

Japan International Cooperation Agency (JICA)

**Directorate General of Land Rehabilitation and Social Forestry,
Ministry of Forestry, the Republic of Indonesia**

**THE STUDY
ON
CRITICAL LAND
AND
PROTECTION FOREST REHABILITATION
AT
TONDANO WATERSHED
IN
THE REPUBLIC OF INDONESIA**

**VOLUME-IV
MAPS AND DRAWINGS**

AUGUST 2001

**Nippon Koei Co., Ltd.
Kokusai Kogyo Co., Ltd.**

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LIST OF VOLUMES

VOLUME-I MAIN REPORT

VOLUME-II APPENDICES (1/2)

- Appendix-A Aerial Photography and Topographic Mapping
- Appendix-B PCM Workshop
- Appendix-C Natural Conditions
- Appendix-D Socio-Economy and Rapid Rural Appraisal
- Appendix-E Land Use
- Appendix-F Forestry

VOLUME-III APPENDICES (2/2)

- Appendix-G Agriculture and Agroforestry
- Appendix-H Soil Erosion and Sedimentation
- Appendix-I Capacity Building and Institutional Development
- Appendix-J Project Implementation and Cost Estimate
- Appendix-K Environment
- Appendix-L Project Evaluation

VOLUME-IV MAPS AND DRAWINGS

THE STUDY
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Volume IV
MAPS AND DRAWINGS

