DETAILED PROJECT REPORT

INTEGRATED WATERSHED MANAGEMENT PROJECT

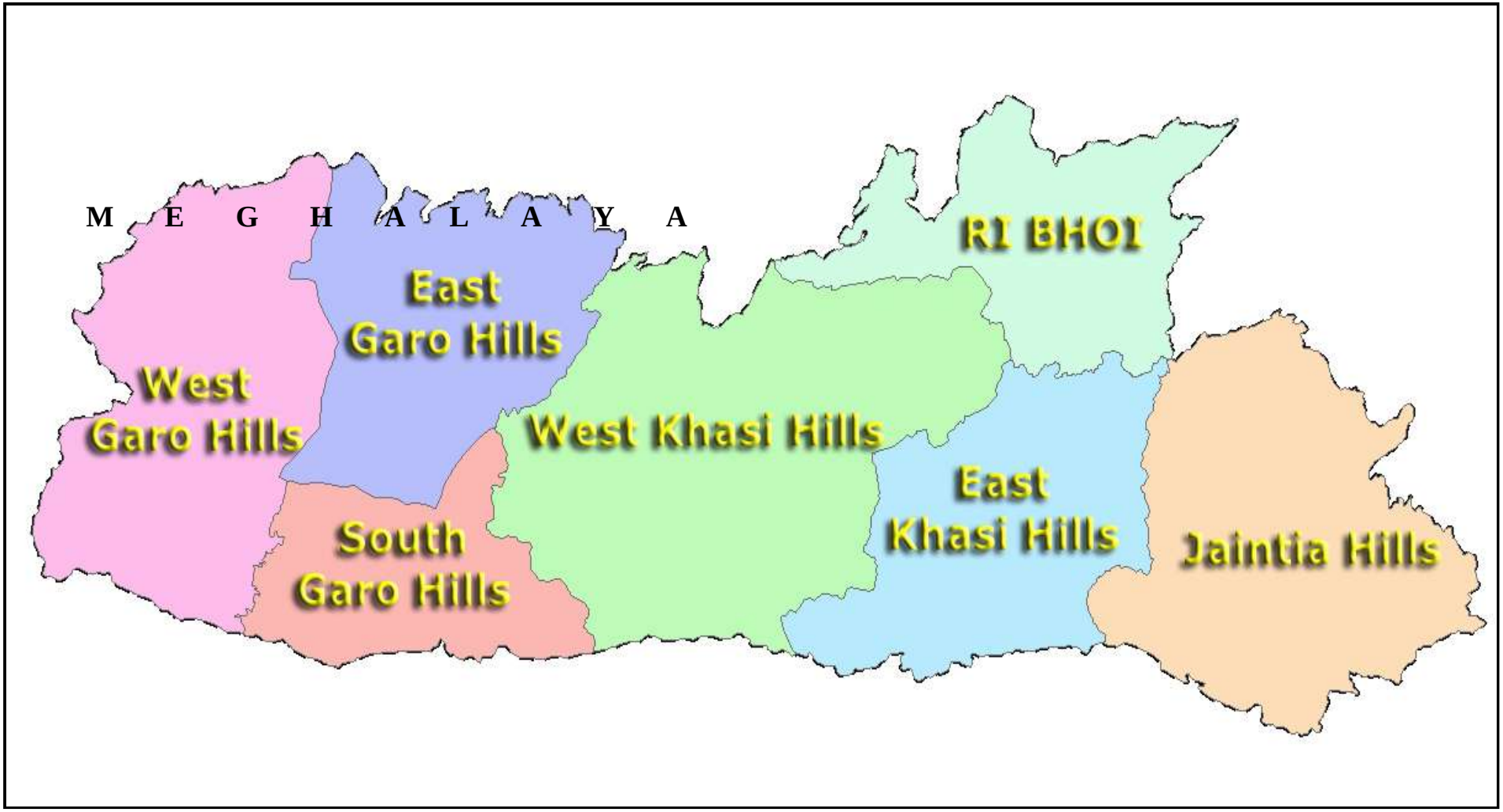
IWMP – I

2009 – 2010

UMSNING C & RD BLOCK

RI BHOI DISTRICT

MEGHALAYA


M E G H A L A Y A
West Garo Hills
East Garo Hills
South Garo Hills
West Khasi Hills
RI BHOI
East Khasi Hills
Jaintia Hills

SUMMARY

Name of the Sate	:	Meghalaya
Name of the District	:	Ri Bhoi District
Name of the C&RD Block	:	Umsning
Name of the Micro-watershed	:	1. Umtymmen Rupa MWS 2. Umsarang MWS 3. Lower Umsahong MWS 4. Umbyrshan MWS
Name of the Villages	:	(i) Umtyrkhang (ii) Iamkhon (iii) Mawlaho (iv) Mawpat (v) Mawshunam (vi) Umsarang (vii) Lumdiengngan (viii) Lumsohphoh (ix) Lumshyiap (x) Lumsohpieng (xi) Pamphret (xii) Dongpyngrop
Name of the Project	:	Ri Bhoi – IWMP – I
Total Geographical Area	:	3180 Ha
Total Treatment Area	:	2000 Ha
Total Project Cost	:	300 lakhs
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation Ri Bhoi Division, Nongpoh.

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INTRODUCTION AND BACKGROUND

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INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Lower Umsahong, Umbyrshan, Umtymmnen Rupa and Umsarang (IWMP-I) project is located in Umsning C&RD Block, Ri Bhoi District of Meghalaya. Consisting of a four micro-watershed, the project area is drained to the Umiam and its tributaries flowing in a south to north direction. The total area is 3180 Ha with 2000 Ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 70 km from Nongpoh the District Head Quarter. A total of twelve villages are covered under the project. These are –

1. Umsarang
2. Lumsohphoh
3. Lumshyiap
4. Nonglakhiat
5. Lumsohpieng
6. Pamphret
7. Dongpyngrope
8. Iamkhon
9. Umtyrkhang
10. Mawpat
11. Mawshunam
12. Mawlaho

1.2 Micro-watershed Information:

The micro-watershed code are Lower Umsahong 3B2B4b1f, Umbyrshan 3B2A4b1g, Umtymmnen Rupa 3B2A6c2b and Umsarang 3B2A6c1j as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 3180 Ha., with 2000 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed 3B2B4b1f, 3B2A4b1g, 3B2A6c2b and 3B2A6c1j falls under the Medium Priority category as per the prioritization of watersheds by the North East Space Application Centre (NESAC). Located on the Northern aspect sloping towards Assam the 12 villages do have kutcha road connectivity. The farmers are mostly marginal and 204 households are below the poverty line, which is 29.69% of the total households. Jhum cultivation is still practiced by most of the inhabitants of these villages on the slopes.

Even though the area receives ample rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to travel long distances for fetching water even for domestic use.

1.4 Other developmental projects/schemes running in the Project Area:

The other developmental projects/schemes undertaken in the Project Area are:-

i. MGNREGS

ii. Total Sanitation Campaign (TSC)

iii. Swarnjayanti Gram Swarozgar Yojana (SGSY)

iv. Indira Awas Yojana (IAY)

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

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BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area of Lower Umsahong and Umbyrshan are located within the area of Khyriem Syiemship while that of Umsarang and Umtymmenrupa are located within the area of Mylliem Syiemship under Umsning C&RD Block of Ri Bhoi District. It is situated at a distance of about 45 km from Nongpoh the district Head Quarter and about 125 km from Shillong which is also the State Capital. The geographical location is between 92^0 00' to 91^0 10'00"E Longitude and 25^0 41' to 25^0 42' 00"N Latitude of Umsarang MWS, 92^0 01'0'' to 92^0 03'00"E Longitude and 25^0 41'0'' to 25^0 44' 00"N Latitude of Umtymen rupa MWS, 92^0 06'00' to 92^0 08'00"E Longitude and 25^0 53'00' to 25^0 56' 00"N Latitude of Umbyrshan MWS, 92^0 07'00" to 92^0 09'00"E Longitude and 25^0 53'00' to 25^0 55' 00"N Latitude of Lower Umsahong MWS,. There are 12 villages within the Watershed which are as follows –

1. Umsarang
2. Lumsohphoh
3. Lumshyiap
4. Nonglakhiat
5. Lumsohpieng
6. Pamphret
7. Dongpyngrope
8. Iamkhon
9. Umtyrkhang
10. Mawpat
11. Mawshunam
12. Mawlaho

2.2 Physiography:

The physiography of the micro-watershed is moderately undulating. The altitude ranges from a minimum of 880-1080m (Umsarang), 900-1200m (Umtymmen rupa), 400-800m (Lower Umsahong) and 400-800m (Umbyrshan) respectively above mean sea level. In the lower reaches (valley lands) the slope ranges from 0% to 20%, however, in the middle and upper reaches it is greater than 45 %, and can reach up to 70%.

Table 2.1: Physiographic details

1	2	3	4	5	6	7
Sl. No.	**Names of Projects**	**Elevation (metres)**	**Slope range (%)**	**Order of watershed Sub/Micro-watershed**	**Major streams**	**Toposequence (Soil series)**
1	RB-IWMP-I					
	1. Umsarang	880-1080m	As per slope map enclosed	3rd order	Umtung	Typic Kandlhmults Typic Dystrochrepts
	2. Umtymmen rupa	900-1200m	-do-	3rd 0rder	Umtung	Typic Kandlhmults Typic Dystrochrepts
	3. Lower Umsahong	400-800m	-do-	3rd order	Umiam	Typic Kandlhmults Typic Dystrochrepts
	4. Umbyrshan	400-800m	-do-	3rd order	Umiam	Typic Kandlhmults Typic Dystrochrepts

2.3 Drainage: The major stream draining the micro-watershed is the Umiam which is a 3th order stream flowing in a south- north direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Umiam (Umbyrshan and Lower Umsahong) and Umtung (Umtymmen rupa and Umsarang).

2.4 Soil: Soil Texture is loamy on the sloping lands and clayey-loamy to sandy clay on the low lying areas. Soil depth varies from shallow to deep. Soils are permeable and generally acidic in nature. Owing to moderately undulating land form and absence of good vegetation cover, the area is exposed to erosion hazards. The soil nutrient status in the area shows a general trend of low phosphorous content.

Table 2.2: Details of soil erosion in the project areas:

1	2	3	4	5	6	7	8	9
Sl. No.	Names of State	Names of District	Names of Projects	Cause	Types of erosion	Area affected (ha)	Run-off (mm/ year)	Average soil loss (Tonnes/ ha/ year)
1	Meghalaya	Ri Bhoi	RB-IWMP-I	Water erosion:				
				a	Sheet	2000	NA	NA
				b	Rill	NA	NA	NA
				c	Gully	NA	NA	NA
				Sub total		2000	NA	NA
				Wind erosion		Nil	Nil	Nil

2.5 Climate: The area in the foothills or low lying areas and mid-slopes are hot in summer and remain warm throughout the winter. The area on the higher reaches is hot during summer and warm during winter. The average annual rainfall is 1205 mm.

Table 2.3: Agro-climatic zones of the project areas, soil types, average rainfall and major crops.

1	2	3	4	5	6	7		8	9	
Sl. No.	Name of State	Name of the Agro-climatic zone	Area (in ha)	Names of the districts	Names of the Projects	Major soil types		Average annual rainfall in mm (preceding 5 years' average)	Major crops	
						a) Type	b) Area (ha)		a) Name	b) Area (ha)
1	Meghalaya	Hills of Norhtern Slopes (300-1200) warm humid hyperthermic	2000 Ha	Ri bhoi	RB- IWMP – I	i. Loamy ii. Clayey loamy	1250 Ha 750 Ha	1205 mm	Paddy	484
									Ginger	128
									Pineapple	85
									Vegetables	60
									Arecanut	45
									Betel Leaf	20
									Others	312
			2000 Ha				2000 Ha	**1205 mm**		**1135 Ha**

2.6 Agriculture: Agriculture is the primary occupation of the people of the area. The people mostly practice jhum. The jhum plots vary from 0.5 to 1.0 Ha, and are cultivated for 1-2 years. The principal agricultural crops grown in the jhum fields are Hill Paddy, Ginger and vegetables. Fruit crops are well suited in the lower reaches which include, orange, pineapple, jackfruit, litchi. The slopes of the project areas are also very suitable for betel nut, betel leaf, black pepper, broomstick, which contribute to the income of the people.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Paddy	485	2.69	1300
Maize	128	2.25	288
Ginger	85	8.00	680
Pineapple	60	11.49	6894
Arecanut	45	NA	NA
Betel Leaf	20	NA	NA
Others	312	NA	NA

2.7 Natural Vegetation: The tree species common to the watershed area includes - *Quercus* spp. *Castanopsis* spp. *Toona ciliata, Albizia* spp. *Aporosa* spp. *Bahunia variegata Duabanga* spp. and *Ficus* spp. However, due to jhum cultivation the forest cover of the area has reduced considerably.

2.8 Socio-Economic Profile: Economically, the project area is still backward compare to other part of the district. The main reason is due to the absence of road communication, primitive way of agricultural practices like jhumming and the difficult terrain of the area.

Demographic Status: The total households in the watershed project is 687 with a total population of 3031, of which 1631 are male and 1400 are female. The detail of the household in each of the villages in the watershed project is as follows:

1. Umsarang
2. Lumsohphoh
3. Lumshyiap
4. Nonglakhiat
5. Lumsohpieng
6. Pamphret
7. Dongpyngrope
8. Iamkhon
9. Umtyrkhang
10. Mawpat
11. Mawshunam
12. Mawlaho

Demographic details of the four micro watershed:

Name of Micro Watershed	No. of Male	No. of Female	Total No. of Population	SC %	ST %	Landless Labourers %
Umtymmen Rupa	453 nos.	372 nos.	825 nos.	-	100%	NA
Umsarang	579 nos.	467 nos.	1046 nos.	-	100%	0.2%
Umbyrshan	297 nos.	275 nos.	572 nos.	-	100%	2%
Lower Umsahong	302 nos.	286 nos.	588 nos.	-	100%	2%
TOTAL	1631	1400	3031	-	100 %	

Infrastructure facilities **:**

2.1.1 *Roads:* Some of the villages within the Project Area are connected by road. The Project area depends entirely on the kutcha road connected to Sonidan for Lower Umsahong and Umbyrshan Micro-Watershed and to Bhoilymbong for Umsarang and UMtymmen rupa MWS.

2.1.2 *School:* there are only 14 L.P Schools and 6 Secondary Schools within the Project Area run either by the Mission or by the Government.

2.1.3 *Electricity :* Connections have been provided to all some villages.

2.1.4 *Health :* There are 8 Primary Health Centres within the project areas.

2.1.5 *Water Supply :* Drinking water supply have been provided by the PHE Deptt. To most villages. However, during lean season the entire population have to depend on springs available in the area as the supply is not sufficient to meet the daily requirement.

2.1.6 *Market :* There is a weekly market held once in a week at Mawhati, Mawlasnai, Umroi, Umsning. However, the main market where the people sell their produce are at Mawhati, Umsning, Umroi and also at Shillong.

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
Ri-Bhoi	Ri-Bhoi – IWMP I	(i)	No. of villages connected to the main road by an all-weather road.	12			
		(ii)	No. of village provided with electricity	12			
		(iii)	No. of households without access to drinking water	126 nos.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P) 14 Nos.	(S) 6 nos	(HS) -	(VI) -
		(v)	No. of village with access to Primary Health Centre	8			
		(vi)	No. of village with access Veterinary Dispensary	2			
		(vii)	No. of village with access Post Office	8			
		(viii)	No. of village with access Banks	Nil			
		(ix)	No. of village with access Markets/ mandis	1			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U) Nil	(S) Nil	(PA) Nil	(O) Nil
		(xiii)	No. of villages with access to Aganwadi Centres	8 No.			
		(xiv)	Any other facilities with no. of villages (please specify)	Nil			

2.9 Livestock: there are only 3 kinds of livestock farming being farmed in the area i.e., Piggery, poultry and fishery.

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	130
Poultry	NA
Fishery	NA
Total	130

2.10 Land ownership: There are primarily two types of land holding system, namely private lands (Ri Kynti i.e. individually owned land) and community lands (Ri Kur i.e. clan land and Ri Raid i.e. village community land).

Table 2.7: Land Holding:

1	2	3	4	5	6		
Name of District	Name of the Project	Types of Farmer	No. of households	No. of BPL households	Land holding (ha)		
					Irrigated	Rainfed	Total
Ri-Bhoi	Ri-Bhoi – IWMP I	(i) Large	24	-	-	360	360
		(ii) Small	268	-	-	1206	1206
		(iii) Marginal	337	146	-	434	434
		(iv) Landless	58	58	-	-	-
		Sub - Total	687	204	-	2000	2000

Table 2.5: Common Property Resources in the Project Area

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
Ri-Bhoi	Ri-Bhoi – IWMP I	(i) Wasteland/ degraded land	2035	-		280 clan land	1135	-	-	60 clan land
		(ii) Pastures	35	-	-	-	-	-	-	-
		(iii) Orchards	240	-	-	-	140			-
		(iv) Village woodlot	25	-	-	125 clan land	-	-	-	12 clan land
		(v) Forest	285	-	-	130 clan land	190	-	-	30 clan land
		(vi) Village Ponds/ Tanks	40	-	-	12 village durbar	-	-	-	1 village durbar
		(vii) Community Buildings	-	15	-	24	-	5	0	1
		(viii) Weekly Markets	-	-	-	8	-	-	-	1
		(ix) Permanent Markets	-	-	-	6	-	-	-	6
		(x) Temples/ Places of worship	-	-	-	6	-	-	-	2
		(xi) Others (Pl. specify)	-	-	-	14	-	-	-	2
		Total	2560	**15**	**-**	**605**	**1695**	**5**	**-**	**115**

2.11 Land use and land cover : As per the land use land cover map generated by NESAC, Meghalaya from Satellite Image taken during 2005 – 2006 (LISS – III, Image) the Watershed area has been broadly classified into the following land uses.

1. Umsarang MWS

Lulc_class	Area in Hectare
Agricultural Land-Crop Land-Two crop Area	480.51
Forest-Forest Plantation	50.54
Others-Shifting Cultivation	11.77
Tree Clad Area-Close	104.90
Wastelands-Scrub land-DenseScrub	7.15
Total	654.88

2. Umtymmen rupa MWS

Lulc_class	Area in Hectare
Agricultural Land-Crop Land-Two crop Area	367
Built Up – Built Up (Rural) – Built Up area (Rural)	92
Tree Clad Area-Open	221
Tree Clad Area-Close	199
Waterbodies – lakes / ponds	3
Total	882

3. Lower Umsahong MWS

LULC_Class	Area in Hectare
Tree Clad Area-Close	121.28
Tree Clad Area-Open	23.94
Wastelands Scrub land Open Scrub	367.19
Total	512.42

4. Umbyrshan MWS

Lulc_class	Area in Hectare
Agricultural Land-Crop Land-Two crop Area	143
Built Up – Built Up (Rural) – Built Up area (Rural	53
Tree Clad Area-Close	233
Tree Clad Area-Open	159
Wastelands-Scrub land-Open Scrub	542
Total	1130

2.12 Problems of the Area : The primary problems of the area is jhumming. Majority of the population depends on Jhum Cultivation for their livelihood. Vast tracks of abandoned Jhum areas are converted to Broomstick cultivation areas which has further degraded the capability of the land. Mention may also be made here that the land use categorized as Tree-clad Area-open in the land used land cover map generated using Satellite Images of 2005 – 2006 are actually Broom-stick cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. Road communication is another infrastructural problems that the area is facing where large volume crops like pineapple, jackfruits etc do not find their way into the market which has resulted in poor socio-economic status of the people. However, to control or to overcome the said problems an innovative approach has been formulated and documented in the Action Plan or the Treatment Plan the Detailed Project Report. The method of identification of the problems is through the Participatory Rural Appraisal Exercises conducted in all the villages within the Watershed.

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

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3.1 Scientific Planning

i) Base Line Survey: To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi –structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area.

ii) Participatory Rural Appraisal: To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.

iii) GIS & Remote Sensing: To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared by the North Eastern Space Application Centre (NESAC) using the LISS III images (2006). The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

Table 3.1: Details of Scientific Planning and Inputs in IWMP projects:

1	2	2
Total no. of projects sanctioned	Scientific criteria/ inputs used	No. of projects in which scientific criteria were used
	(A) Planning	
	Cluster approach	Yes
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	Yes SIRD
	Baseline survey	Yes
	Hydro-geological survey	Yes
	Contour mapping	Yes
	Participatory Net Planning (PNP)	No

	Remote sensing data-especially soil/ crop/ run-off cover	Yes
	Ridge to Valley treatment	Yes
	Online IT connectivity between	
	(1) Project and DRDA cell/ZP	No
	(2) DRDA and SLNA	No
	(3) SLNA and DoLR	Yes
	Availability of GIS layers	
	1. Cadastral map	No
	2. Village boundaries	Yes
	3. Drainage	Yes
	4. Soil (Soil nutrient status)	Yes
	5. Land use	Yes
	6. Ground water status	No
	7. Watershed boundaries	Yes
	8. Activity	Yes
	Crop simulation models[#]	No
	Integrated coupled analyzer/ near infrared visible spectroscopy/ medium spectroscopy for high speed soil nutrient analysis	No
	Normalized difference vegetation index (NDVI)#	No
	Weather Stations	No
	(B) Inputs	
	1. Bio-pesticides	No
	2. Organic manures	Yes
	3. Vermicompost	No
	4. Bio-fertilizer	No
	5. Water saving devices	Yes
	6. Mechanized tools/ implements	No
	7. Bio-fencing	Yes
	8. Nutrient budgeting	No
	9. Automatic water level recorders & sediment samplers	No
	Any other (please specify)	

3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation Ri-Bhoi Division, Nongpoh, Ri-Bhoi District of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by Range Officer, Sonidan Soil & Water Conservation Range and Beat Officer, Umroi Soil & Water Conservation Beat along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

1	2	3	
Names of Districts	Names of projects	Details of PIA	
Ri bhoi	IWMP I	(i) Type of organization#	Government Department
		(ii) Name of organization	Soil and Water Conservation Department, Government of Meghalaya
		(iii) Designation & Address	Divisional Soil and Water Conservation Officer, Ri Bhoi Division, Nongpoh, Meghalaya.
		(iv) Telephone	03638-232257
		(v) Fax	03638-232257
		(vi) E-mail	Dswco_ribhoi@yahoo.com

3.3 Institution Building

Details of Watershed Development Teams (WDTs) in the project areas of the country: State–wise:

1	2	3	4	5	6	7	8
Names of Districts	Names of projects	Names of WDT members	M/F#	Age	Qualification / Experience	Description of professional training	Role/ Function##
Ri bhoi	IWDP I Umsning	Smti V Papang	F		BSc Agri/25 yrs	Sol and water conservation trained	A to I
		Shri A B S Swer	M		BSc Agri/20yrs	-do-	A to I
		Shri S S Kharsyntiew	M		BSc/30yrs	-do-	A to I
		Shri A Bhattacharjee	M		JE/24 yrs	-do-	ABEFGHI
		Shri E.Kharbhih	M		30 yrs	-do-	A to I
		Shri A M Kharmutee	M		30 yrs	-do-	A to I
		Shri. B.P Marwein	M		26 yrs	-do-	A to I
		Shri K.Iawphniaw	M		26 yrs	-do-	A to I
		Smti I.Moksha	F		BCA/1 yr	Trained in capacity building	A,E

M – Male, F - Female## In column 10, only the letter, assigned as below, needs to be typed, except for `J', where the type may be specifically mentioned.

A. Participatory Net Planning (PNP) and Participatory Rural Approach (PRA), Training and Capacity Building
B. Planning
C. Maintenance of Accounts
D. Signing of cheques and making payments
E. Social audit
F. Engineering surveys, drawings and cost estimations
G. Physical verification & measurement
H. Record of labour employed
I. Livelihood opportunities for landless
J. Post project operation, maintenance of assets
K. Any other (please specify)

Watershed Committee (WC)

The Watershed Committee of the Lower Umsahong, Umbyrshan, Umsarang and Umtymmen rupa IWMP I was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Durbar/Council). The Lower Umsahong, Umbyrshan, Umsarang and Umtymmen rupa Watershed Committee has been registered under the Society Registration Act 1860.

Village Level Institutions:

Table 3.2: Details of Watershed Committees (WC):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educa-tional qualifi-cation	Function/s assigned#
Ri Bhoi	IWMP I	Umsarang	NA	President H. Jana	M		Yes		yes					Yes			A,B,D,E. F.G.H.I
				Secretary ABS Swer	M		Yes								Govt service	BSc Agri	A to I
				Member-4	M		Yes	1	1		1			1			A,B,E,F, G,H,I
				Member -2	F		Yes	1	-	-	-	-	-	1			A,B,E,F, G,H,I
		Umtymmen rupa		President SM Shadap	M		Yes										A,B,D,E. F.G.H.I
				Secretary K. Iawphniaw	M		Yes								Govt service		A to I
				Member -8	M		Yes	4	2		-			2			A,B,D,E. F.G.H.I
				Member -8	F		Yes	2									A,B,D,E.

																F.G.H.I
				President SM Shadap	M		Yes									A,B,D,E. F.G.H.I
		Lower Umsahong		President Sting Shangrang	M		Yes									A,B,D,E. F.G.H.I
				Secretary E. Kharbhih	M		Yes									A to I
				Member -4	M		Yes	2	1		1					A,B,E,F, G,H,I
				Member -3	F		Yes	1	1				1			A,B,E,F, G,H,I
		Umbyrshan		President Robert Muktieh	M											A,B,D,E. F.G.H.I
				Secretary E Kharbhih	M											A to I
				Member -7	M		Yes	1	1		1	1		1	2	A,B,E,F, G,H,I
				Member												

* From column no.2, the total number of States, from column no.3, the total number of Districts; from column no.4, the total number of projects; from column no.5, the total number of watershed committees; from column no.6, the total number of registered watershed committees; from column no.7, the total number of members, and WCs without a President and/or without a Secretary, may be mentioned for the State as a whole. From column no.8, the total no. of male and female members may be mentioned separately. The totals of columns 9 to 18, for the entire country, may be mentioned at the end of the table.

In column 20 only the letter assigned, as below, needs to be typed, except for `J', where the type may be specifically mentioned.

A. PNP and PRA
B. Planning
C. Maintenance of Accounts
D. Signing of cheques and making payments
E. Supervision of construction activities
F. Cost Estimation

G. Verification & Measurement
H. Record of labour employed
I. Social Audit
J. Any other (please specify).

i) Self Help Group

Awareness programmes were organized in the villages to inform and sensitize the people on the essence of organizing themselves in to homogenous groups for uplifting their livelihood especially for the women and the landless. Discussions were held at length with the WDT on the scope and procedure of group formation, availing credit, grading of the groups and so on.

Table 3.3: Details of Self Help Groups (SHGs) in the project areas:

1	2	3				4				5			6		
Names of the Districts	Names of projects	Total no. of registered SHGs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		With only Men	With only Women	With both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
Ri Bhoi	IWMP I	Nil	Nil			(i) Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									

ii) User Group

To manage the assets created and ensure their sustainability User Groups will be formed. The people have been sensitized on the importance of ensuring that the assets created are sustainably used and the essentiality of having User Groups for maintenance and operation of their assets.

Table 3.4: User Group Details

1	2	3				4				5			6		
Names of Districts	Names of Projects	Total no. of UGs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		Men	Women	Both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
Ri Bhoi	IWMP I	NA	NA	NA	NA	(i)Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total															

CHAPTER IV

PROJECT ACTIVITIES

CHAPTER IV
PROJECT ACTIVITIES

4.1 Preparatory Phase:

i) Entry Point Activities (EPA)
(All financial figures in lakh Rs.)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA (Rs/lakhs)	E P A planned (Rs/lakhs)	Estimated cost (Rs/lakhs)	Expenditure incurred (Rs/lakhs)	Balance (Rs/lakhs)	Expected outcome	Actual outcome
1	Meghalaya	Ri Bhoi	RB-IWMP-I	Rs.12.00	Drinking Water-14 nos Footbridge-6 no Water Harvesting pond-4 no	Rs.12.00	Rs.12.00	Nil	Clean drinking water, safe crossing of stream, ground water recharge	Clean drinking water, safe crossing of stream, ground water recharge

ii) Other activities of Preparatory Phase:

1	2	3	4	5	6	7	8	9	10	11	12	13
District	Name of Projects	Initiation of village level institution	Capacity building	IEC activities	Baseline survey	Hydro-geological survey	Identifying technical support agencies	Resource agree-ments	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In lakh)
Ri Bhoi	RB-IWMP-I	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	21.00

4.2 Watershed Works Phase:

4.2.1 **Activities related to surface water resources in the project areas:**

1	2	3	4	5	6			7										
Sl. No	Name of States	Name of Districts	Name of Projects	Type of structures	Pre Project			Proposed Project										
								Augmentation/ repair of existing structures				Construction of new structures				Total target			
					No	Area irrigated (ha)	Storage capacity(Ha)	No	Area to be treated (ha)	Storage capacity	Estimated cost	No	Area to be treated (ha)	Storage capacity	Estimated cost(Rs lakhs)	No	Area to be treated (ha)	Storage capacity	Estimated cost
1	Meghalaya	Ri Bhoi	RB-IWMP-I	(i) Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(ii) Pond	8		0.80	-	-	-	-	7	12	1.2	2.233	7	12	1.2	2.233
				(iii) Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(iv) Check Dam	16	-	-	-	-	-	-	84	165	0	6.30	84	165	0	6.30
				(v) Percolation Tank	-	-	-	-	-	-	-	62	73	12.40	20.336	62	73	12.40	20.336
				(vi) Channel	-		-	-	-	-	-	40	0	0	3.758	40	0	0	3.758
				(vii) Any others -cc dam -protection wall	-	-	-	-	-	-	-	 40 28	 62 12	 0 0	 11.96 8.309	 40 28	 62 12	 0 0	 11.96 8.309
			Total		24	0	0.80	-	-	-	-	87	324	13.60	52.896	87	324	13.60	52.896

Activities related to surface water resources in the project areas:

8											9	10
Achievement due to project												
Augmentation/ repair of existing structures				Construction of new structures				Total achievement			Change in storage capacity (col 8-6)	Change in irrigated area (ha) Col. (8-6)
No	Area irrigated (ha)	Storage capacity	Expenditure incurred	No	Area irrigated (ha)	Storage capacity	Expenditure incurred	Area irrigated (ha)	Storage capacity	Estimated incurred		
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.2 Activities related to recharging ground water resources in the project areas:

1	2	3	4	5	6		7								8								9
S. No.	Names of States	Names of Districts	Names of projects	Type of structures	Pre-project		Proposed target								Achievement due to project								Change in irrigated area (Col. 8-6) (ha)
					No.	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target		Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total achievement		
							No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost	No.	Area irrigated (ha)	Expenditure incurred	No	Area irrigated (ha)	Expenditure incurred	Area irrigated (ha)	Expenditure incurred	
1	Meghalaya	Ri Bhoi	RB-IWMP-I	(i)Open wells	Nil	Nil	Nil	Nil	Nil														
				(ii)Bore wells	Nil	Nil	Nil	Nil	Nil														
				(iii)Any others #Percolation tanks/check dams	24	Nil	Nil	Nil	Nil	193	312	40.829	312	40.829	NA	NA	NA	NA	NA	NA	NA	NA	NA
				Total for the project	24	Nil	Nil	Nil	Nil	193	312	40.829	312	40.829	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.3 Activities executed by User Groups in the Project Areas.

1	2	3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets				No. of UGs involved	Estimated Cost	Amount of WDF to be collected (Rs.)
		Structure/ activity proposed						
		Sl. No.	Type	No.#	Treatment (ha)			
Ri Bhoi	RB-IWMP-I	NA	NA	NA	NA	NA	NA	NA

4.2.4 Activities executed by User Groups in the Project Areas:

4									
Major activities of the UGs – Achievements									
Structure/ activity				No. of UGs involved	Expenditure incurred (Rs.)	No. of mandays			Amount of WDF collected (Rs.)
Sl. No.	Type	No.#	Treated Area (ha.)			SC	ST	F	
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.5 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

1	2	3		
Names of the Districts	Names of projects	Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
Ri Bhoi	RB-IWMP-I	NA	NA	NA

4.2.6 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

4	5				6	7	8			9	10
No. of SHGs given training	Total assistance received by the SHG (Amount in Rs.)				Total annual Income generated (Rs.)	Total annual Savings (Rs.)	No. of SHGs Graded as			Total Amount of loan sanctioned by the bank(s)	No. of SHGs federated
	Loan from revolving fund	Training	Material	Others (pl. specify)			I	II	III		
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.7 Other activities of watershed works phase:

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Names of projects	Ridge area treatment		Drainage line treatment		Nursery/ floriculture raising		Land development		Crop demonstrations		Livelihood development and production		Veterinary services		Fishery development		Non-conventional energy		Any other (value addition)		Total cost incurred (Rs. In lakhs)
		(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
Ri Bhoi	RB-IWMP-I	590 ha	21.24	324 ha	52.896	26 units	6.50	1038 ha	75.864	22 ha	12.00	38 units	7.00	150 units	15.00	100 units	25.00	0	0	7 units	3.50	219.00

4.2.8 Details of engineering structures in watershed works:

1	2	3	4			5			6	7					8						
			Type of treatment			Type of land			Executing agency	Target					Achievement						
District	Project	Name of structures	(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Pri-vate	(ii) Commu nity	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	No. of units (No./ cu.m./ rmt)	Estimated cost (Rs. in lakh)				Expected month & year of completion (mm/yyyy)	No. of units (No./ cu.m./ rmt)	Expendi-ture incurred (Rs. in lakh)				Status of comple-tion	Actual month & year of completion (mm/yyyy)
											M	W	O	T			M	W	O	T		
Ri Bhoi	RB-WMP-I	Staggered trenching																				
		Contour bunding																				
		Graded bunding																				
		Bench terracing																				
		CC checks dams		40nos		40nos			Land owner	40nos	11.96				03/2014	NA					NA	NA
		Masonary stop dams																				
		Gully plug		84nos		58nos	26nos		Land owner/village durbar	84nos	6.30				03/2014	NA					NA	NA
		Gabion structures																				
		Halfmoon terrace			158ha	158 nos			Land owner	158nos	11.85				03/2014	NA					NA	NA
		Field bunds			320 ha	320 nos			Land owner	320nos	13.76				03/2014	NA					NA	NA
		Any others (pl. specify)																				

4.2.9 Details of engineering structures in watershed works.

9																			
Outcomes																			
Reduction in run off (cu.m)	Area treated# (ha)	Water level (m)		Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
		Pre-project	Post project	Pre-project	Post project	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
NA	NA	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA

4.2.10 Details of activities connected with vegetative cover in watershed works:

1	2	3	4			5			6	7				8			
District	Project	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of comple-tion (mm/ yyyy)	Area # (ha)	No. of plants	Expendi-ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
Ri Bhoi	RB-IWMP-I	Afforestation	Yes		yes	Yes	yes		Landowner/ village durbar	590	2.75	21.24	03/2014				
		Regeneration															
		Agro-forestry															
		Fuel wood															
		Fodder															
		Horticulture			yes	yes			landowner	1038	3.2	75.864	03/2014				
		Pasture dev.															
		Nursery raising	Yes		Yes	Yes	Yes		SHG/UG	For 1628 Ha	5.95	6.50	03/2014				
		Others (pl. specify)															

in case two or more activities are executed over same area, the figures in area treated should be accounted only once and should reflect only the actual watershed area treated.

4.2.11 Details of vegetative structures in watershed works: Phase – II (contd.):

9														
Outcomes														
Reduction in run off (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
	Pre-project	Post project	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2.12 Details of allied / other activities:

1	2	3	4			5	6		7	
District	Project	Name of activity@	Type of land			Executing agency	Target		Achievement	
			(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Expendi-ture incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
RI BHOI	IWMP-I	Crop demonstration								
		Mud bricks.basket making		Yes		SHG	4.00	03/2014		
		Cash crop value addition	Yes			SHG	3.50	03/2014		
		Backyard poultry	Yes			individual	7.50	03/2014		
		Other livestock	Yes			indv	7.50	03/2014		
		Fisheries	Yes	Yes		Indv/vill durbar	25.00	03/2014		
		Tailoring/carpentry/black smithy	yes			indv	3.00	03/2014		
		Non conventional energy saving devices (bio-fuel)								
		Energy conservation measures								
		Others (pl. specify)								

* from column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, total no. of Projects; from column no. 5, activity-wise totals, from column no. 6, type-wise totals, from coulmn no. 7, agency-wise totals, from column no. 8, total estimated cost, from column no. 9, total expenditure incurred, structure-wise no. of completed works, from column no. 10, item-wise totals, for the entire country may be indicated at the end of the table
@The activities given in this column are merely indicative and States are free to choose any other activity suited to the project area.

