



INDIA METEOROLOGICAL DEPARTMENT

# DISASTROUS WEATHER EVENTS, 2015



ISSUED BY  
NATIONAL CLIMATE CENTRE  
OFFICE OF THE  
HEAD, CLIMATE RESEARCH AND SERVICES  
PUNE – 411 005

**Cover Photo:** Heavy rainfall due to Vigorous northeast monsoon activity during first week of December affected the south peninsula, especially Tamil Nadu with the city of Chennai particularly hard-hit. The floods were among the costliest natural disasters of the year for the country. Seen in picture is a flooded road in Chennai and the People travelling on a boat to move to safer places.

December 2, 2015 - Reuters (<http://www.dawn.com>)



भारत सरकार  
GOVERNMENT OF INDIA  
भारत मौसम विज्ञान विभाग  
INDIA METEOROLOGICAL DEPARTMENT

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## विपदाकारी मौसम घटनाएँ - 2015

2015 की सबसे चित्तग्राही विपदाकारी मौसम घटनाएँ इस प्रकार थे :

- देश के उत्तरपश्चिमी, पूर्वी, मध्य एवं प्रायद्वीपीय भागों में उष्ण लहर की स्थितियाँ प्रबल रहीं, जिसके कारण 2000 से अधिक लोगों की मृत्यु हुई, जिनमें से 1442 आंध्रप्रदेश से तथा 584 तेलंगाना से थी ।
- 2015 की ग्रीष्म मॉनसून के दौरान बाढ़ तथा भारी वर्षा के कारण अधिक संख्या में पशुधन हानि एवं कृषि तथा निजी / सार्वजनिक सम्पत्तियों के अत्यधिक क्षतिग्रस्त होने के अलावा 415 लोगों की मृत्यु हुई । गुजरात में “अमरेलि बाढ़” ने 70 से अधिक लोगों की जानें ली ।
- 2015 की उत्तरपश्चिमी मॉनसून के दौरान बाढ़ तथा भारी वर्षा के कारण अधिक संख्या में पशुधन हानि एवं कृषि तथा निजी / सार्वजनिक सम्पत्तियों के अत्यधिक क्षतिग्रस्त होने के अलावा 332 लोगों की मृत्यु हुई । बाढ़ तथा भारी वर्षा के कारण तमिलनाडु में 214 तथा आंध्रप्रदेश में 92 लोगों की मृत्यु हुई ।
- चक्रवाती तूफान (कोमेन) 26 जुलाई - 02 अगस्त 2015 । चक्रवाती तूफान (सीएस), कोमेन, बंगाल की खाड़ी (बीओबी) में एक कम दबाव के क्षेत्र से विकसित हुआ जो 25 जुलाई की शाम को उत्तर-पूर्व बीओबी और आसपास बांग्लादेश और पश्चिम बंगाल के ऊपर ठहरा और 26 वें जुलाई की सुबह वही क्षेत्र में अवदाब में केंद्रित हुआ। 30 जुलाई को बंगाल के उत्तर पूर्व खाड़ी के ऊपर एक अर्धवृत्ताकार ट्रैक का पालन करते हुए हटिया और संद्विप के बीच अक्षांश 22.5°उ. / देशांतर 91.4°पू. के आसपास 1400 - 1500 यू. टी. सी. के दौरान बांग्लादेश तट को पार किया। भूस्खलन के बाद, शुरू में उत्तर-उत्तर पश्चिम, बाद में पश्चिम की ओर पश्चिम-दक्षिण पश्चिम की ओर बांग्लादेश, गंगीय पश्चिम बंगाल और झारखंड के पार स्थानांतरण हुआ। यह 02 अगस्त 1200 यूटीसी को झारखंड और निकटवर्ती उत्तर ओडिशा और उत्तरी छत्तीसगढ़ क्षेत्र में सुस्पष्ट कम दबाव में धीरे-धीरे कमजोर हो गया। इसके कारण पश्चिम बंगाल में 69 लोगों की मृत्यु हुई ।

इन प्राकृतिक आपदाओं का सारांश प्रेस तथा भारत मौसम विज्ञान विभाग के विविध विवरणों की सूचनाओं पर आधारित हैं ।  
प्रतिकूल मौसम स्थितियों से प्रभावित क्षेत्रों को ऋतुवार चार मानचित्रों में दर्शाया गया है ।



