State: **NAGALAND**

Agriculture Contingency Plan for District: MON

1.0 District Agriculture profile				
1.1	Agro-Climatic/Ecological Zone	Temperate to subtropical hill zone		
	Agro Ecological Sub Region (ICAR)	17.1,D2A9, Eastern Range Nagaland Hills, Warm to hot pre- humid ecosystem with red and laterite soils		
	Agro-Climatic Zone (Planning Commission)	Eastern Himalayan Region		
	Agro Climatic Zone (NARP)	Upper Brahmaputra Valley Zone, NEH-3,95.43 Sub Tropical Hill Zone, NEH-3, 4.57		
	List all the districts or part thereof falling under the NARP Zone	Wokha, Mokokchung, Kohima, Tuensang, Phek, Zunheboto		
	Geographic coordinates of district headquarters	Latitude	Longitude	Altitude
		26° 43' N	95° 01' E	180-1625 msl
	Name and address of the concerned ZRS/ ZARS/ RARS/ RRS/ RRTTS	ICAR Research Complex for NEH Region, Nagaland centre, Jharnapani		
	Mention the KVK located in the district	KVK Mon, Dept. of Agriculture, Govt. of Nagaland		

1.2	**Rainfall**	**Normal RF(mm)**	**Normal Rainy days (number)**	**Normal Onset (specify week and month)**	**Normal Cessation (specify week and month)**
	Winter (Jan- March)	470.7	24	2nd week of Jan	2nd week of March
	Pre-monsoon/ Summer (March – May)				
	Summer (Apr-May)	522.8	36	1st week of April	4th week of May
	Monsoon (South west)June- Sept.	1401.12	82	1st week of June	4th week of Sept.
	NE Monsoon(Oct-Dec):	162.9	23	1st week of Oct	4th week of Nov

	Annual	2554.6	181	2nd week of Jan	4th week of Nov

1.3	Land use pattern of the district (latest statistics)	Geographical area (‘000 ha)	Cultivable area (‘000 ha)	Forest area (‘000 ha)	Land under non-agricultural use (‘000 ha)	Permanent Pastures (‘000 ha)	Cultivable wasteland (‘000 ha)	Land under Misc. tree crops and groves (‘000 ha)	Barren and uncultivable land (‘000 ha)	Current Fallows (‘000 ha)	Other fallows (‘000 ha)
	Area (‘000 ha)	178.6	38.07	**41.70**	10.0		5.0	4.1	5.0	112.5	4.45

1. 4	Major Soils (common names like red sandy loam deep soils (etc.,)*	Area (‘000 ha)	Percent (%) of total
	1 Red clayey soils		
	2 Lateritic soils		
	3 Alluvial colluvial soils (partly saline)		
	4 Alluvial-colluvial soils		
	5 Lateritic gravelly soils		
	6 Rock land and water bodies		
	7 Medium deep black soils		
	8 Red gravelly loam soils		
	9 Red gravelly clay loam soils		
	Others (specify): Black soil Sandy loam Eroded hill slopes	 22.0 9.0 7.6	 57.0 23.3 19.7

*** mention colour, depth and texture (heavy, light, sandy, loamy, clayey etc) and give vernacular name, if any, in brackets (data source: Soil Resource Maps of NBSS&LUP).**

1.5	Agricultural land use	Area (‘000 ha)	Cropping intensity %
	Net sown area	30.35	108.96
	Area sown more than once	2.72	

	Gross cropped area	33.07	

1.6	**Irrigation**	**Area ('000 ha)**		
	Net irrigated area	3.52		
	Gross irrigated area	5.58		
	Rainfed area	23.97		
	Sources of Irrigation	Number	**Area ('000 ha)**	**% of total irrigated area**
	Stream flow		2.00	5.8
	Tanks			
	Open wells			
	Bore wells			
	Lift irrigation schemes			
	Micro-irrigation			
	Other sources (please specify)			
	Total Irrigated Area			
	Pump sets	03	0.33	14.16
	No. of Tractors	01		
	Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	**No. of blocks/ Tehsils**	**(%) area**	**Quality of water (specify the problem such as high levels of arsenic, fluoride, saline etc)**
	Over exploited			
	Critical			
	Semi- critical			
	Safe			
	Wastewater availability and use			
	Ground water quality			
***over-exploited: groundwater utilization > 100%; critical: 90-100%; semi-critical: 70-90%; safe: <70%**				

Source: Statistical handbook of Nagaland 2008.

