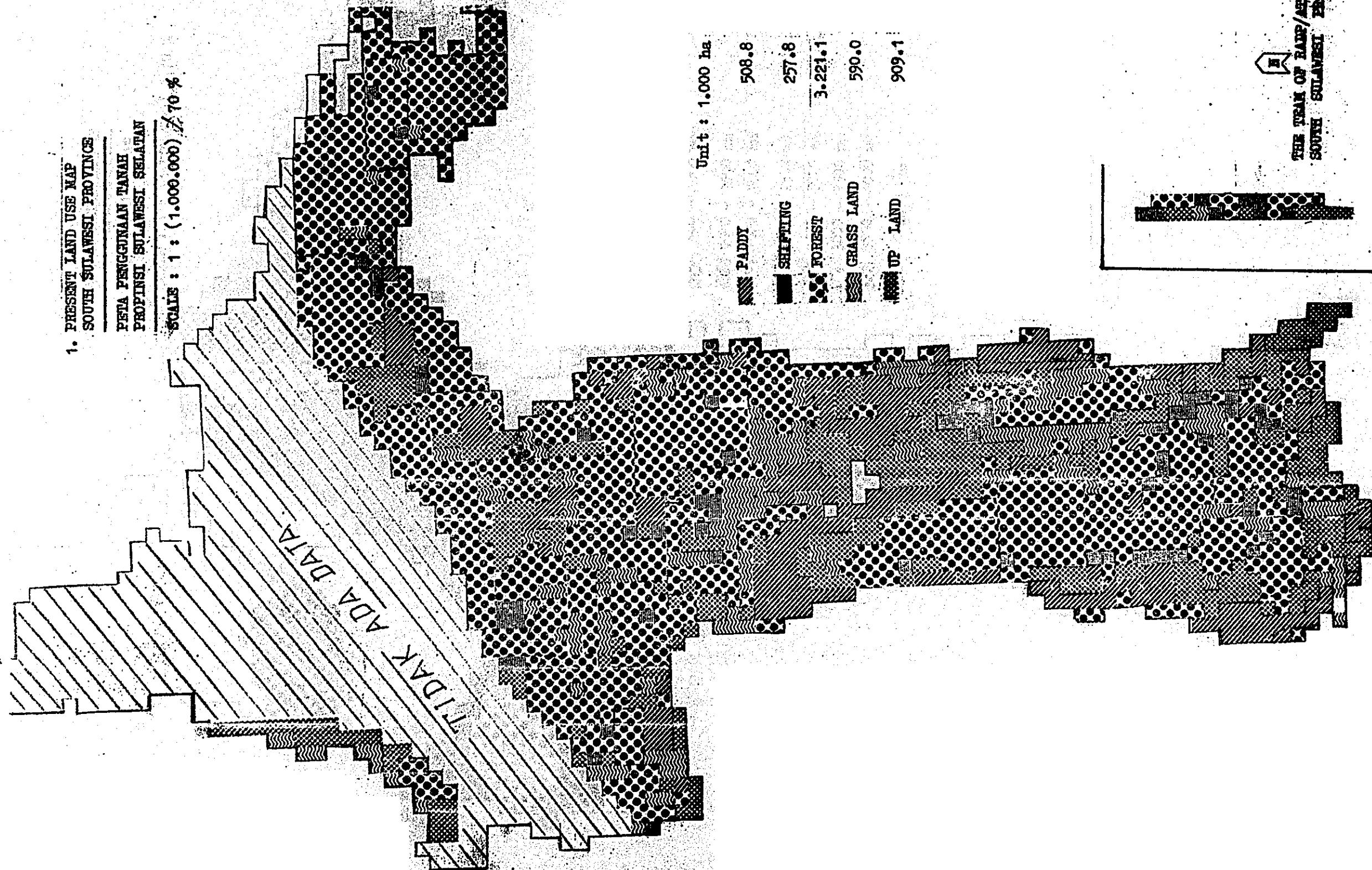
29. Map of water catchment area

30. Population Density.

Note: The error of total acreage is about 6%, between the
statistic data and the drafted map by mesh.

2.2. Maps:

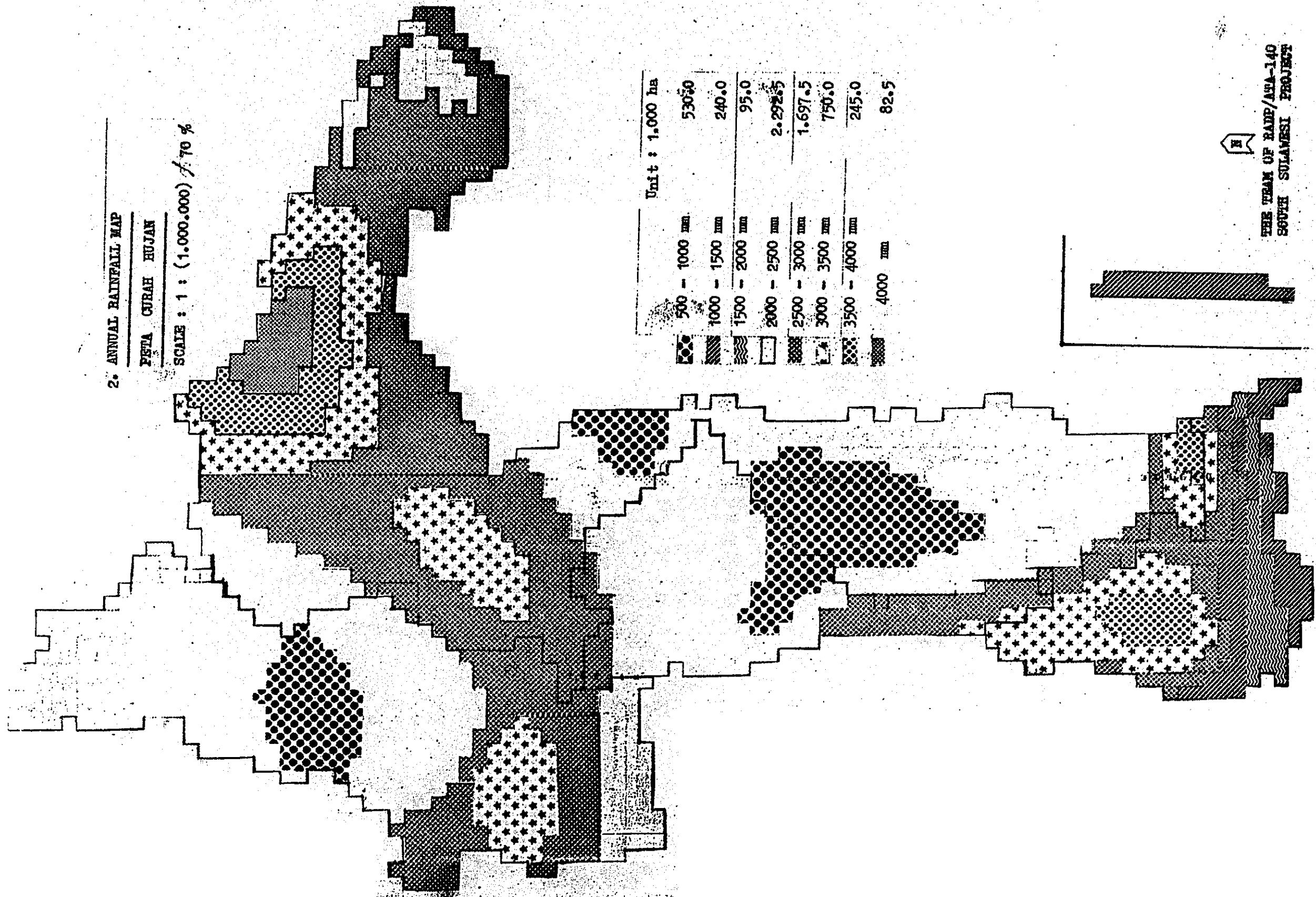
Analyzed maps mentioned above are shown in
the following pages 5 to 34.

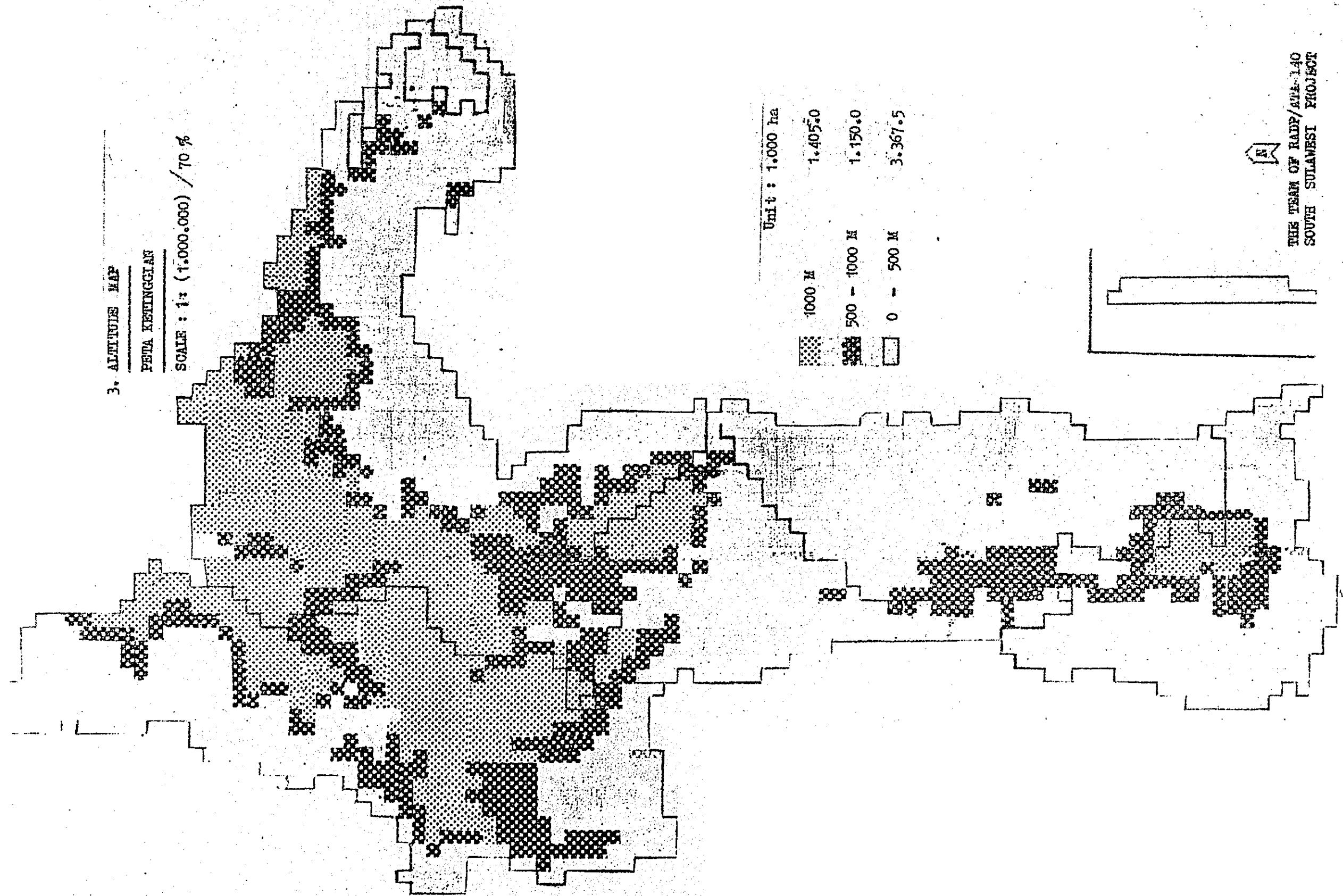


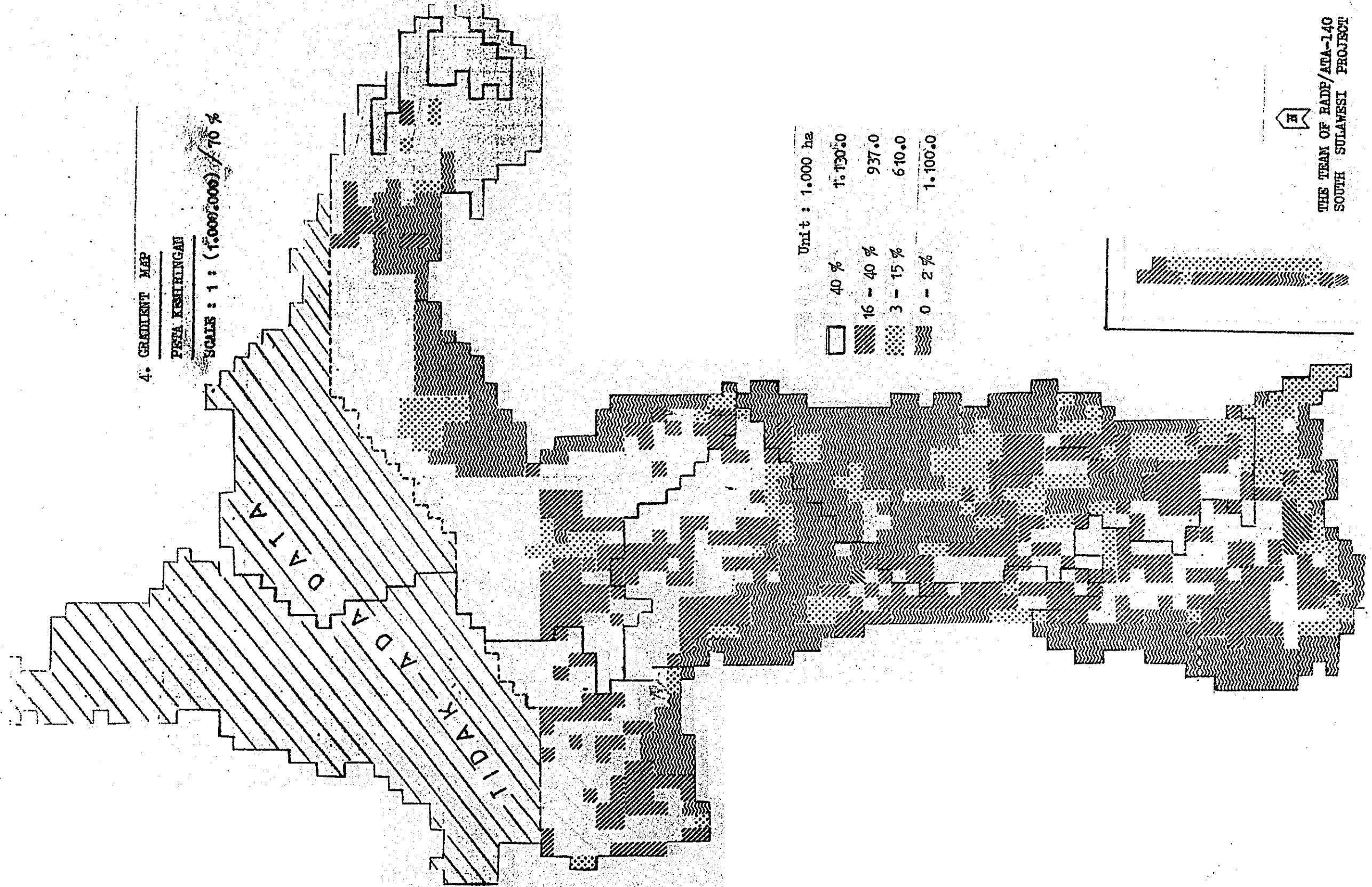
2. ANNUAL RAINFALL MAP

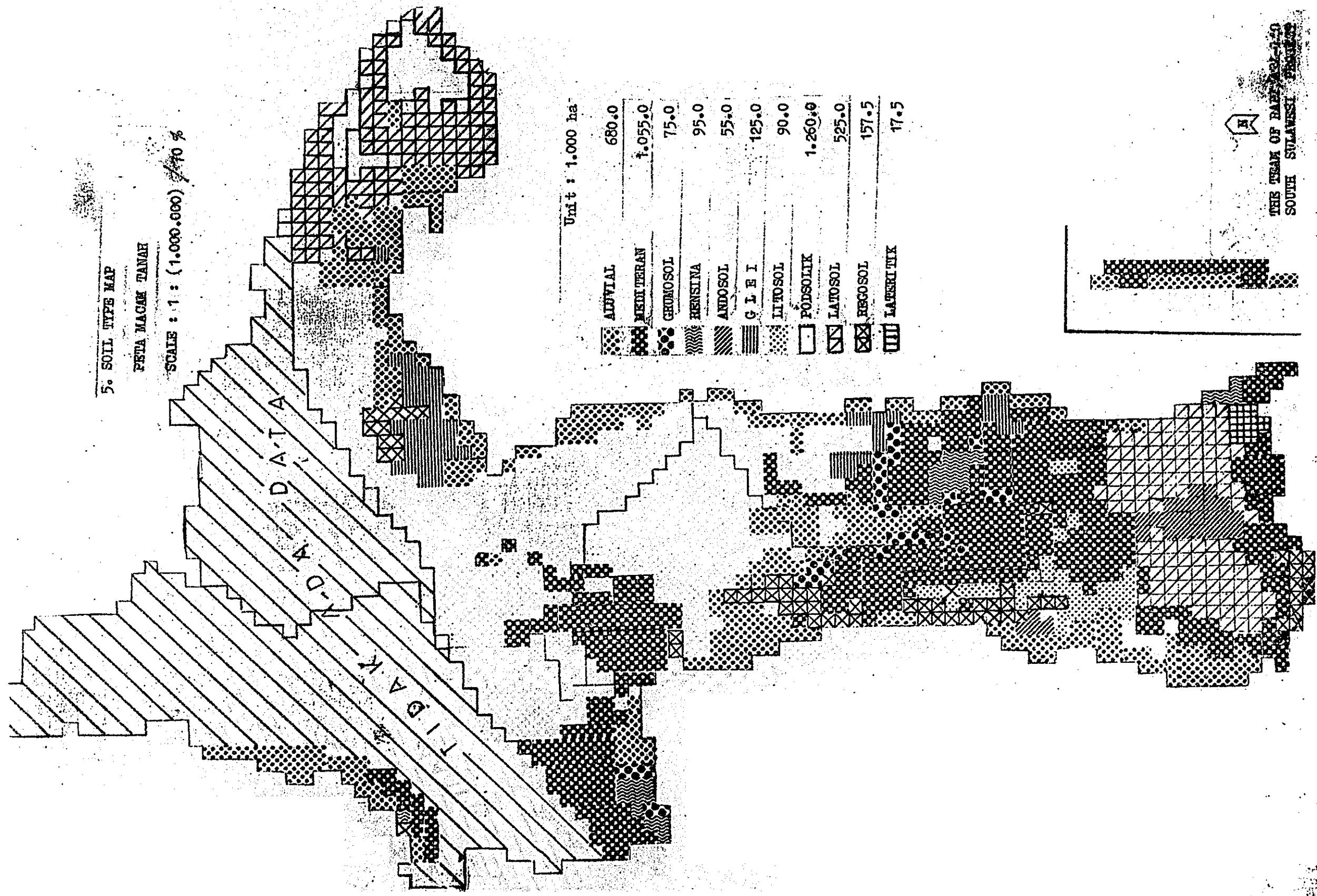
PETA GRAH HUJAN

SCALE : 1 : (1.000.000) / 70 %





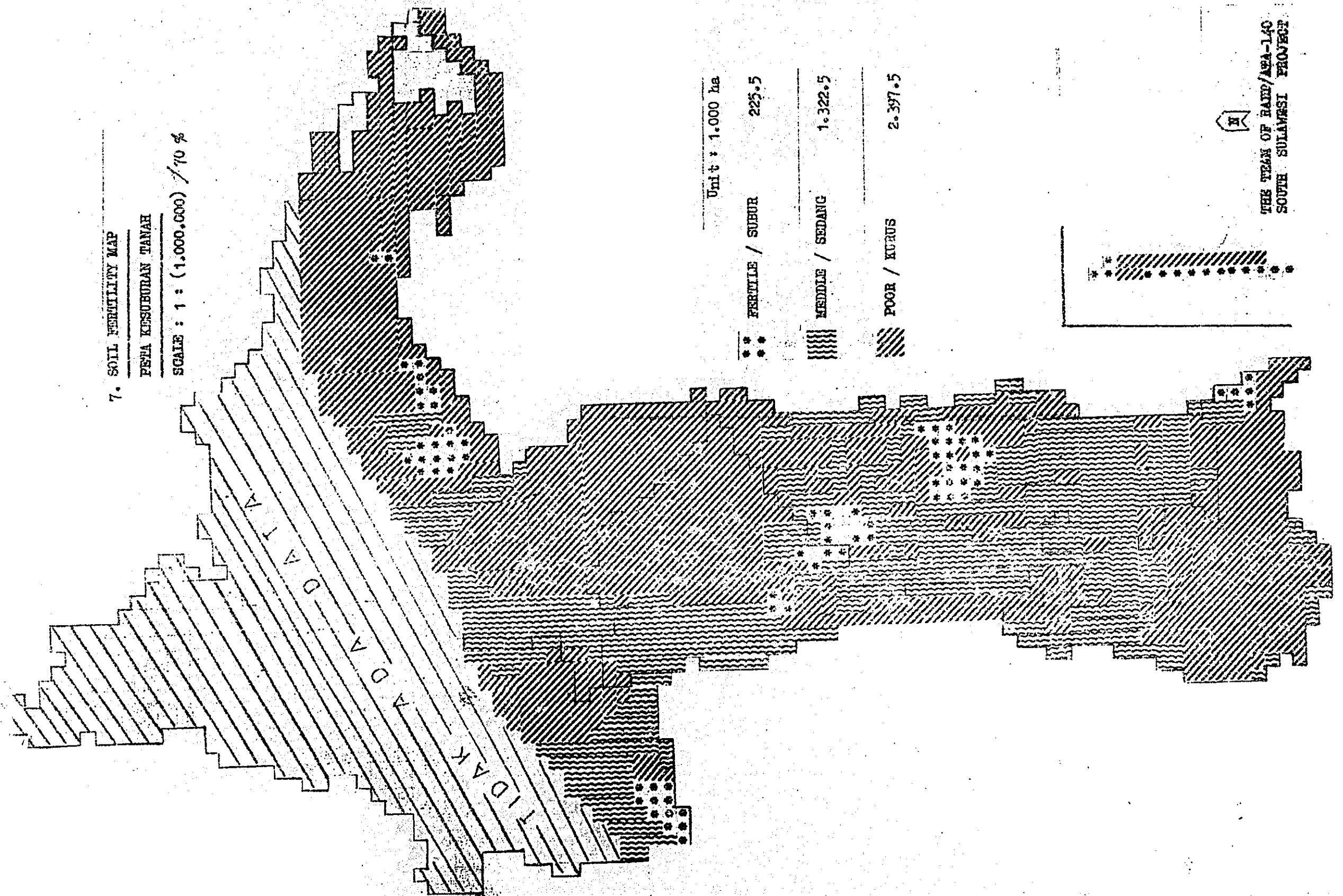




7. SOIL FERTILITY MAP

PETA KESUBURAN TANAH

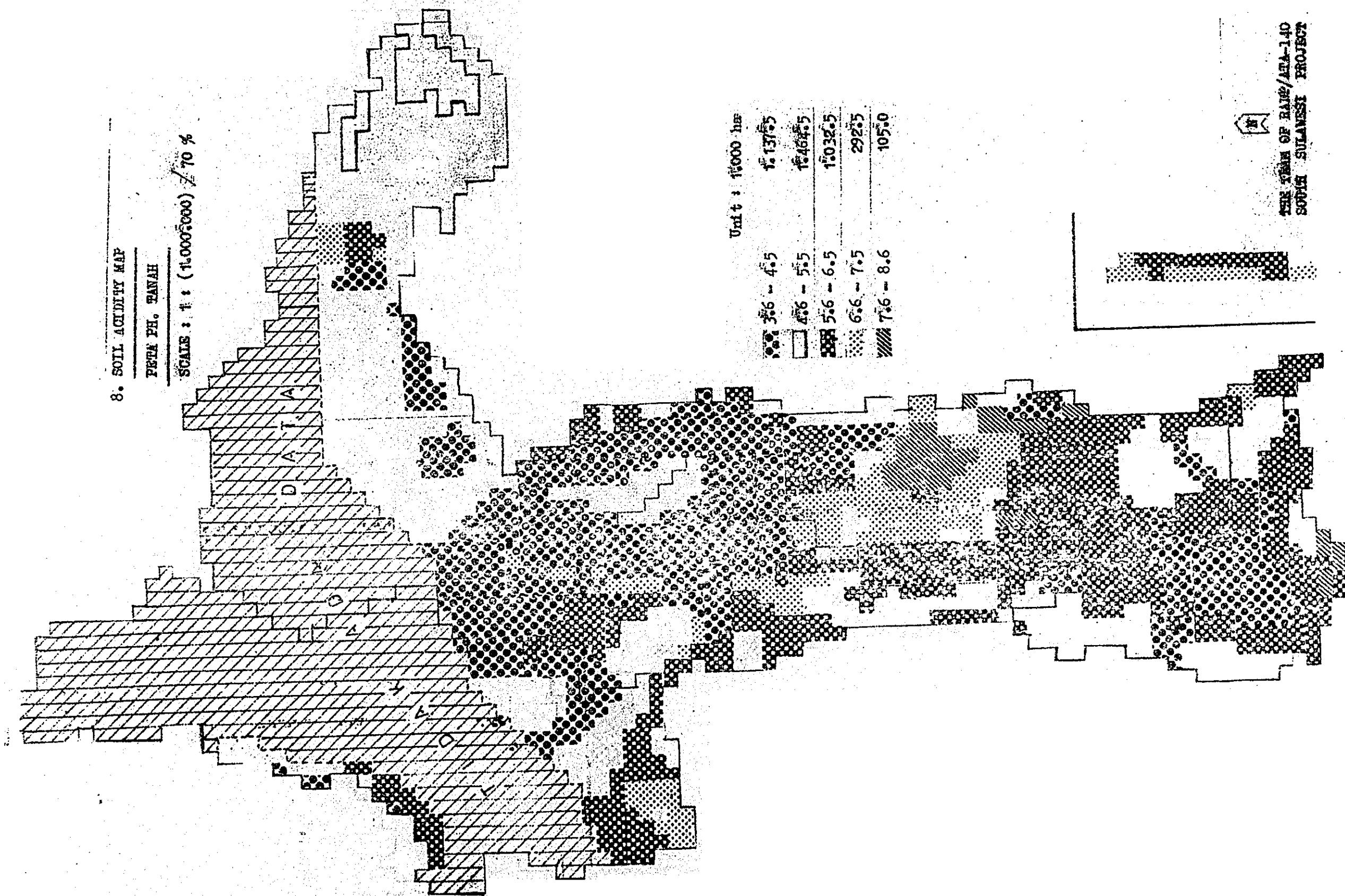
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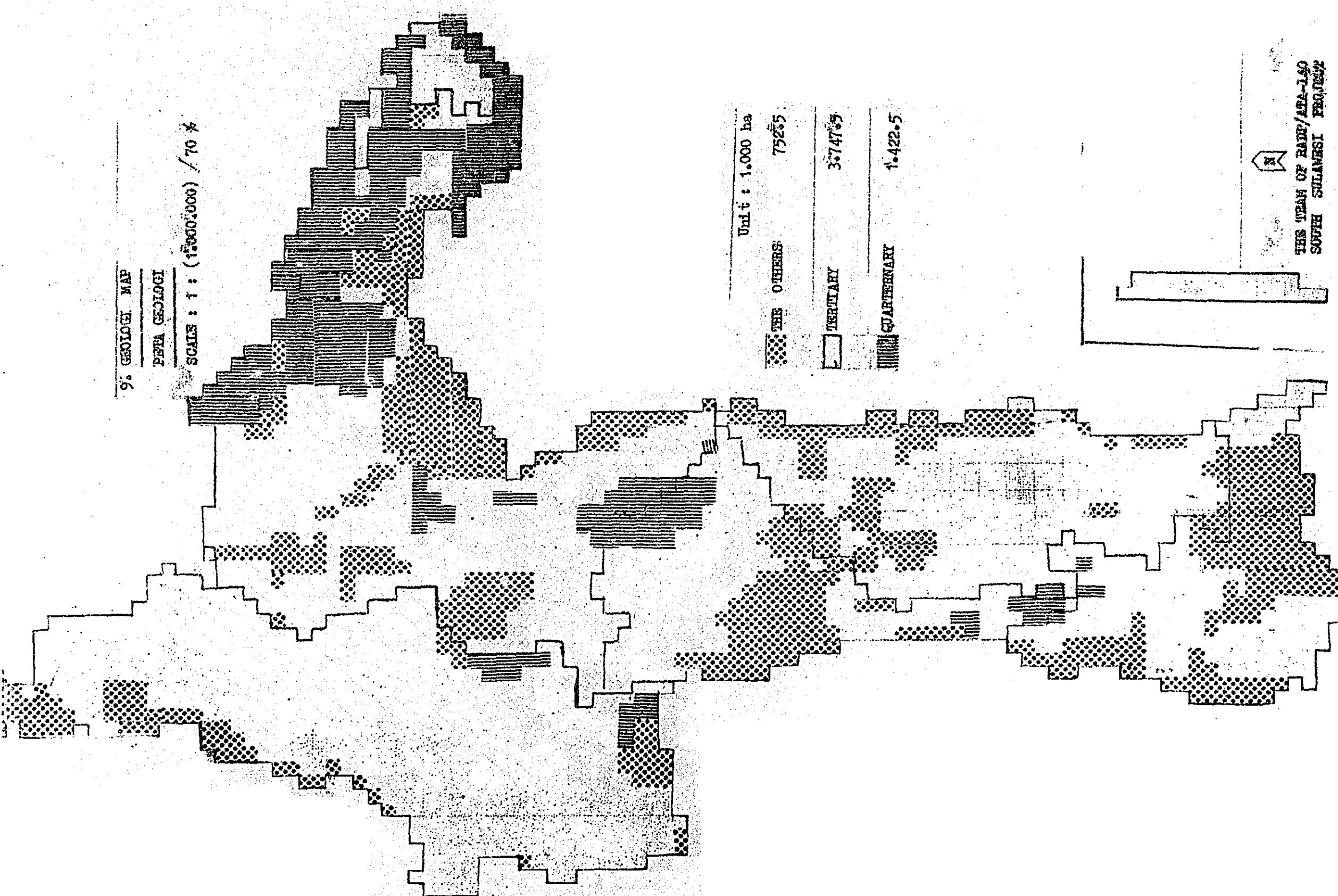