4.2.13 Details of allied / other activities:

8											
Outcomes											
Income (Rs.)		Mandays generated					No. of beneficiaries				
Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total

4.3 Consolidation and withdrawal phase

Details of activities in the CPRs in the project areas:

1	2	3	4	5	6				7						
					Target				Achievement						
Names of the Districts	Names of projects	Name(s) of the villages	CPR particulars	Activity proposed	Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficia-ries	Estimated contri-bution to WDF (Rs.)	Area treated under the activity (ha)	Expenditure incurred (Rs.)	Actual no. of benefici-aries	No. of mandays			WDF collected (Rs.)
												SC	ST	F	
Ri bhoi	Iwmp I	1. Umsarang 2. Lumsohphoh 3. Lumshyiap 4. Nonglakhiat 5. Lumsohpieng 6. Pamphret 7. Dongpyngrope 8. Iamkhon 9. Umtyrkhang 10. Mawpat 11. Mawshunam 12. Mawlaho	Forest	Improvement	590ha	21.24	687 households	1.062							
			Drinking water	Collection, Filtering Storing Distribution	14 nos	6.00	280 nos	0.35							
			Footbridge	Construction	6 no	3.00	550 nos	0.15							
			Weekly market,	Footpath	4 no	2.00	Comm..	0.10							
			Village paths	Widening	2 no	1.00	Comm.	0.05							

CHAPTER V

PROJECT PHASING & BUDGETING

CHAPTER V
PROJECT PHASING & BUDGETING

ACTION PLAN OF UMSARANG, UMTYMMRN RUPA, LOWER UMSAHONG AND UMBYRSHAN WATERSHED UNDER IWMP – I, RI BHOI DIVISION : NONGPOH

Name of District: Ri Bhoi District
Name of C&RD Block: Umsning Block

No. of villages – 12 nos.
Project Area – 2000 Ha.

NAME OF THE PROJECT: **INTEGRATED WASTELAND MANAGEMENT PROGRAMME PROJECT IV RI BHOI DISTRICT, MEGHALAYA.**

TOTAL AREA OF THE WATERSHEDs 3180 Ha

AREA PROPOSED FOR TREATMENT 2000 Ha -

TOTAL PROJECT COST Rs 300.00 Lakhs CENTRAL SHARE: Rs 270.00 lakhs STATE SHARE: Rs 30.00 lakhs

Rupees in Lakhs

Sl no	Particulars	Budget outlay		First Year		Second Year		Third Year		Fourth Year		Fifth Year	
		Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
1	2	3	4	5	6	7	8	9	10	11	12	13	14
				6 %		14 %		50 %		25 %		5 %	
1	**Administration (PIA) Administrative cost**	10%	30.00			2%	6.00	5 %	15.00	3%	9.00	0	0
	(1)Honorarium to volunteers @ Rs5000/ month for 3 years	4 nos	7.20			4 nos	2.40	4 nos	2.40	4 nos	2.40	0	0
A	(2)Office expenses i)Cost of stores, furniture, ii) Stationeries, iii) Hiring of vehicle etc. iv) TA/DA of staff, etc		3.80 3.00 10.20 5.80				1.00 0.80 1.00 0.80		2.00 2.00 7.40 1.20		0.80 0,20 1.80 3.80	0	0
B	**Monitoring**	1%	3.00			0.2%	0.60	0.5%	1.50	0.3%	0.90	0	0
C	**Evaluation**	1%	3.00			0.3%	0,90	0.5%	1.50	0.2%	0.60	0	0
Total of 1		**12%**	**36.00**				**7.50**		**18.00**		**10.50**	**0**	**0**
2	**Preparatory phase (PIA)**												
A	**Entry point Activities**	21 nos	12.00	4 % 21 nos	12.00	0	0	0	0	0	0	0	0
B	**Institutional, Capacity Building &**			**1 %**	3.00	2%	6.00	1%	3.00	1%	3.00	-	-

	Training, IEC activities												
	i) Training of Watershed Development Team (WDT) members @ Rs. 25,000/- each	8 nos	2.00	4 nos	1.00	4 nos	1.00	0	0	0	0	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	ii)Capacity building and Training of Watershed Secretary, Volunteers and members of Watershed Committee @ Rs 25,000/- each	16 nos	4.00	4 nos	1.00	8 nos	2.00	4 nos	1.00	0	0	0	0
	iii) Capacity building and Training of farmers @ Rs 50,000/- each	16 nos	8.00	2 no	1.00	4 no	2.00	4 nos	2.00	6 nos	3.00	0	0
	iv) Institutional Training @ Rs.25,000/- each	4 no	1.00	0	0	4 nos	1.00	0	0	0	0	0	0
	TOTAL	44 nos	15.00	10 nos	3.00	20 nos	6.00	8 nos	3.00	6 nos	3.00	0	0
C	**Preparation of DPR**	1% 3 nos	3.00	3 nos	3.00	0	0	0	0	0	0	0	0
	Total of 2	**10% 68 nos**	**30.00**	**34 nos**	**18.00**	**20 nos**	**6.00**	**8 nos**	**3.00**	**6 nos**	**3.00**	**0**	**0**
3	**Watershed Works Phase (WC)**												
I	**Watershed Treatment/ Development works**												
A	**Drainage line Treatment**												
i	Protection wall / Utility Platform (as per estimate) @ 29,675/-	28 nos	8.309	0	0	0	0	28 nos	8.309	0	0	0	0
iii	Loose boulder check dam @ Rs.7500/-	84 nos	6.30	0	0	40 nos	3.00	44 nos	3.30	0	0	0	0
iv	Water Harvesting and Distribution @ Rs. 32,800/-	62 nos	20.336	0	0	24 nos	7.872	38 nos	12.464	0	0	0	0

v	CC check Dams @ Rs. 29,900/each	40 nos	11.96	0	0	18 nos	5.382	18 nos	5.382	4 nos	1.196	0	0
vi	Run-off disposal channel @ Rs 26/Rm	14454Rm	3.758	0	0	2870 Rm	0.746	6749 Rm	1.7548	4835 Rm	1.2572	0	0
Vii	Dug-out ponds @ 31900	7 nos	2.233	0	0	0	0	7 nos	2.233	0	0	0	0
Total of A- Drainage line Treatment		**324 Ha**	**52.896**	**0**	**0**	**104.0 Ha**	**17.00**	**212 ha**	**33.4428**	**8 Ha**	**2.4532**	**0**	**0**
1	2	3	4	5	6	7	8	9	10	11	12	13	14
B	**Arable Land Treatment**												
i	Improvement of Existing Paddy Fields @ Rs.4300/Ha	320 Ha	13.76	0	0	0	0	320 Ha	13.76	0	0	0	0
ii	Half moon terrace @ Rs. 7500/Ha	158 Ha	11.85	0	0	0	0	158 Ha	11.85	0	0	0	0
Iii	Agro- horticulture (citrus) @Rs.8600/Ha	240 Ha	20.64	0	0	0	0	0	0	0	0	0	0
	i Preliminary works and First year planting @ Rs.1300/Ha	0	0	0	0	240 Ha	3.12	0	0	0	0	0	0
	ii First year Maintenance @ Rs.4600/Ha	0	0	0	0	0	0	240 Ha	11.04	0	0	0	0
	iii Second year Maintenance @ Rs 2700/Ha	0	0	0	0	0	0	0	0	240 Ha	6.48	0	0
Iv	Agro- horticulture (temperate) @Rs.8350/Ha	180 Ha	15.03	0	0	0	0	0	0	0	0	0	0
	i Preliminary works and First year planting @ Rs.1100/Ha	0	0	0	0	0	0	180 Ha	1.98	0	0	0	0
	ii First year Maintenance @ Rs.4880/Ha	0	0	0	0	0	0	180 Ha	8.784	0	0	0	0
	iiii Second year Maintenance @ Rs. 2370/Ha	0	0	0	0	0	0	0	0	180 Ha	4.266	0	0
V	Agro- horticulture(arecanut) @Rs 12,680/Ha (238pl/Ha)	80 Ha	10.144	0	0	0	0	0	0	0	0	0	0
	i Preliminary works and First year planting @ Rs.1490/Ha	0	0	0	0	0	0	80 Ha	1.192	0	0	0	0
	ii First year Maintenance @ Rs.8664/Ha	0	0	0	0	0	0	80 Ha	6.9312	0	0	0	0

	iii Second year Maintenance @ Rs 2526/Ha	0	0	0	0	0	0	0	0	80 Ha	2.0208	0	0
Vi	Agro- horticulture (banana) @Rs 7400/Ha	60 Ha	4.44	0	0	0	0	0	0	0	0	0	0
	i Preliminary works and First year planting @ Rs.1080/Ha	0	0	0	0	0	0	60 Ha	0.648	0	0	0	0
	ii First year Maintenance @ Rs.4020/	0	0	0	0	0	0	60 Ha	2.412	0	0	0	0
	ii First year Maintenance @ Rs 2300/Ha	0	0	0	0	0	0	0	0	60 Ha	1.38	0	0
Total of B - Arable Land Treatment		**1038 Ha**	**75.864**	**0**	**0**	**240 Ha (C)**	**3.12**	**798 Ha (C) 560 Ha (M)**	**58.5972**	**560 Ha (M)**	**14.1468**	**0**	**0**
1	2	3	4	5	6	7	8	9	10	11	12	13	14
C	**Non Arable Land Treatment**												
	Improvement of degraded natural forest @ Rs.3600/Ha	590 Ha	21.24	0	0	0	0	0	0	0	0	0	0
	i. Preliminary Year @ Rs. 700/Ha	0	0	0	0	340 Ha	2.38	250 Ha (C)	1.75	0	0	0	0
	ii First year planting @ Rs. 1900/Ha	0	0	0	0	0	0	590 Ha (M)	11.21	0	0	0	0
	iii First year planting @ Rs.1000/Ha	0	0	0	0	0	0	0	0	590 Ha (M)	5.90	0	0
Total of C- Non Arable Land Treatment		**590 Ha**	**21.24**	**0**	**0**	**340Ha(C)**	**2.38**	**250 Ha (C) 590Ha (M)**	**12.96**	**590Ha (M)**	**5.90**	**0**	**0**
Total of **Watershed Treatment/Development works**		**1890 Ha**	**150.00**	**0**	**0**	**684 Ha**	**22.5**	**956 Ha**	**105.00**	**250 Ha**	**22.50**		**0**
II	**Livelihood Activities**					1%	3.00	3%	9.00	6%	18.00		

A	Kitchen gardening, agri-implements @ Rs.2500/ unit	480 units	12.00	0	0	120 units	3.00	120 units	3.00	240 units	6.00	0	0
B	Piggery/ Poultry/ @ Rs.10,000/ unit	150 units	15.00	0	0	0	0	50 units	5.00	100 units	10.00	0	0
C	Tailoring, carpentry, black smithy @ Rs. 10,000/unit	30 units	3.00	0	0	0	0	10 units	1.00	20 units	2.00	0	0
Total of **Livelihood Activities**		**660 units 22 Ha**	**30.00**	**0**	**0**	**120 units 2 Ha**	**3.0**	**180 units 7 Ha**	**9.00**	**360 units 13 Ha**	**18.00**	**0**	**0**
III	**Production System & Micro Enterprise**					1%	3.00	5%	15.00	7%	21.00		
A	Mud brick making/ basket making/food processing @ Rs. 25,000 / unit	16 units	4.00	0	0	0	0	8 units	2.00	8 units	2.00	0	0
B	Fishery @ Rs.25,000/each	100 units	25.00	0	0	12 units	3.00	40 units	10.00	48 units	12.00	0	0
C	Horticulture nursery/ Floriculture @ Rs 25,000/unit	26 units	6.50	0	0	0	0	12 units	3.00	14 units	3.50	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14
D	Cash crop value addition @ Rs 50,000/unit	7 units	3.50	0	0	0	0	0	0	7 units	3.5	0	0
Total of Production System & Micro Enterprise		**149 units 26 Ha**	**39.00**	**0**	**0**	**12 units 2 Ha**	**3.00**	**60 units 10 Ha**	**15.00**	**70 units 14 Ha**	**21.00**	**0**	**0**
Total of 3 - Watershed Works phase		**73% 2000 Ha**	**219.00**	**0**	**0**	**260 Ha**	**28.50**	**1131 Ha**	**129.00**	**179 Ha**	**61.50**		
4	**Consolidation &Withdrawal Phase (PIA)**	**5%**	**15.00**	0	0	0	0	0	0	0	0	**5%**	**15.00**
Total of 4		**5%**	**15.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5%**	**15.00**
Grand Total of 1 to 4		**100% 2000 Ha**	**300**	**0**	**18**	**690 ha.**	**42**	**1131 ha.**	**150.00**	**179 ha.**	**75.00**		**15**

Details of the types of areas covered under the IWMP Programme:

1	2	3	4	5	6		7	8	9	10				11				
Sl. No.	Name of State	Name of Districts	Names of Projects	Year of sanction	Project duration (dd/mm/yyyy)		Area of the projects (Ha)	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	Area (ha) of the projects				Area details (ha) (falling within the projects)				
					From	To				Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Pvt. Agri. Land	Forest land	Community land	Others (pl. specify)	Total area (ha)
												a) Temporary fallow	b) Permanent					
1	Meghalaya	Ri Bhoi	RB-IWMP-I	2009-10			500	75.00	1. Umsarang	480	0	20	0	440	50	10	0	500
							500	75.00	2. Umtymmen rupa	367	0	133	0	475	0	25	0	500
							500	75.00	3. Lower Umsahong	145	0	268	87	380	80	40	0	500
							500	75.00	4. Umbyrshan	143	0	245	112	400	60	40	0	500
							2000	300.00		1135	0	666	199	1695	190	115	0	2000

Fund provision for the IWMP projects from all sources:

1	2	3		4										5
District	Name of Projects	IWMP Fund		Funds from other sources in addition to IWMP funds										Total
				Convergence funds		PPP		Community		Institutional finance		Others (Pl. specify)		
		Central Share	State Share	Name of Scheme	Amount (Lakhs)	Name of private sector	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	
Ri Bhoi	RB-IWMP-I	270 lakhs	30 lakhs	NREGs	15.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	285.00

Details of Project Fund Accounts of Distt. Agency and Watershed Committees:

1	2	3	4	5				6				
				Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
Sl. No.	Names of States	Name of Districts	Names of Projects	Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confiden-tially)	Account type (Savings/ Current/ Others)	Name & Designation of authorized persons who operate the account.	Name of Watershed Committee	Name of the Bank and Branch where project account has been opened	Account number (to be obtained confiden-tially	Accoun t type (Saving s/ current others)	Name & Designation of authorized persons who operate the account.
1	Meghalaya	Ri Bhoi	RB-IWMP-I	Indian Bank, Nongpoh	867300258	Savings	Smti V. Papang,DSWCO SWCDept,Ri Bhoi District, Nongpoh	Umsarang W/C	Indian Bank Nongpoh	883978664	Savings	1.H Jana Chairman WC 2.Shri ABS Swer, ASWCO and Secretary WC
								Umtymmen rupa	Indian Bank Nongpoh	880451052	Savings	1.Chairman WC 2. K.Iawphniaw,RO Secretary WC
								Lower Umsahong	Indian Bank Nongpoh	868289404	Savings	1.Chairman WC 2. E.Kharbhih,RO Secretary WC
								Umbyrshan	Indian Bank Nongpoh	868278209	Savings	1.Chairman WC 2. .Kharbhih,RO Secretary WC

Details of Convergence of IWMP with other Schemes:

1	2	3	4	5	6	7
District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds (a) Structures (b) livelihoods (c) Any other (pl. specify)[#]	Reference no. of activity/ task/ structure in DPR[@]	Level at which decision for convergence was taken[$]
Ri bhoi	Iwmp I	C&RD Dept				
		NREGS	15.00	Water harvesting	III C fisheries	Deputy Commissioner

Public-Private Partnership in the IWMP projects: NIL

1	2	3	4			5		6	7	8	9
District	Name of project	Name of Private Sector Partner Agency	Type of agreement signed			Financial contribution		Partnership Interventions	Expected Outcomes	Actual Outcomes	Comments
			a)MoU	b)Contract	c) Any other (pl. specify)	IWMP	Private sector				

***** from Column no. 2, total no. of States implementing the programme, from Column no. 3, total no. of Districts; from Column no. 4, total no. of projects under PPP; from Column no. 5, total no. of private companies/ agencies, from column no. 7, total amounts may be mentioned at the end of the table for the entire country.

CHAPTER VI
CAPACITY BUILDING

CHAPTER VI
CAPACITY BUILDING

Capacity Building is a process to systematically upgrade the skill of individuals or groups for achieving a specific target. Capacity building in the project has been planned for all the stake holders involved i.e. State Level, District Level, Project Level and Village Level. The relevant details pertaining to Capacity Building has been shown below.

List of approved Training Institutes[@] for Capacity Building:

1	2	3	4	5	6	7	8	9				
S. No.	State	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute[#]	Area(s) of speciali-zation[$]	Accredita-tion details	Performance				
								Reference Year	No. of trainings assigned	No. of trainees to be trained	No. of trainings conducted	No. of trainees trained
1	Megh alaya	SIRD	Nongsder, Ri Bhoi District	Shri A. Mawlong, Director	Rural developme nt	Capacity building	NA	NA	NA	NA	NA	NA

***** From Column no. 2, total no. of States implementing the programme, from Column no. 3, no. of training institutes, from column No. 9, total no. of category-wise trainings and trainees may be given at the end of the table for the entire country

Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)

$ Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ livelihoods/ entrepreneurship development/ others (pl. specify)

[@] The training institutes must fulfill the conditions mentioned in the operations guidelines.

(i) Technical experts in fields required by IWMP
(ii) Past experiences
(iii) Annual Turnover
(iv) Receives funds either from the Central or State Government
(v) Publications

(vi) Not blacklisted by any Govt. organizations
(vii) Audited accounts
(viii) Organizational structure

Capacity Building activities for the year …2009-2010 as on …31/03/2010… (dd/mm/yyyy)*-NA

1	2	3	4	5	6		7	
Project Stakeholders	Total no. of persons	No. of persons trained so far	No. of persons to be trained during current financial year	No. of persons trained during current financial year	Sources of funding for training		Funds utilised	
					a)DoLR	b)Any other (pl. specify)	a)DoLR	b)Any other (pl. specify)
SLNA								
DRDA/ZP cell								
PIAs	54 nos	24nos	30nos	NA	1.00		1.00	
WDTs	12nos	12 nos	12 nos	NA	1.00		1.00	
UGs								
SHGs								
WCs	44nosx4 times	44 nos	44 nos	NA	2.00		2.00	
GPs								
Community	2635 nos	687nos	652 nos	NA	2.00		2.00	
Others (Pl. specify)								
Total	**2745**	**767**	**738**	**NA**	**6.00**		**6.00**	

Information, Education & Communication (IEC) activities for the year 2009-2010 as on 31/03/2010 (dd/mm/yyyy)*-

1	2	3	4	5
Activity	Executing agency	Estimated expenditure (Rs.)	Expenditure incurred (Rs.)	Outcome (may quantify, wherever possible)
NA	NA	NA	NA	NA

Table 6.1: Other List of approved Training Institutes for Capacity Building:

1	2	3	4	5	6	7	8	9				
S. No	State	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute#	Area(s) of specialization$	Accre-ditation details	Performance				
								Refer-ence Year	No. of trainings assigned	No. of trainees to be trained	No. of trainings conducted	No. of trainees trained
1	Meghalaya	NIRD (NER)	Guwahati	Director	Central Govt.	Remote Sensing, Rural Devt.	NA	-				
2		SIRD	Nongsder	Director	State Govt.	Capacity Building	NA	-				
3		RRTC	Umran	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA					
4		ICAR	Umiam	Director	Central Govt.	Do	NA					
5		VTC	Kyrdem Kulai	Director	State Govt.	Animal Husbandry	NA					
6		Fruit Garden	Shillong	Director	State Govt.	Agri-Horti, Fruit Processing	NA					

CHAPTER VII

EXPECTED OUTCOME

CHAPTER VII
EXPECTED OUTCOME

Table 7.1 Water related outcomes:

Details of average ground water table depth in the project areas of the Country: State-wise * (in meters)

1	2	3	4	5	6	7	8
Names of Districts	Names of Projects	Sources	Pre-Project level	Mid-term project level	Post-project level	Increase/decrease (Col. 8 – Col. 6)	Remarks
Ri bhoi	IWMP I	Open wells	NA	NA	NA	NA	
		Bore wells	NA	NA	NA	NA	
		Others (specify)	NA	NA	NA	NA	

*From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column nos. 6 to 9, the average measurements, category-wise, for the entire country may be given at the end of the table. The data must be based on the average of the Ground Water Table depth collected by PIA with the help of concerned technical expert in the same sample of 10% of selected wells and bore wells in the villages in the watershed project area, during pre-project, mid-term and post-project periods.

Table 7.2 Status of Drinking water:

1	2	3			4			5
District	Name of the project	Availability of drinking water (no. of months in a year)			Quality of drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in quality	
Ri bhoi	IWMP I	12	NA	NA	Poor	NA	NA	

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, category-wise no. of projects, from column no. 5, average no. of months may be given at the end of the table for the entire country.

Table 7.3 Water Use efficiency:

1	2	3	4			
District	Name of the project	Name of major crop	Water savings in cu.m.			
			through water saving devices[$]	through water conserving agronomic practices[#]	Any other (pl. specify)	Total
Ri bhoi	IWMP I	Paddy Ginger Pineapple Vegetables Arecanut Betel leaf Others	NA	NA	NA	NA

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 6, practice-wise totals may be mentioned at the end of the table for the entire country.

[$] Sprinkler, Drip, PVC pipe, etc.

[#] Vermi-compost, organic manuring, Mulching, Check basin, Alternate furrow, Ridges & furrow & other scientific practices

Table 7.4.Vegetation/ crop related outcomes:

Table 7.4.1 Details of Karif crop area and yield in the project areas:

1	2	3	4						5						6					
Names of the District	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
			Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)	
			Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
Ri Bhoi	IWMP I	Paddy		485		2.69		1300												
		Maize		128		2.25		288												
		Ginger		85		8.00		680												
		Pineapple		60		11.49		6894												
		Arecanut		45		NA		NA												
		Betel leaf		20		NA		NA												
		Others		312		NA		NA												
				1135																

***** From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no.4, total no. of projects; from column no.5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated Rf. - Rainfed

Table 7.4.2 Details of Rabi crop area and yield in the project areas:

1	2	3	4	5	6						7						8					
Sl. No.	Names of States	Names of the Districts	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)	
					Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
1	MEGH	RI BHOI	IWMP I																			
			Total for the District	NA	NA	NA	NA	NA	NA	NA												

***** From column no.2 total number of States, from column no.3 total no. of Districts; from column no.4 total no. of projects; from column no.5, total no. of crops; from column no.6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – IrrigatedRf. – Rainfed

Table 7.4.3 Details of Zaid crop area and yield in the project areas of the Country: State-wise:

1	2	3	4	5	6						7						8					
Sl. No.	Names of States	Names of the Districts	Name of Projects	Name of crops	**Pre-project**						**Mid-term**						**Post-project**					
					Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)		Area (ha)		Average Yield per ha (qtl)		Total production (qtl)	
					Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
1	MEGH	RI BHOI	IWMP I																			
			Total for the District	NA	NA	NA	NA	NA	NA	NA												

***** From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no.5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – IrrigatedRf. – Rainfed

Table 7.5 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under horticulture (ha)			Achievement (ha)		
			Source/ Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
Ri bhoi	IWMP I	5 years	WC	2009	255 Ha	1038 ha		

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.6 Increase/ Decrease in area under fuel-wood:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fuel-wood (ha)			Achievement (ha)		
			Source/ Name of report	Year of reference	Area already under fuel-wood	Area under fuel-wood proposed to be covered through IWMP	Area under fuel-wood actually covered through IWMP	Change in area under fuel-wood
Ri Bhoi	IWMP I	5 years	WC	2009	30 Ha	80 Ha		

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.7 Increase/ Decrease in area under fodder:

3	4	5	6			7		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/ Name of report	Year of reference	Area already under fodder	Area under fodder proposed to be covered through IWMP	Area under fodder actually covered through IWMP	Change in area under fodder
Rib hoi	IWMP I	5 years	WC	2009	Nil	Nil		

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.8 Increase/ Decrease in Forest/vegetative cover:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing tree cover (ha)			Achievement (ha)		
			Source/ Name of report	Year of reference	Area already under forest/vegetative cover	forest/vegetative cover area proposed to be covered under IWMP	forest/vegetative cover area actually covered under IWMP	Change in forest/vegetative cover area
Ri bhoi	IWMP I	5 years	WC	2009	285 Ha	310 Ha		

***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.8 Livelihood related outcomes:

Details of livestock in the project areas (for fluids please mention in litres, for solids please mention in kgs. and income in Rs.):

1	2	3	4			5			6			7
Names of the Districts	Names of Projects	Type of Animal	Pre-Project			Mid-term			Post-project			Remarks
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
Ri bhoi	IWMP I	Milch-animals	Nil									
		Animals for other purpose	Piggery	130 nos	6,50,000							
	Total for all projects			130 nos	6,50,000							
Total for all Districts												

* From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column nos. 5 to 8, the total nos. of animals and the average yield and incomes, category-wise, for the entire country may be given at the end of the Table.

Table 7.9 Details of other livelihoods created for landless people:

1	2	3	4	5				6	7					8					
District	Project	Name of activity	Funds required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of beneficiaries trained					No. of beneficiaries taking up activity				
				Project Fund	Benefi-ciary	Others (pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
Ri bhoi	IWMP I	Piggery	3.50	iwmp	35		3.50											
		Poultry	3.50	iwmp	35		3.50											
		Tailoring/ carpentry	2.00	iwmp	20		2.00											
		Mud brick	2.50	Iwmp	10		2.50											
		Utility shop	1.00	Iwmp	04		1.00											

Contd.

* From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 5, total no. of activities, from column no. 6, total funds required for the activity, from column no. 7 to 12, categorywise totals, from column no. 13, category-wise totals, for the entire country may be given at the end of the Table.

Table 7.10 Details of other livelihoods created for landless people:

9		10	11				12
No. of persons employed indirectly in the activity		Annual increase in income due to activity (Rs.)	Impact of livelihoods programme				Any other information (Pl. Specify)
			Migration (No. of beneficiaries)		Development of backward-forward linkages		
Total	Grand total (8+9)		Pre-project	Post-project	Pre-project	Post-project	
NA	NA	NA	NA	NA	NA		NA

Table 7.11 Details of other livelihoods created for farmers:

1	2	3	4	5				6	7				8			
District	Project	Name of activity	Funds required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of farmers trained				No. of farmers taking up activity			
				Project Fund	Benefi-ciary	Others (please specify)	Total		SF	MF	LF	Total	SF	MF	LF	Total
Ri bhoi	IWMP I	Cash crop value addition	0.50	Iwmp	01		01									
		Rice mill	0.50	Iwmp	01		01									
		Fishery	13.00	Iwmp	52		52									

* From column no. 2, total number of States, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 5, total no. of activities, from column no. 6, total funds required for the activity, from column no. 7 to 12, categorywise totals, from column no. 13, category-wise totals, for the entire country may be given at the end of the Table.

Details of other livelihoods created for farmers* (contd.)

9		10	11				12
No. of persons employed indirectly in the activity		Annual increase in income due to activity (Rs.)	Impact of livelihoods programme				Any other information (Pl. Specify)
			Migration (No. of beneficiaries)		Development of backward-forward linkages		
Total	Grand total (8+9)		Pre-project	Post-project	Pre-project	Post-project	
NA	NA	NA	NA	NA	NA		NA

Table 7.12 Marketing related outcomes:

Backward-Forward linkages *

1	2	3	4	5	6
District	Project	Type of Marketing Facility	Pre-project (no.)	During the project (no.)	Post-project (no.)
		(A) Backward linkages			
		(i) Seed certification	No		
		(ii) Seed supply system	No		
		(iii) Fertilizer supply system	No		
		(iv) Pesticide supply system	No		
		(v) Credit institutions	No		
		(vi) Water supply	Yes		
		(vii) Extension services	No		
		(viii) Nurseries	No		
		(ix) Tools/machinery suppliers	No		
		(x) Price Support system	No		
		(xi) Labour	Yes		
		(xii) Any other (please specify)	No		
		(B) Forward linkages			
		(i) Harvesting/threshing machinery	No		
		(ii) Storage (including cold storage)	No		
		(iii) Road network	Yes		
		(iv) Transport facilities	Yes		
		(v) Markets / Mandis	Yes		
		(vi) Agro and other Industries	No		
		(vii) Milk and other collection centres	No		
		(viii) Labour	Yes		
		(ix) Any other (please specify)	No		

* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6, 7 & 8, category-wise totals may be given at the end of the table for the entire country.

Abstract of outcomes:

1	2	3	4	5	6	7
S. No.	State	Item	Unit	Pre-project Status	Post-project Status	Remarks
		Status of water table		NA		
		Ground water structures repaired/ rejuvenated		NA		
		Quality of drinking water		NA		
		Availability of drinking water		NA		
		Increase in irrigation potential		NA		
		Change in cropping/ land use pattern		NA		
		Area under agricultural crop		NA		
		i Area under single crop		NA		
		ii Area under double crop		NA		
		iii Area under multiple crop		NA		
		Net increase in crop production area		NA		
		Increase in area under vegetation		NA		
		Increase in area under horticulture		NA		
		Increase in area under fuel & fodder		NA		
		Increase in milk production		NA		
		No. of SHGs		NA		
		Increase in no. of livelihoods		NA		
		Increase in income		NA		
		Migration		NA		
		No. of school going children		NA		
		SHG Federations formed		NA		
		Credit linkage with banks		NA		
		Resource use agreements		NA		
		WDF collection & management		NA		
		Summary of lessons learnt	May be attached as a separate file			

Table 7.13 Details of rights conferred in the CPRs of the project areas: NA

1	2	3	4	5	6	7				8
Names of the Districts	Names of the projects	Names of the villages	Particular of CPR	Nature of right	Period of right	Beneficiary details (no. of families)				User Charges (Rs.)
						SC	ST	Others	Total	
RI BHOI	IWMP I Umsarang	Umsarang, Nonglakhiat, Lumsohphoh, Lumshyiap	NA	NA	NA	NA	NA	NA	NA	NA
	Umtymmen rupa	Lumsohpieng, Pamphret, Dongpyngrope	NA	NA	NA	NA	NA	NA	NA	NA
	Umbyrshan	Iamkhon, Umtyrkhang	NA	NA	NA	NA	NA	NA	NA	NA
	Lower Umsahong	Mawshunam Mawlaho Mawpat,	NA	NA	NA	NA	NA	NA	NA	NA

* From column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, no. of projects, from column no. 5, no. of villages, from column nos. 9 & 10, particular-wise totals for the entire country may be given at the end of the table.

@ In column no.6, the categories given in table no. M(SP)10, column 5 may be filled as required.

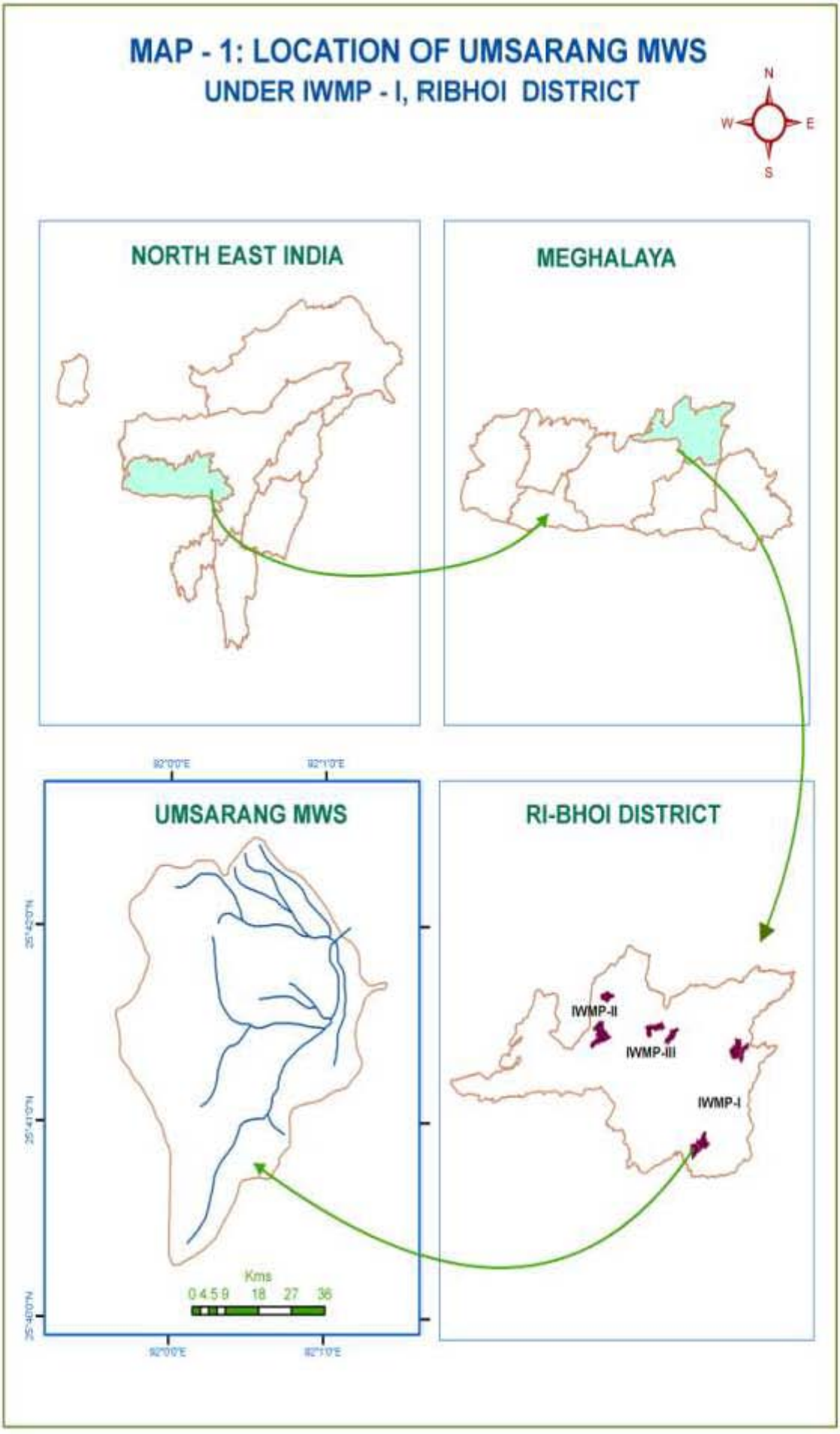
In column no. 7, only the letter assigned to each type, as given below, needs to be typed.

