

# **OPERATIONAL GUIDELINES**

## **RESTRUCTURED WEATHER BASED CROP INSURANCE SCHEME**

**March 2016**

**Department of Agriculture, Cooperation and Farmers Welfare**

**Ministry of Agriculture & Farmers Welfare**

**Krishi Bhawan, New Delhi-110001**

**Weather Based Crop Insurance Scheme (WBCIS)**  
**Operational Guidelines (OGs)**

**I. Objective of the Scheme**

Weather Based Crop Insurance Scheme (WBCIS) aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from adverse weather conditions relating to rainfall, temperature, wind, humidity etc. WBCIS uses weather parameters as “proxy” for crop yields in compensating the cultivators for deemed crop losses. Payout structures are developed to the extent of losses deemed to have been suffered using the weather triggers.

**II. Coverage of Farmers**

Refer para II of OGs of PMFBY.

**III. Coverage of Crops**

- 1) Food Crops (Cereals, Millets and Pulses)
- 2) Oilseeds
- 3) Commercial / Horticultural crops

**IV. Weather Perils to be Covered**

1. Following major weather perils, which are deemed to cause “Adverse Weather Incidence”, leading to crop loss, shall be covered under the scheme:
  - a) Rainfall – Deficit Rainfall, Excess rainfall, Unseasonal Rainfall, Rainy days, Dry-spell, Dry days
  - b) Temperature– High temperature (heat), Low temperature
  - c) Relative Humidity
  - d) Wind Speed
  - e) A combination of the above
  - f) Hailstorm, cloud-burst may also be covered as Add-on/Index-Plus products for those farmers who have already taken normal coverage under WBCIS.

The perils listed above are only indicative and not exhaustive and any addition / deletion may be considered by State Govt. in consultation with insurance companies based on availability of relevant data.

2. State Government shall consider to cover such perils which are capable of causing severe & quantifiable loss and can be induced directly or indirectly by change in measurable weather parameters to capture the losses during the adverse climatic conditions and have demonstrated correlation with quantifiable yield losses of crop due to such perils.
3. Only adverse weather incidences which can cause substantial crop losses should only be covered, or the triggers identified in such a way that major losses are captured. **Too conservative triggers tend to lead to frequent but smaller payouts, diluting the indemnity principle of insurance.**
4. State Governments will also continue to conduct the requisite number of Crop Cutting Experiments (CCEs) in areas where WBCIS is implemented to enable the implementing agencies to make analytical study for assessing

performance of the Scheme *vis-à-vis* yield Index based crop Insurance Schemes (i.e. PMFBY) and Benchmarking of products.

5. The specific “Adverse Weather Incidence” with its timing / duration applicable to a particular Notified crop shall be notified by the SLCCCI.

**V. Period of Risk (i.e. Insurance Period)**

Risk period would ideally be from sowing period to maturity of the crop. Risk period depending on the duration of the crop and weather parameters chosen, could vary with individual crop and reference unit area and would be notified by SLCCCI before the commencement of risk period.

**VI. Preconditions for Implementation of the Scheme**

Refer para V of OGs of PMFBY.

**VII. Notification**

State/UT Government should ensure issuance of the notification and its circulation to all concerned agencies / departments / institutions atleast one month prior to the commencement of the crop season / risk period. Notification issued by State government / UT should necessarily contain following details:

- a) Crops and Reference Unit Areas notified in various districts.
- b) Applicable Sum Insured, Premium rates, and subsidy etc.
- c) Term-sheets / product structures of various crops and Reference Unit Areas (RUA)
- d) Seasonality discipline for various activities.
- e) List of Reference and Back-up Weather Stations for each Reference Unit Area

**VIII. Selection of Areas & Crops**

1. SLCCCI shall, for the purpose of selection of crops under WBCIS, consider factors such as availability of historical weather data, minimum cropped area, weather perils capable of causing significant & quantifiable losses by change in measurable weather parameters etc.
2. State Govt. may convene meetings with insurance providers and experts of Agro-meteorology / agronomy from State Agriculture Universities, Research Institutes etc. for finalization of triggers, term-sheets and pay-out etc. before SLCCCI meeting. A Technical Committee may be constituted by the State Government for selection of crop(s), area(s), weather triggers under WBCIS, examination of proposals received from the Insurance Companies, and finalization of term-sheets for the proposed crop(s) / area(s) based on demonstrated correlation with historical weather & yield data and further evaluation of products & benefits to the farmers on insurance principles.
3. The Scheme shall operate on the principle of “Area Approach” in selected notified RUAs. Therefore, State Govt. may notify the smallest possible areas as insurance units / RUAs, which should be preferably, the Village Panchayat / Revenue Circle / Mandal / Hobli / Block / Tehsil etc.