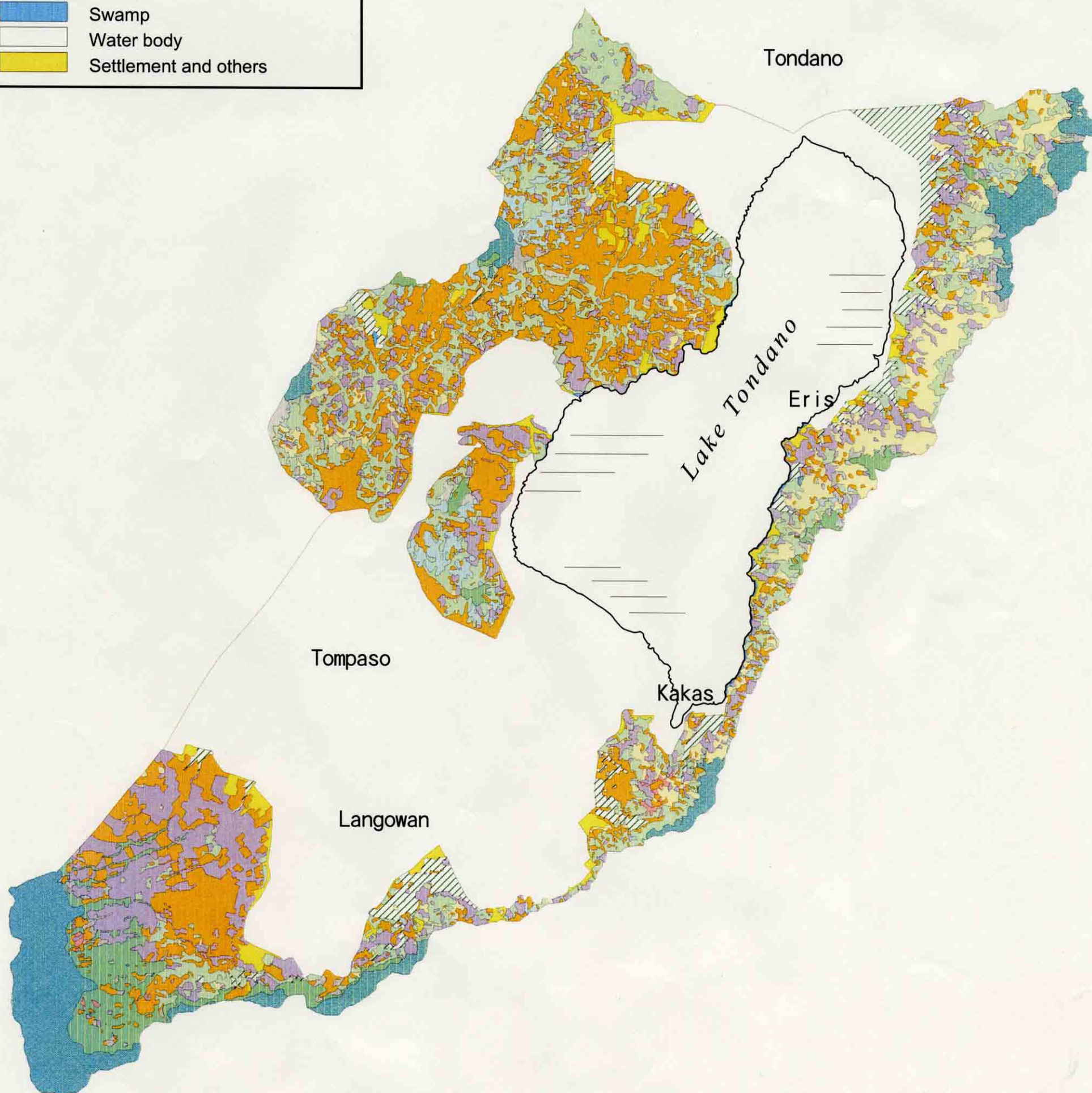
List of Maps and Drawings

		<u>Drawing No.</u>
Part 1	GENERAL	
	Land Use Map of Intensive Area	LU-1
	Zoning Map of Intensive Area	WCP-1
Part 2	WATERSHED CONSERVATION PLAN MAP	
	Watershed Conservation Plan Map (Sheet No. A5)	CP-1
	Watershed Conservation Plan Map (Sheet No. A6)	CP-2
	Watershed Conservation Plan Map (Sheet No. B3)	CP-3
	Watershed Conservation Plan Map (Sheet No. B4)	CP-4
	Watershed Conservation Plan Map (Sheet No. B5)	CP-5
	Watershed Conservation Plan Map (Sheet No. B6)	CP-6
	Watershed Conservation Plan Map (Sheet No. C2)	CP-7
	Watershed Conservation Plan Map (Sheet No. C3)	CP-8
	Watershed Conservation Plan Map (Sheet No. C4)	CP-9
	Watershed Conservation Plan Map (Sheet No. C5)	CP-10
	Watershed Conservation Plan Map (Sheet No. C6)	CP-11
	Watershed Conservation Plan Map (Sheet No. D2)	CP-12
	Watershed Conservation Plan Map (Sheet No. D3)	CP-13
	Watershed Conservation Plan Map (Sheet No. D4)	CP-14
	Watershed Conservation Plan Map (Sheet No. D5)	CP-15
	Watershed Conservation Plan Map (Sheet No. E2)	CP-16
	Watershed Conservation Plan Map (Sheet No. E3)	CP-17
Part 3	EROSION CONTROL FACILITY	
3.1	Check Dam	
	Check Dam at Tataaran	EC-1
	Check Dam at Tandengan	EC-2
	Check Dam at Ranomerut	EC-3
	Check Dam at Tounipus	EC-4
3.2	Slope Protection Works for Hillside	
	Slope Protection Works for Hillside at Mt. Maimberg	EC-5
3.3	Slope Protection Works for Road	
	Slope Protection Works for Road at Paleloan	EC-6
3.4	Torrent and River Erosion Control Works	
	River Bed Protection Works at River Panasen	EC-7
	River Bank Protection Works at River Panasen	EC-8

GENERAL

COLOR CATEGORY

- Natural / semi-natural forest
- Secondary forest
- Planted forest (timber)
- Planted forest (fuel wood)
- Bush
- Estate (cloves)
- Estate (others)
- Mixture of estate & arable upland
- Arable upland
- Pasture
- Pasture
- Swamp
- Water body
- Settlement and others