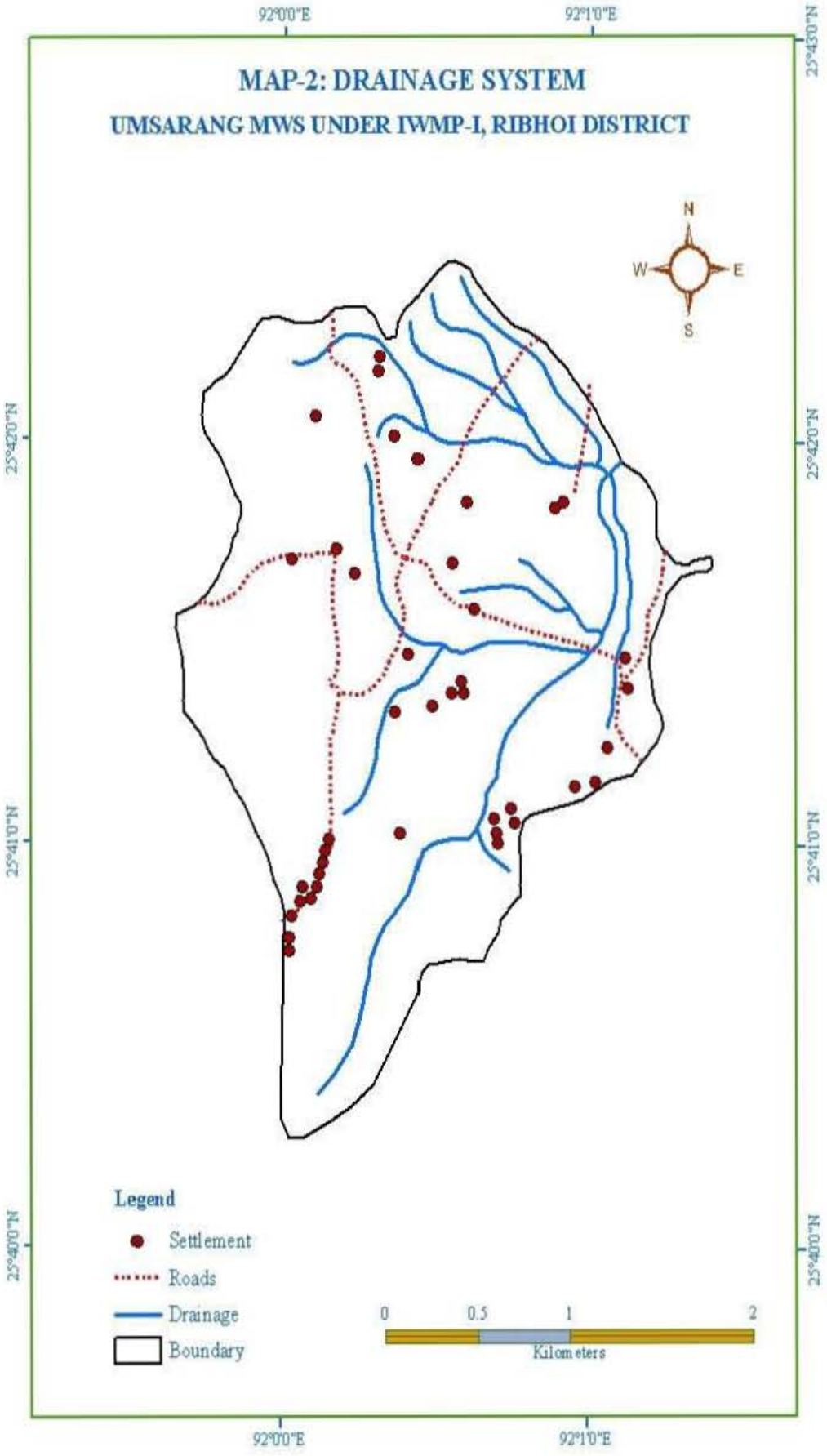
F for right to fishing [culture, harvest and sale]

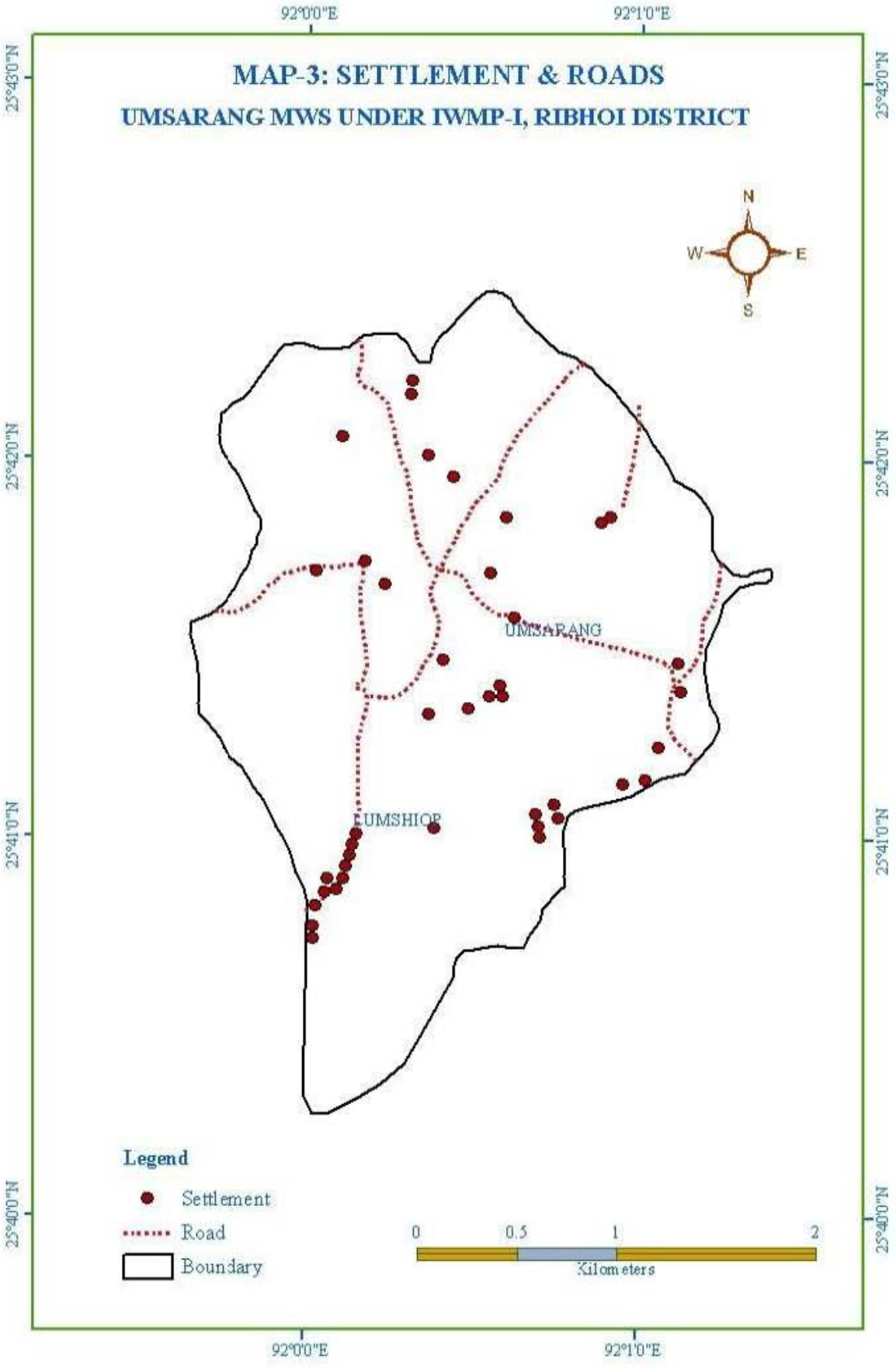
Fw	for right to	collect firewood for domestic purposes
G	for right of	grazing for cattle and
MFP	for right to	collect and sell minor forest produces
P	for right to	passage across the CPR
Rd	for right to	construct a road for access to individual property
S/M	for right to	collect and sell sand and minerals
So	for right to	collect soil for nursery and plantation activities and constructions
T	for right to	collect timber for construction of house
Wd	for right to	collect/ use water for drinking
Wi	for right to	use water for irrigation
O	for any right other than indicated above (please specify)	

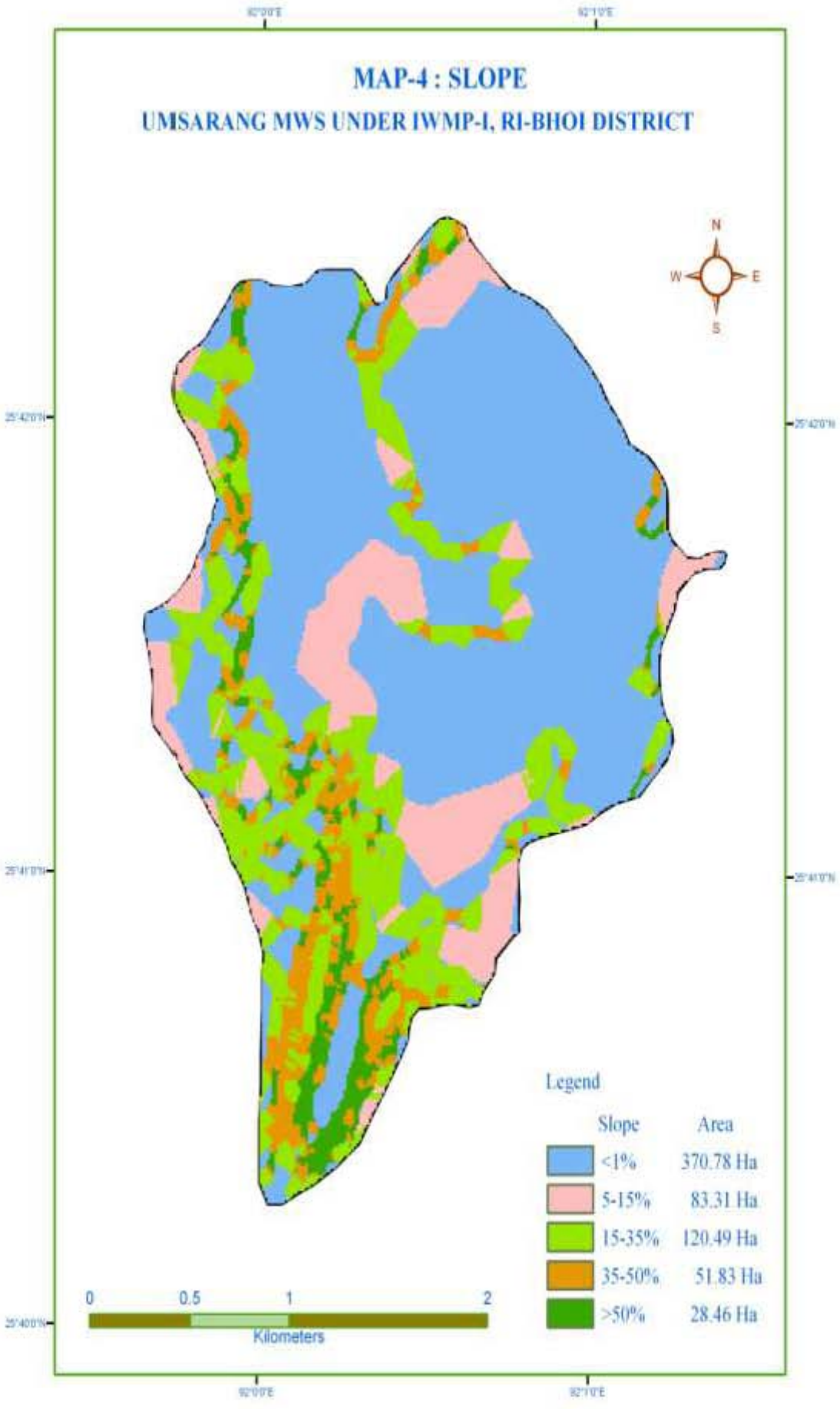
ANNEXURE I

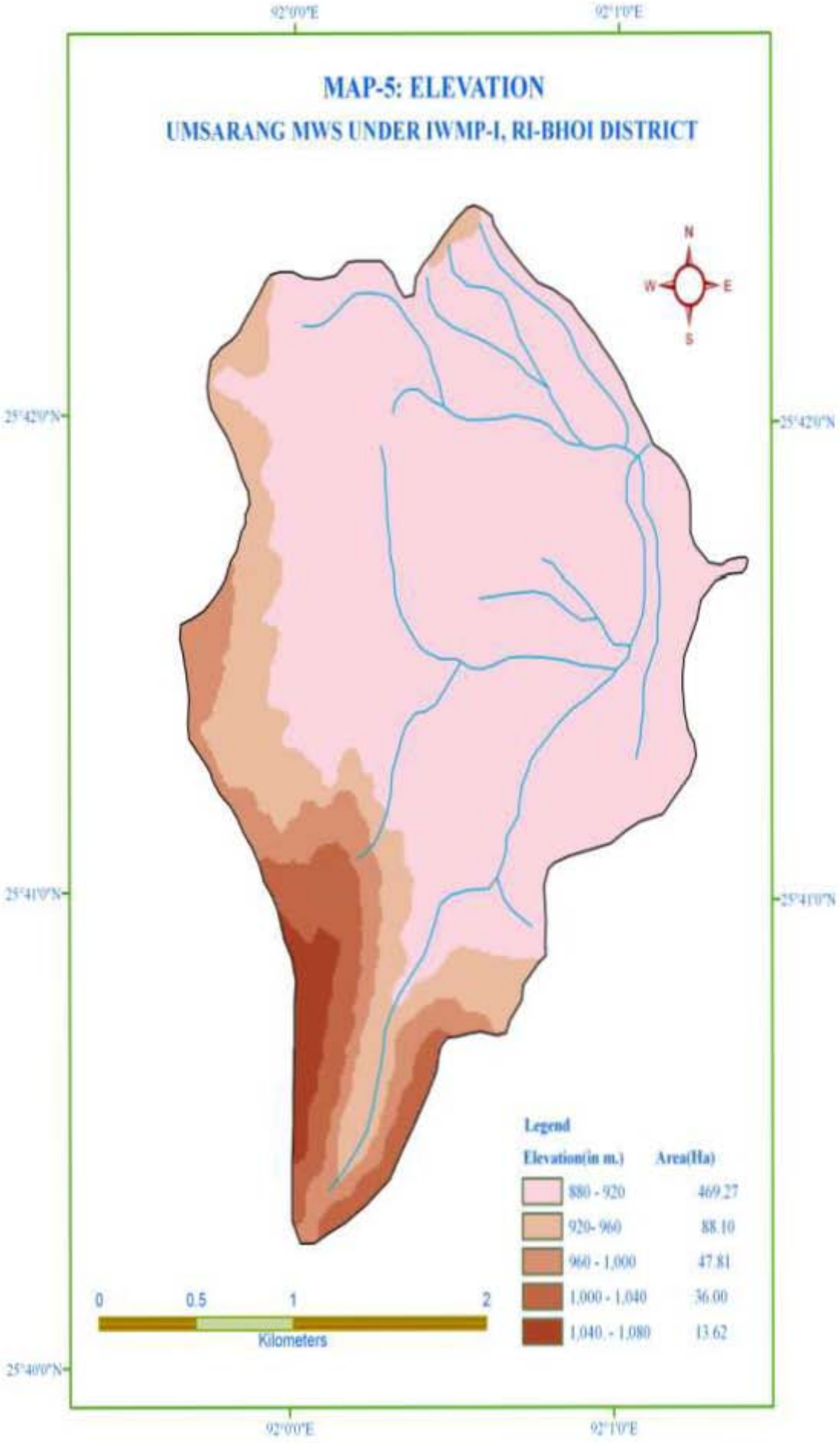
MAPS

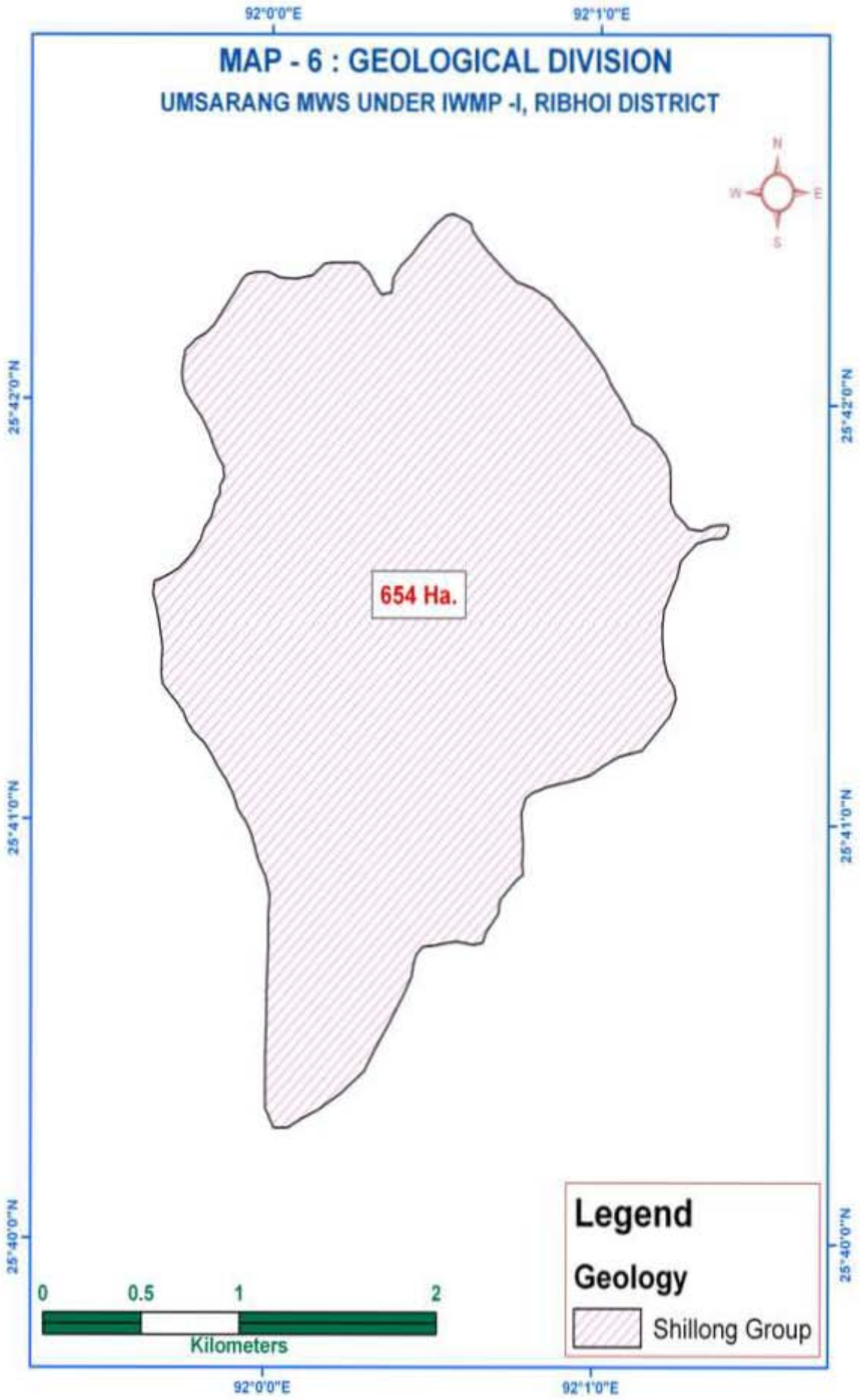

MAP - 1: LOCATION OF UMSARANG MWS
UNDER IWMP - I, RIBHOI DISTRICT
N
W
E
S
NORTH EAST INDIA
MEGHALAYA
UMSARANG MWS
RI-BHOI DISTRICT
IWMP-II
IWMP-III
IWMP-I
Kms
0 4.5 9 18 27 36

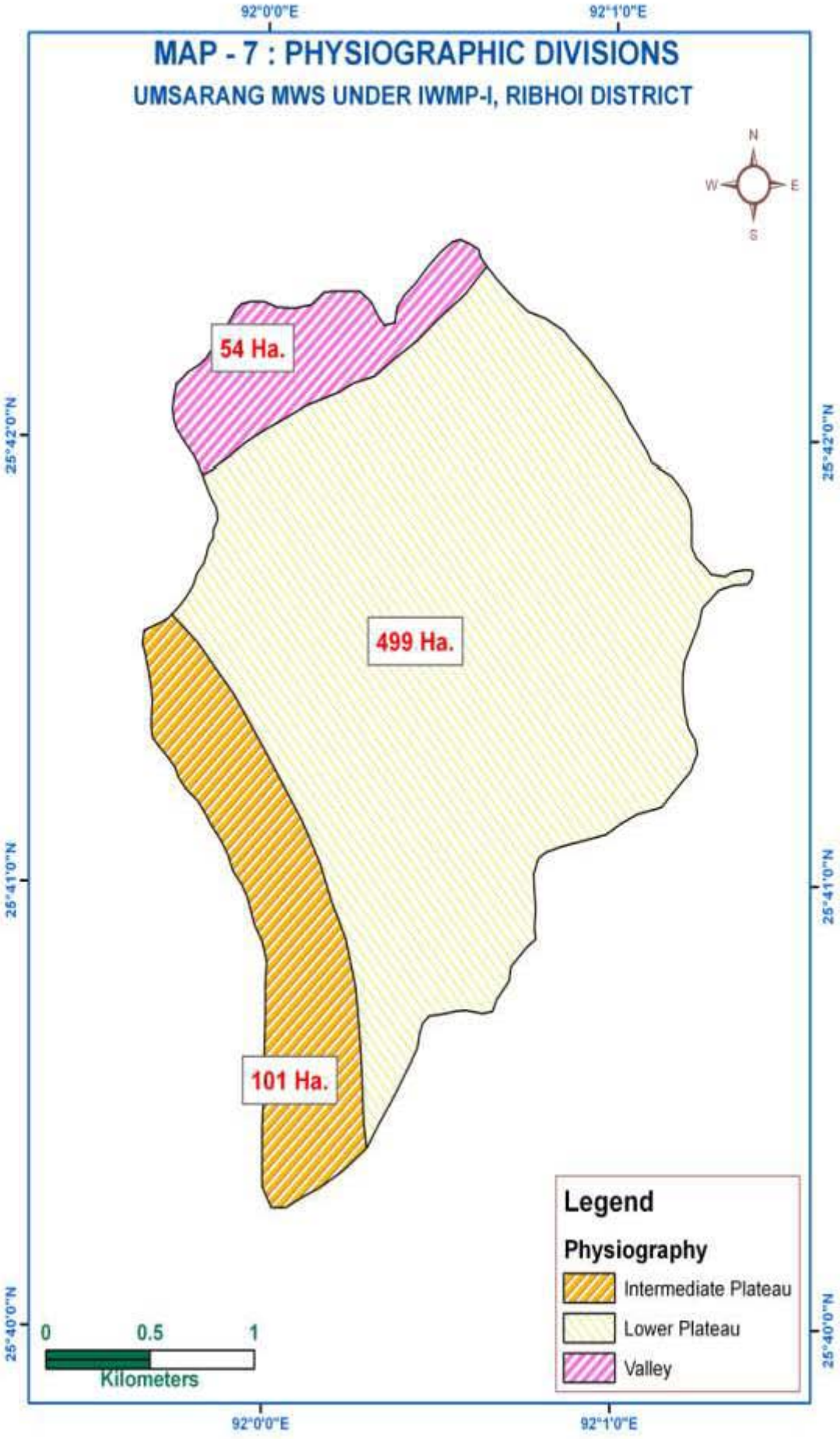

MAP-2: DRAINAGE SYSTEM
UMSARANG MWS UNDER IWMP-I, RIBHOI DISTRICT
92°0'0"E
92°1'0"E
25°43'0"N
25°42'0"N
25°41'0"N
25°40'0"N
N
W
E
S
Legend
Settlement
Roads
Drainage
Boundary
0
0.5
1
2
Kilometers

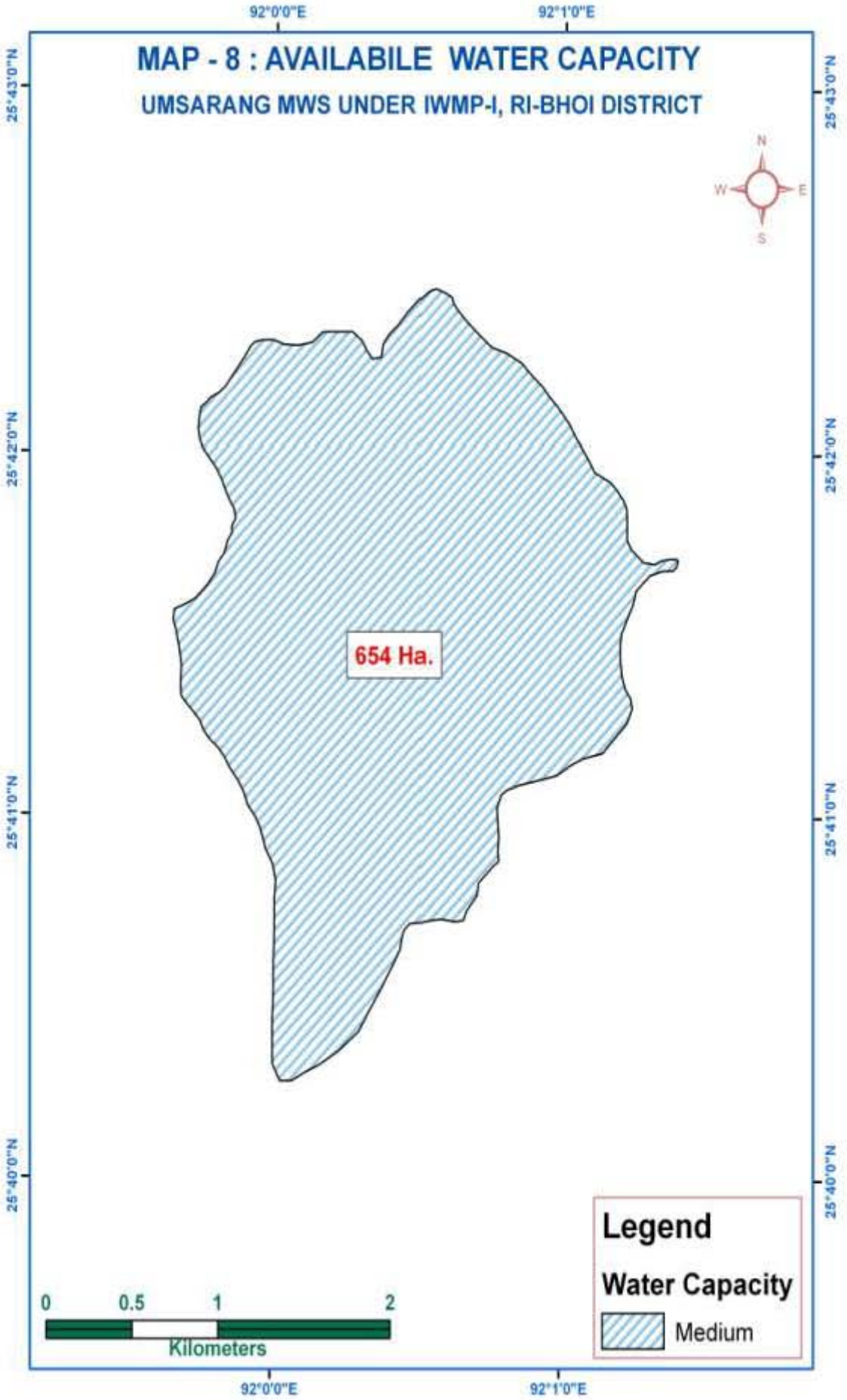

MAP-3: SETTLEMENT & ROADS
UMSARANG MWS UNDER IWMP-I, RIBHOI DISTRICT
92°0'0"E
92°1'0"E
25°43'0"N
25°42'0"N
25°41'0"N
25°40'0"N
N
W
E
S
UMSARANG
UMSHIOP
Legend
Settlement
Road
Boundary
0
0.5
1
2
Kilometers

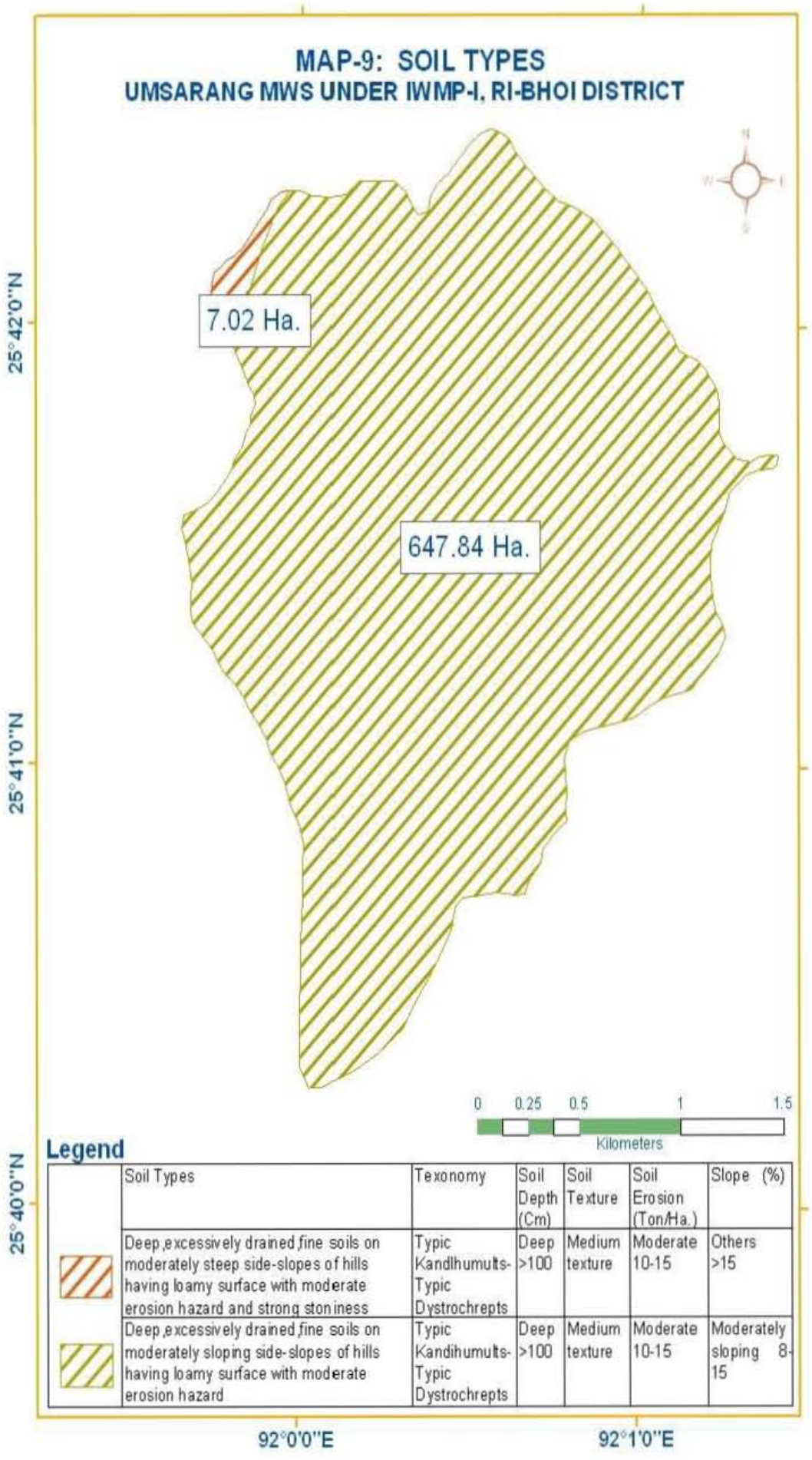

MAP-4 : SLOPE
UMSARANG MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
Legend
Slope
Area
<1%
370.78 Ha
5-15%
83.31 Ha
15-35%
120.49 Ha
35-50%
51.83 Ha
>50%
28.46 Ha
0
0.5
1
2
Kilometers


92°0'0"E
92°1'0"E
MAP-5: ELEVATION
UMSARANG MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°42'0"N
25°41'0"N
25°40'0"N
Legend
Elevation(in m.)
Area(Ha)
880 - 920
469.27
920- 960
88.10
960 - 1,000
47.81
1,000 - 1,040
36.00
1,040. - 1,080
13.62
0
0.5
1
2
Kilometers

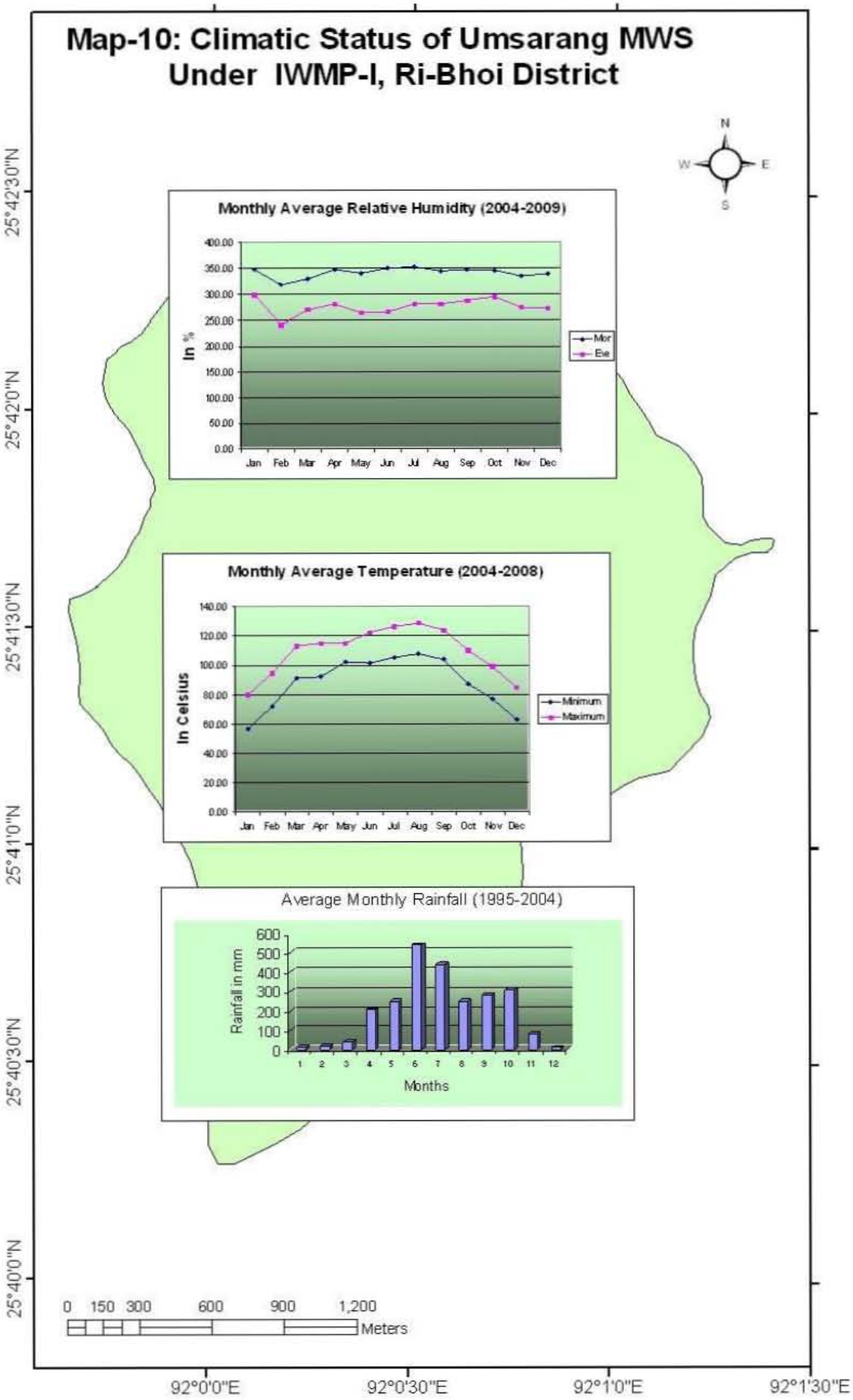

92°0'0"E
92°1'0"E
MAP - 6 : GEOLOGICAL DIVISION
UMSARANG MWS UNDER IWMP -I, RIBHOI DISTRICT
N
W
E
S
25°42'0"N
25°41'0"N
25°40'0"N
654 Ha.
0
0.5
1
2
Kilometers
Legend
Geology
Shillong Group


MAP - 7 : PHYSIOGRAPHIC DIVISIONS
UMSARANG MWS UNDER IWMP-I, RIBHOI DISTRICT
92°0'0"E
92°1'0"E
25°42'0"N
25°41'0"N
25°40'0"N
N
W
E
S
54 Ha.
499 Ha.
101 Ha.
0
0.5
1
Kilometers
Legend
Physiography
Intermediate Plateau
Lower Plateau
Valley

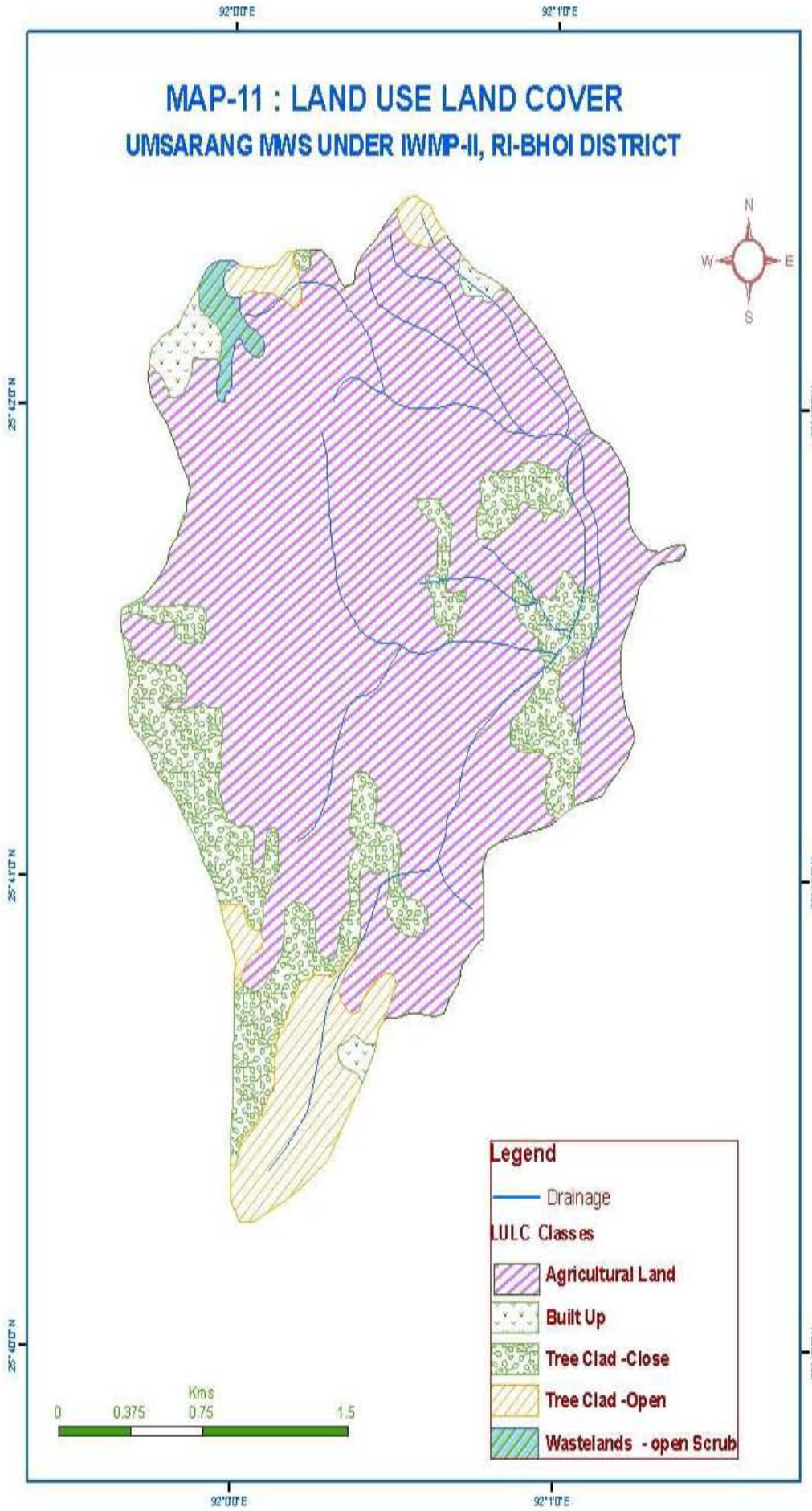

MAP - 8 : AVAILABILE WATER CAPACITY
UMSARANG MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°0'0"E
92°1'0"E
25°43'0"N
25°42'0"N
25°41'0"N
25°40'0"N
N
S
E
W
654 Ha.
0
0.5
1
2
Kilometers
Legend
Water Capacity
Medium