1.7 Area under major field crops & horticulture (as per latest figures) (Specify year 2007-08)

1.7a	Major field crops cultivated	Area ('000 ha)							
		Kharif			*Rabi*			Summer	Grand total
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total		
1	Jhum paddy		13.10						13.10
2	TRC/WRC Paddy		2.77						2.77
3	Maize		8.23						8.23
4	Small millet		1.82						1.82
5.	Rapeseed/ Mustard					3.19			3.19
6.	Soybean		3.10						
Others (specify)	NA	NA	NA	NA	NA	NA	NA	NA	NA

1.7b	Horticulture crops - Fruits			
		Total	Irrigated	Rainfed ('000 ha)
1	Orange	0.20		0.20
2	Banana	0.20		0.20
Others (specify)	NA	NA	NA	NA

1.7c	Horticulture crops - Vegetables	Total area ('000 ha)	Irrigated area ('000 ha)	Rainfed area ('000 ha)
1	Chilly	0.30		0.30
2	Ginger	0.30		0.30
3	**Colocassia**	0.15		0.15
4	Leafy vegetable	0.10		0.10
5	Tapioca	0.10		0.10
Others (specify)	NA	NA	NA	NA

1.7d	**Medicinal and Aromatic crops**	**Total area (‘000 ha)**	**Irrigated area (‘000 ha)**	**Rainfed area (‘000 ha)**
1	Medicinal and Aromatic crops	0.05		0.05
Others (specify)	NA	NA	NA	NA
1.7e	**Plantation crops**	**Total area (‘000 ha)**	**Irrigated area (‘000 ha)**	**Rainfed area (‘000 ha)**
1	Cardamon	0.20		0.20
2	ARECANUT	0.05		0.05
Others (Specify)	Eg., industrial pulpwood crops etc.	NA	NA	NA
1.7f	**Fodder crops**	**Total area (‘000 ha)**	**Irrigated area (‘000 ha)**	**Rainfed area (‘000 ha)**
1.	NA	NA	NA	NA
1.7g	Grazing land	NA	NA	NA
1.7h	Sericulture etc	NA	NA	NA
1.7i	Others (specify)	NA	NA	NA

1.8	Livestock (in number)	Male (‘000)	Female (‘000)	Total (‘000)
	Non descriptive Cattle (local low yielding)	5.96	9.36	15.32
	Crossbred cattle	5.10	6.98	12.08
	Non descriptive Buffaloes (local low yielding)	1.14	1.55	2.69
	Graded Buffaloes	-	-	-
	Goat	3.15	4.05	7.20
	Sheep	0.086	0.098	0.184
	Others (Camel, Pig, Yak etc.)			
	(i) Pig	.88	19.22	40.10
	(ii) Mithun	1.320	1.36	2.66
	Commercial dairy farms (Number)			

1.9	Poultry	No. of farms	Total No. of birds (‘000)
	Commercial	1	0.804
	Backyard	-	133.99

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)	
	ii) Inland (Data Source: Fisheries Department)	No. Farmer owned ponds	No. of Reservoirs	No. of village tanks			

	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)	43.00	1.51	0.065
	Others	NA	NA	NA

