



Government of India

Ministry of Agriculture and Farmers Welfare  
(Department of Agriculture, Cooperation and Farmers Welfare)

NATIONAL  
**CRISIS MANAGEMENT PLAN**  
FOR  
**DROUGHT**

**2018**

Drought Management Division

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## **Crisis Management Plan**

### **1. Evolving a CMP....**

Crisis Management Plan (CMP) refers to an actionable programme, which can be pressed into action in the event of a crisis situation to minimize damage to life, property and environment.

CMP is designed to help reduce the time taken in mobilizing resources for an effective response and enable a harmonious relationship among stakeholders. The goal of crisis management is to facilitate overall management of the crisis situation in a structured and planned manner with the most efficient and optimum utilisation of time, effort and resources so that adverse impact on the community is minimised.

CMP helps in delineating roles and responsibilities of stakeholders, including Central and State Governments and their agencies in managing the calamity. CMP ensures better preparation and timely communication among stakeholders, which is critical in managing a calamity.

Above all, a CMP should be simple, precise, actionable and monitorable. Accordingly, the CMP identifies trigger-points for various response actions and integrates such actions in an appropriate response matrix that are culled out from departmental contingency action plans of different agencies. The identified priorities of CMP are to clarify the goals and define the roles and responsibilities of various responders (Ministries / Departments, Organisations and individuals) involved in crisis management, and putting together a communication process for quickly notifying the public in the event of a crisis.

The Plan outlined in this document does not replace the emergency procedures or contingency action plans already drawn by different agencies, but merely collates them in a manner that lends itself to a smooth and concerted response in a crisis situation. Care has been taken to include all aspects of crisis

management in this CMP document, yet, potentially there may arise occasions when an entirely new and unforeseen crisis situation may warrant an entirely different response than can be planned for in advance. However, experience has shown that team building and preparedness in consonance with a practical and prudent CMP can enable handling of unforeseen situations with greater alacrity and impact

This Crisis Management Plan (CMP) is part of overall spectrum of Drought Management but is focused on management interventions required during the time of crisis.

## 2. Drought – a Crisis

About 56% of the net cultivated area of the country is rain-fed accounting for 44% of food production. Thus Monsoon rainfall is crucial for agriculture production and food security of the country. It also has negative spin off effects on other sectors of the economy.

South West Monsoon (June to September) rainfall contributes to about 73% of total rainfall in the country. Timely onset and spatial distribution of rainfall is crucial for cultivation of Kharif crops that accounts for about 90% of paddy, 70% of coarse cereals and 70% oilseed production of the country. Rainfall especially during the months of June and July are crucial for sowing of Kharif crops. Coastal areas of peninsular India, in particular Tamil Nadu receive bulk of their annual rainfall from the North-East Monsoons, between October and December.

Drought connotes a situation of water shortage for human, cattle and agriculture primarily on account of, though not limited to significant shortfall in rainfall. The revised Manual for Drought Management of the Department of Agriculture, Cooperation and Farmers' Welfare, December 2016 (the Manual) has discussed rainfall, vegetative indices, progression of crop sowing, soil moisture and hydrological indices in a cogent matrix for the determination of drought.

The mechanism for anticipating and managing droughts necessarily differs from similar arrangements related to other natural calamities (like earthquakes, floods, cloudbursts, tsunami etc) or man-made disasters, for the following reasons:

- (i) Slow and almost imperceptible onset coupled with a prolonged duration as against other disasters, which have rapid and often dramatic onset, and a limited salience; and
- (ii) Early warning indicators in case of droughts tend to be ambiguous and non-definitive.

Government of India in 2002 decided to retain the management of drought with the Department of Agriculture, Cooperation & Farmers' Welfare when at the time the management of all other types of natural and man-made disasters was being transferred to the Ministry of Home Affairs.

## **Monitoring of drought**

Central and State Governments monitor following parameters that may indicate an onset of drought like conditions:

- (i) Rainfall (ii) Progression of sowing (iii) Remote sensing based Vegetative Indices
- (iv) Soil Moisture Based Indices (v) Hydrological Indices

The Crop Weather Watch Group in the Department of Agriculture, Cooperation and Farmers' Welfare (DAC&FW&FW) and the Drought Monitoring Centres (DMCs) under the State Disaster Management Authorities should meet frequently, and at least once a week during the South-West Monsoon season to monitor portents of drought. The methodology for an objective assessment of all relevant parameters are described in chapter 3 of the Manual.

### **Early indicators of Drought**

The following constitute 'early warning indicators':

#### **Kharif (June to September)**

- i) Delay in onset of South-West Monsoon.
- ii) Long 'break' during the of South-West Monsoon season.
- iii) Insufficient rains and skewed spatial distribution, particularly during the months of June and July.
- iv) Rise in price of fodder.
- v) Absence of rising trend in reservoir levels and / or reduction in stream flows and depletion rate of groundwater.
- vi) Drying up of sources of rural drinking water supply.
- vii) Declining trend in the progress of sowing as compared to total normal sown areas.
- viii) Out migration of rural population.

#### **Rabi (November to January)**

- i) Deficiency in closing figures for South-West Monsoon (30<sup>th</sup> September).
- ii) Serious depletion in level of Ground Water compared to figures for "normal years".
- iii) Fall in the level of reservoirs compared to the corresponding period in 'normal years' - indication of poor recharge following SW Monsoon.
- iv) Indication of marked soil moisture stress.
- v) Rise in price of fodder.

- vi) Increased deployment of water through tankers

(For Tamil Nadu & Pondicherry the crucial period is North East Monsoon – October to December).

### **Management of Drought**

The primary responsibility of managing drought (or any other natural disasters) is that of the State Governments. The role of Central Government is to supplement the efforts of the State Government in effective management of disasters and provide additional resources (food grains / financial assistance etc.) to combat the situation.

State Governments should ensure the declaration of drought in accordance with the modalities and timelines in the Manual so that relief assistance can be provided to the drought affected people in time.

### **Advance preparation for drought by Central and State Governments**

Following steps to be taken by Central / State Governments after an assessment of vulnerability / risk of drought at district / sub-district levels:

- a) Updated District-wise Crop contingency plans kept in readiness and available with extension functionaries at Block / Tehsil/Mandal/Taluka levels.
- b) Sufficient provisioning for drought resilient varieties of seeds at appropriate hubs.
- c) Sufficient shelf of projects and funds under MGNREGA
- d) Contingency Plans for cattle care, water, health, energy and food kept in readiness at the operational/functional levels.
- e) Repair of Hand Pumps and drinking water schemes through flexi funds & state's own resources.
- f) Repair of Transformers in rural areas.
- g) Desiltation /repair of canals.
- h) Identification of sites / organisations for cattle camps.
- i) Increasing and strengthening the number of Fodder Banks.
- j) Collect the storm water in nallahs and store in natural or artificial ponds, tanks, recharge pits etc. to recharge ground water.

## Drought Declaration

The Manual has specified a detailed modality for monitoring and determination of spatial expanse and intensity of drought based on objective parameters, to be further established on the basis of ground truthing through field verification. State Governments are expected to adhere to the Manual for an objective, transparent and timely declaration of drought.

### 3. Crisis Management Framework

It is the framework of crisis analysis aimed at identification of fundamental aspects of Crisis situation (Phases of crisis, magnitude, outcome of crisis [Impact], trigger mechanism and strategic response matrix).