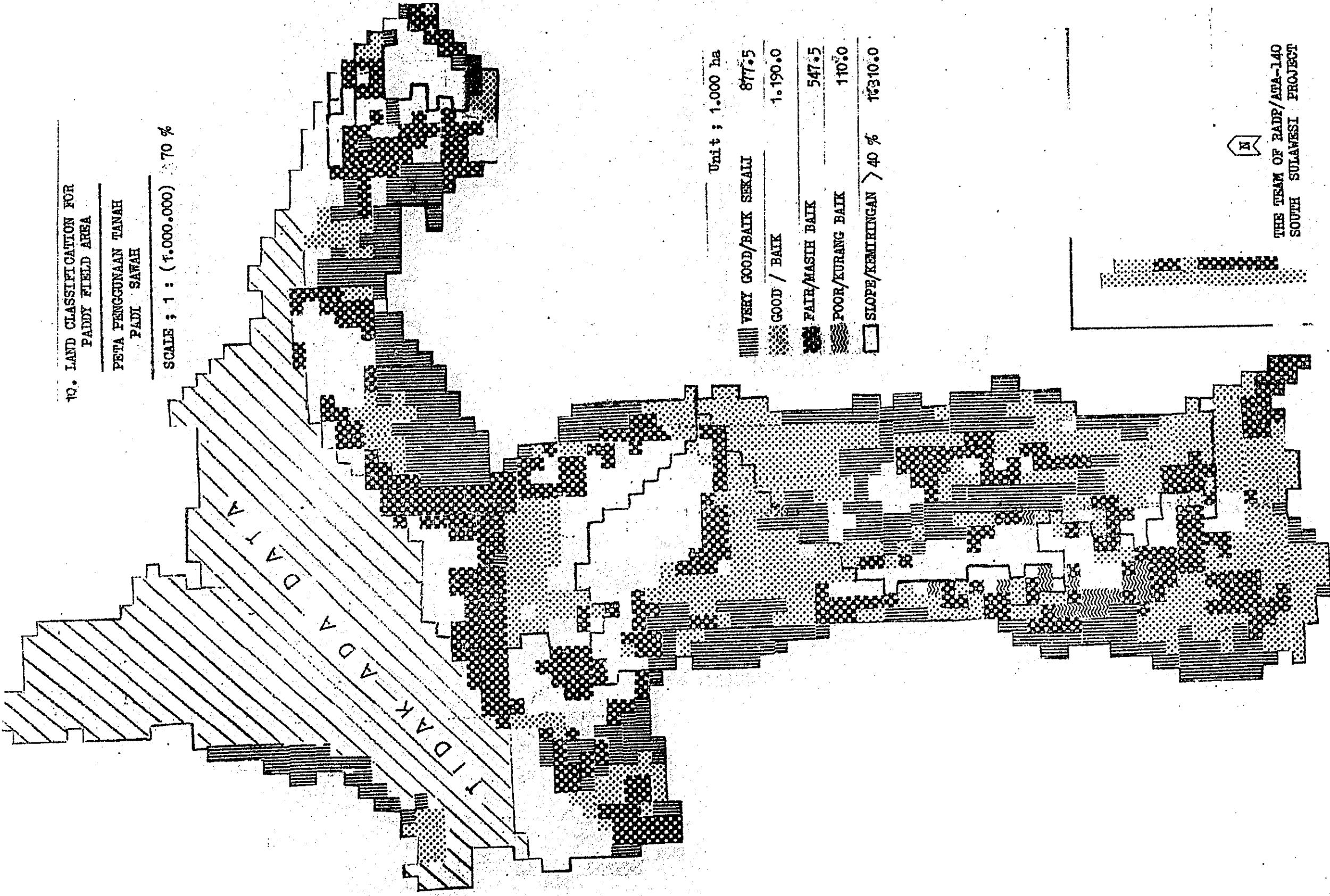
8. SOIL ACIDITY MAP

PETAWAH

SCALE : 1 : (1:000,000) X 70 %







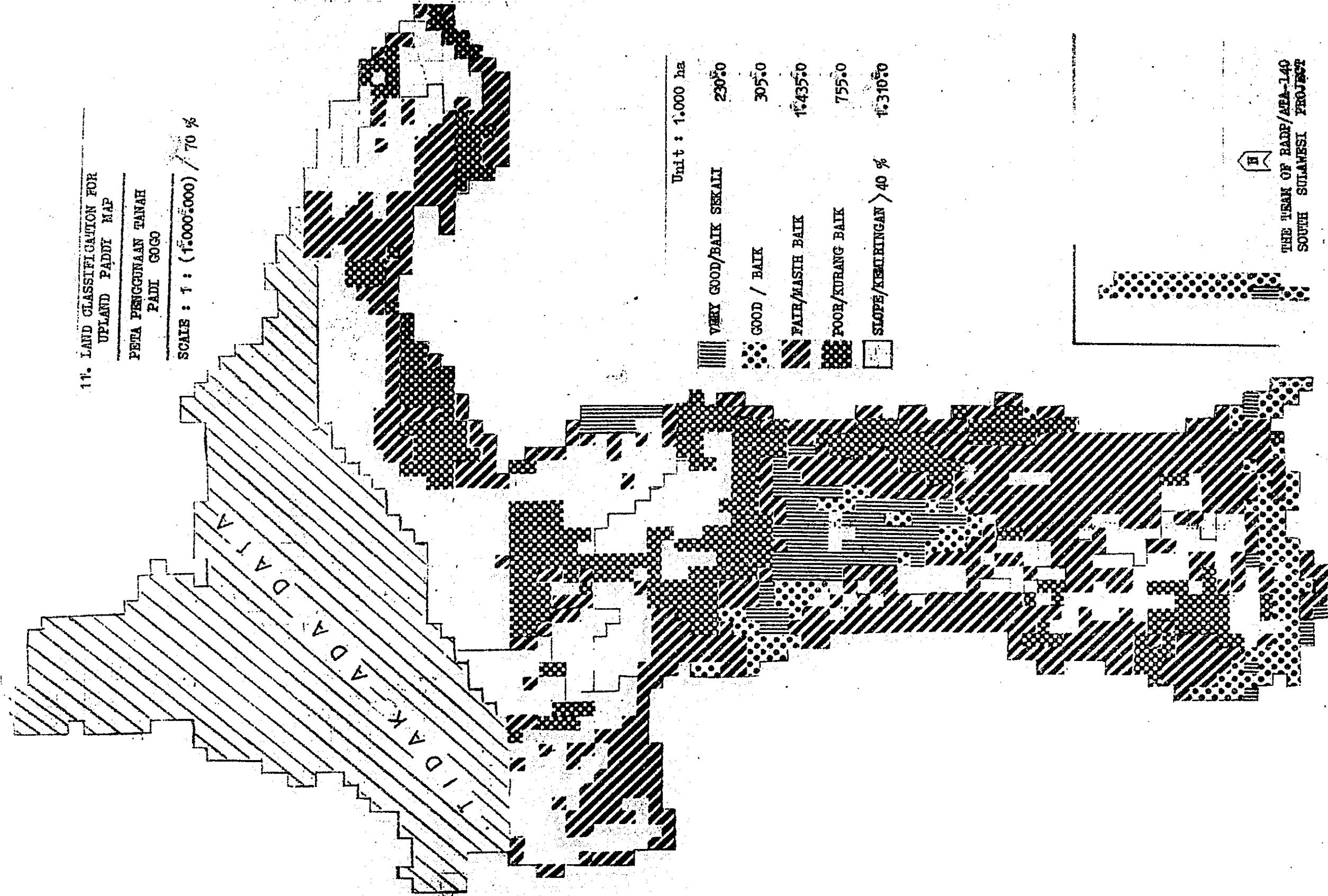
11. LAND CLASSIFICATION FOR

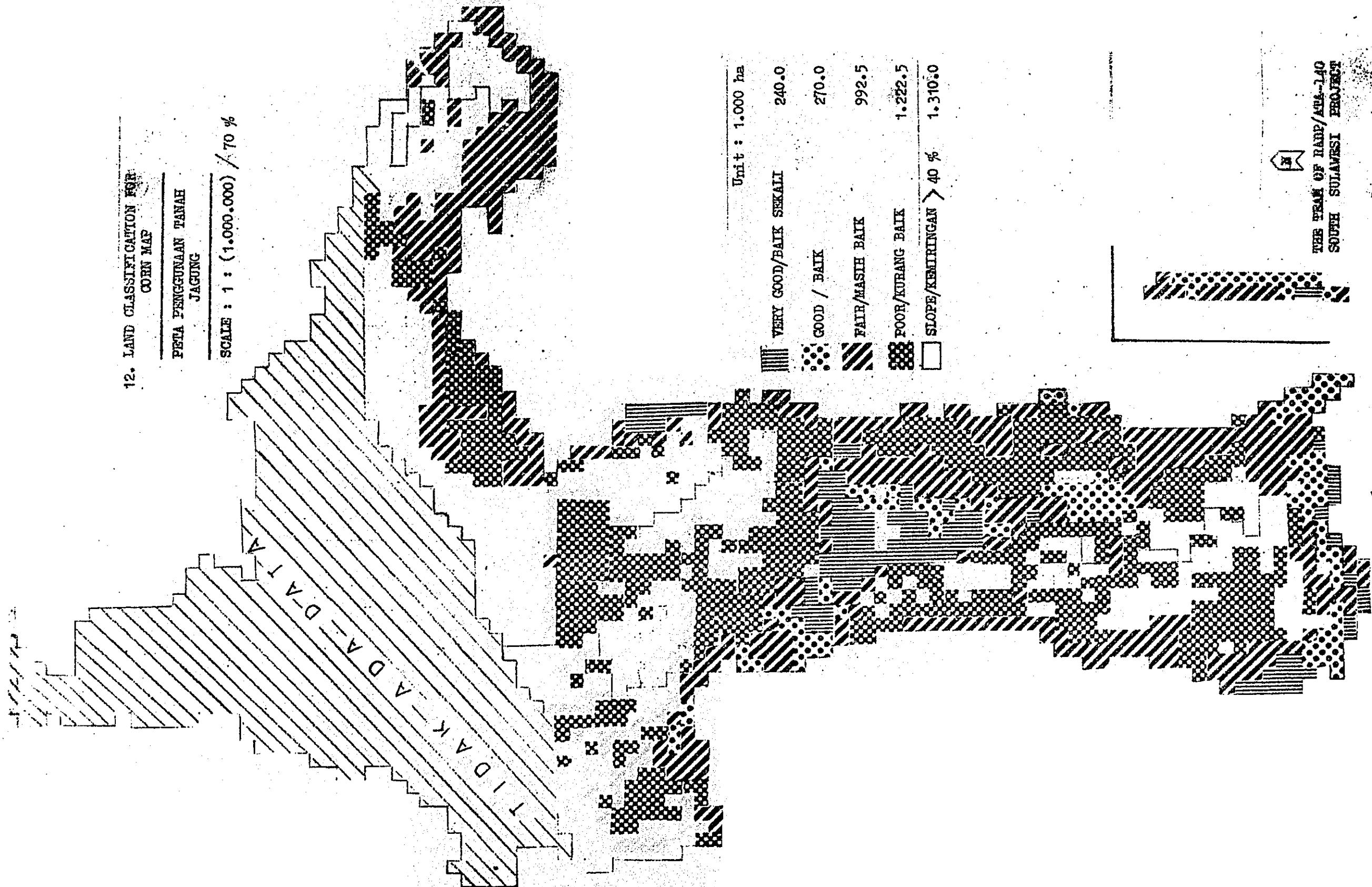
UPLAND PADDY MAP

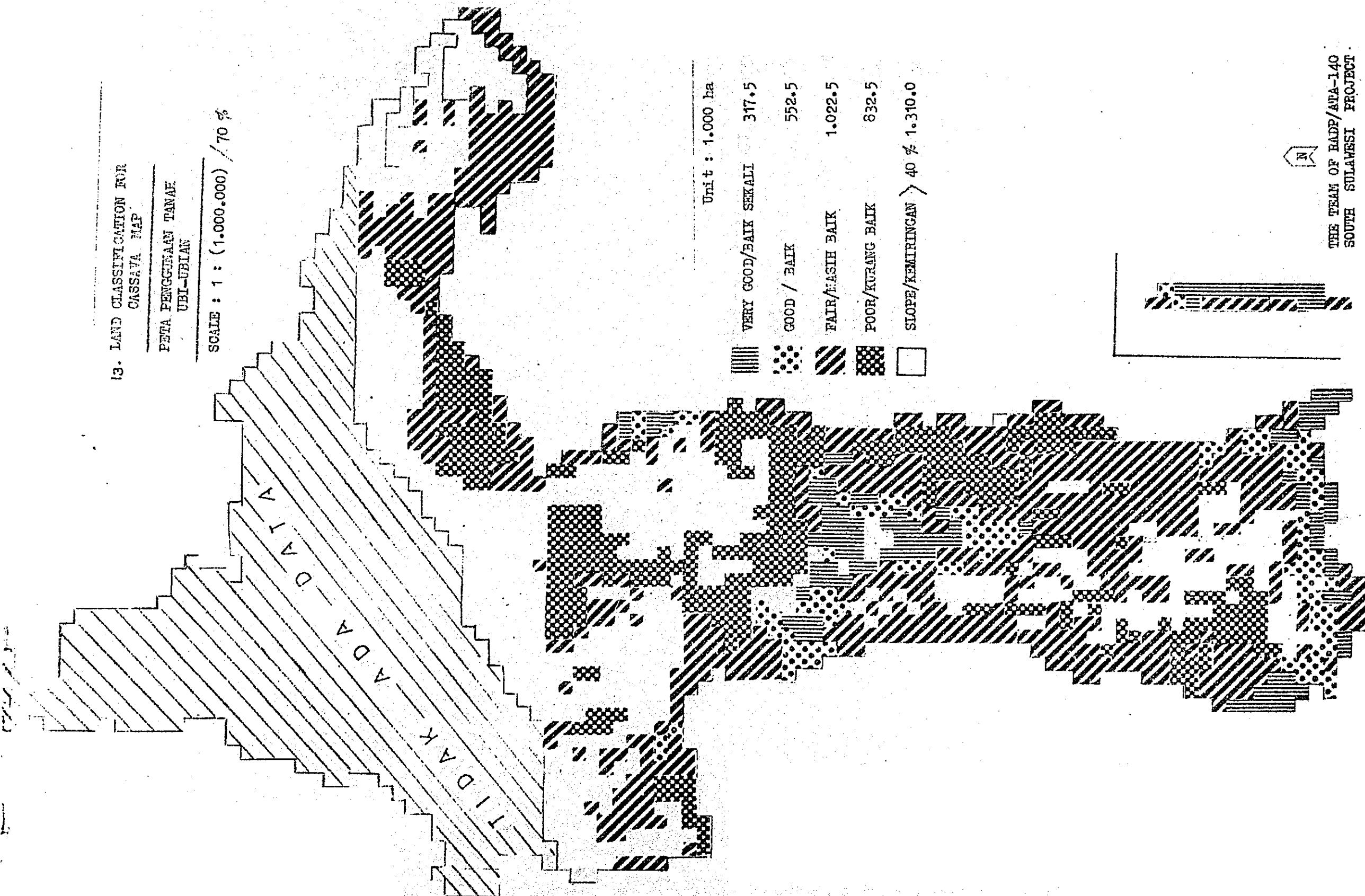
PETA PENGGUNAAN TANAH

PADI GOGO

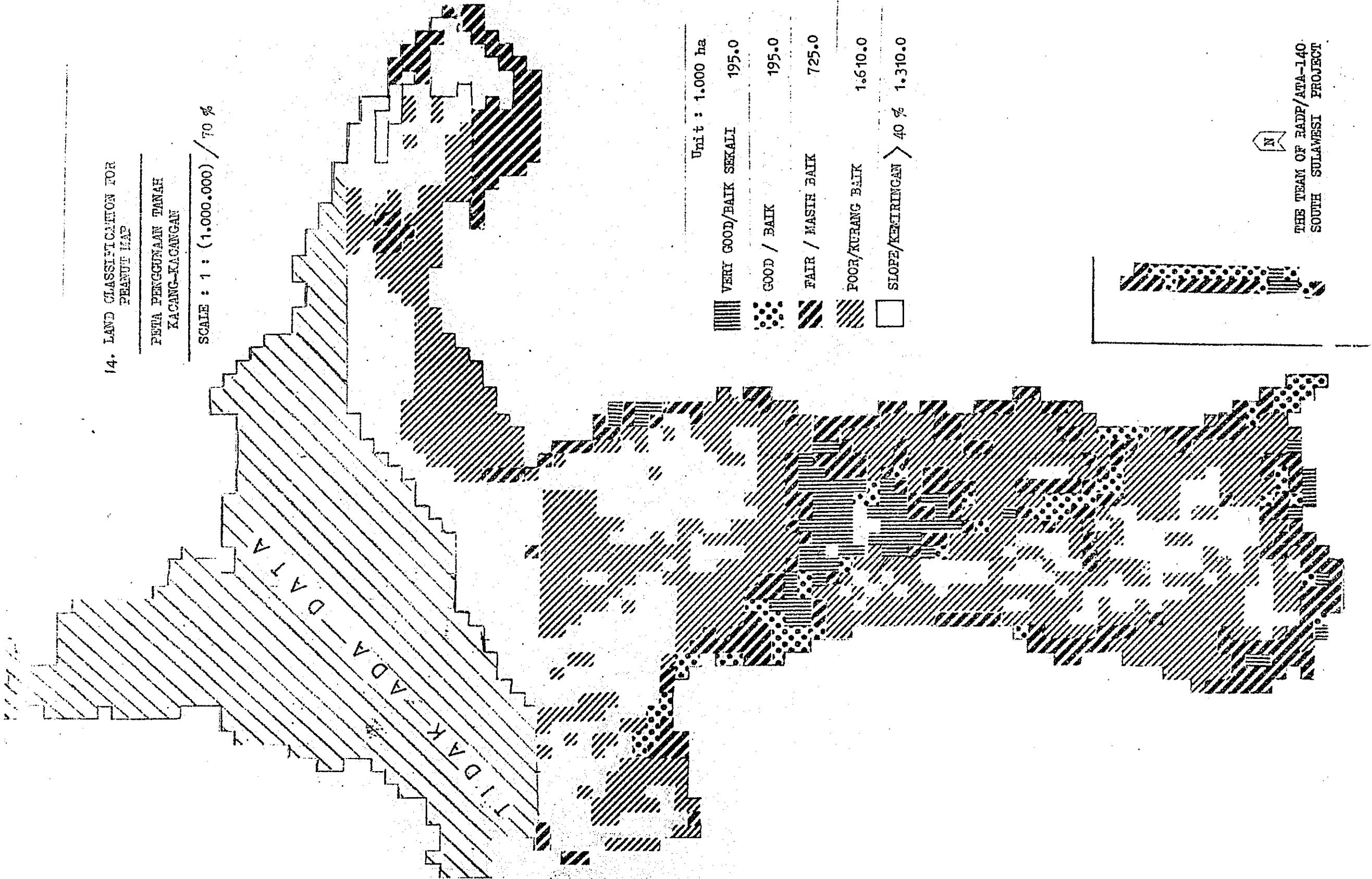
SCALE : 1 : (1:000,000) / 70 %







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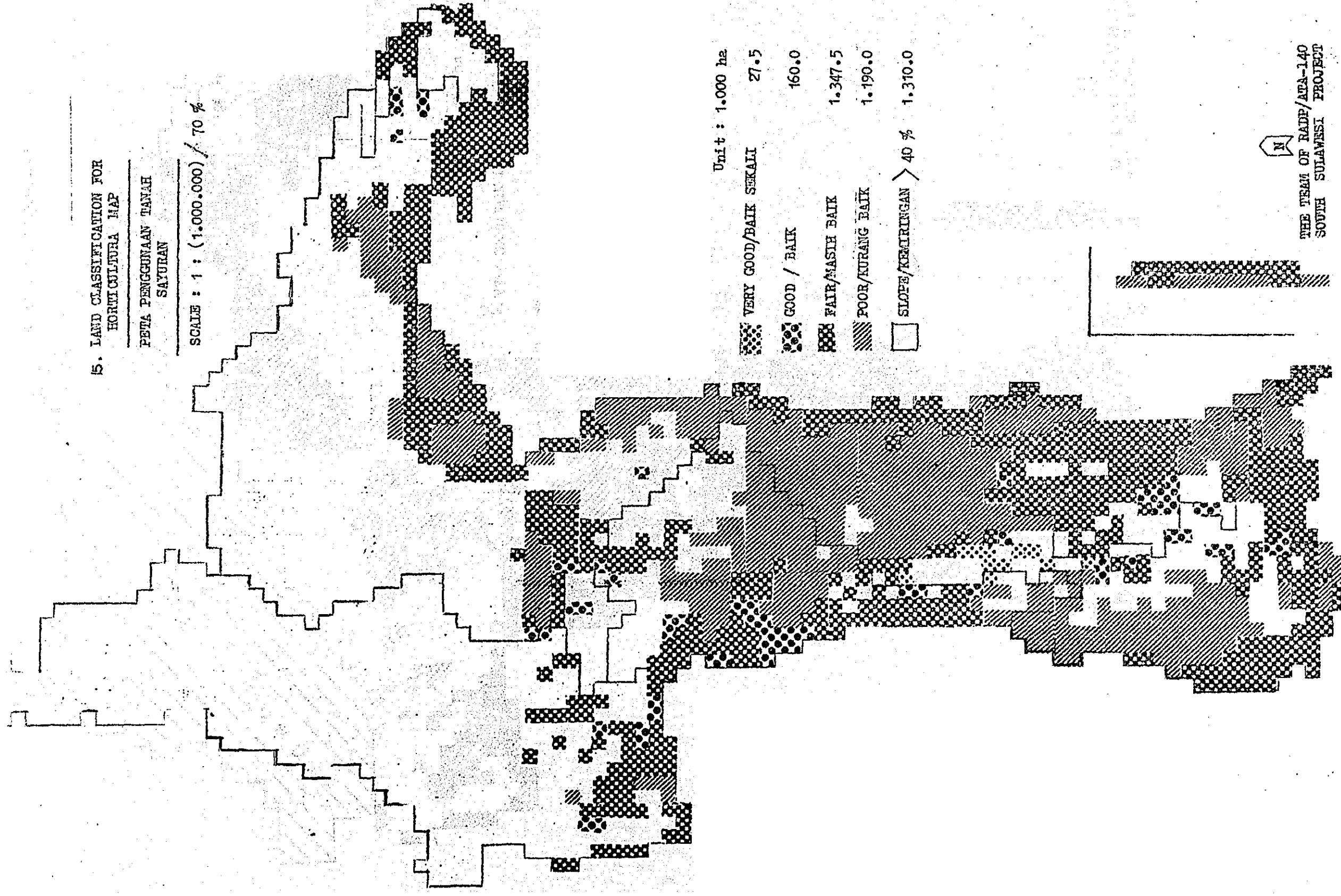