1.11 Production and Productivity of major crops (Average of 06-07)

1.11	Name of crop	Kharif		Rabi		Summer		Total		Crop residue as fodder ('000 tons)
		Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	Production ('000 t)	Productivity (kg/ha)	
Major Field crops (Crops to be identified based on total acreage)										
Crop 1	JHUM PADDY	15.6	1210					15.6	1210	
Crop 2	TRC/WRC PADDY	4.24	1570					4.24	1570	
Crop 3	MAIZE	13.74	1670					13.74	1670	
Crop 4	SMALL MILLET	1.28	700					1.28	700	
CROP5	RAPE SEED/ MUSTARD			2.3	690			2.3	690	
Crop 6	SOYBEAN	1.98	640					1.98	640	
Others										
Major Horticultural crops (Crops to be identified based on total acreage)										
Crop 1	ORANGE							0.09	500	
Crop 2	BANANA							0.45	4290	

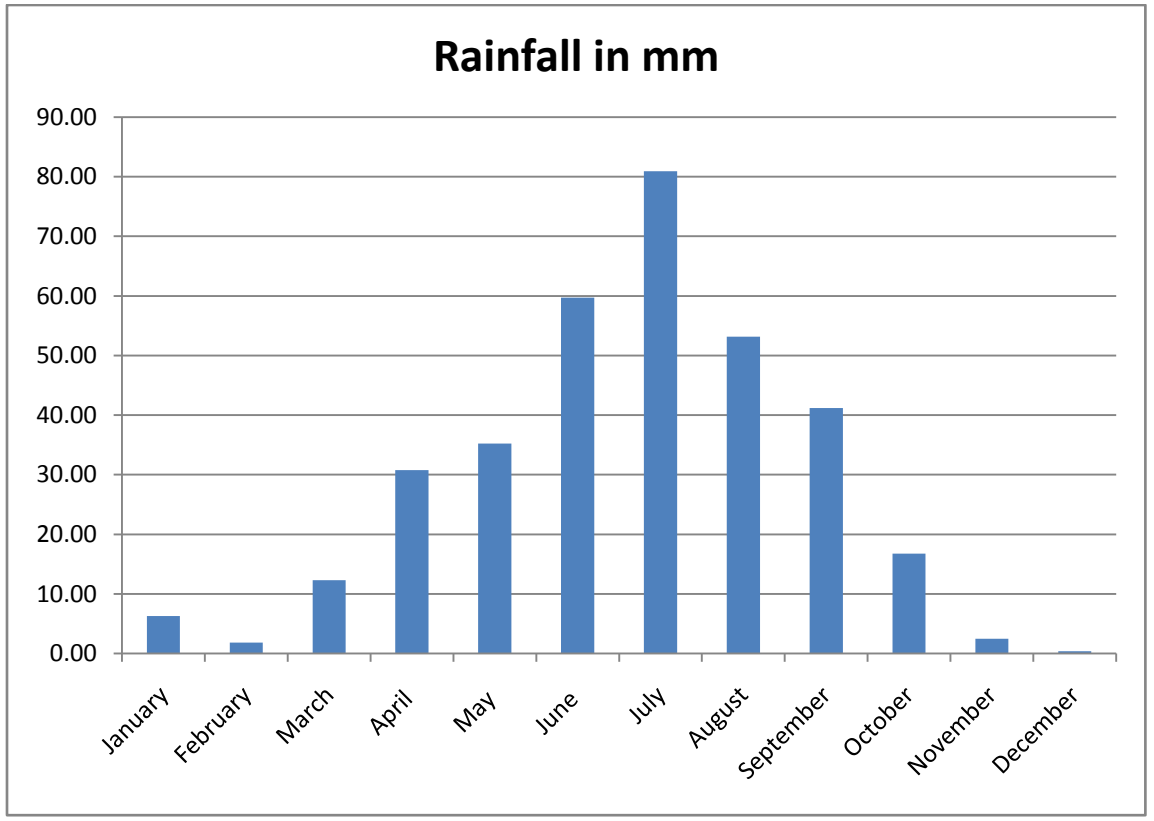
1.12	**Sowing window for 5 major field crops (start and end of normal sowing period)**	**Crop 1 : JHUM PADDY**	**Crop 2: COLOCASIA**	**Crop 3: MAIZE**	**Crop 4: SOYBEAN**	**Crop 5: NAGA KING CHILLI**
	Kharif- Rainfed	Feb-March	Feb-March	Feb-March	July- August	Feb-March
	Kharif-Irrigated					
	Rabi- Rainfed					
	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			✓
	Pests and disease outbreak (specify)			✓
	Others (specify)			