Level	Phases of Crisis	Vulnerability Magnitude (area specific) (Scale: Zero-10)	Outcome of the Crisis Phase	Identified Trigger mechanism	Strategic Response Matrix/Action
1	Normal	<b>Zero</b> (Rainfall is +19% to -19% cumulatively for more than 4 weeks period throughout the season)	Nil	Nil	<ul style="list-style-type: none"><li>➤ Constant monitoring of drought-related parameters.</li><li>➤ Conservation of rain water by checking surface run offs.</li></ul>



2	Alert/Wat ch	<p><b>1-2</b></p> <p>Forecast of late onset of monsoon coupled with continuing water crisis and heat wave. Delayed onset of monsoon and anticipated deficit rainfall in the areas already affected by drought from the previous year.</p> <p><b><u>(Apr - Jun)</u></b> (Rainfall forecast is expected to be less than the normal rainfall and below -19% and the deficit continues for more than 2-3 weeks &amp; Soil moisture level is unsustainable)</p>	Incipient. Sudden acceleration of demand of employment	<ul style="list-style-type: none"> <li>• CAP (Crop) - Contingency Action Plan.</li> <li>• CAP (Water)</li> <li>• CAP (Health)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Wide publicity for the Contingency Crop Plan through effective agro advisory services</li> <li>➤ Propagation of short-term water conservation measures, water budgeting,</li> <li>➤ Proper health advisories and ensuring availability of emergency medical services</li> <li>➤ While on going works under MGNREGS would continue, yet district/block panchayat levels to remain in complete readiness to cater to a spurt in demand on wage employment under MGNREGS.</li> <li>➤ Monitoring over exploitation of ground water for non- agricultural and non-drinking purposes (i.e. industrial /commercial/ entertainment purposes)</li> </ul> <p><b><u>Advisory Note:</u></b> (The ULBs may be directed to control the extraction of water)</p> <ul style="list-style-type: none"> <li>➤ Energising the</li> </ul>
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					<p>Identified alternative sources for the requirement of water, food, fodder and power.</p> <p>➤ Meeting of Crisis Management Group (CMG) to review and revitalise the role of concerned machineries.</p> <p>➤ The State Executive Committee (SEC) to meet</p>
3	Warning	<p><u>3-4</u></p> <p>Delayed onset of monsoon. Deficit Rainfall for more than two weeks. Acute water crisis (Jun-Mid July) (Rainfall is less than the normal rainfall and below -19% and the deficit continues for more than 3 - 6 weeks &amp; Soil moisture, GW &amp; SW level is lower than previous</p>	Moderate	<ul style="list-style-type: none"> <li>• CAP (Crop)</li> <li>• CAP (Water)</li> <li>• CAP (Health)</li> <li>• CAP (Food &amp; PD)</li> </ul>	<p>➤ District Crop Contingency Plan put into operation.</p> <p>➤ Operationalising short-term water conservation measures by municipal and district agencies, water-budgeting by Ministry of Water Resources (Irrigation), M/o Urban Development (PHED) and by Drinking Water &amp; Sanitation(<u>utilizing flexi funds or state's own resources</u>).</p> <p><b><u>Advisory Note:</u></b> Identify alternative sources when the town is in "Warning" period</p>

		normal average			<p><b>and the supply of water may be as per norm issued by M/o Drinking water and Sanitation.</b></p> <ul style="list-style-type: none"> <li>➤ Judicious use of drinking water (restricted supply of water for basic requirement and alternative non-potable water for other purposes)</li> <li>➤ Meeting of CMG to review the action plan initiated by line Departments and affected State Governments and taking decision for movement of water and fodder from surplus areas (States) to the deficit areas (States).</li> <li>➤ Review and Visit by Area Officers in the deficit rainfall States.</li> <li>➤ Apprising the developments to National Crisis Management Committee (NCMC)/ National Executive Committee and State Executive Committee in the States.</li> <li>➤ MGNREGA</li> </ul>
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					<p>related works to be operationalized in full swing.</p> <p>➤ Provision of Mid Day Meal in Schools during vacation.</p>
4	Emergency	<p><u>5-7</u></p> <p>Deficit or No rainfall during the sowing period. Mid- season withdrawal of monsoon. Dry spell for more than 4 weeks. Deficit rainfall in the range of 20% to - 40%. Wilting of Crops due to shortage of water and continuing heat wave conditions. <b>(JUL -SEP)</b></p> <p>(Rainfall is less than the normal rainfall and below -25% and the deficit continue for more than - 6 weeks &amp; Soil moisture,</p>	Severe	<ul style="list-style-type: none"> <li>• CAP (Crop)</li> <li>• CAP (Water)</li> <li>• CAP (Cattle Care)</li> <li>• CAP (Health)</li> <li>• CAP (EGP)</li> <li>• CAP (Food &amp; PD)</li> </ul>	<p>➤ Referring the issue to (NEC) for taking up with cabinet for taking certain vital decisions like deferment/ rescheduling / fresh loan, movement of water and fodder through railways, additional allocation of food grains, establishing cattle camps, alternative employment generation programmes, enhancing PDS allocations, import of food grains to meet the gap between demand and supply, checking up of inflation etc.</p> <p><b><u>Advisory Note:</u></b> In the 'Emergency' period, water may be supplied as per norm issued by M/o Drinking water and Sanitation.</p> <p>➤ Early release of instalments</p>

		GW & SW level is alarmingly low)			<p>under State Disaster Response Fund (SDRF) and ensuring that the State Governments utilise it for initial emergency measures.</p> <p>➤ MGNREGA Works to continue in full swing.</p> <p>➤ Monitoring and visit of deficit rainfall States personally by each designated area officer in the Department Apprising the developments to National Crisis Management Committee (NCMC) on regular basis.</p> <p>➤ Measures for meeting the shortage of secondary and tertiary sectors.</p> <p>➤ Provision of Mid Day Meals in Schools during vacation.</p> <p>➤ Distribution of Food Rations wherever needed.</p>
5	Acute (Potential Disaster)	<p><u>7-10</u></p> <p>Early withdrawal of monsoon. Midseason withdrawal. . Severe</p>	EXTREME (FULL BLOWN DROUGHT)	<ul style="list-style-type: none"> <li>• CAP (Water)</li> <li>• CAP (Cattle Care)</li> <li>• CAP (Social Sector)</li> <li>• CAP (Energy</li> </ul>	<p>➤ Decision by Cabinet for Constitution of GoM / Task Force under the chairmanship of a Union Minister of Cabinet rank to</p>

		<p>deficit of cumulative annual rainfall. Severe soil moisture deficit. No rainfall for more than 4-6 weeks in sown area, resulting in crop damage. Severe shortage in availability of GW &amp; SW.</p> <p><b>(JUL - OCT)</b></p> <p>(Rainfall is less than normal and below -25% and the deficit continue for more than - 6 weeks &amp; Soil moisture, GW &amp; SW level is alarmingly low)</p>		<p>Sector)</p> <ul style="list-style-type: none"> <li>• CAP (Health)</li> <li>• CAP (Food &amp; PD)</li> <li>• CAP (Labour &amp; Employment)</li> </ul>	<p>take decisions during acute crisis.</p> <ul style="list-style-type: none"> <li>➤ Monitoring of drought affected States individually by each designated area office in the Department about ongoing relief measures.</li> <li>➤ Weekly CMG meeting and monitoring of the progress of drought relief measures.</li> <li>➤ Review of visit by Area Officers to the deficit rainfall States.</li> <li>➤ Strict Water conservation measures and monitoring of the release of canal water for irrigation.</li> <li>➤ Constitution of Central Teams to visit to drought declared States.</li> <li>➤ Assessment of damages and estimation of losses for release of funds from National Disaster Response Fund (NDRF) Special assistance to farmers / dairy / Poultry / fishery sectors.</li> <li>➤ Enabling employment under</li> </ul>
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					<p>MGNREGS as a part of supplementary employment and as a social safety net support.</p> <ul style="list-style-type: none"> <li>➤ Revitalising the ongoing programmes for vulnerable sections of society</li> <li>➤ Preventive measures for loss of human / cattle life on account of potential disaster.</li> <li>➤ Measures for meeting the shortage of secondary and tertiary sectors and measures for economic revival.</li> <li>➤ Legislative measures like issue of control orders for maintaining sustained supply of essential commodities.</li> <li>➤ Video Conferencing with drought affected States.</li> <li>➤ MGNREGS works to continue in full swing.</li> <li>➤ Distribution of food Rations</li> <li>➤ Mid day Meal distribution in schools.</li> </ul>
6	Recovery (Post Disaster)	<u>10-0</u> (OCT JUN)  Normal	-	<u>Mitigated</u>	<ul style="list-style-type: none"> <li>• CAP (Water)</li> <li>• CAP (Cattle Care)</li> </ul> <ul style="list-style-type: none"> <li>➤ Rescheduling of farm loans</li> <li>➤ Early release of input subsidy</li> </ul>

