State: ASSAM
Agriculture Contingency Plan for District: CACHAR

1.0	**District Agriculture profile**				
1.1	**Agro-Climatic/Ecological Zone**				
	Agro Ecological Sub Region (ICAR)	Assam And Bengal Plain, Hot Sub humid To Humid (Inclusion Of Per humid) Eco-Region (15.2)			
	Agro-Climatic Region (Planning Commission)	Eastern Himalayan Region (II)			
	Agro Climatic Zone (NARP) Zone	Barak Valley Zone			
	List all the districts falling under the NARP Zone	Cachar, Karimganj , Hailakandi			
	Geographic coordinates of district	Latitude	Longitude	Altitude	
		24^0 22' N & $25^0$8' E	92^0 24' E & $93^0$15' E	36.5 MSL	
	Name and address of the concerned *ZRS*/ZARS/RARS/RRS/RRTTS	Regional Agricultural Research Station (RARS), Karimganj, Assam			
	Mention the KVK located in the district	KVK, Cachar PO Arunachal 788025, Cachar, Assam			
	Name and address of the nearest Agromet Field Unit (AMFU, IMD) for agro-advisories in the Zone	Regional Agricultural Research Station (RARS), Karimganj, Assam			
1.2	Rainfall	Normal RF (mm)	Normal rainy days (Number)	Normal Onset (specify week and month)	Normal Cessation (specify week and month)
	SW monsoon (June-Sep):	1900	90	2nd week of June	Last week of September
	NE Monsoon(Oct-Dec):	250	20	2nd week of October	Last week of December
	Winter (Jan- March)	200	12	2nd week of February	Last week of March
	Summer (Apr-May)	900	25	1st week of April	Last week of May
	Annual	3250	147		

Source: Department of Agriculture, Cachar, Assam

1.4	Major soils	Characteristics	Area in ha ('000)	Percent (%) of total
	Non laterized red soil	Confined to hilly areas, belonging chiefly to Tipam and	192.582	51.00

		Surma groups of soil. More acidic than alluvial tract.		
	Old mountain alluvium	Deep and heavy textured varying from silty to clay loam with moderate organic matter content.	135.939	35.99
	Old reverine alluvium	Light textured (varies from sandy to fine silty loam), silt deposition is common feature, pH comparatively higher	26.432	7.00
	Lateric red soil	Texture is sandy loam, rich in Fe and Al content, high in acidity	15.105	4.00
	Peat soil	Heavy textured, dark grey in colour, pH around 7.0, rice in organic matter.	7.552	2.00

Source: Department of Agriculture, Cachar, Assam

1.5	**Agricultural land use**	**Area ('000 ha)**	**Cropping intensity %**
	Net sown area	125000	122.3
	Area sown more than once	70980	
	Gross cropped area	152826	

1.6	**Irrigation**	**Area ('000 ha)**	
	Net irrigated area	0.398	
	Gross irrigated area	1.180	
	Rainfed area	151.646	
	Sources of Irrigation	**Number**	**Area('000 ha)**
	Canals		
	Tanks		
	Open wells		
	Bore wells		
	Lift irrigation		
	Other sources	325	0.398 ha
	Total		
	Pumpsets		
	Micro-irrigation		
	Groundwater availability and use		
	Over exploited		
	Critical		
	Semi- critical		
	Safe		
	Wastewater availability and use		

*over-exploited: groundwater utilization> 100%; critical: 90-100%; semi-critical: 70~90%; safe: <70%

1.7 Area under major field crops & horticulture etc

1.7a	Major field crops cultivated	Area ('000 ha)									
		Kharif			*Rabi*			Summer			
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Grand total
	Rice		87.53	87.53		10.61	10.61		14.70	14.70	112.84
	Maize					0.094	0.094				0.094
	Wheat					0.083	0.083		0.083	0.083	0.083
	Sugarcane								0.232	0.232	0.232
	Jute		0.075	0.075							0.075
	Black gram		0.125	0.125							0.125
	Gram					0.052	0.052				0.052
	Mung		0.031	0.031							0.031
	Pea					0.564	0.564				0.564
	Lentil					0.019	0.019				0.019
	Lathyrus					0.934	0.934				0.934
	Other rabi crops					4.00	4.00				4.00
	Rapeseed & mustard					1.98	1.98				1.98
	Sesumum					0.184	0.184				0.184
	Linseed					0.043	0.084				0.084
	Nizer					0.029	0.029				0.029

1.7b	Horticulture crops - Fruits	Area ('000 ha)		
		Total	Irrigated	Rainfed
	Banana	2.80		2.80
	Pineapple	1.41		1.41
	Popaya	0.35		0.35
	Orange	0.052		0.052
	Assam lemon	0.626		0.626
	Guava	0.365		0.365
	Litchi	0.292		0.292
	Jackfruit	1.09		1.09
	Mango	1.25		1.25
	Other fruits	0.067		0.067

1.7c	**Horticulture crops – Vegetables and spice**	**Total**	**Irrigated**	**Rainfed**
	Rabi Vegetable	7.96		7.96
	Potato	1.89		1.89
	Kharif Vegetable	3.45		3.45
	Chillies	0.839		0.839
	Termeric	0.265		0.265
	Onion	0.168		0.168
	Ginger	0.361		0.361
	Coriander	0.055		0.055
	Garlic	0.093		0.093
	Black pepper	0.169		0.169
	Other spices	0.072		0.072
1.7d	**Medicinal and Aromatic crops**			
1.7e	**Plantation crops**			
	Arecanut	4.46		4.46
	Coconut	1.40		1.40
	Eg., industrial pulpwood crops etc.			
	Fodder crops			

* If break-up data (irrigated, rainfed) is not available, give total area

1.8	**Livestock (in number)**	**Male ('000)**	**Female ('000)**	**Total ('000)**
	Non descriptive Cattle (local low yielding)	172.01	211.66	383.67
	Crossbred cattle	9.44	135.68	145.12
	Non descriptive Buffaloes (local low yielding)	3.56	41.52	45.08
	Graded Buffaloes			26.40
	Goat	92.30	85.20	177.50
	Sheep	5.40	10.02	15.42
	Others (Camel, Pig, Yak etc.)			
	(i) Pig	10.54	15.81	26.35
	(ii) Mithun			
	Commercial dairy farms (Number)			10
1.9	**Poultry**	**No. of farms**	**Total No. of birds ('000)**	
	Commercial	565	491.04	
	Backyard	11	256.00	