0 1 2 3km
Scale

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PRESENT LAND USE MAP

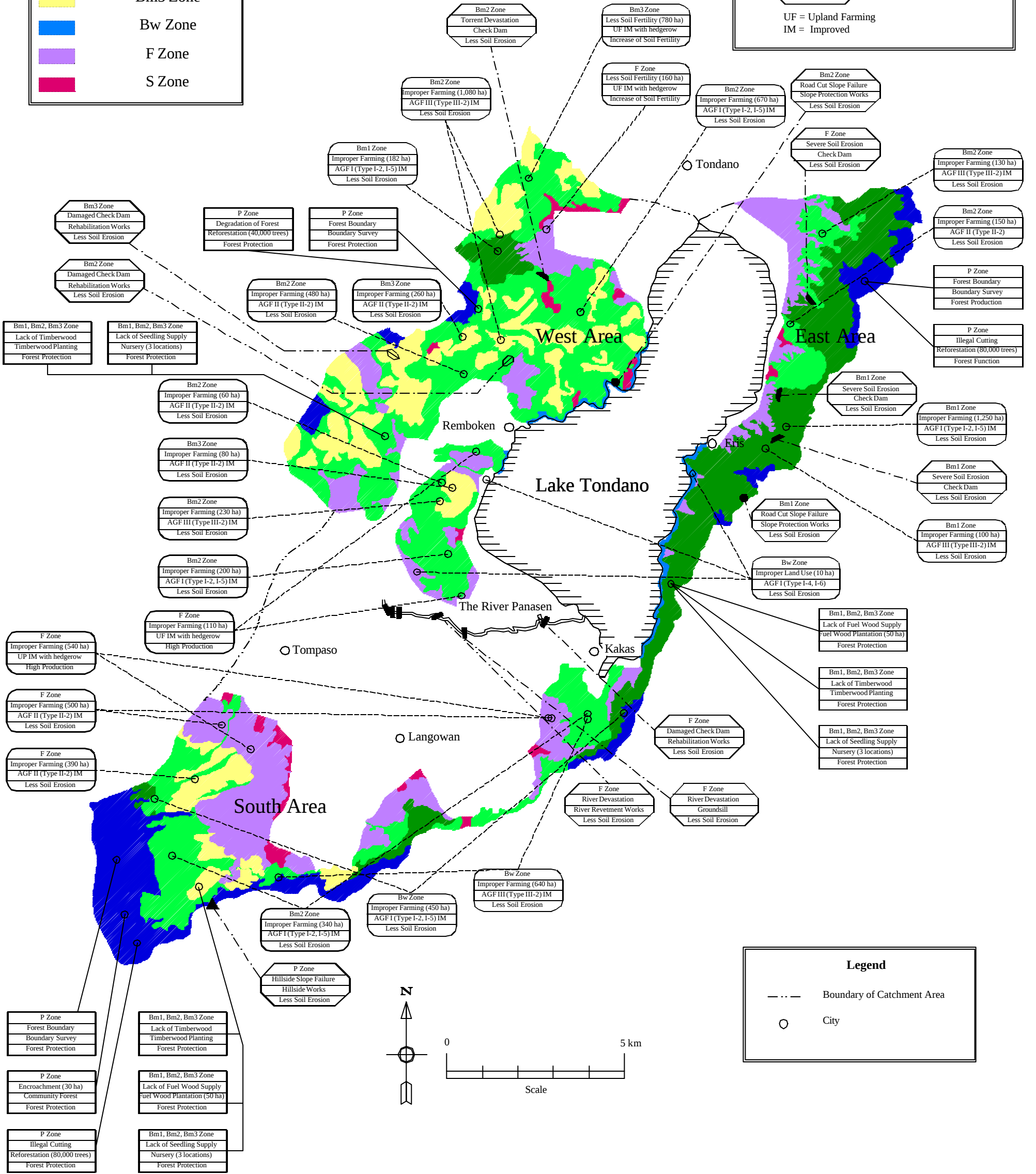