		rainfall in Rabi and subsequent seasons. Easing of soil moisture stress situation Farming/Rural community's livelihood requirement's Returning to normal activity.		<ul style="list-style-type: none"> <li>• CAP (Energy Sector)</li> <li>• CAP (Health)</li> <li>• CAP (Employment Guarantee Programme s)</li> <li>• CAP (Food &amp; PD)</li> <li>• CAP (Labour &amp; Employment)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Payment of compensation for losses in time to the beneficiaries i.e. agri-insurance, NDRF/ State Disaster Relief Fund SDRF (formerly CRF) benefits etc.</li> <li>➤ Adequate availability of seeds for sowing in the next season.</li> <li>➤ Monitoring of the ongoing relief measures and taking necessary course correction</li> <li>➤ Simultaneous documentation</li> <li>➤ Monitoring of the climate and ensuring alternative arrangements against relapse of the drought.</li> </ul>
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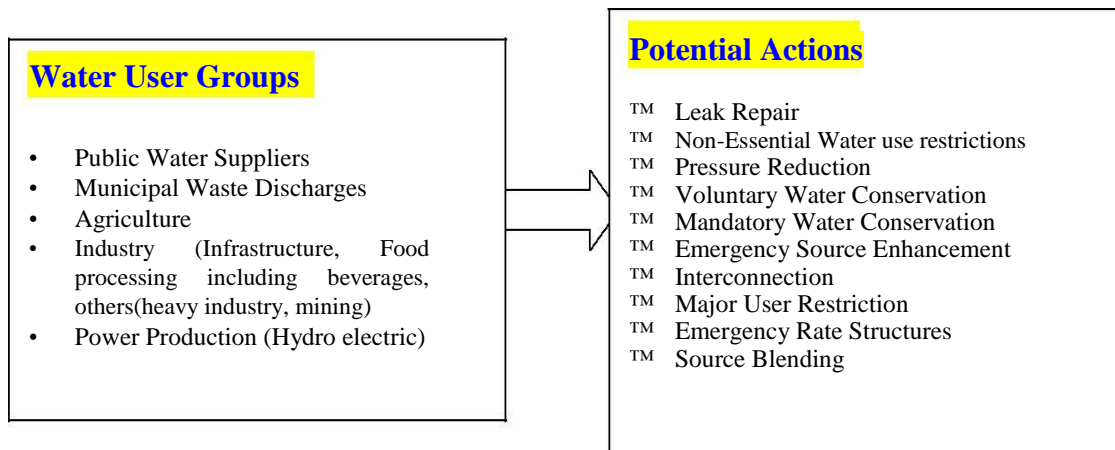
**Note:** Contingency Action Plans (CAP) in respect of Crop, Water, Cattle Care, Health, Energy Sector, Food and livelihood Security) – (To be prepared by concerned Central Government Ministries/ Departments)

The effective preparedness and mobilization to mitigate the impact of drought in agriculture is a very important task before the Governments at the centre and the states. Preparation and implementation of effective Crop Contingency Plans in districts go a long way in the mitigation of crisis in agriculture in the event of a drought. The Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad under ICAR has been preparing district-wise contingency plans in collaboration with State Agricultural Universities (SAUs) / Indian Council of Agricultural Research (ICAR) institutes / Krishi Vigyan Kendras (KVKs). The district-wise contingency plans for 623 districts in the country are



now available on the website of the Department  
<http://www.agricoop.nic.in/acp.html>, <http://farmer.gov.in/>, <http://crida.in/>.

#### Specific Attention to Water User Groups:



#### 4. Strategic Activity Planner

Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
<b>DROUGHT PREPAREDNESS</b>												
<b>Reviewing CMP</b>												
<b>Monitoring</b>												
Rainfall												
Temperature												
Surface water level												
Normal Area Vs Sown Area												
<b>Assessment</b>												
Drinking water Availability												
Irrigation water Availability												
Soil Moisture												
Fodder availability												

Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Food grains availability												
Energy Sector requirement												
Inputs and Seed availability												
<b>Water Conservation measures</b>												
Check dams / Water sheds												
Rain Water Harvesting												
Ground Water Recharge												
Protection of aquatic resources for aquaculture												
<b>DROUGHT REPORTING</b>												
<b>Early Warning System (EWS)</b>												
Forecast of Contingency Cropping												
Forecast of Crop Loss												
Forecast of Water Deficiency												
Forecast of Food insecurity												
Forecast of Cattle feed deficit												
<b>Declaration of Drought</b>												
<b>Estimation</b>												
Unsown area												

Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Crop Loss due to drought												
Potential Water deficit												
For irrigation												
For drinking												
Fodder requirement, availability, additional demand for cattle care												
Loss to AH/ Fisheries												
Loss to Energy Sector (fuel and hydroelectricity)												
DROUGHT RESPONSE												
Propagation of Forecast through Extension Services												
Propagation of contingency cropping												
Promotion of agro forestry												
Issue of Agro advisories												
Issue of General advisories												
SDRF release												
Alternative employment												

Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Food Security to vulnerable Sections												
Food grain requirement of farming community												
Processing of request for additional financial assistance												
Water and Fodder movement												
Energy Sector requirement (Import / Indigenous procurement from outside the State)												
Cattle & animal welfare (Vet.)												
Cattle camp												
Encouraging of community welfare organizations for mitigation efforts and monitoring of their activity												

## 5. Agencies responsible for Identified Activities

<b>Activity</b>	<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>
<b>Monitoring</b>			
Reviewing CMP	DAC&FW	MHA / NDMA	NCMC
Rainfall	IMD	States	DAC&FW
Temperature	IMD	States	DAC&FW
Surface water level	CWC / MoWR	States	DAC&FW
Ground Water level	CGWB / MoWR	States	DAC&FW
Monitoring of Agricultural Drought	States	* MNCFC / ICAR Institutes	DAC&FW
<b>Assessment</b>			
Drinking water availability	States	MoDWS MoWR (CGWB) / PHED (MoUD)	DAC&FW
Irrigation water availability	States	MoWR	DAC&FW
Soil Moisture	States	*MNCFC / IMD / MoWR (Irrigation Wing)	DAC&FW (NRM Division)
Fodder, cattle feed and poultry feed availability	States	Do AH&D	DAC&FW
Food grains availability	States	D/o F&PD	DAC&FW
Energy Sector requirement	States	M/o Power / Petroleum & Natural Gas	DAC&FW
Inputs and Seed availability	States	State / National agencies / corporations for Seeds/ Fertilizers / Pests & Insecticides	DAC&FW (Seeds PP & INM Div) / D/o Fertilizers
<b>Water Conservation measures</b>			
Check dams / Water sheds	States	DAC&FW / RD (LR) / MoWR	DAC&FW (NRM Division)
Deficit irrigation, Sprinkler and drip irrigation, reuse of irrigation water, use of water of suboptimal quality	States	MoWR (Irrigation Wing)	DAC&FW
Rain Water Harvesting & Water Shed Management	States	MoWR / CGWB	DAC&FW
Ground Water Recharge	States	CGWB	MoWR
Adjustment in sanction water /Water Pricing	States	CWC	MoWR
Monitoring of Water levels in Head works such as Jack wells and Tubewells	ULB / Implementing Agency	Public Health Engineering Department / State Governments/state irrigation & WR deptt.	DAC&FW
Judicial use of available water	ULB / Department in-charge of O&M	Public Health Engineering Department / State Governments	MoWR
Planting of naturally drought restraint crops with less water consumption and duration	States	ICAR / Directorate of Extension	DAC&FW (Crops Division)
Water Supply system for drought prone areas for	States	CWC	MoWR