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

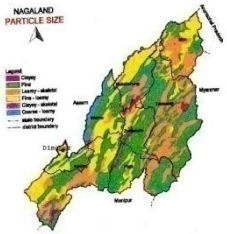
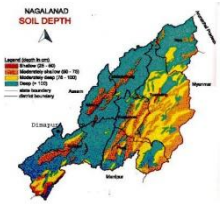
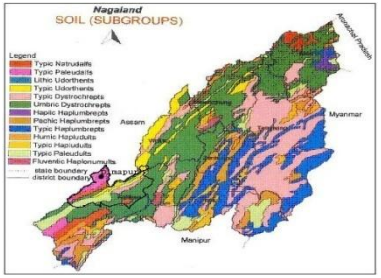
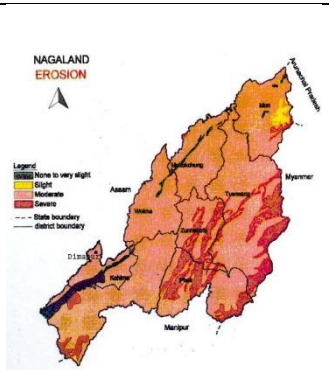
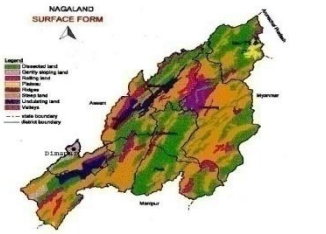
Annexure – 1: DISTRICT MAP OF MON DISTRICT

Annexure-2: ANNUAL RAINFALL OF MON DISTRICT



Annual average Rainfall for 5 years(2008-2012) map of the district (Source-DSCO Office, MON)

Annexure – 3: SOIL MAP OF MON

				
Particle size map of Nagaland	**Soil depth map of Nagaland**	**Soil sub groups of Nagaland**	**Soil erosion of Nagaland**	**Surface maps of Nagaland**

Source: NBSSLUP, Regional Centre, JORHAT

2.0 Strategies for weather related contingencies

2.1 Drought – Pre- monsoon (Last week of March to First week of April) Normal

Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation[a]**	**Normal Crop / Cropping system[b]**	**Change in crop / cropping system[c] including variety**	**Agronomic measures[d]**	**Remarks on Implementation[e]**
Delay **by 2 weeks (2^{nd} to 3^{rd} week of April)**	Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	maize	No change	Short duration varieties (RCM-76) Sowing in ridge and furrow for plain areas and Valley,/ Mulching	Line dept. schemes/ RKVY, ATMA,
		Colocasia	No change	Sowing in ridges and furrows for plain areas and Valley / Mulching	
		Naga king Chilli	No change	i)raising seedlings in polybag under low cost shade(dry banana leaf/ thatch) and transplanting after the first monsoon shower	NHM
	(1201 msl and above) Steeply slopping, side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Maize	No change	Earthing Up, Mulching, spraying of 0.2% Urea,	
	3)AES-I(0-600m msl) Gently sloping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Maize	No change		
		Naga king Chilli	No change	i)raising seedlings in polybags under low cost shade (dry banana leaf/ thatch) and transplanting after the first monsoon shower	NHM