1.10	**Fisheries (Data source: Chief Planning Officer of district)**							
	A. Capture							
	i) Marine (Data Source: Fisheries Department)	No. of fishermen	Boats		Nets		Storage facilities (Ice plants etc.)	
			Mechanized	Non-mechanized	Mechanized (Trawl nets, Gill nets)	Non-mechanized (Shore Seines, Stake & trap nets)		
		Not applicable						
	ii) Inland (Data Source: Fisheries Department)	No. Farmer owned ponds		No. of Reservoirs		No. of village tanks	No of ponds& tanks	
							6188.00	
	B. Culture							
		Water Spread Area (ha)		Yield (t/ha)		Production (‘000 tons)		
	i) Brackish water (Data Source: MPEDA/ Fisheries Department)							
	ii) Fresh water (Data Source: Fisheries Department)							
	GP pond and tank	7.88				18000		
	Revenue pond and tank	3.5						
	Private pond and tank	6038.0						
	Beels	13973.38						

1.11 Production and Productivity of major crops

1.11	Name of crops	Kharif		Rabi		Summer		Total	
		Production (‘000 t)	**Productivity (Kg / ha)**	**Production (‘000 t)**	**Productivity (Kg / ha)**	**Production (‘000 t)**	**Productivity (Kg / ha)**	**Production (‘000 t)**	**Productivity (Kg / ha)**
Field crops									
	Summer rice					30.86	2100	30.86	2100
	Winter rice	192.56	2200					192.56	2200
	Boro rice			10.61	1800			10.61	1800
	Maize	0.047	500					0.047	500
	Wheat			0.088	1070			0.088	1070
	Sugarcane	0.986	4250					0.986	4250

	Jute	500 bale	1200					500 bale	1200
	Black gram	0.089	705					0.089	705
	Green gram	0.017	533					0.017	533
	Gram			0.027	522			0.027	522
	Lentil			0.010	512			0.010	512
	Lathyrus			0.54	575			0.54	575
	Pea			0.34	600			0.34	600
	Rapeseed			1.14	573			1.14	573
	Sesame	0.094	512					0.094	512
	Linseed			0.020	462			0.020	462
	Nizer			0.015	516			0.015	516
Horticultural crops									
	Banana	33.98	12139					33.98	12139
	Pineapple	29.91	16923					29.91	16923
	Popaya	4.24	12297					4.24	12297
	Orange	0.312	6000					0.312	6000
	Assam Lemon	3.47	5543					3.47	5543
	Guava	5.66	15512					5.66	15512
	Litchi	1.46	5000					1.46	5000
	Jackfruit	10.93	10012					10.93	10012
	Mango	8.55	6817					8.55	6817
	Other fruits	0.093	1388					0.093	1388
	Potato			10.41	5513			10.41	5513
	Sweet potato			0.956	5250			0.956	5250
	Tapioca			0.120	4300			0.120	4300
	Chillies			0.536	640 (dry)			0.536	640 (dry)
	Termeric	0.562	2120					0.562	2120
	Onion			0.546	3250			0.546	3250
	Ginger	2.50	6930					2.50	6930
	Coriander	0.051	920					0.051	920
	Garlic	0.200	2150					0.200	2150
	Black pepper	0.228	1340					0.228	1340
	Other spices							56	770
	Kharif vegetables	42.50	12326					42.50	12326
	Rabi vegetables			126.79	15924			126.79	15924

1.12	Sowing window for 5 major crops (Start and end of sowing period)	Winter Rice	Summer rice	Boro rice	Rajmah	Potato
	Kharif-Rainfed	June - July	April -May			
	Kharif – Irrigated					
	Rabi-Rainfed			December - January	October - November	October - November
	Rabi-Irrigated					

1.13	What is the major contingency the district is prone to? (Tick mark)	Regular*	Occasional	None
	Drought		√	
	Flood	√		
	Cyclone		√	
	Hail storm	√		
	Heat wave			√
	Cold wave			√
	Frost			√
	Sea water intrusion			√
	Snowfall			√
	Landslides			√
	Earthquake		√	

1.14	Include Digital maps of the district for	Location map of district within state as Annexure I	Enclosed: Yes
		Mean annual rainfall as Annexure 2	Enclosed: Yes
		Soil map as Annexure 3	Enclosed: Yes/ No

2.0 Strategies for weather related contingencies

2.1 Drought

2.1.1 Rain fed situation

Condition			Suggested Contingency measures		
Early season drought (Delayed onset)	**Major Farming situation**	**Normal Crop /cropping system**	**Change in crop /cropping system**	**Agronomic measures**	**Remarks on Implementation**

Delay by 2 weeks (Specify month) June 3rd week	1. Rainfed low land situation	**Winter rice high yielding variety(ies)** Ranjit, Bahadur, Pankaj, Kushal and local variety; **Summer rice** (Var. *Swarnabh, Dinanath, KMJ 2-3-1*) and **Autumn rice** (var. *Disang, Lachit, Chilarai*) i) Winter paddy -- fallow ii) Winter paddy – summer / autumn paddy	Does not require to change the crops and cropping system	1. Preparation of seed bed just after rain 2. Repairing of bund with mud plastering to keep rain water	1) Seed production of suitable varieties so that these can be made available in time 2) Identification & evaluation of suitable varieties specific to prevailing situation iii) Identification of ITK if any
	2. Rainfed medium land situation	**Winter rice high yielding variety(ies)-** Ranjit, Bahadur, Pankaj, Kushal and local variety(ies) and Autumn rice (var. *Disang, Lachit, Chilarai*) i) Winter paddy -- fallow ii) Winter paddy –autumn paddy iii) Winter paddy – Rabi crops (Cole crops, rajmash, potato, pumpkin, brinjal, tomato, chilli etc.)	-do-	1. Preparation of seed bed just after rain 2. One ploughing of main field to conserve moisture. 3. Repairing of bund with mud plastering to keep rain water	-do-
	3. Rainfed upland situation	Summer/Kharif vegetables like snakegourd, okra, ridge gourd, bottle gourd, bittergourd, Sweet guard, cucumber followed by rabi vegetables- cole crops,	-do-	1. Minimum tillage 2. Mulching with waste materials at the time of sowing.	-do-

		potato, rajmash, tomato, brinjal, chilli, pea Summer /Kharif vegetables - Rabi vegetables			
	4. Tilla Land	Aracanut, Pineapple, banana, ginger, turmeric, assam lemon Horticulture crop -Fallow	-do-	1. Life saving irrigation. 2. Shading with dhaincha.	1. Construction of Jalkund. 2) Seed production of suitable varieties so that these can be made available in time

