

DEPARTMENTAL DISASTER MANAGEMENT PLAN (2017-18) (AGRICULTURE DEPARTMENT)

Chapter 1

Bounded by Nagaland in the north, Mizoram in the south and Assam in the West, lies Manipur with an area of 22,347 sq. km at latitude of 23⁰83'N – 25⁰68'N and longitude of 93⁰03'E – 94⁰78'E, sharing its international border with Myanmar in the east. The hills comprising about 90% of its total geographical area extend from North to South by a series of ranges viz. the eastern ranges with altitudes varied from 2498 m to 2933 m and the western ranges from 2562 m to 2994 m from the sea level respectively. The total gross cropped area in the state during 2010-11 was 2.5 lakh hectares out of which 0.35 lakh hectares were under the irrigated status whereas 1.80 lakh hectares were under un-irrigated status (Agriculture Census, 2010-11). The State is very much prone to various natural and manmade disasters which call for a planning exercise by the Department of Agriculture, Government of Manipur to mainstream all issues concerned with emergency preparedness, responses and mitigation/risk reduction activities in the field of agriculture.

1. Profile of the Department

1.1 Statistical profile of the Department

The Department of Agriculture was established in the year 1946 with HQ at Imphal (Bapupara). In November 1977, Agriculture Department was bifurcated into Agriculture Department and Horticulture & Soil Conservation Department under the joint cadre of Agriculture. In the year 1983, after 37 years of existence Agriculture Department became a major department. Again, in September, 1997 the joint cadre of Agriculture was trifurcated as Agriculture, Horticulture & Soil Conservation (Hort. & SC) and Command Area Development Authority (CADA).

The Department is functioning under the State Government with Directorate in Imphal at Sanjenthong and strengthened at District and Sub-Divisional Head Quarters. Crop Husbandry, Green Revolution, Agri. Research & Education, Cold Storage & Warehousing and General Economic Services are main thrust areas of the department. Besides the state plan schemes, various centrally sponsored schemes viz. Agriculture Census Survey & Statistics, National Mission on Extension & Agricultural Technology (NMEAT), Krishi Unati Yojana (KUY), Rastria Krishi Vikash Yojana (RKVY), National Food Security Mission (NFSM), Pradhan Mantri Fasal Bima Yojana (PMFBY), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Mission Organic Value Chain Development-NER (MOVCD-NER), National Mission on Sustainable Agriculture (NMSA), etc. are undertaken by the department.