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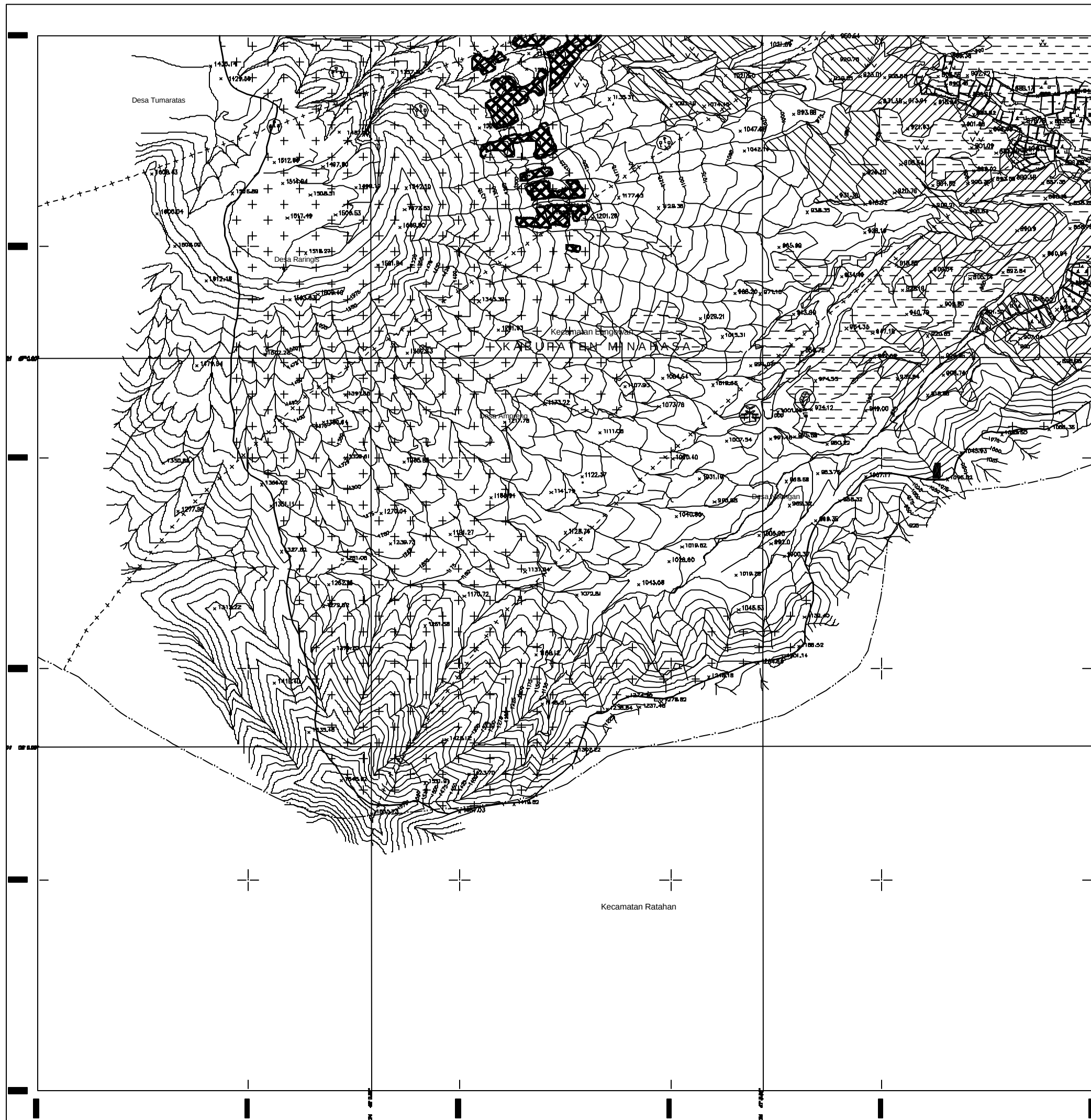
LU/1