2.1.2 Rainfed situation – South west monsoon - normal (1st week of June)

Condition			**Suggested Contingency measures**		
Early season drought (delayed onset)	**Major Farming situation[a]**	**Normal Crop / Cropping system[b]**	**Change in crop / cropping system[c] including variety**	**Agronomic measures[d]**	**Remarks on Implementation[e]**
Delay by 2 weeks June 3rd week	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Soybean	No change	Delay sowing of Short duration varieties, In-situ moisture conservation	Line dept. schemes/ RKVY, ATMA
	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	soybean	No change	Delay sowing of Short duration varieties, In-situ moisture conservation	
	(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	soybean	No change	Delay sowing of Short duration varieties (JS-335), In-situ moisture conservation	Line dept. schemes/ RKVY, ATMA

Condition			Suggested Contingency measures		
Early season drought (delayed onset)	**Major Farming situation**	**Normal Crop / Cropping system**	**Change in crop / cropping system including variety**	**Agronomic measures**	**Remarks on Implementation**
Delay **by 4 weeks July 1st week**	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Soybean	No change	Short duration varieties (JS-335), In-situ moisture conservation	Line dept. schemes/ RKVY, ATMA
	2)AES-III (1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	NA	NA	NA	NA
	3)AES-I(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks				

- **6-8 weeks delay of South west monsoon is not applicable in the district.**

- **Pre monsoon- Normal**

Condition			**Suggested Contingency measures**		
Early season drought (Normal onset)	**Major Farming sit uation[a]**	**Normal Crop/cropping system[b]**	**Crop management[c]**	**Soil nutrient & moisture conservation measures[d]**	**Remarks on Implementation [e]**
Normal onset followed by 15-20 days dry spell after sowing leading to poor germination/crop stand etc.	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Maize	i. If there is poor germination (Less than 30%) resowing ii. Gap filling iii. life saving irrigation if possible iv. Weeding	In situ moisture conservation, mulching with locally available bio mass and life saving irrigation if possible	Line dept. schemes/ RKVY, ATMA
		Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing ii. Weeding	In situ moisture conservation, mulching with locally available bio mass	
	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing ii. Weeding	In situ moisture conservation, mulching with locally available bio mass	
		Maize	i. If there is poor germination (Less than 30%) resowing ii. Gap filling iii. Weeding	In situ moisture conservation, mulching with locally available bio mass	
	(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching	Maize	i. If there is poor germination (Less than 30%) resowing ii. Gap filling iii. Weeding	In situ moisture conservation, mulching with locally available bio mass	

	blocks	Jhum paddy	i. If there is poor germination (Less than 30%) re-sowing ii. Weeding	In situ moisture conservation, mulching with locally available bio mass	

Condition			**Suggested Contingency measures**		
Mid season drought (Long dry spell consecutive 2 weeks rainless (>2.5 mm period)	**Major Farming situation**	**Normal Crop/cropping system**	**Crop management**	**Soil nutrient & moisture conservation measures**	**Remarks on Implementation**
Vegetative stage	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	Line dept. schemes/ RKVY, ATMA
		Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	

		Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
	3)AES-I(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	

Condition			**Suggested Contingency measures**		
Mid season drought (Long dry spell consecutive 2 weeks rainless (>2.5 mm period)	**Major Farming situation[a]**	**Normal Crop/cropping system[b]**	**Crop management[c]**	**Soil nutrient & moisture conservation measures[d]**	**Remarks on Implementation[e]**
Vegetative					

stage	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	Line dept. schemes/ RKVY,ATMA
		Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	

	(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Jhum paddy	**i.** Weeding	Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	

Condition			**Suggested Contingency measures**		
Mid season drought (Long dry spell consecutive 2 weeks rainless long dry) **At flowering / fruiting stage**	**Major Farming situation[a]**	**Normal Crop/cropping system[b]**	**Crop management[c]**	**Soil nutrient & moisture conservation measures[d]**	**Remarks on Implementation[e]**
	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Give 1 supplement irrigation if possible	Line dept. schemes/ RKVY, ATMA
		Jhum paddy	**i.** Weeding	Mulching with locally available biomass	