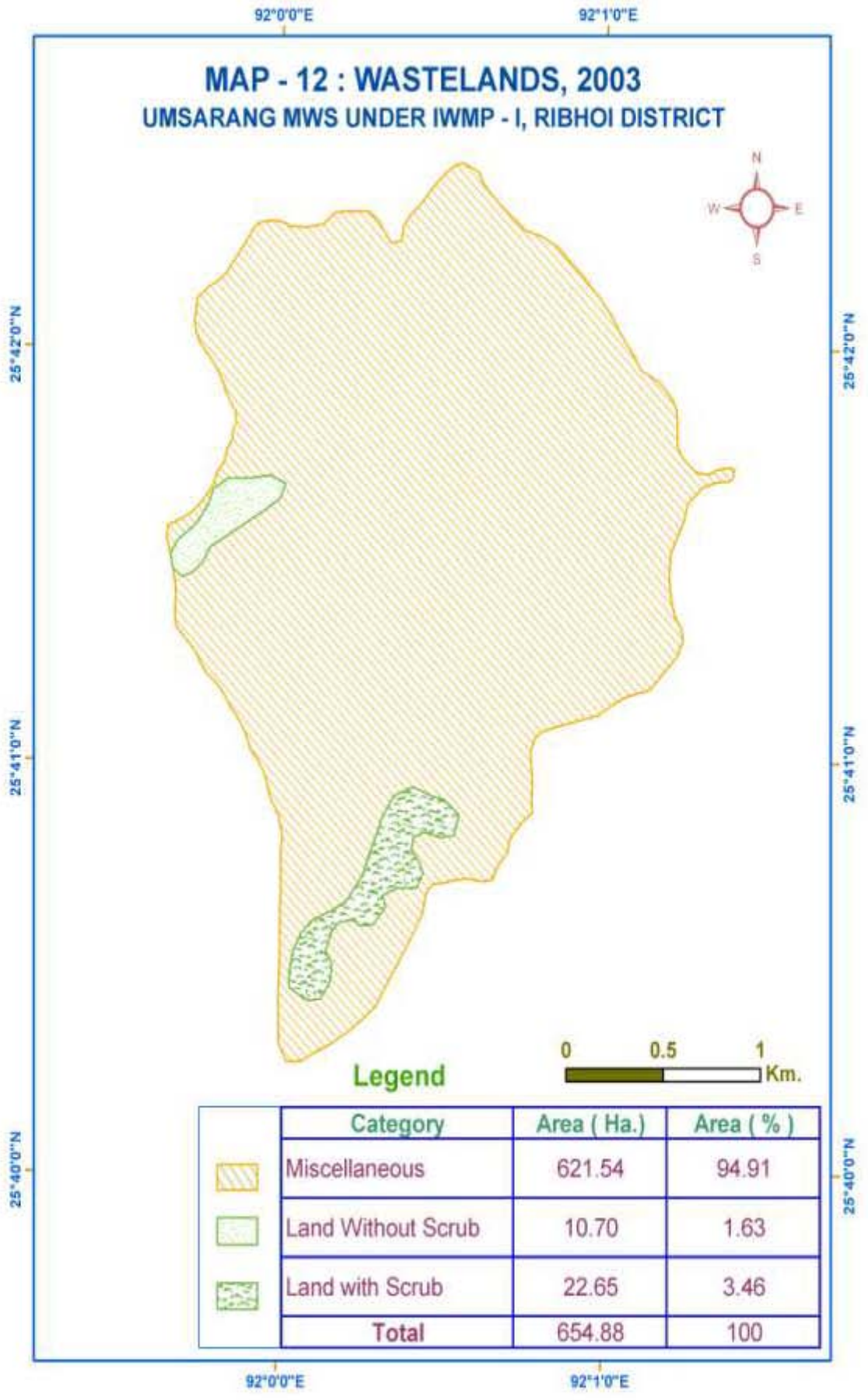

MAP-9: SOIL TYPES
UMSARANG MWS UNDER IWMP-I, RI-BHOI DISTRICT
7.02 Ha.
647.84 Ha.
25°42'0"N
25°41'0"N
25°40'0"N
92°0'0"E
92°1'0"E
0 0.25 0.5 1 1.5
Kilometers
Legend
Soil Types | Texonomy | Soil Depth (Cm) | Soil Texture | Soil Erosion (Ton/Ha.) | Slope (%)
Deep,excessively drained,fine soils on moderately steep side-slopes of hills having loamy surface with moderate erosion hazard and strong stoniness | Typic Kandlhumults-Typic Dystrochrepts | Deep >100 | Medium texture | Moderate 10-15 | Others >15
Deep,excessively drained,fine soils on moderately sloping side-slopes of hills having loamy surface with moderate erosion hazard | Typic Kandihumults-Typic Dystrochrepts | Deep >100 | Medium texture | Moderate 10-15 | Moderately sloping 8-15

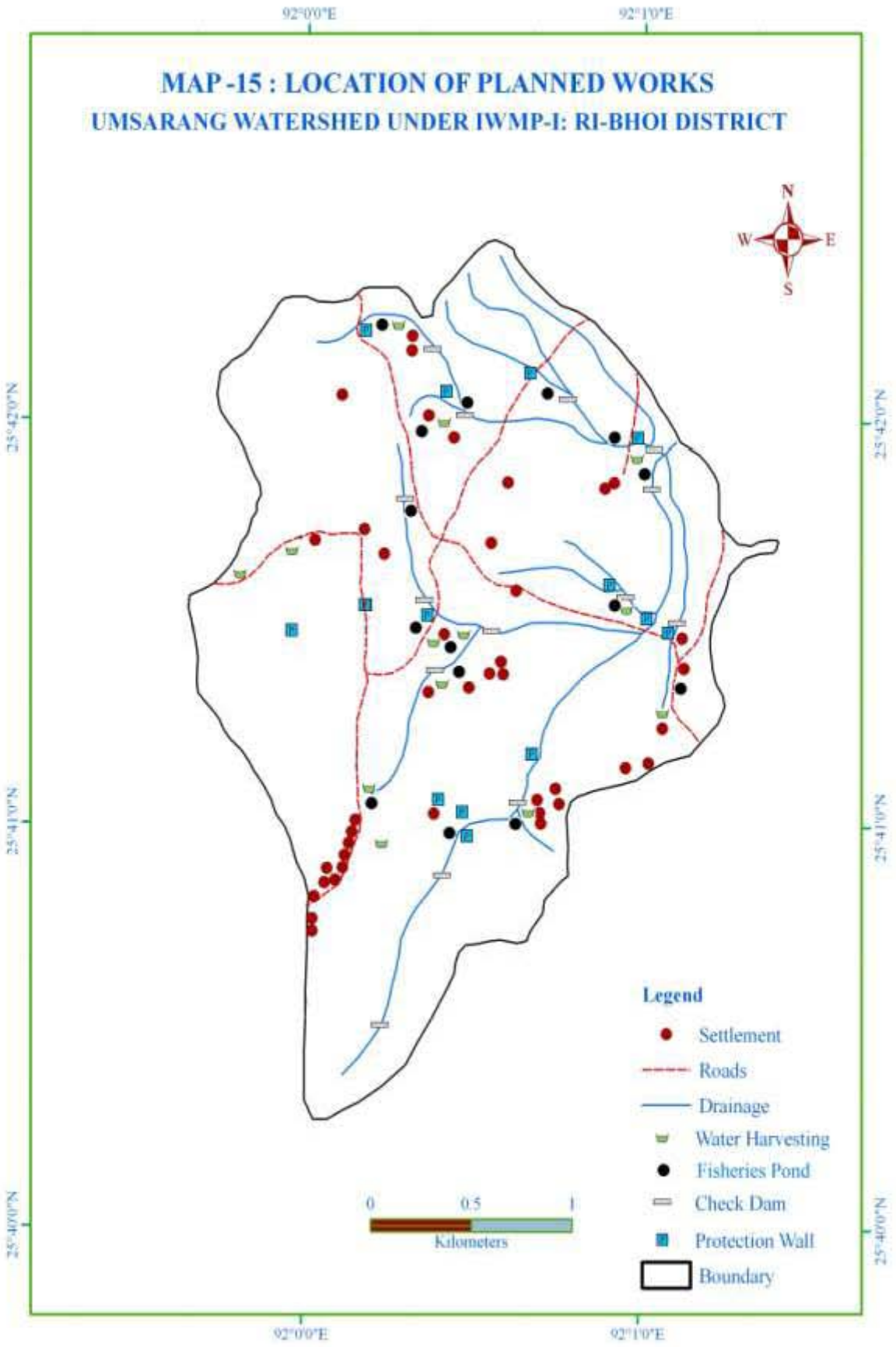
Map-10: Climatic Status of Umsarang MWS Under IWMP-I, Ri-Bhoi District



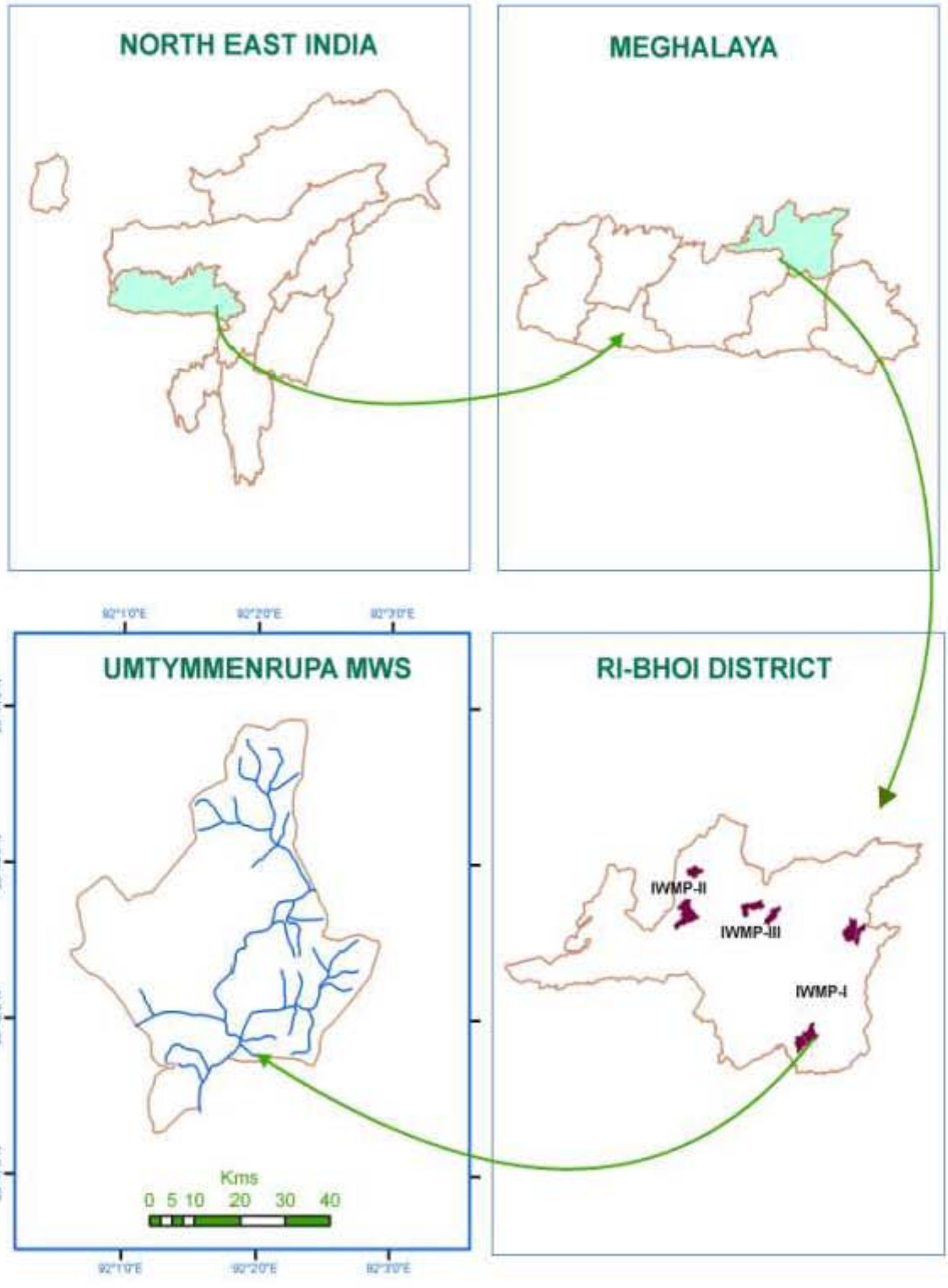
l)

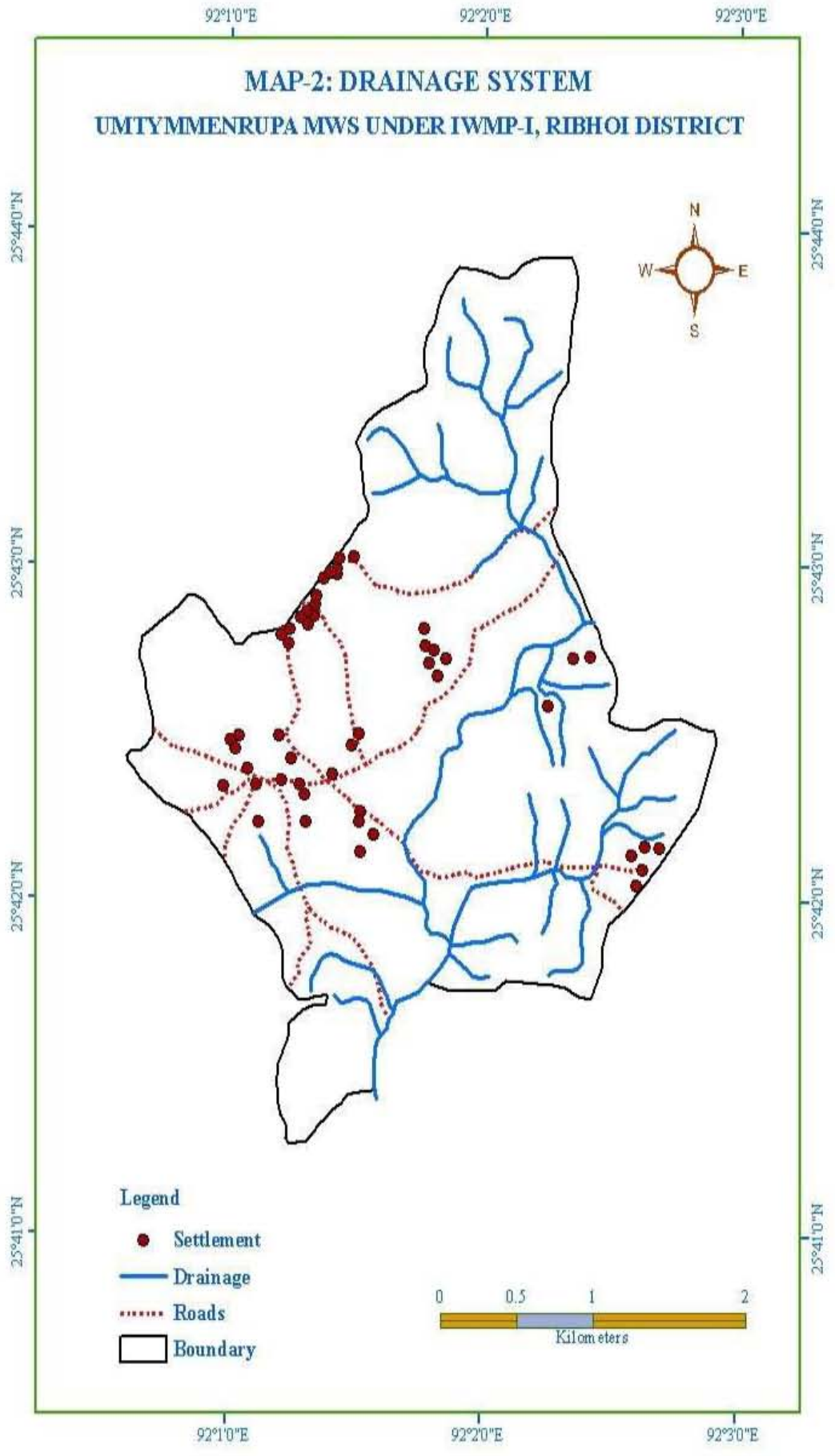

MAP-11 : LAND USE LAND COVER
UMSARANG MWS UNDER IWMP-II, RI-BHOI DISTRICT
92°0'0"E
92°1'0"E
25°42'0"N
25°41'0"N
25°40'0"N
N
W
E
S
Kms
0
0.375
0.75
1.5
Legend
Drainage
LULC Classes
Agricultural Land
Built Up
Tree Clad -Close
Tree Clad -Open
Wastelands - open Scrub

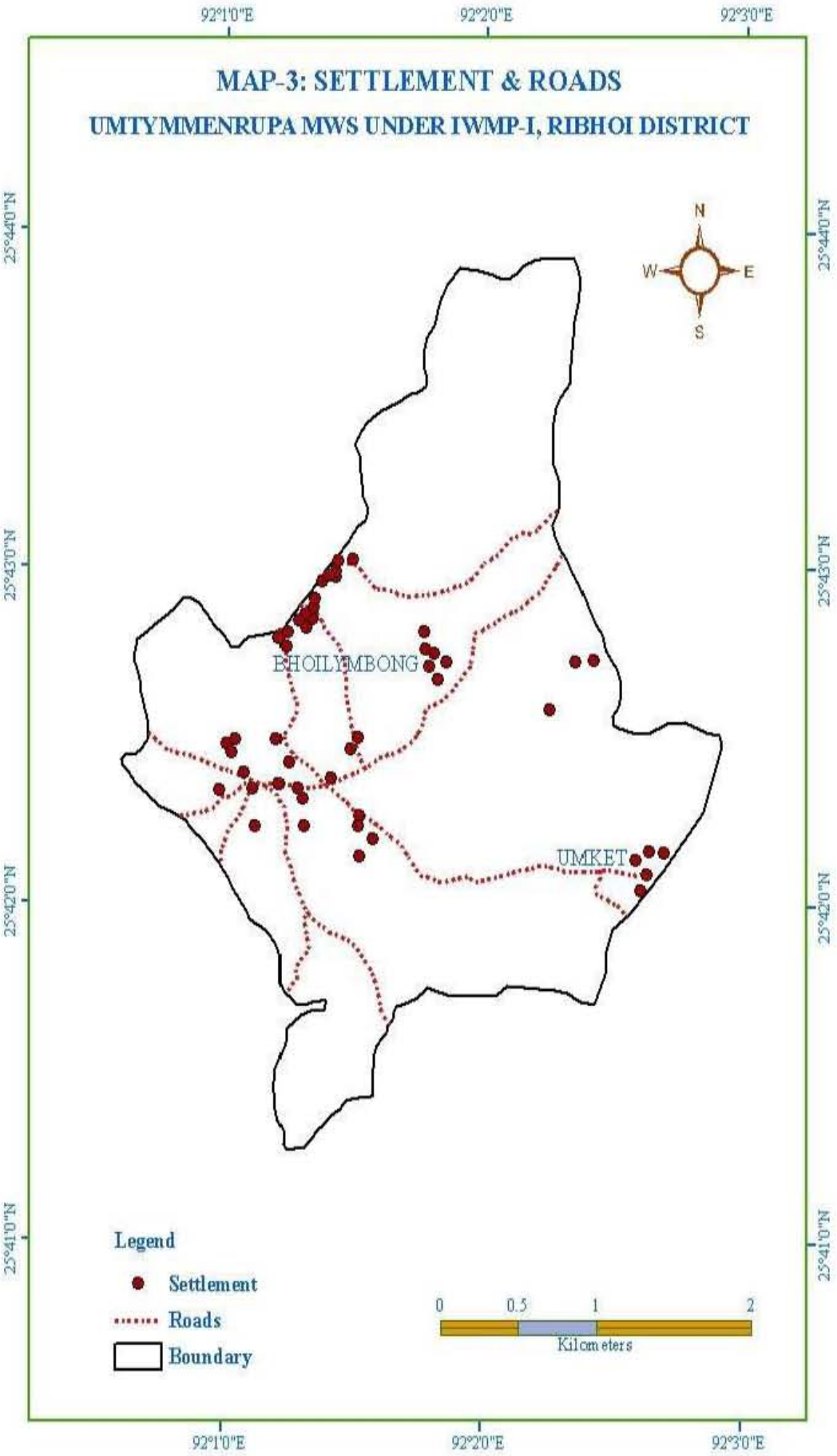

92°0'0"E
92°1'0"E
MAP - 12 : WASTELANDS, 2003
UMSARANG MWS UNDER IWMP - I, RIBHOI DISTRICT
N
W
E
S
25°42'0"N
25°41'0"N
25°40'0"N
0
0.5
1
Km.
Legend
Category
Area (Ha.)
Area (%)
Miscellaneous
621.54
94.91
Land Without Scrub
10.70
1.63
Land with Scrub
22.65
3.46
Total
654.88
100

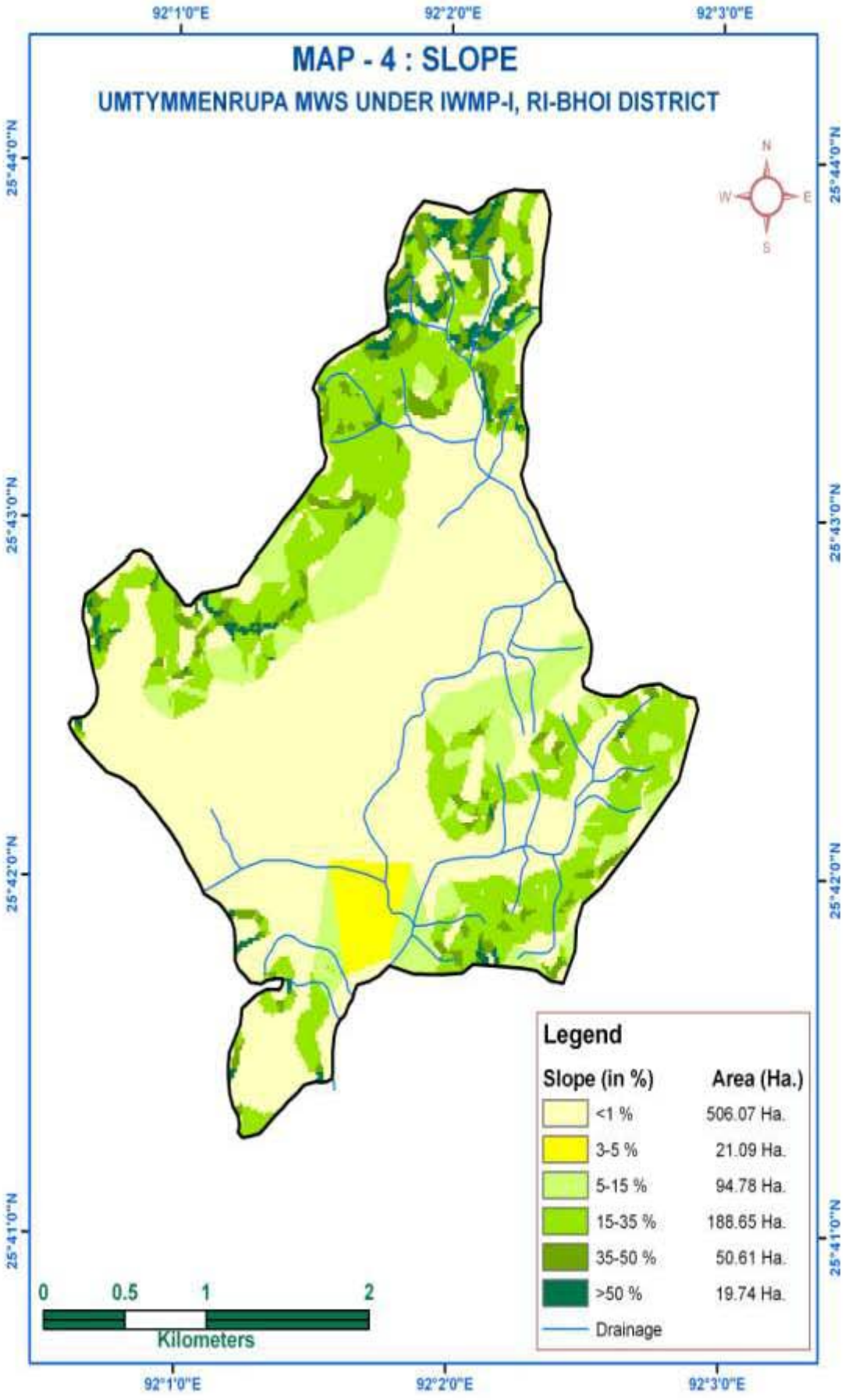

MAP -15 : LOCATION OF PLANNED WORKS
UMSARANG WATERSHED UNDER IWMP-I: RI-BHOI DISTRICT
92°0'0"E
92°1'0"E
25°42'0"N
25°41'0"N
25°40'0"N
N
W
E
S
Legend
Settlement
Roads
Drainage
Water Harvesting
Fisheries Pond
Check Dam
Protection Wall
Boundary
0
0.5
1
Kilometers

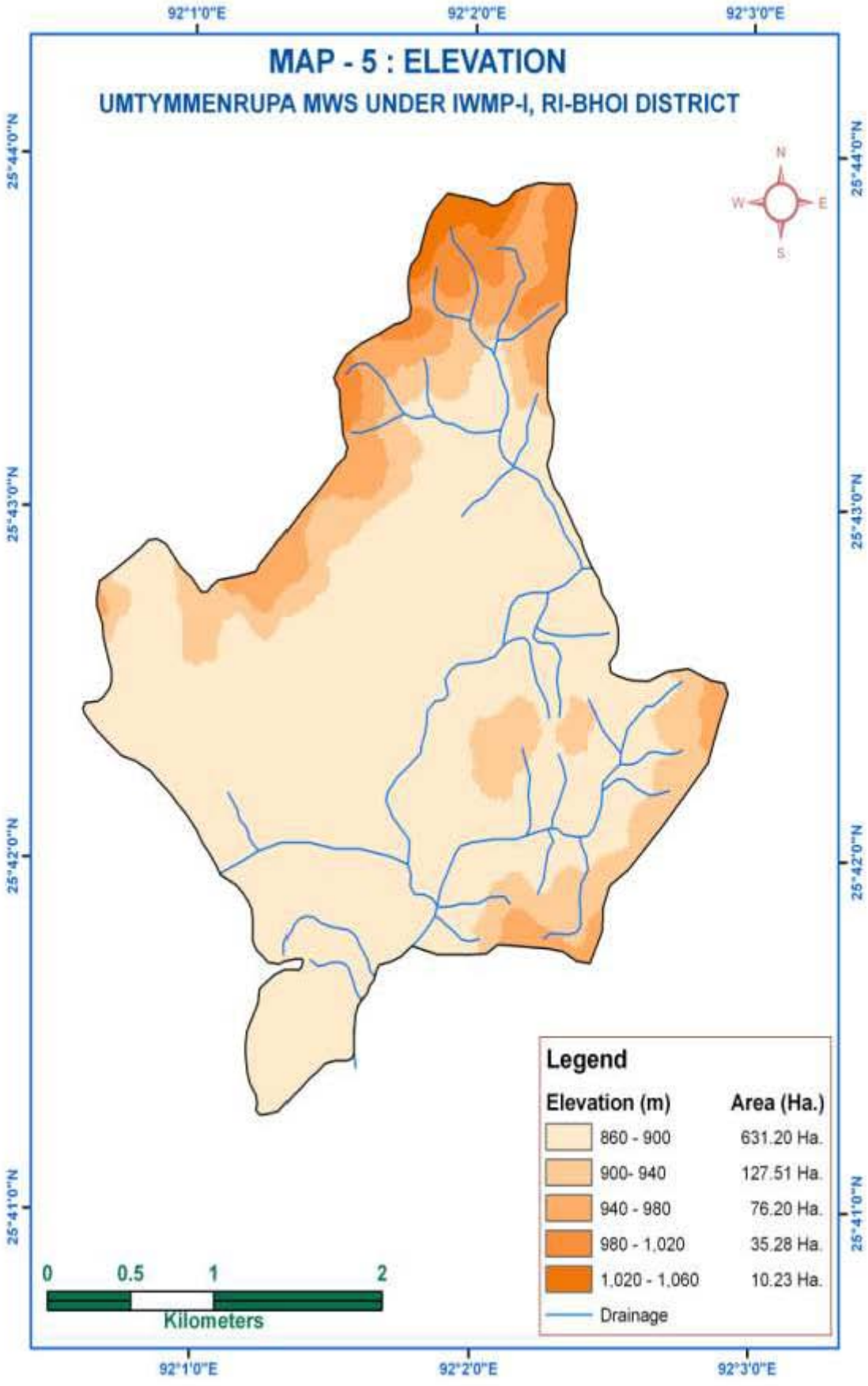
MAP - 1: LOCATION OF UMTYMMENRUPA MWS
UNDER IWMP - I, RIBHOI DISTRICT

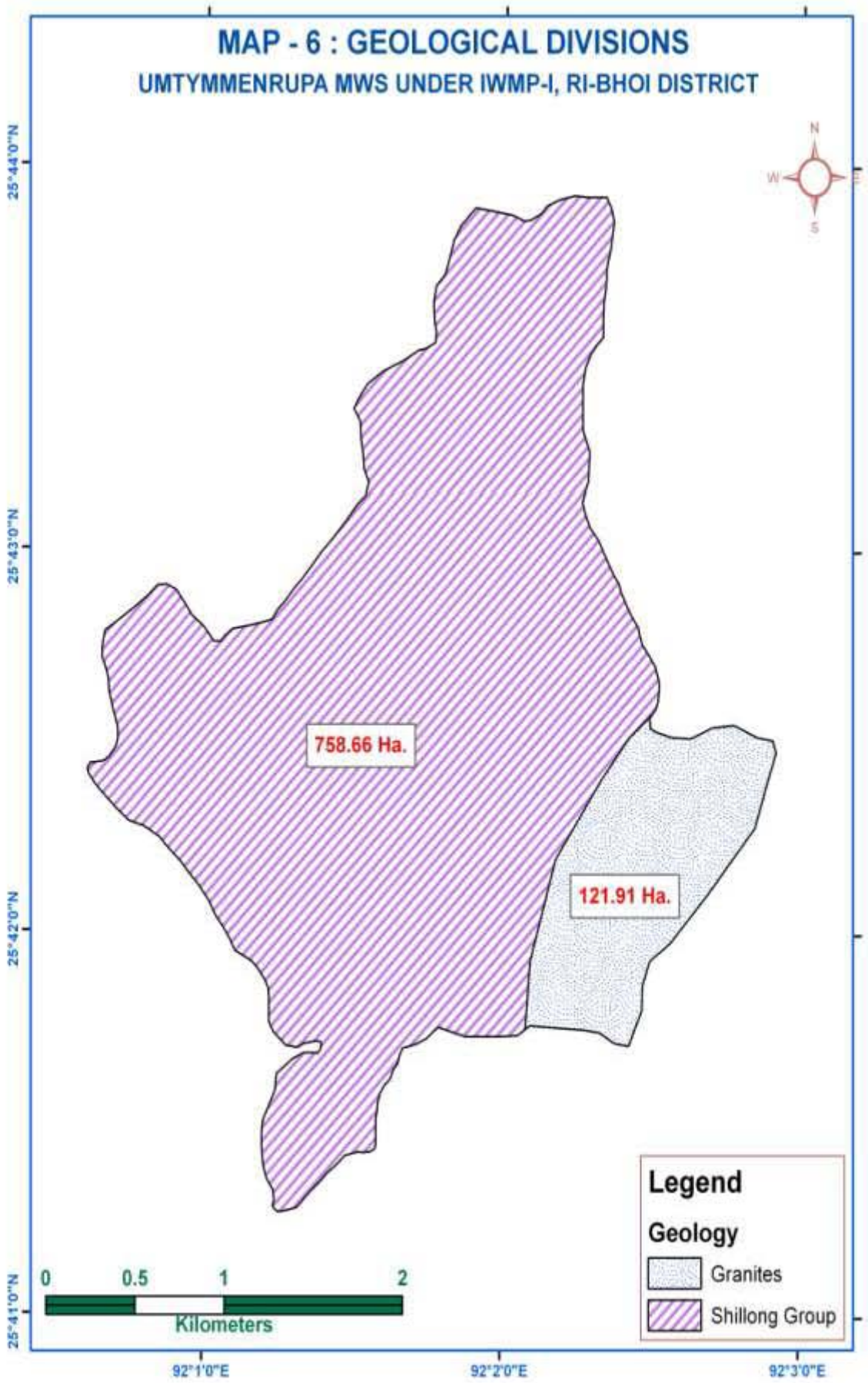


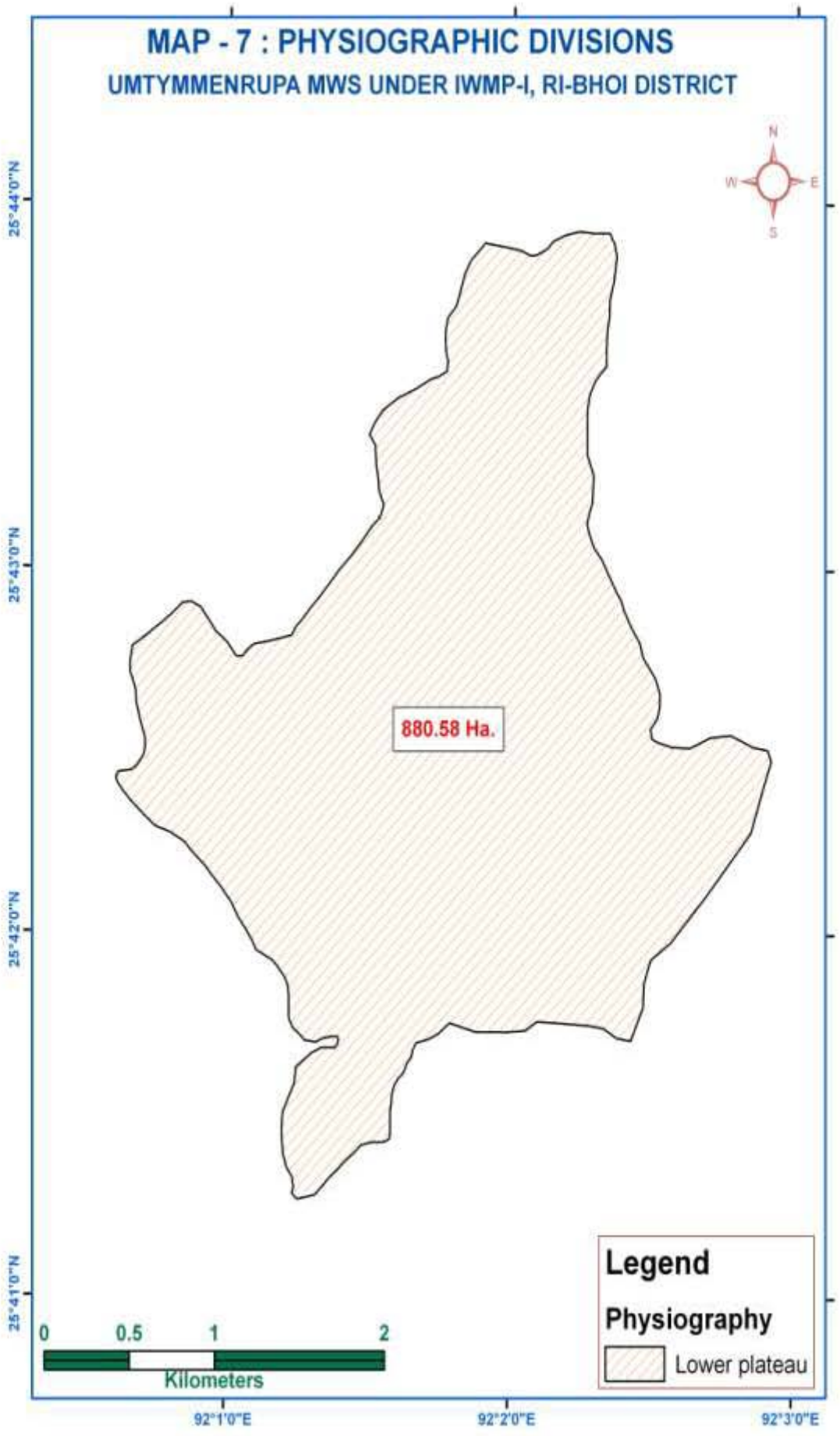

MAP-2: DRAINAGE SYSTEM
UMTYMMENRUPA MWS UNDER IWMP-I, RIBHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
Legend
Settlement
Drainage
Roads
Boundary
0
0.5
1
2
Kilometers