## DISASTROUS WEATHER EVENTS OF 2015

**The most striking disastrous weather events of 2015 were the following:**

- Heat wave conditions prevailed over Northwest, Eastern, Central and Peninsular parts of the country and claimed human lives over 2000 out of which 1422 lives claimed from Andhra Pradesh and 584 lives claimed from Telangana.
- During summer monsoon of 2015, floods and heavy rains claimed 415 human lives apart from loss of large number of livestock and extensive damage to agriculture and public/private property. “**Amreli flood**” in **Gujarat** claimed more than 70 lives.
- During northeast monsoon of 2015, floods and heavy rains claimed 322 human lives apart from loss of large number of livestock and extensive damage to agriculture and public/private property. Floods and heavy rains claimed 214 lives in Tamil Nadu and 92 lives in Andhra Pradesh.
- A Cyclonic Storm (KOMEN) 26 July – 02 August 2015 : The cyclonic storm (CS), KOMEN over the Bay of Bengal (BoB) developed from a low pressure area which lay over northeast BoB and adjoining Bangladesh & Gangetic West Bengal on 25 July evening and concentrated into a depression over the same area in the morning of 26 July. It followed a semi circular track over northeast Bay of Bengal and then crossed Bangladesh coast between Hatia and Sandwip near lat. 22.5°N and long. 91.4°E during 1400 and 1500 UTC of 30 July. After landfall, it moved initially north-northwestwards, then westwards and west-southwestwards across Bangladesh, Gangetic West Bengal and Jharkhand. It weakened gradually into a well marked low pressure area over Jharkhand and adjoining north Odisha and north Chhattisgarh at 1200 UTC of 02 August. It took a toll of 69 in West Bengal.

The summary of these natural hazards is based on various reports of the India Meteorological Department and press information. The areas affected by the adverse weather conditions are depicted season wise on four maps.

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## सारिणी - I : हिमपात 2015

### निकष

मध्यम : 7.6 से 15.5 सेमी. 24 घंटेमें ।

कुछ भारी : 15.6 से 35.5 सेमी. 24 घंटेमें ।

भारी : 35.6 से 64.4 सेमी. 24 घंटेमें ।

### TABLE – I : SNOWFALL

#### CRITERIA

Moderate : 7.6 to 15.5 cm in 24 hrs.

Rather Heavy : 15.6 to 35.5 cm in 24 hrs.

Heavy : 35.6 to 64.4 cm in 24 hrs.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	1 & 2 Mar	Bilaspur, Chamba, Kullu, Shimla, Sirmur, Una (Himachal Pradesh)	Heavy	Total 4 persons died. 2 persons buried in avalanche in Chamba Dist. One woman & her kid buried due to landslide in Kullu Dist.	i) Damage to Chopal forest in Shimla Dist. reported. ii) State & National Highway remained closed. iii) Power supply & essential commodities disrupted.
2.	3 Mar	Jammu & Kashmir	Heavy	2 persons died due to avalanche.	
3.	6 Mar	Pithorgarh (Uttarkhand)	Heavy	3 javans of Indian Army died due to avalanche.	
4.	15 Mar	Pulwama (Jammu & Kashmir)	Heavy	3 persons injured due to snow avalanche at Branpatheri Nagbal Tral	
5.	20 Mar	Ramban (Jammu & Kashmir)	Heavy	3 persons died due to snow avalanche in Mahoo area.	
6.	29 & 30 Mar	Kullu, Mandi, Lahaul & Spiti, Shimla (Himachal Pradesh)	Rather heavy		Damage to wheat crops, vegetables & fruit crops reported.

## सारिणी - II : शीत लहर 2015

### निकष

(A) जब, सामान्य न्यूनतम तापमान 10°C या अधिक है।  
शीत लहर : रात का तापमान 5°C से 6°C सामान्य से नीचे।  
तिव्र शीत लहर : रात का तापमान 7°C या सामान्य से अधिक नीचे।

(B) जब, सामान्य न्यूनतम तापमान 10°C से कम हो ।  
शीत लहर : रात का तापमान 4°C से 5°C सामान्य से नीचे।  
तिव्र शीत लहर: रात का तापमान 6°C या सामान्य से अधिक नीचे।

### TABLE – II : COLD WAVE

#### CRITERIA

(A) When, Normal minimum temperature is 10°C or more.  
Cold wave : Night temperature 5°C to 6°C below normal.  
Severe cold wave : Night temperature 7°C or more below normal.