Legend of Zoning	
Color	Zone
	P Zone
	Bm1 Zone
	Bm2 Zone
	Bm3 Zone
	Bw Zone
	F Zone
	S Zone

Legend of Box	
Zone Problem Plan Effect	Forest Conservation
Zone Problem Plan Effect	Agroforestry Development
Zone Problem Plan Effect	Erosion Contol Facility Development
UF = Upland Farming IM = Improved	



***WATERSHED CONSERVATION
PLAN MAP***



INDEX MAP

LEGEND

WATERSHED CONSERVATION PLAN

WATERSHED CONSERVATION PLAN	
INTENSIVE AREA BOUNDARY	
FORESTRY	
Protection Forest	
Community Forest	
Nursery	
Forest Guard Station	
EROSION CONTROL FACILITY	
Rehabilitation of Existing Earth Fill Check Dam	
Rehabilitation of Existing Gabion Box Check Dam	
Check Dam	
River Bed Protection Works	
River Bank Protection Works	
Slope Protection Works for Hillside	
Slope Protection Works for Road	
AGRICULTURE / AGROFORESTRY	
AGF - I / IM	
AGF - II / IM	
AGF - III / IM	
UF / IM	
UF	
Non-Agricultural Area	
MONITORING SYSTEM	
Soil Erosion Monitoring Station	
Rainfall Monitoring Station	
Flow Rate Monitoring Station	
Water Quality Monitoring Station	
Bench Mark	

TOPOGRAPHICAL MAP

Existing Triangulation Point Titik Tetap Triangulasi	Electric Power Line Jalur Tegangan Tinggi
Existing Bench Mark Bench Mark	Cutting and Embankment Kerukan dan Timbunan
Spot Height titik Tinggi	Swamp Rawa
House / Building Bangunan	Paddy field Sawah
Gasoline Pump Pompa Bensin	Boundary of Vegetation Batas Tanaman
Road Jalan	Field Ladang
Path Jalan Setapak	Forest Hutan
Bridge Jembatan	Grass Rumput
Station	Tree Pohon
Kecamatan Boundary Batas Kecamatan	Water hole Lubang Air
Kelurahan Boundary Batas Kelurahan	Sluice Pintu Air
Land Slide Gorong	Pipe Culvert Gorong - gorong
a. River / Sungai b. Rivulet / Anak Sungai c. Direction / Arah Sungai	Line Contour Garis Kontur
	Pond, lake Kolam, danau
	Sand Pasir

Scale 1 : 10.000

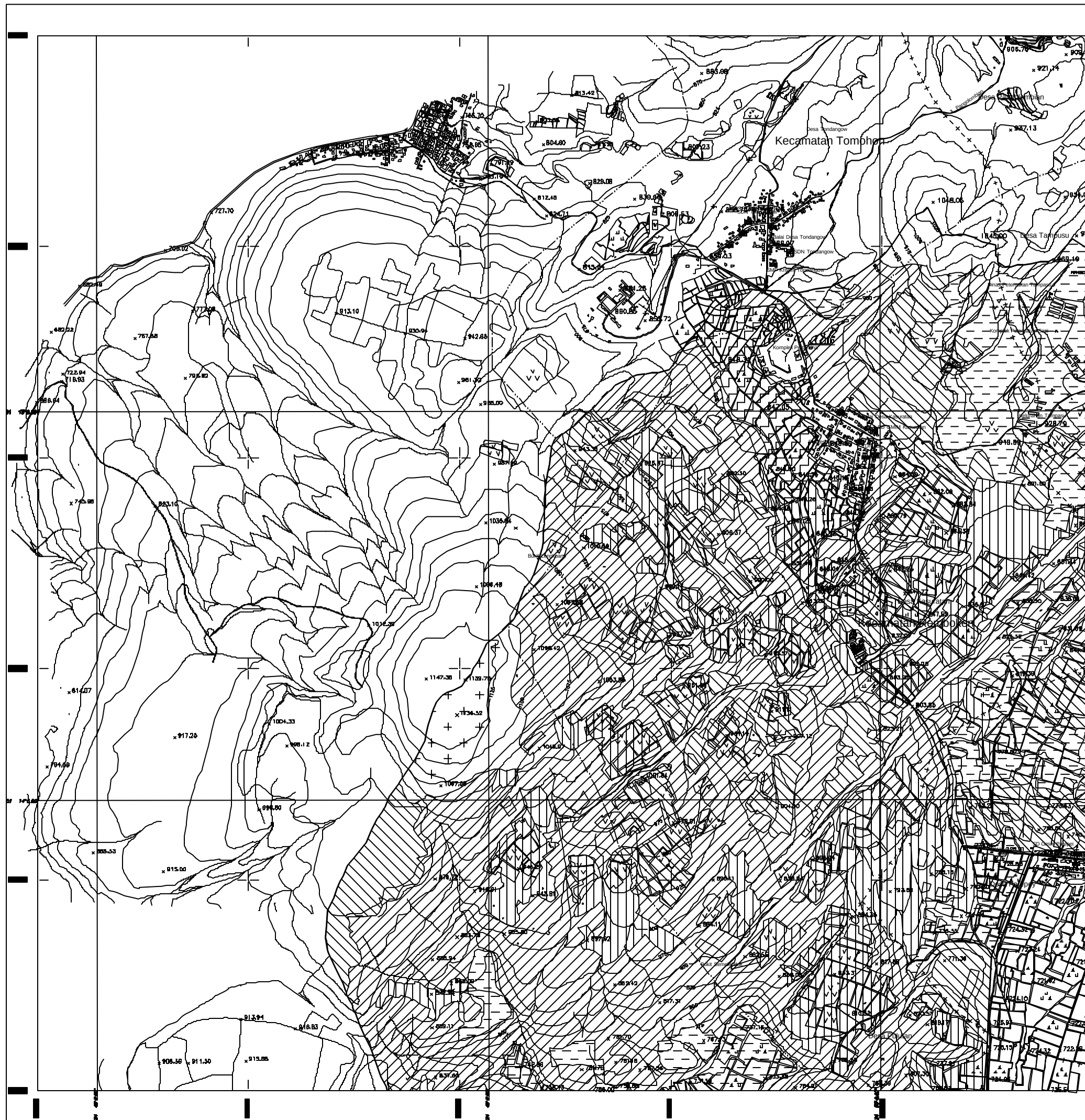
REPUBLIC OF INDONESIA
MINISTRY OF FORESTRY AND ESTATE CROPS
DIRECTORATE GENERAL OF LAND REHABILITATION AND SOCIAL FORESTRY