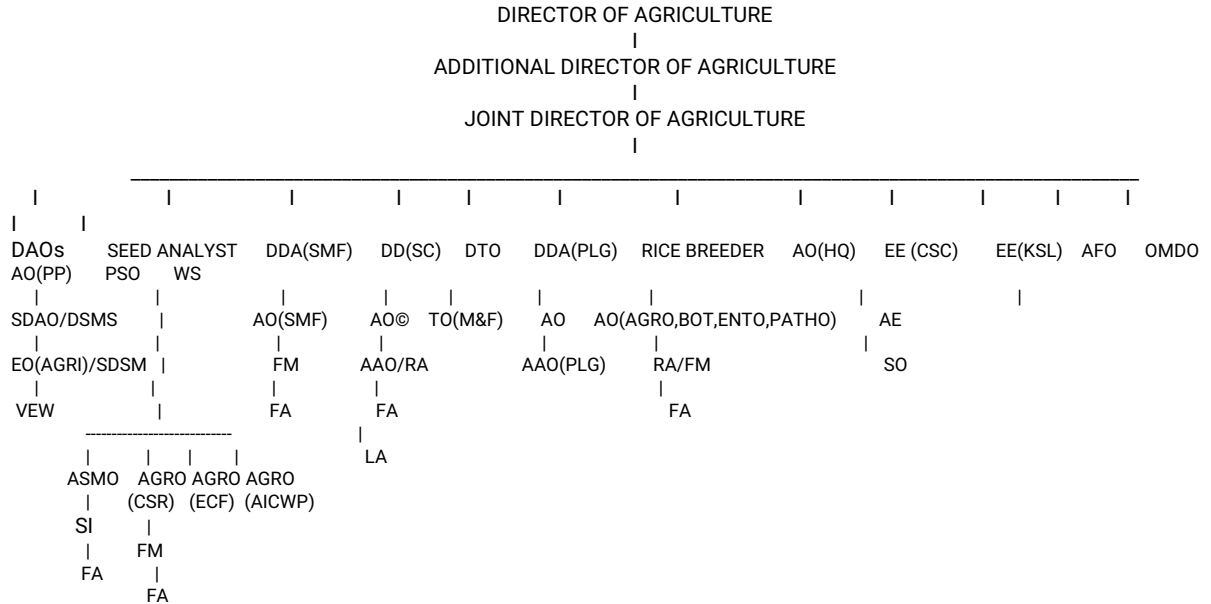
1.2 Organizational Structure

The Director of Agriculture is the Head of the department. The department is manned by

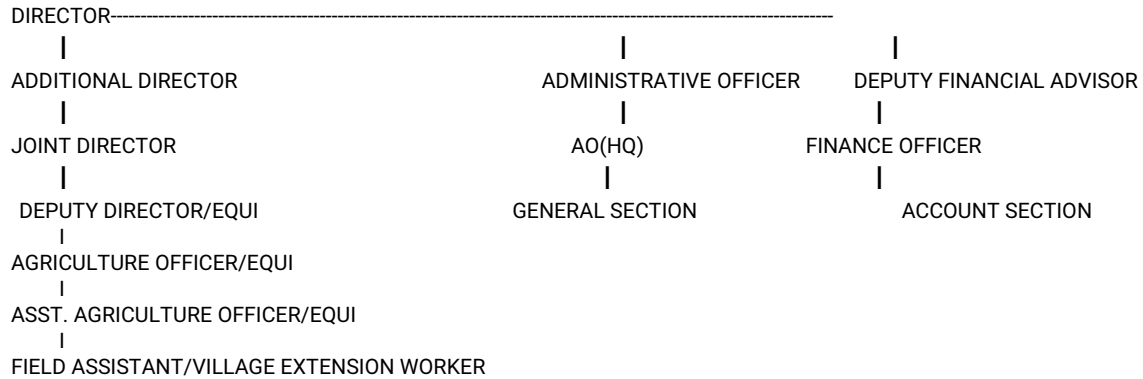
various categories of posts (Class-I, Class-II, Class-III and Class-IV).

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ORGANIZATIONAL CHART OF AGRICULTURE DEPARTMENT: MANIPUR



HIERARCHICAL SET UP



- DAO – District Agriculture Officer
- DD (SC)- Dy. Director Soil Chemist
- Patho – Pathology
- Ento – Entomology
- PDO – Pulse Development Officer
- OSDO – Oilseed Development Officer
- CDO – Cotton Development Officer
- DTO – District Training Officer
- DDA(PLG) – Dy. Director of Agriculture (Planning)
- SDAO – Sub-Divisional Agriculture Officer
- DSMS – District Subject Matter Specialist
- AO(S) – Agriculture Officer (Sugarcane)
- AO(PP) – Agriculture Officer (Plant Protection)
- EO(AGRI) – Extension Officer (Agriculture)
- AE- Asst. Engineer
- RA – Research Assistant
- FM – Farm Manager
- AAO – Assistant Agriculture Officer
- AFO – Assistant Fertilizer Officer
- OMDO – Organic Manure Development Officer
- FA – Field Assistant
- VEW – Village Extension Worker
- LA – Laboratory Attendant

WS – Weed Specialist
 PSO – Pest Surveillance Officer
 AO(Bot) –Agriculture Officer (Botany)
 TO(M) – Training Officer (Male)
 TO (F) – Training Officer (Female)
 EE –Executive Engineer

1.3 Details of infrastructure available with the department

Table 1. Infrastructure Availability

Sl.No	Infrastructures	Number	Remarks
1	Rice Research Centre	1	Can be used for paddy varietal trial.
2	State Mechanized Farm	1	Can be used for paddy seed multiplication.
3	Plant Health Clinic (Directorate)	1	Can be used for surveillance of pest & disease outbreak.
4	Directorate	1	Can be used for control room at state level in case of emergency
5	District office complex	9	Can be used as control room cum storage centre at district level in case of emergency.
6	ATMA	9	Can be used for agricultural technology management at district level during emergency.