Condition			**Suggested Contingency measures**		
Early season drought (Delayed onset)	**Major Farming situation**	**Normal Crop /cropping system**	**Change in crop /cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 4 weeks (Specify month) 1st week of July	1. Rainfed low land situation	Winter rice high yielding variety (ies) of Ranjit, Bahadur, Pankaj, Kushal and local variety, summer rice (Var. *Swarnabh, Dinanath, KMJ 2-3-1*) and Autumn rice (var. *Disang, Lachit, Chilarai*) **i) Winter paddy -- fallow** **ii) Winter paddy – summer / autumn paddy**	Medium duration Winter rice variety Basundhra, Satyaranjan and flash flood tolerant variety like Jalkuwari and Jalashree. i) Winter paddy -- fallow ii) Winter paddy – summer / autumn paddy	1. Preparation of seed bed just after rain 2. Repairing of bund with mud plastering to keep rain water	1) Seed production of suitable varieties so that these can be made available in time Either by ASCA/AAU as foundation/ certified seeds
	2. Rainfed medium land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety(ies) and Autumn rice (var. *Disang, Lachit, Chilarai*)	Medium duration Winter rice variety (ies) Basundhra and Satyaranjan. i) Winter paddy –autumn	➢ Preparation of seed bed just after rain ➢ Repairing of bund with mud plastering to keep rain water.	-do-

		Cropping system: i) Winter paddy -- fallow ii) Winter paddy –autumn paddy iii) Winter paddy – Rabi crops (Cole crops, rajmash, potato, pumpkin, brinjal, tomato, chilli etc.)	paddy ii) Winter paddy – Normal rabi crops		
	3. Rainfed upland situation	Summer/Kharif vegetables like Snakegourd,okra, ridge gourd, bottle gourd, bittergourd Sweet guard, spine gourd cucumber followed by rabi vegetables- cole crops, potato, rajmash, tomato, brinjal, chilli, pea Cropping system: **Summer vegetables-Rabi vegetables**	Late kharif vegetables followed by normal rabi vegetables Cropping system: Late kharif vegetables – Normal rabi crops	1. Delayed sowing with high seed rate / transplanting	
	4. Tilla Land	Arecanut, Pineapple, banana, ginger, turmeric, Assam lemon Cropping system: **Horticulture crop -- fallow**	-	1. Life saving irrigation. 2. Shading with dhaincha.	1. Construction of Jalkund. 2) Seed production of suitable varieties so that these can be made available in time

Condition			**Suggested Contingency measures**		
Early season drought (Delayed onset)	**Major Farming situation**	**Crop /cropping system**	**Change in crop /cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 6 weeks (Specify month) 3rd week of July	1. Rainfed low land situation	Late winter paddy with traditional varieties Monahar Winter, Andrew winter	1. Short duration rice variety like Disang, Luit, Kolong, Kopilee and traditional paddy varieties	• Closer spacing • Stagger planting • Direct seeding	1) Seed production of suitable varieties so that these can be made available in time Either by

		Cropping system: 1. Winter rice – fallow 2. Summer rice – fallow - Winter rice	like *Monohar Winter, Sial Winter* etc. for late sown condition and HYV *Gitesh, Prafulla* etc. Cropping system: 1) Rice –fallow 2) Very late sown/ late transplanted winter paddy variety like *Gitesh, Prafulla* etc. --- summer / autumn paddy		ASCA/AAU as foundation/ certified seeds
	2. Rainfed medium land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety(ies) Cropping system: winter rice -Fallow	-do-	• Closer spacing • Stagger planting • Direct seeding	-do-
	3. Rainfed upland situation	Summer/kharif vegetables like Snakegourd,okra, ridge gourd, bottle gourd, bittergourd Sweet guard, spine gourd cucumber followed by rabi vegetables- cole crops, potato, rajmash, tomato, brinjal, chilli, pea Cropping system: **i**. Summer /kharif vegetables - Rabi vegetables	Late kharif vegetables followed by normal rabi vegetables and rabi oilseed and pulses Cropping system: Kharif vegetables- rabi vegetables	-do-	-do-

		ii. Fallow – rabi crops / rabi vegetables			
	4. Tilla Land	Aracanut, Pineapple, banana, ginger, turmeric, assam lemon Cropping system: **Horticulture crop -- fallow**	-	1. Life saving irrigation. 2. Shading with dhaincha.	1. Construction of Jalkund. 2. Seed production of suitable varieties so that these can be made available in time.

Condition			**Suggested Contingency measures**		
Early season drought (Delayed onset)	**Major Farming situation**	**Crop /cropping system**	**Change in crop /cropping system**	**Agronomic measures**	**Remarks on Implementation**
Delay by 8weeks (Specify month) 1st week of August	1. Rainfed low land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety. Cropping system: Rice -fallow	Short duration rice variety like Disang, Luit, Kolong, Kopilee and traditional varieties. Rice variety like *prafulla* and *gitesh* as staggered planting. Cropping system: Short duration rice / Late transplanted winter rice - fallow	• Closer spacing • Staggered planting • Community nursery. • Increase no. of seedlings / hill	
	2. Rainfed medium land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and traditional variety followed by rabi crops (cole crops, potato, tomato, brinjal, chilli etc.). **Cropping system:** 1. Rice –fallow 2. Rice – rabi crops	1. Late sown/ late transplanted winter paddy variety like Gitesh, Prafulla etc. followed by Autumn paddy. **Rice -Rice** 2. Short duration rice variety like Disang, Luit, Kolong, Kopilee and	1. Staggered planting 2. Closure spacing during transplanting 3. Increase no. of seedlings / hill 4. Minimize no. of top dressing of fertilizer (not during dry spell) 5. Advocating mat nursery for raising tender aged	