arranged supply of water to commercial and industrial activities having low water consumption			
Reduction in conveyance loss, evaporation from soil surface, renovation and percolation of tanks, water consciousness	States	CWC	MoWR
<a href="#">Early Warning System (EWS)</a>			
Forecast of Contingency Cropping	States	DAC&FW (Extn.)	DAC&FW
Forecast of Crop Loss	States	ICAR / DAC&FW (Extn.)	DAC&FW
Forecast of Water Deficiency	States	MoWR / DWS	DAC&FW
Forecast of Food Insecurity	States	D/o Food & PD	DAC&FW
Forecast of Cattle feed deficit	States	D/o AHD	DAC&FW
Declaration of Drought	States		
Estimation			
Normal Area Vs sown area	States	DAC&FW	
Unsovn area	States	DAC&FW	
Crop Loss due to drought	States	DAC&FW	
Loss to Animal Husbandry & Fisheries Sector	States	DoAHD&F	
Potential Water deficit			
For irrigation	States	MoWR	DAC&FW
For drinking	States	MoDWS	DAC&FW
Fodder / cattle feed / poultry feed requirement, availability, additional demand for cattle care	States	DoAHD&F	DAC&FW
Loss to Energy Sector and Requirement of Energy Sector	States	Power / Petroleum & Natural Gas	DAC&FW
<a href="#">Drought Mitigation</a>			
Propagation of Forecast through Extn. Services	Extensions Agencies / KVKs	States	DAC&FW
Promotion of contingency cropping	States	ICAR	DAC&FW
Intensification of agricultural activities with support from Centrally Sponsored Schemes	Respective Missions / agencies	States	DAC&FW
Additional Availability of seeds and other inputs	Respective agencies / corporations	States	DAC&FW
Credit Support	Agriculture Coop Banks / Nationalised & Scheduled Banks NABARD / RBI	States	DAC&FW
Propagation of agro forestry	States	M/o E&F	DAC&FW
Issue of Agro advisories	States	DAC&FW/IMD	
Issue of General advisories	States	DAC&FW	
SDRF release	M/o Finance	States	
Alternative employment	States	D/o Rural Development	DAC&FW
Food Security to vulnerable Sections	States	M/o WCD / SJ & E / RD	DAC&FW
Food grain requirement of			

farming community	States	D/o F&PD	DAC&FW
Request for additional financial assistance from NDRF etc.	States	DAC&FW	HLC / M/o Finance
Water and Fodder movement	States	Railways	DAC&FW
Packaged / Bottled potable Water( In emergency only)	States	M/o DWS, WCD, SJ&E, RD	DAC&FW
Energy Sector requirement	States	Power / Petroleum & Natural Gas	DAC&FW
Cattle & Animal Welfare (Vet.)	States	D/o AH,D&F	DAC&FW
Cattle camp	States	D/o AH,D&F	DAC&FW
Monitoring and encouraging of NGOs / VOs	States	Rural Development	DAC&FW
Taking over of the exploratory wells in drought prone areas	States	CGWB	MoWR
Adoption of traditional methods of water storage and completion of ongoing storage projects	States	CWC	MoWR
Undertaking Mid/ Long – Term Drought Mitigation activities under Centrally Sponsored Programmes for water shed, Backward Regions, Drinking Water Supply, infrastructure	District Administrations	Respective Departments in States	Ministry/ Department of Panchayati Raj, Land Resources, Drinking Water Supply, Rural Development, Agriculture

**\*MNCFC = MAHALANOBIS NATIONAL CROP FORECAST CENTRE**

## **6. Monitoring & Reporting of Drought**

The State Governments will send weekly report to DMCs, Govt. of India on Monsoon Rain and its impact on Agriculture from 15<sup>th</sup> May to 30<sup>th</sup> September at e-mail drought.krishi@nic.in

Mahalanobis National Crop Forecast Centre (MNCFC) headed by a Director has been created as an attached office of Department of Agriculture & Cooperation and has been functioning since April, 2012, near Krishi Vistar Sadan, Pusa Campus, New Delhi-110012 (Tel: 011-25843224, 25843229 & Fax: 011-25843225). MNCFC has the mandate to prepare multiple-in-season crop forecasts and assessments of drought situation using state of the art techniques and methodologies for selected major crops.

The project National Agricultural Drought Assessment and Monitoring System (NADAMS) developed by National Remote Sensing Centre (NRSC), ISRO has since been transferred to MNCFC. NADAMS envisages use of remote sensing and meteorological data for assessment of crops in 17 agriculturally important states in India.

The IMIS portal of the National Rural Drinking Water Programme (MoDWS) can provide vital information on water provisioning in drought prone states.

## **7. Dissemination of Information and Media Management**

Sharing information with print, radio and television and social media is an important aspect of drought management. The Central and State Governments should provide credible and verified information on relevant aspects of drought to the people and media.

For effective dissemination of information up to village level, states are advised to collect and prepare data repositories of e-mail addresses right up to the village level. District wise e-groups of government employees and of important stakeholders often helps in quick dissemination of information and synchronized action.

Designated spokespersons of governments should be accessible to media for providing information on drought, for which a communication outreach strategy may be adopted. Periodic briefings for dissemination of information could be considered.

Additional Secretary and Central Drought Relief Commissioner, Department of Agriculture and Cooperation, Government of India and the Relief Commissioners in state governments should plan media strategy.



## **8. Crisis Management Group**

There shall be a Crisis Management Group (CMG) for Drought Management to manage the various phases of drought. The composition of the CMG for Drought is at **Appendix 1**. Joint Secretary (Drought Management), the nodal officer nominated by the Department of Agriculture, Cooperation & Farmers Welfare will be the Member-Secretary of CMG. CMG under the Chairmanship of Additional Secretary & Central Drought Relief Commissioner will periodically review the state of drought preparedness, take appropriate decisions and report the developments to the Union Agriculture Secretary, the National Crisis Management Committee (NCMC) and the state governments.

At the State level, a similar set up, as envisaged at the Centre, shall be created to review the crisis.

At the District level, the District Magistrate / Collector would be the head of the CMG.

## **9. Nodal Officers**

Central and state governments will nominate nodal officers from related, line Departments / Ministries/ agencies, responsible for different sets of activities connected with crisis management of drought. Such officers will normally be not below the rank of Director or equivalent in the Government of India. The list of nodal officers containing their names, designations, telephone (office / residence), FAX, e-mail, mobile numbers and addresses shall be maintained in the Drought Monitoring Centre (Control Room) of the Department of Agriculture, Cooperation & Farmers Welfare, Government of India and will be updated every month.

At the District level, District Magistrates / Collectors will constitute their respective crisis management teams consisting of district level officials of line departments.

## **10. Drought Monitoring Centers (DMCs) at State level**

The Manual of Drought Management 2016 and the National Disaster Management Authority (NDMA) Guidelines, 2010 enjoin upon states to create separate DMCs with adequate staff to report to the State Disaster Management Authorities (SDMAs) and the Relief Commissioners. The State DMCs will be provided with

requisite administrative, technical and data management personal as described in Chapter 2 of the Manual referred to above.

## **11. Drought Management Contacts**

- Composition of Crisis Management Group (CMG) – **Appendix-1**
- List of Nodal Officers of Line Ministries / Departments – **Appendix-2**
- List of Officers of Drought Management Division– **Appendix-3**
- List of districts where drought declared in the last 7 years- **Appendix-4**
- Composition of Crop Weather Watch Group for Drought Management in DAC&FW – **Appendix-5**

## **12. Conclusion**

The aim of the drought CMP is to help all stake holders to be better prepared to manage drought. It will aid in a timely and effective response by government agencies so as to reduce the impact on rural communicates and environment in the event of a drought crisis. The strategic activity planner and identification of agencies responsible for managing the crisis is aimed at delineation of duties of personnel in identified activities.