Table 2. Staff Strength of Agriculture Department

Sl.No	Name of post	Permanent	Temporary	Total
1	Director	1	-	1
2	Additional Director	1	-	1
3	Joint Director	1	-	1
4	Executive Engineer	1	-	1
5	Deputy Director/Equi	12	3	15
6	Administrative Officer (Agri)	-	1	1

7	Deputy Financial Advisor	-	1	1
8	Agriculture Officer/Equi	26	28	54
9	Assistant Engineer/Equi	-	4	4
10	Finance Officer (Agri)	1	-	1
11	Account Officer	1	-	1
12	Assistant Agriculture Officer/Equi	125	37	162
13	Senior Accountant/Head Clerk	5	-	5
14	Economic Analyst	1	1	2
15	FA/Village Extension Worker/Equi	158	203	361
16	UDC/Jr. Accountant	33	14	47
17	Mechanic Grade - I	1	-	1
18	Store Keeper	-	3	3
19	Section Officer	-	1	1
20	Liberian	-	1	1
21	Inspector (MI)	5	1	6
22	Computer	1		1
23	Mechanic Grade - II	2	1	3
24	Lower Division Clerk	81	17	98
25	Steno (APS)	6	2	8
26	Steno Grade - II	1	-	1
27	Steno Grade - III	1	-	1
28	Mechanic Grade -III	4	1	5
29	Jeep Driver	20	5	25
30	Truck Driver	2	1	3

31	Tractor Driver	16	4	20
32	Power Tiller Operator	6	-	6
33	Fitter	1	1	2
34	Primary Price Reporter	10	-	10
35	Mandal	5	-	5
36	Ref. Assistant	-	1	1
37	Cinema Operator	1	-	1
38	Photographer	1	-	1
39	Carpenter	1	-	1
40	Dark Room Assistant	-	1	1
41	Handyman	9	10	19
42	Peon	43	29	72
43	Chowkidar	25	30	55
44	Fieldman	20	4	24
45	Mali	4	-	4
46	Cowherd/Cleaner/Scavenger	3	-	3
47	Sweeper	1	1	2
48	Cattle Attendant	1	-	1
49	Hostel Attendant	1	-	1
50	Poultry Attendant	-	1	1
51	Daftry	-	1	1
52	Laboratory Attendant	4	-	4
	Total	641	408	1049

The Departmental Disaster Management plan of Agriculture Department is aimed at

- Establishing coordination in implementing and providing technological know-how on flood and drought management to the farming community through agricultural extension services.
- Creating assured irrigation facilities and availability of water to the agricultural fields through PMSKY.
- Continuing educating farmers on soil and water conservation technologies through implementation of watershed projects and know-how of drought resistant crops.
- Implementing calamity (like flood, drought, etc.) relief programmes.
- Recording damage to crops and allied infrastructures in case of disaster.

Chapter 2

2. Hazard, Vulnerability, Capacity and Risk Profile

2.1 Nature, frequency and intensity of disaster to which the department is prone to or is likely to be impacted in future

The state of Manipur is vulnerable to a large number of natural as well as man-made disasters, of which flood, drought and cyclone are very frequent. The marginal, small and medium farmers and weaker sections are most vulnerable to such disasters and they are severely affected by the disasters. Due to poor institutional mechanisms and lack of access to adequate resources, the vulnerable population of the state is unable to cope up effectively with the adverse impacts of disasters.