			traditional varieties. followed by Autumn paddy / rabi crops. 3. Traditional paddy varieties like Monohar Sali, Andrew Sali etc. for late sown condition followed by rabi crops. **Rice –Rice/Rabi crops**	seedling 6. In extreme cases winter paddy is omitted followed by timely cultivation of kharif pulses or oilseeds / rabi crops.	
	3. Rainfed upland situation	Summer and kharif vegetables (brinjal , Snakegourd,okra, ridge gourd, bittergourd Sweet guard, cucumber) and sesamum followed by rabi vegetables (cole crops, tomato, brinjal, potalo, chilli), rapeseed, pea, rajmash. 1. Summer /kharif vegetables - Rabi crops 2. Fallow – Rabi crops	Late kharif vegetables followed by normal rabi vegetables, rabi and pulses Vegetable- Rabi crops	1) Use of organic mulches in kharif vegetables 2) Timely cultivation of rabi crops / vegetables 3) Minimise no. of top dressing of fertilizer (not during dry spell) 4) Growing seedlings of vegetables under controlled conditions.	-
	Tilla Land	Aracanut, Pineapple, ginger, turmeric, Assam lemon 1. Horticulture crop – fallow 2. Multi storied cropping.	-	1. Life saving irrigation. 2. Shading with dhaincha. 3. Mulching with farm wastes.	1. Construction of Jalkund. 2. Seed production of suitable varieties so that these can be made available in time.

Condition			**Suggested contingency measures**		
Early season drought (Normal onset)	**Major Farming situation**	**Crop/Cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on implementation**
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination / crop stand etc.	1. Rainfed low land situation	**Winter rice high yielding variety(ies)** Ranjit, Bahadur, Pankaj, Kushal and local variety; **Summer rice** (Var. *Swarnabh, Dinanath, KMJ 2-3-1*) and **Autumn rice** (var. *Disang, Lachit, Chilarai*) i) Winter paddy -- fallow ii) Winter paddy – summer / autumn paddy	1. Manually watering in the nursery bed 2. Resowing 3. Repairing of bund for soil moisture conservation 4. Treatment of seed with 4% KCl sol.	1. Spraying of 2% urea solution in nursery bed. 2. Maximum use of organic manure 3. Use of organic mulch	1. Buffer stock of Seed 2. Identification & evaluation of suitable varieties specific to prevailing situation and their seed production.
	2. Rainfed medium land situation	**Winter rice high yielding variety(ies)-** Ranjit, Bahadur, Pankaj, Kushal and local variety(ies) and Autumn rice (var. *Disang, Lachit, Chilarai*) i) Winter paddy -- fallow ii) Winter paddy –autumn paddy iii) Winter paddy – Rabi crops (Cole crops, rajmash, potato, pumpkin, brinjal, tomato, chilli etc.)	1. Manually watering in the nursery bed 2. Resowing 3. Treatment of seed with 4% KCl solution 4. Delayed sowing 5. Sowing of pre-germinated seeds of paddy.	1. Application of sufficient organic matter in the nursery bed 2. Application of MOP@22 Kg/ha	1. Buffer stock of Seed 2. Identification & evaluation of suitable varieties specific to prevailing situation and their seed production. 3.) Identification & evaluation of suitable varieties specific to prevailing situation
	3. Rainfed upland situation	Summer/Kharif vegetables like snakegourd, okra, ridge gourd, bottle	1. Mannualy watering in the nursery bed 2. Resowing	-	-

		gourd, bittergourd, Sweet guard, cucumber followed by rabi vegetables- cole crops, potato, rajmash, tomato, brinjal, chilli, pea Summer/Kharif vegetables- Rabi vegetables			
	4. Tilla Land	Arecanut, Pineapple, ginger, turmeric, Assam lemon **Cropping system:** Horticulture crop - Fallow	-	-	-

Condition			**Suggested contingency measures**		
Mid season drought (long dry spell, consecutive 2 weeks rainless (>2.5 mm)period)	**Major Farming situation**	**Crop/Cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on implementation**
At vegetative stage.	1. Rainfed low land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and bao/deep water paddy i) Winter paddy – fallow ii) Winter paddy – summer / autumn paddy iii) Winter paddy – rabi crops	• Bunds should be kept in good condition in rice field • Spray of anti-transpirants • If crop is damaged short duration Winter rice variety can be grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing • Stop top dressing of urea in case of rice	
	2. Rainfed medium land	Winter rice high yielding	• Bunds should be kept in	• Application of	

	situation	variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and bao/deep water paddy Cropping system: rice mono crop	good condition in rice field • Spray of anti-transpirants • If crop is damaged short duration Winter rice variety can be grown	sufficient amount of organic manures in main fields before transplanting/ sowing	
	3. Rainfed upland situation	Summer and kharif vegetables like brinjal ,Snakegourd,okra, ridge gourd, bottle gourd, bittergourd Sweet guard, cucumber, sesamum followed by rabi vegetables, maize, rapeseed, pea potato, rajmah	• Thinning the plant population & Mulching in case of other crops, resowing of crops	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	

Condition			**Suggested contingency measures**		
Mid season drought (long dry spell)	**Major Farming situation**	**Crop/Cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on implementation**
At reproductive stage	1. Rainfed low land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and bao/deep water paddy Cropping system: rice mono crop either Winter or boro	• Bunds should be kept in good condition in rice field • If crop is damaged early rabi oilseed pulses and vegetables should be grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	
	2. Rainfed medium land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and	• Bunds should be kept in good condition in rice field	• Application of sufficient amount of organic manures in main fields before	

		bao/deep water paddy Cropping system: rice mono crop	• If crop is damaged early rabi oilseed pulses and vegetables should be grown	transplanting/ sowing	
	3. Rainfed upland situation	Summer and kharif vegetables like brinjal ,Snakegourd,okra, ridge gourd, bottle gourd, bittergourd Sweet guard, cucumber, sesamum followed by rabi vegetables, maize, rapeseed, pea potato, rajmah	• Bunds should be kept in good condition in rice field • If crop is damaged early rabi oilseed pulses and vegetables should be grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	

Condition			**Suggested contingency measures**		
Terminal drought (Early withdrawal of monsoon)	**Major Farming situation**	**Crop/Cropping system**	**Crop management/planning**	**Soil nutrient & moisture conservation measures**	**Remarks on implementation**
	1. Rainfed low land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and bao/deep water paddy Cropping system: rice mono crop either Winter or boro	High yielding variety of Boro rice is to grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	
	2. Rainfed medium land situation	Winter rice high yielding variety of Ranjit, Bahadur, Pankaj, Kushal and local variety and bao/deep water paddy Cropping system: rice mono crop	Early rabi and normal rabi of vegetables, oilseed and pulses are to be grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	