15. LAND CLASSIFICATION FOR
HORTICULTURE MAP

PETA PENGUNAAN TANAH

SAYURAN

SCALE : 1 : (1.000.000) / 70 %

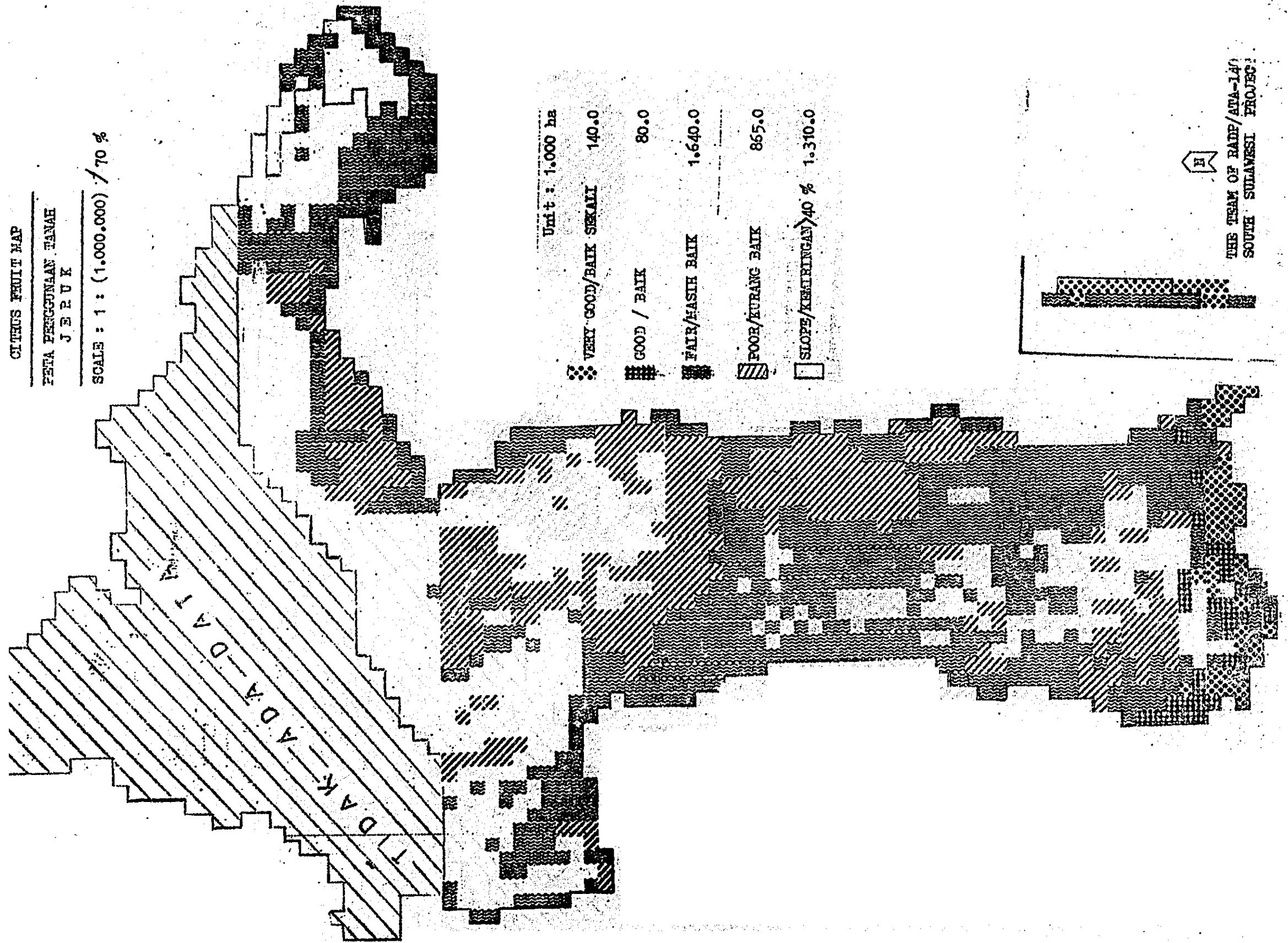


CITRUS FRUIT MAP

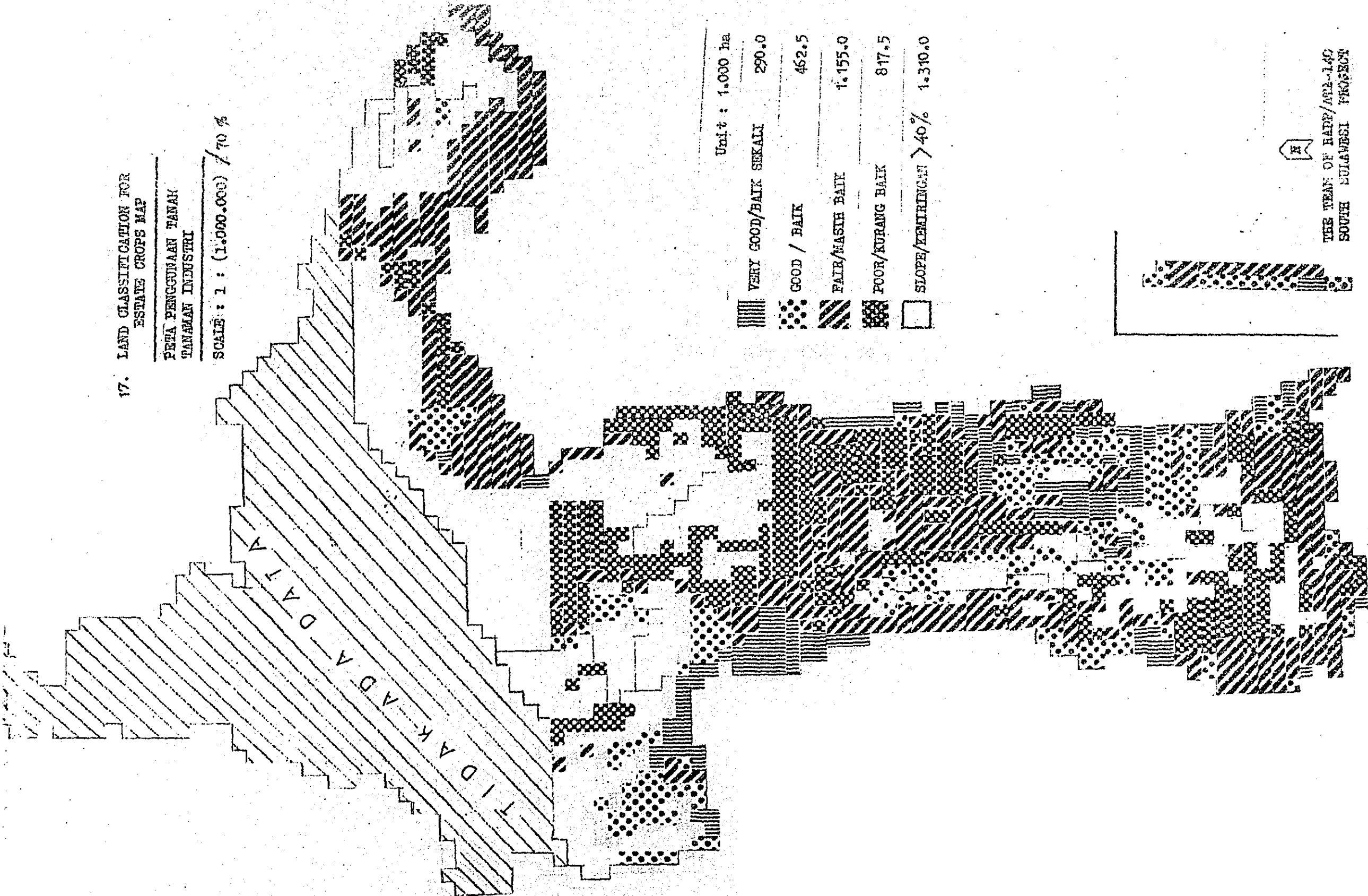
PETA PENGUNAN TANAH

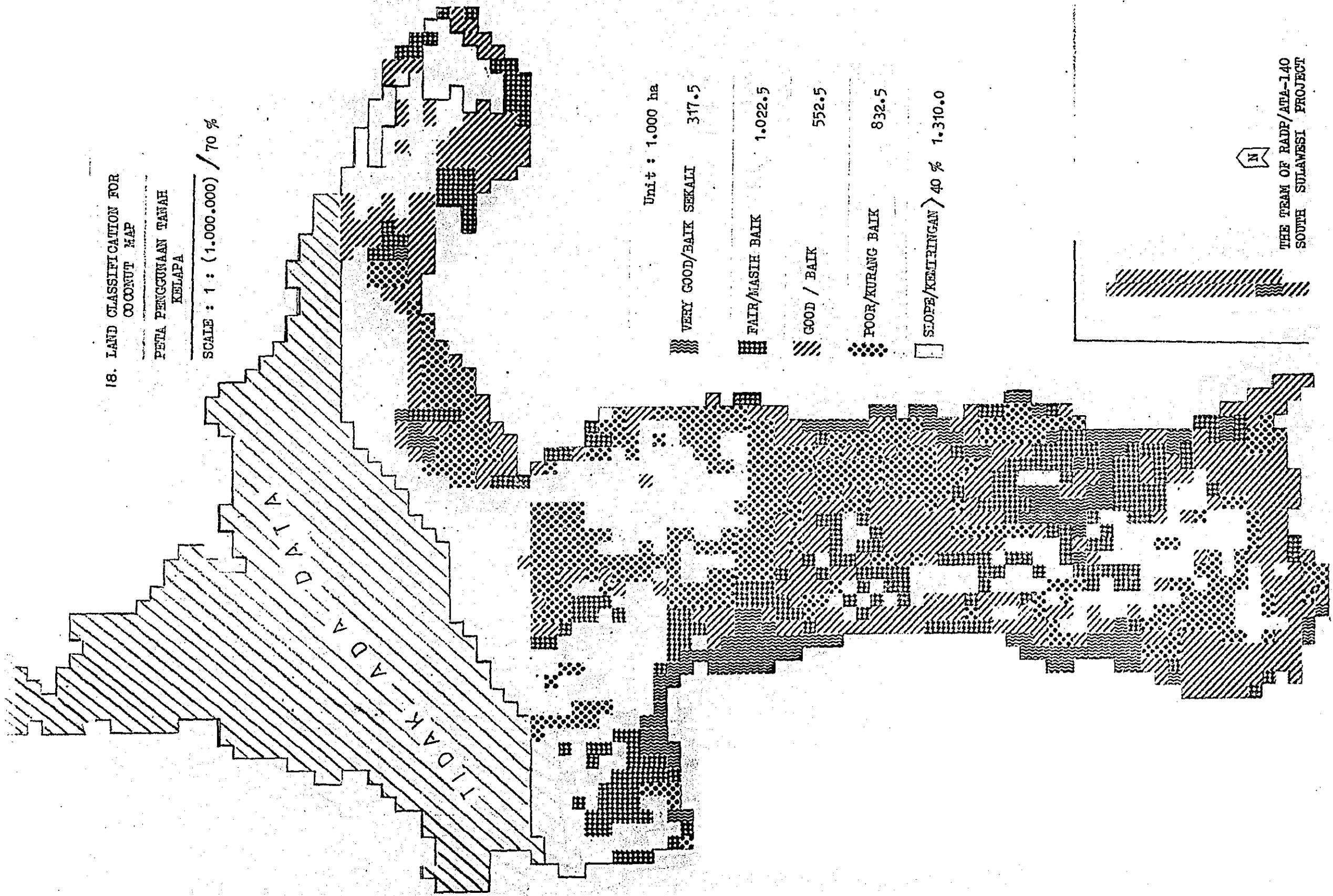
J E R U K

SCALE : 1 : (1.000.000) / 70 %



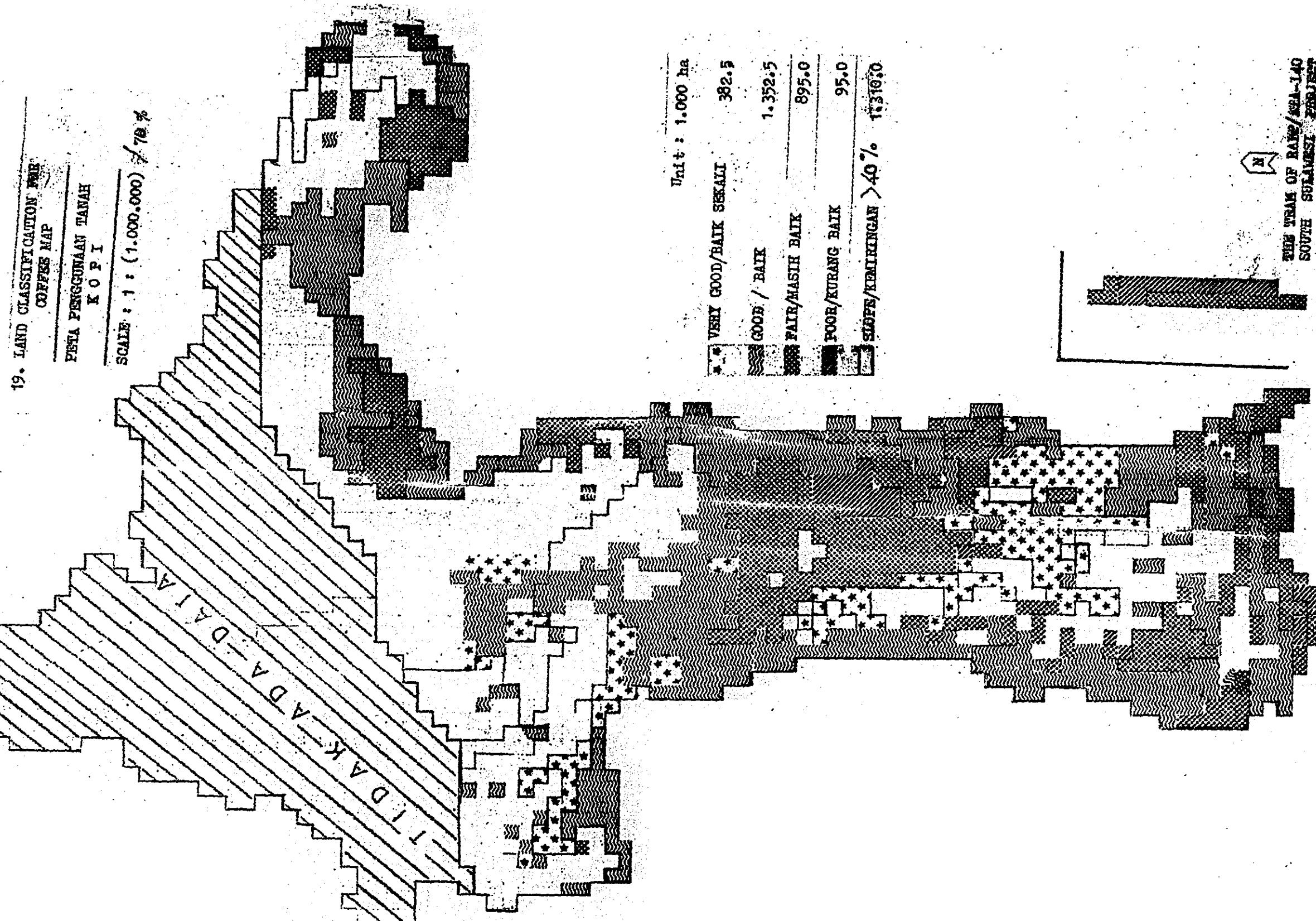
THE TEAM OF RAIP/ATA-LI
SOUTH SULAWESI PROJECT