Table 3. Nature Frequency and Intensity of Disaster

Sl.No.	Nature	Frequency	Intensity
1	Flood	Regular	High
2	Drought	Regular	Moderate
3	Cyclone/Hail storm	Rare	Low
4	Heat/Cold wave	Rare	Low
5	Disease/pest epidemic	Rare	Low

2.2 Historical/past disaster/losses in the department

Flood:

The State of Manipur had witnessed a continuous heavy rainfall during the rainy season of almost every year in the last 12 years (2006-2017) that had resulted into flood

situation/mud slides/landslides in the state affecting sown/transplanted paddy, maize, pulses, oilseeds, etc. The rainfall pattern in the past years experienced that the state faced untimely rainfall resulting flood followed by drought and vice versa in the same year.

Drought:

The State of Manipur has also experienced scanty rainfall during early parts of 2015-16 resulting into a drought like situation. If the rainfall received upto a particular period is less than 75% of the normal rainfall, then it is treated that the drought like situation has occurred during that period. During the year 2015-16, the rainfall received from January to June (22-06-2015) was only 382.8 mm constituting only 48.24% of the normal rainfall and such drought like situation prevailed in the State during the aforesaid period. These areas lacked not only irrigation facilities but also received scanty rainfall. In some areas, rainfall, though plenty, is erratic and poorly conserved and harvested. All the nine districts of the State had been declared drought in 2009. Because, the actual rainfall received during the crop sowing time from May to July was 383.7mm against the normal 713.00 mm.

In 2009, due to rainfall deficit, the total sown area in respect of kharif maize was 0.18 lakh hectares against the actual area of 0.20 lakh hectare, similarly the kharif pulse and oilseed was 0.022 lakh hectare against the targeted area of 0.13 lakh hectares and kharif rice occupied the actual sown area of 1.07 lakh hectares against 1.95 lakh hectares.

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Table 4. Area Damaged due to Flood in last 12 years (in ha.)

District	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
IE	550	1250	1510	750	3150	-	-	-	-	4113	-	23108
IW	-	-	-	-	-	-	-	-	-	2329	-	21028
TBL	-	-	-	-	-	-	-	-	-	17625	-	17103
BPR	-	-	2325.1	-	-	-	-	-	77.14	5331	-	17010
TMG	-	-	-	-	-	-	-	-	-	450	-	10
CDL	-	-	-	-	-	164	-	-	-	2565	-	78
SPT	-	-	-	-	-	-	-	-	-	1319	-	0
CCP	-	-	-	-	-	-	-	-	-	329	-	320
UKL	-	-	-	-	-	-	-	-	-	2359	-	20
Total	550	1250	3835.1	750	3150	164	-	-	77.14	364200	-	78677

Table 5. Crop Damage Report due to Flood (2015-16)

Sl. No	Crop	Normal Area(Ha)	Affect- ed Area (Ha)	Area covera- ge after flood (Ha)	Producti- on Target (Mt)	Estimate Productio n after flood (Mt)	Decreas e in producti- on (Mt)	% decrease in producti- on
1	Rice	195000	31773	163227	497550	430919	66631	13.39
2	Maize	20000	1316	18684	45020	42039	2981	6.62
3	Khari f Pulse s	5000	170	4830	5480	5313	167	3.05
	Total	220000	33259	186741				

Table 6. Crop Damage Report due to Flood (2017)

Sl. No	Name of the crops damaged	Total Crop Sown Area (Ha)	Crop Damaged Area (Ha)	% of Crop Damage
1	Paddy	195000	77900	39.95
2	Maize	19940	307	1.54
3	Pulses	5000	300	6.00
4	Oilseeds	8500	150	1.76
5	Sugarcane	6000	20	0.33
	Total	234440	78677	

2.3 Causes of losses/damages

Flash floods cause landslides, inundation and silting of crop fields and favour pest and disease outbreak of crops. During cyclone, hailstorm destroys crops. Drought delayed sowing/planting of crops and decreased crop growth.