**IX. Notification of the seasonality discipline**

Refer para VI(9) & IX of OGs of PMFBY.

**X. Notification of Reference Weather Stations (RWS) and Authorized Data providers**

1. SLCCCI based on distance and location and availability of Automatic Weather Stations / Rain Gauge will approve "Reference Weather Stations (RWS) for RUA"s. In addition to RWS for all RUAs, additional weather stations designated as Back-up Weather Stations (BWS) shall be notified for use in case RWS is unable to provide data for any reason. Information of RUAs along with RWS and back up weather stations shall be covered in notification issued at the commencement of the season. Such AWS & ARG should meet the requirements & standards as recommended in report of the committee constituted to draft the Guidelines for setting up Automatic Weather Stations (AWSs) and Automatic Rain Gauges (ARGs) by private agencies and their accreditation, standardization, validation and quality management of weather data etc. circulated by this Department in 2015.
2. Any new AWS/ARG including 5000 AWS planned to be established under PPP mode with support from Govt. of India, should be set up following the guidelines envisaged in the report of the above mentioned committee.
3. All claims shall be settled based on actual data recorded by the RWS. There is no protocol to revise or make change in the actual weather data recorded by the Reference AWS (notified). The insurance companies / their data provider will provide daily weather data recorded in the notified AWSs / ARGs to the State Govt. on request and they should also be given access to view real time weather data of the notified AWSs / ARGs, if so desired.

**XI. Sum Insured**

1. The Sum Insured (SI) for each notified crop is pre-defined and will be same for loanee and non-loanee farmers, which will be based on the 'Scale of finance' as decided by the District Level Technical Committee. If the scale of finance is not declared by DLTC the sum insured will be broadly based on the cost of cultivation of the crops and will be decided by State Government. Sum Insured for individual farmer is equal to the Sum Insured multiple by acreage of the notified crop. 'Area under cultivation' shall always be expressed in 'hectare'.
2. The Sum Insured of the crop may be distributed among the critical phases of the crop based on the accumulating input costs in its growing path of the crop during that phase. However, the sum insured assigned to the subsequent phases may be the summation of its previous phases to provide adequate compensation on damage of crop at later stages.

**XII. Premium Rates & Premium Subsidy**

Refer para VIII of OGs of PMFBY.

**XIII. Participation of Insurance Companies in Implementation of the Scheme**

Refer para XXIII of OGs of PMFBY.

**XIV. Collection of Proposals and Premium Amount**

Refer para X of OGs of PMFBY.

## **XV. Claims Assessment & Settlement**

1. Insurance company shall be responsible for all claims arising out of adverse weather incidence and shall settle claims strictly as per the terms and conditions of the scheme mentioned in the notification. In case of adverse weather incidence all the insured cultivators growing the notified crop in a RUA shall be deemed to have suffered the same level of adverse weather condition & same proportion of crop loss and become eligible for the same rate of claims.
2. Claims shall be assessed only on the basis of weather data recorded by the notified RWSs or BWS, as the case may be, and the claims process shall commence once the weather data is received. The weather data providers should ensure that the exposure conditions of AWS, their standardization / calibration, maintenance and weather data transmission meet the guidelines issued by the Government.
3. Claims processing should be strictly as per the insurance term sheets, payout structure and the Scheme provisions. Claims shall be worked out as per the Insurance Declarations received from the Nodal Branches/ Nodal Banks for each notified area and crop.
4. Administrative structure for collection of premium, insurance proposal and remittance of admissible claim along with other return will be same as PMFBY. (Refer para X of Operational Guidelines of PMFBY)
5. All standard Claims should be processed and paid within 45 days from the end of the risk period. Further verification & collection of relevant documents / papers, if required, in respect of affected farmers should be completed within a period of 30 days from payment of standard claims of season.
6. Insurance Companies should verify & satisfy themselves about the insured farmers, crops & areas before approaching the Government for release of Subsidy. Cases of area discrepancies under WBCIS will be settled as per procedure explained in para XVII(4) of OGs of PMFBY, and such cases should be settled within a maximum period of three months from closing of crop season.
7. Disputed claims / sub-standard claims, if any, shall be referred through State Government to DAC&FW for disposal by the insurance company and the decision or any interpretation of DAC&FW of provisions of scheme or disputes shall be binding on all concerned.
8. If observed index value falls below or above, (as the case may be) the notified trigger value, then claims per unit shall be calculated using following formula depending upon index definition:

**Claims per Unit = (Difference between Observed & Notified index values) X Notional Payout**

Overall claims will be 'Claims per Unit' X 'Number of units'

### Illustration

In table below, a farmer having 1, 2 and 3 hectares of land in RUAs X, Y and Z respectively buys an insurance policy having deficit rainfall cover.