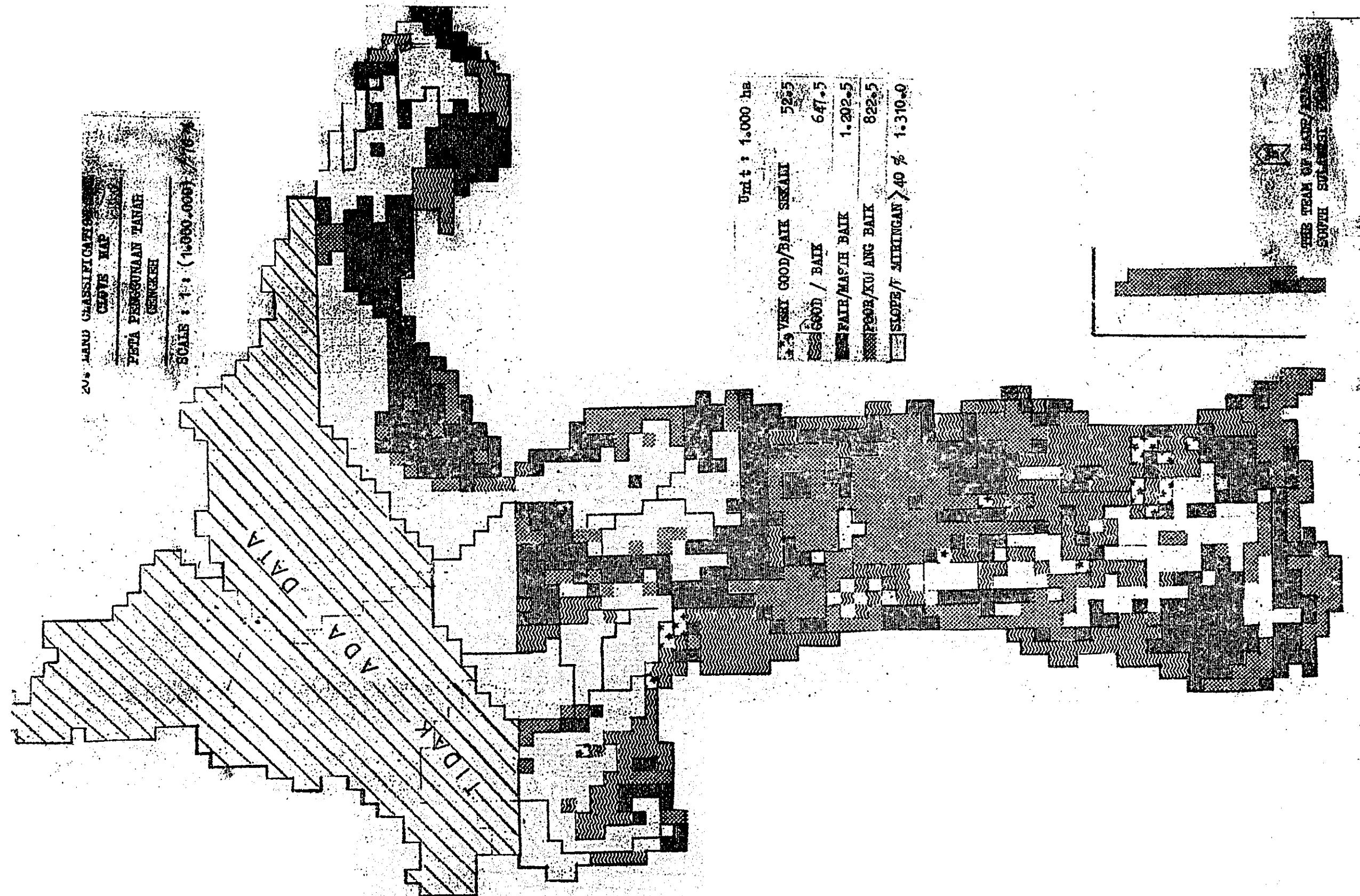


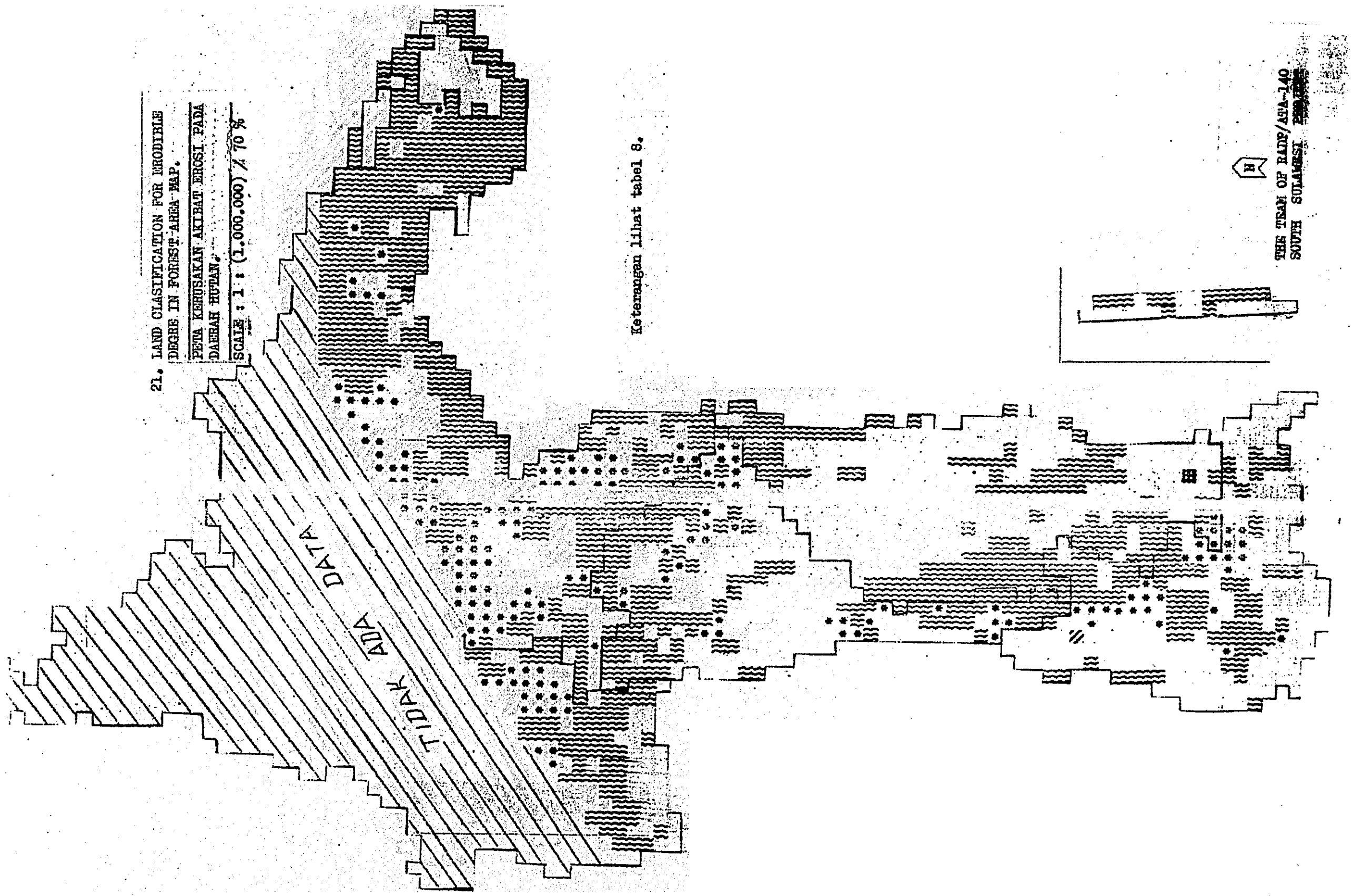
19. LAND CLASSIFICATION MAP
COFFEE MAP
PETA PENGUNAAN TANAH
KOPI

SCALE : 1 : (1.000.000) 70 %

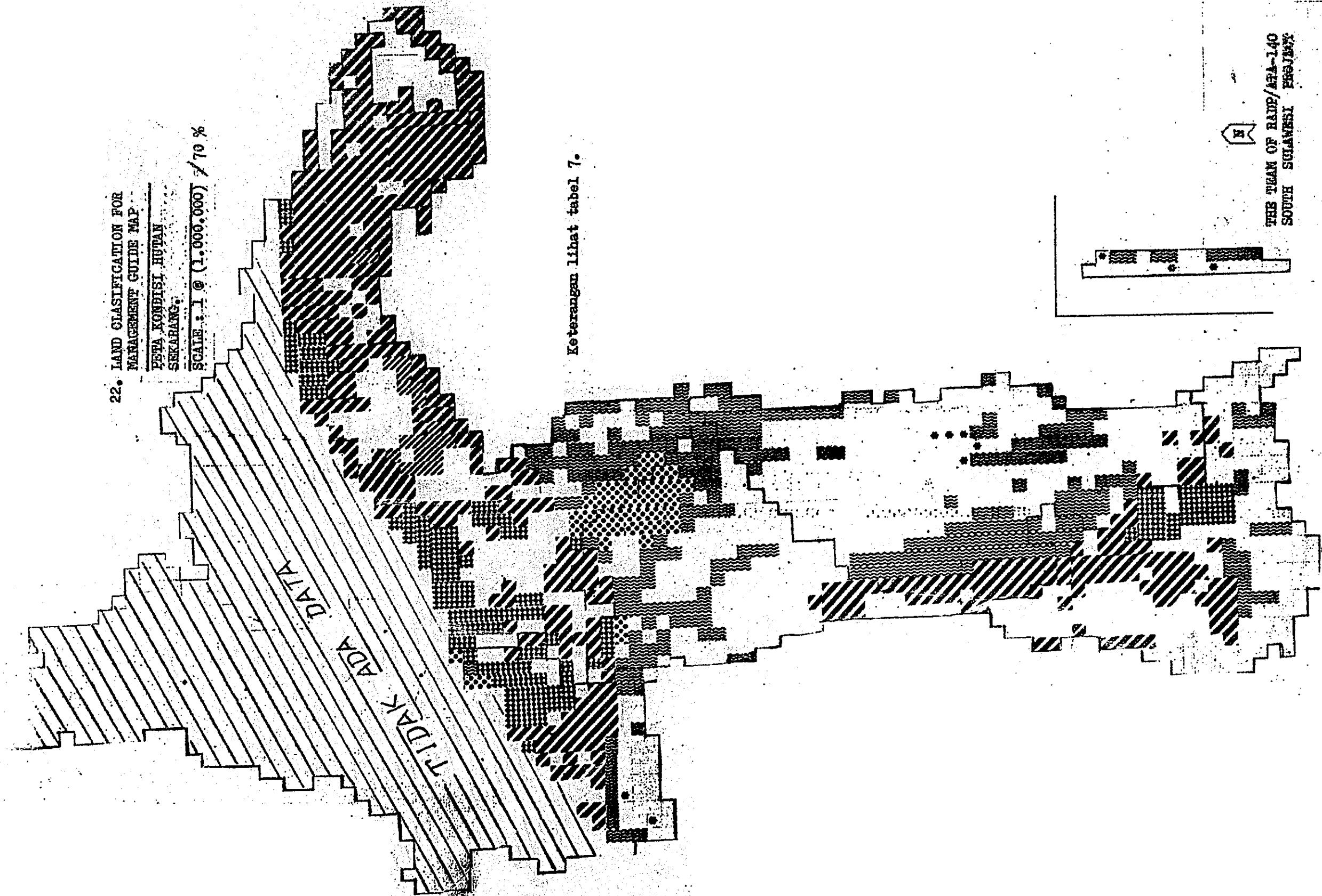


THE TEAM OF R&D/ESAL-140
SOUTH SULAWESI PROJECT

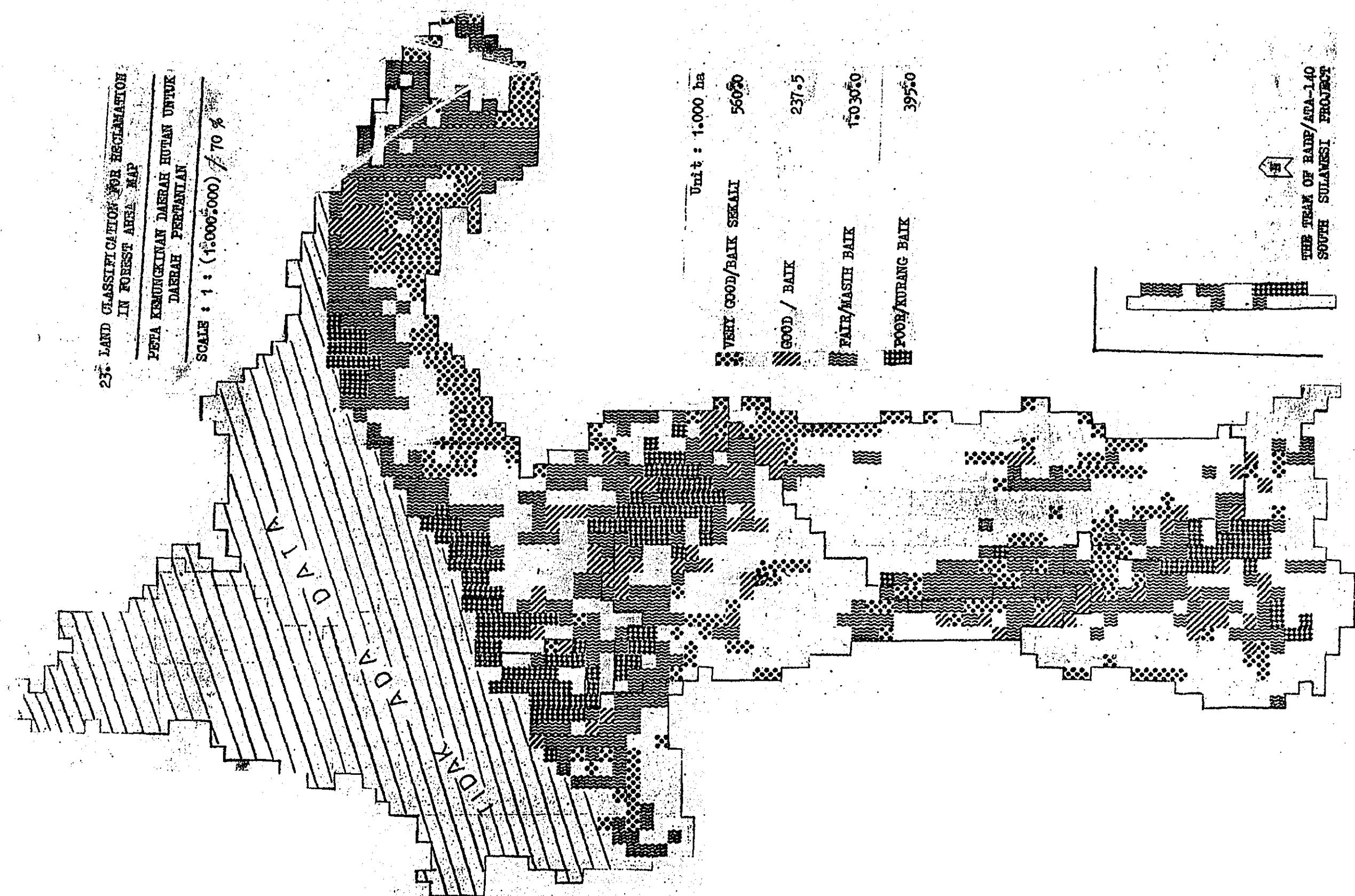


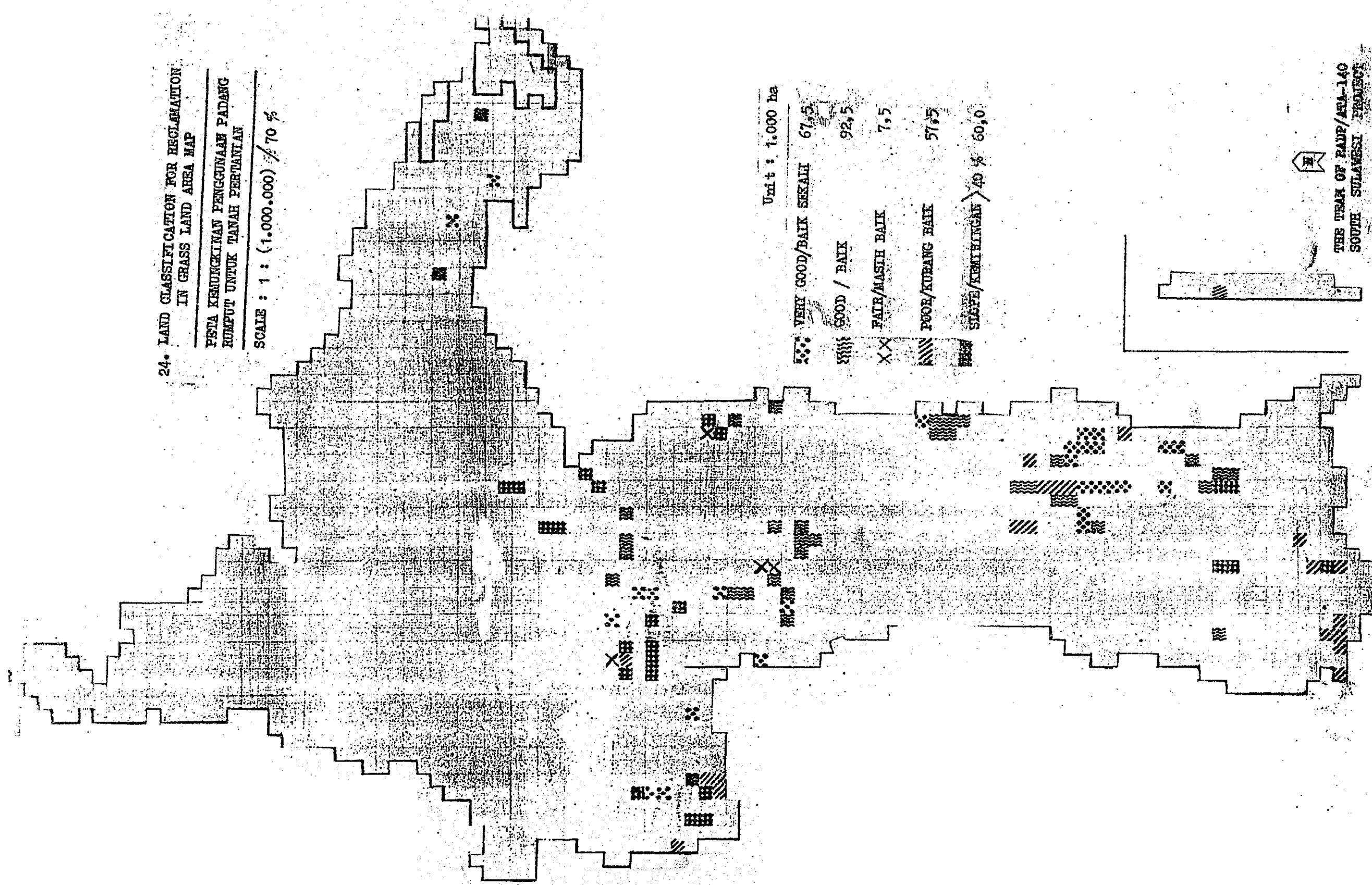


22. LAND CLASSIFICATION FOR
MANAGEMENT GUIDE MAP
PETA KONDISI HUTAN
SEKARANG.
SCALE : 1 @ (1.000.000) / 70 %



THE TEAM OF RAPP/434-140
SOUTH SULAWESI PROJECT

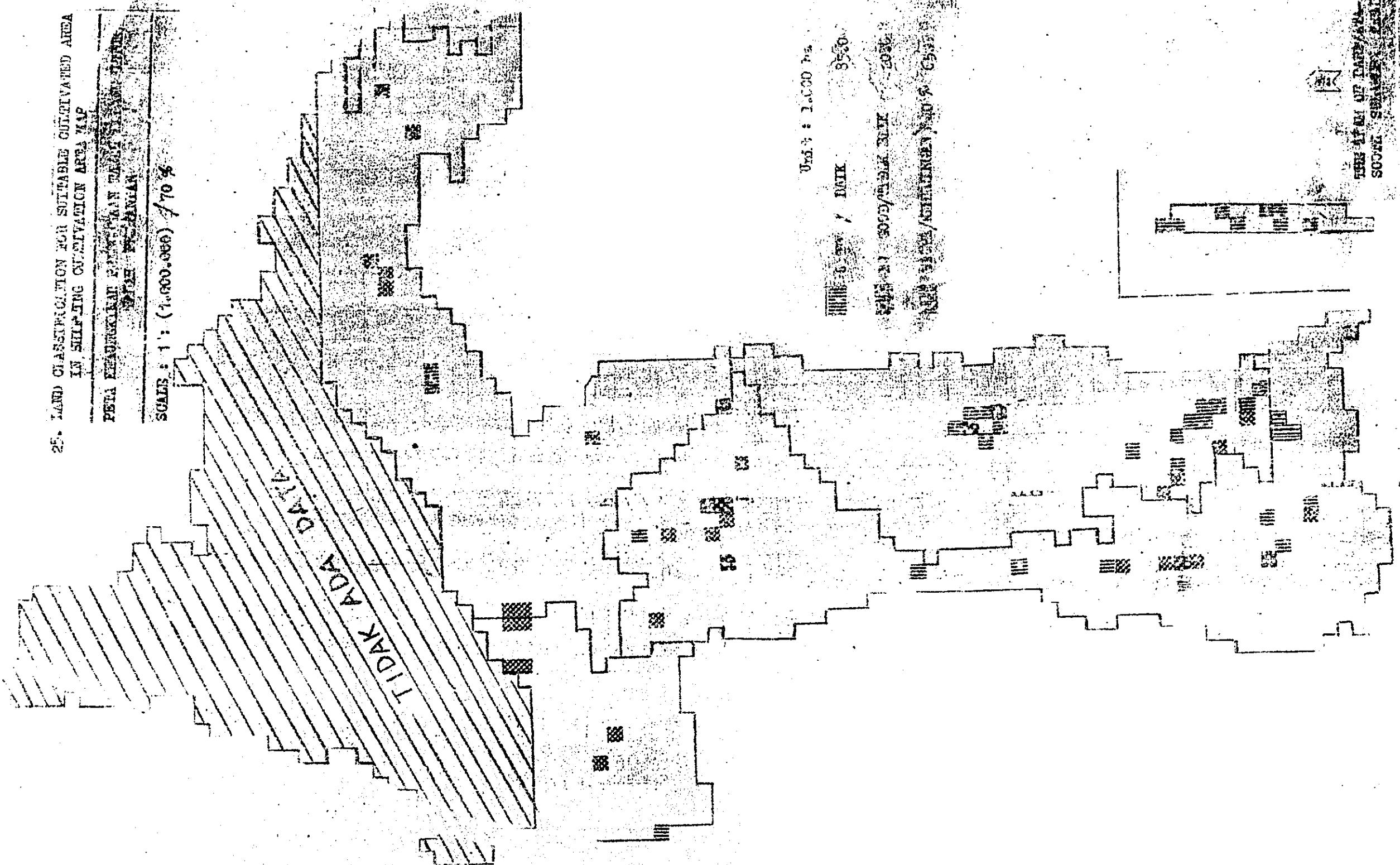




25. LAND CLASSIFICATION FOR SUITABLE CULTIVATED AREA
IN SHIFTING CULTIVATION AREA MAP

PETA REGIONAL PLANNING TEAM
DILIGEN, DAVAO DEL SUR

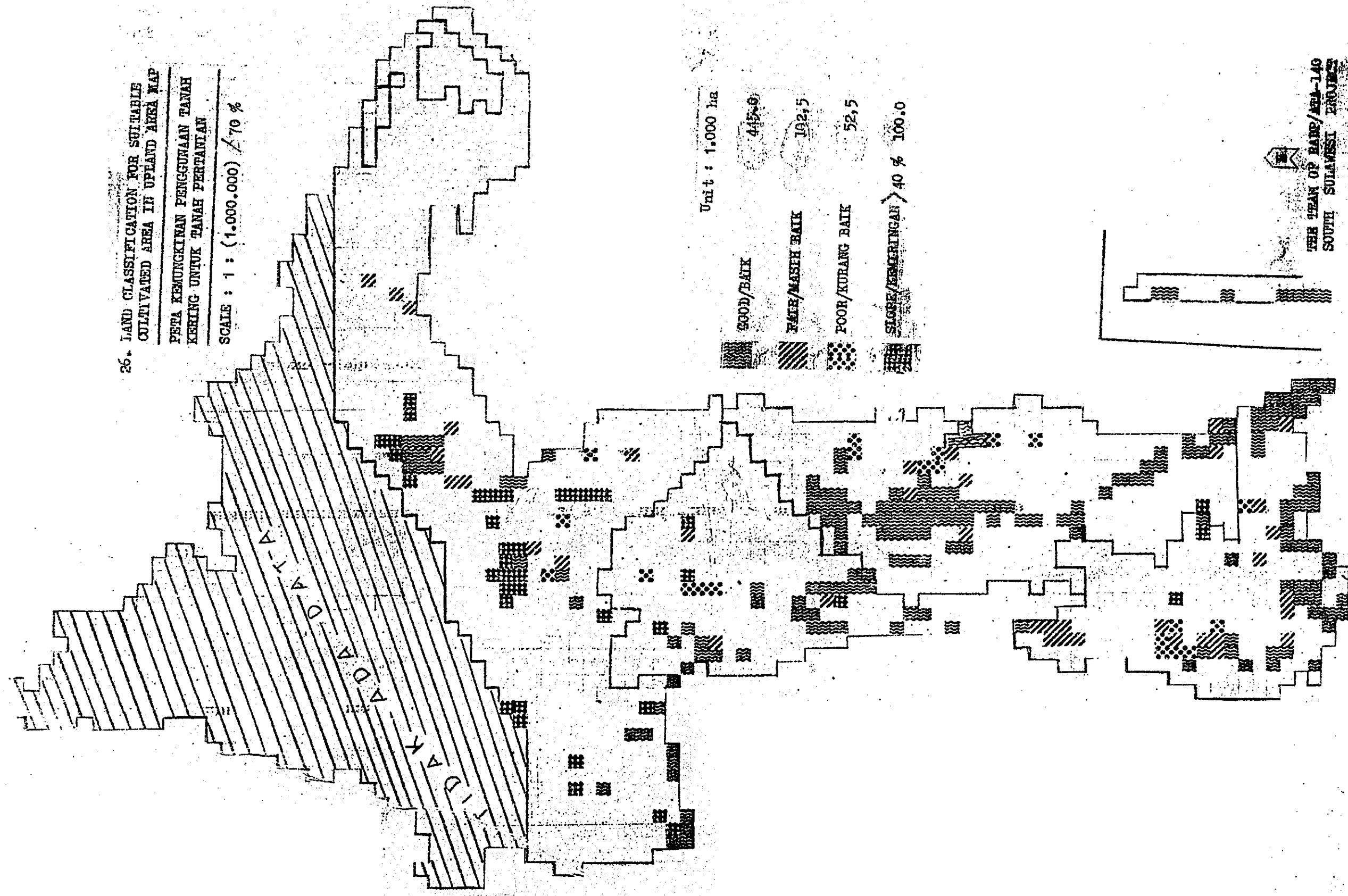
SCALE : 1 : (1,000,000) / 70 %



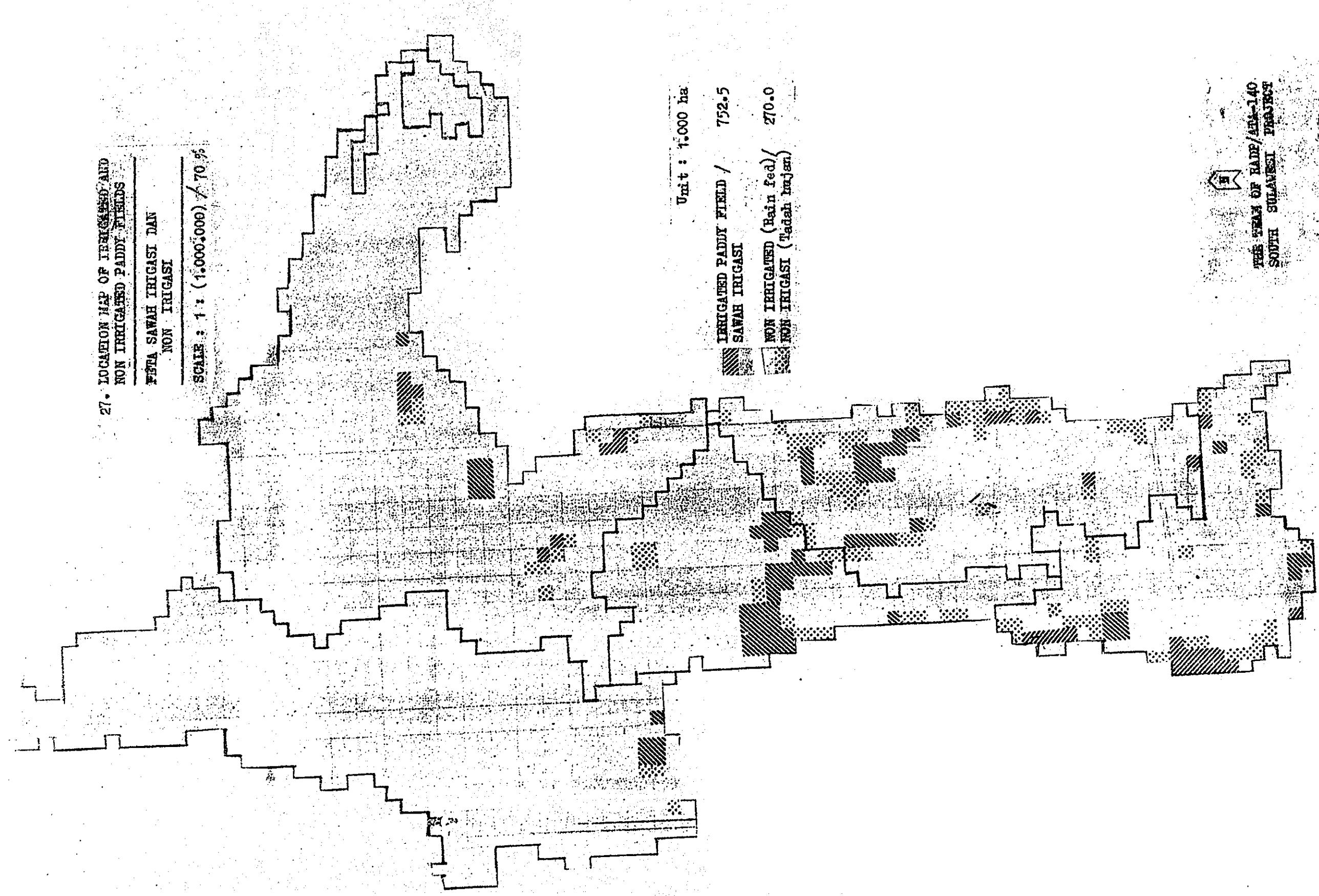
26. LAND CLASSIFICATION FOR SUITABLE
CULTIVATED AREA IN UPLAND AREA MAP

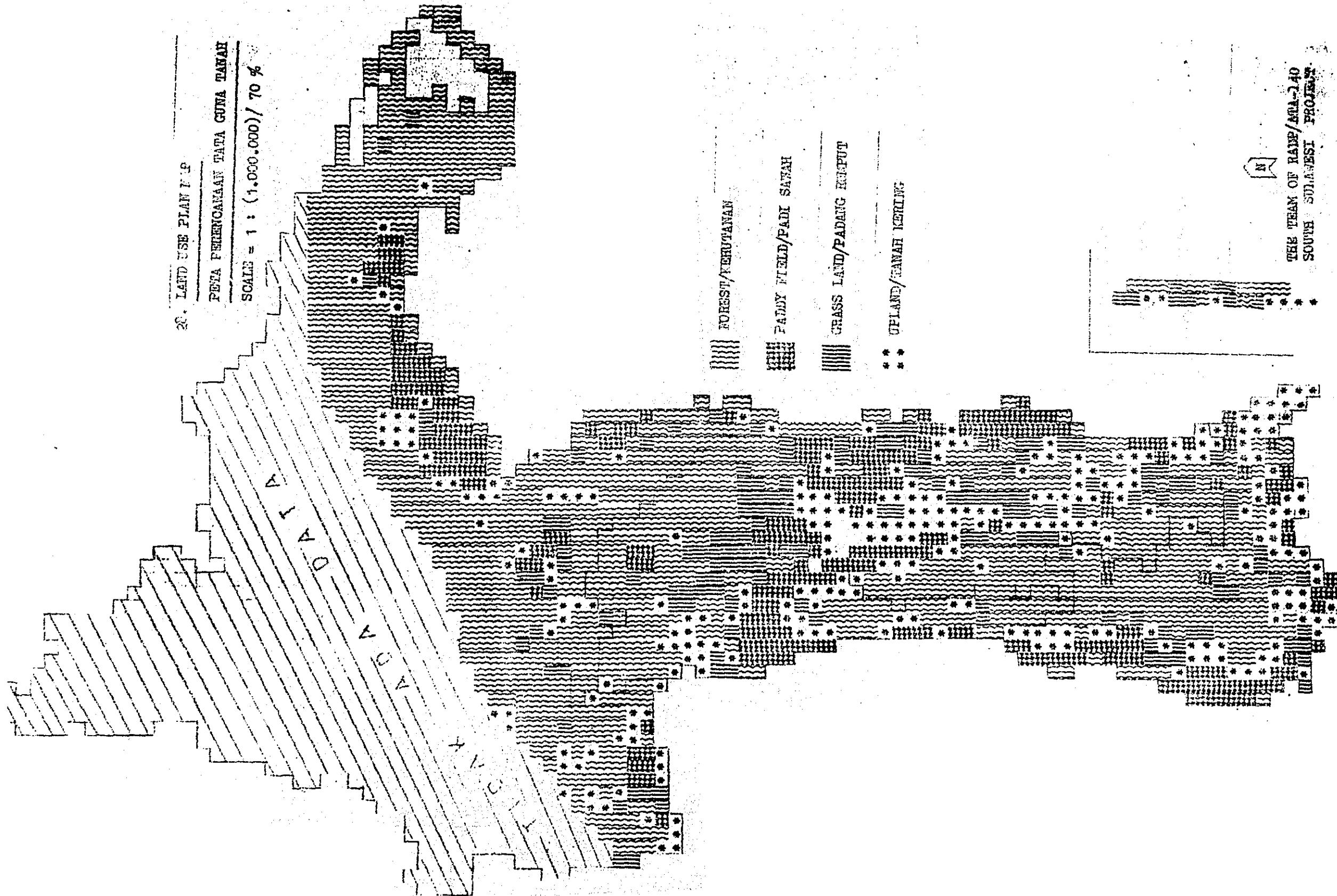
PETA KEMUNGKINAN PENGGUNAAN TANAH
KERING UNTUK TANAH PERTANIAN

SCALE : 1 : (1.000.000) \neq 70 %



THE TEAM OF HAB/PAB-140
SOUTH SULAWESI PROJECT

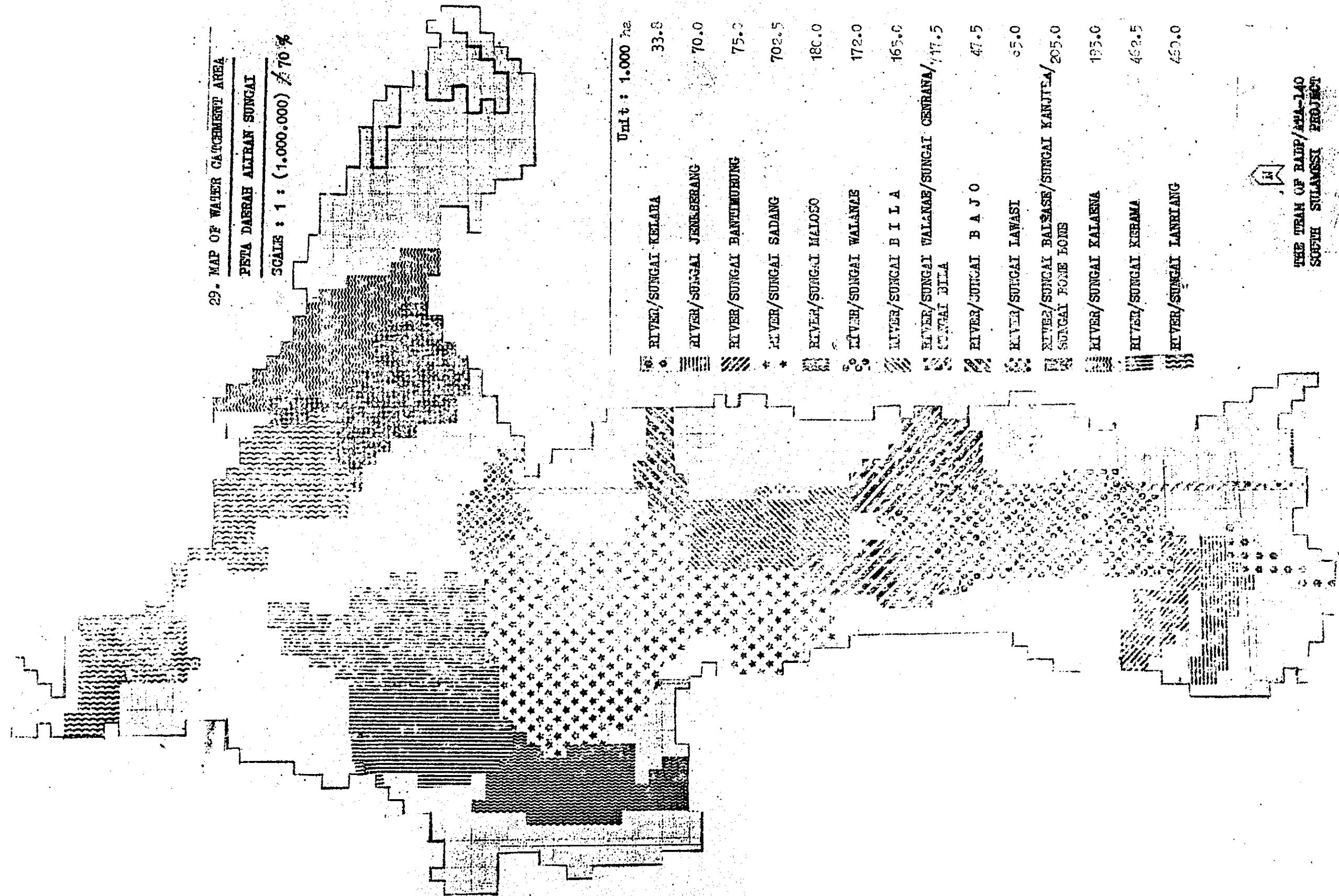




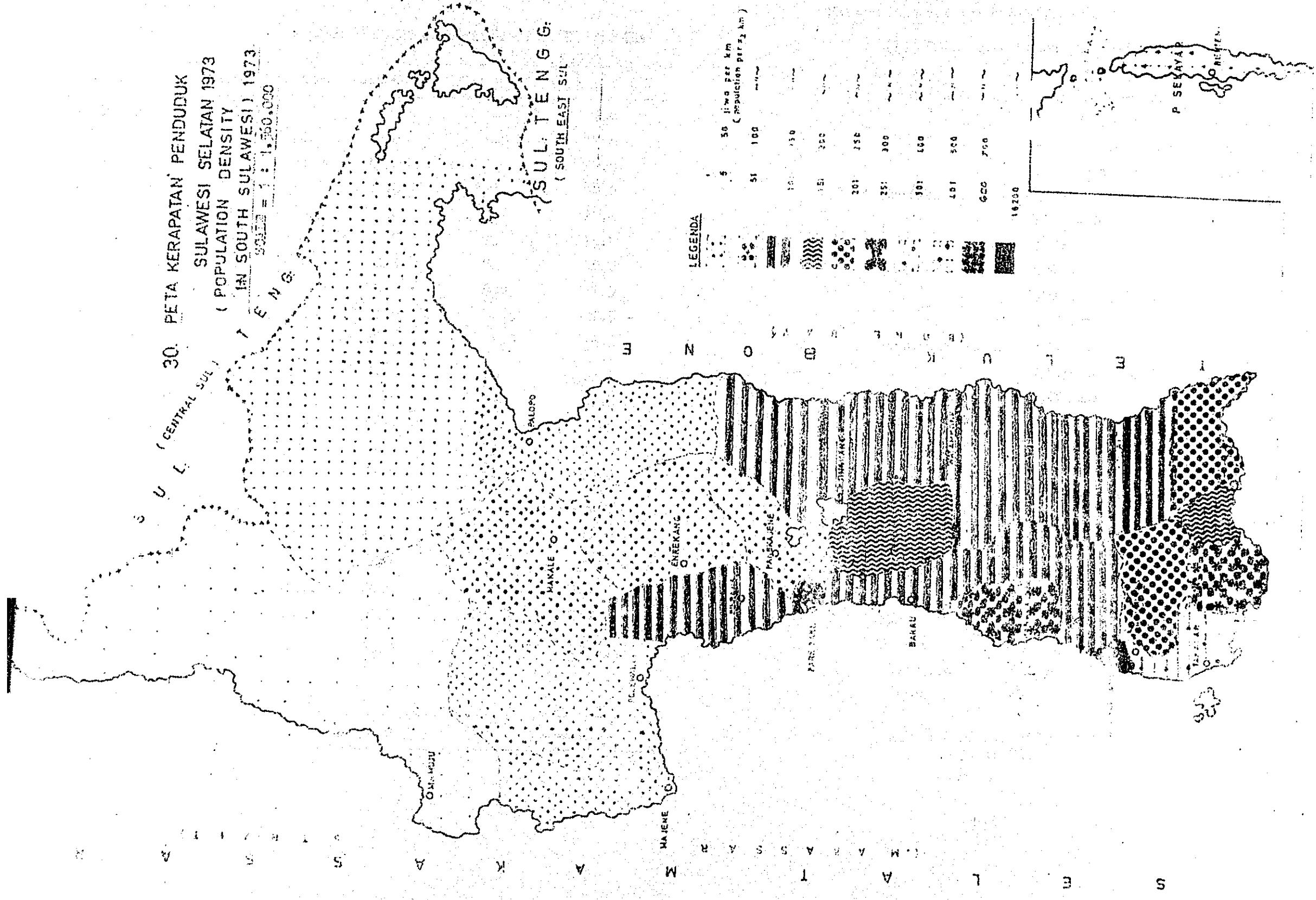
29. MAP OF WATER CATCHMENT AREA

PETA DAERAH ALIRAN SUNGAI

SCALE : 1 : (1,000,000) / 70 %



THE TEAM OF RAIP/AHL-140
SOUTH SULAWESI PROJECT



2.3 Analized data

Table 5.

Classification for Reclamation in Forest Area

Name of Kab.	Best	Better	Loss-good	No good	Unit: 1,000 ha.	
					Total	
1. U.Pandang	5.0	-	-	-	5.0	
2. Maros	2.5	10.0	40.0	5.0	77.5	
3. Pangkep	10.0	5.0	15.0	-	30.0	
4. Gowa	2.5	20.0	25.0	32.5	80.0	
5. Takalar	10.0	2.5	10.0	-	22.0	
6. Jeneponto	-	-	7.5	7.5	15.0	
7. Bantaeng	2.5	-	2.5	5.0	10.0	
8. Bulukumba	7.5	5.0	10.0	5.0	27.5	
9. Selayar	-	-	17.5	10.5	27.5	
10. Sinjai	-	5.0	12.5	5.0	22.5	
14. Barru	17.5	20.0	47.5	-	85.0	
15. Pare-Pare	-	-	7.5	-	7.5	
16. Pinrang	32.5	5.0	32.5	17.5	87.5	
17. Sidrap	10.0	12.5	37.5	17.5	77.5	
18. Enrekang	2.5	27.5	37.5	32.5	100.0	
11. Bone	95.0	12.5	75.0	7.5	190.0	
12. Wajo	47.5	12.5	15.0	-	75.0	
13. Soppeng	15.0	-	45.0	2.5	62.5	
22. Tator	2.5	20.0	60.0	85.0	167.5	
23. Luwu	245.0	67.5	437.5	107.5	857.5	
19. Polins	32.5	12.5	95.0	55.0	195.0	
20. Majene						
21. Mamuju						
Total	555.0	237.5	1,030.0	395.0	2,222.5	

Note: Standard for classification:

(1) Category of each physical factor

Item	Category	Classification
Erodible degrees	HH : Accelerately spread	X
	H : Newly occur or damage of spread	X
	M : Little occur so long as not disturb	Δ
	L : No accorance so long as disturb	0
Gradient	15 %	0
	15 % - 40 %	Δ
	40 %	X
Altitude	500 m	0
	500 m - 1,000 m	Δ
	1,000 m	X
Annual rainfall	2,000 mm	X
	2,000 mm - 3,000 mm	0
	3,000 mm	Δ
Soil condition	Loamy : Heavy soil	Δ
	Medium: Clay	0
	Sandy : Sandy loam, Sand	Δ
Soil fertility	Fertile: No deficiency of 3 main elements	0
	Medium : Less one of the 3 main elements	0
	Poor : Deficiency of more the 2 elements	Δ
(2) Land classification for reclamation		
Item	Indices for reclamation	
Best	All 0 - 04 + Δ 2	
Better	03 + Δ 3 - 01 + Δ 5	
Less good	all Δ - 02 + Δ 3 + X1	
No good	X2	

Source: Land classification map for reclamation in forest area/
Map No. 23.

Table 6. Classification of the Suitable Area for cultivation area in Shifting Cultivation Area.

Kabupaten	Unit : 1,000 ha		
	Good	No Good	Steep sloping area
1. U. Pandang	-	-	-
2. Maros	-	2.5	5.0
3. Pangkep	2.5	-	2.5
4. Gowa	7.5	2.5	2.5
5. Takalar	-	-	-
6. Jeneponto	-	-	-
7. Bantaeng	-	-	-
8. Bulukumba	7.5	-	-
9. Selayar	20.0	-	-
10. Sinjai	15.0	-	5.0
14. Barru	2.5	-	-
15. Pare-Pare	-	-	-
16. Pinrang	-	2.5	2.5
17. Sidrap	-	2.5	2.5
18. Enrekang	2.5	5.0	7.5
11. Bone	20.0	5.0	5.0
12. Wajo	-	-	-
13. Soppeng	-	-	-
22. Tator	-	-	5.0
23. Luwu	7.5	-	12.5
19. Polmas	-	-	15.0
20. Majene	-	-	-
21. Mamuju	-	-	-
Total	85.0	20.0	65.0

Note : This analysis has done after deduction all steep sloping area, 40 %.