2.4 Hazard wise vulnerability of the department to various hazards to which the

Department/State is prone to

The State is agrarian economy with major section of the population depending upon agriculture as the source of livelihood. The impact of disasters on agricultural productivity may impose more burdens to the farming and rural community. The provable impacts of disasters are

- Projected decrease of crop yields

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- Increased incidence of pest and diseases
- Increased soil erosion with degradation of soil fertility
- Siltation of crop fields
- Delay in implementation of various welfare and income generating govt. schemes due to poor/lack of connectivity due to hazards
- Low input use efficiency
- Increase evaporation, runoff and decrease soil moisture recharge
- Decreased income due to poor crop production
- Lower employment rate
- Food security and nutritional issues
- Land use change pattern

Table 7. Various Hazards to which the department is prone to

Nature of Hazards	Areas likely to be affected	Stimulus	Outcome
Flood	Fields adjoining banks of Imphal, Iril, Maklang, Thoubal, Sekmai river, etc. and low lying poor drained fields.	Increased frequency and intensity of rainfall	Damage to roads and other official buildings, Loss of food grains & crops
Cyclone	Any part of the State	Storm	Loss of life & property, Injury, Loss of homes, Damage of infrastructures such as Godowns & Dept. Buildings, No communication

Earthquake	Seismic Zone		No communication & transportation, Loss of homes, Damage of infrastructure
Drought	Rainfed and areas lacking irrigation facilities	Less rainfall and water shortage	Migration , Low economic activity, Loss of Crops & Food Shortage
Lightning, Heavy Rain,	Any part of the state		Injury, Loss of Life, Crop Damage

2.5 Capacity of the department to deal with the identified disasters-institutional, organizational and infrastructural

Agriculture Department is having reasonably well developed network for implementation of various agricultural activities. But during natural calamity like flood, cyclone, earthquake, drought and disease epidemic, the institutional network get disrupted. The existing facilities are as follows.

- Selected District level field staffs
- Plant Health Clinic
- District Office Premises.

2.6 Gaps in the Existing Capacity

- Adequate skilled and trained manpower
- Transport facility
- Information Communication facility
- Input requirements

The department is handicapped due to large scale vacancy of skill staff. Poor accessibility and limited availability of transport facilities increases the vulnerability of the population during disasters.

There is a need to prepare a standard and uniform disaster operation procedure for the department to deal with various situations. The department personnel are not adequately trained regarding management and mitigation of different type of disasters including relief, rescue and rehabilitation. Adequate financial powers are need to be vested with the department to manage the crisis.

2.7 Risk Analysis-calculating risk which various hazards/disaster can cause to department keeping in view its vulnerability and capacity

Various risks are involved in the functioning of agriculture department when exposed to hazards/disasters.

Table 8. Risks in Agriculture Department when exposed to different disasters

Sl.No.	Hazards/Disasters	Risk
1	Flood	High risk
2	Drought	High risk

The hazard and risk vulnerability has been prepared based on targeted area and yield and actual area covered and estimated yield achieved when disaster occurs. There is a great need of know how risk assessment in due course of time from experts.

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Chapter 3

3. Prevention, Mitigation and Preparedness Plan

3.1 Measures necessary for prevention of disasters, mitigation, preparedness and Capacity-building

Prevention and Mitigation Plans are evolved for vulnerable areas to reduce the impact of disasters. The following measures and investments shall be undertaken to minimize the collateral damage usually caused by the impact of any disaster.

Table 9. Measures required for minimizing the impact of disaster

Sl.No.	Particulars	Measures required
1	Capacity building at all levels in vulnerable areas of flood/cyclone/drought	State level – For better supervision, monitoring and preventive measures one day training cum awareness programme at state level for State & District Officers at State HQ. District level – Training/Workshop on prevention, mitigation & preparedness for District Officers & Field Functionaries at District HQs. Community level - Sensitization of villagers on impacts & preparedness.
2	Public awareness through IEC activities	Mass awareness programme through various audio-visual media.
3	Logistic arrangement	Management, coordination and fund

	requirement.
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3.2 Integration into its development plans and projects, the measures for prevention of disaster and mitigation

The department integrates the measures for prevention and mitigation of disasters like flood and drought viz. crop contingency plan (Procurement and distribution of seeds and pumping sets, Raising of community nursery, Construction of temporary earthen dam, capacity building of farmers, etc.) with various development plan of the department.