**LIST OF MEMBERS OF CRISIS MANAGEMENT GROUP**

1. **Chairman** - Additional Secretary & Central Drought Relief Commissioner

2. **Members –**

**Nodal Officers of Line Ministries / Departments:**

- i. D/o Animal Husbandry, Dairying & Fisheries
- ii. M/o Drinking Water and Sanitation
- iii. M/o Earth Sciences
- iv. M/o Environment & Forests
- v. D/o Food & Public Distribution
- vi. M/o Health & Family Welfare
- vii. M/o Home Affairs
- viii. India Meteorological Department, M/o Earth Sciences
- ix. M/o Labour & Employment
- x. D/o Land Resources
- xi. M/o Petroleum & Natural Gas
- xii. M/o Power
- xiii. M/o Railways
- xiv. D/o Rural Development
- xv. M/o Urban Development
- xvi. M/o Water Resources and Ganga Rejuvenation
- xvii. M/o Women & Child Development

3. **Member Secretary –** Joint Secretary (Drought Management)

**LIST OF NODAL OFFICERS OF THE LINE MINISTRIES / DEPARTMENTS**

S. No	Name of the Ministry / Department & Address	Details of Nodal Officer / Alternate Nodal Officer
1.	D/o Animal Husbandry, Dairying & Fisheries, Krishi Bhawan, New Delhi	Shri P.K. Anand, Joint Director (Extension & LI), Room No.432-A, Krishi Bhawan, New Delhi Tel: 23389606 E-mail : <a href="mailto:pradeep.anand60@gov.in">pradeep.anand60@gov.in</a>
2.	M/o Drinking Water and Sanitation, Pt. Deen Dyal Antyodaya Bhavan, CGO Complex, Lodhi Road, New Delhi	Ms. Radha V., Joint Secretary (Water), Tel:24362705 Fax:24361669 E-mail : <a href="mailto:radhav@ias.nic.in">radhav@ias.nic.in</a>  <u>Alternate Nodal Officer</u> Shri Dinesh Chand, Additional Advisor (PHE), Tel: 24366660 E-mail : <a href="mailto:d.chand@nic.in">d.chand@nic.in</a>
3.	M/o Earth Sciences, Room No.319,Prithvi Bhavan, IMD Campus, Opp. India Habitat Centre, Lodhi Road, New Delhi - 110003.	Dr. Kamaljit Ray, Scientist 'G'/Advosdor Tele -24669514  E-mail: <a href="mailto:kamal.ray@nic.in">kamal.ray@nic.in</a>
4.	M/o Environment & Forests, 7 <sup>th</sup> Floor, Paryavaran Bhavan,  CGO Complex, Lodi Road, New Delhi-110003	Shri R.C. Meena, Assistant Commissioner (F),NAEB, M/o Environment & Forests Room No.703, Pt. Deendayal Antyodaya Bhawan Tel: 24361722
5.	D/o Food & Public Distribution, Krishi Bhavan, New Delhi	Shri Ram Krishna Khandelwal, Joint Secretary (P & FCI), Room No.183-A. Krishi Bhawan, New Delhi Tel:23382956, E-mail- <a href="mailto:jspolicy.fpd@nic.in">jspolicy.fpd@nic.in</a>  Shri Ramakant Singh, Director (Movement) R. No.182-B, <u>Tel:23382709</u> 9717647613 (Mob) E-mail : <a href="mailto:jdmov.fpd@nic.in">jdmov.fpd@nic.in</a>
6	M/o Health & Family Welfare, Directorate General of Health Services (EMR), Nirman Bhavan, New Delhi-110011	Shri Lav Agarwal, Joint Secretary, Tel: 23061195 (O), 24103468 (R) Mobile: 9818778177 Fax : 23061842 E-mail:- <a href="mailto:lavmofhw@gmail.com">lavmofhw@gmail.com</a>  <u>Alternate nodal officer</u> Dr. P.R. Ravindran, Addl DDG & Director,EMR, Dte.G.H.S, Tel: 23061302,(O), 43474921(R), 45639559 (R), Fax: 23061457

7.	M/o Home Affairs, (Disaster Management Division) 3 <sup>rd</sup> Floor, NDCC Building, Jai Singh Road, Connaught Place, New Delhi	Shri G.C. Chhawaniya, Director (DM-I), Tel:23438154 (Telefax) E-mail:dirdm1@nic.in  <u>Alternate Nodal Officer</u> Shri Prashant Nikam, Director (DM-II), Tel: 23438154 (Tele) E-mail: prashant.nikam@nic.in
8.	Ministry of Earth Sciences, India Meteorological Department Mausam Bhavan, Lodi Road, New Delhi-110003	Dr. K.K. Singh, Scientist 'G'/ Head (Agromet), Tel: 9868110771 E-mail: <a href="mailto:kksingh2022@gmail.com">kksingh2022@gmail.com</a>  <u>Alternate Nodal Officer</u> Shri Anand Kumar Sharma, Scientist 'F'/Regional Coordinator, Agromet Division, Mob. 9411575800 E-mail: <a href="mailto:anand.sharma870@gmail.com">anand.sharma870@gmail.com</a>
9	M/o Skill Development & Entrepreneurship, Directorate General of Training, Shram Shakti Bhavan, Rafi Marg, New Delhi-110001	Smt. Sandhya Salwan, Director, Room No.331,  Shram Shakti Bhavan, New Delhi Tel: 2372p0792 E-mail :sandhya.salwan@nic.in
10	M/o Panchayati Raj, 11 <sup>th</sup> Floor, Jeevan Prakesh Building, 25, K.G.Marg, New Delhi- 110001	Shri Sanjeeb Kumar Patjoshi,, Joint Secretary, Tel:23753819 Fax:23317931 E-mail :js1-mopr@gov.in
11	M/o Petroleum & Natural Gas, 2 <sup>nd</sup> Floor, Shastri Bhavan, New Delhi	Shri Alok Tripathi, Director (D&MC) (Distribution & Mkt. Coordination), Room No.211-B, 2 <sup>nd</sup> Floor, Shastri Bhawan, New Delhi Tel: 23070593 E-mail: <a href="mailto:directordmcpng@gmail.com">directordmcpng@gmail.com</a>  <u>Alternate Nodal Officer</u> Shri K.M. Mahesh, Director (LPG), Room No. 209-B, 2 <sup>nd</sup> Floor, Shashtri Bhawan, New Delhi Tel No. 23387404 E-mail : <a href="mailto:mahesh.png@gov.in">mahesh.png@gov.in</a>
12	M/o Power, Shram Shakti Bhavan, Rafi Marg, New Delhi-110001	Shri Raj Pal, Economic Adviser, Room No.427,Shram Shakti Bhavan, Tel: 23715595 (T/F) (O), E-mail- <a href="mailto:raj.pal@nic.in">raj.pal@nic.in</a>  <u>Alternate Nodal Officer</u> Shri Ghanshyam Prasad, Director (OM), Room No.417 Tel: 23716674 (O), 28052436 (R) Mobile: 9968301928