Source : Land classification suitable area for cultivation Map of in shifting cultivation Area/Map No.25.

Table 7. Classification for Reclamation in the Grassland Area

Kabupaten	Suitable cultivation area	Suitable grassland area	Steep sloping area
1. U. Pandang	-	-	-
2. Maros	-	7.5	5.0
3. Pangkep	-	-	-
4. Gowa	-	5.0	2.5
5. Takalar	-	2.5	-
6. Jeneponto	-	12.5	-
7. Bantaeng	-	-	-
8. Bulukumba	-	-	-
9. Selayar	-	2.5	-
10. Sinjai	-	12.5	5.0
14. Barru	-	-	-
15. Pare-Pare	-	-	-
16. Pinrang	5.0	5.0	-
17. Sidrap	-	7.5	-
18. Enrekang	2.5	7.5	-
11. Bone	30.0	42.5	-
12. Wajo	2.5	7.5	-
13. Soppeng	-	5.0	-
22. Tator	7.5	40.0	20.0
23. Luwu	5.0	25.0	15.0
19. Polmas	10.0	22.5	12.5
20. Majene	-	-	-
21. Mamuju	-	-	-
Total	62.5	270.0	60.0

Note : This analysis was done after deducting all concession area, up to 1917, for stock-farm ranch.

Source : Land classification maps for reclamation in the grassland/Map No.24.

Table 8. Suitable area for Cultivation in Upland Area

Unit : 1,000 ha

Kabupaten	Good	Fair	Poor	Steep sloping area
1. U. Pandang	2.5	-	-	-
2. Maros	2.5	7.5	12.5	2.5
3. Pangkep	2.5	17.5	-	-
4. Gowa	20.0	15.0	2.5	2.5
5. Takalar	10.0	-	-	-
6. Jeneponto	27.5	2.5	-	-
7. Bantaeng	22.5	2.5	-	-
8. Bulukumba	50.0	5.0	2.5	-
9. Selawar	17.5	-	-	-
10. Sinjai	12.5	5.0	-	2.5
14. Barru	10.0	-	-	-
15. Pare-Pare	2.5	-	-	-
16. Pinrang	30.0	2.5	-	5.0
17. Sidrap	20.0	2.5	-	2.5
18. Enrekang	-	2.5	10.0	5.0
11. Bone	50.0	7.5	12.5	-
12. Wajo	62.5	2.5	5.0	-
13. Soppeng	47.5	2.5	-	-
22. Tator	7.5	5.0	5.0	25.0
23. Luwu	27.5	22.5	2.5	35.0
19. Polmas	20.0	-	-	20.0
20. Majene	-	-	-	-
21. Mamuju	-	-	-	-
Total	445.0	102.5	52.5	100.0

Source : Map of Land Classification of suitable area for cultivation in upland area/Map. No.26.

Table 6.9. Land classification of suitable areas for cultivation of 11 commodities

Unit : 1,000 ha

Commodity	Very good	Good	Fair	Poor	Total
1. Wetland paddy	877.5	1,190.0	547.5	110.0	2,725.0
(in forests)	297.5	187.5	27.5	42.5	555.0
(in grassland)	20.0	45.0	2.5	0.0	67.5
2. Corn	240.0	270.0	992.5	1,222.5	2,725.0
(in forests)	7.5	37.5	365.0	145.0	555.0
(in grassland)	-	20.0	27.5	20.0	67.5
3. Peanut	195.0	195.0	725.0	1,610.0	2,725.0
(in forest)	5.0	22.5	162.5	365.0	555.0
(in grassland)	0.0	10.0	15.0	42.5	67.5
4. Cassava	317.5	552.5	1,022.5	832.5	2,725.0
(in forest)	10.0	5.0	375.0	165.0	555.0
(in grassland)	0	2.5	55.0	10.0	67.5
5. Estate crops	290.0	462.5	1,155.0	817.5	2,725.0
(in forest)	80.0	132.5	260.0	82.5	555.0
(in grassland)	15.0	30.0	20.0	2.5	67.5
6. Vegetables	27.5	160.0	1,347.5	1,190.0	2,725.0
(in forest)	7.5	37.5	365.0	145.0	555.0
(in grass-land)	0.0	5.0	55.0	7.5	67.5
7. Citrus fruit	140.0	80.0	1,640.0	865.0	2,725.0
(in forest)	2.5	5.0	390.5	157.5	555.0
(in grassland)	0	5.0	55.0	7.5	67.5
8. Coconut	317.5	552.5	1,022.5	832.5	2,725.0
(in forest)	95.0	192.5	142.5	125.0	555.0
(in grassland)	15.0	32.5	15.0	5.0	67.5
9. Coffee	382.5	1,352.5	895.0	95.0	2,725.0
(in forest)	132.5	322.5	97.5	2.5	555.0
(in grassland)	42.5	20.0	2.5	2.5	67.5
10. Clove	52.5	647.5	1,202.5	822.5	2,725.0
11. Upland paddy	230.0	305.0	1,435.0	755.0	2,725.0

Note : "In forest" is the best reclamation area in forest area.

Source : Land classification for 11 crops by Kabupaten.
(Refer to Vol. 2)

Table : 10 - (1)

Land Classification of suitable area formcultivation of 11 commodities by KabupatenPaddy

Unit : 1,000 ha

Kabupaten	' very good '	' Good '	' Fair '	' Poor '	Total
1. U. Pandang	10.0	2.5	-	-	12.5
2. Maros	25.0	40.0	32.5	-	97.5
3. Pangkep	27.5	10.0	20.0	5.0	62.5
4. G o w a	32.5	72.5	20.0	-	125.0
5. Takalar	17.5	20.0	2.5	-	40.0
6. Jeneponto	7.5	57.5	5.0	-	70.0
7. Bantaeng	5.0	27.5	2.5	-	35.0
8. Bulukumba	-	72.5	37.5	-	110.0
9. Selayar	-	42.5	20.0	5.0	67.5
10. Sinjai	2.5	-	22.5	37.5	62.5
11. Barru	7.5	35.0	37.5	10.0	90.0
12. Pare-Pare	2.5	-	7.5	-	10.0
13. Pinrang	92.5	45.0	12.5	-	150.0
14. Sidrap	7.5	112.5	10.0	-	130.0
15. Enrekang	-	37.5	25.0	32.5	95.0
16. Bone	145.0	147.5	85.0	5.0	382.5
17. W a j o	82.5	152.5	5.0	-	240.0
18. Soppeng	50.0	32.5	17.5	15.0	115.0
19. Tator	2.5	95.0	22.5	-	120.0
20. Luwu	302.5	135.0	122.5	-	560.0
21. Polmas	57.5	52.5	40.0	-	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
TOTAL :	877.5	1,190.0	547.5	110.0	2,275.0

Source : Map of land classification for paddy field area/Map No. 10

Table : 10 - (2)

Upland paddy/Padi Goro

Kabupaten	' Very good '	' Good '	' Fair '	' Poor '	Total
1. U. Pandang	-	-	5.0	7.5	12.5
2. Maros	-	-	72.5	25.0	97.5
3. Pangkep	2.5	-	50.0	10.0	62.5
4. G o w a	2.5	17.5	62.5	42.5	125.0
5. Takalar	5.0	22.5	7.5	5.0	40.0
6. Jeneponto	7.5	42.5	20.0	-	70.0
7. Bantaeng	-	27.5	7.5	-	35.0
8. Bulukumba	5.0	37.5	57.5	10.0	110.0
9. Selayar	10.0	57.5	-	-	67.5
10. Sinjai	-	-	57.5	5.0	62.5
11. Barru	-	-	82.5	7.5	90.0
12. Pare-Pare	-	-	10.0	-	10.0
13. Pinrang	15.0	37.5	80.0	17.5	150.0
14. Sidrap	32.5	17.5	22.5	57.5	150.0
15. Enrekang	-	-	7.5	87.5	95.0
16. Bone	2.5	2.5	295.0	82.5	382.5
17. W a j o	70.0	15.0	90.0	65.0	240.0
18. Soppeng	52.5	27.5	35.0	-	115.0
19. Tator	-	-	27.5	92.5	120.0
20. Luwu	25.0	-	317.5	217.5	560.0
21. Polmas	-	-	127.5	22.5	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
TOTAL :	230.0	305.0	1,435.0	755.0	2,725.0

Source : Land classification map for upland paddy/Map No. 11

Table 10-(3) Corn

No. Kabupaten	Unit: 1,000 ha.				
	Very good	Good	Fair	Poor	Total
1. U.Pandang	-	-	5.0	7.5	12.5
2. Maros	-	-	35.0	62.5	97.5
3. Pangkep	-	-	32.5	30.0	62.5
4. Gowa	12.5	2.5	32.5	77.5	125.0
5. Takalar	15.0	10.0	10.0	5.0	40.0
6. Jeneponto	12.5	27.5	27.5	2.5	70.0
7. Bantaeng	12.5	15.0	2.5	5.0	35.0
8. Bulukumba	5.0	42.5	52.5	10.0	110.0
9. Selayar	5.0	35.0	27.5	-	67.5
10. Sinjai	-	-	30.0	32.5	62.5
11. Barru	-	-	27.5	62.5	90.0
12. Pare-Pare	-	-	-	10.0	10.0
13. Pinrang	15.0	35.0	50.0	150.0	250.0
14. Sidrap	35.0	5.0	25.0	65.0	130.0
15. Enrekang	-	-	-	95.0	95.0
16. Bone	2.5	47.5	127.5	205.0	382.5
17. Wajo	57.5	27.5	90.0	65.0	240.0
18. Soppeng	45.0	12.5	30.0	27.5	115.0
19. Tator	-	-	2.5	117.5	120.0
20. Luwu	22.5	-	345.0	192.5	560.0
21. Polmas	-	10.0	40.0	100.0	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	240.0	270.0	992.5	1,222.5	2,725.0

Source: Land classification map for corn/Map No.12

Table 10-(4) Cassava

No. Kabupaten	Unit: 1,000 ha.				
	Very good	Good	Fair	Poor	Total
1. U.Pandang	-	-	5.0	7.5	12.5
2. Maros	-	-	62.5	35.0	97.5
3. Pangkep	-	-	52.5	10.0	62.5
4. Gowa	12.5	12.5	57.5	42.5	125.0
5. Takalar	15.0	12.5	7.5	5.0	40.0
6. Jeneponto	12.5	27.5	30.0	-	70.0
7. Bantaeng	17.5	12.5	5.0	-	35.0
8. Bulukumba	37.5	27.5	-	5.0	110.0
9. Selayar	35.0	5.0	27.5	-	67.5
10. Sinjai	-	10.0	47.5	5.0	62.5
11. Barru	-	-	67.5	22.5	90.0
12. Pare-Pare	-	-	10.0	-	10.0
13. Pinrang	12.5	37.5	10.0	20.0	150.0
14. Sidrap	25.0	15.0	32.5	57.5	130.0
15. Enrekang	-	-	7.5	87.5	95.0
16. Bone	2.5	-	260.0	120.0	382.5
17. Wajo	60.0	20.0	95.0	65.0	240.0
18. Soppeng	20.0	37.5	55.0	2.5	115.0
19. Tator	-	-	27.5	92.5	120.0
20. Luwu	12.5	12.5	380.0	155.0	560.0
21. Polmas	-	7.5	102.5	40.0	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	317.5	552.5	1,022.5	832.5	2,725.0

Source: Land classification map for cassava/Map No.14

Table 10 - (5) Peanut

No. Kabupaten	Unit: 1,000 ha.				
	Very good	Good	Fair	Poor	Total
1. U.Pandang	-	-	-	12.5	12.5
2. Maros	-	-	15.0	82.5	97.5
3. Pangkep	-	2.5	25.0	35.0	62.5
4. Gowa	-	-	25.0	100.0	125.0
5. Takalar	5.0	-	30.0	5.0	40.0
6. Jeneponto	5.0	5.0	47.5	12.5	70.0
7. Bantaeng	7.5	5.0	17.5	5.0	35.0
8. Bulukumba	5.0	30.0	27.5	47.5	110.0
9. Selayar	7.5	32.5	27.5	-	67.5
10. Sinjai	-	-	17.5	45.0	62.5
11. Barru	-	-	12.5	77.5	90.0
12. Pate-pare	-	-	-	10.0	10.0
13. Pinrang	15.0	40.0	45.0	50.0	150.0
14. Sidrap	30.0	7.5	20.0	72.5	130.0
15. Enrekang	-	-	-	95.0	95.0
16. Bone	2.5	35.0	95.0	250.0	382.5
17. Wajo	72.5	10.0	77.5	80.0	240.0
18. Soppeng	32.5	7.5	22.5	52.5	115.0
19. Tator	-	-	2.5	117.5	120.0
20. Luwu	12.5	-	197.5	350.0	560.0
21. Polmas	-	20.0	20.0	110.0	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	195.0	195.0	725.0	1,610.0	2,725.0

Source: Land classification map for peanut/Map No.13.

Table 10 - (6) Horticulture

No. Kabupaten	Very good	Good	Fair	Poor	Total
1. U.Pandang	-	-	2.5	10.0	12.5
2. Maros	2.5	5.0	30.0	60.0	97.5
3. Pangkep	-	2.5	-	60.0	62.5
4. Gowa	-	15.0	47.5	62.5	125.0
5. Takalar	-	-	35.0	5.0	40.0
6. Jeneponto	-	5.0	50.0	15.0	70.0
7. Bantaeng	-	-	35.0	-	35.0
8. Bulukumba	-	-	67.5	42.5	110.0
9. Selayar	-	-	37.5	30.0	67.5
10. Sinjai	-	5.0	22.5	35.0	62.5
11. Barru	-	5.0	62.5	22.5	90.0
12. Pare-Pare	-	-	10.0	-	10.0
13. Pinrang	-	45.0	65.0	40.0	150.0
14. Sidrap	-	-	17.5	112.5	130.0
15. Enrekang	-	5.0	32.5	57.5	95.0
16. Bone	10.0	20.0	250.0	122.5	382.5
17. Wajo	-	-	45.0	195.0	240.0
18. Soppeng	12.5	2.5	20.0	30.0	115.0
19. Tator	2.5	2.5	75.0	50.0	120.0
20. Luwu	-	17.5	347.5	195.0	560.0
21. Polmas	-	20.0	115.0	15.0	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	27.5	160.0	1,347.5	1,190.0	2,725.0

Source: Land classification map for horticulture/Map No.16

Table 10 (7) Citrus fruit

No.	Kabupaten	Unit: 1,000 ha.				
		Very good	Good	Fair	Poor	Total
1.	U.Pandang	-	-	5.0	7.5	12.5
2.	M a r o s	-	-	72.5	23.0	97.5
3.	Pangkep	-	-	52.5	10.0	62.5
4.	G o w a	5.0	27.5	35.0	57.5	125.0
5.	Thikalar	12.5	15.0	10.0	2.5	40.0
6.	Jeneponto	27.5	22.5	20.0	-	70.0
7.	Bantaeng	20.0	10.0	5.0	-	35.0
8.	Bulukumba	37.5	5.0	57.5	10.0	110.0
9.	Selbyar	37.5	-	30.0	-	67.5
10.	Sinjai	-	-	52.5	10.0	62.5
11.	B a r r u	-	-	82.5	7.5	90.0
12.	Pare-Pare	-	-	10.0	-	10.0
13.	Pintag	-	-	125.0	25.0	150.0
14.	Sidrap	-	-	65.0	65.0	130.0
15.	Enrekang	-	-	5.0	90.0	95.0
16.	B o n e	-	-	257.5	125.0	382.5
17.	W a j o	-	-	120.0	120.0	240.0
18.	Soppeng	-	-	107.5	7.5	115.0
19.	T a t o r	-	-	27.5	92.5	120.0
20.	L u w u	-	-	392.5	167.5	560.0
21.	Polmas	-	-	107.5	42.5	150.0
22.	Majene	-	-	-	-	-
23.	Mamuju	-	-	-	-	-
Total		140.0	80.0	1,640.0	865.0	2,725.0

Source: Land classification map for citrus fruit/Zip No. 18.

Table 10 - (8) Estate Crops

No. Kabupaten	Unit: 1,000 ha.				
	Very good	Good	Fair	Poor	Total
1. U.Pandang	-	5.0	7.5	-	12.5
2. Maros	22.5	30.0	12.5	32.5	97.5
3. Pangkep	-	32.5	20.0	10.0	62.5
4. Gowa	-	-	52.5	72.5	125.0
5. Takalar	2.5	2.5	30.0	5.0	40.0
6. Jeneponto	2.5	7.5	45.0	15.0	70.0
7. Bantaeng	-	2.5	27.5	5.0	35.0
8. Bulukumba	10.0	10.0	67.5	20.0	110.0
9. Selayar	5.0	50.0	32.5	-	67.5
10. Sinjai	5.0	12.5	25.0	17.5	62.5
11. Barru	-	15.0	62.5	12.5	90.0
12. Pare-Pare	2.5	-	7.5	-	10.0
13. Pinrang	70.0	27.5	42.5	10.0	150.0
14. Sidrap	-	5.0	47.5	77.5	130.0
15. Amrekang	-	-	7.5	87.5	95.0
16. Bone	112.5	122.5	77.5	70.0	382.5
17. Wajo	17.5	2.5	102.5	117.5	240.0
18. Soppeng	-	27.5	57.5	30.0	115.0
19. Tator	-	22.5	10.0	87.5	120.0
20. Luwu	2.5	40.0	405.0	112.5	560.0
21. Polmas	37.5	67.5	15.0	30.0	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	290.0	462.5	1,155.0	817.5	2,725.0

Note: Excluding coconut, coffee and clove

Source: Land classification map for estate crops/Map No. 15.

Table 10 - (9) Coconut

No. Kabupaten	Unit: 1,000 ha.				
	Very good	Good	Fair	Poor	Total
1. U.Pandang	2.5	2.5	7.5	-	12.5
2. Maros	25.0	30.0	20.0	22.5	97.5
3. Pangkep	27.5	2.5	22.5	10.0	62.5
4. Gowa	-	-	62.5	62.5	125.0
5. Takalar	-	5.0	30.0	5.0	40.0
6. Jeneponto	7.5	2.5	45.0	15.0	70.0
7. Bintangor	-	2.5	27.5	5.0	35.0
8. Bulukumba	5.0	7.5	77.5	20.0	110.0
9. Selayar	5.0	-	62.5	-	67.5
10. Sinjai	7.5	22.5	30.0	2.5	62.5
11. Barru	-	25.0	52.5	12.5	90.0
12. Pare-Pare	2.5	-	7.5	-	10.0
13. Pinrang	75.0	42.5	25.0	7.5	150.0
14. Sidrap	-	22.5	45.0	62.5	130.0
15. Amrekang	-	-	5.0	90.0	95.0
16. Bone	95.0	127.5	75.0	85.0	382.5
17. Wajo	17.5	22.5	80.0	120.0	240.0
18. Soppeng	-	35.0	57.5	22.5	115.0
19. Tator	-	20.0	15.0	85.0	120.0
20. Luwu	15.0	107.5	265.0	172.5	560.0
21. Polmas	32.5	75.0	10.0	32.5	150.0
22. Majene	-	-	-	-	-
23. Mamuju	-	-	-	-	-
Total	317.5	552.5	1,022.5	832.5	2,275.0

Source: Land classification map for coconut/Map No.17.

Table 10 (10) Coffee

No.	Kabupaten	Unit: 1,000 ha.				
		Very good	Good	Fair	Poor	Total
1.	U.Pandang	-	12.5	-	-	12.5
2.	Maros	32.5	37.5	20.0	5.0	97.5
3.	Pangkep	27.5	47.5	12.5	-	62.5
4.	Gowa	-	65.0	60.0	-	125.0
5.	Takalar	-	25.0	15.0	-	40.0
6.	Jeneponto	-	30.0	27.5	12.5	70.0
7.	Bantaeng	-	10.0	25.0	-	35.0
8.	Dulukumba	5.0	55.0	50.0	-	110.0
9.	Selayar	-	-	35.0	32.5	67.5
10.	Sinjai	-	42.5	20.0	-	62.5
11.	Baru	12.5	52.5	25.0	-	90.0
12.	Pare-Pare	-	10.0	-	-	10.0
13.	Pinrang	32.5	110.0	7.5	-	150.0
14.	Sidrap	7.5	62.5	60.0	-	180.0
15.	Shrekang	5.0	90.0	-	-	95.0
16.	Bone	162.5	105.0	92.5	22.5	382.5
17.	Waajo	-	97.5	122.5	20.0	240.0
18.	Soppeng	30.0	-	82.5	2.5	115.0
19.	Tutor	37.5	82.5	-	-	120.0
20.	Luwu	-	322.5	237.5	-	560.0
21.	Polmas	55.0	92.5	2.5	-	150.0
22.	Majene	-	-	-	-	-
23.	Mamuju	-	-	-	-	-
Total		382.5	1,352.5	895.0	95.0	2,725.0

Source: Land classification map for coffee/Map No. 19.

Table 10 (11) Clove

No.	Kabupaten	Unit: 1,000 ha.				
		Very good	Good	Fair	Poor	Total
1.	U.Pandang	-	12.5	-	-	12.5
2.	Maros	2.5	57.5	35.0	2.5	97.5
3.	Pangkep	-	30.0	10.0	22.5	62.5
4.	Gowa	-	-	92.5	32.5	125.0
5.	Takalar	-	-	27.5	12.5	40.0
6.	Jeneponto	-	-	27.5	42.5	70.0
7.	Bantaeng	-	-	12.5	22.5	35.0
8.	Dulukumba	-	10.0	42.5	57.5	110.0
9.	Selayar	-	-	5.0	62.5	67.5
10.	Sinjai	10.0	27.5	25.0	-	62.5
11.	Baru	-	10.0	37.5	42.5	90.0
12.	Pare-Pare	-	2.5	-	7.5	10.0
13.	Pinrang	10.0	92.5	27.5	20.0	150.0
14.	Sidrap	-	12.5	62.5	55.0	130.0
15.	Shrekang	-	-	77.5	17.5	95.0
16.	Bone	20.0	167.5	105.0	90.0	382.5
17.	Waajo	-	25.0	85.0	130.0	240.0
18.	Soppeng	2.5	25.0	20.0	67.5	115.0
19.	Tutor	-	27.5	75.0	17.5	120.0
20.	Luwu	-	70.0	405.0	85.0	560.0
21.	Polmas	7.5	77.5	30.0	35.0	150.0
22.	Majene	-	-	-	-	-
23.	Mamuju	-	-	-	-	-
Total		52.5	647.5	1,202.5	822.5	2,725.0

Source: Land classification map for clove/Map No. 20.

Table 11 Classification of Forest Area by the Management Guide

Name of Kab.	Unit: 1,000 ha.						Total
	I ₁	I ₂	I ₃	II ₁	II ₂	II ₃	
1. U.Pandans	-	5.0	-	-	-	-	5.0
2. Maros	-	52.5	5.0	-	20.0	-	77.5
3. Pangkep	-	30.0	-	-	-	-	30.0
4. Gowa	-	35.0	30.0	-	15.0	-	80.0
5. Thukalar	-	15.0	-	-	7.5	-	22.5
6. Jeneponto	-	-	-	-	15.0	-	15.0
7. Benteng	-	-	5.0	-	5.0	-	10.0
8. Sulukuma	-	7.5	5.0	-	15.0	-	27.5
9. Selayar	-	-	-	7.5	20.0	-	27.5
10. Pinjai	-	15.0	7.5	-	-	-	22.5
14. Barru	-	82.5	-	-	2.5	-	85.0
15. Pare-Pare	-	7.5	-	-	-	-	7.5
16. Pinrang	-	10.0	10.0	-	62.5	5.0	87.5
17. Sidrap	-	2.5	-	-	57.5	17.5	77.5
18. Shrekeng	-	20.0	-	-	40.0	40.5	100.0
11. Bone	-	15.0	7.5	12.5	155.0	-	190.0
12. Wajo	-	-	-	-	75.0	-	75.0
13. Soppeng	-	2.5	-	-	60.0	-	62.5
22. Tator	-	60.0	100.0	-	-	7.5	167.5
23. Luwu	-	597.5	75.0	47.5	112.5	25.0	857.5
19. Polmas	-	87.5	60.0	2.5	37.5	7.5	195.0
Total		1,045.0	305.0	70.0	700.0	102.5	2,222.5

Note

A Management guide of each condition

Divi- sion	Combina- tion of physical factors	Sub Divisi- on	Method of re- generat- ion	Planting density	Introduced trees and the ratio
	0	0	I ₁	Artifi- cial rep- roduction	2,500/ha Economical tree- species (only) (mixed more than 2 kinds in belts)
I	Δ	Δ	I ₂	idem	Economical tree- species (70%) Soil improving tree-species (30%) (mixed in belt)
	x	0	I ₃	Natural regene- ration	Raise natural use- ful trees to good forest
	0	0	II ₁	Artificial reproduct- ion	Economical tree- species (70%) Soil improving tree species (30%)
	0	Δ	II ₂	idem	Economical tree- species (50%) Soil improving tree-species (50%)
	Δ	0	III ₃	Natural regene- ration	Raise natural use- ful trees to good forest

Note: Collected maps are not covered Kab. Majene, Kab. Mamuju
and partial area of Kab. Luwu. This total acreage is
estimated about 1 million ha.

Source: Forest classification map for management guide/Map No. 22.

Table: 12. Classification by Erodible Degree in Forest Area

Name of Kab.	Unit: 1,000 ha.					Total
	H H	H	M	L		
1. U.Pandang	-	-	-	5.0	5.0	
2. Maros	-	-	20.0	57.5	79.5	
3. Pangkep	2.5	-	10.0	17.5	30.0	
4. Gowa	-	-	20.0	60.0	80.0	
5. Takalar	-	-	2.5	20.5	22.5	
6. Jeneponto	-	-	2.5	12.5	15.0	
7. Bantaeng	-	-	5.0	5.0	10.0	
8. Bulukumba	-	-	5.0	22.5	27.5	
9. Selayar	-	-	-	27.5	27.5	
10. Sinjai	-	2.5	10.0	10.0	22.5	
14. Barru	-	-	20.0	65.0	85.0	
15. Pare-Pare	-	-	7.5	-	7.5	
16. Pinrang	-	-	7.5	80.0	87.5	
17. Sidrap	-	-	30.0	47.5	77.5	
18. Amerekan	-	-	22.5	77.5	100.0	
11. Bone	-	-	-	190.0	190.0	
12. Wajo	-	-	-	75.0	75.0	
13. Soppeng	-	-	-	62.5	62.5	
22. Tator	-	-	87.5	80.0	167.5	
23. Luwu	-	-	147.5	710.0	857.5	
19. Polmas	-	-	50.0	145.0	195.0	
20. Majene						
21. Mamuju						
Total	2.5	2.5	447.5	1,770.0	2,222.5	

Note

(Step - 1)	(Step - 2)	(Erodible degree)	(Probability of erosion development)
I	I → HH	HH	Spread rapidly
I	II → H	H	Newly occurred or danger of spreading
I	III → M	M	Little occurred as long as not disturbed
II	I → H	H	Danger of spread
II	II → M	M	Little occurred as long as not disturbed
II	III → L	L	No occurrence as long as not disturbed
III	I → M	M	Possible for natural regreening
III	II → L	L	Keep stable despite some disturbance
III	III → L	L	Keep stable despite some disturbance

Note: HH > H > M > L

As for the restoration works on denuded forest land, the first step is classification of bare and critical lands by condition of their denudation.

The methods of restoration should be selected and decided according to the denuded conditions. Grasses have the function of erosion control suitable for the introduced plants at the first stage of the bare land improvements.

Source: Land classification map by erodible degree in forest area/Map No. 21.