3.3 Provision of funds for prevention of disaster, mitigation, capacity-building and preparedness

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Table 10. Fund requirement for Prevention of Disaster, Mitigation, Capacity Building & Preparedness

Sl. No.	Name of the programme	Unit Cost (Rs)	Total No. of programme	Total Cost (Rs)
1	Sensitization to Senior staff at state level			
2	One Day Training at District level			
3	Logistic arrangement Arrangement of vehicle, POL and Temporary arrangement for stay of staff for monitoring			

The fund is to be allocated from the fund available in the Dept. and hence the quantum and unit cost of the programme are to be determined.

3.4 Drawing up mitigation, preparedness and response plans, capacity building, data collection and identification and training of personnel in relation to disaster management

Mitigation plan

- Structural adaptation measures
- Strengthening & building embankments, improvement of channels, canals & retention ponds, protecting river banks, erosion control, drainage clearance, silt management,

- Non-structural adaptation
- Efficient management of flood plains and contingency planning for disaster preparedness and response.
- Regulatory measures
- Strict regulation of urban land use in the valley and treatment of upper catchment areas.
- Follow up National Flood Policy to support rehabilitation & compensation.
- Identifying new water harvesting scheme (ponds) and rain water harvesting and small check dam at community lands.
- In water deficient areas, there is possibility of acute water scarcity due to disaster (drought). There should be proper identification of areas for new creation as well as renovation and protection of water bodies.

Preparedness plan

- Rapid screening and strategy Assessment of State Agriculture Policy

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- Short term as well as long term agriculture policies related to the inputs for the production of crops such as cereals, pulses and oilseeds along with irrigation and fertilizers need to be screened in view of the possible hazards.
- Risk management in agriculture and allied sectors
- New credit & insurance mechanism might be devised to facilitate adoption of desired practices.
- Breeding studies on major crops for climate resilient agriculture
- To combat the disaster impacts, breeding strategies are to be undertaken for development of genotypes of different major crops having climate resilient characteristics.
- Establishing an effective institutional delivery mechanism to promote best practices on disasters.
- This will be transferred to the farmers through cluster level training.
- Utilization of bio-resources (organic wastes) towards preparation of organic manures.
- Developing livelihood focused, people centric integrated watershed in rain fed areas.
- Developing water use efficiency micro-irrigation methods in individual/community farm (cluster) lands.
- Developing sustainable soil water and crop management practices.
- Popularization & implementation of INM along with soil amelioration. Improved method of soil & water conservation.
- Improving pest monitoring & surveillance technique.

3.5 Review of the enactments administered by it, its policies, rules and regulations with a view to incorporate therein the provisions necessary for prevention of disaster mitigation or preparedness

The provision amended from time to time necessary for prevention, mitigation or preparedness of disasters will be included in the plan and will be reviewed yearly or otherwise as provided by the authority.

3.6 Provision of emergency communication in the affected areas

- Record of location and telephone number of each GP Office
- Record of mobile number of each pradhan and respective members
- Notice of the telephone numbers of district offices & mobile number of disaster management team at district level
- Transport facility to staffs for quick access to the affected areas
- Quick response from HQ

3.7 Other actions as may be necessary for disaster management

Any other measures undertaken by the District and State Authority will be included in the departmental plan.

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Chapter 4

4. Response Plan

4.1 Mechanism for early Warning and Dissemination thereof

After getting warning from State authorities or District Administration, the department undergoes to take up

- Daily record of weather data from meteorological stations
- Notice of the Weather Forecast Report to print & electronic media
- Notice of the pest & disease forecast to print & electronic media

4.2 Trigger mechanism for response

After issue of early warning, the Nodal Officer of the vulnerable District will explain the detailed response plan at district level meeting of District disaster management authority constituted in every district in conformity with Gol & State guidelines for planning, coordinating and implementing various activities.