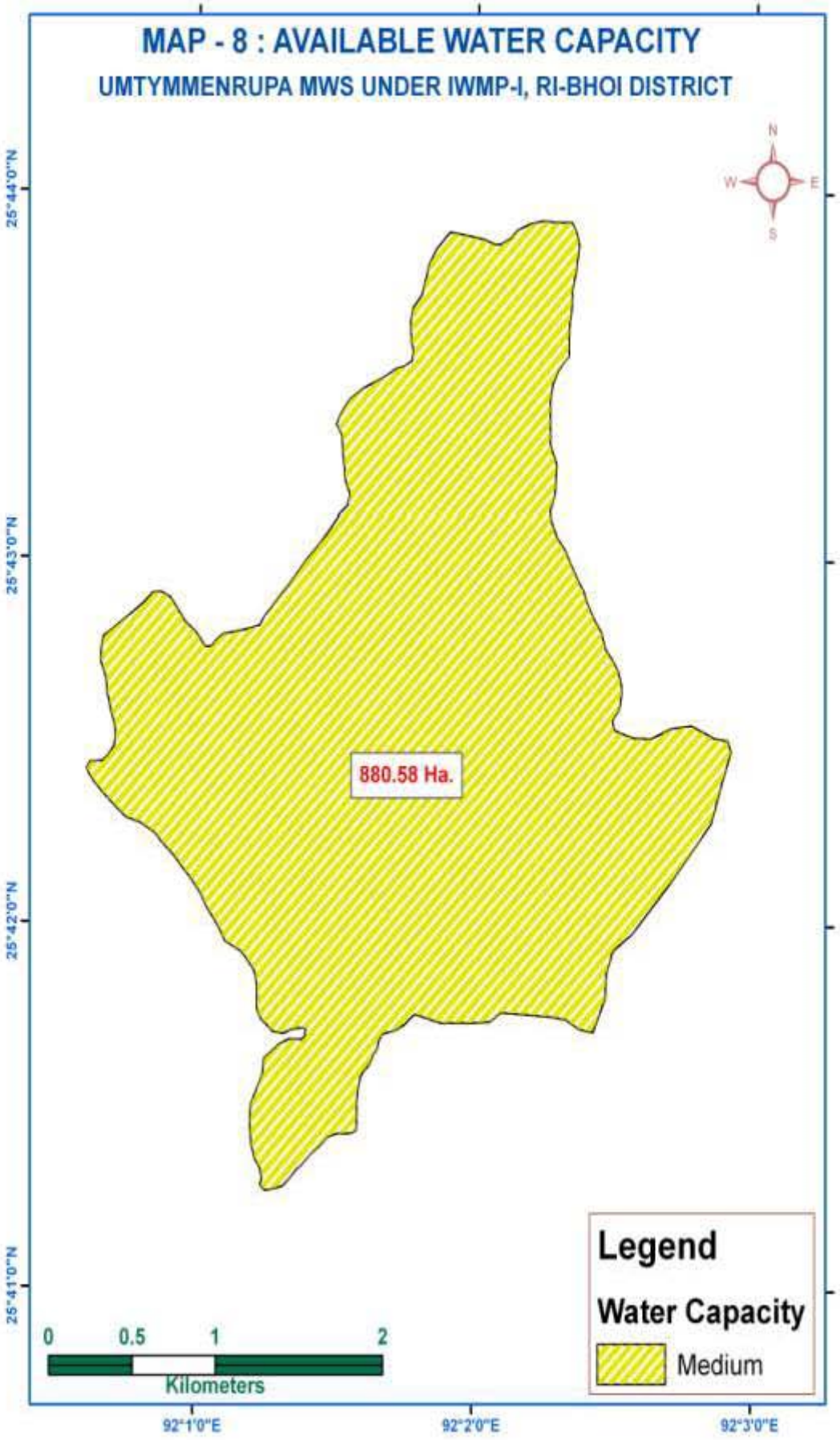

MAP-3: SETTLEMENT & ROADS
UMTYMMENRUPA MWS UNDER IWMP-I, RIBHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
BHOILYMBONG
UMKET
Legend
Settlement
Roads
Boundary
0
0.5
1
2
Kilometers

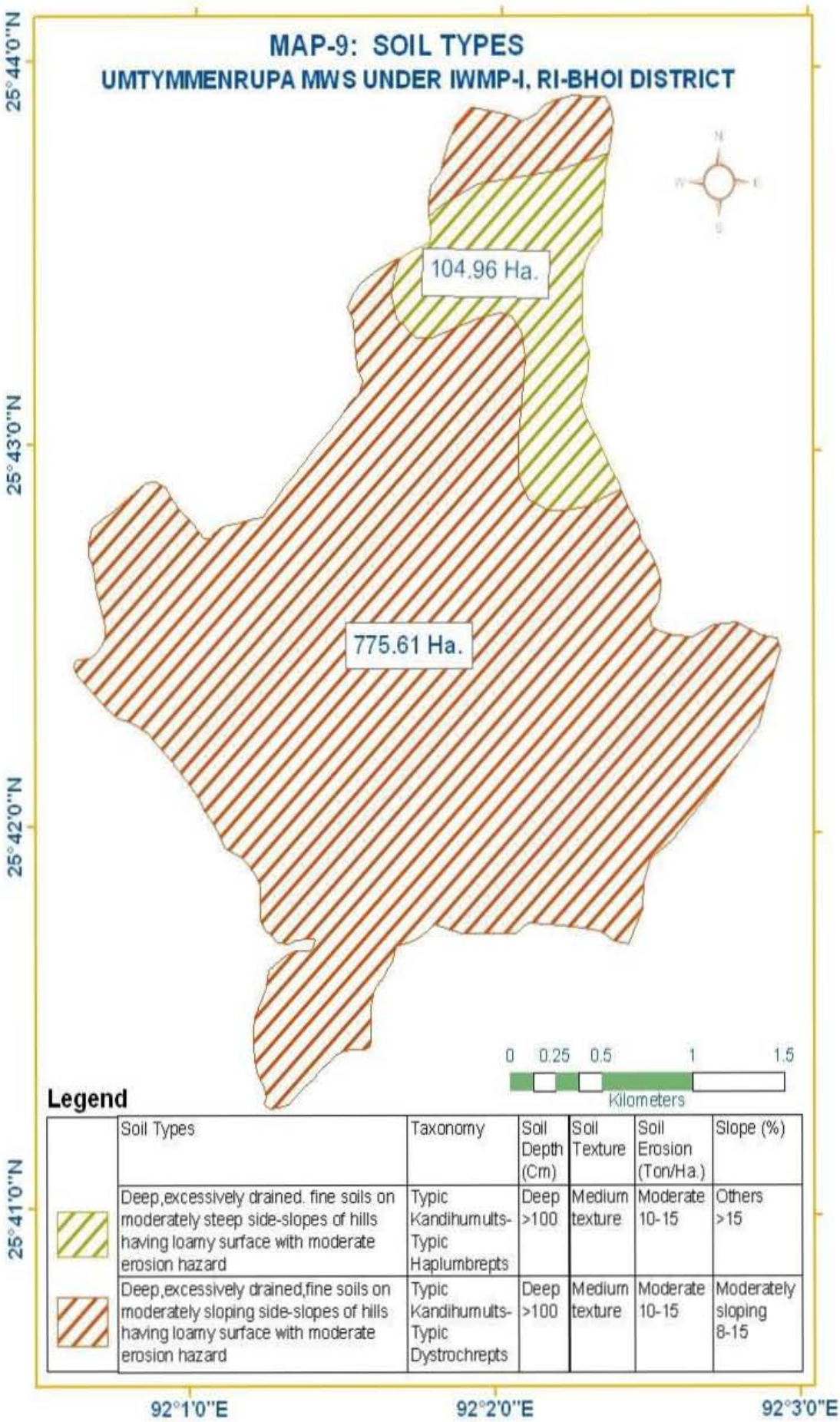

MAP - 4 : SLOPE
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
Legend
Slope (in %)
Area (Ha.)
<1 %
506.07 Ha.
3-5 %
21.09 Ha.
5-15 %
94.78 Ha.
15-35 %
188.65 Ha.
35-50 %
50.61 Ha.
>50 %
19.74 Ha.
Drainage
0
0.5
1
2
Kilometers


MAP - 5 : ELEVATION
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
Legend
Elevation (m)
Area (Ha.)
860 - 900
631.20 Ha.
900- 940
127.51 Ha.
940 - 980
76.20 Ha.
980 - 1,020
35.28 Ha.
1,020 - 1,060
10.23 Ha.
Drainage
0
0.5
1
2
Kilometers

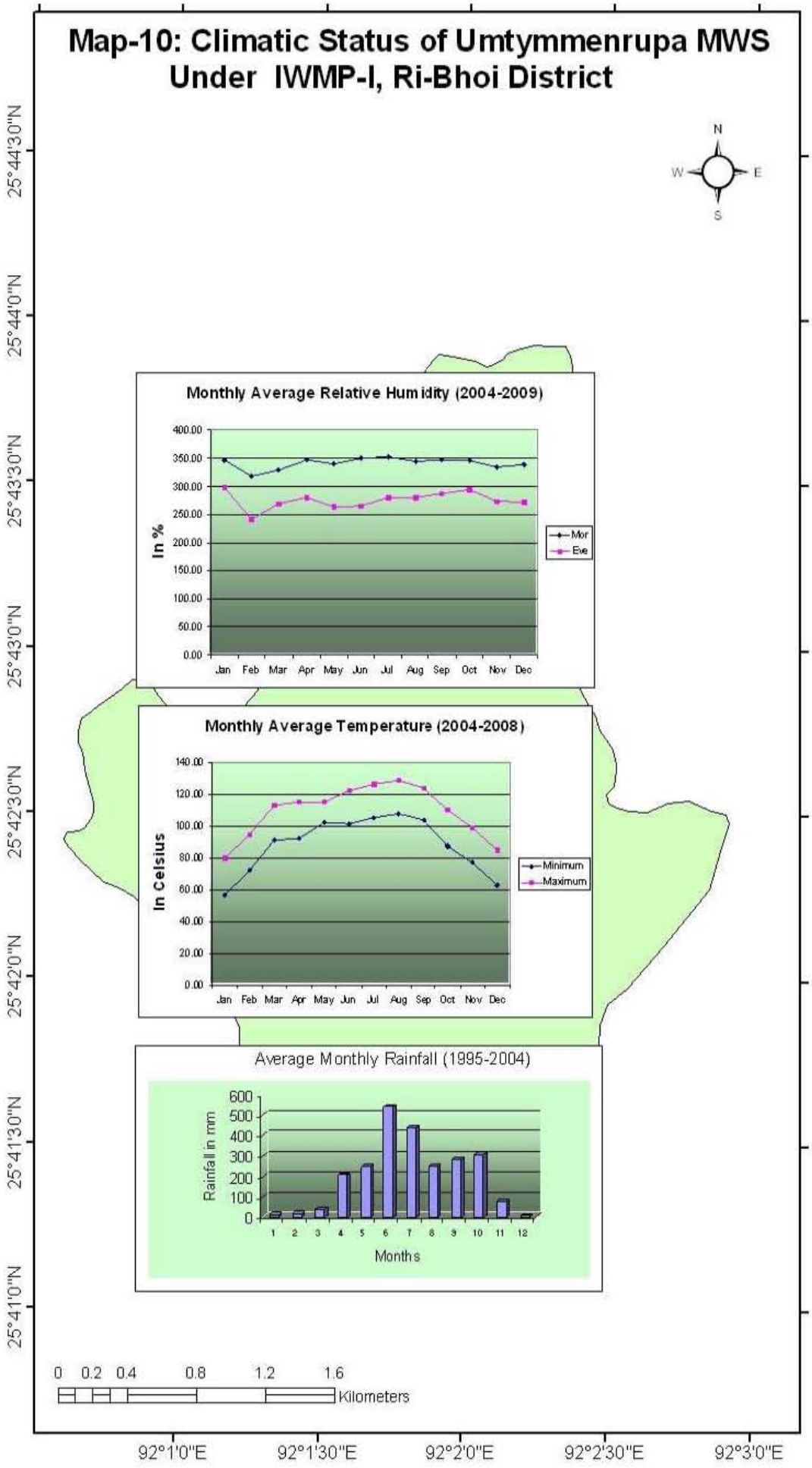

MAP - 6 : GEOLOGICAL DIVISIONS
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
758.66 Ha.
121.91 Ha.
0
0.5
1
2
Kilometers
92°1'0"E
92°2'0"E
92°3'0"E
Legend
Geology
Granites
Shillong Group

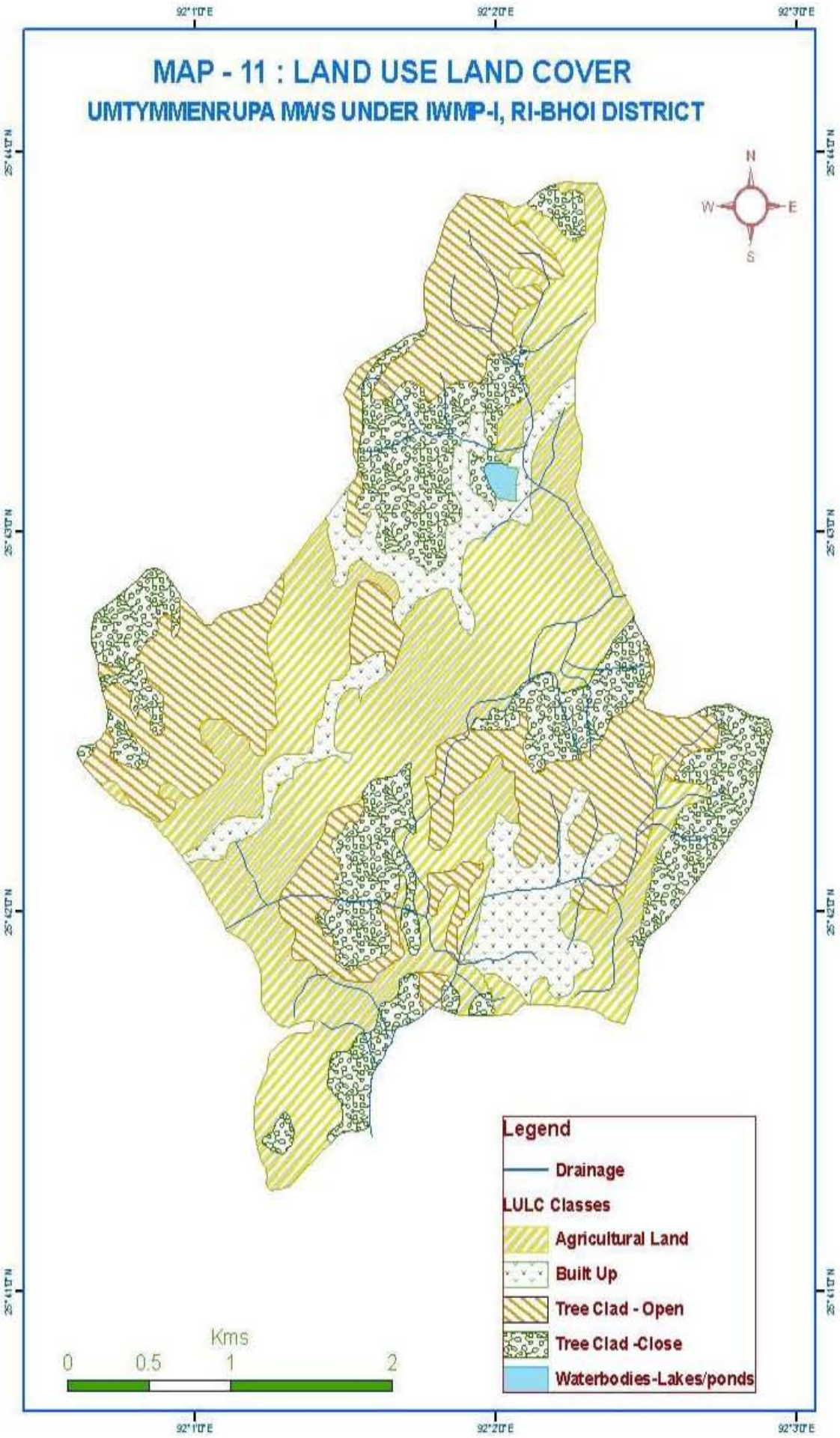

MAP - 7 : PHYSIOGRAPHIC DIVISIONS
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
880.58 Ha.
0
0.5
1
2
Kilometers
92°1'0"E
92°2'0"E
92°3'0"E
Legend
Physiography
Lower plateau

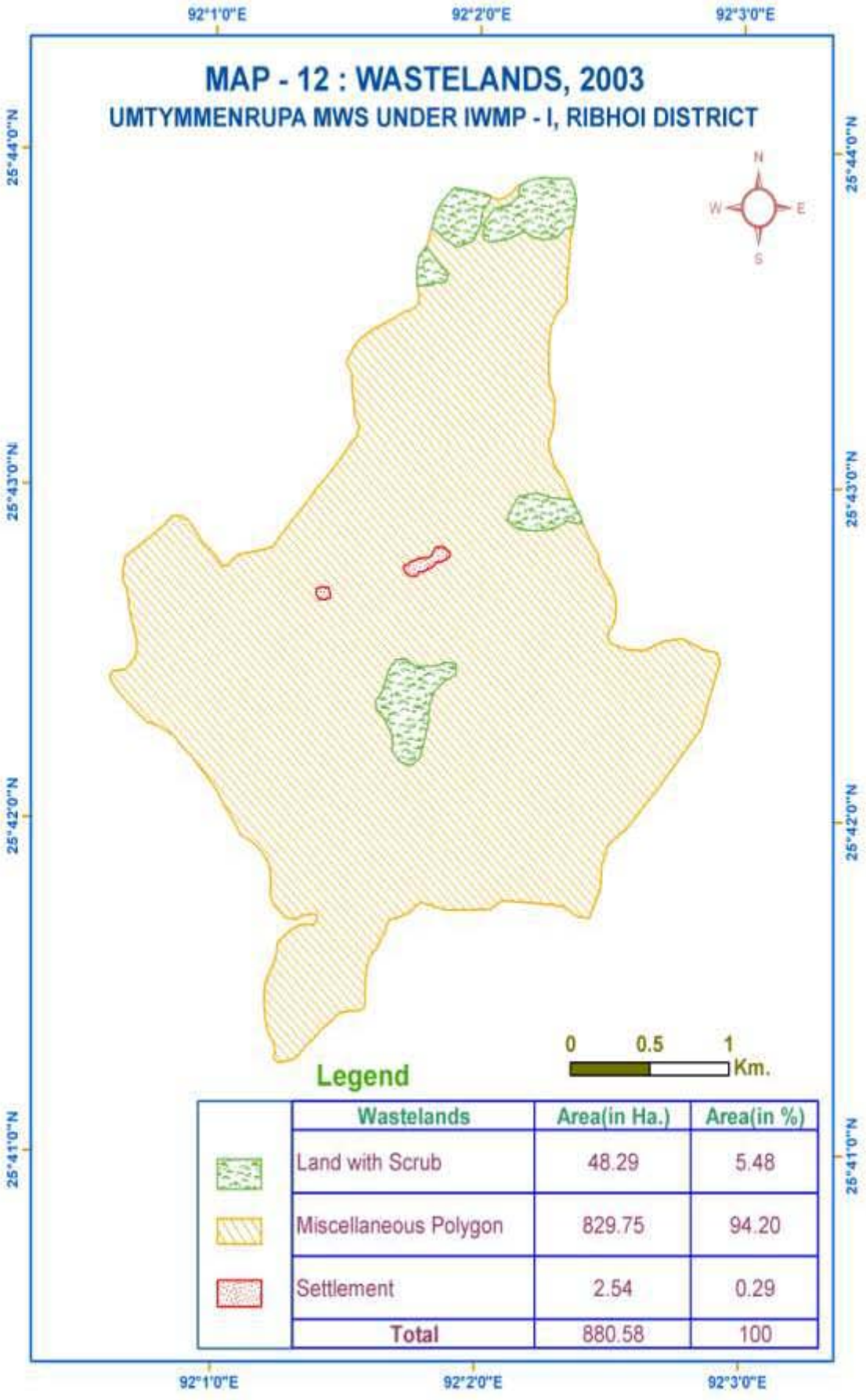

MAP - 8 : AVAILABLE WATER CAPACITY
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
880.58 Ha.
0
0.5
1
2
Kilometers
92°1'0"E
92°2'0"E
92°3'0"E
Legend
Water Capacity
Medium

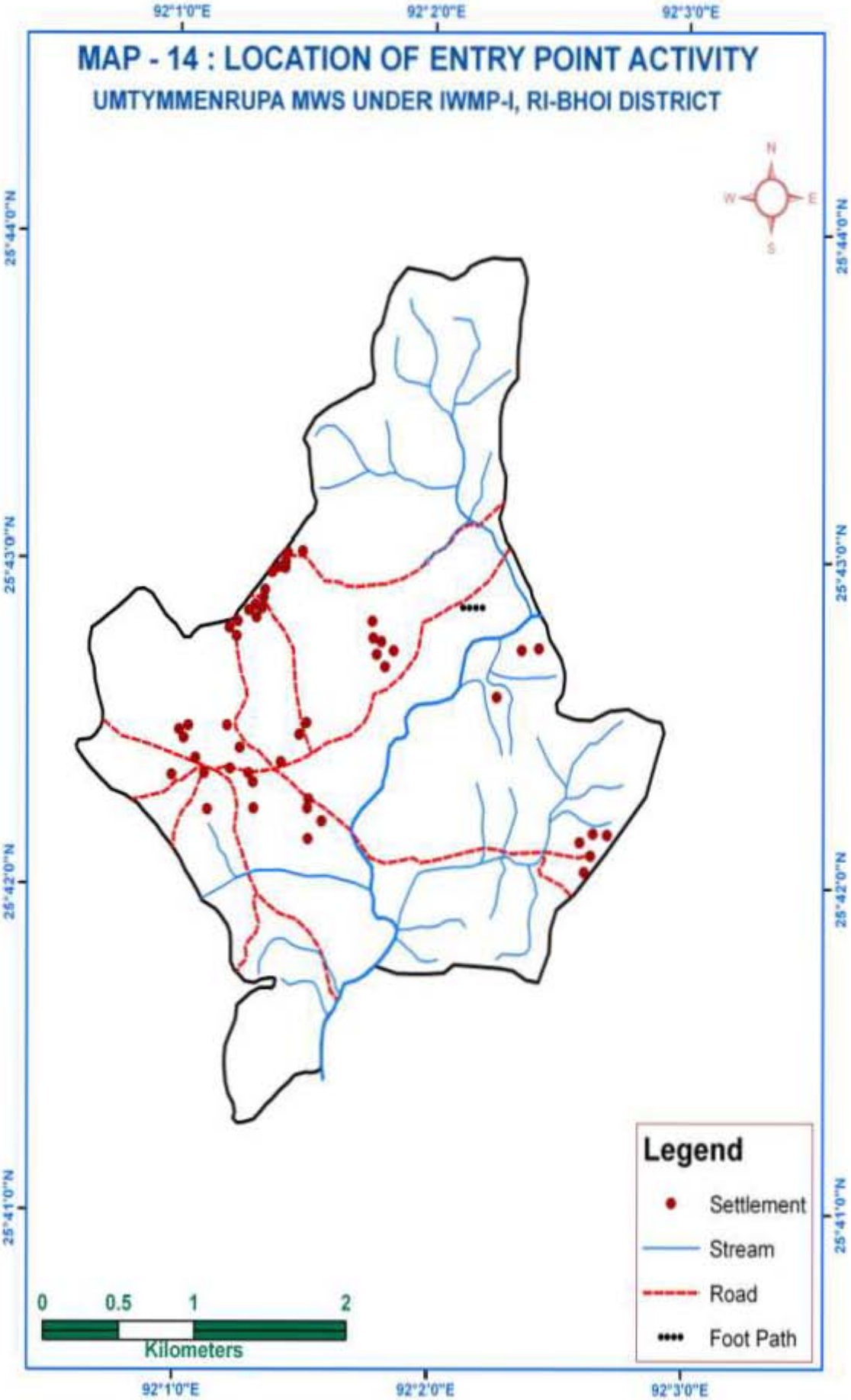

MAP-9: SOIL TYPES
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
104.96 Ha.
775.61 Ha.
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
92°1'0"E
92°2'0"E
92°3'0"E
0 0.25 0.5 1 1.5
Kilometers
Legend
Soil Types | Taxonomy | Soil Depth (Cm) | Soil Texture | Soil Erosion (Ton/Ha.) | Slope (%)
Deep,excessively drained. fine soils on moderately steep side-slopes of hills having loamy surface with moderate erosion hazard | Typic Kandihumults-Typic Haplumbrepts | Deep >100 | Medium texture | Moderate 10-15 | Others >15
Deep,excessively drained,fine soils on moderately sloping side-slopes of hills having loamy surface with moderate erosion hazard | Typic Kandihumults-Typic Dystrochrepts | Deep >100 | Medium texture | Moderate 10-15 | Moderately sloping 8-15

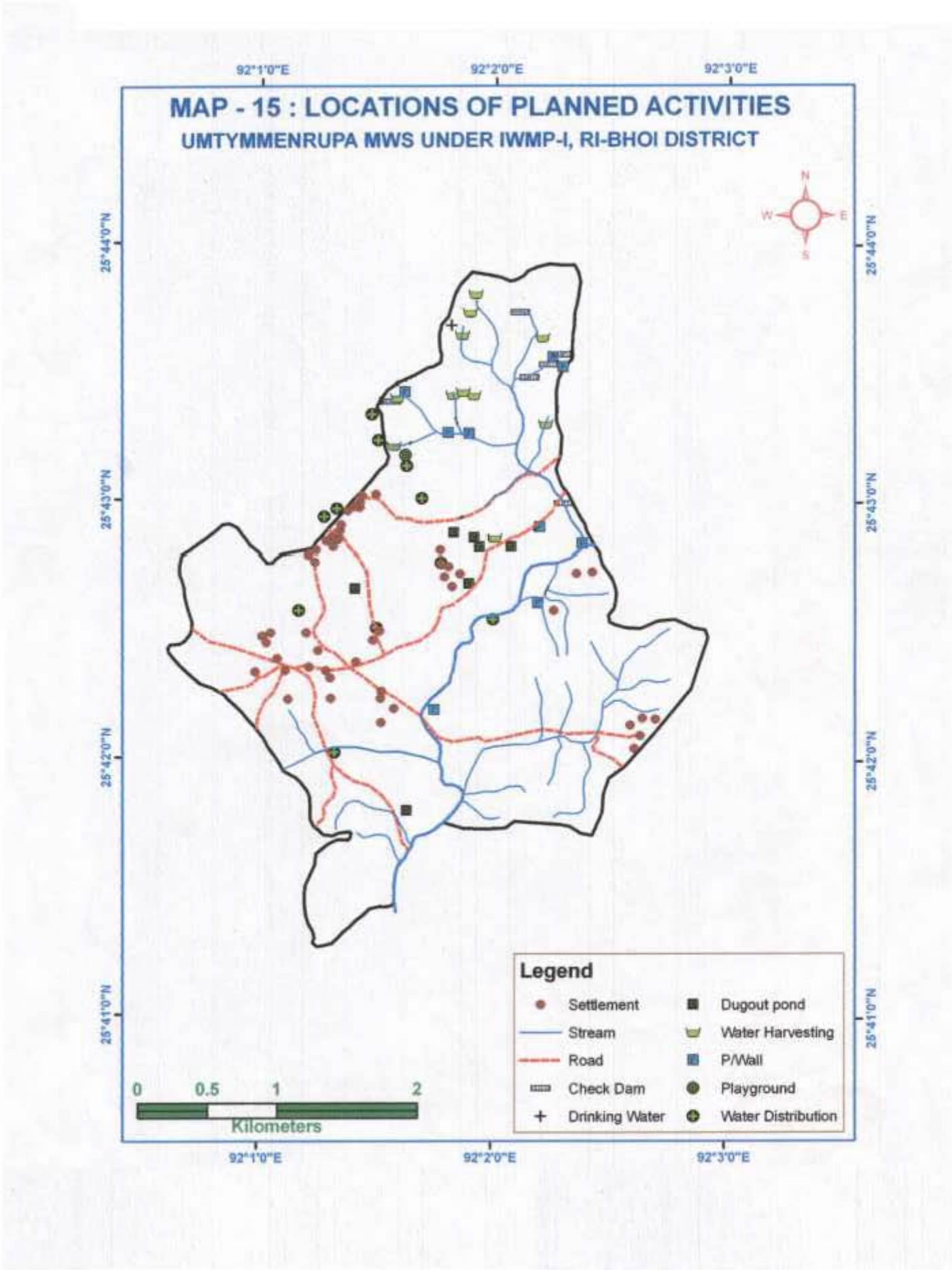
Map-10: Climatic Status of Umtymmenrupa MWS Under IWMP-I, Ri-Bhoi District

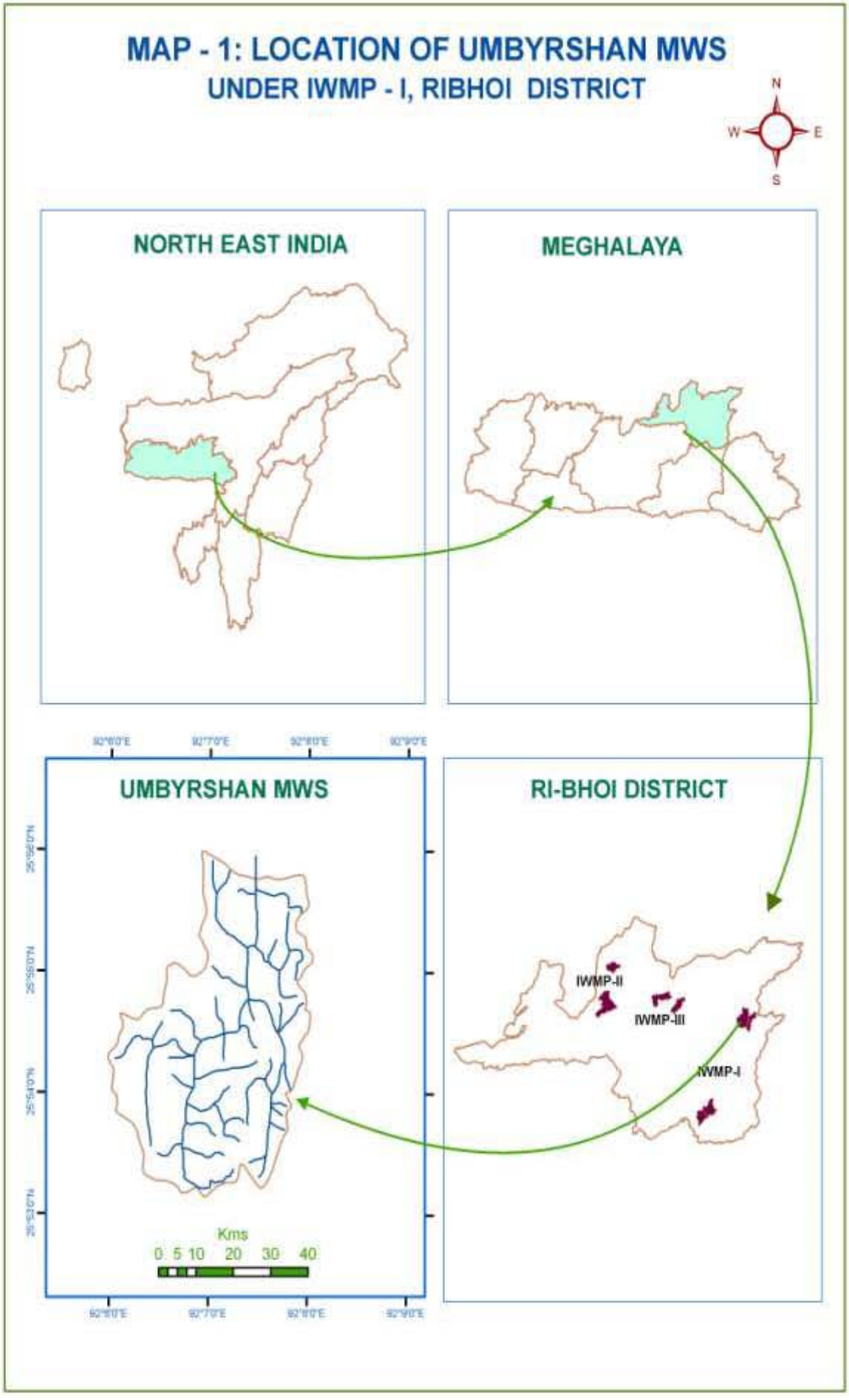


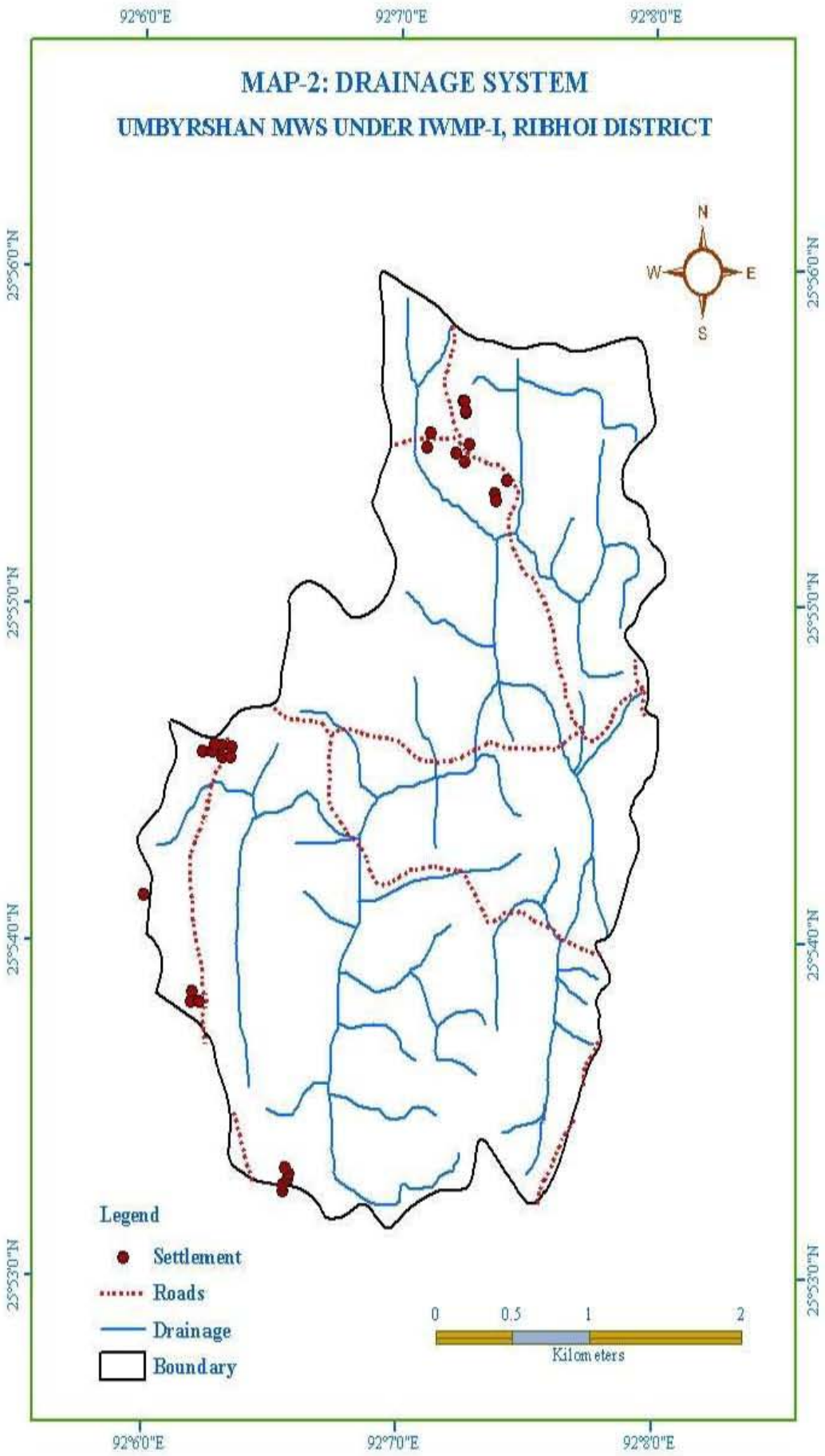

MAP - 11 : LAND USE LAND COVER
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
Legend
Drainage
LULC Classes
Agricultural Land
Built Up
Tree Clad - Open
Tree Clad -Close
Waterbodies-Lakes/ponds
Kms
0
0.5
1
2