III. Collected Maps on General Condition

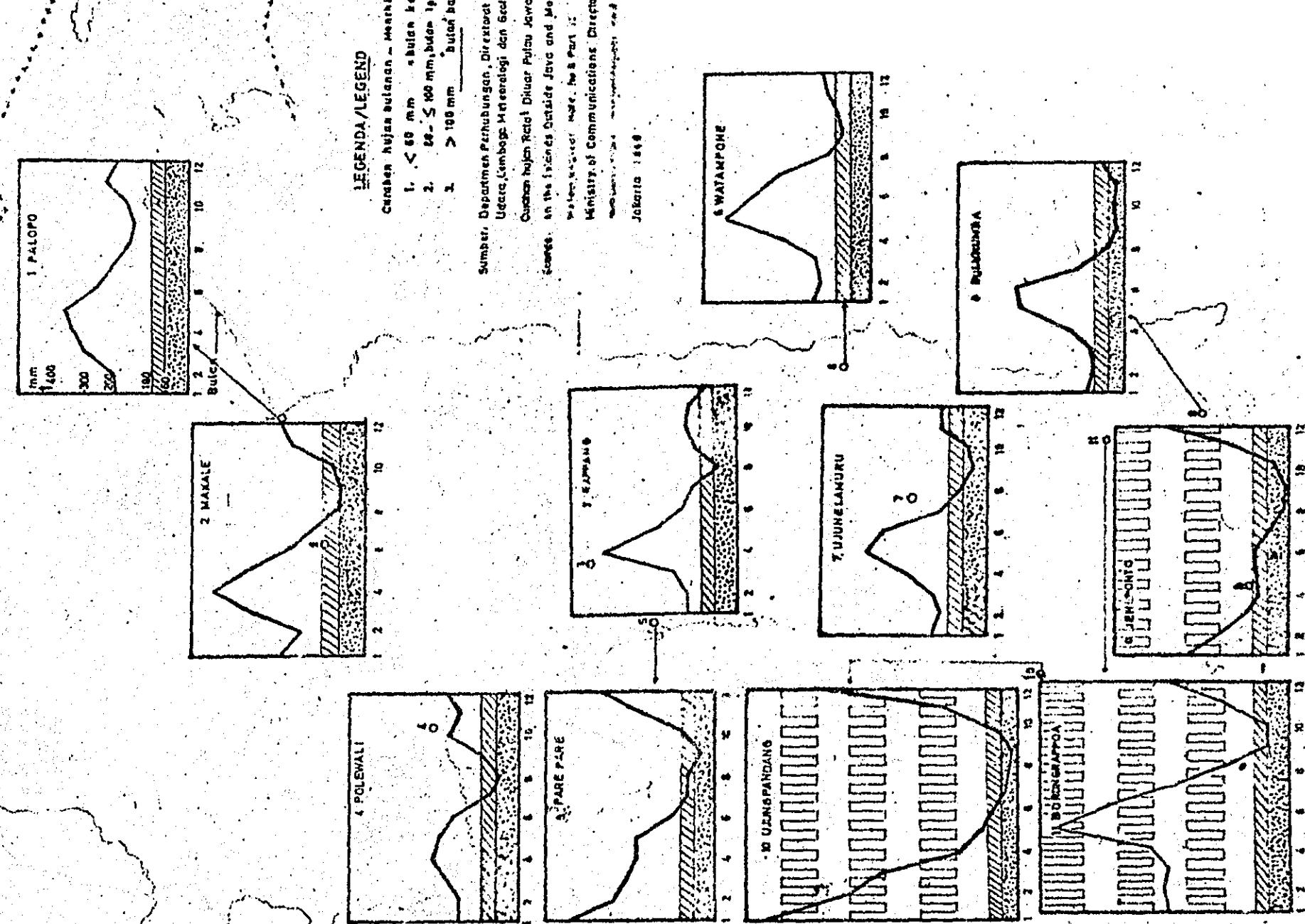
3.1. First of map of analyzed general maps.

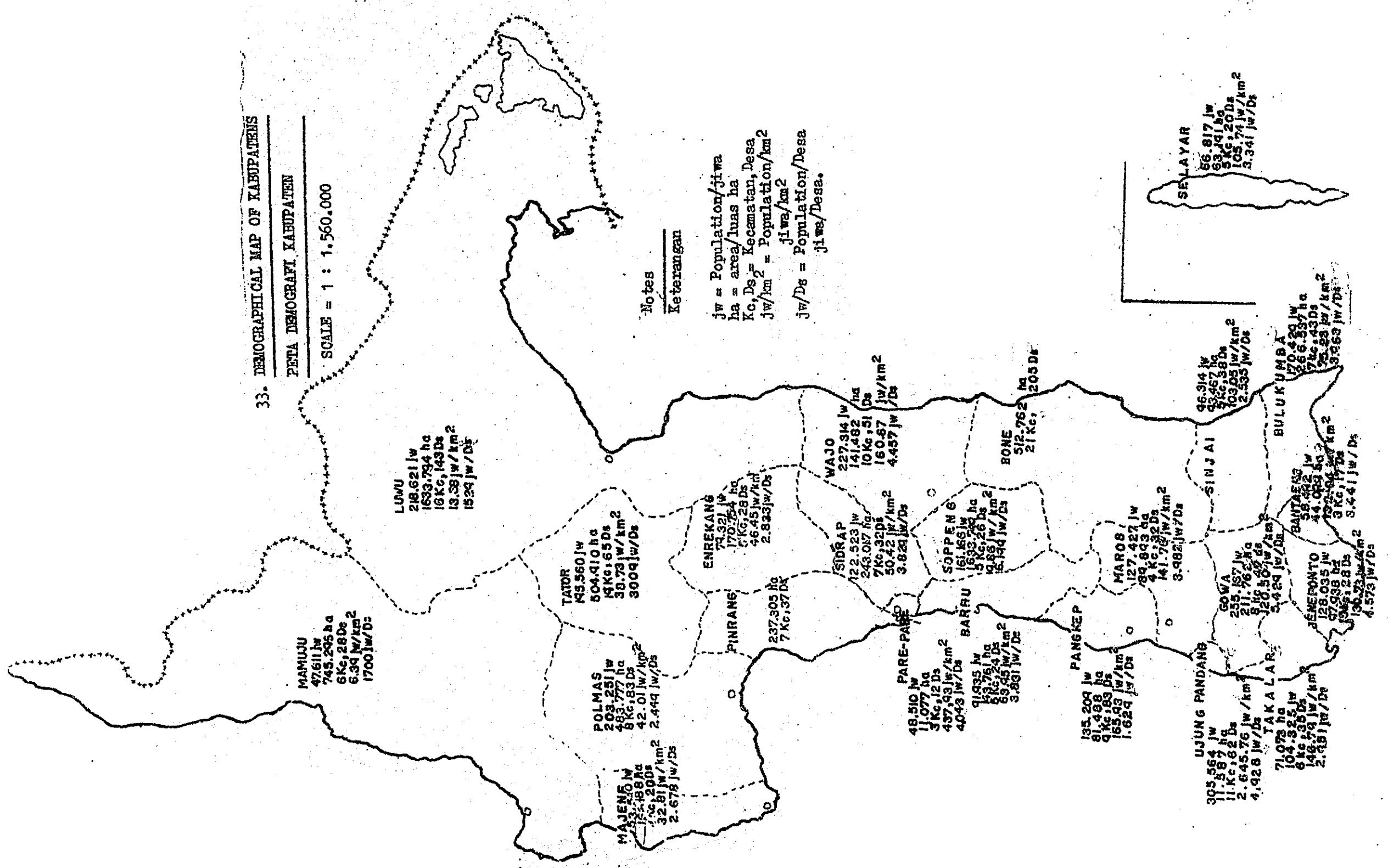
(No.)

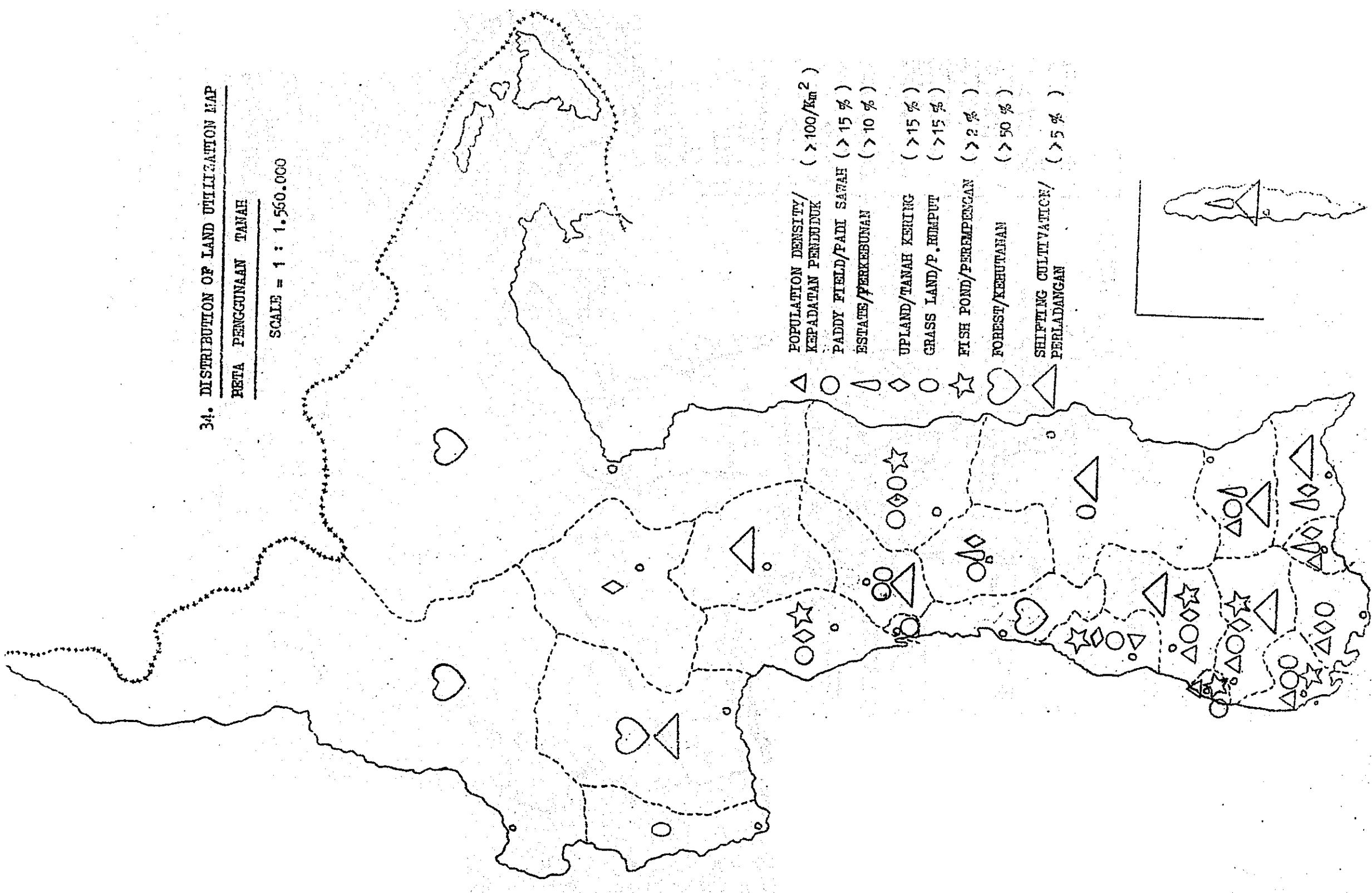
31. Road network 1973.
32. Monthly rainfall.
33. Demographical map of Kabupaten-s.
34. Distribution of land utilization.
35. Soil map and suitability for crops.
36. Watered and dry rice field.
37. Distribution of food crop area.
38. Distribution of corn and cassava.
39. Total area coconut, candlenut and kapok.
40. Total area of coffee and cloves.
41. Distribution of population, crop area per capita and draft cattle.
42. Distribution of horses, caws and buffaloes.
43. Forestry area (1972) and volume of forestry products.
44. Sea and inland waters production of fish.
45. Area and production of shrimps (1972).
46. Existing industries.

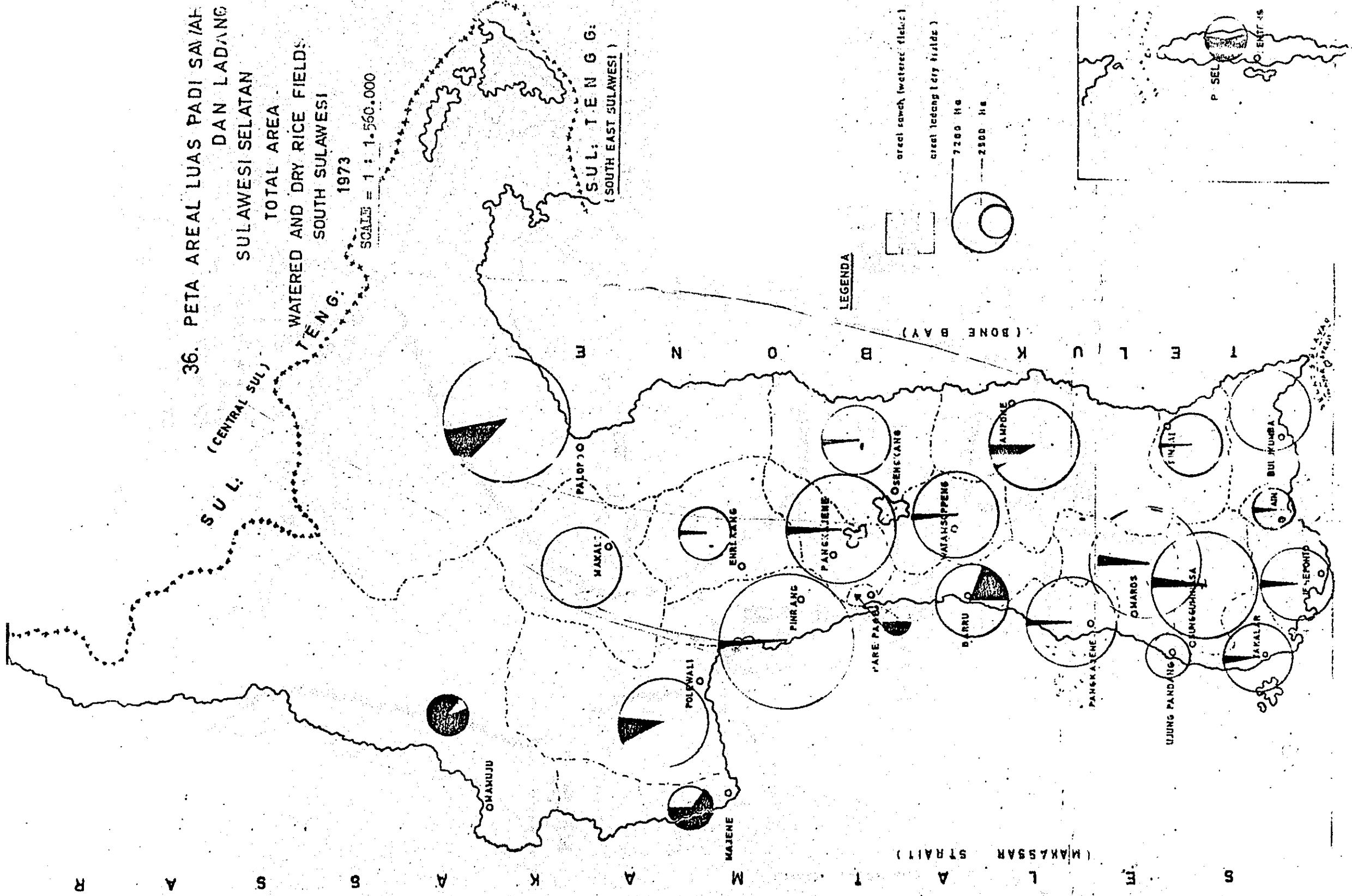
3.2. Maps: Collected maps mentioned above are shown in the following pages 47 to 62.

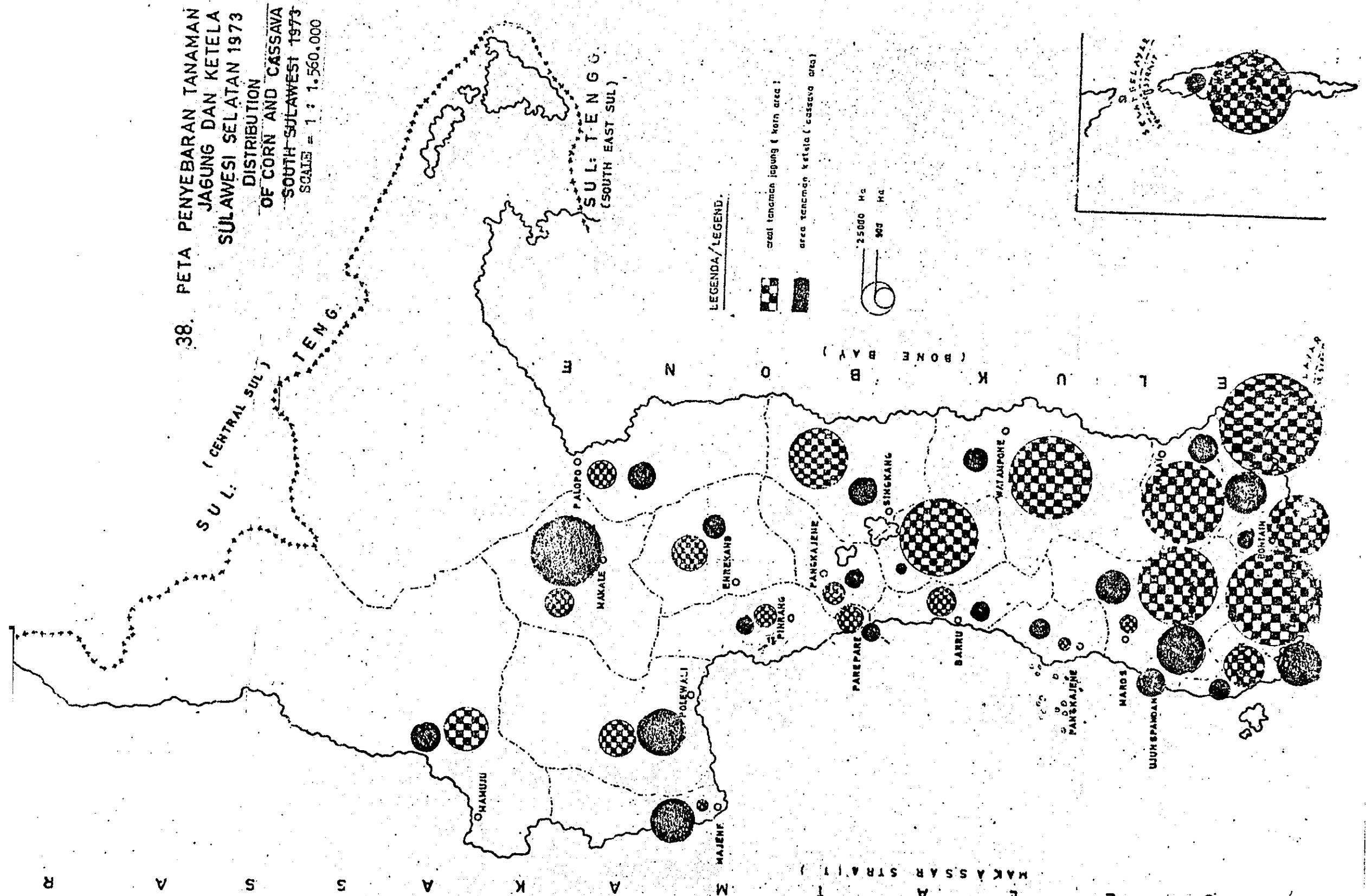
32. CURAHAN HUJAN BULANAN
SOUTH SULAWESI
MONTHLY RAINFALL
1931 - 1960
SCALE = 1 : 1.560.000