THE STUDY ON CRITICAL LAND AND PROTECTION FOREST
REHABILITATION AT TONDANO WATERSHED PROJECT

WATERSHED CONSERVATION PLAN MAP

JICA JAPAN INTERNATIONAL
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A/6



INDEX MAP

LEGEND

WATERSHED CONSERVATION PLAN

FORESTRY		AGRICULTURE / AGROFORESTRY	
	Protection Forest		AGF - I / IM
	Community Forest		AGF - II / IM
	Nursery		AGF - III / IM
	Forest Guard Station		UF / IM
EROSION CONTROL FACILITY			UF
	Rehabilitation of Existing Earth Fill Check Dam		Non-Agricultural Area
	Rehabilitation of Existing Gabion Box Check Dam	MONITORING SYSTEM	
	Check Dam		Soil Erosion Monitoring Station
	River Bed Protection Works		Rainfall Monitoring Station
	River Bank Protection Works		Flow Rate Monitoring Station
	Slope Protection Works for Hillside		Water Quality Monitoring Station
	Slope Protection Works for Road		Bench Mark

TOPOGRAPHICAL MAP

	Existing Triangulation Point		Electric Power Line
	Trik Tetap Triangulasi		Jalur Tegangan Tinggi
	Existing Bench Mark		Cutting and Embankment
	Bench Mark		Kerukan dan Timbunan
	Spot Height		Swamp
	Titik Tinggi		Rawas
	House / Building		Paddy field
	Bangunan		Sawah
	Gasoline Pump		Boundary of Vegetation
	Pompa Bensin		Batasi Tanaman
	Road		Field
	Jalan		Ladang
	Path		Forest
	Jalan Sepatapak		Hutan
	Bridge		Grass
	Jembatan		Rumput
	Station		Tree
	Stasiun		Pohon
	Kecamatan Boundary		Water hole
	Batasi Kecamatan		Lubang Air
	Kelurahan Boundary		Sluice
	Batasi Kelurahan		Pintu Air
	Land Slide		Pipe Culvert
	Tebing		Gorong - gorong
	a. River / Sungai		Line Contour
	b. Rivulet / Anak Sungai		Garis Kontur
	c. Direction / Arah Sungai		Pond, lake
			Kolam, danau
			Sand
			Pasir

Scale 1 : 10.000

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B/3