	3. Rainfed upland situation	Summer and kharif vegetables like brinjal ,Snakegourd,okra, ridge gourd, bottle gourd, bittergourd Sweet guard, cucumber, sesamum followed by rabi vegetables, maize, rapeseed, pea potato, rajmah	Kharif, early rabi and normal rabi of vegetables, oilseed and pulses are to be grown	• Application of sufficient amount of organic manures in main fields before transplanting/ sowing	

2.2 Unusual rains (untimely, unseasonal etc.) (for both rainfed and irrigated situations)

Condition	**Suggested Contingency measure**			
Continuous high rainfall in a short span leading to water logging	**Vegetative stage [k]**	**Flowering stage [l]**	**Crop maturity stage [m]**	**Post harvest [n]**
Winter rice	Drainage	Drainage	Drainage	• Harvesting should be done before rain as per as possible • Drying of produces before storage to optimum moisture level • Seed treatment with insecticide and fungicide against insects & diseases respectively during the period of storage
Summer rice	-do-	-do-	-do-	
Potato	-do-	-do-	-do-	
Rajmah	-do-	-do-	-do-	
Rapseed	-do-	-do-	-do-	
Horticulture				• Harvesting should be done before rain as per as possible • Drying of produces before storage to optimum moisture level • Sale the produces
Tomato	-do-	-do-	-do-	
Capsicum	-do-	-do-	-do-	
Vegetables	-do-	-do-	-do-	
French bean	-do-	-do-	-do-	
Chilli	-do-	-do-	-do-	
Pineapple	-do-	-do-	-do-	
Turmeric	-do-	-do-	-do-	
Assam lemon	-do-	-do-	-do-	
Arecanut	-do-	-do-	-do-	
Ginger	-do-	-do-	-do-	

Heavy rainfall with high speed winds in a short span [2]				
Rice	Drainage	Drainage	Drainage	• Harvesting should be done before rain as per as possible • Drying of produces before storage to optimum moisture level
Rajmah	Drainage & earthing up	Drainage & earthing up	Drainage & earthing up	
Potato	-do-	-do-	-do-	
Rabi pulse	Drainage	Drainage	Drainage	
Toria	Drainage	Drainage	Drainage	
Horticulture				
Tomato	Drainage & resowing	Drainage	Drainage	• Harvesting should be done before rain as per as possible
Rabi vegetable	Drainage & resowing	Drainage	Drainage	
Kharif vegetable	Drainage & resowing	Drainage	Drainage	
Brinjal	Drainage & resowing	Drainage	Drainage	
Chilli	Drainage & resowing	Drainage	Drainage	
Pineapple	-do-	-do-	-do-	
Turmeric	-do-	-do-	-do-	
Assam lemon	-do-	-do-	-do-	
Arecanut	-do-	-do-	-do-	
ginger	-do-	-do-	-do-	
Outbreak of pests and diseases due to unseasonal rains				
Rice	Application of pesticides as prophylactic measures	Rouging if infected plant, Application of 2 per cent Potash solution by spraying, Micronutrient spray.	Apply pesticide and ITK measures	Ensure proper drying of harvested materials before bagging
Rajmah				
Toria				
Potato				
Rabi pulse				
Horticulture	Application of pesticides as prophylactic measures	Rouging if infected plant, Application of 2 per cent Potash solution by spraying, Micronutrient spray.	Apply pesticide and ITK measures	-
Tomato				
Rabi vegetable				
Kharif vegetable				
Brinjal				
Chilli				
Pineapple				

Turmeric				
Assam lemon				
Arecanut				
ginger				

2.3 Floods

Condition	**Suggested Contingency measure [o]**			
Transient water logging/ partial inundation[1]	**Seedling / nursery stage**	**Vegetative stage**	**Reproductive stage**	**At harvest**
Winter rice	1. Drainage of nursery bed or resowing 2. Submergence tolerant varieties – Jalashree and Jalkuwari may be grown	• Drainage of excess water. • Gap filling may be done by redistributing the tillers. • Wet seeding of sprouted seeds • Closer spacing • Stagger planting • Management of pests & diseases • Community nursery to be established for short duration variety like Luit, Kapilee, Disang etc., with higher seed rate 10 kg/ha	• Drainage of excess water. • If normal crop fails, emphasis should be given on early rabi vegetables	• Drain out excess water harvested and tying the harvested head and transferred to dry place keep for drying
Summer rice	Drainage of nursery bed or resowing	-do-	• Drainage of excess water. Emphasis should be given on winter rice along submergence tolerant varieties – Jalashree and Jalkuwari	-do-
Rajmah	Flood does not occur	Flood does not occur	Flood does not occur	Flood does not occur
Toria	-do-	-do-	-do-	-do-
Potato	-do-	-do-	-do-	-do-
Horticulture				
Summer vegetables	Drainage of nursery bed or	i. Drainage or resowing late	Drainage or pre rabi and rabi	-

	resowing	varieties ii. Hoeing in between lines for aeration in root zone after flood.	vegetables	
Kharif Vegetable	Drainage of nursery bed or resowing	Hoeing in between lines for aeration in root zone after flood.	Hoeing in between lines for aeration in root zone after flood.	-
Rabi vegetables	Flood does not occur	Flood does not occur	Flood does not occur	Flood does not occur
Chilli	-do-	-do-	-do-	-do-
Tomato	-do-	-do-	-do-	-do-
Potato	-do-	-do-	-do-	-do-
Continuous submergence for more than 2 days [2]				
Winter rice	Drainage or resowing if seedling damaged	i. Drainage, gap filling, stagger planting, disease pest management ii. Closer spacing iii. Stagger planting iv. Management of pests & diseases v. Community nursery to be established for short duration variety like Luit, Kapilee, Disang	• Drainage of excess water. • If normal crop fails, emphasis should be given on early rabi vegetables	-
Summer rice	Drainage or resowing	Drainage, gap filling, stagger planting, disease pest management Grown Winter rice	Drainage of excess water. Growing of rabi after receding flood water	Drainage of excess water., emphasis should be given on Winter rice
Rajmah	Flood does not occur	Flood does not occur	Flood does not occur	Flood does not occur
Horticulture				
Summer vegetables	Drainage or resowing	i. Drainage or Resowing of late varieties ii. Hoeing in between lines for aeration in root zone after flood.	Growing of rabi vegetables	Harvest and dry in shade as soon as possible Safe storage against storage pest and diseases
Rabi vegetables	Flood does not occur	Flood does not occur	Flood does not occur	Flood does not occur
Crop 3				