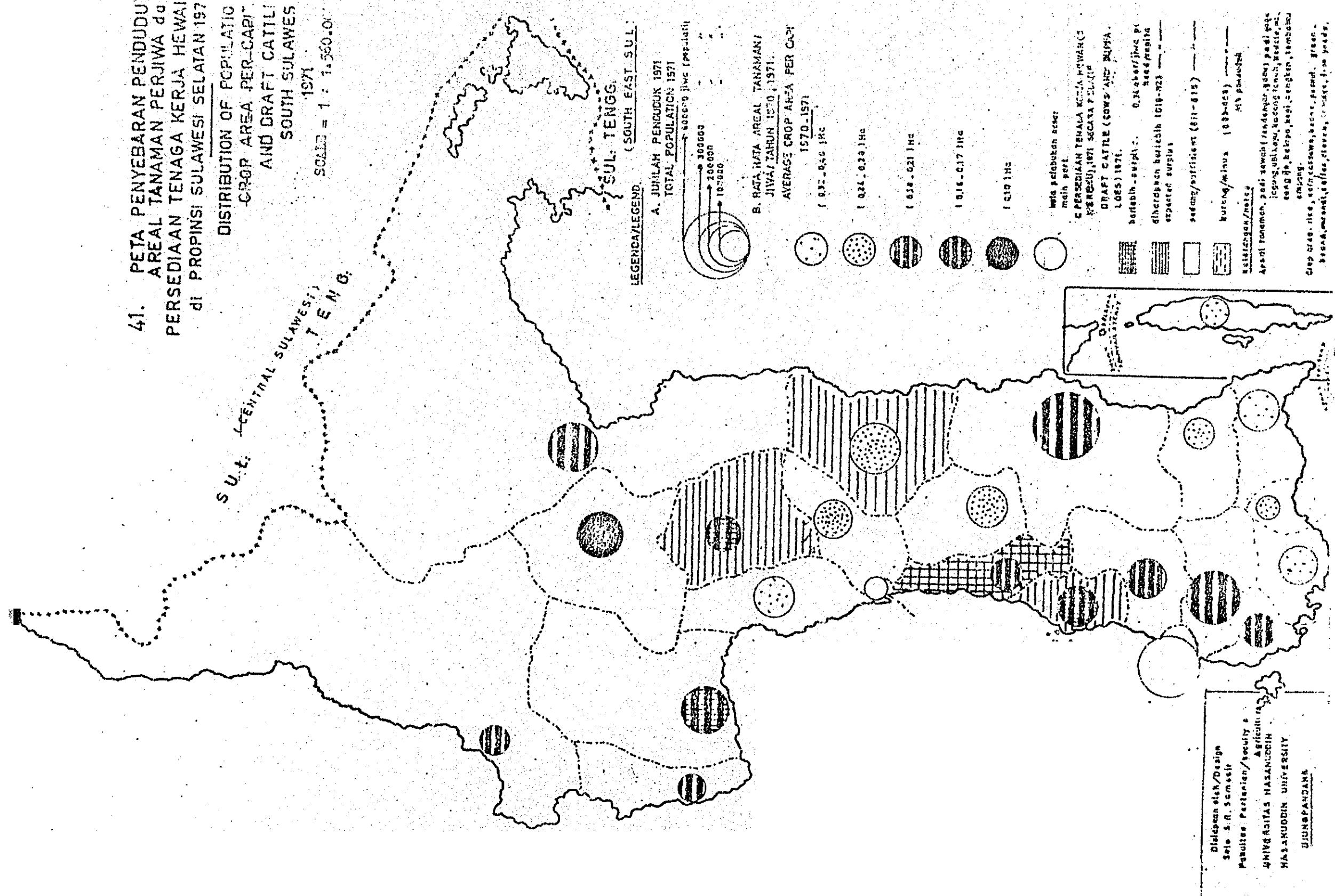






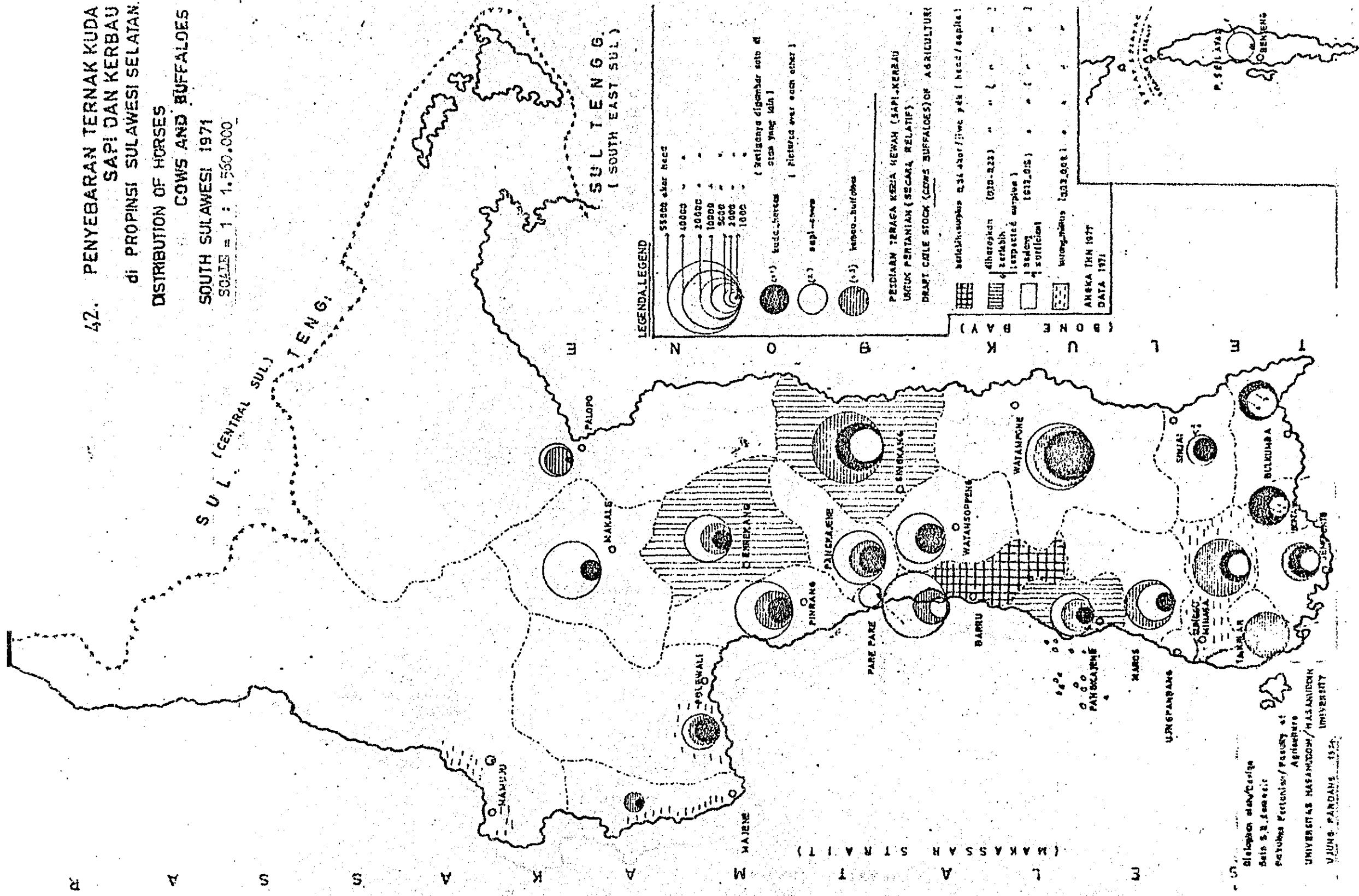


41. PETA PENYEBARAN PENDUDUK
AREAL TANAMAN PERJIWA dan
PERSEDIAAN TENAGA KERJA HEWAI
di PROPINSI SULAWESI SELATAN 197



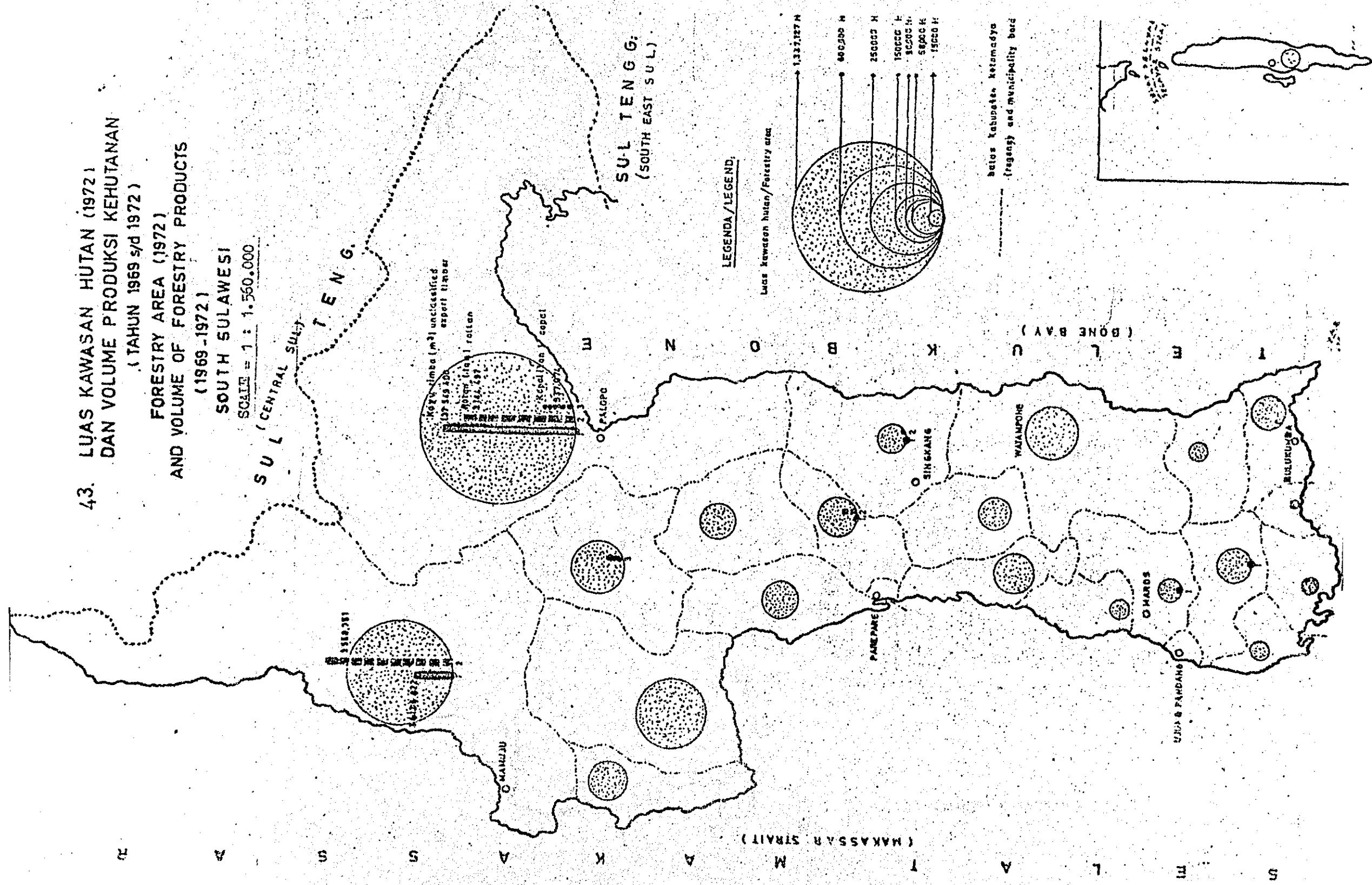
**42. PENYEBARAN TERNAK KUDA
SAPI DAN KERBAU
di PROPINSI SULAWESI SELATAN.**

**DISTRIBUTION OF HORSES,
COWS AND BUFFALOES**



4.3. LUAS KAWASAN HUTAN (1972) DAN VOLUME PRODUKSI KEHUTANAN (TAHUN 1969 s/d 1972)

FORESTRY AREA (1972) AND VOLUME OF FORESTRY PRODUCTS



44. PRODUKSI IKAN BASAH
PERIKANAN DARAT DAN LAUT
TAHUN 1972

SEA AND INLAND WATERS
PRODUCTION OF FISH

1972

SCALE = 1 : 1.550.000

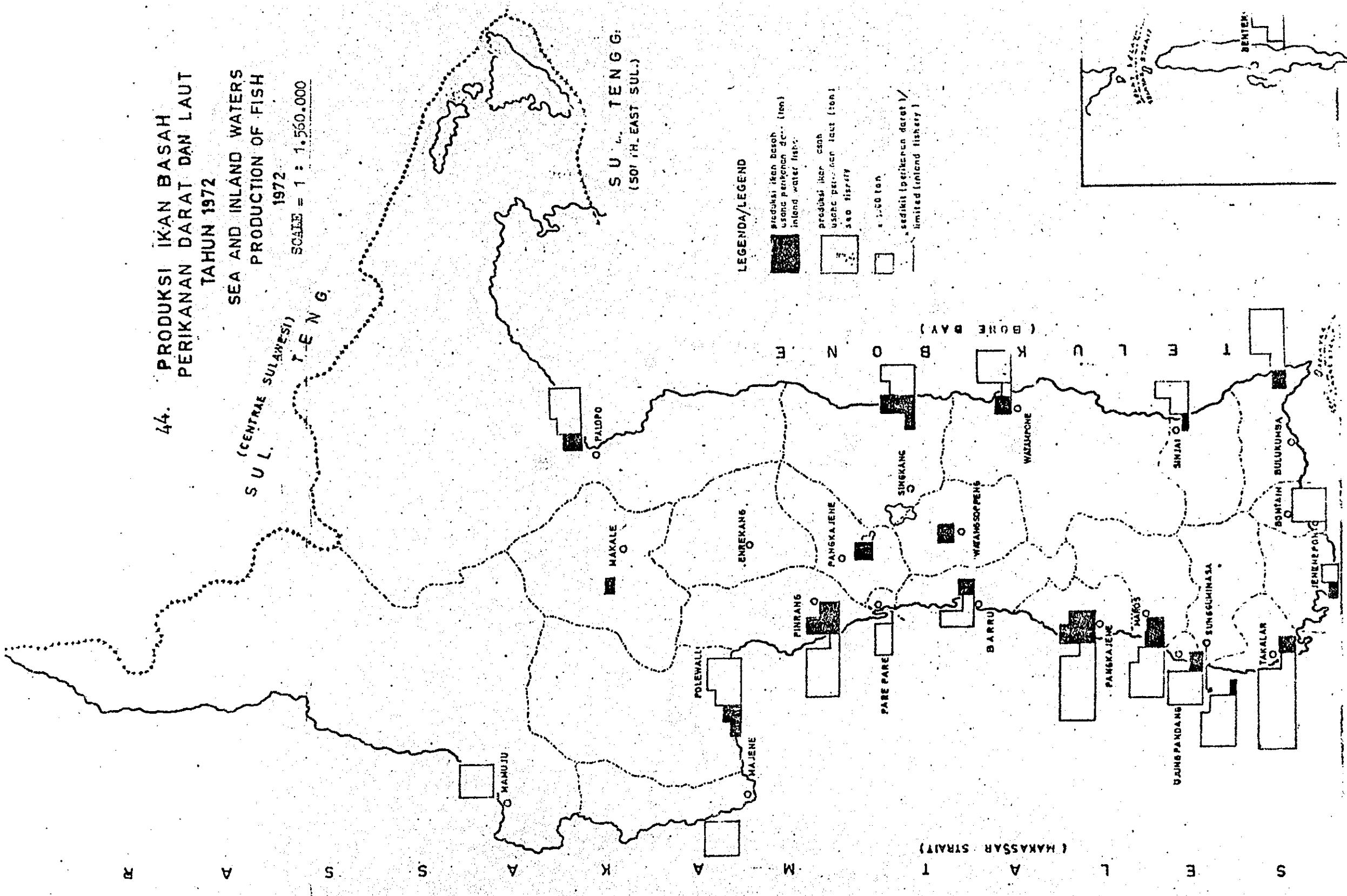
S U L.
(CENTRAL SULAWESI)

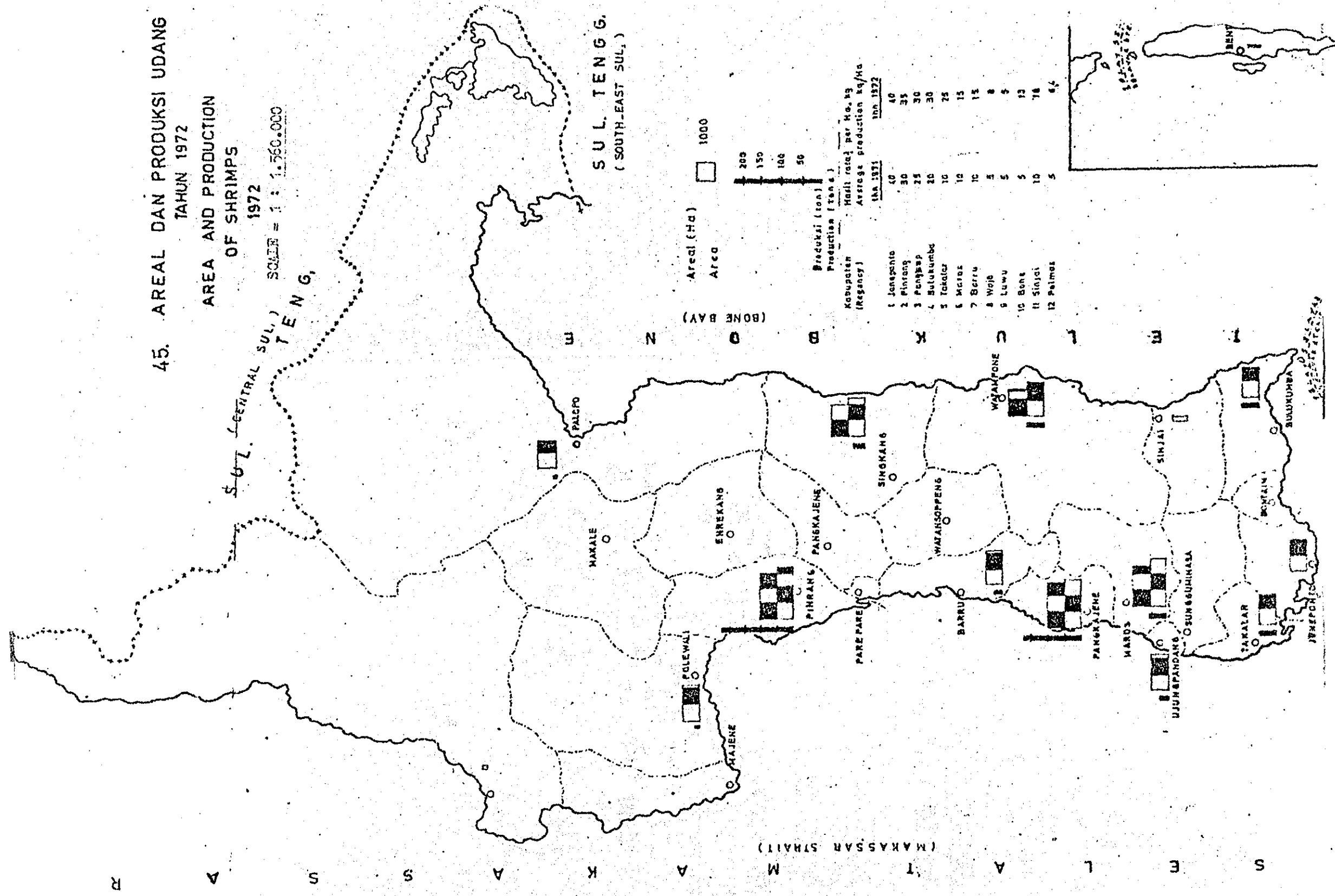
T E N G G.

S U L. T E N G G.
(SOI I.H. EAST SUL.)

LEGENDA/LEGEND

- [Solid black square] produksi ikan besoh
using penangkapan darat (ton)
- [Open square] produksi ikan basah
using perikanan laut (ton)
- [Crossed-out square] sedikit (perikanan darat) /
limited (inland fishery)
- [Open circle] sea fishery
- [Crossed-out circle] sea fishery
- [Square with dot] location





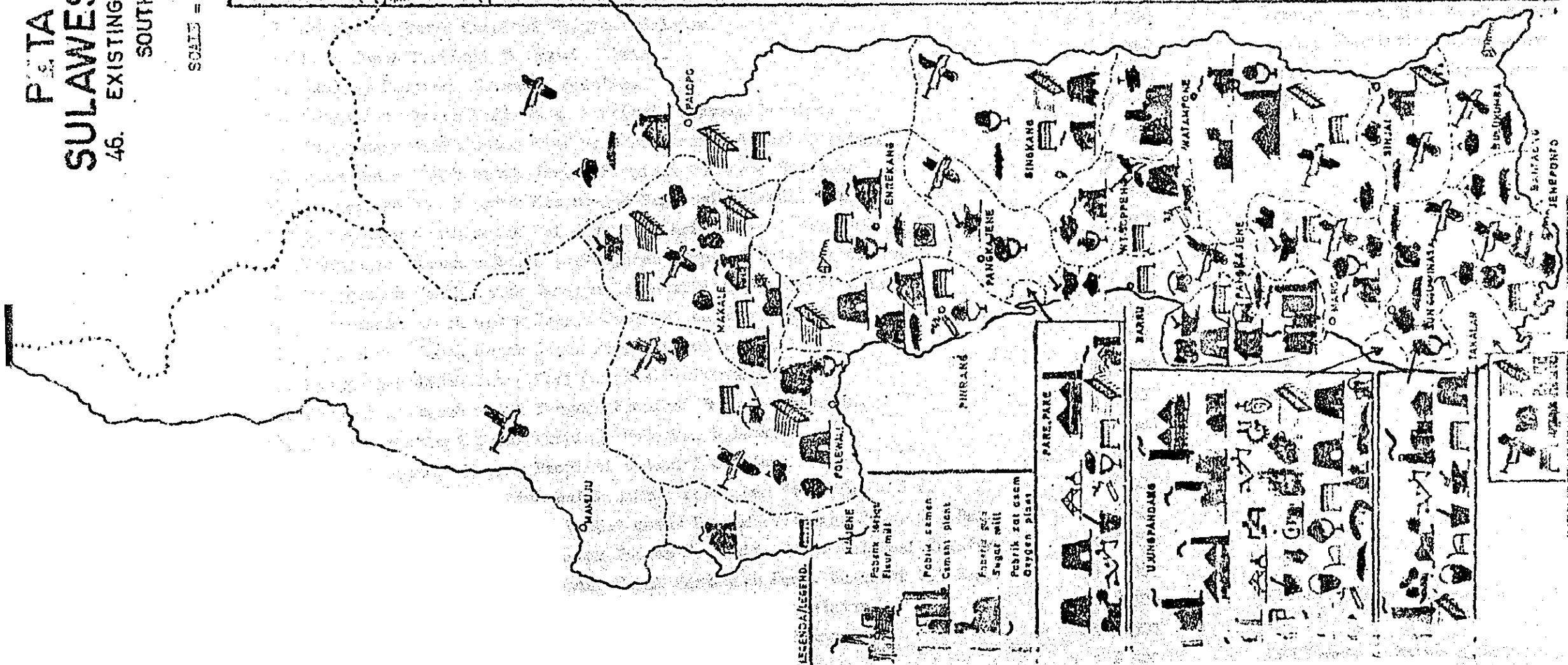
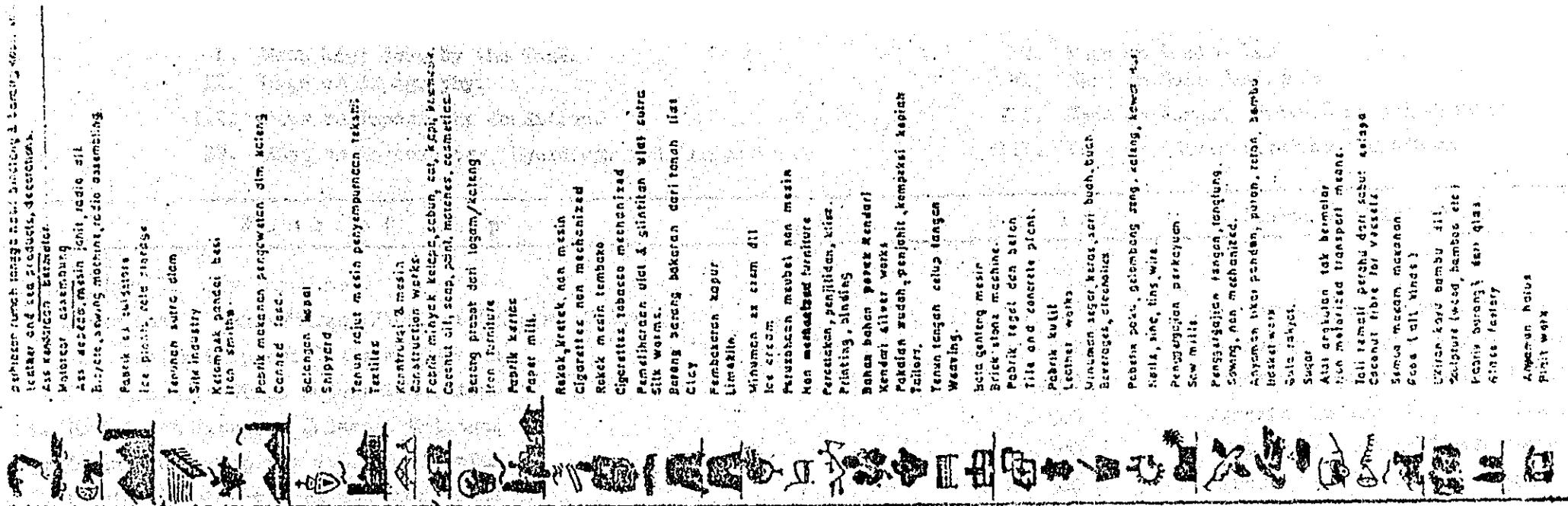
PETA INDUSTRI SULAWESI SELATAN

46. EXISTING INDUSTRIES SOUTH SULAWESI!

1973

SCALE = 1 : 1,500,000

LEGENDA / LEGEND



LIST OF COLLECTED MAPS BY THE TEAM.

- I. Mesh Maps drew by the Team.
- II. Maps on Topography.
- III. Maps on Topography Condition.
- IV. Maps on Meteorology, Hydrology and Irrigation.

- V. Maps on Land - Use.
- VI. Maps on Soil Condition.
- VII. Maps on Forest, Grass Land and Fishery.
- VIII. Maps on Administration and others.

No.	Name of Map	Scale	Source of Original Map
I. Mesh Maps Drew by the Team :			
1.	Penggunaan Tanah sekarang Propinsi Sulawesi Selatan.	1 / 500	Kantor Agraria Propinsi Sulawesi Selatan
2.	Curah Hujan Propinsi Sulawesi Selatan.	1 / 500	Metrology Propinsi Sulawesi Selatan.
3.	Ketinggian Propinsi Sulawesi Selatan.	1 / 500	Agraria Propinsi Sulawesi Selatan.
4.	Kemiringan Propinsi Sulawesi Selatan.	1 / 500	Agraria Propinsi Sulawesi Selatan.
5.	Macam Tanah Propinsi Sulawesi Selatan.	1 / 500	Lembaga Penelitian Tanah Bogor.
6.	Tekstur Tanah Propinsi Sulawesi Selatan.	1 / 500	Lembaga Penelitian Tanah Bogor.
7.	Kesuburan Tanah Propinsi Sulawesi Selatan.	1 / 500	Lembaga Penelitian Tanah Bogor.
8.	F.H. Tanah Propinsi Sulawesi Selatan.	1 / 500	Lembaga Penelitian Tanah Bogor.
9.	Geology Propinsi Sulawesi Selatan.	1 / 500	Direktorat Geology Departemen Pertambangan.
10.	Penggunaan Tanah Padi Sawah Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
11.	Penggunaan Tanah untuk Padi Gogo Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
12.	Penggunaan Tanah untuk Jagung Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
13.	Penggunaan Tanah untuk Kacang-2an Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
14.	Penggunaan Tanah untuk Ubi Kayu Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
15.	Penggunaan Tanah untuk Sayur-sayuran Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
16.	Penggunaan Tanah untuk Tanaman Industri Prop. Sulawesi Selatan.	1 / 500	ATA - 140.
17.	Penggunaan Tanah untuk Kelapa Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
18.	Penggunaan Tanah untuk Jeruk Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
19.	Penggunaan Tanah untuk Kopi Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
20.	Penggunaan Tanah untuk Cengkeh Propinsi Sulawesi Selatan.	1 / 500	ATA - 140.
21.	Kerusakan Akibat Erosi Propinsi Sulawesi Selatan.	1 / 500	
22.	Kondisi Hutan Sekarang Propinsi Sulawesi Selatan.	1 / 500	
23.	Kemungkinan Daerah Hutan untuk Daerah Pertanian Prop. Sul - Sel.	1 / 500	
24.	Kemungkinan Daerah Padang Rumput untuk Daerah Pertanian Prop. Sul-Sel.	1 / 500	
25.	Kemungkinan Tanah Ladang untuk Daerah Pertanian Prop. Sulawesi Selatan.	1 / 500	
26.	Kemungkinan Tanah Kering untuk Tanah Pertanian Prop. Sulawesi Selatan.	1 / 500	
27.	Sawah Irrigasi dan Non Irrigasi Propinsi Sulawesi Selatan.	1 / 500	DPU Pengairan Sulawesi Selatan.
28.	Perencanaan Penggunaan Tanah Propinsi Sulawesi Selatan.	1 / 500	DPU Propinsi Sulawesi Selatan
29.	Peta Daerah Aliran Sungai Propinsi Sulawesi Selatan.	1 / 500	
(30. Population Density)			

No.	Name of Map	Scale	Source of Original Map
II. Topography :			
101.	Peta Topography Sulawesi.	1 / 1.000	Direktorat Geology Bandung.
102.	Peta Topography Sulawesi.	1 / 1.000	Direktorat Geology Bandung.
III.			
111.	Indeks untuk Peta Topography.	1/250.000	
112.	Peta Topography Sulawesi Selatan.	1/250.000	
121.	Indeks untuk Peta Topography.	1/125.000	
122.	Peta Topography Sulawesi Selatan.	1/125.000	
141.	Indeks untuk Peta Topography.	1/100.000	
142.	Peta Topography Sulawesi Selatan.	1.100.000	
151.	Indeks untuk Peta Topography.	1 / 50.000	
152.	Peta Topography Sulawesi Selatan.	1 / 50.000	
251.	Peta Topography Kabupaten Jeneponto.	1 / 50.000	Direktorat Geology Bandung.
252.	Peta Topography Kabupaten Enrekang.	1/100.000	Direktorat Geology Bandung.
253.	Peta Topography Kabupaten Enrekang.	1/125.000	Direktorat Geology Bandung.
III. Topography Condition :			
301.	Peta Geology Tinjau Daerah Ujung Pandang.	1/250.000	Direktorat Geology Bandung.
302.	Peta Geology Lembah Majene dan Bagian Barat Lembah Palopo.	1/250.000	Direktorat Geology Bandung.
303.	Peta Geology Sulawesi Selatan.	1/500.000	Direktorat Geology Bandung.
304.	Peta Geology Sulawesi Selatan.	1/1.000.000	Direktorat Geology Bandung.
321.	Situasi Daerah dan Ketinggian Wilayah Pengembangan Sul-Sel.	1/125.000	Agraria Sulawesi Selatan.
322.	Peta Ketinggian Sulawesi Selatan.	1/500.000	Agraria Sulawesi Selatan.
323.	Peta Bentuk Wilayah Sulawesi Selatan.	1/1.000.000	Agraria Sulawesi Selatan.
324.	Peta Topography Sulawesi Selatan.	1.500.000	Agraria Sulawesi Selatan.
325.	Peta Ketinggian Kabupaten Jeneponto.	1 / 50.000	Dinas Pertanian Jeneponto.
326.	Peta Ketinggian Sul-Sel Wilayah Pengembangan Bahagian Selatan.	1/500.000	Agraria Sulawesi Selatan.
327.	Peta Ketinggian Kabupaten Jeneponto.	1 / 50.000	Direktorat Geology Bandung.
328.	Peta Ketinggian Kabupaten Jeneponto.	1 / 50.000	Agraria Sulawesi Selatan.
341.	Peta Kemiringan Sulawesi Selatan.	1/500.000	Direktorat Agraria Sul - Sel.
342.	Peta Kemiringan Kabupaten Jeneponto.	1 / 50.000	Dinas Pertanian Kab. Jeneponto.
343.	Peta Lereng Kabupaten Jeneponto.	1 / 50.000	Direktorat Agraria Sul - Sel.

No.	Name of Map	Scale	Mapping by
344.	Peta Lereng Sul-Sel. Wilayah Pengembangan Bagian Selatan	1/50,000	Direktorat Agraria Sulawesi Selatan
345.	Peta Kemiringan Kabupaten Enrekang	1/100,000	Direktorat Agraria Sulawesi Selatan
346.	Peta bentuk Wilayah Sulawesi Selatan	1/500,000	Direktorat Agraria Sulawesi Selatan
IV. Meteorology, Hydrology, Irrigation			
401.	Peta Tempat Stasiun Hujan Sulawesi Selatan	1/500,000	D P U. Ujung Pandang.
411.	Peta type Iklim Propinsi Sulawesi Selatan	1/1,000,000	Direktorat Metrologi Geofisika
412.	Peta type Iklim Sulawesi Selatan	1/500,000	Direktorat Metrologi dan Geofisika
413.	Peta Curah hujan Kabupaten Jeneponto	1/50,000	Biro Perencanaan Kabupaten Jeneponto
421.	Daerah aliran sungai Sulawesi Selatan	1/50,000	Agraria
422.	Peta Lokasi Daerah-daerah Irigasi Sulawesi Selatan	1/500,000	D P U. Sulawesi Selatan
423.	Peta Pengairan / Persawahan Kabupaten Tator	1/100,000	D P U.
424.	Peta daerah proyek irigasi di Sulawesi Selatan	1/500,000	D P U.
425.	Peta jaringan irigasi Kab. Luwu Bahagian Utara	1/100,000	D P U.
426.	Peta daerah aliran sungai utama Sul-Sel.	1/500,000	D A S.
427.	Peta pengairan dan kemungkinan perluasan areal pertanian Sulawesi Selatan	1/500,000	Lembaga Penelitian Tanah Bogor
428.	Peta irigasi Kabupaten Barru	1/50,000	Kantor Irigasi Saddang
429.	Peta ikhtisar daerah rehabilitasi Sub Proyek Saddang	1/50,000	Kantor Irigasi Saddang
430.	Peta Irigasi Kabupaten Bulukumba	1/50,000	Kantor Irigasi Bulukumba
431.	Schema daerah irigasi Manolohe Kab. Bulukumba/Sinjai	—	P U. Sie Pengairan Bulukumba/Sinjai
432.	Peta sungai Propinsi Sulawesi Selatan	1/500,000	P U. Pengairan Sulawesi Selatan.
433.	Peta sungai Sulawesi Selatan	1/500,000	D P U. Pengairan Sul-Sel.
434.	Peta daerah aliran sungai Sulawesi Selatan	1/500,000	Kanwil Depten Sulawesi Selatan
435.	Peta lokasi Irigasi Kabupaten Bone	1/100,000	D P U.
436.	Peta lokasi Irigasi Sederhana SulSel.	1/500,000	D P U.
437.	Peta sungai Sulawesi Selatan	1/500,000	A T A.
438.	Peta sungai Kabupaten Jeneponto	1/50,000	A T A.
439.	Peta sungai Kabupaten Enrekang	1/100,000	A T A.
V. Land use			
501.	Peta Indeks Tata Guna Tanah Sulawesi Selatan	—	Direktorat Agraria Sul-Sel.
502.	Peta Tata Guna Tanah Sulawesi Selatan	1/100,000	Direktorat Agraria Sul-Sel.
521.	Peta Indeks Tata Guna Tanah Sul-Sel.	—	Direktorat Agraria Sul-Sel.
522.	Peta Tata Guna Tanah Sul-Sel.	1/50,000	Direktorat Agraria Sul-Sel.