4.3 Response Plan for Responding Effectively and Promptly

All the field staff would remain at their respective head quarter with necessary preparation as per the standard operating procedure. The control room at District HQ will collect, collate and transmit information regarding matters relating to the natural calamities and relief operations undertaken, if any, and for processing and communicating all such data to the directorate of agriculture. The Control Room shall be manned round the clock during the peak period of disaster till the relief operations are over. The District Nodal Officer shall furnish a daily report to the head of office on the important messages received and actions taken thereon. The head of office shall indicate the particulars to be released for public information.

4.4 Appointment of Nodal Officer to perform Emergency Support Function

The District Agriculture Officer will be the nodal officer at the district level to perform emergency support functions. The Director of Agriculture will be the nodal officer at state level and will be supported by various officials.

4.5 Constitution of the Incident Response Teams (IRTs) at all levels with provision of delegation of authority

The Incident Response Team of the Agriculture Department will be constituted at State and District level as per norms and guidelines to tackle any disaster.

Role of the District Incident Response Team are:-

- To coordinate with Department and District Authority
- To activate Disaster Plan
- To manage the overall response activities in the field
- To deploy adequate staff for the response and monitor effectiveness
- To develop the media messages regarding up to date status of disaster mitigation and response work
- To collect and store disaster related information for post incident analysis
- To visit the affected areas to assess the extent of damage

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Table 11. Incident Response Team at District Level (Proposed)

Deputy Collector	Chairman
District Agriculture Officer	As District Nodal Officer/Member Secretary
Representative of KVK	Member
Representative of ATMA	Member
Representative of NGOs associated with agriculture	Member

Role of the State Incident Response Team are:-

- To coordinate with State Government, Central Government and other concerned Departments
- To facilitate execution of orders for declaring the disaster
- To prepare a status report regarding the disaster
- Visit the spot and assist the District Response Team for pre disaster planning
- Assess the staff and other logistic requirement for field operation and monitor effectiveness
- To ensure availability of funds at District and block level to meet contingency expenses
- To develop the media messages regarding up to date status of disaster mitigation and response work

- To monitor and guide the district response team
- To maintain an inventory of all related guidelines, procedures, action plans, district maps and Contact numbers.
- **Table 12. Incident Response Team at District Level (Proposed)**

Addl. C.S./Principal Commissioner (Agriculture)	Chairman
Director of Agriculture	As State Nodal Officer/Member Secretary
Representative of CAU	Member
Representative of ICAR	Member
Representative of NGOs associated with agriculture	Member

4.6 Reporting procedures and formats

The village Level/Extension Workers will be responsible to report to the respective E.O. Agri of the circle who will compile the reports and furnish to the concerned SDAO and then to the DAO. DAO is responsible to forward to the authority of the Directorate.

Table 13. Preparedness measures (Format)

Sl.No	Preparedness measures	Action Taken/Remarks
1	Update SDMP specifically with reference to the resource available	
2	Check upon communication network such as phones, wireless, fax, internet, etc.	
3	Identify and determinate hazard wise most vulnerable and risk prone pockets.	
4	Activate District Control Room establish communication with sub-division, Block & GP level	

	functionaries in the close proximity affected areas.	
5	Designate in-charge officials.	
6	Convene meetings with concerned authority on regular interval.	
7	Convene meetings with NGOs, PRIs and prepare a list with their Functional Specialization and Geographical Coverage.	
8	Prepare a list of inputs for distribution.	
9	Prepare a transport plan for relief materials.	
10	Prepare a media plan for dissemination of information to the people of the district, local newspaper, radio, TV and cable, etc.	

4.7 Role of NGOs, Voluntary Sector and Coordination thereof

The role of the voluntary agencies and the Voluntary Sectors which operate at the grass roots level in the vulnerable areas is crucial in motivating and mobilizing community participation in disaster response measures and implementing contingency plans. They will be involved for raising awareness of the communities, information dissemination, advocacy and planning,

4.8 System of assessing the damage from any disaster

- GIS based assessment of damage
- Physical damage survey by visits

4.9 Roles and responsibilities and coordination mechanism for the department

The department will play a vital role coordinated in the department and with other as well taking responsibility to address the effects of hazards as per approved and adopted guidelines.