2.4. Extreme events: Heat wave /Cold wave /Frost /Hailstorm /Cyclone

Extreme event type	**Suggested Contingency measure [r]**			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Hailstorm				
Winter rice	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Summer rice	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Rajmah	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Toria	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Potato	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Horticulture				
Summer vegetables	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Rabi vegetables	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop
Chilli	Resowing	Nothing to do	Nothing to do	Emphasis should be given in the next crop

2.5 Contingent strategies for Livestock, Poultry & Fisheries

2.5.1 Livestock

Drought	Suggested contingency measures		
	Before the event [s]	During the event	After the event
Feed and fodder availability	1.Fodder cultivation 2.Collection & storage of paddy straws 3. Storage of sufficient feed/fodder 4. Processing of fodder 5. Preservation of fodder as silage and hay. 6. Utilization of waste lands for cultivation of fodder, trees, bushes etc.	1. Utilization of fodder from fodder plant 2. Utilization of stored feed/fodder and transport it to affected areas. 3. Harvesting and use of all failed field crops as fodder. 4. Harvest of tree/ top of fodder and use as feed 5. Feeding of vitamins, mineral	1. Awareness /training of farmers for fodder cultivation /feed & fodder storage. 2. Training on preparation of urea treated paddy straw/hay & silage making. 3. Cultivation of short duration fodder crops like maize, sorghum etc. 4. Feeding of vitamins, mineral

	7. Need of a fodder bank/ seed bank in the district 8. Introduction/ cultivation of drought tolerant perennial grasses fodder, trees, bushes etc. 9. Awareness camp on drought	mixture and concentrate feed. 6. Feeding of fodder tree leaves like neem, subabol, mango, jack fruit etc.	mixture and concentrate feed.
Drinking water	1. Preserving water in own tanks/ponds 2. Preserving water in village tanks/ponds 3. Rain water harvesting 4. Excavation of bore wells where possible	1. Using water from the preserved tanks/ponds or from bore well where available.	1. Maintenance of cleaning and strengthening of water reservoirs/tanks/ponds etc.
Health and disease management	1. Vaccination of animals. 2. Insurance of animals. 3. Deworming of all animals. 4. Storage of essential medicines for first aid	1. Awareness camp on Animal health 2. Animal health camp 3. Emergency measures of life saving approaches like drenching, watering, semi-liquid diet etc.	1. Vaccination of animals. 2. Dewornming of animals. 3. Treatment of sick animals. 4. Animal infertility camp.
Floods			
Feed and fodder availability	1. Collection and storage of paddy straw. 2. Fodder cultivation in tillah land 3. Storage of feed/fodder safely from floods. 4. Preparation of urea treated paddy straw, hay & silage making and their storage. 5. Feed block preparation	1. Transportation of storage paddy straw /feed/fodders to flood affected areas. 2. Providing feed blocks 3. Use of unconventional feed and various by-products. 4. Feeding of vitamins, mineral mixture and concentrate feed. 5. Feeding of fodder tree leaves like neem, subabol, mango, jack fruit etc.	1. Maintenance and strengthening of feed / fodder storage facilities. 2. Awareness/training of farmers for fodder cultivation /feed/fodder storage. 3. Feeding of vitamins, mineral mixture and concentrate feed.
Drinking water	1. Excavation of bore wells.	1. Supply of clean and safe water to the animals.	1. Cleaning and disinfection of water reservoir/village ponds/tanks. 2. Repair/maintenance of bore wells.
Health and disease management	1. Vaccination of animals. 2. Deworming of all animals. 3. Provision of community shelters at safe places.	1. Shifting animals from affected areas to safe areas like tillah areas & community shelters. 2. Providing veterinary aids to affected	1. Mass Deworming of animals 2. Animal health camp 3. Treatment of sick animals 4. Mass Vaccination

	4. Make availability of sufficient veterinarians and medicines	animals. 3. Regular monitoring of animals. 4. Segregation /culling of sick animal.	5. Proper disposal of carcass of dead animals. 6. Segregation /culling of sick animal.
Cyclone	Not a cyclone prone district		
Feed and fodder availability			
Drinking water			
Health and disease management			
Heat wave and cold wave	Not a Heat wave and cold wave district		
Shelter/environment management			
Health and disease management			

s. based on forewarning whenever available.

2.5.2 Poultry

	Suggested contingency measures		
	Before the event [a]	**During the event**	**After the event**
Drought			
Shortage of feed ingredients	1. Keeping sufficient stock by suppliers. 2. Storage of household grains like broken rice, maize, pulses, oilseeds etc.	1. Utilizing feed from sufficient stock. 2. Supply of stored of household grains like broken rice, maize, pulses, oilseeds etc. 3. Vitamins and mineral mixture supplementation	1. Strengthening of feed storage facilities. 2. Vitamins and mineral mixture supplementation.
Drinking water	1. Increased water supply sources.	1. Supply of sufficient clean and safe drinking water supplies	1. Strengthening of water supply sources
Health and disease management	1. Vaccination of birds. 2. Proper medicinal/supplement schedule for day to day basis. 3. Sufficient stocks of medicines. 4. Culling of weak and diseased birds. 5. Proper disposal of dead bird.	1. Routine inspection of flock 2. Segregation/treatment /culling of diseased bird. 3. Proper disposal of dead bird.	1. Routine inspection of flock 2. Segregation/treatment /culling of diseased bird. 3. Proper disposal of dead bird.
Floods			
Shortage of feed ingredients	1. Storage of sufficient feed to meet requirements during floods at least for 30 days. 2. Keep the food in dry condition to avoid fungal growth. 3. Storage of household grains like	1. Supply of fed to the affected areas from the storage. 2. Supply of stored of household grains like broken rice, maize, pulses, oilseeds etc. 3. Vitamins and mineral mixture	1. Regular inspection of feed to prevent fungal growth. 2. Cleaning & disinfection of feed stores 3. Disposal of fungal contaminated feeds. 4. Vitamins and mineral mixture supplementation.