13	M/o Railways Railway Board, Rail Bhavan, New Delhi	Shri Satyendra Kumar, Director, Traffic Transportation (POL), Room No.152, Rail Bhawan, New Delhi Tel: 23384649, E-mail :  <u>Alternate Nodal Officer</u> Shri P.Srinivas, Director, Safety-III Room No.362,Rail Bhavan, New Delhi Tel : 23303239 Fax:23385047 E-mail:dsafety3@rb.railnet.gov.in
14.	D/o Rural Development Krishi Bhavan, New Delhi.	Shri A.K. Sumbly, Deputy Secretary (MGNREGA), Room No.464, Krishi Bhawan, New Delhi. Tel: 23070129(F) E-mail: <a href="mailto:ak.sumbly@nic.in">ak.sumbly@nic.in</a>
15.	M/o Urban Development (CPHEEO) Nirman Bhavan, New Delhi.	Shri M. Dhinadhayalan, Joint Adviser (PHE) Room No.654, A Wing, Nirman Bhawan, New Delhi. Tel: 23062418 Fax: 23062559  <u>Alternate Nodal Officer</u> Shri V.K. Chaurasia, Deputy Adviser (PHE), R.No.660-A, Nirman Bhawan, Tel: 23061144 (O) Fax: 23062559
16.	M/o Water Resources, Block No.11, 8 <sup>th</sup> floor, CGO Complex, Lodi road, New Delhi.	Shri Vijay Kumar Nagpure, Director Water Management Directorate, Central Water Commission, Tel: 26107403 (o) E-mail: <a href="mailto:vjynagpure@yahoo.com">vjynagpure@yahoo.com</a>
17.	M/o Women & Child Development Shastri Bhavan, New Delhi.	Shri Krishna Bahadur Singh, Director (ICDS) Ministry of Women & Child Development, Shastri Bhavan, New Delhi Tel: 23385192 (o) Mail: <a href="mailto:kb.singh@gov.in">kb.singh@gov.in</a>
18.	D/o Agriculture, Cooperation & Farmers Welfare (Seed Division)	Shri S Selvaraj Deputy Commissioner(Seed) Tel. 011-23389242
19.	D/o Agriculture, Cooperation & Farmers Welfare, Mahalanobish National Crop Forecast Centre(MNCFC), Pusa Campus, New Delhi-110012	Dr. Shibendu S. Ray, Director, MNCFC, Tel: 011 -25843224 E mail: <a href="mailto:shibendu.ncfc@nic.in">shibendu.ncfc@nic.in</a>

**Appendix-3****DETAILS OF OFFICERS OF DROUGHT MANAGEMENT DIVISION**

Sl.No.	Name & Designation	Room No.	Telephone	E-mail
1	Ms. Upma Srivastava, Additional Secretary & Central Drought Relief Commissioner	129	23381305 (O) 23389348 (Telefax)	ascc-agri@nic.in
2	Shri K. S Srinivas Joint Secretary (DM)	133	23073384 (O) 23384468 (Fax)	jsdm-agri@gov.in
3	Ms. Rajni Taneja, Deputy Secretary (DM)	233	23386741 (O)	rajni.taneja66@nic.in
4	Shri Vijay Soni, Under Secretary (DMC)	22	23389453 (O)	vijay.soni70@gov.in
5	Shri Balram Prasad Bimal, Under Secretary (DM)	573	23382922 (O)	bp.bimal@gov.in
6	Drought Monitoring Cell (Control Room)	22	23389453 (O) 23384555 (O)	drought.krishi@nic.in
7	Drought Management Section	387	23383309 (Telefax)	drought.krishi@nic.in

## Appendix-4

### List of Districts where drought was declared by the State Government in the years from 2011-12 to 2017-18

State	District	Years	
		Kharif	Rabi
Andhra Pradesh	Anantapur	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2017-18
	Chittoor	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	
	East Godavari	2011-12	
	Guntur	2011-12, 2012-13, 2014-15, 2015-16	
	Krishna	2011-12, 2015-16	
	Kurnool	2011-12, 2012-13, 2014-15, 2016-17	
	Prakasam	2011-12, 2012-13, 2014-15, 2015-16, 2016-17	2017-18
	SPSR Nellore	2011-12, 2012-13, 2014-15, 2015-16, 2016-17	2017-18
	Srikakulam	2011-12, 2015-16, 2016-17	
	Visakhapatnam	2011-12	
	Vizianagram	2011-12, 2013-14, 2015-16	2017-18
	West Godavari	2011-12	
	YSR Kadapa	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2017-18
Telangana	Adilabad	2011-12	
	Karimnagar	2011-12, 2015-16	
	Khammam	2011-12, 2015-16	
	Mahabubnagar	2011-12, 2012-13, 2013-14, 2015-16	
	Medak	2011-12, 2013-14, 2015-16	
	Nalgonda	2011-12, 2012-13, 2013-14, 2015-16	
	Nizamabad	2011-12, 2015-16	
	Ranga Reddy	2011-12, 2015-16	
	Warangal	2011-12, 2015-16	
Bihar	Gaya	2013-14	
	Jahanabad	2013-14	
	Aurangabad	2013-14	
	Nawada	2013-14	
	Patna	2013-14	
	Nalanda	2013-14	
	Bhojpur	2013-14	
	Buxar	2013-14	
	Kaimur	2013-14	
	Munger	2013-14	
	Shekhpura	2013-14	
	Lakhisarai	2013-14	
	Jamui	2013-14	
	Begusarai	2013-14	
	Khagaria	2013-14	
	Madhubani	2013-14	
	Darbhanga	2013-14	
	Samastipur	2013-14	
	Bhagalpur	2013-14	
	Siwan	2013-14	
	Saran	2013-14	
	Gopalganj	2013-14	
	Muzaffarpur	2013-14	
	Sitamarhi	2013-14	
	Vaisali	2013-14	
	Sheohar	2013-14	
	East Champaran	2013-14	



	West Champaran	2013-14	
	Madhepura,	2013-14	
	Supaul	2013-14	
	Sharsa	2013-14	
	Purnea	2013-14	
	Katihar	2013-14	
<b>Chattisgarh</b>	Raipur	2015-16, 2017-18	
	Gariaband	2015-16, 2017-18	
	Mahasamund	2015-16, 2017-18	
	Dhamtary	2015-16, 2017-18	
	Durg	2015-16, 2017-18	
	Balod	2015-16, 2017-18	
	Bemetara	2015-16, 2017-18	
	Rajnandgaon	2015-16, 2017-18	
	Kabirdham	2015-16, 2017-18	
	Bastar	2015-16	
	Kondagaon	2015-16, 2017-18	
	Narayanpur	2015-16, 2017-18	
	Kanker	2015-16, 2017-18	
	Dantewara	2015-16, 2017-18	
	Sukma	2015-16	
	Bijapur	2015-16, 2017-18	
	Bilaspur	2015-16, 2017-18	
	Mungeli	2015-16, 2017-18	
	Janjgir-Chamap	2015-16, 2017-18	
	Korba	2015-16, 2017-18	
	Balrampur	2015-16	
	Surajpur	2015-16	
	Koria	2015-16, 2017-18	
	Raigarh	2015-16, 2017-18	
	Jashapur	2015-16	
	Baloda Bazar	2017-18	
<b>Gujarat</b>	Ahmedabad	2012-13	
	Amreli	2012-13	
	Anand	2012-13	
	Banaskantha	2012-13, 2015-16	
	Bharuch	2012-13	
	Bhavnagar	2012-13	
	Gandhinagar	2012-13	
	Jamnagar	2012-13, 2015-16	
	Junagadh	2012-13	
	Kheda	2012-13	
	Kutch	2012-13, 2015-16	
	Mehsana	2012-13	
	Patan	2012-13	
	Porbandar	2012-13, 2015-16	
	Rajkot	2012-13, 2015-16	
	Surendranagar	2012-13	
	Vadodara	2012-13	
	Devbhumi Dwarka	2015-16	
<b>Haryana</b>	Ambala	2014-15	
	Bhiwani	2014-15	
	Faridabad	2014-15	
	Palwal	2014-15	
	Fatehabad	2014-15	
	Gurgaon	2014-15	
	Mewat.	2014-15	