(B) When, Normal minimum temperature is less than 10°C.  
Cold wave : Night temperature 4°C to 5°C below normal.  
Severe cold wave : Night temperature 6°C or more below normal.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	5 & 6 Jan.	Jhalwar, Bhilwara (Rajasthan)	Severe (B)	2 persons died.	
2.	12 Jan	Parts of Uttar Pradesh	Severe (Both A & B as appropriate)	7 persons died.	

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
3.	22 Jan	Hardoi, Farrukhabad, Mahoba (Uttar Pradesh)	Severe (Both A & B as appropriate)	Total 3 persons died. Hardoi - 1, Mahoba - 2	Damage to Tomato, vegetable crops reported.
4.	19 & 20 Feb	Kinnaur, Kullu, Shimla (Himachal Pradesh)	Severe (B)	3 persons died.	
5.	8 & 9 Mar	Chamba, Kangra, Kinnaur, Lahaul & Spiti (Himachal Pradesh)	Severe (Both A & B as appropriate)	2 persons died in Chamba Dist.	Damage to Orchards, Wheat crops, Peas, Potato and Onion crops reported.
6.	25 Dec	Chhatarpur (Madhya Pradesh)	Severe (B)	One person died.	

### सारिणी - III : उष्ण लहर 2015

#### निकष

- (A) जब, सामान्य अधिकतम तापमान  $40^{\circ}\text{C}$  या कम।  
 उष्ण लहर : सामान्य से विचलन  $5^{\circ}\text{C}$  to  $6^{\circ}\text{C}$ ।  
 तिब्र उष्ण लहर : सामान्य से विचलन  $7^{\circ}\text{C}$  या अधिक।  
 (B) जब, सामान्य अधिकतम तापमान  $40^{\circ}\text{C}$  से अधिक।  
 उष्ण लहर : सामान्य से विचलन  $4^{\circ}\text{C}$  से  $5^{\circ}\text{C}$ ।  
 तिब्र उष्ण लहर : सामान्य से विचलन  $6^{\circ}\text{C}$  या अधिक।

TABLE – III : HEAT WAVE

#### CRITERIA

- (A) When, Normal maximum temperature is  $40^{\circ}\text{C}$  or less.  
 Heat Wave: Departure from normal is  $5^{\circ}\text{C}$  to  $6^{\circ}\text{C}$ .  
 Severe Heat Wave: Departure from normal is  $7^{\circ}\text{C}$  or more.  
 (B) When, Normal maximum temperature is more than  $40^{\circ}\text{C}$ .  
 Heat Wave: Departure from normal is  $4^{\circ}\text{C}$  to  $5^{\circ}\text{C}$ .  
 Severe Heat Wave: Departure from normal is  $6^{\circ}\text{C}$  or more.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	1 Apr to 31 May	Adilabad	Severe	26	
		Hyderabad	(Both A & B	11	
		Karimnagar	as	145	
		Khammam	appropriate)	99	
		Mahaboobnagar		45	
		Medak		35	
		Nalgonda		148	
		Nizamabad		18	
		Ranga Reddy		36	
		Warangal		21	
		* Total		584	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
2.	1 Apr to 20 Jun.	Ananthapuram Chittoor East Godavari Guntur Krishna Kurnool Prakasam SPS Nellore Srikakulam Visakhapatnam Vizianagaram West Godavari YSR Kadapa	Severe (Both A & B as appropriate)	37 115 147 144 80 48 96 178 95 214 137 84 47	
		<b>* * Total</b>		<b>1422</b>	
		* As per data received from Disaster Management, Govt. of Telangana.			
		** As per data received from Disaster Management, Govt. of AP.			
3.	19 Apr.	Purulia (West Bengal)	Severe (A)	One person died.	
4.	5,12,16,19 May & 21 May to 31 May	Angul, Balasore, Barhgarh, Bolangir, Cuttack, Dhenkanal, Ganjam, Jajpur, Kendrapara, Khurda, Nuapada, Puri, Rayagada, Subarnapur (Odisha)	Severe (Both A & B as appropriate)	36 persons died.	
5.	16 May	Purulia (West Bengal)	Severe (A)	2 persons died.	