	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Jhum paddy	**i.** Weeding	Mulching with locally available biomass	
	(0-600m msl) Gently slopping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Maize	i. Weeding/ intercultural operations etc.	In situ moisture conservation, mulching with locally available bio mass Spraying of 0.2% Urea Spraying of 0.2% Potash	
		Jhum paddy	**i.** Weeding	Mulching with locally available biomass	

- Not Applicable

Condition		Suggested Contingency measures		
Terminal drought (Early withdrawal of monsoon)	**Major Farming situation[a]**	**Normal Crop/cropping system[b]**	**Crop management[c]**	**Rabi Crop planning[d]**
	(601-1200 m msl) Moderately sloppy, side slopes of hills-Deep fine to fine loamy soils covering Mon, wakching, Tizit, Phomching, Chen and Tobu	Maize	i. Mulching ii. Life saving irrigation if possible	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of toria, cabbage
		Jhum paddy		i. If grain filling is severely affected harvest for fodder
	(1201 msl and above) Steeply slopping,side slopes of hills-moderately deep loamy fine soils covering Tobu, Chen & Phomching block	Jhum paddy		i. If grain filling is severely affected harvest for fodder
		Maize	i. Mulching	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of toria,raddish
	(0-600m msl) Gently sloping ,side slopes of hills-deep fine soils covering Tizit, Mon & Wakching blocks	Maize	i. Mulching ii. Life saving irrigation if possible	i. If grain filling is severely affected harvest for fodder ii. Land preparation for sowing of toria,raddish
		Jhum paddy		i. If grain filling is severely affected harvest for fodder

2.1.2 Drought - Irrigated situation-- not applicable

Condition			Suggested Contingency measures		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Delayed release of water in canals due to low rainfall	NA	NA	NA	NA	NA
Condition			**Suggested Contingency measures**		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Limited release of water in canals due to low rainfall	NA	NA	NA	NA	NA

Condition			Suggested Contingency measures		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Lack of inflows into tanks due to insufficient /delayed onset of monsoon	NA	NA	NA	NA	NA
Condition			**Suggested Contingency measures**		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**

Condition			Suggested Contingency measures		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Insufficient groundwater recharge due to low rainfall	NA	NA	NA	NA	NA

Condition			Suggested Contingency measures		
	Major Farming situation[f]	**Normal Crop/cropping system[g]**	**Change in crop/cropping system[h]**	**Agronomic measures[i]**	**Remarks on Implementation[j]**
Insufficient flow of water in streams	NA	NA	NA	NA	NA

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

2.3 Floods: Not Applicable

2.4 Extreme events- Hailstorm

Extreme event type	**Suggested contingency measure[r]**			
	Seedling / nursery stage	**Vegetative stage**	**Reproductive stage**	**At harvest**
Hailstorm				
Maize	Resowing	Gap filling/ change the crop to okra or cow pea	Gap filling/ change the crop to groundnut	Early Harvest of the crop for fodder purpose
Colocasia	Resowing	Gap filling/ change the crop to soyabean	Gap filling/ change the crop to cabbage,raddish or carrot	No change
Naga king chilli	Resowing	Gap filling/ change the crop to cow pea	Gap filling/ change the crop to soyabean	Minimize the economic loss by value addition
Upland paddy	Resowing	Gap filling/ change the crop to okra or cow pea	Change the crop to soyabean	Harvest the damaged crops for fodder purpose, straw can be used for mushroom cultivation
Soybean	Resowing	Gap filling/ change the crop to cabbage, raddish or pea	Gap filling/ change the crop to onion, raddish or pea	Harvest the damaged crops for fodder purpose