	broken rice, maize, pulses, oilseeds etc.	supplementation	
Drinking water	1. Excavation of deep bore wells. 2. Increased water supply from the PHE	1. Use of clean and safe water from bore well or PHE only.	1. Maintenance of water supply sources.
Health and disease management	1. Routine inspection of stocks. 2. Vaccination of stocks 3. Proper medicinal/supplement schedule for day to day basis 4. Sufficient stocks of medicine	1. Routine inspection of flocks 2. Segregation/treatment /culling of diseased bird. 3. Proper disposal of died birds 4. Vitamins and mineral mixture supplementation.	1. Routine inspection of flocks 2. Segregation/treatment /culling of diseased bird. 3. Proper disposal of died birds. 4. Vitamins and mineral mixture supplementation.
Cyclone			
Shortage of feed ingredients			
Drinking water			
Health and disease management			
Heat wave and cold wave			
Shelter/environment management			
Health and disease management			

2.5.3 Fishery

	Suggested Contingency measures		
	Before the event	**During the event**	**After the event**
1. Drought			
A. Capture			
Marine	-	-	-
Inland			
(i) Shallow water depth due to insufficient rains/inflow	1. Critical analysis of long range forecast data. Storage of water 2. Conservation of rivers/reservoir/ponds. 3. Re-excavation of local canals and reservoirs. 4. Capturing some amount of fishes and keeping few to minimize quantity of fishes in the pond 5. Digging of ponds to increase depth 6. Follow measures like addition of cowdung etc. to stop/minimize downward percolation of water	1. Use stored water. 2. Divert water from unutilized areas. 3. Minimising quantity of fishes	i) Cleaning and digging of ponds to increase depth ii) Use of materials in pond beds to minimize water loss through percolation

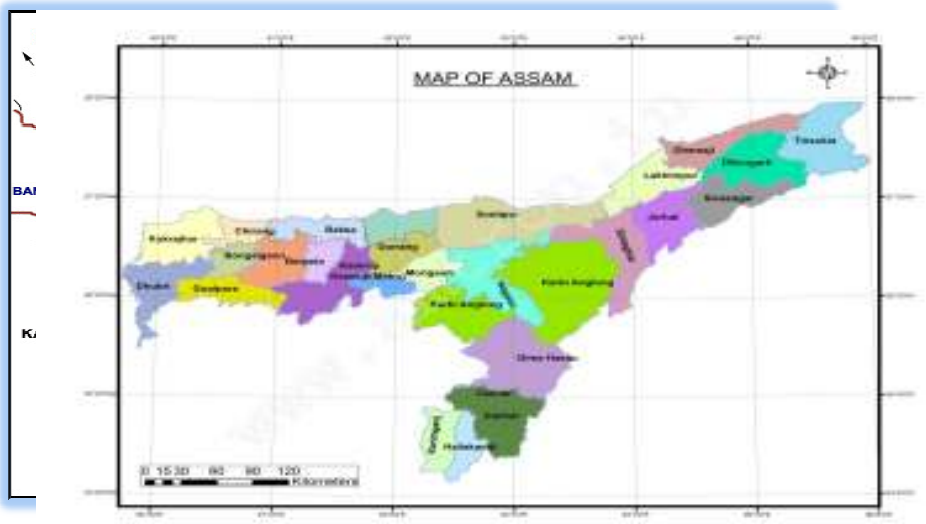
	7. Enquiring alternative water sources to add to the ponds		
(ii) Changes in water quality	i) Prohibit dumping of solid, liquid and waste in water sources.	i) Use disinfectants and therapeutic drugs. (2% liming & 3-4% Alam) ii) Adoption of bio-remedial measures iii) Turbidity to be measured	i)Need based research data should be generated on water quality. ii) Dumping of solid, liquid and waste in water bodies should be stopped through enactment of legislation. iii) Turbidity to be measured
(iii) Any other			
B. Aquaculture			
(i) Shallow water in ponds due to insufficient rains/inflow	i) Critical analysis of long range ii) Forecast data. iii) Conservation of rivers/reservoir/ponds. iv) Re-excavation of local canals and reservoirs.	i. Divert water from unutilized areas. ii. Utilize canal water. iii. Aeration of ponds. iv. Concern government agency to come in action	i) Need based monitoring through research plan. ii) Construction of water reservoirs. iii) Adoption of rain harvesting methods. iv) Compensation claims . v) Concern government agency to come in action
(ii) Impact of salt load build up in ponds/Changes in water quality	-	-	-
(iii) Any other	-	-	-
2. Flood			
A. Capture			
Marine	N/A	-	-
Inland			
(i) Average compensation paid due to loss of human life	i) Be prepared to evacuate at a short notice. ii) Preparation of flood control action	i) Human evacuation from the area. ii) Coordination of assistance. iii) Damage and need assessment.	i) Arrangement for rescue and casualty care. ii) Arrangement for burial control

	plan. iii) Warning dissemination and precautionary response. iv) Formation of flood management committee. v) Enhancement in coping capabilities of common people. vi) Insurance for the life of people/fishermen.	iv) Immediate management of relief supplies. v) Immediate help delivery.	room. iii) Restoration of essential services, security and protection of property. iv) Support to rehabilitation, logistics, training and awareness build up & testing and updating the plan. v) Insurance and compensation claim.
(ii) No. of boats/nets damaged	i) Annual repair of boats/nets and gears. ii) Insurance of boats/nets/gears.	i) Coordination of assistance ii) Immediate management of relief supplies. ii) Pod to be surrounded by net to prevent fish to go out iv) Govt. support and compensation.	i) Education and training for the repair of boats/nets and gears. ii) Loss assessment & insurance claim.
(iii) No. of houses damaged	i) Education and training for the repair of houses. ii) Store raw material for emergency repair of houses. iii) House insurance.	i) Arrangement of temporary shelters for homeless people. i) Damaged house enumeration and need assessment. ii)Coordination of assistance. iii) Immediate management of relief supplies.	i)Loss assessment & insurance claim. ii) Govt. assistance claim.
(iv) Loss of stock	i) Keep boats, nets/gears ready for emergency use. ii) Store fuels, food/other item iii) Develop flood control management plans.	i) Search/locate the stock/input. ii) Mobilize local people for protection. iii) Hire stock/inputs from distant areas/company/ farmers who are not affected by flood.	i) Follow flood control management plan. ii) Notify utilities of the critical demand about loss of stock and inputs. iii) Loss assessment & insurance claim.
(v) Changes in water quality	i) Provision to stop/close the effluent/sewerage discharge point in water bodies ii) Store chemicals, disinfectants and therapeutic drugs.	i) Do not use contaminated water ii) Proper preparation and management through emergency aeration. iii) Use appropriate amount of disinfectants, chemicals and therapeutic drugs. iv) Need based bioremediation	i) Need based research data should be generated to maintain water quality, ii) Dumping of solid, liquid and waste should be stopped through enactment of legislation. iii) Regular water monitoring and bio-monitoring of water bodies for formulation of management plan