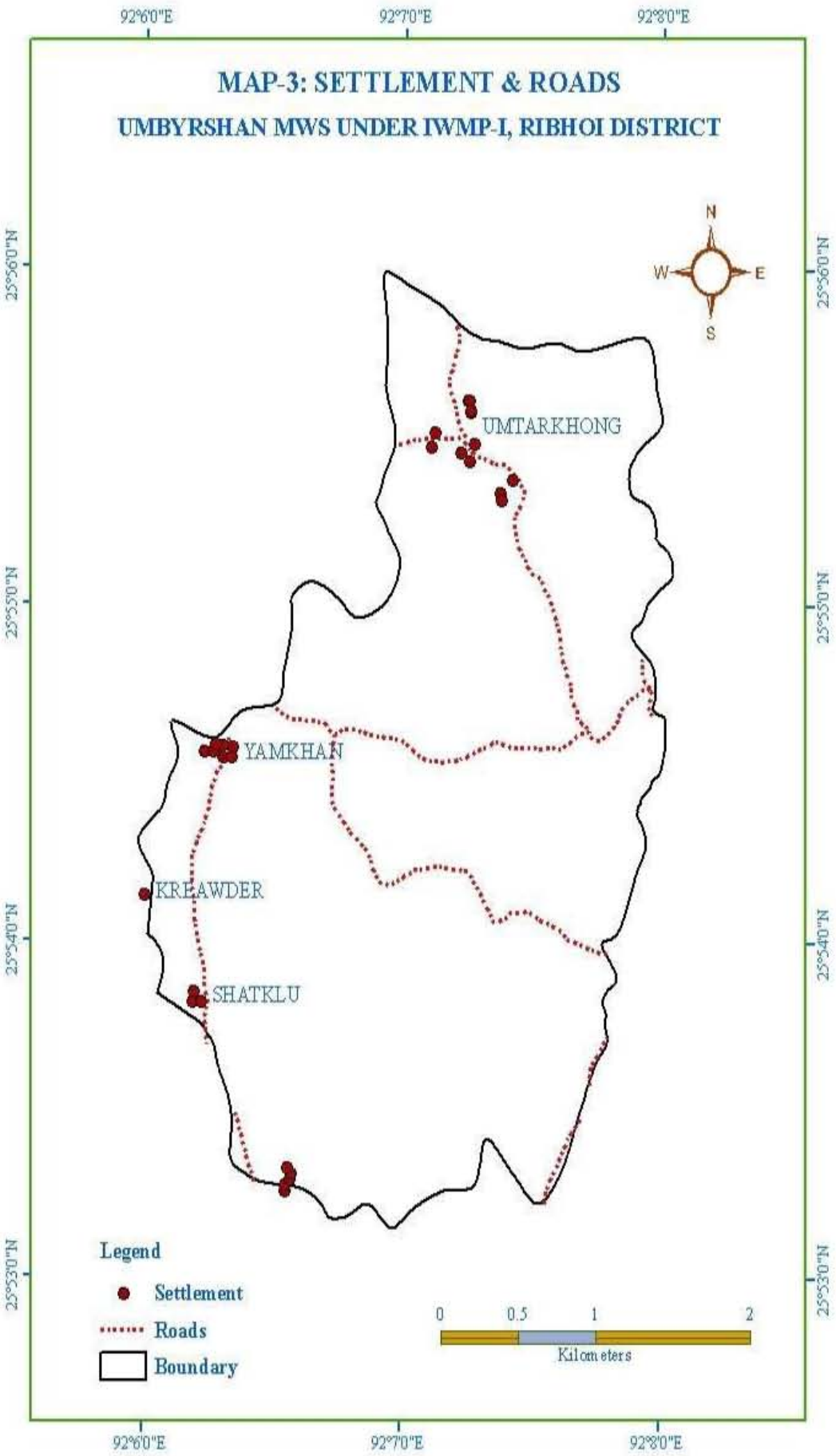

92°1'0"E
92°2'0"E
92°3'0"E
MAP - 12 : WASTELANDS, 2003
UMTYMMENRUPA MWS UNDER IWMP - I, RIBHOI DISTRICT
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
0 0.5 1
Km.
Legend
Wastelands
Area(in Ha.)
Area(in %)
Land with Scrub
48.29
5.48
Miscellaneous Polygon
829.75
94.20
Settlement
2.54
0.29
Total
880.58
100

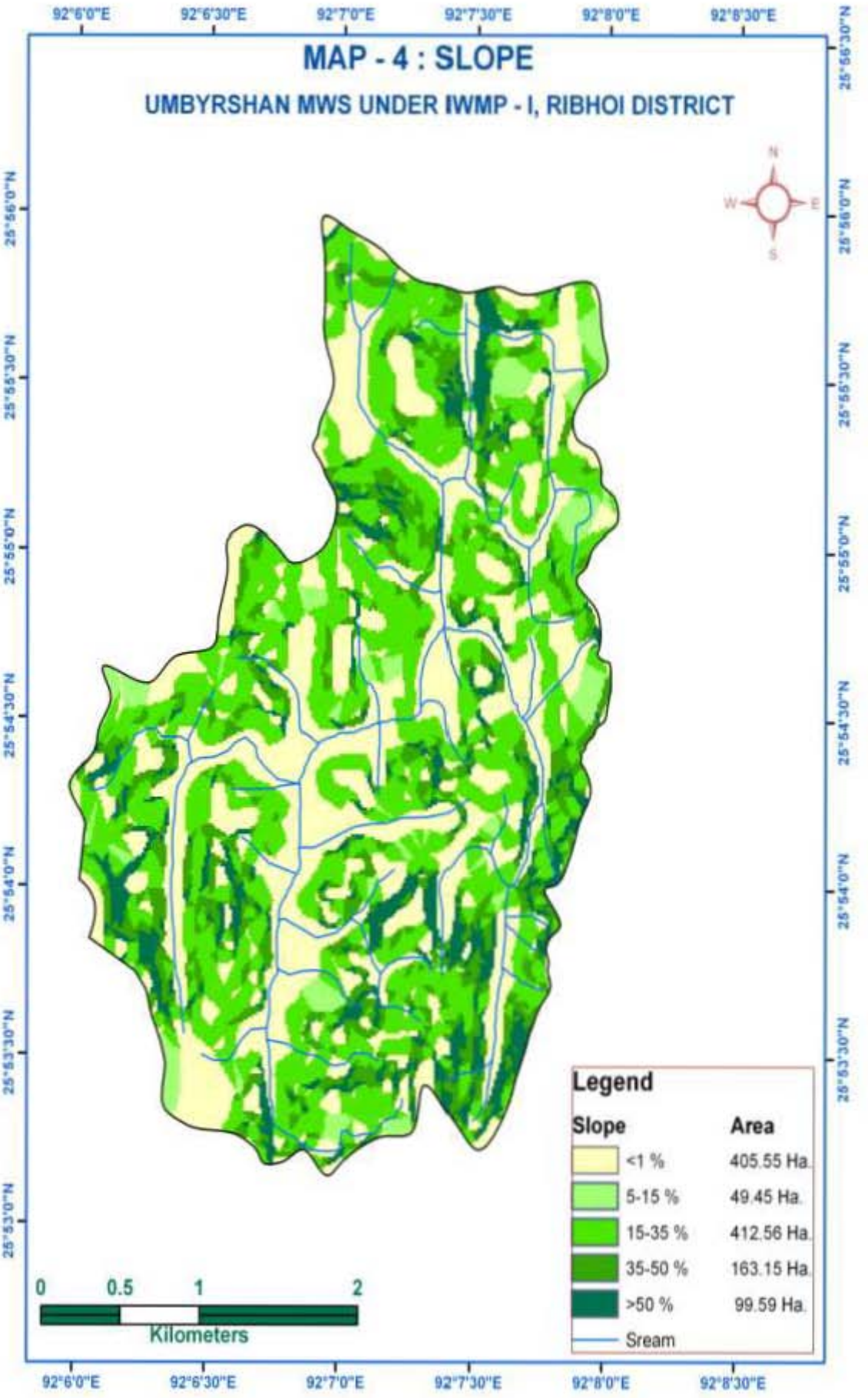

MAP - 14 : LOCATION OF ENTRY POINT ACTIVITY
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
S
E
W
Legend
Settlement
Stream
Road
Foot Path
0
0.5
1
2
Kilometers

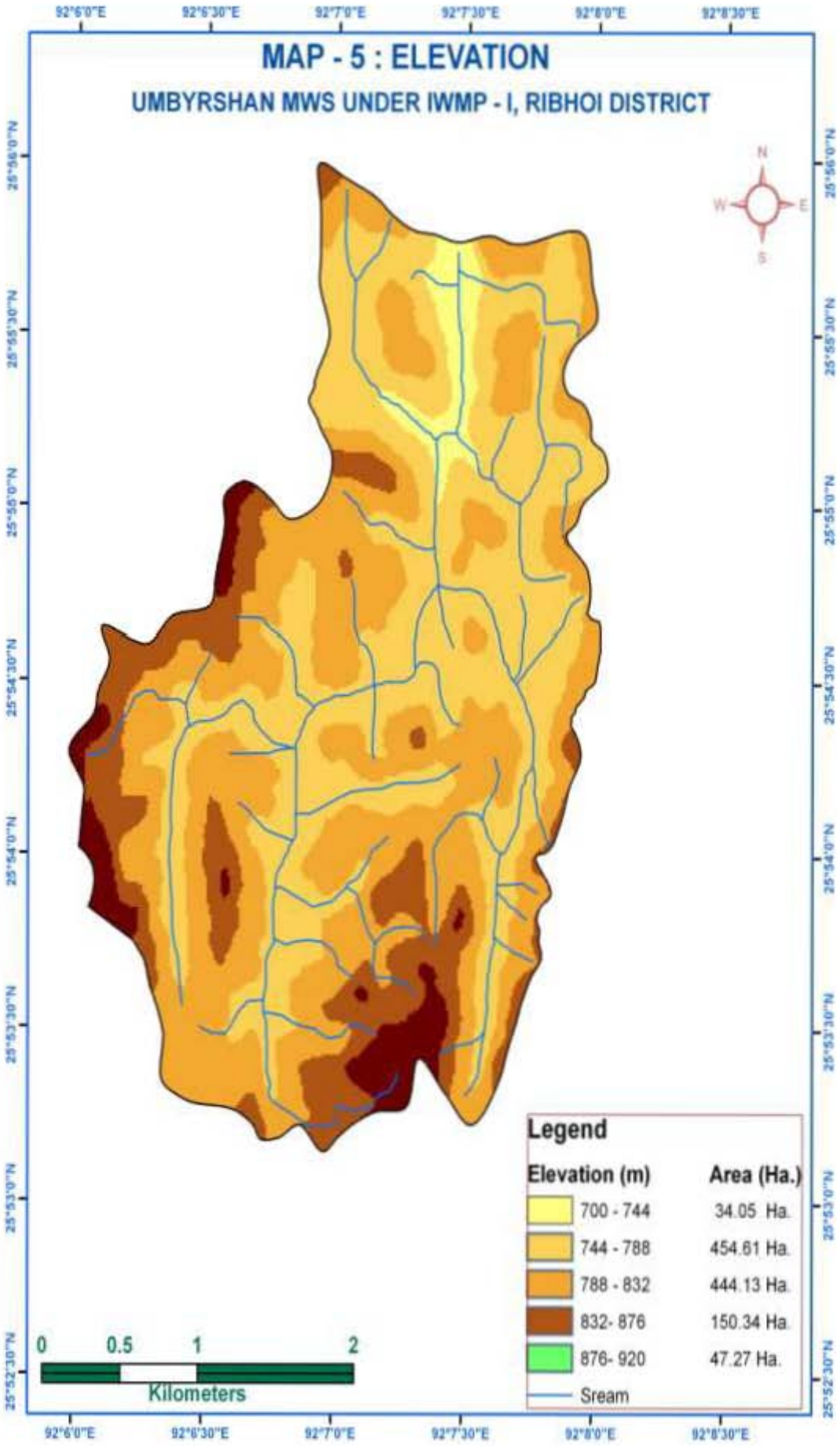

MAP - 15 : LOCATIONS OF PLANNED ACTIVITIES
UMTYMMENRUPA MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°1'0"E
92°2'0"E
92°3'0"E
25°44'0"N
25°43'0"N
25°42'0"N
25°41'0"N
N
W
E
S
Legend
Settlement
Stream
Road
Check Dam
Drinking Water
Dugout pond
Water Harvesting
P/Wall
Playground
Water Distribution
0
0.5
1
2
Kilometers

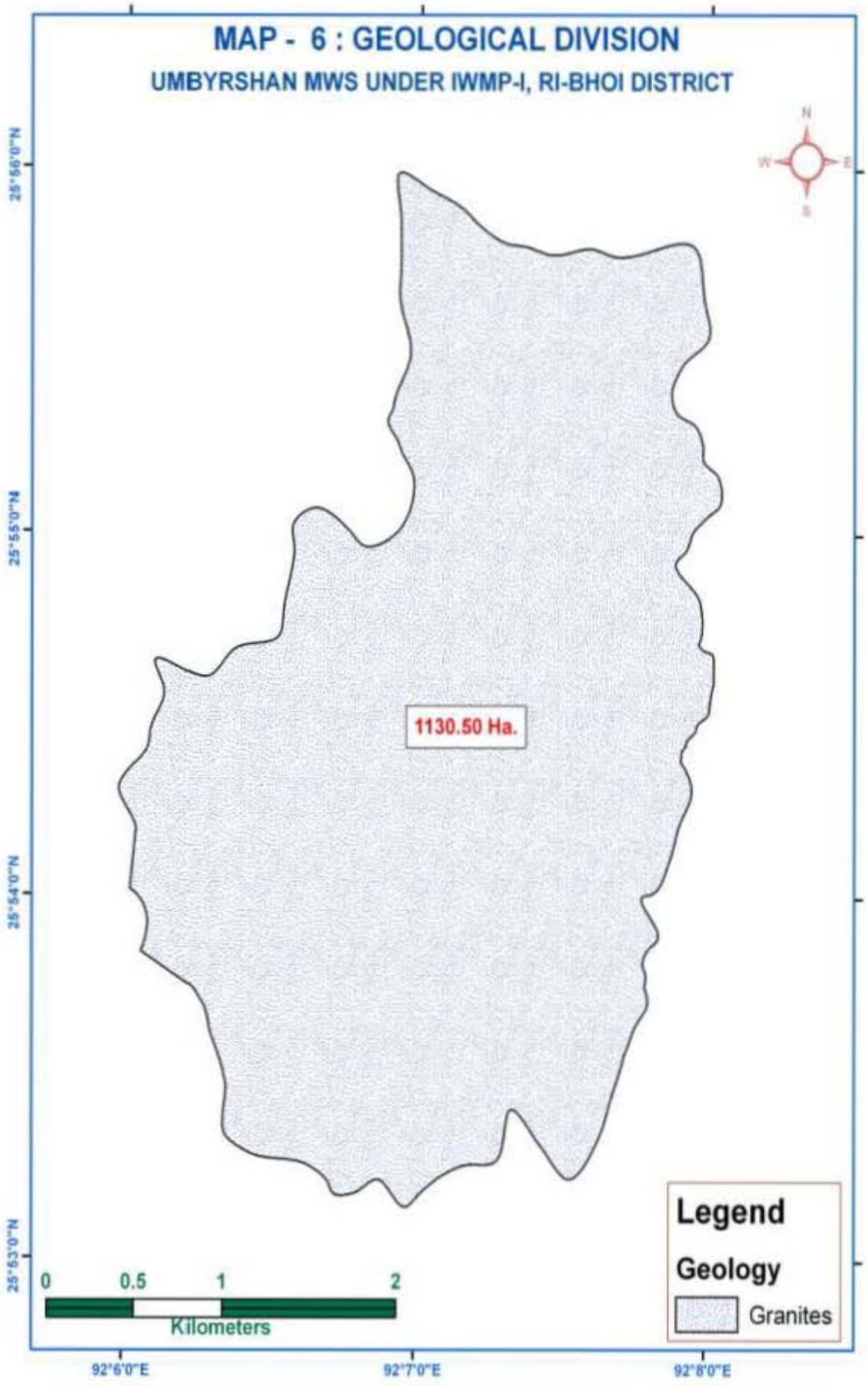

MAP - 1: LOCATION OF UMBYRSHAN MWS
UNDER IWMP - I, RIBHOI DISTRICT
N
W
E
S
NORTH EAST INDIA
MEGHALAYA
UMBYRSHAN MWS
RI-BHOI DISTRICT
IWMP-II
IWMP-III
IWMP-I
Kms
0 5 10 20 30 40

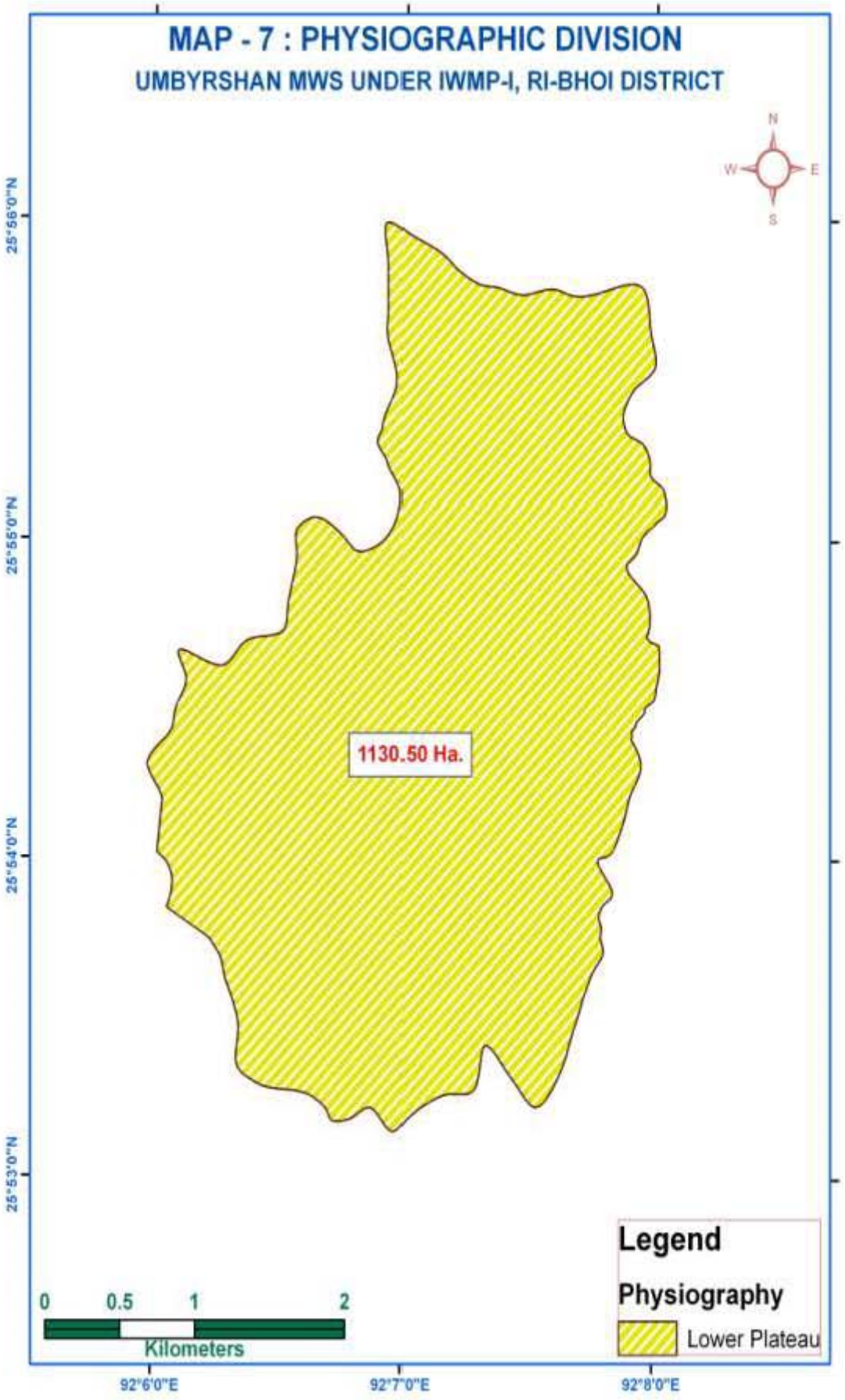

MAP-2: DRAINAGE SYSTEM
UMBYRSHAN MWS UNDER IWMP-I, RIBHOI DISTRICT
92°6'0"E
92°7'0"E
92°8'0"E
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
Legend
Settlement
Roads
Drainage
Boundary
0
0.5
1
2
Kilometers

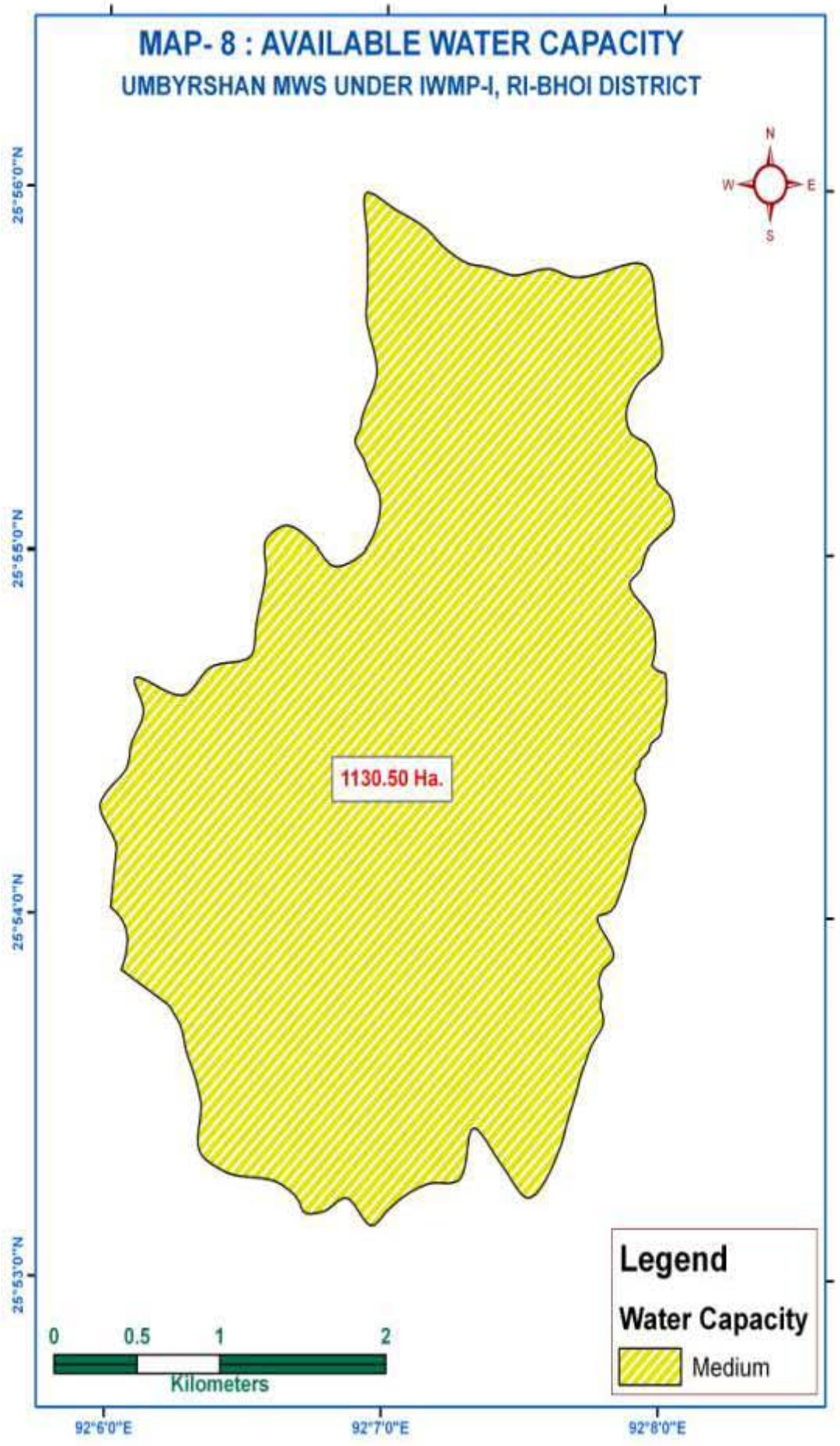

MAP-3: SETTLEMENT & ROADS
UMBYRSHAN MWS UNDER IWMP-I, RIBHOI DISTRICT
92°6'0"E
92°7'0"E
92°8'0"E
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
UMTARKHONG
YAMKHAN
KREAWDER
SHATKLU
Legend
Settlement
Roads
Boundary
0
0.5
1
2
Kilometers

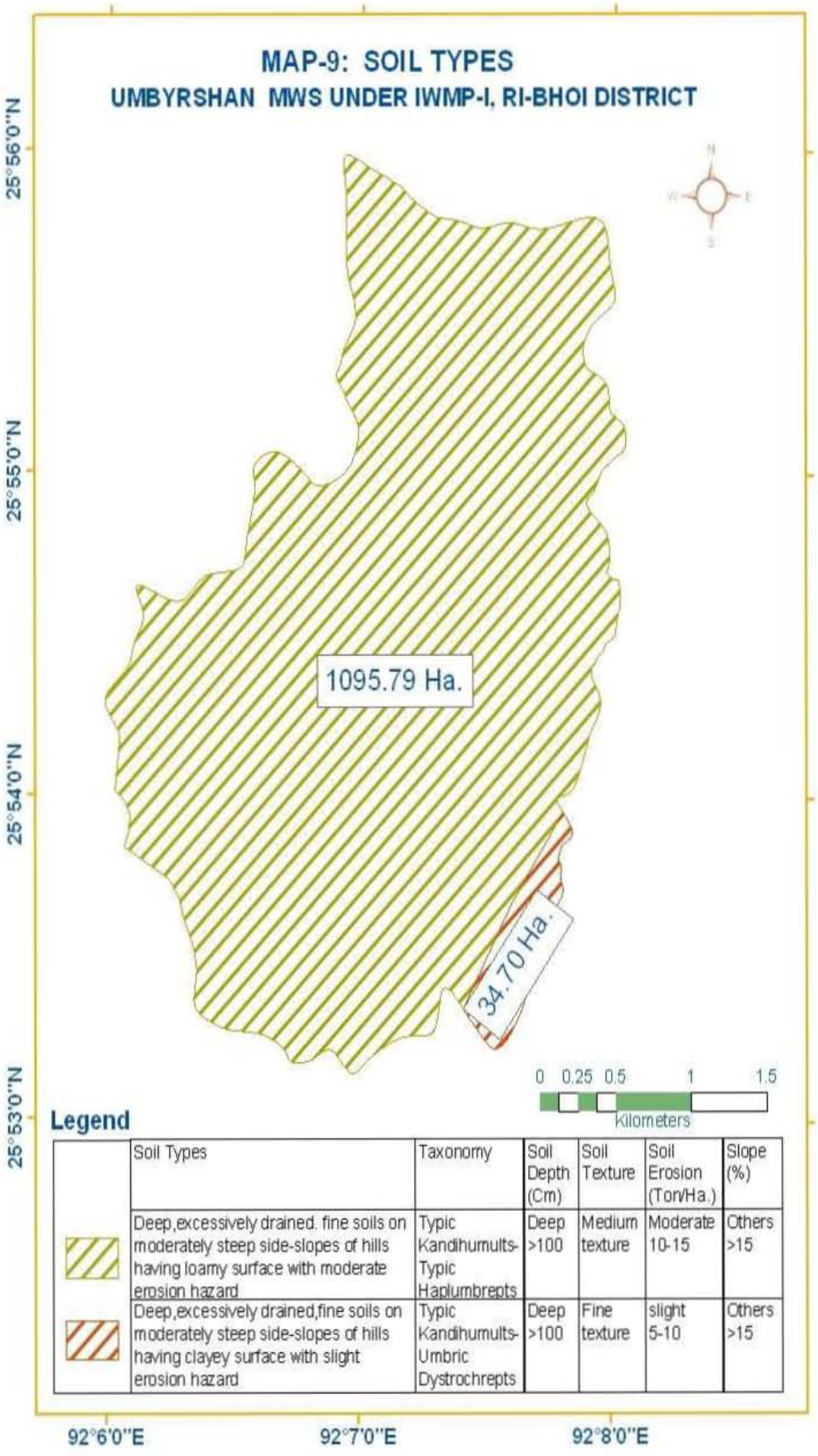

MAP - 4 : SLOPE
UMBYRSHAN MWS UNDER IWMP - I, RIBHOI DISTRICT
92°6'0"E
92°6'30"E
92°7'0"E
92°7'30"E
92°8'0"E
92°8'30"E
25°56'30"N
25°56'0"N
25°55'30"N
25°55'0"N
25°54'30"N
25°54'0"N
25°53'30"N
25°53'0"N
N
S
E
W
Legend
Slope
Area
<1 %
405.55 Ha.
5-15 %
49.45 Ha.
15-35 %
412.56 Ha.
35-50 %
163.15 Ha.
>50 %
99.59 Ha.
Sream
0
0.5
1
2
Kilometers


MAP - 5 : ELEVATION
UMBYRSHAN MWS UNDER IWMP - I, RIBHOI DISTRICT
92°6'0"E
92°6'30"E
92°7'0"E
92°7'30"E
92°8'0"E
92°8'30"E
25°56'0"N
25°55'30"N
25°55'0"N
25°54'30"N
25°54'0"N
25°53'30"N
25°53'0"N
25°52'30"N
N
W
E
S
Legend
Elevation (m)
Area (Ha.)
700 - 744
34.05 Ha.
744 - 788
454.61 Ha.
788 - 832
444.13 Ha.
832- 876
150.34 Ha.
876- 920
47.27 Ha.
Sream
0
0.5
1
2
Kilometers


MAP - 6 : GEOLOGICAL DIVISION
UMBYRSHAN MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
1130.50 Ha.
0
0.5
1
2
Kilometers
Legend
Geology
Granites
92°6'0"E
92°7'0"E
92°8'0"E

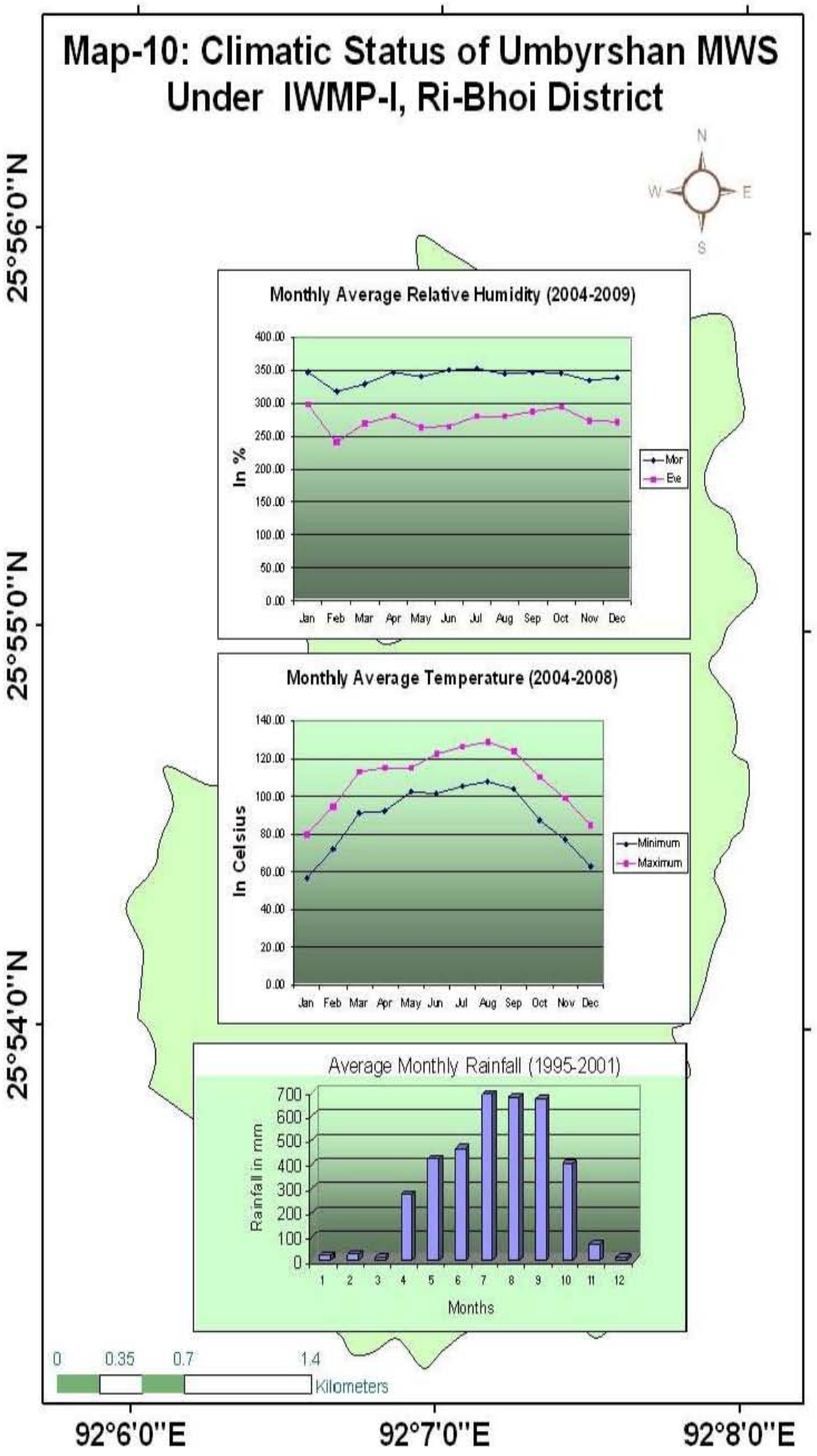

MAP - 7 : PHYSIOGRAPHIC DIVISION
UMBYRSHAN MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
1130.50 Ha.
0
0.5
1
2
Kilometers
92°6'0"E
92°7'0"E
92°8'0"E
Legend
Physiography
Lower Plateau

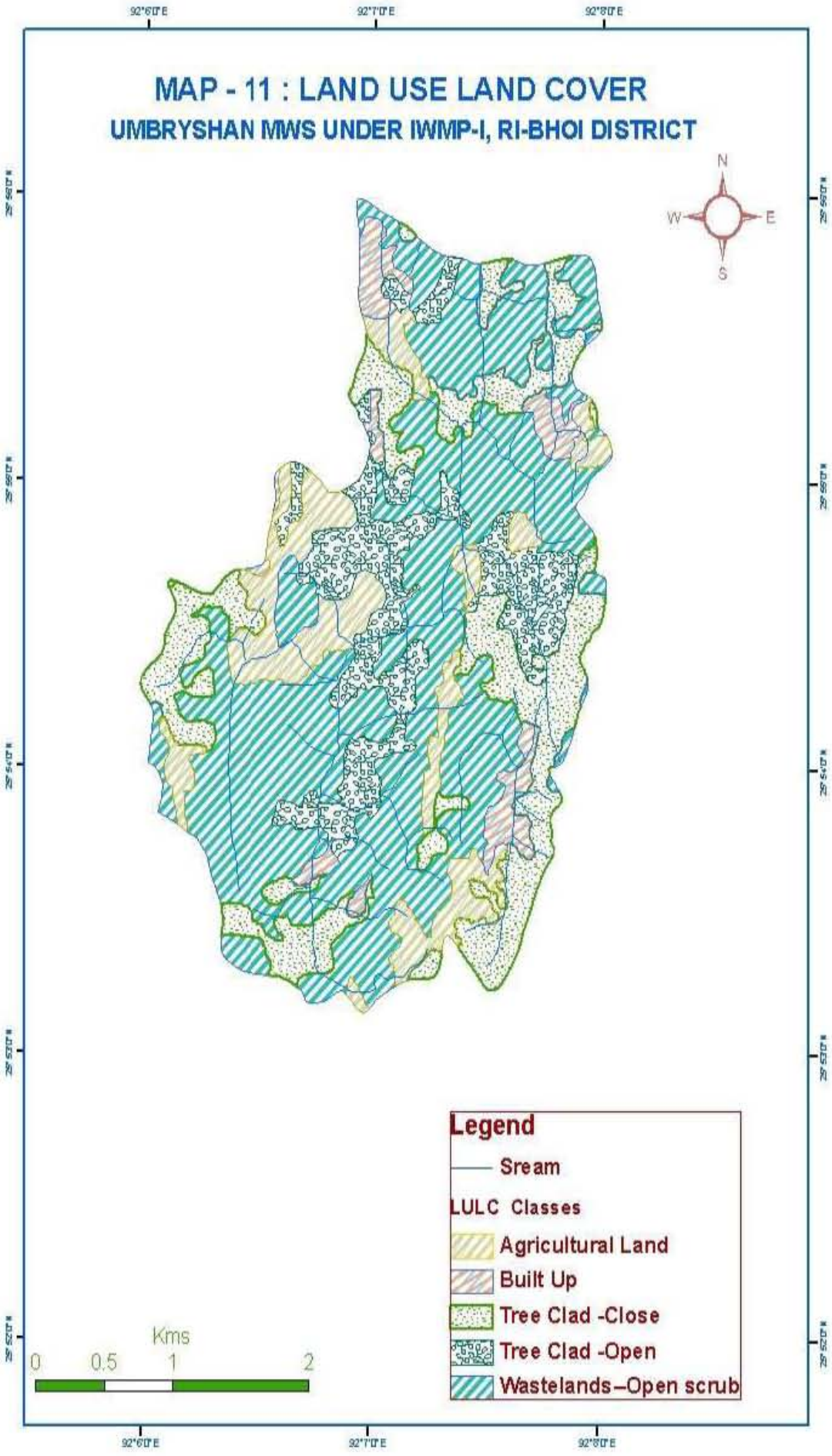

MAP- 8 : AVAILABLE WATER CAPACITY
UMBYRSHAN MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
1130.50 Ha.
0
0.5
1
2
Kilometers
92°6'0"E
92°7'0"E
92°8'0"E
Legend
Water Capacity
Medium