2.5 Contingent strategies for Livestock, Poultry & Fisheries

2.5.1 Livestock

	Suggested contingency measures		
	Before the event[s]	**During the event**	**After the event**
Drought/ Lean period (Oct-March)			
i)Feed and fodder availability	Encourage perennial fodder on bunds and waste land on community basis Establishing fodder banks, encouraging hedge row species for fodder crops Preparation of Hay	Utilizing fodder from perennial trees and Fodder bank reserves Transporting excess fodder from adjoining districts Use of non conventional fodders. Use of feed mixtures and feed blocks Culling unproductive livestock	Use of non conventional fodders. Use of feed mixtures and feed blocks Availing Insurance
ii)Drinking	Roof top water harvesting , Preserving	Judicious use of water, Using preserved water in the tanks for	Maintenance/cleaning of

water	water in the tank for drinking purpose	drinking purpose, recycling of household used water. Chlorification of stored water	community reservoirs/ village ponds
iii)Health and disease management	Insurance, Veterinary preparedness with medicines and vaccines, organizing vaccination camps and mineral supplementation	Conducting mass animal Health Camps and treating the affected one, mineral supplementation.	Culling sick animals and mineral supplementation
Floods	Not applicable		
Cyclone	Not applicable		
Heat wave	Not applicable		
cold wave		Raise the temperature in the animal shed, using low cost heated creep boxes to maintain normal body temperature. Provide dry straw or slated wooden bed over concrete floor in the animal shed.	
i)Shelter/environment management	Establishing animal shed with proper ventilation Monitoring animal's behavior daily.		
ii)Health and disease management	Insurance, Veterinary preparedness with medicines and vaccines	Conducting mass animal Health Camps and treating the affected one. Mineral supplementation.	Culling sick and diseased animal

[s] based on forewarning wherever available

2.5.2 Poultry

	Suggested contingency measures			**Convergence/linkages with ongoing programs, if any**
	Before the event[a]	**During the event**	**After the event**	
Drought	-	-	-	-
i)Shortage of feed ingredients	Procurement and storage of feed ingredients, Establishing feed reserve Bank	Utilizing from feed reserve banks, nutritional supplementation to poultry	Nutritional supplementation to poultry	
ii)Drinking water	Arrangement for drinking water, Roof top water harvesting , Preserving water in the tank for drinking purpose	Judicious use of water, providing B-complex and Vitamin C in water		
iii)Health and disease	Insurance and Emergency Veterinary preparedness with	Sanitation and Hygiene	Culling affected birds, Mass vaccination	

management	medicines and vaccination to birds			
Floods	Not applicable			
Cyclone	Not applicable			
Heat wave Cold wave	Not applicable			
Cold wave				
i)Shelter/environment management	Establishing poultry house or brooder	Raise the temperature in brooder, Additional room heaters like coal heaters, bukhari may be provided		
ii)Health and disease management	Insurance and Emergency Veterinary preparedness with medicines and vaccination to birds	Sanitation and Hygiene, nutritional supplementation to birds	Culling affected birds	

[a] based on forewarning wherever available

5.3 Fisheries/ Aquaculture

	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			
(ii) Changes in water quality			
(iii) Any other			
B. Aquaculture			
(i) Shallow water in ponds due to insufficient rains/inflow	De-silting, repair of bunds of existing ponds, rain water harvesting, liming and adopt low stocking density, deepening of ponds by 1.5 -2metres, restrict use of Manures and fertilizers, Channelizing water to pond if	Integrated farming, air breathing fish to be practiced, avoid fertilization and manuring on supplementary basis, feeding should be minimum to avoid organic loading, short term	Prepare pond for the next crop after early harvest, Maintain proper water quality

	possible, Maintain proper water quality	aquaculture with medium and minor carps, Maintain proper water quality	
(ii) Impact of salt load build up in ponds / change in water quality	Rain water harvesting, deepening, desilting of existing water bodies and removal of debris	Rain water harvesting, deepening, desilting of existing water bodies and removal of debris	Restrict feeding and manure to avoid waste accumulation and eutrofication
(iii) Any other			
2) Floods	Not Applicable		
3. Cyclone / Tsunami	Not Applicable		
4. Heat wave and cold wave	Not Applicable		

[a] based on forewarning wherever available