4.10. Disaster Specific Response plan

- Designating Disaster Management Cell in the Department
- Examining preparedness periodically every three months
- Establishing Control Room
- Instructing all concerned for safe custody of seeds, fertilizers, pesticides, implements, etc just on receipt of flood alert
- Preparing crop contingency plan
- Ensuring the plan reached to the affected area/people

Chapter 5

5. Relief, Rehabilitation and Reconstruction

5.1 Norms of relief

- Restoration of fields for sowing/planting
- Making availability agricultural inputs for re-sowing/replanting
- Participation of District Administration, PRI and NGOs

5.2 Minimum standard of relief

- As per approved by the authority

5.3 Rehabilitation Plan

- De-silting of agricultural land, the extent of which should be determined by the competent authority.
- Restoration/repair of farm bunds
- Removal of debris on agricultural lands in hill areas
- Adopting crop contingency plan viz.
 - A. Procurement and distribution of seeds of suitable crops
 - B. Raising of community nursery mainly for paddy
 - C. Procurement and distribution of pumping sets
 - D. Construction of temporary earthen dams
 - E. Cropping system based training of farmers

5.4 Financial mechanism

- As per the fund flow structure of the Government to the department

5.5 Action Plan for Reconstruction-‘Building back better’

- Strengthening & building embankments, improvement of channels, canals & retention ponds, protecting river banks, erosion control, drainage clearance, silt management,
- Efficient management of flood plains and contingency planning for disaster preparedness and response.
- Strict regulation of urban land use in the valley and treatment of upper catchment areas.
- Follow up National Flood Policy to support rehabilitation & compensation.
- Identifying new water harvesting scheme (ponds) and rain water harvesting and small check dam at community lands.
- In water deficient areas, proper identification of areas for new creation as well as renovation and protection of water bodies should be taken up.

Chapter 6

6. Knowledge Management

6.1 Need for creating network of knowledge institutions

- To bring together knowledge and experience of disaster practitioners
- To create a versatile interface among policy makers in the Government and disaster managers at all administrative levels
- To bring in information on different aspects of Disaster Risk Management and delivers it to the Disaster Risk Management practitioners.
- To establish linkages with the on-going development information systems that needs to be established.

6.2 Identification of knowledge institutions and mechanism of knowledge sharing

Table 14. Mechanism of knowledge sharing with knowledge institutions

State Disaster and Relief Department	Training, Interaction, Information sharing
District Administration	Interaction, Information sharing
ICAR/CAU	Training, Interaction, Information sharing

6.3 Documentation of Lessons Learnt

Recent floods were caused mostly due to continuous and heavy rainfall and heavy surface runoff from catchment areas in hills where deforestation was at large. Encroachers and structures in the stream line blocked the steady flow of water and damaged the weak river bank and flooded nearby fields.

Though there was flood almost every year, drought like situation prevailed in the year due to less rain water harvesting structures and weak management system.

The crop contingency plan addressed the affected farmers on short term basis.

6.4 Documentation of the best practices and uploading of the same in the departmental website

The best practices will be documented and uploaded in the departmental website.

Chapter 7

7. Review and Updation & Dissemination of Plan

7.1 DM Plan is a "Living document" – would require regular Improvement and updating – at least once a year

The Disaster Management plan prepared by the Department has been circulated to all its District offices. Yearly updates on the Plan will be shared on the Departmental portal. The plan will also be updated subject to further modifications and suggestions as and when required which will be communicated to the key stake holders vide letter.

7.2 System of updation-who, when and how

The disaster management plan will be reviewed once in a year. Participation of different stakeholders will be ensured by inviting them to district level workshops. Based on their feedback necessary changes will be incorporated in the plan.

7.3 Dissemination of plan to stakeholders-how, printing of document, uploading in departmental website, meetings, seminars, etc.

A Standard operating procedure (SOP) has been prepared for flood and cyclone and will be uploaded in the department website. A printed document would be supplied to all the stakeholders. Meetings and Seminars would be held to disseminate the disaster management plan and on the SOP being prepared. The detail of the meetings and the seminars is given in.