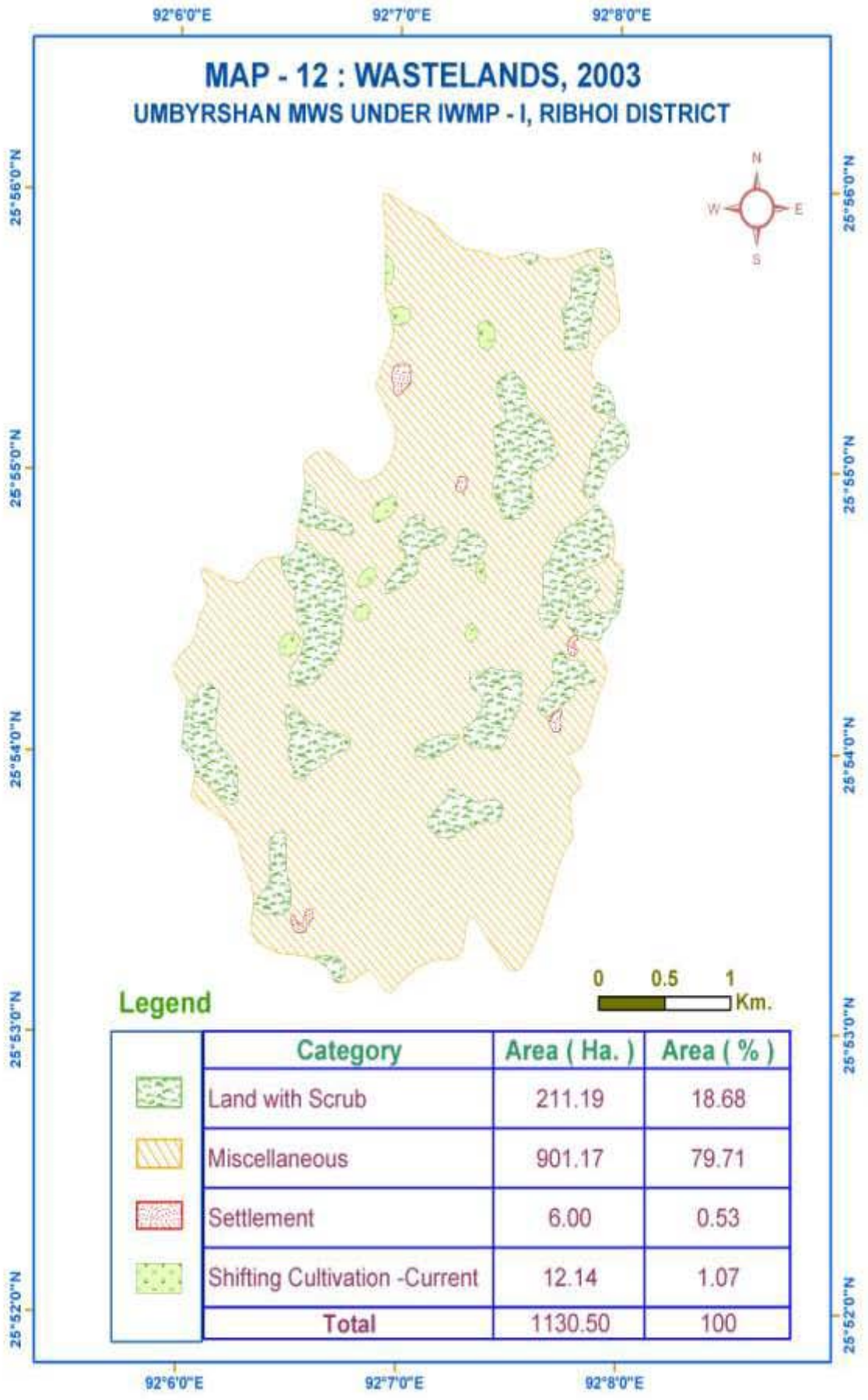


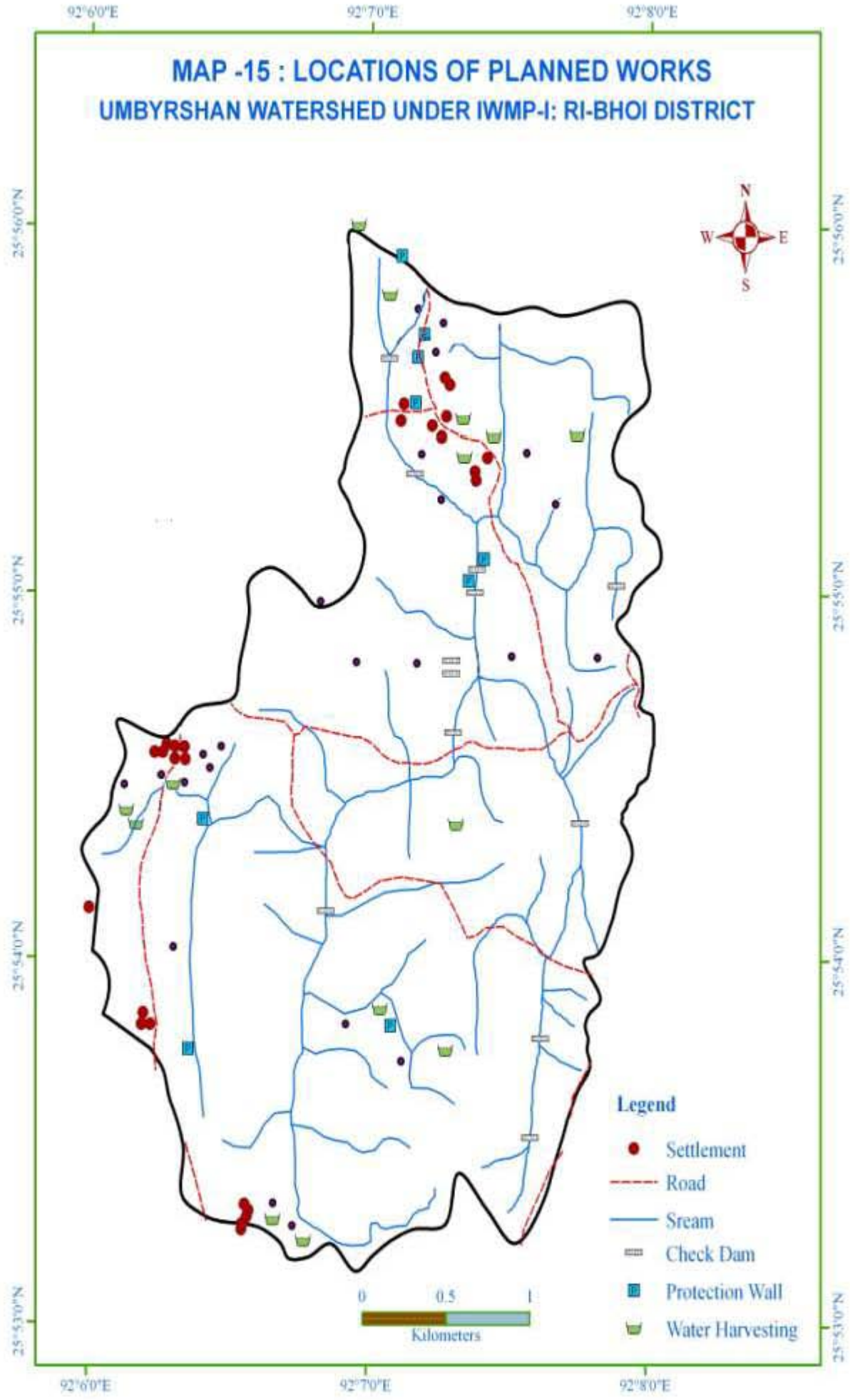
Legend

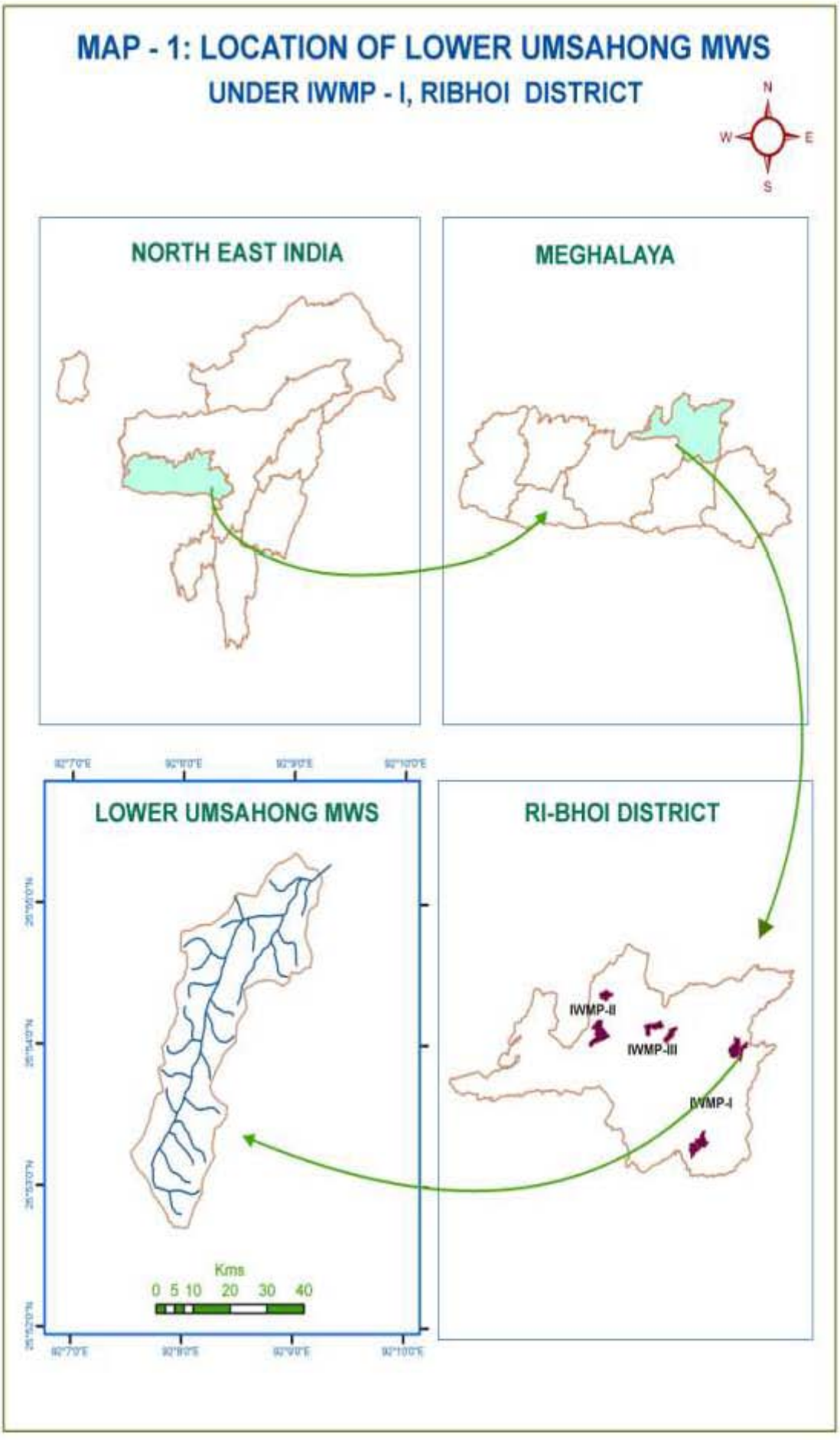
Soil Types	Taxonomy	Soil Depth (Cm)	Soil Texture	Soil Erosion (Ton/Ha.)	Slope (%)
Deep,excessively drained. fine soils on moderately steep side-slopes of hills having loamy surface with moderate erosion hazard	Typic Kandihumults-Typic Haplumbrepts	Deep >100	Medium texture	Moderate 10-15	Others >15
Deep,excessively drained,fine soils on moderately steep side-slopes of hills having clayey surface with slight erosion hazard	Typic Kandihumults-Umbric Dystrochrepts	Deep >100	Fine texture	slight 5-10	Others >15

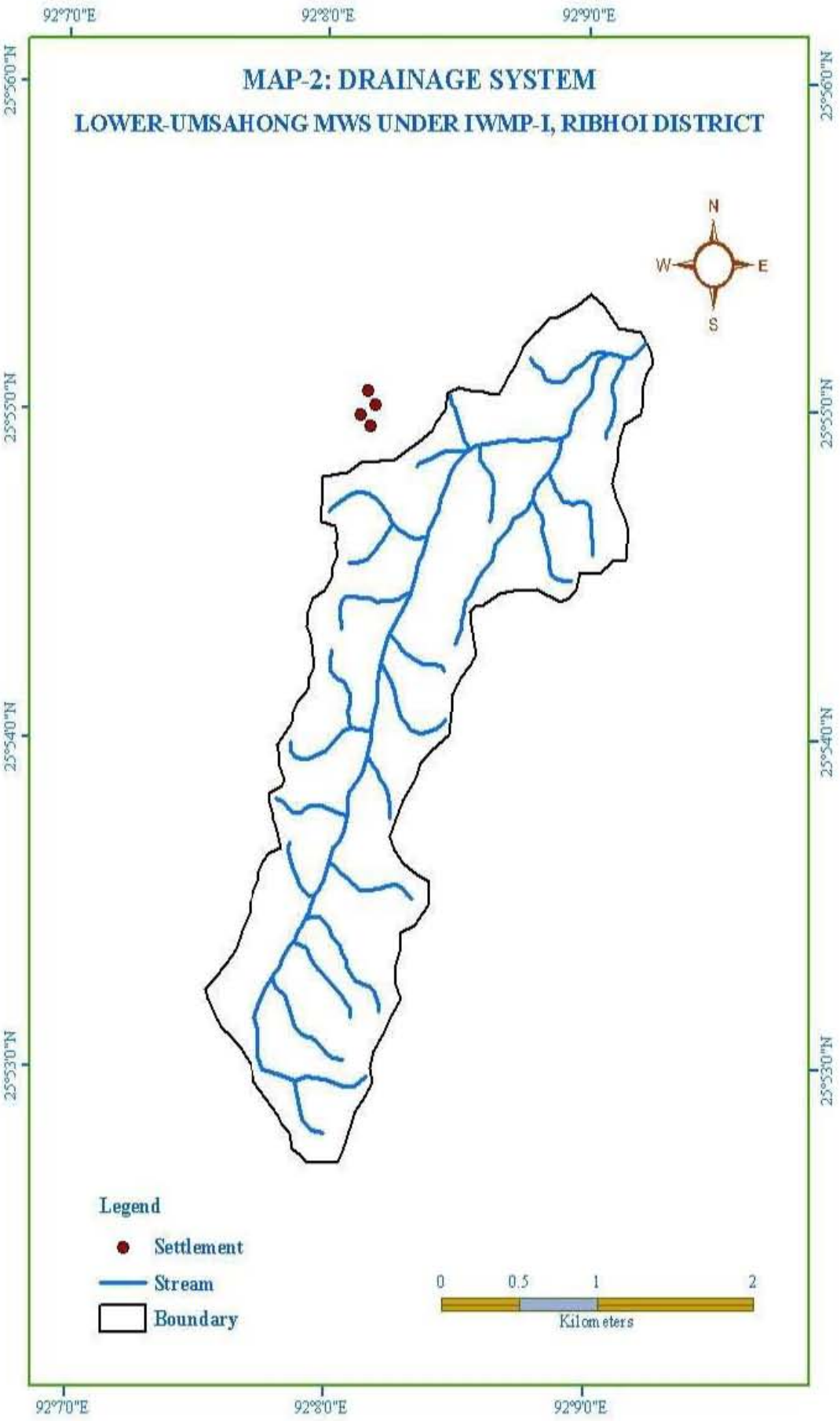

Map-10: Climatic Status of Umbyrshan MWS
Under IWMP-I, Ri-Bhoi District
N
W
E
S
25°56'0"N
25°55'0"N
25°54'0"N
92°6'0"E
92°7'0"E
92°8'0"E
Monthly Average Relative Humidity (2004-2009)
In %
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Mor
Eve
Monthly Average Temperature (2004-2008)
In Celsius
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Minimum
Maximum
Average Monthly Rainfall (1995-2001)
Rainfall in mm
700
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12
Months
0 0.35 0.7 1.4
Kilometers

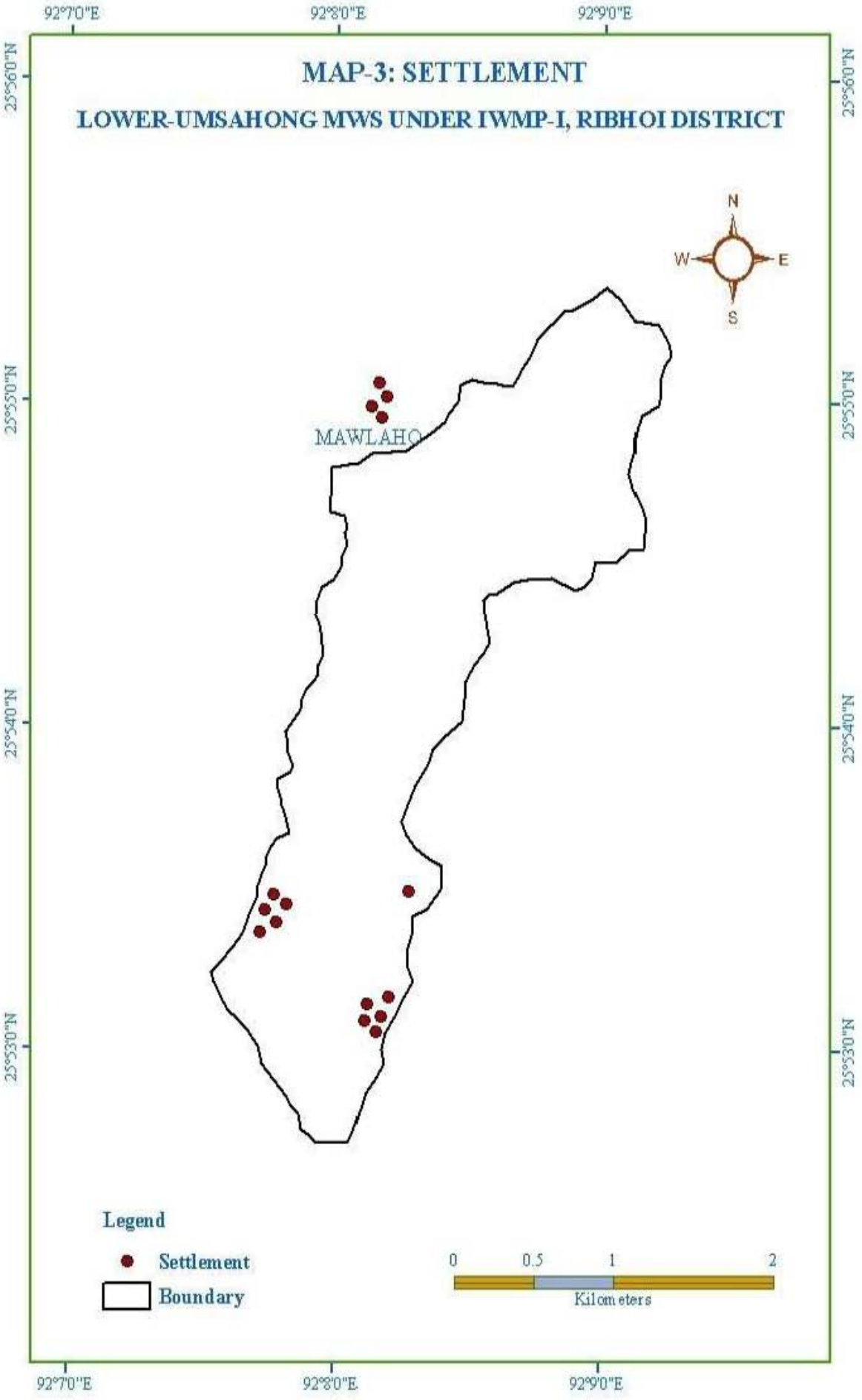

MAP - 11 : LAND USE LAND COVER
UMBRYSHAN MWS UNDER IWMP-I, RI-BHOI DISTRICT
N
W
E
S
92°6'0"E
92°7'0"E
92°8'0"E
25°9'0"N
25°8'0"N
25°7'0"N
25°6'0"N
25°5'0"N
Kms
0
0.5
1
2
Legend
Sream
LULC Classes
Agricultural Land
Built Up
Tree Clad -Close
Tree Clad -Open
Wastelands–Open scrub

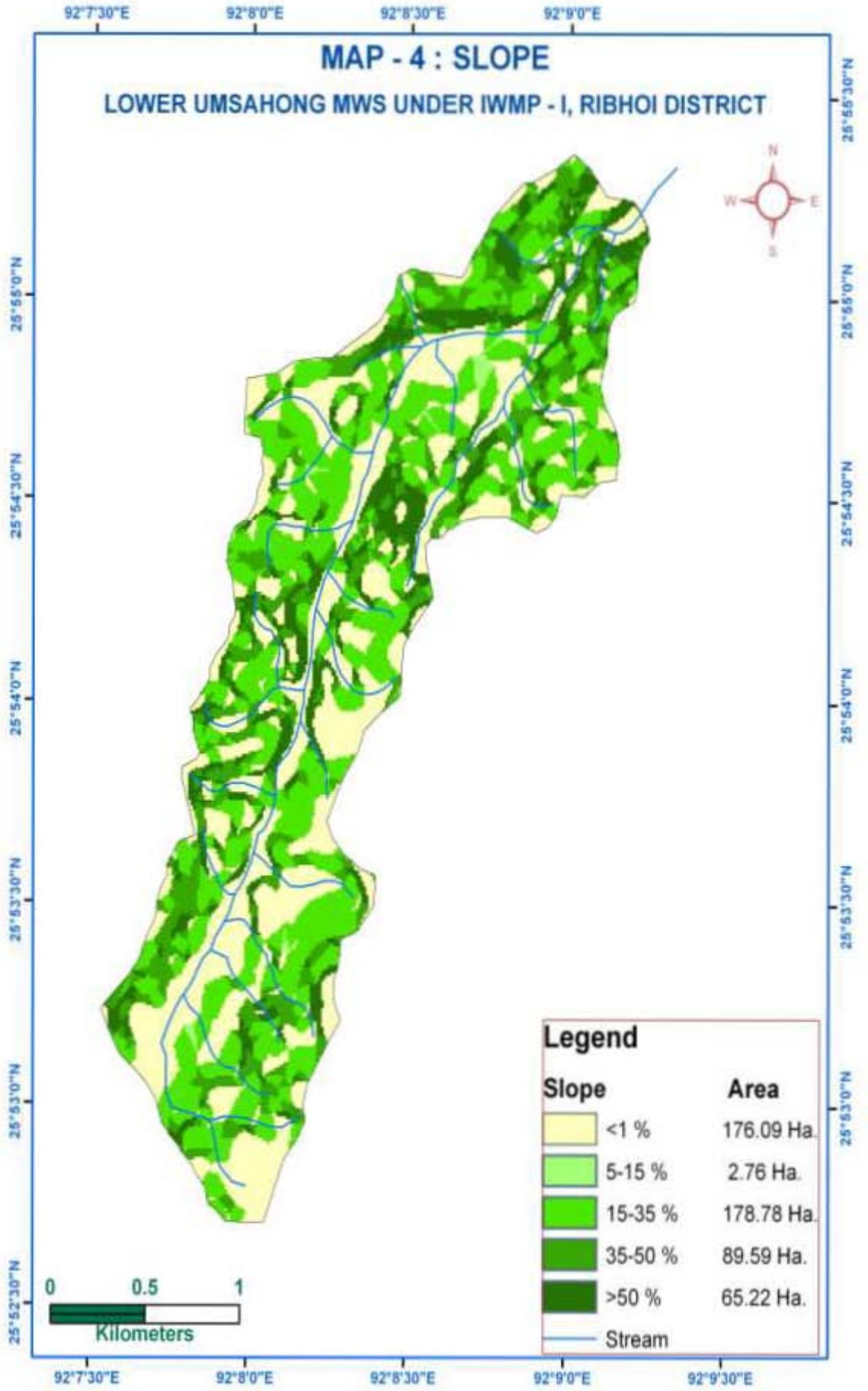

92°6'0"E
92°7'0"E
92°8'0"E
MAP - 12 : WASTELANDS, 2003
UMBYRSHAN MWS UNDER IWMP - I, RIBHOI DISTRICT
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
25°52'0"N
N
W
E
S
0 0.5 1
Km.
Legend
Category
Area (Ha.)
Area (%)
Land with Scrub
211.19
18.68
Miscellaneous
901.17
79.71
Settlement
6.00
0.53
Shifting Cultivation -Current
12.14
1.07
Total
1130.50
100

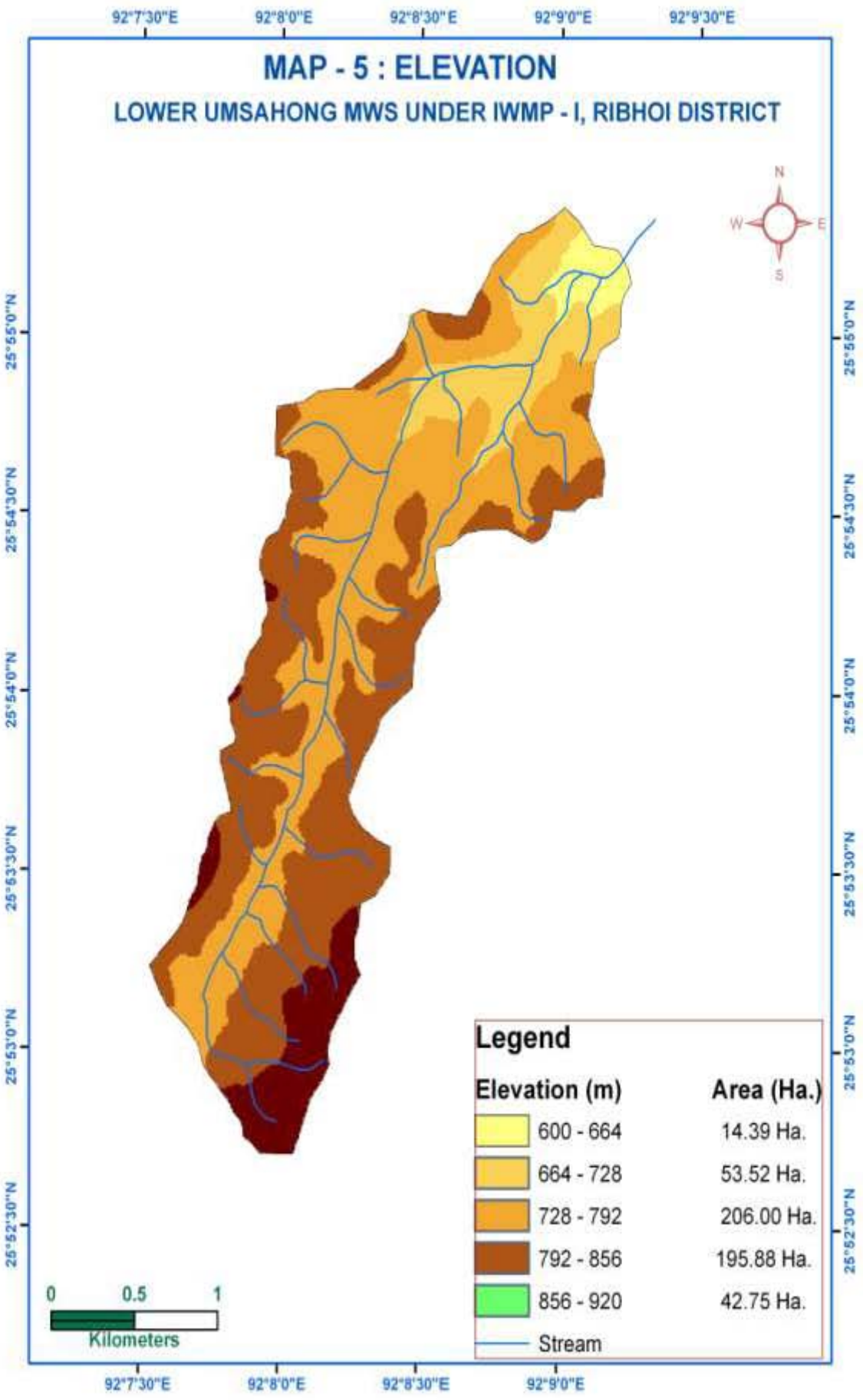

92°6'0"E
92°7'0"E
92°8'0"E
MAP -15 : LOCATIONS OF PLANNED WORKS
UMBYRSHAN WATERSHED UNDER IWMP-I: RI-BHOI DISTRICT
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
Legend
Settlement
Road
Sream
Check Dam
Protection Wall
Water Harvesting
0
0.5
1
Kilometers

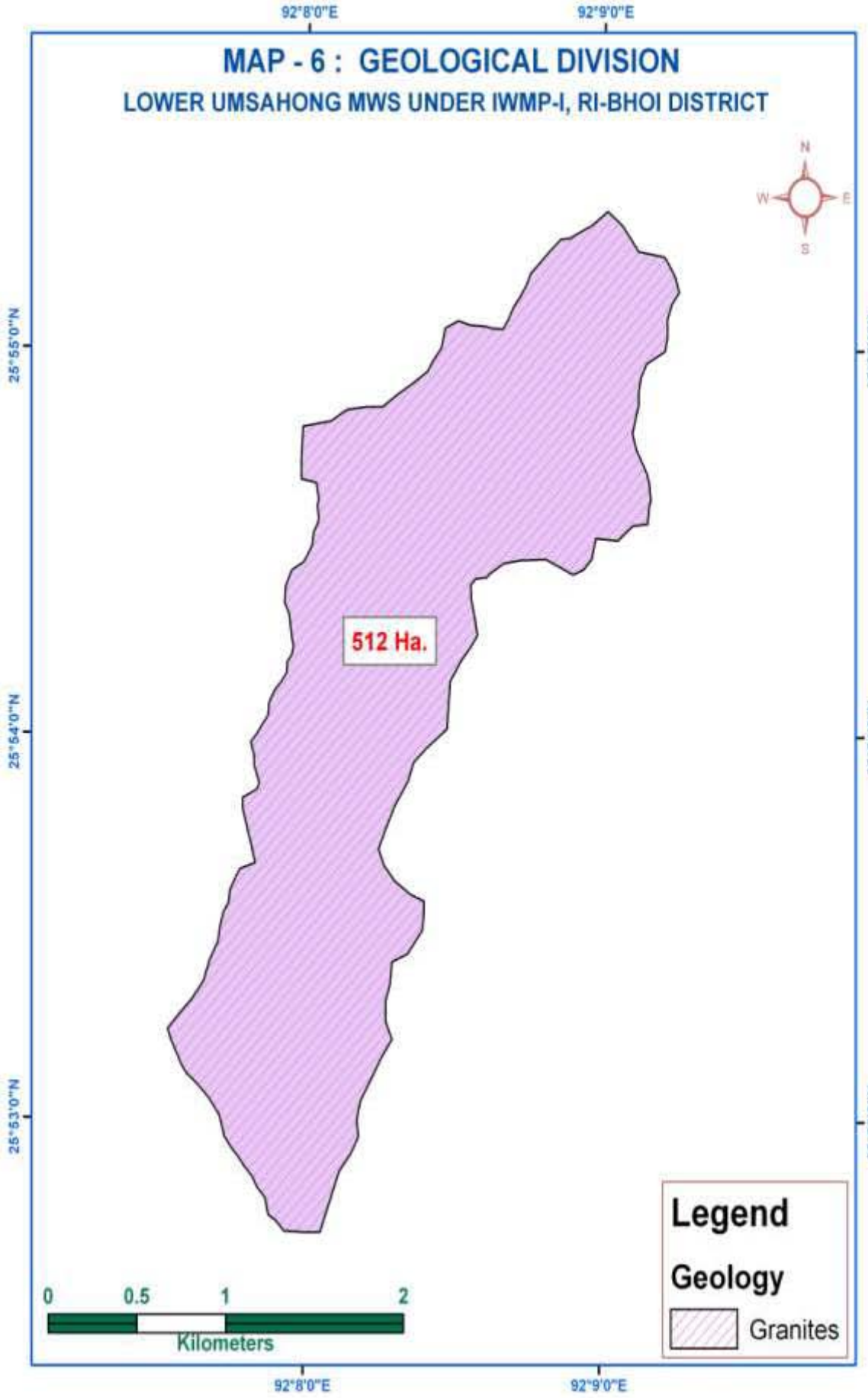

MAP - 1: LOCATION OF LOWER UMSAHONG MWS
UNDER IWMP - I, RIBHOI DISTRICT
N
W
E
S
NORTH EAST INDIA
MEGHALAYA
LOWER UMSAHONG MWS
RI-BHOI DISTRICT
IWMP-II
IWMP-III
IWMP-I
Kms
0 5 10 20 30 40

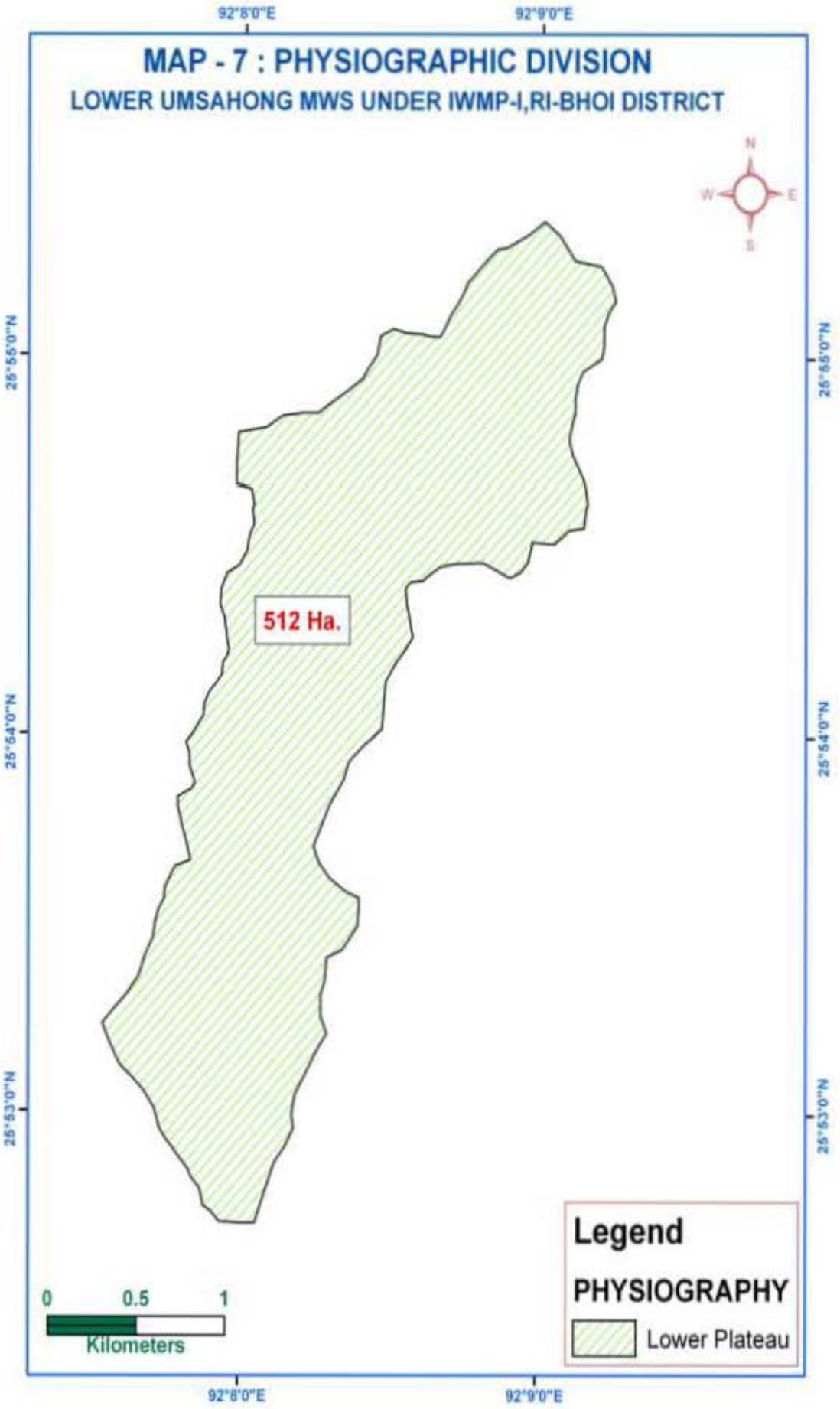

MAP-2: DRAINAGE SYSTEM
LOWER-UMSAHONG MWS UNDER IWMP-I, RIBHOI DISTRICT
92°7'0"E
92°8'0"E
92°9'0"E
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
Legend
Settlement
Stream
Boundary
0
0.5
1
2
Kilometers

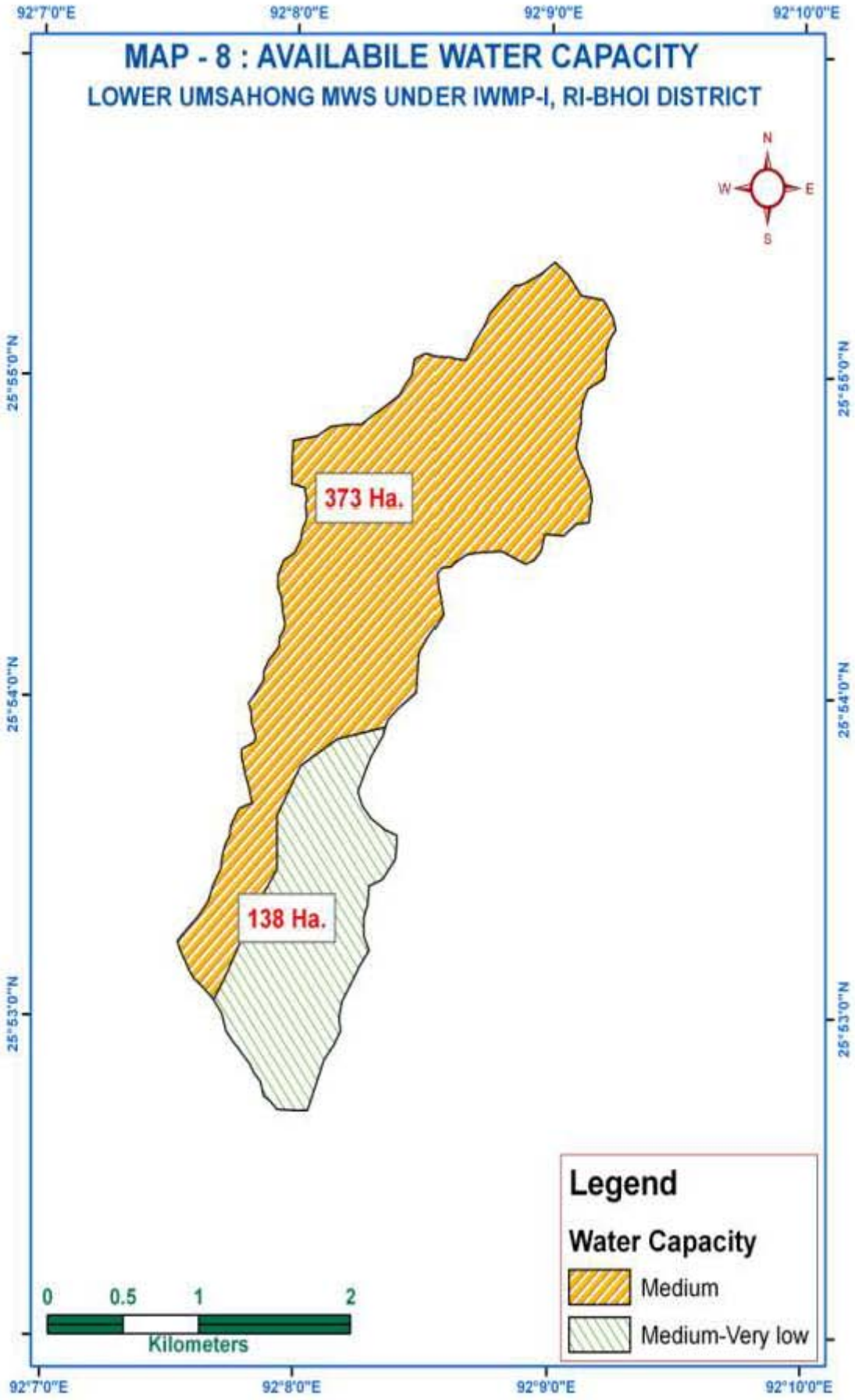

MAP-3: SETTLEMENT
LOWER-UMSAHONG MWS UNDER IWMP-I, RIBHOI DISTRICT
92°7'0"E
92°8'0"E
92°9'0"E
25°56'0"N
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
MAWLAHO
Legend
Settlement
Boundary
0
0.5
1
2
Kilometers