	Hisar	2014-15	
	Jhajjar	2014-15	
	Jind	2014-15	
	Kaithal	2014-15	
	Karnal	2014-15	
	Kurukshetra	2014-15	
	Mahendragarh	2014-15	
	Panchkula	2014-15	
	Panipat	2014-15	
	Rewari	2014-15	
	Rohtak	2014-15	
	Sirsa	2014-15	
	Sonipat	2014-15	
	Yamunanagar	2014-15	
<b>Jharkhand</b>	Ranchi	2015-16	
	Khunti	2015-16	
	Lohardaga	2015-16	
	Gumla	2015-16	
	Simdega	2015-16	
	West Singhbhum	2015-16	
	Saraikela	2015-16	
	East Singhbhum	2015-16	
	Palamu	2015-16	
	Garhwa	2015-16	
	Latehar	2015-16	
	Hazaribagh	2015-16	
	Ramgarh	2015-16	
	Koderma	2015-16	
	Dhanbad	2015-16	
	Bokaro	2015-16	
	Chatra	2015-16	
	Dumka	2015-16	
	Godda	2015-16	
	Deoghar	2015-16	
	Jamtara	2015-16	
	Giridih	2015-16	
<b>Karnataka</b>	Bagalkote	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Belgaum	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Bellary	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Bidar	2011-12, 2012-13, 2014-15, 2015-16	2015-16, 2016-17
	Bijapur	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Chamarajnagar	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2016-17
	Chikkaballapura	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2016-17
	Chikamagalur	2011-12, 2012-13, 2015-16, 2016-17	2016-17
	Chitradurga	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2016-17
	Davangere	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2016-17
	Dharwad	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Gadag	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Gulbarga	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2015-16
	Hasan	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2016-17
	Haveri	2011-12, 2012-13, 2013-14, 2016-17	2015-16, 2016-17
	Kolar	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2016-17
	Koppal	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Mandya	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2016-17
	Mysore	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Raichure	2011-12, 2012-13, 2015-16, 2016-17	2016-17
	Ramanagara	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2016-17

	Tumkur	2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17	2016-17
	Yadgiri	2011-12, 2012-13, 2013-14, 2015-16, 2016-17	2015-16, 2016-17
	Bangalore Rural	2011-12, 2012-13, 2014-15, 2015-16, 2016-17	2016-17
	Bangalore Urban	2012-13, 2013-14, 2014-15, 2016-17	2016-17
	Shimoga	2012-13, 2015-16, 2016-17	2016-17
	Uttara Kannada	2013-14, 2015-16, 2016-17	2016-17
	Dakshina Kannada		2016-17
	Kodagu	2015-16, 2016-17	2016-17
	Udupi		2016-17
<b>Kerala</b>	Idukki	2012-13, 2016-17	2012-13
	Kollam	2012-13, 2016-17	2012-13
	Thiruvananthapuram	2012-13, 2016-17	2012-13
	Wayanad	2012-13, 2016-17	2012-13
	Alappuzha	2016-17	2012-13
	Kannur	2016-17	2012-13
	Ernakulam	2016-17	2012-13
	Kasargode	2016-17	2012-13
	Kottayam	2016-17	2012-13
	Kozhikode	2016-17	2012-13
	Malappuram	2016-17	2012-13
	Palakkad,	2016-17	2012-13
	Pathanamthitta	2016-17	2012-13
	Thrissur	2016-17	2012-13
<b>Maharashtra</b>	Nashik	2011-12, 2012-13, 2014-15, 2015-16	
	Dhule	2011-12, 2012-13, 2014-15, 2015-16	
	Nandurbar	2011-12, 2014-15, 2015-16	
	Jalgaon	2012-13, 2014-15, 2015-16	
	Ahmednagar	2011-12, 2012-13, 2014-15, 2015-16	2012-13, 2015-16
	Pune	2011-12, 2012-13, 2014-15, 2015-16	2012-13
	Satara	2011-12, 2012-13, 2014-15, 2015-16	2012-13
	Sangli	2011-12, 2012-13, 2015-16	2012-13
	Aurangabad	2012-13, 2014-15, 2015-16	2012-13
	Jalna	2012-13, 2014-15, 2015-16, 2015-16	2012-13
	Beed	2012-13, 2014-15, 2015-16	2012-13
	Latur	2011-12, 2012-13, 2014-15, 2015-16	
	Osmanabad	2011-12, 2012-13, 2014-15, 2015-16	2012-13
	Nanded	2012-13, 2014-15, 2015-16	
	Parbhani	2012-13, 2014-15, 2015-16	
	Hingoli	2012-13, 2014-15, 2015-16	
	Buldhana	2011-12, 2012-13, 2014-15, 2015-16	
	Akola	2014-15, 2015-16	
	Yavatmal	2014-15, 2015-16	
	Nagpur	2011-12, 2014-15, 2015-16	
	Gadchiroli	2011-12, 2014-15, 2015-16	
	Amaravati	2011-12, 2014-15, 2015-16	
	Washim	2014-15, 2015-16	
	Wardha	2014-15, 2015-16	
	Bhandara	2014-15, 2015-16	
	Chandrapur	2014-15, 2015-16	
	Goandia	2011-12, 2014-15, 2015-16	
	Solapur	2011-12	2012-13, 2015-16
<b>Madhya Pradesh</b>	Katni	2015-16	
	Shahdol	2015-16, 2017-18	
	Umaria	2015-16, 2017-18	
	Anuppur	2015-16	

	Tikamgarh	2015-16, 2017-18	
	Rewa	2015-16	
	Jabalpur	2015-16	
	Sidhi	2015-16, 2017-18	
	Sagar	2015-16, 2017-18	
	Damoh	2015-16, 2017-18	
	Seoni	2015-16	
	Sigroli	2015-16	
	Sheopur	2015-16, 2017-18	
	Chhatarpur	2015-16, 2017-18	
	Bhind	2015-16, 2017-18	
	Panna	2015-16, 2017-18	
	Satna	2015-16, 2017-18	
	Dindori	2015-16	
	Shivpuri,	2015-16, 2017-18	
	Morena	2015-16, 2017-18	
	Jhabua	2015-16	
	Mandsaur	2015-16	
	Bhopal	2015-16	
	Ujjain	2015-16	
	Neemuch	2015-16	
	Vidishia	2015-16, 2017-18	
	Raisen	2015-16	
	Rajgarh	2015-16	
	Khandwa	2015-16	
	Ratlam	2015-16	
	Narsinghpur	2015-16	
	Guna	2015-16	
	Betul	2015-16	
	Burhanpur	2015-16	
	Agar Malwa	2015-16	
	Sehore	2015-16	
	Indore	2015-16	
	Dhar	2015-16	
	Shajapur	2015-16, 2017-18	
	Harda	2015-16	
	Chhindwara	2015-16	
	Dewas	2015-16	
	Ashoknagar	2015-16, 2017-18	

	Khargone	2015-16	
	Hoshangabad	2015-16	
	Badwani	2015-16	
	Datia	2017-18	
	Gwalior	2017-18	
<b>Odisha</b>	Angul	2015-16	
	Balasore	2015-16	
	Bargarh	2015-16	
	Balangir	2015-16	
	Boudh	2015-16	
	Cuttack	2015-16	
	Deogarh	2015-16	
	Dhenkanal	2015-16	
	Gajapati	2015-16	
	Ganjam	2015-16	
	Jajpur	2015-16	
	Jharsuguda	2015-16	
	Kalahandi	2015-16	
	Kandhamal	2015-16	
	Keonjhar	2015-16	
	Khordha	2015-16	
	Koraput	2015-16	
	Mayurbhanj	2015-16	
	Nuapada	2015-16	
	Nabarangpur	2015-16	
	Nayagarh	2015-16	
	Puri	2015-16	
	Rayagada	2015-16	
	Sambalpur	2015-16	
	Subarnapur	2015-16	
	Sundargarh	2015-16	
	Bhadrak	2015-16	
<b>Rajasthan</b>	Ajmer	2012-13, 2013-14, 2015-16, 2016-17	
	Alwar .	2013-14	
	Banswada	2012-13, 2013-14, 2015-16	
	Barmer	2012-13, 2013-14, 2015-16, 2016-17, 2017-18	
	Bara	2013-14	
	Bikaner	2012-13, 2013-14, 2017-18	
	Churu	2012-13, 2013-14, 2015-16, 2016-17, 2017-18	
	Dungarpur	2013-14, 2015-16, 2017-18	
	Jodhpur	2012-13, 2013-14, 2015-16, 2016-17, 2017-18	
	Sirohi	2013-14	