**Table 1: Deficit Rainfall Cover**

Index	Aggregate rainfall in mm during cover phase
Cover Phase, From	1-July

To	15-August
Strike 1 (mm)	200
Strike 2 (mm)	150
Exit (mm)	100
Standard Loss Rate between Strike 1 and Strike 2 – <i>Notional 1</i> (Rs / mm / Hectare)	50
Standard Loss Rate between Strike 2 and Exit – <i>Notional 2</i> (Rs / mm / Hectare)	80
Standard loss below Exit	Nil
Policy Limit (Rs / Hectare)	6500

In table below actual observed index values are mentioned for 3 notified RUAs during the cover period obtained on the basis of data of RWS.

**Table 2**

RUA	RWS	Strike-1	Strike-2	Exit	Notional-1	Notional-2	Policy Limit	Observed Index
X	A	200	150	100	50	80	6500	300
Y	B	200	150	100	50	80	6500	120
Z	C	200	150	100	50	80	6500	80

**RUA X:** In this case notified trigger value is 200. Observed index value is 300. In this case there would be no claim payable as the notified trigger is not breached.

**RUA Y:** Here observed index value is 120.

Hence, claims per unit will be:  $\{(200-150)*50\}+\{(150-120)*80\} = \text{Rs. } 4900$ .

For two hectares, overall claim= Rs. 4900 X 2= Rs. 9800/-

**RUA Z:** Here observed index value is 80 which has breached the exit level. Hence in this case the full sum insured assigned to the phase of Rs. 6500 per unit would be payable.

For two hectares, overall claim= Rs. 6500 X 2= Rs. 13000/-

Using the methodology discussed above, total claims will be worked out.

**XVI. Modalities for assessment of loss due to localized perils of Hailstorm and Cloudburst (Add-on / Index-Plus product)**

Refer all sub-paras of para XV of OGs of PMFBY.

**XVII. Important Conditions / Clauses Applicable for Coverage of Risks**

1. In case of any substantial misreporting by bank branch / cooperative nodal bank / PACS particularly of compulsory farmers coverage, the concerned bank only shall be liable for such misreporting. Refer para XXIV.4. 'e' of sub-head "Lead Bank / Administrative Office of commercial banks /RRBs" & 'f' of sub-head "Lending Banks/RFIs".
2. Insured / applicant must have insurable interest. Mere sanctioning / disbursement of crop loans and submission of proposals / declarations and remittance of premium by farmer/ bank, without explicit intent to raise the crop, does not constitute acceptance of risk by insurance company.

## **XVIII. Role & Responsibilities of Various Agencies**

### **1. Central Government**

- a) Constitute a Technical Support Unit (TSU) to monitor implementation of WBCIS, product structuring, standardization & Benchmarking of products, rationalization of premium rate / subsidy, issuing guideline for installation & accreditation of Weather Stations, creation of national grid for statistical data for the purpose and other matter / directives to insurance companies.
- b) Other role & responsibilities are same as detailed in para XXIV.1.'a' to 'g' of OGs of PMFBY.

### **2. State / UT Governments**

- a) To provide the details of crop calendar and package of practices for the crops and the areas under the scheme for the first year. Weather data is required to be furnished in the daily format at least for 25 years at the RUA level proposed to be notified for the scheme, wherever necessary.
- b) To constitute a Technical Committee with experts in the relevant areas for finalization of triggers, term-sheets, pay-out etc before SLCCCI meeting and further evaluation of products and benefits to the farmers.
- c) To facilitate strengthening and expanding the existing automatic weather station network so as to facilitate providing the weather data on near real-time basis.
- d) To undertake sufficient number of CCEs in the notified area and provide the yield data to concerned insurance companies for comparison with WBCIS particularly to establish correlation between yield and weather parameters to help in designing of better weather insurance products, standardization & benchmarking of products etc.
- e) Other role & responsibilities are same as detailed in para XXIV.2.'a' to 'o' of OGs of PMFBY.