MAP - 4 : SLOPE
LOWER UMSAHONG MWS UNDER IWMP - I, RIBHOI DISTRICT
92°7'30"E
92°8'0"E
92°8'30"E
92°9'0"E
92°9'30"E
25°55'30"N
25°55'0"N
25°54'30"N
25°54'0"N
25°53'30"N
25°53'0"N
25°52'30"N
N
S
E
W
0
0.5
1
Kilometers
Legend
Slope
Area
<1 %
176.09 Ha.
5-15 %
2.76 Ha.
15-35 %
178.78 Ha.
35-50 %
89.59 Ha.
>50 %
65.22 Ha.
Stream


MAP - 5 : ELEVATION
LOWER UMSAHONG MWS UNDER IWMP - I, RIBHOI DISTRICT
92°7'30"E
92°8'0"E
92°8'30"E
92°9'0"E
92°9'30"E
25°55'0"N
25°54'30"N
25°54'0"N
25°53'30"N
25°53'0"N
25°52'30"N
N
W
E
S
Legend
Elevation (m)
Area (Ha.)
600 - 664
14.39 Ha.
664 - 728
53.52 Ha.
728 - 792
206.00 Ha.
792 - 856
195.88 Ha.
856 - 920
42.75 Ha.
Stream
0
0.5
1
Kilometers

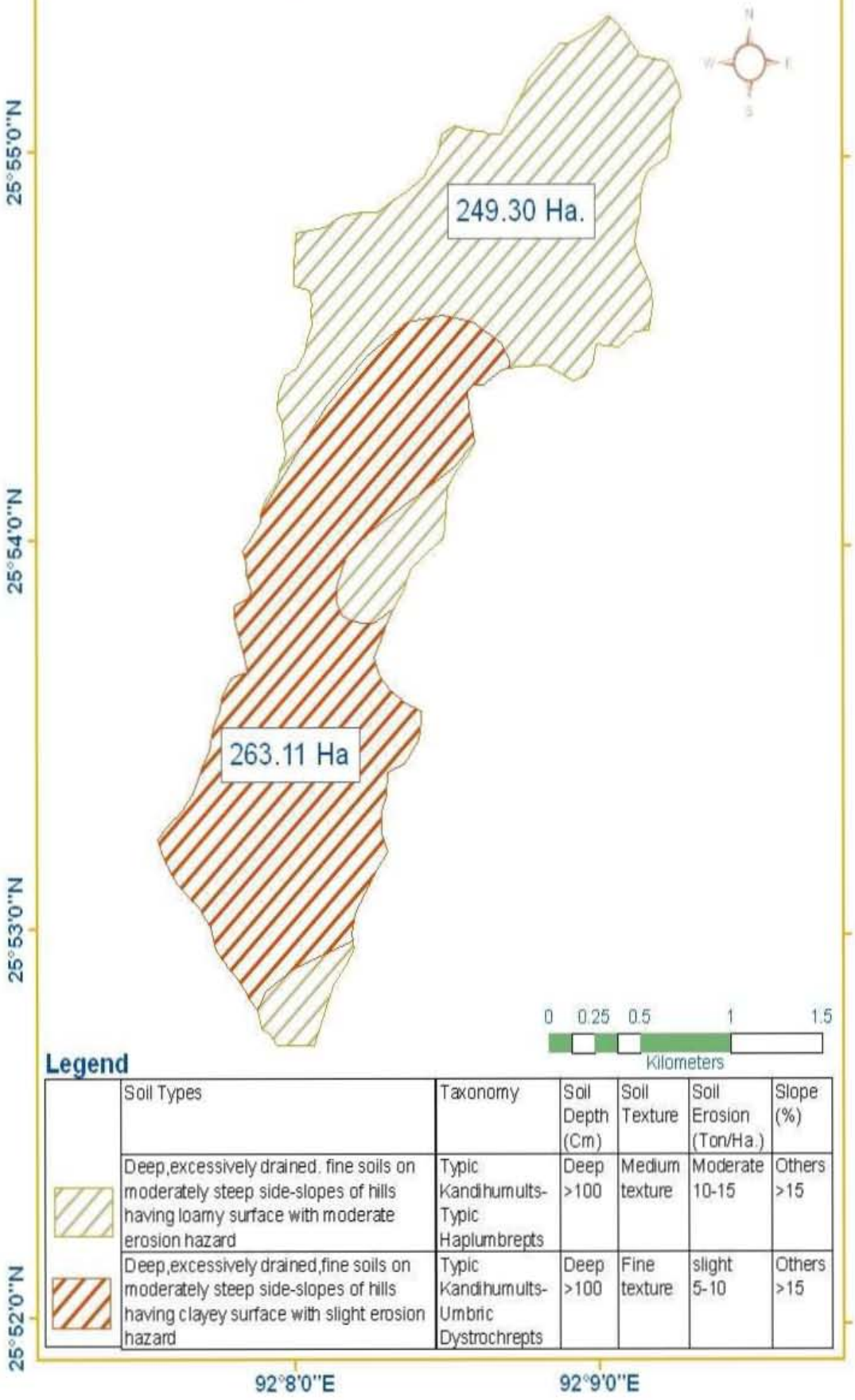

MAP - 6 : GEOLOGICAL DIVISION
LOWER UMSAHONG MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°8'0"E
92°9'0"E
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
512 Ha.
0
0.5
1
2
Kilometers
Legend
Geology
Granites


MAP - 7 : PHYSIOGRAPHIC DIVISION
LOWER UMSAHONG MWS UNDER IWMP-I,RI-BHOI DISTRICT
92°8'0"E
92°9'0"E
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
512 Ha.
0
0.5
1
Kilometers
Legend
PHYSIOGRAPHY
Lower Plateau


MAP - 8 : AVAILABILE WATER CAPACITY
LOWER UMSAHONG MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°7'0"E
92°8'0"E
92°9'0"E
92°10'0"E
25°55'0"N
25°54'0"N
25°53'0"N
N
W
E
S
373 Ha.
138 Ha.
0
0.5
1
2
Kilometers
Legend
Water Capacity
Medium
Medium-Very low

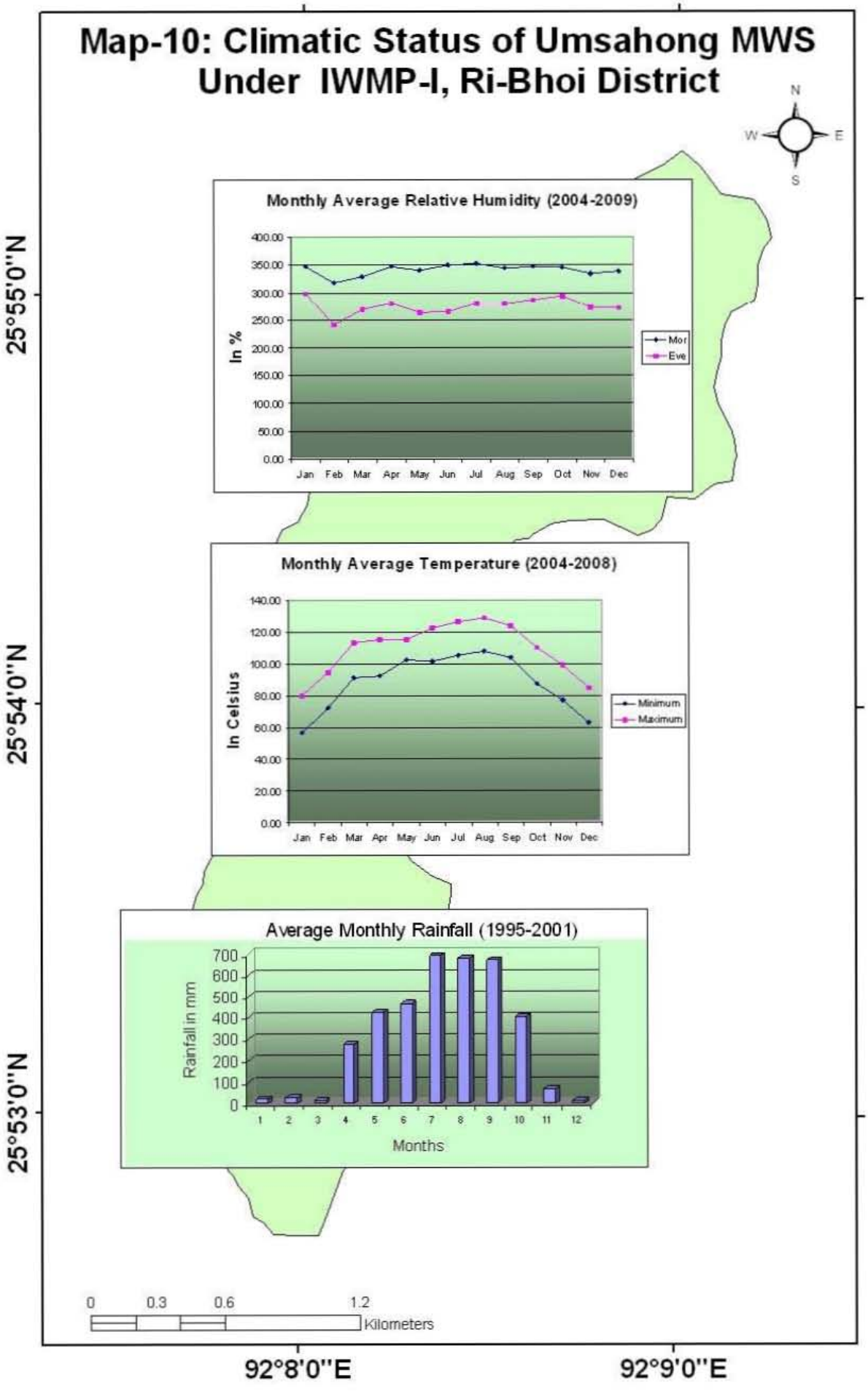
MAP-9: SOIL TYPES

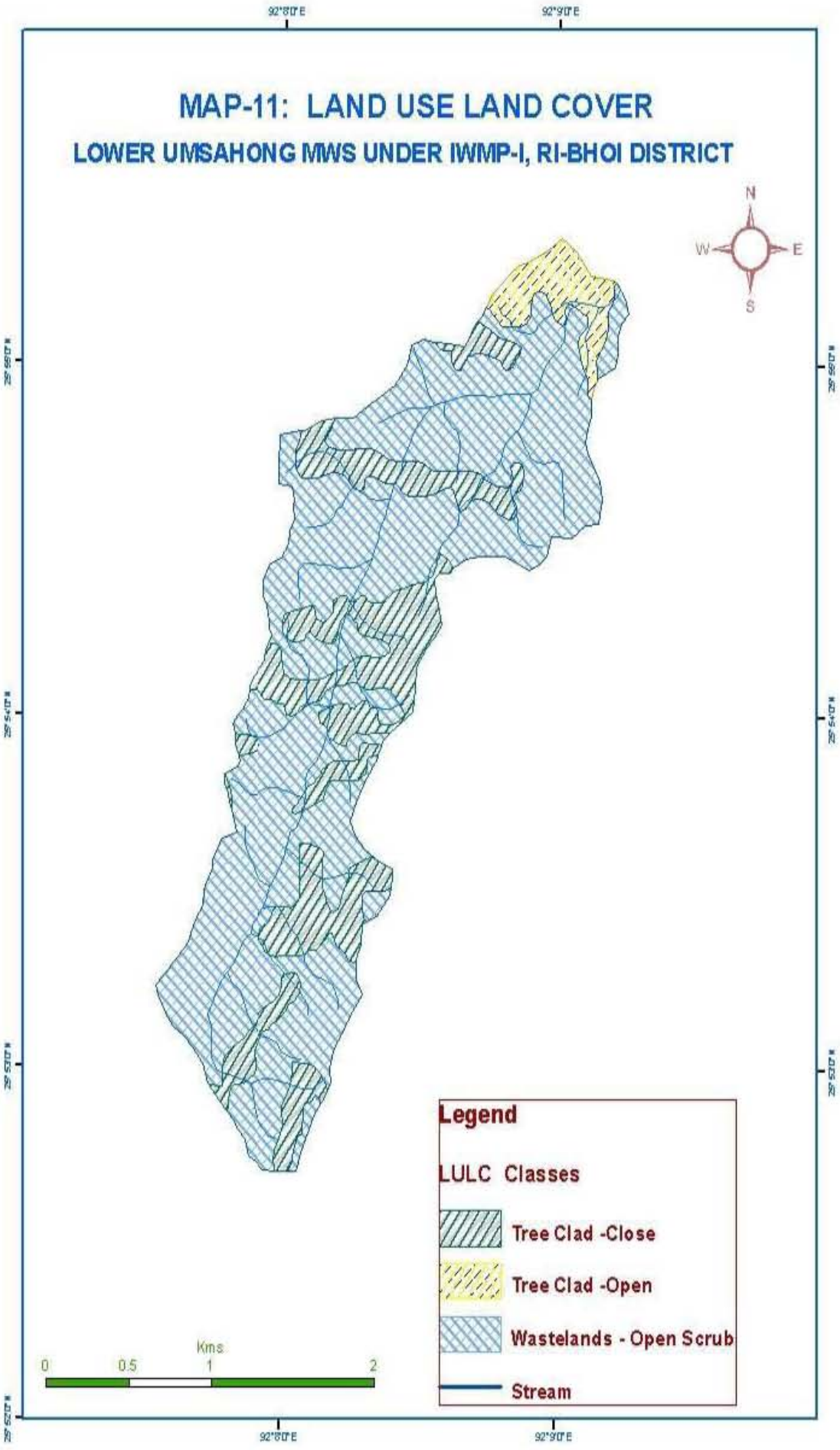
LOWER UMSAHONG MWS UNDER IWMP-I, RI-BHOI DISTRICT

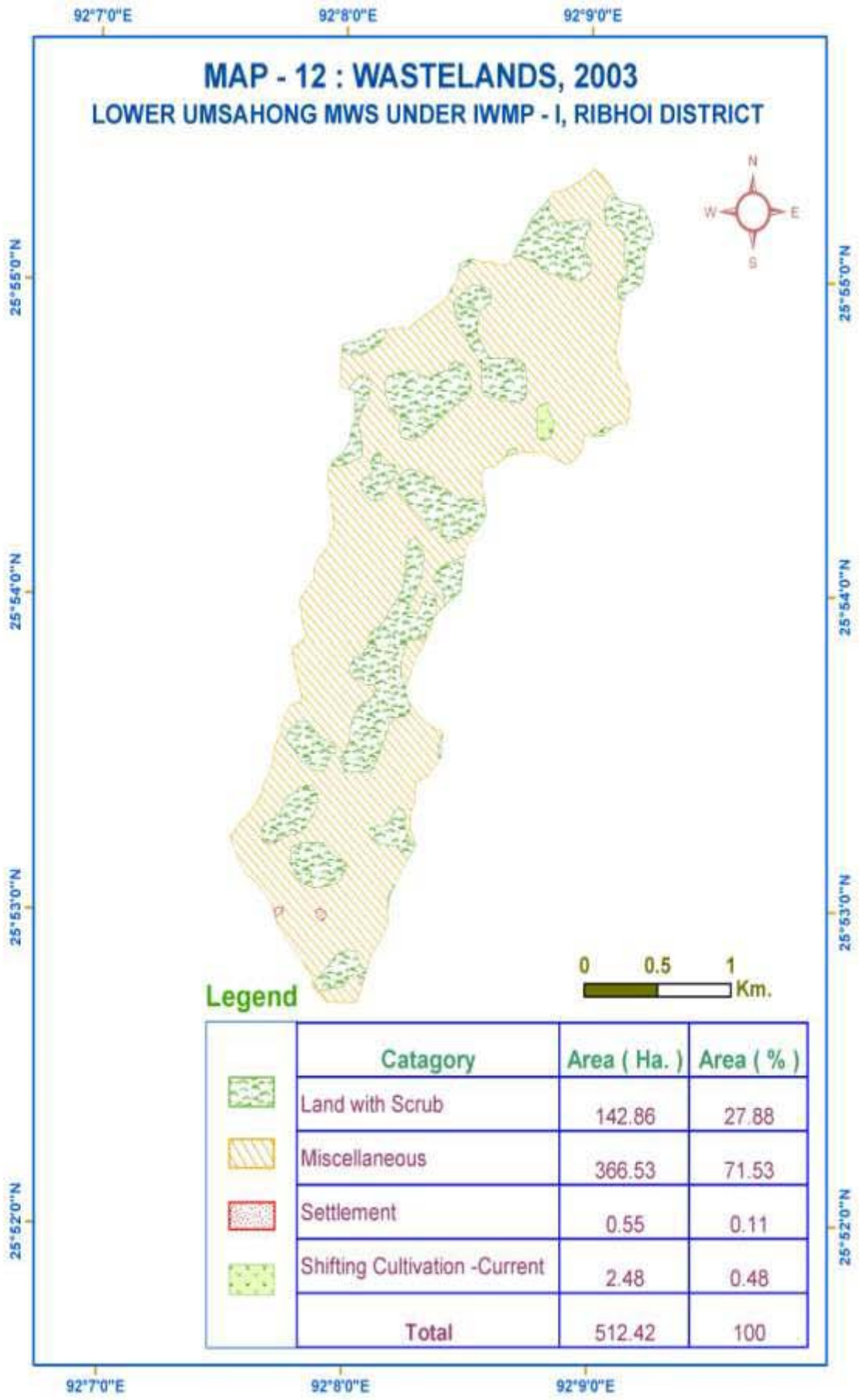


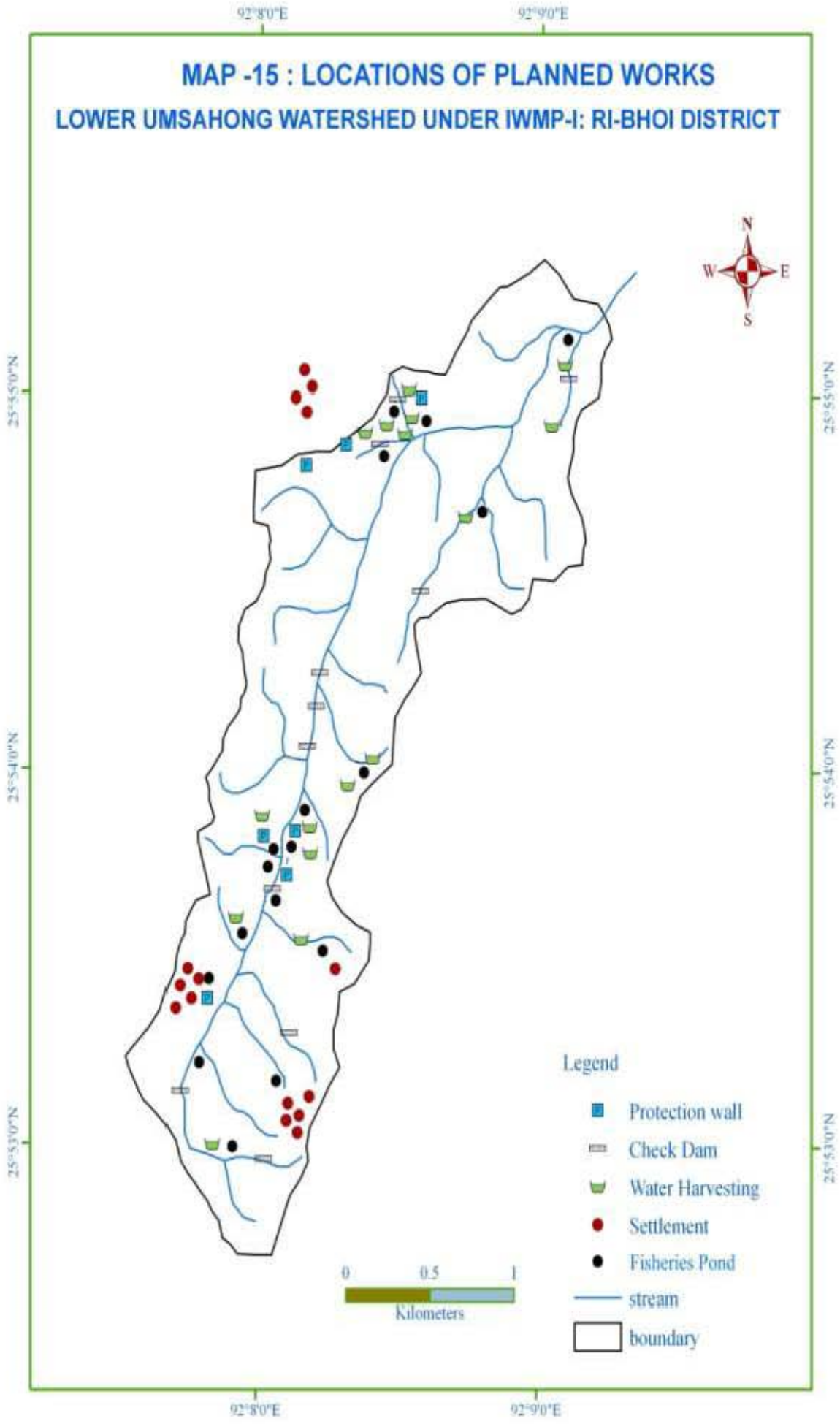
Legend

Soil Types	Taxonomy	Soil Depth (Cm)	Soil Texture	Soil Erosion (Ton/Ha.)	Slope (%)
Deep,excessively drained. fine soils on moderately steep side-slopes of hills having loamy surface with moderate erosion hazard	Typic Kandihumults-Typic Haplumbrepts	Deep >100	Medium texture	Moderate 10-15	Others >15
Deep,excessively drained,fine soils on moderately steep side-slopes of hills having clayey surface with slight erosion hazard	Typic Kandihumults-Umbric Dystrochrepts	Deep >100	Fine texture	slight 5-10	Others >15


Map-10: Climatic Status of Umsahong MWS
Under IWMP-I, Ri-Bhoi District
N
W
E
S
Monthly Average Relative Humidity (2004-2009)
In %
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Mor
Eve
Monthly Average Temperature (2004-2008)
In Celsius
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Minimum
Maximum
Average Monthly Rainfall (1995-2001)
Rainfall in mm
700
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12
Months
25°55'0"N
25°54'0"N
25°53'0"N
92°8'0"E
92°9'0"E
0 0.3 0.6 1.2
Kilometers


MAP-11: LAND USE LAND COVER
LOWER UMSAHONG MWS UNDER IWMP-I, RI-BHOI DISTRICT
92°8'0"E
92°9'0"E
25°6'0"N
25°5'0"N
N
W
E
S
Legend
LULC Classes
Tree Clad -Close
Tree Clad -Open
Wastelands - Open Scrub
Stream
Kms
0
0.5
1
2


92°7'0"E
92°8'0"E
92°9'0"E
MAP - 12 : WASTELANDS, 2003
LOWER UMSAHONG MWS UNDER IWMP - I, RIBHOI DISTRICT
N
W
E
S
25°55'0"N
25°54'0"N
25°53'0"N
25°52'0"N
0 0.5 1
Km.
Legend
Catagory
Area (Ha.)
Area (%)
Land with Scrub
142.86
27.88
Miscellaneous
366.53
71.53
Settlement
0.55
0.11
Shifting Cultivation -Current
2.48
0.48
Total
512.42
100


92°8'0"E
92°9'0"E
MAP -15 : LOCATIONS OF PLANNED WORKS
LOWER UMSAHONG WATERSHED UNDER IWMP-I: RI-BHOI DISTRICT
N
W
E
S
25°55'0"N
25°54'0"N
25°53'0"N
Legend
Protection wall
Check Dam
Water Harvesting
Settlement
Fisheries Pond
stream
boundary
0
0.5
1
Kilometers

ANNEXURE II

SOCIO – ECONOMIC ABSTRACT

SOCIO – ECONOMIC ABSTRACT

Name of Micro Watershed	No. of Male	No. of Female	Total No. of Population	SC %	ST %	Landless Labourers %
Umtymmen Rupa	453 nos.	372 nos.	825 nos.	-	100%	NA
Umsarang	579 nos.	467 nos.	1046 nos.	-	100%	0.2%
Umbyrshan	297 nos.	275 nos.	572 nos.	-	100%	2%
Lower Umsahong	302 nos.	286 nos.	588 nos.	-	100%	2%
TOTAL	1631	1400	3031	-	100 %	

ANNEXURE III

COST ESTIMATES

COST NORMS FOR LOOSE BOULDER BUNDS (IWMP)
(Rate as per PWD, SOR for R&B 2008 – 2009)

A. SPECIFICATIONS & COSTS OF LOOSE BOULDER BUNDS

Top Width = 0.4 m
Bottom Width = 1.0 m
Height = 0.9 m
Length = 10 m

1/3.11 Providing dry stone masonry walls etc….

10m x $\frac{0.4+1.0}{2}$ m x 0.90 = 6.30m^3 @ Rs.1191/m^3 = Rs.7,500.00

Total = Rs.7,500.00

(Rupees Seven Thousand Five Hundred) only.

MODEL NORMS PER HECTARE FOR AGRO – HORTICULTURE WITH CITRUS FRUIT
(INTEGRATED WATERSHED MANAGEMENT PROGRAMME)
(Rate as per PWD, SOR for R&B 2008 – 2009)

Spacing - 8m x 6.3m

Plant Density - 200 Nos.

A.	Preliminary works		
I.	Site clearance		
	3 mandays @ Rs.100/- per manday	-	Rs. 300.00
II.	Pit digging (pit size 0.45m x 0.45m x 0.45m)		
	200 Nos. @ Rs.5/- each	-	Rs.1000.00
	Total	-	Rs.1300.00
B.	First year Planting		
I.	Cost of planting materials		
	200 Nos. @ Rs.10/- each	-	Rs.2000.00
II.	Cost of planting 200 Nos. @ Rs. 3/- each	-	Rs. 600.00
III.	Weeding two times		
	20 mandays @ Rs.100/- per manday	-	Rs.2000.00
	Total	-	Rs.4600.00
C.	Second year Planting		
I.	Refilling vacancy (10%)	-	Rs. 360.00
II.	Weeding two times		
	20 mandays @ Rs.100/- per manday	-	Rs.2000.00
III	Plant protection measures including		
	cost of chemical	-	Rs. 340.00
	Total	-	Rs.2700.00

Grand Total A+B+C = Rs.1300.00 + Rs.4600.00 + Rs.2700.00 = Rs.8600.00

(Rupees Eight thousand six hundred) only.

MODEL NORMS PER HECTARE FOR AFFORESTATION WITH PINE/ NON-PINE (INTEGRATED WATERSHED MANAGEMENT PROGRAMME)
(Rate as per PWD, SOR for R&B 2008 – 2009)

Spacing 6m x 5.5m

Plant Density – 300 Nos.

B.	Preliminary works			
J.	Jungle clearance etc. 5 mandays @ Rs.100/- per manday		-	Rs. 500.00
II.	Pit digging (pit size 0.30m x 0.30m x 0.30m) 300 Nos. @ Rs.4/- each		-	Rs. 1200.00
		Total	-	Rs. 1700.00
B.	First year Planting			
I.	Cost of planting materials 300 Nos. @ Rs.8/- each		-	Rs. 2400.00
II.	Cost of planting 300 Nos. @ Rs. 2/- each		-	Rs. 600.00
III.	Weeding two times 20 mandays @ Rs.100/- per manday		-	Rs. 2000.00
IV.	Fire protection measures 5 mandays @ Rs.100/- per manday		-	Rs. 500.00
		Total	-	Rs. 5500.00
C.	Second year Planting			
I.	Vacancy refilling (10%)		-	Rs. 400.00
II.	Weeding two times 20 mandays			

@ Rs.100/- per manday		-	Rs. 2000.00
III. Fire protection measures			
5 mandays @ Rs.100/- per manday		-	Rs. 500.00
	Total	-	Rs. 2900.00

Grand Total A+B+C = Rs.1700.00 + Rs.5500.00 + Rs.2900.00 = Rs.10100.00

(Rupees Ten thousand one hundred) only.

MODEL NORMS PER HECTARE FOR IMPROVEMENT OF DEGRADED FOREST (INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

(Rate as per PWD, SOR for R&B 2008 – 2009)

C.	Preliminary works		
K.	Site clearance 3 mandays @ Rs.100/- per manday	-	Rs. 300.00
II.	Pit digging (pit size 0.30m x 0.30m x 0.30m) 100 Nos. @ Rs.4/- each	-	Rs. 400.00
	Total	-	Rs. 700.00
B.	First year Planting		
I.	Cost of planting materials 100 Nos. @ Rs.8/- each	-	Rs. 800.00
II.	Cost of planting 100 Nos. @ Rs. 2/- each	-	Rs. 200.00
III.	Round Weeding around the plant four times 5 mandays @ Rs.100/- per manday	-	Rs. 500.00
IV.	Fire protection measures 4 mandays @ Rs.100/- per manday	-	Rs. 400.00
	Total	-	Rs.1900.00
C.	Second year Planting		
I.	Refilling vacancy (10%)	-	Rs. 100.00
III.	Round Weeding around the plant four times 5 mandays @ Rs.100/- per manday	-	Rs. 500.00

III. Fire protection measures

4 mandays @ Rs.100/- per manday	-	Rs. 400.00
Total	-	Rs.1000.00
Grand Total A+B+C = Rs.700.00 + Rs.1900.00 + Rs.1000.00	=	Rs.3600.00

(Rupees Three thousand six hundred) only.

MODEL ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE

(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2008 - 2009)

Name of Beneficiary -

Name of Location/Village -

1/5 (a) Earthwork in excavation for abutment and wing walls of bridges and culverts, up to the desired founding level including dewatering, bailing out of water and protecting the foundation sides by adequate shoring, scaffolding and including leveling the foundation longitudinally and transversely etc.

1 x 6.00 x 1.00 x 0.50	=	3.00 m^3
1 x 1.90 x 1.50 x 0.35	=	0.99 m^3
1 x 1.90 x 0.20 x 0.30	=	0.11 m^3
		4.10 m^3
	@ Rs.124.00/m^3	Rs. 508.40

2/26 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregates 40mm down graded, including necessary carriage of stone and sand within a distance of 200m and curing, complete as directed.

1 x 6.00 x 1.00 x 0.10	=	0.60 m^3
	@ Rs.2136.00/m^3	Rs. 1281.60

3/41 Providing shuttering with dressed planks not less than 25mm thick properly joined including battens, props to the proper level and removing the same after the concrete hardened.

1 x 6.00 x 1.10	=	6.60 m^2
1 x 6.00 x 1.20	=	7.20 m^2
2 x 5.00 x 0.40	=	4.00 m^2
4 x 1.70 x 0.30	=	2.40 m^2
4 x 1.20 x 0.30	=	1.44 m^2
4 x 0.40 x 0.30	=	0.48 m^2
2 x 1.20 x 0.20	=	0.48 m^2
2 x 0.40 x 0.20	=	0.16 m^2
2 x 1.90 x 0.20	=	0.76 m^2
		23.16 m^2
	@ Rs.295.00/m^2	Rs. 6832.20

4/28 Providing cement concrete work in abutments, wing walls and return walls in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary carriage of stone and sand within a distance of 200m etc.

1 x 6.00 x 1.00 x 0.40	=	2.40 m^3
$1 \times 6.00 \times \frac{1.00 + 0.50}{2} \times 1.10$	=	4.95 m^3
2 x 2.25 x 0.50 x 0.40	=	0.90 m^3
2 x 1.70 x 0.50 x 0.20	=	0.34 m^3
2 x 1.20 x 0.30 x 0.20	=	0.14 m^3
2 x 0.40 x 0.30 x 0.20	=	0.05 m^3
1 x 1.90 x 0.50 x 0.20	=	0.19 m^3
1 x 1.90 x 1.50 x 0.10	=	0.28 m^3
		9.25 m^3
	@ Rs.2344.00/m^3	Rs.21682.00

5/24 Providing stone pitching with one man size boulders not less than 25cm X 25cm X 30cm long including filling the interstices with spoils and carriage of stone within a distance of 200m complete as directed.

1 x 1.90 x 1.50 x 0.25	=	0.71 m^3
	@ Rs.512.00/m^3	Rs. 363.52

6/27 Providing 12mm thick cement plastering including cleaning surface, curing and carriage of sand within 200m complete.

1 x 6.00 x 1.10	=	6.60 m^2
1 x 6.00 x 1.20	=	7.20 m^2
2 x 5.00 x 0.40	=	4.00 m^2
4 x 1.70 x 0.30	=	2.04 m^2
4 x 1.20 x 0.30	=	1.44 m^2
4 x 0.40 x 0.30	=	0.48 m^2
2 x 1.20 x 0.20	=	0.48 m^2
2 x 0.40 x 0.20	=	0.16 m^2
2 x 1.90 x 0.20	=	0.76 m^2
		23.16 m^2
	@ Rs.93.00/m^2	Rs. 2153.88

TOTAL: Rs.32821.60

Say Rs.32,800.00

(Rupees Thirty two thousand eight hundred) only.

MODEL ESTIMATE FOR CONSTRUCTION OF C.C CHECK DAM

(The rate based as per PWD Schedule of rate for Reads, bridges and E&D Works 2008 – 2009)

Name of Beneficiary –
Name of Location/ Village –

1/5 (a) Earthwork in excavation for abutment and wing walls of bridges and culverts, up to the desired etc complete.

$1\times5.80\times1.00\times0.50 = 2.90\ m^3$

$1\times4.85\times1.50\times0.30 = 2.18m^3$

$5.08m^3$

@ Rs. 124.00/m^3 = Rs. 629.92

2/26 providing cement concrete work in prop 1:4:8 with hard broken stone aggregates 40 mm etc complete.

$1\times5.80\times1.00\times0.10 = 0.58m^3$

@ Rs. 2136.00/m^3 = Rs. 1236.88

3/41(a) Providing shuttering with dressed planks not less than 25mm thick etc complete.

$1\times5.80\times1.10 = 6.38m^2$

$1\times5.80\times1.20 = 6.96m^2$

$2\times3.50\times0.40 = 2.80m^2$

$1\times7.85\times0.05 = 0.39m^2$

$16.53m^2$

@ Rs. 295.00/m^2 = Rs. 7876.35

4/28 Providing cement concrete work in abutments, wing walls etc complete

$1\times5.80\times1.00\times0.40 = 2.32m^2$

$1\times5.80\times\frac{1.00+0.50}{2}\times1.10 = 4.78m^3$

$2\times1.50\times0.50\times0.40 = 0.60m^3$

$1\times4.85\times1.50\times0.10 = 0.73m^3$

$= 8.43m^3$

@ Rs. 2344.00/m^3 = Rs. 19759.92

5/24 Providing stone pitching with one man size boulder not less than 25cm× 30cm etc complete

$1\times4.85\times1.50\times0.25 = 1.82m^3$

@ Rs. 512.00/m^3 =Rs. 931.84

6/27 Providing 12mm thick cement plastering including cleaning surface etc complete

$1\times5.80\times1.10 = 6.38m^2$

$1\times5.80\times1.20 = 6.96m^2$

$2\times3.50\times0.40 = 2.80m^2$

$1\times5.80\times0.50 = 2.90m^2$

$1\times4.85\times1.50 = 7.28m^2$

$= 26.32m^2$

@ Rs. 93.00/m^2 = Rs. 2447.76

TOTAL = Rs. 29884.67

Say Rs. 29,900.00

(Rupees twenty Nine thousand nine hundred) only

COST NORMS FOR RUN-OFF DISPOSAL CHANNEL (INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

(Rate as per P.W.D. schedule of rate for Road & Bridge 2008-2009)

Specification – Top width - 1.00m

Bottom width - 0.70m

Depth - 1.2 m

1/3(a) Earthwork in excavation etc., in ordinary soil.

$1m \times \frac{1.00 + 0.7}{2} \times 1.2m = 1.02m^3$ @Rs.26.00/-per m^3 …. Rs. 26.52

Total = Rs. 26.52

Say Rs.26.00

In words (Rupees twenty six) only.