	Pratapgarh	2013-14, 2015-16	
	Kota	2013-14	
	Jaisalmer	2012-13, 2013-14, 2015-16, 2016-17, 2017-18	
	Jhalawad	2013-14, 2016-17	
	Nagaur	2012-13, 2013-14, 2015-16, 2016-17, 2017-18	
	Pali	2012-13, 2013-14, 2015-16, 2016-17	
	Bundi	2013-14	
	Bharatpur	2013-14	
	Bhilwada	2013-14, 2015-16, 2016-17, 2017-18	
	Baran	2013-14, 2015-16	
	Chittorgarh	2013-14, 2015-16, 2016-17	
	Dausa	2013-14	
	Sriganganagar	2013-14, 2017-18	
	Hanumangarh	2013-14, 2015-16, 2017-18	
	Jaipur	2013-14, 2015-16, 2017-18	
	Jhunjhnu	2012-13, 2013-14, 2015-16, 2017-18	
	Karauli	2013-14	
	Sawaimadhopur	2013-14, 2017-18	
	Tonk	2013-14	
	Sikar	2012-13, 2013-14	
Tamil Nadu	Rajsamand	2012-13, 2015-16, 2016-17	
	Jalor	2015-16, 2016-17	
	Udaipur	2015-16, 2016-17	
	Chennai	2016-17	
	Kancheepuram	2012-13, 2016-17	
	Vellore	2012-13, 2016-17	
	Thiruvallur	2012-13, 2016-17	
	Salem	2012-13, 2016-17	
	Coimbatore	2012-13, 2016-17	
	Viluppuram	2012-13, 2016-17	
	Tirunelveli	2012-13, 2016-17	
	Madurai,	2012-13, 2016-17	
	Tiruchirappalli	2012-13, 2016-17	
	Cuddalore	2012-13, 2016-17	
	Tiruppur	2012-13, 2016-17	
	Tiruvannamalai	2012-13, 2016-17	
	Thanjavur	2012-13, 2016-17	
	Erode	2012-13, 2016-17	
	Dindigul	2012-13, 2016-17	
	Virudhunagar	2012-13, 2016-17	
	Krishnagiri	2012-13, 2016-17	
	Kanniyakumari	2012-13, 2016-17	
	Toothukkudi	2012-13, 2016-17	
	Namakkal	2012-13, 2016-17	
	Pudukkottai	2012-13, 2016-17	
	Nagapattinam	2012-13, 2016-17	
	Dharmapuri	2012-13, 2016-17	
	Sivaganga	2012-13, 2016-17	
	Ramanathapuram	2012-13, 2016-17	
	Thiruvarur	2012-13, 2016-17	
	Theni	2012-13, 2016-17	
	Karur	2012-13, 2016-17	
	Ariyalur	2012-13, 2016-17	
	The Nilgiris	2012-13, 2016-17	
	Perambalur	2012-13, 2016-17	
Uttar Pradesh	Agra	2014-15, 2015-16	
	Aligarh	2014-15	

	Amroha	2014-15	
	Amethi	2014-15, 2015-16	
	Auraiya	2014-15, 2015-16	
	Azamgarh	2014-15	
	Badaun	2014-15	
	Bareilly	2014-15	
	Bulandshahar	2014-15	
	Chitrkoot	2014-15, 2015-16	2015-16
	Deoria	2014-15, 2015-16	
	Etah	2014-15, 2015-16	
	Etawah	2014-15, 2015-16	
	Faizabad	2014-15, 2015-16	
	Farukhabad	2014-15, 2015-16	
	Fatehpur	2014-15, 2015-16	
	Firozabad	2014-15	
	Gautambudh Nagar	2014-15	
	Ghaziabad	2014-15, 2015-16	
	Hamirpur	2014-15, 2015-16	2015-16
	Hapur	2014-15	
	Hardoi	2014-15	
	Jhansi	2014-15, 2015-16	2015-16
	Jaunpur	2014-15, 2015-16	
	Kanpur Dehat	2014-15, 2015-16	
	Kanpur Nagar	2014-15, 2015-16	2015-16
	Kannauj	2014-15, 2015-16	
	Kaushambi	2014-15, 2015-16	
	Kushinagar	2014-15, 2015-16	
	Maharajganj	2014-15, 2015-16	
	Mau	2014-15, 2015-16	
	Meerut	2014-15	
	Mainpuri	2014-15, 2015-16	
	Mahoba	2014-15, 2015-16	2015-16
	Mathura	2014-15	
	Muzaffarnagar	2014-15	
	Pilibhit	2014-15, 2015-16	
	Rampur	2014-15, 2015-16	
	Saharanpur	2014-15	
	Shamli	2014-15	
	Sonbhadra	2014-15, 2015-16	
	Unnao	2014-15, 2015-16	
	Shri Ravidas Nagar	2015-16	
	Sultanpur	2015-16	
	Mirzapur	2015-16	
	Ballia	2015-16	
	Sidharthnagar	2015-16	
	Shahjahanpur	2015-16	
	Banda	2015-16	2015-16
	Pratapgarh	2015-16	
	Chanauli	2015-16	
	Basti	2015-16	
	Baghpat	2015-16	
	Gonda	2015-16	
	Barabanki	2015-16	
	Sant Kabi Nagar	2015-16	
	Jalaun	2015-16	2015-16
	Gorakhpur	2015-16	
	Hathras	2015-16	

	Allahabad	2015-16	
	Lalitpur	2015-16	2015-16
	Lacknow	2015-16	
	Rai Bareily	2015-16	
	Ambedkar Nagar	2015-16	
	Balrampur	2015-16	
<b>Uttarakhand</b>	<u>Pithoragarh</u>		2015-16
	<u>Champawat</u>		2015-16
	<u>Almora</u>		2015-16
	<u>Bageshwar</u>		2015-16
	<u>Nainital</u>		2015-16
	<u>Rudraprayag</u>		2015-16
	<u>Pauri Garhwal</u>		2015-16
<b>UT of Puducherry</b>	Puducherry	2016-17	
	Karaikal	2016-17	



### Crop Weather Watch Group for Drought Management (CWWGDM)

The CWWGDM, in the DAC&FW, can act as an Inter-Ministerial mechanism, which should meet at least once a week during June to September period to monitor drought situation in the country. The composition of the Group and the specific areas of responsibility are given in Table 2.1 below.

Partners	Tasks
Additional Secretary, Department of Agriculture, Cooperation & Farmers Welfare & Central Drought Relief Commissioner	Chairperson
Economics & Statistical Advisor, DAC&FW	Report behaviour of agro-climatic and market indicators
Agriculture Commissioner	Crop conditions: Availability of Inputs; Contingency Planning
Animal Husbandry Commissioner	Livestock health; Fodder availability
India Meteorological Department	Rainfall forecast and monsoon conditions.
Central Water Commission & Central Ground Water Board	Monitoring data on Important reservoirs / groundwater.
Ministry of Power	Availability of power
Indian Council of Agricultural Research (Crop Specific Research Institutes, Central Research Institute for Dryland Agriculture, Central Arid Zone Research Institute, Indian Agricultural Research Institute etc.)	Technical input and contingency planning
Remote Sensing Centres	Provide satellite based inputs
Mahalanobis National Crop Forecast Centre	Agricultural Drought Information
Indian Space Research Organisation	Technical inputs on drought parameters
Joint Secretary, Drought Management, DAC & FW	Coordinator

The CWWGDM will be responsible for the evaluation of multi-source information and data from scientific and technical bodies to determine the likely impact of meteorological and other environmental parameters on agriculture.