### **3. Insurance Companies (IA)**

- a) Open a separate account for maintaining all transactions under the scheme in the account for audit by the Government Agency.
- b) Claims processing, finalization and payment of the claims within 45 days of receipt of weather data subject to receipt of Government subsidy.
- c) Other role & responsibilities are same as detailed in para XXIV.3.'a' to 'o' of OGs of PMFBY.

### **4. Financial Institutions/Banks**

#### Nodal bank branches/cooperative nodal banks

- a) **In case, claims have arisen during crop season then respective nodal bank & its branches would be responsible to make payment of the admissible claims to loanee farmers who were deprived from insurance cover to their crops due to non-deduction of premium by lending banks/branches.**
- b) **If Nodal banks keep the amount of premium collected beyond the defined timelines(Refer Para IX of OGs of PMFBY) then they will be liable to pay interest (at prevailing rate of interest for saving account) for the delay period to the insurance company.**
- c) **If Nodal banks keep the claims amount beyond the defined timelines (Refer Para XVI.3 of OGs of PMFBY) then they will be liable to pay interest (at prevailing rate of interest for saving account) for the delay period to the eligible farmers.**
- d) Other role & responsibilities are same as detailed in para XXIV.4.'a' to 'm' of OGs of PMFBY.

Lending Banks / RFI

Refer para XXIV.4.'a' to 'f' (second) of OGs of PMFBY.

## 5. Designated Insurance agents

Refer para XXIV.5.'a' to 'f' of OGs of PMFBY.

6. Loanee farmers

Refer para XXIV.6.'a' to 'd' of OGs of PMFBY.

7. Non-Loanee farmers

Refer para XXIV.7.'a' to 'g' of OGs of PMFBY.

8. Role & Responsibilities of Weather data providers

a) The Automatic Weather Stations (AWSs) and Automatic Rain Gauges (ARGs) of IMD, State Governments, Agriculture Universities or any other organizations / institutions and Independent Third Parties like National Collateral Management Services Limited (NCML), Weather Risk Management Services Pvt. Limited (WRMS), Skymet etc. should only be notified as Reference Weather Stations (RWSs) or Back up Weather Stations (BWSs) which meet the basic minimum criteria fixed by the IMD / Government for the purpose.

b) The data provider should ensure that all the equipments, weather sensors etc. of AWSs / ARGs should be standard, installed properly and regularly maintained as per the specification detailed in the Guidelines issued by IMD / DAC&FW and the equipments should also be calibrated regularly.

c) The data provider should maintain the quality of weather data and standards for dissemination, retrieval & validation of weather data etc.

d) The data provider should work independent from the insurer (insurance Company) and insured (farmer).

e) The data provider should provide weather data in prescribed formats on near real time basis to insurance companies / State Govt.

f) The data provider should ensure that insured farmers may not be deprived of any benefit under the Scheme due to non-functioning of weather sensors / sub-standard data/ loss of data etc. and if any, the concerned agency shall only make good all such losses.

g) The data provider should get the weather station equipment, exposure conditions, maintenance, data quality, etc. certified by an accreditation agency, who may randomly visit some of the weather stations from time to time.

**XIX. Illustration for preparation of Term sheet**

Crop season is segregated into 3-4 phases according to important activities taking place in growth cycle of the crop (i.e. critical stages). For example, if rainfall period is from 15<sup>th</sup> June to 31<sup>st</sup> August. The requirement of rain (water) by the crop plant may also vary fortnightly (i.e. 1-15<sup>th</sup> July, 15-31<sup>st</sup> July, 1-15<sup>th</sup> August, 16-31<sup>st</sup> August, 1-15<sup>th</sup> September and so on) or monthly or such other period that the State Government decides. Therefore, the requirement of rainfalls / weather parameters should be assessed for each fortnight / month according to historical data. The pay-out trigger(s) should be fixed strictly according to demonstrated correlation with requirement of weather parameters to the crop at each critical stages and also soil types, topography etc. Product outlines of such product are given below:



WEATHER BASED CROP INSURANCE SCHEME			
TERM SHEET		SEASON	
State: A	District: B	Tehsil: C	
1.	Crop: D	RAU: E	
	Reference Weather Station: F		
DEFICIT RAINFALL			
		PHASE-I	PHASE-II
RAINFALL VOLUME	PERIOD	15 <sup>th</sup> June to 20 <sup>th</sup> July	21 <sup>st</sup> July to 20 <sup>th</sup> August
	TRIGGER	50 mm	80 mm
			PHASE-III
			21 <sup>st</sup> August to 25 <sup>th</sup> September
			80 mm
<b>No. of consecutive Dry Days</b>			
RAINFALL DISTRIBUTION (Consecutive Dry Days)	PERIOD	1 <sup>st</sup> July to 5 <sup>th</sup> September	
	TRIGGER DAYS(>=)	24	
	20		
Note: Rainfall of less than 2.5 mm in a day shall not be considered as a rainy day			
2.	EXCESS RAINFALL ON A SINGLE DAY	PERIOD	15 <sup>th</sup> July to 15 <sup>th</sup> August
		TRIGGER (>)	200 mm

If rainfall period is from 15<sup>th</sup> July to 31<sup>st</sup> October, the requirement of rain (water) by the crop plant may also vary fortnightly (i.e. 15-31<sup>st</sup> July, 1-15<sup>th</sup> August, 16-31<sup>st</sup> August, 1-15<sup>th</sup> September and so on) or monthly or such other period that the State Government decides on prevailing weather condition.

#### TERMSHEET FOR WEATHER BASED CROP INSURANCE SCHEME

CROP : A  
 STATE : B  
 District : C  
 Tehsil : D  
 Reference Weather Station: E (IMD)

INDEX – A (Excess Rainfall Cover)				
Maximum of cumulative rainfall in mm of any 2 consecutive days during the cover period				
Cover Phase,	From	15-Jul	1-Sep	1-Oct
	To	31-Aug	30-Sep	31-Oct
Strike 1 (mm)		80	33	15

Strike 2 (mm)	175	95	45
Exit (mm)	285	200	134
Standard Loss Rate between Strike 1 and Strike 2-Notional 1 (Rs/mm/Hectare)	7.37	6.45	9.67
Standard Loss Rate between Strike 2 and Exit-Notional 2 (Rs/mm/Hectare)	20.91	24.76	30.45
Policy Limit (Rs/Hectare)	3000	3000	3000

<b>INDEX B (Deficit Rainfall Cover)</b>			
Aggregate rainfall during the cover phases in mm			
Cover Phase,	From	25-Jun	16-Aug
	To	15-Aug	30-Sep
Strike 1 (mm)		475	200
Strike 2 (mm)		270	95
Exit (mm)		25	10
Standard Loss Rate between Strike 1 and Strike 2-Notional 1 (Rs/mm/Hectare)		7	21
Standard Loss Rate between Strike 2 and Exit-Notional 2 (Rs/mm/Hectare)		24	62
Policy Limit (Rs/Hectare)		7500	7500

<b>INDEX C (Consecutive Dry Days)</b>		
Maximum Number of Consecutive Dry Days (CDD) where dry day is a day with rainfall less than equal to 2.5mm		
Cover Phase,	From	15-July
	To	31-August
Strike 1 (CDD's)		4
Strike 2 (CDD's)		10
Strike 3 (CDD's)		14
Strike 4 (CDD's)		19
Exit (CDD's)		24
Payout 1 (Rs/Hectare) for Strike 1 < CDD ≤ Strike 2		328
Payout 2 (Rs/Hectare) for Strike 2 < CDD ≤ Strike 3		720
Payout 3 (Rs/Hectare) for Strike 3 < CDD ≤ Strike 4		1800
Payout 4 (Rs/Hectare) for Strike 4 < CDD ≤ Exit		3600
Maximum Payout (RS/Hectare) for CDD > Exit		6000

Combined Policy Limit (Rs/Hectare) –say	30,000
Premium (Rs/Hectare) say	3,000
Farmer's Share (Rs/Hectare) say	750

**Backup reference Weather Stations:** X

**Data Source:** IMD /Independent third party like NCMSL, SKYMET, etc.

**Settlement Date:** Within Thirty days from the data released by data provider.

**Other Terms & Conditions:** The Operational Guidelines / Administrative Approval and other instructions issued by DAC&FW and State Government from time to time.

**XX. Other provisions are same as envisaged under Operational Guidelines of PMFBY**

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**Coconut Palm Insurance Scheme (CPIS)**

There are no changes in the Operational Guidelines of CPIS issued earlier by this Department vide letter No. 13015/02/2012-Credit II dated 4<sup>th</sup> February, 2014.

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