(vi) Health and disease	i) Advance planning and preparedness. ii) Store chemicals, disinfectants and therapeutic drugs.	i) Prompt action or immediate removal of disease causing agents/ dead fish, followed by sterile or landfill disposal. ii) Use appropriate amount of disinfectants, chemicals and therapeutic drugs. iii) Emergency aeration or splashing in water bodies.	i) Laboratory diagnosis of diseased fish, generation of data about type or kind of disease spread. ii) Follow up surveillance and monitoring after disease outbreak. iii) Bio-monitoring and maintaining water quality. iv) Need based research data should be generated. v) Loss assessment & insurance claim.
B. Aquaculture			
(i) Inundation with flood water	i) Proper facility construction for ponds and its stock safety. ii)Preparedness with emergency backup equipment on site. iii) Stock insurance. iv) Preventive measures against entry of alien/wild organisms through flood water.	i) Arrangement for evacuation. ii) Arrangement for burial control room. iii) Restoration of essential services, security and protection of property. iv) Coordination of assistance. v) Damage and need assessment. vi) Immediate management of relief supplies. vii) Release excess water from height of T. viii) Lower the water level in culture facilities.	i) Support to rehabilitation, logistics, training and awareness build up & testing and updating the plan ii) Reallocate fish to maintain appropriate biomass so that waste assimilation capacity of pond is not exceeded. iii) Strengthening of water bodies/ponds. iv) Loss assessment & insurance claim.
(ii) Water contamination and changes in water quality	i) Store chemicals, disinfectants and therapeutic drugs ii) Develop flood control management plan	i) Do not use contaminated water. ii) Proper preparation and management through emergency aeration (paddle wheel aerator/circulating aerator), that may improve water quality in affected areas. iii) Use appropriate amount of disinfectants, chemicals and therapeutic drugs. iv) Maintaining the purity and quality	i) To maintain water quality, need based research data should be generated ii) Dumping of solid, liquid and waste should be stopped through enactment of legislation. iii) Immediate remedy and cleaning of water bodies. iv) Regular water monitoring and bio-monitoring of water bodies for formulation of management plan.

		of water bodies. iv) Need based bioremediation.	
(iii) Health and diseases	i) Stock sufficient emergency medicines. Ie. Potach , bleaching powder, lime, turmeric etc.	i)Identification of type of disease outbreak, immediate removal of disease causing agents/ dead fish. ii) Use appropriate amount of disinfectants, chemicals and therapeutic drugs.	i) Laboratory diagnosis of diseased fish, generation of data about type or kind of disease spread. ii) Proper disposal of dead fish. iii) Loss assessment & insurance claim.
(iv) Loss of stock and input (feed, chemicals)	i) Keep the stock/input at safe place for emergency purpose.	i) Search/locate the stock/input. ii) Purchase/hire valuable stock/inputs from distant areas not affected by flood.	i) Strengthening of stocks. ii) Assessment of total loss. iii) Insurance claims.
(v) Infrastructure damage (pumps, aerators, huts etc)	i) Educate and provide training for the repair of infrastructure. ii) Follow flood control management plan. iii) Infrastructure insurance.	i)Coordination of assistance. ii) Immediate management of relief supplies.	i) Locate backup equipment and verify its operation. ii) Loss assessment & insurance claim.
(vi) Any other	-	-	-
3. Cyclone / Tsunami	Not a cyclone affected district.		
4. Heat wave and cold wave	No occurrence of heat and cold wave.		

ANNEXURE-1
LOCATION MAP OF DISTRICT WITHIN STATE



ANNEXURE-2
MONTHLY RAINFALL FOR THE YEAR 2010

Month	Rainfall (mm)	Average Rainfall (Mean)	Temperature ^{0} C		Relative Humidity (%)	
			Maximum	Minimum	Morning	Evening
January	0	0	27.3	11.0	71.25	55.45
February	50	1.78	30.1	15.3	64.25	47.85
March	100	3.23	35.2	21.8	66.90	47.90
April	346	11.53	32.4	18.2	72.09	68.40
May	380	12.25	39.1	18.0	85.23	75.46
June	320	10.67	39.2	19.0	82.12	78.65
July	370	11.93	38.4	21.0	84.28	78.10

August	780	25.16	35.3	24.0	93.88	97.60
September	490	16.34	35.2	20.0	90.00	80.00
October	210	6.77	37.3	18.6	98.90	65.90
November	10	0.34	30.5	15.2	75.20	60.70
December	0	0	28.3	12.0	73.60	62.30
TOTAL	3056					

MONTHLY RAINFALL FOR THE YEAR 2011

Month	**Rainfall (mm)**	**Average Rainfall (Mean)**	**Temperature ^{0} C**		**Relative Humidity (%)**	
			Maximum	**Minimum**	**Morning**	**Evening**
January	0	0	27.6	11.0	71.25	55.45
February	15	0.53	30.8	15.2	64.25	47.85
March	200	6.45	35.2	21.0	66.90	47.90
April	78	2.61	35.30	18.60	75.53	73.42
May	498	16.06	34.10	19.80	87.71	85.69
June	372	12.4	34.90	23.20	92.23	85.72
July	492	15.87	34.10	23.60	94.76	84.48
August	258	8.32	36.10	23.70	98.00	76.67
September	137	4.57	38.50	23.80	80.94	92.56
October	35	1.12	35.20	17.70	97.67	66.07
November	0	0	32.50	14.40	78.43	73.16
December	1	0.032	30.10	8.90	77.92	72.62
TOTAL	2086					

ANNEXURE-3

Soil Map of Cachar District