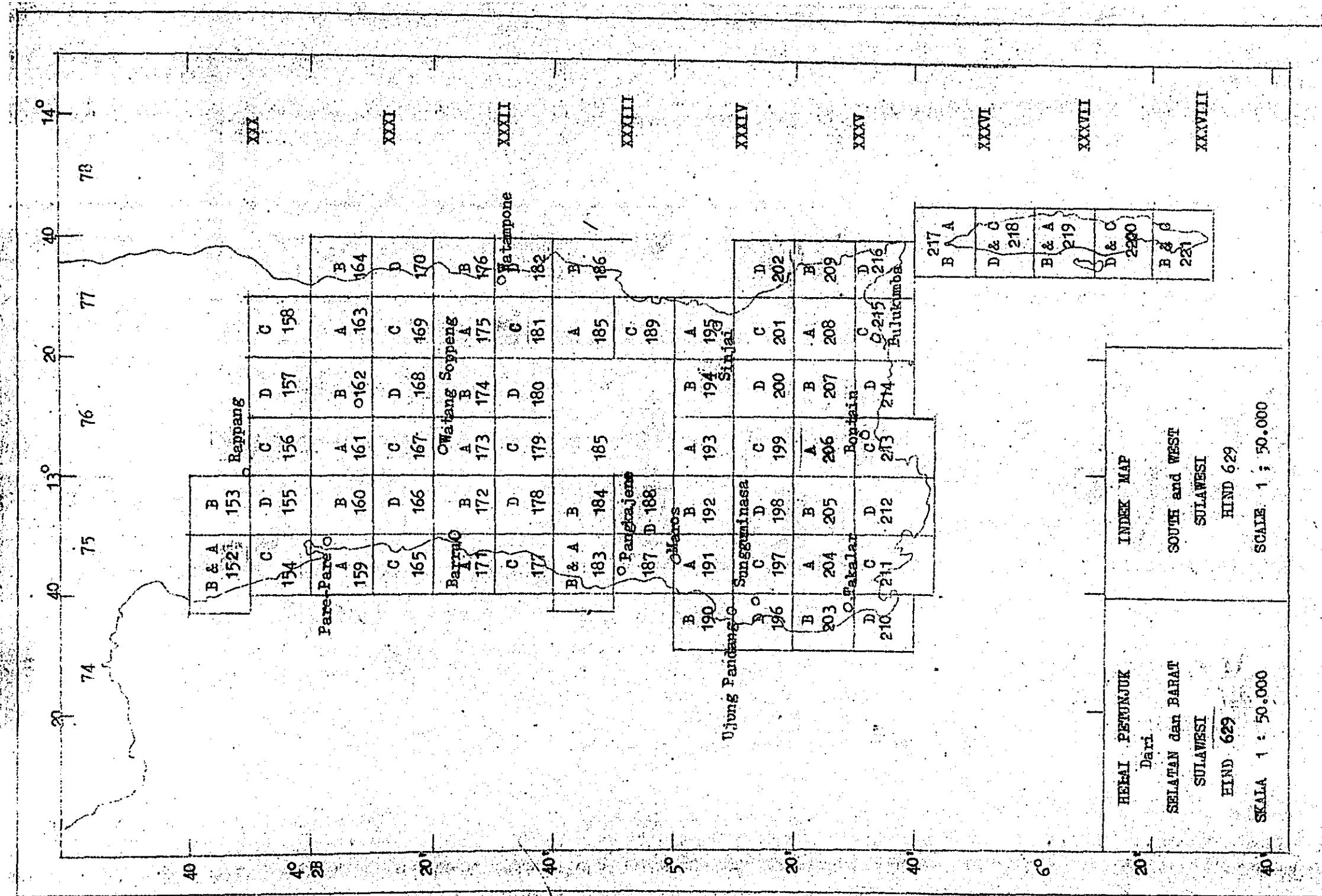
No.	Name of map	Scale	Mapping by
561.	Peta Tata Guna Tanah Sul-Sel.	1/500,000	Lembaga Penelitian Tanah Bogor
562.	Peta Rekomendasi Tata Guna Tanah Sul-Sel.	1/500,000	Lembaga Penelitian Tanah Bogor
563.	Peta Penggunaan Tanah Sul-Sel.	1/500,000	Direktorat Agraria SulSel.
564.	Peta Pedoman Perluasan Areal Tanaman Perkebunan Kabupaten Barru	1/250,000	Lembaga Penelitian Tanah Bogor
565.	Peta Rekomendasi Kabupaten Barru	1/250,000	Lembaga Penelitian Tanah Bogor
566.	Peta Rekomendasi Kabupaten Bantaeng	1/250,000	Lembaga Penelitian Tanah Bogor
567.	Peta Pedoman Perluasan Tanaman Perkebunan Kabupaten Bantaeng	1/250,000	Lembaga Penelitian Tanah Bogor
568.	Peta Rekomendasi Kabupaten Pangkep	1/250,000	Lembaga Penelitian Tanah Bogor
569.	Peta Pedoman Perluasan Tanaman Perkebunan Pangkep	1/250,000	Lembaga Penelitian Tanah Bogor
570.	Peta Penggunaan Tanah Sul-Sel.	1/500,000	Direktorat Tata Guna Tanah Dirjen Agraria Jakarta
571.	Peta Penggunaan Tanah Sul-Sel.	1/500,000	Direktorat Agraria Sul-Sel.
572.	Peta Penggunaan Tanah Kabupaten Jeneponto	1/50,000	Direktorat Agraria Sul-Sel.
573.	Peta Klassifikasi Penggunaan Tanah Kab. Jeneponto	1/50,000	RADP/ATK-140 Sul-Sel.
574.	Peta Rekomendasi Kabupaten Jeneponto	1/250,000	Lembaga Penelitian Tanah Bogor
575.	Peta Pedoman Perluasan Tanaman Perkebunan Kabupaten Jeneponto	1/250,000	Lembaga Penelitian Tanah Bogor
576.	Peta Pedoman Perluasan Tanaman Perkebunan Kabupaten Amrehang	1/250,000	Lembaga Penelitian Tanah Bogor
577.	Peta Rekomendasi Kab. Amrehang	1/250,000	Lembaga Penelitian Tanah Bogor
578.	Peta Rekomendasi Kab. Amrehang	1/100,000	Lembaga Penelitian Tanah Bogor
579.	Peta Tata Guna Tanah Kab. Amrehang	1/100,000	Direktorat Agraria Sul-Sel.
VI. Soil condition			
601.	Peta Kemampuan Wilayah Sul-Sel.	1/500,000	Lembaga Penelitian Tanah Bogor
602.	Peta Tanah Eksplorasi Sulawesi Selatan	1/1,000,000	Lembaga Penelitian Tanah Bogor
603.	Peta Tanah Eksplorasi Sulawesi Selatan	1/500,000	Lembaga Penelitian Tanah Bogor
604.	Peta Tanah Tinjau Sulawesi Selatan	1/500,000	Lembaga Penelitian Tanah Bogor
621.	Peta Tanah Tinjau Sulawesi Selatan	1/500,000	Lembaga Penelitian Tanah Bogor
622.	Peta Kesuburan Tanah Sulawesi Selatan	1/1,000,000	Lembaga Penelitian Tanah Bogor
623.	Peta Kesuburan Tanah Sulawesi Selatan	1/500,000	Lembaga Penelitian Tanah Bogor
624.	Peta Kebutuhan Fosfat Tanah Sul-Sel.	1,1,000,000	Lembaga Penelitian Tanah Bogor
625.	Peta Bagan Bahan Induk Sulawesi Selatan	1/1,000,000	Lembaga Penelitian Tanah Bogor
631.	Peta Tingkat Kemasaman Tanah Sul-Sel.	1/500,000	Lembaga Penelitian Tanah Bogor

No.	Name of Map	Scale	Mapping by
632.	Peta Tingkat Kemasaman Tanah Sul-sel.	1/1,000,000	Lembaga Penelitian Tanah Bogor
651.	Peta Kedalaman Tanah Kab. Jeneponto	1/50,000	Dinas Pertanian Rakyat Kab. Jeneponto
652.	Peta Tanah Tinjau Kab. Jeneponto	1/50,000	Lembaga Penelitian Tanah Bogor
653.	Peta PH. Tanah Kab. Jeneponto	1/50,000	Dinas Pertanian Rakyat Kab. Jeneponto
654.	Peta Konsep Nomor Sample Tanah Kab. Jeneponto	1/50,000	Dinas Pertanian Rakyat Kab. Jeneponto
655.	Peta Tekstur Tanah Kab. Jeneponto	1/50,000	Direktorat Agraria Sul-Sel
656.	Peta Kedalaman Tanah Efektif Kab. Jeneponto	1/50,000	Direktorat Agraria Sul-Sel
657.	Peta Tanah Tinjau Kab. Jeneponto	1/250,000	Lembaga Penelitian Tanah Bogor
658.	Peta Kemampuan Wilayah Kab. Jeneponto	1/250,000	Lembaga Penelitian Tanah Bogor
659.	Peta Kemampuan Wilayah Kab. Enrekang	1/250,000	Lembaga Penelitian Tanah Bogor
660.	Peta Tanah Tinjau Kab. Enrekang	1/250,000	Lembaga Penelitian Tanah Bogor
661.	Peta Tanah Tinjau Kab. Enrekang	1/100,000	Lembaga Penelitian Tanah Bogor
662.	Peta Kedalaman Tanah Kab. Enrekang	1/50,000	Direktorat Agraria Prop. Sul-Sel
663.	Peta Tanah Tinjau Kab. Barru	1/250,000	Lembaga Penelitian Tanah Bogor
664.	Peta Kemampuan Wilayah Kab. Barru	1/250,000	Lembaga Penelitian Tanah Bogor
665.	Peta Tanah Tinjau Kab. Sidrap	1/250,000	Lembaga Penelitian Tanah Bogor
666.	Peta Kemampuan Wilayah Kab. Bantaeng	1/250,000	Lembaga Penelitian Tanah Bogor
667.	Peta Kemampuan Wilayah Kab. Pangkep	1/250,000	Lembaga Penelitian Tanah Bogor
668.	Peta Tanah Tinjau Kab. Pangkep	1/250,000	Lembaga Penelitian Tanah Bogor
VII. Forest, Grass land, "ishery			
801.	Peta Hutan Lindung SulSel.	1/500,000	Kantor DAS Walanae
802.	Peta Daerah Aliran Sungai WalanaE	1/125,000	Kantor DAS WalanaE
803.	Peta Daerah Aliran Sungai WalanaE	1/125,000	Kantor DAS WalanaE
804.	Peta Daerah Aliran Sungai Saddang	1/500,000	Kantor DA Saddang
805.	Peta Kawasan Hutan Kab. Maros dan sekitarnya	1/125,000	
806.	Peta Rencana Tanah Guna Hutan Sul-Sel.	1/500,000	Dinas Kehutanan Sul-Sel.
807.	Peta Kawasan Hutan SulSel.	1/1,000,000	Dinas Kehutanan SulSel.
808.	Peta Kawasan Hutan Lindung Mutlak	1/500,000	Dinas Kehutanan Sul-Sel.
809.	Peta Hutan Lindung	1/500,000	Dinas Kehutanan Sul-Sel.
810.	Peta Kawasan Hutan Sul-Sel.	1/500,000	Dinas Kehutanan Sul-Sel.
811.	Peta Hutan Lindung Sul-Sel.	1/500,000	Dinas Kehutanan Sul-Sel.
812.	Peta Renoana Reboisasi PELITA II Kab. Enrekang	1/100,000	Dinas Kehutanan Sul-Sel.
813.	Peta Penghijauan dan Reboisasi Kec. Alla Kab. Enrekang	1/100,000	Kantor Kecamatan Alla
814.	Peta Kawasan Hutan Kab. Enrekang	1/125,000	Dinas Kehutanan Sul-Sel.

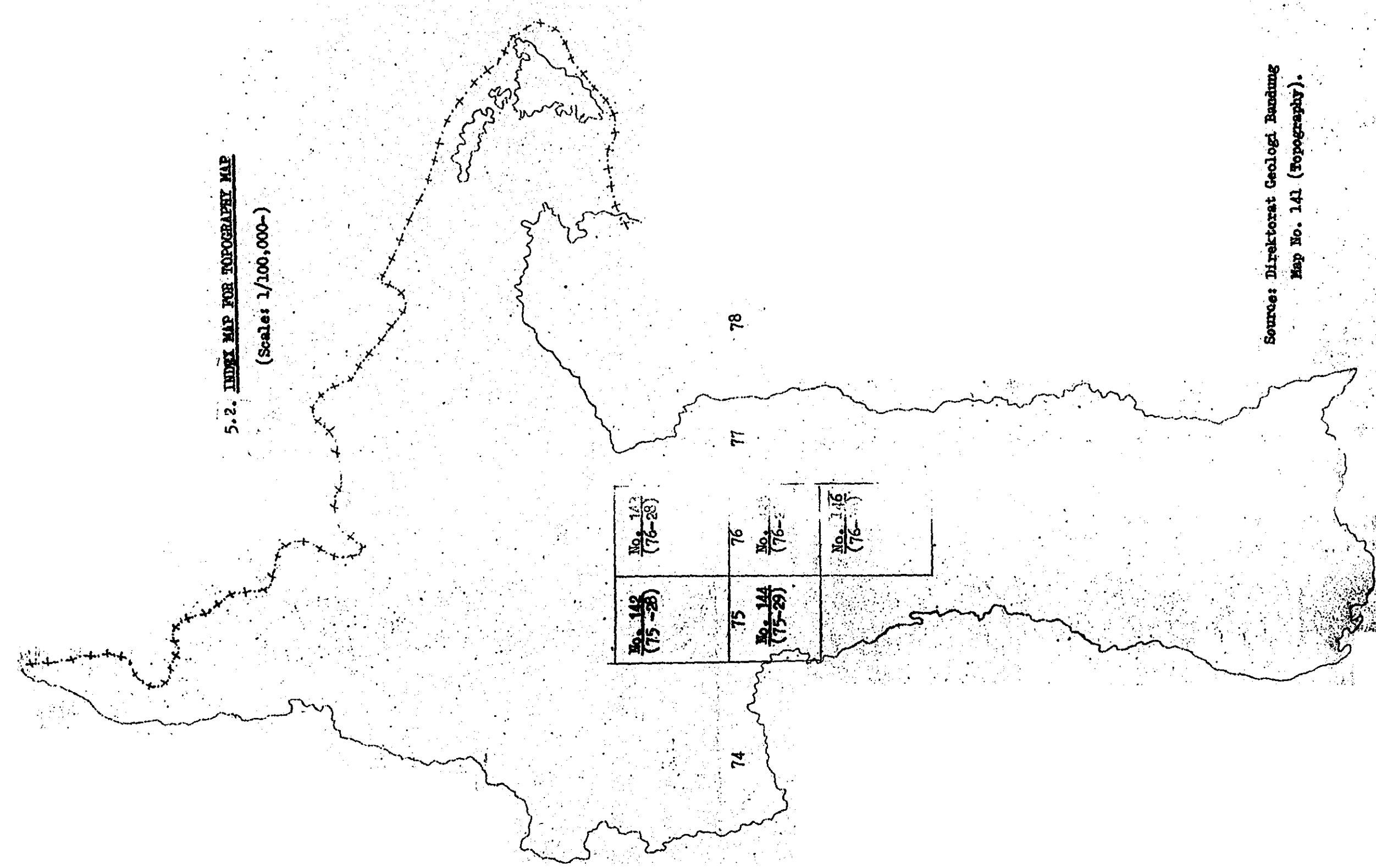
No.	Name of Map	Scale	Mapping by
821.	Peta Padang Rumput Kab. Sidrap	1/125,000	Dinas Peternakan Sidrap
831.	Peta Lokasi Pemukiman Sul-Sel.	1/500,000	- Kanwil Sosial Sul-Sel. - Direktorat P M D. - Dinas Kehutanan Sul-Sel.
841.	Peta Perikanan Kab. Jeneponto	1/50,000	Dinas Perikanan Kab. Jeneponto
842.	Peta Perikanan Kab. Jeneponto	1/50,000	ATA-140 Sul-Sel.
VIII. Administration, others			
901.	Peta Batas-batas Kabupaten di Sul-Sel.	1/500,000	Direktorat Agraria Sul-Sel.
902.	Peta Batas Kabupaten-kabupaten di Sul-Sel.	1/500,000	Direktorat Agraria Sul-Sel.
903.	Peta Potensi Pelayanan Kesehatan Sul-Sel.	1/500,000	Kanwil Kesehatan SulSel.
904.	Peta Wilayah Pembangunan Sul-Sel.	1/500,000	Direktorat Agraria SulSel.
905.	Peta Administrasi Sul-Sel.	1/500,000	BAPPENA Sul-Sel.
921.	Peta Keadaan Jalanan Sul-Sel.	1/500,000	Dinas P.U. Sul-Sel.
922.	Peta Keadaan Jalanan Kab. Enrekang	1/125,000	Direktorat Agraria Sul-Sel.
923.	Peta Rencana Jalanan Ekonomi	1/50,000	ATA-140 Sul-Sel.
924.	Peta Keadaan Jalanan Kab. Enrekang	1/50,000	Direktorat Agraria Sul-Sel.
941.	Peta Kab. Sidrap	1/125,000	Kantor Agraria Sidrap
942.	Peta Kab. Bantaeng	1/50,000	Kantor Bupati Kab. Bantaeng
943.	Peta Kotamadya Pare-Pare	1/12,500	Dinas Pertanian Pare-Pare
944.	Peta Kab. Takalar	1/50,000	Kantor Bupati Kab. Takalar
945.	Peta Administrasi Kab. Bantaeng	1/250,000	Lembaga Penelitian Tanah Bogor
946.	Peta Kab. Jeneponto	1/100,000	Direktorat Agraria Sul-Sel.
947.	Peta Kab. Jeneponto	1/50,000	Kantor Bupati Kab. Jeneponto
948.	Peta Kab. Jeneponto	1/50,000	Direktorat Agraria Sul-Sel.
949.	Peta Administrasi Kab. Jeneponto	1/50,000	Direktorat Agraria Sul-Sel.
950.	Peta Administrasi Kab. Jeneponto	1/1,000,000	Lembaga Penelitian Tanah Bogor
951.	Peta Administrasi Kab. Jeneponto	1/100,000	Direktorat Agraria Sul-Sel.
952.	Peta Batas Kab. Jeneponto	1/50,000	Direktorat Agraria Sul-Sel.
953.	Peta Status Pemilikan Tanah Kab. Enrekang	1/50,000	Direktorat Agraria SulSel.
954.	Peta Keadaan Alam Kab. Enrekang	1/50,000	Direktorat Agraria Sul-Sel.
955.	Peta Lokasi Pasar di Kab. Enrekang	1/50,000	Kantor Bupati Kab. Enrekang
956.	Peta Administrasi Kab. Enrekang	1/50,000	Direktorat Agraria Sul-Sel.
957.	Peta Administrasi Kab. Enrekang	1/1,000,000	Lembaga Penelitian Tanah Bogor
958.	Peta Batas-batas Kecamatan di Kab. Enrekang	1/100,000	ATA-140 Sul-Sel.

5.1. **ANSWER** The following table lists the values of $\sin \theta$ for various angles θ .

(Scale: 1/50,000)



Sengör, Ünal & Göktürk: Geology of Bandırma Map No. 151 (topography).

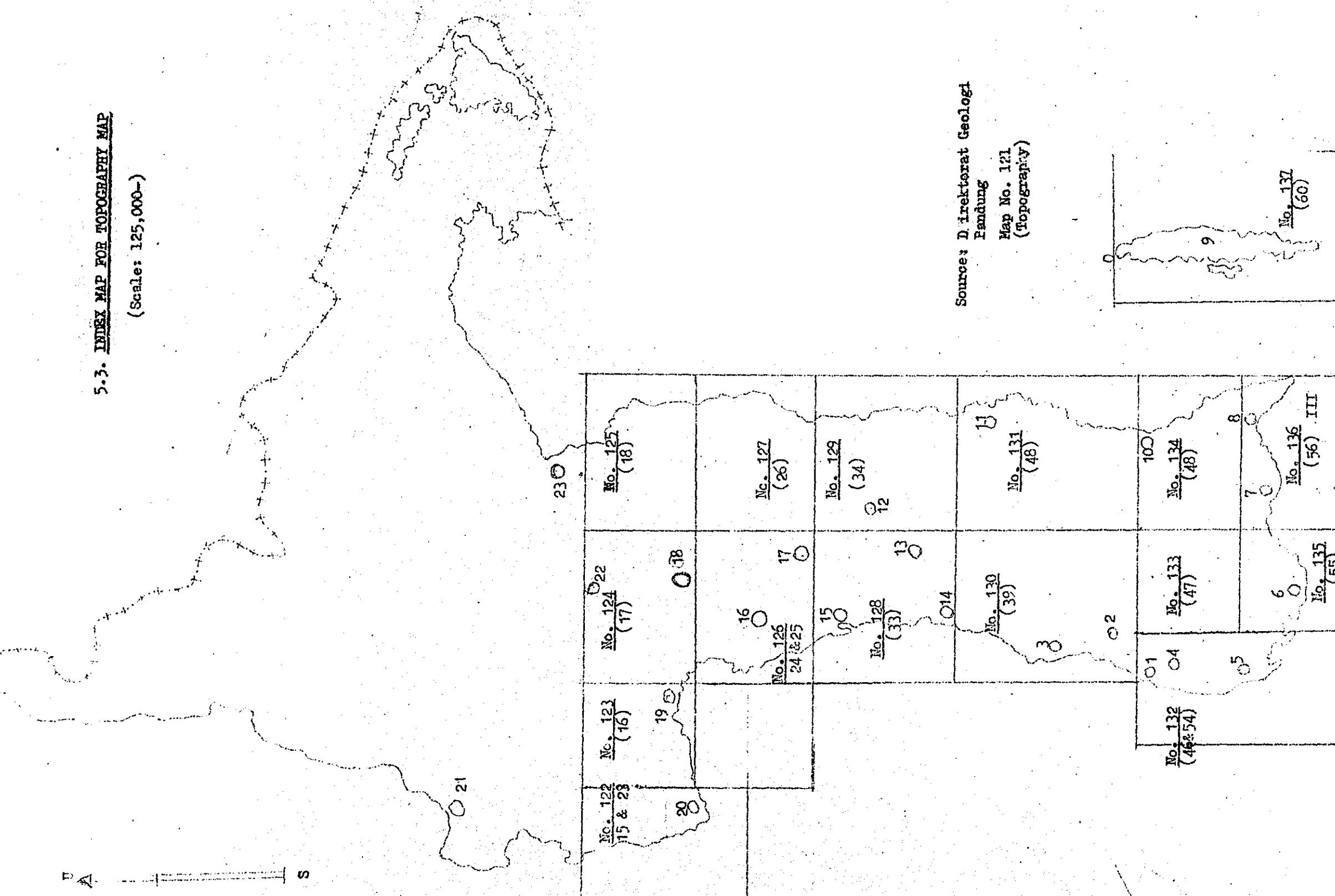


Source: Directorate Geologi Bandung
Map No. 141 (Topography).

5.3. INDEX MAP FOR TOPOGRAPHY MAP

(Scale: 1:25,000—)

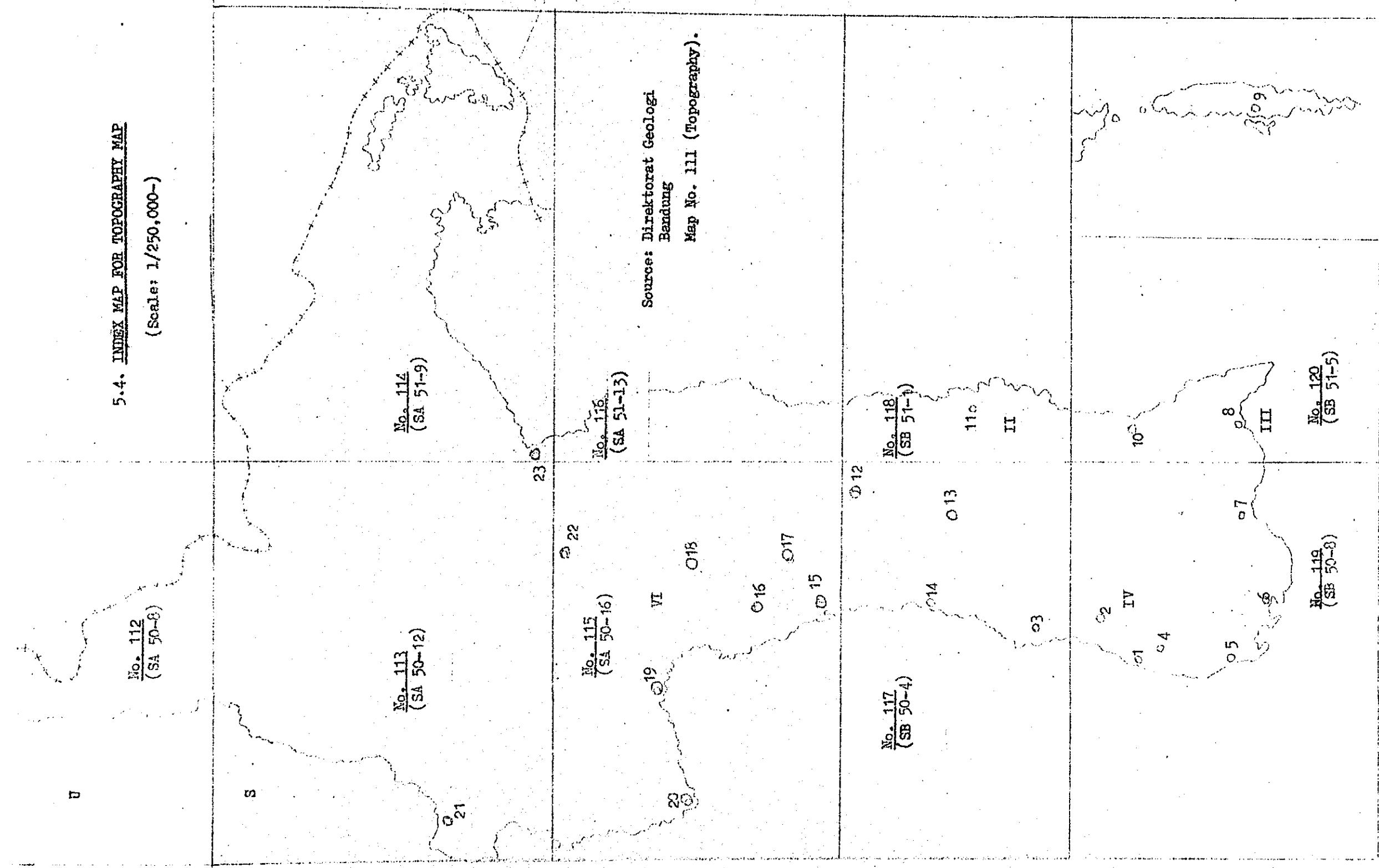
A



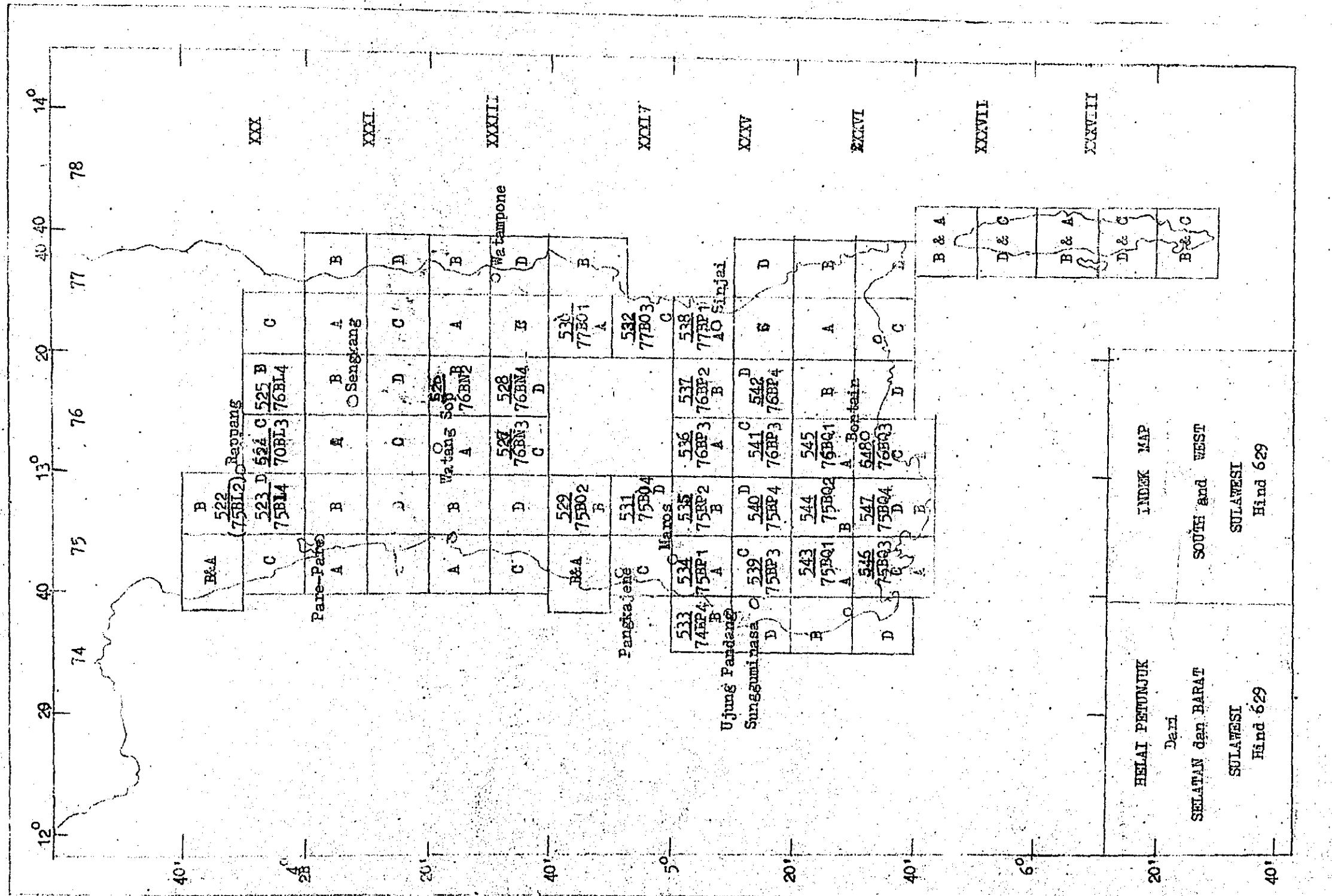
Source: Direktorat Geologi
Pandung
Map No. 121
(Topography)

B

5.4. INDEX MAP FOR TOPOGRAPHY MAP
(Scale: 1/250,000--)



5.5. INDEX MAP FOR LAND-USE MAP (Scale: 1/50,000—)



Source: Direktorat Tata Guna Tanah, Dendaeri, Map No. 521 (Land use)

5.6. INDEX MAP FOR LAND USE MAP
(Scale: 1/100,000—)

No. 502 (74 BI)	No. 503 (75 BI)	No. 504 (76 BI)	No. 505 (77 BI)
74	75	76	77
No. 506 (74 BI)	No. 507 (75 BI)	No. 508 (76 BI)	No. 509 (77 BI)

No. 512
(76 BI)

Source: Direktorat Tata Gunta Tanah
Departemen
Map No. 501 (Land Use).

VOLUME V

The Final Report on phase I,
The Project on RADP/ATA-140.

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