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
6.	18 May	Sikar (Rajasthan)	Severe (A)	One person died.	
7.	19 May	Burhanpur (Madhya Pradesh)	Severe (A)	2 persons died.	
8.	22 May	Burdwan (West Bengal)	Severe (A)	One person died.	
9.	23 May	Birbhum, Hooghly, Kolkata, Nadia, Purulia, West Medinipur (West Bengal)	Severe (Both A & B as appropriate)	8 persons died.	
10.	26 May	Alwar (Rajasthan)	Severe (B)	One person died.	
11.	27 May	Parts of Gujrat	Severe (Both A & B as appropriate)	7 persons died.	
12.	1, 3, 7, 11, 12 Jun.	Dhenkanal, Ganjam, Jajpur, Keonjhar, Mayurbhanj (Odisha)	Severe (Both A & B as appropriate)	9 persons died.	
13.	17 Jun.	Purulia (West Bengal)	Severe (A)	2 persons died.	
14.	10, 19, 20, 27, 28 Jul.	Balasore, Bhadrak, Deogarh, Jajpur, Jharsuguda, Keonjhar, Malkangiri, Mayurbhanj & Sundargarh (Odisha)	Severe (Both A & B as appropriate)	5 persons died.	



#### सारिणी - IV : अंधड़ (स्कॉल) 2015

हवा की गति में कम से कम 29 किलोमीटर (16 kts) प्रति घंटे से 40 किलोमीटर (22 kts) प्रति घंटे या अधिक और अचानक वृद्धि और कम से कम एक मिनट के लिए स्थायी।

#### निकष

मध्यम : सतह हवा की गति (gusts में) 80 किलोमीटर प्रति घंटे तक।

तीव्र : सतह हवा की गति (gusts में) > 80 किलोमीटर प्रति घंटे।

#### TABLE - IV : SQUALL 2015

A sudden increase of wind speed by at least 29 kmph (16 kts), the speed rising to 40 kmph (22 kts) or more and lasting for at least one minute

#### CRITERIA

Moderate : Surface wind speed (in gusts) up to 80 kmph.

Severe : Surface wind speed (in gusts) > 80 kmph.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	9 Apr.	Amravati (Maharashtra)	Severe	One person died and 10 others injured.	i) Roofs of houses blown away. ii) Many trees uprooted. iii) Damage to banners reported.
2.	9 May	Raipur (Chhattisgarh)	Severe	Labour & Police staff injured.	Damage to Pandal reported.
3.	28 May	Sukma,Bastar(Chhattisgarh)	Severe	5 CRPF Javan injured.	Damage to CRPF camp reported.
4.	2 Jun	Raipur (Chhattisgarh)	Severe	One person injured.	Damage to houses, electric polls & school building reported.
5.	4 Jun	Rajnandgaon(Chhattisgarh)	Moderate		Damage to house & mobile tower reported.

**सारिणी - V : झंझा 2015**

**निकष**

तीव्र : हवा की गति  $\geq 75$  किलोमीटर प्रति घंटे

**TABLE - V : GALE 2015**

**CRITERIA**

Strong : Wind speed  $\geq 75$  kmph

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
1.	16 Mar.	Alappuzha, Ernakulam (Kerala)	Strong	-	i) Some trees/electric poles uprooted. ii) Boat capsized. iii) Damage to fishing net worth Rs.4 lakhs reported.
2.	17 Mar.	Ernakulam (Kerala)	Strong	-	Damage to Rubber, Nutmeg, Banana, Tapioca crops reported.
3.	10 Apr.	Coimbatore (Tamil Nadu)	Strong		Damage to 5000 Banana trees in Pollachi town & surrounding areas reported.
4.	23 Apr	Davanagere (Karnataka)	Strong		Damage to 18 acres of Banana plantations reported.
5.	4 May	(a)Ernakulam, Kannur, Kozhikode (Kerala)	Strong		i) 2 houses completely damaged. ii) Damage of more than Rs. 3 lakhs worth reported. iii) Severe loss to agriculture crops. iv) Hundreds of Banana plantation uprooted.
		(b)Havari (Karnataka)	Strong		Damage to about 100 houses reported.

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
6.	6 May	Ernakulam (Kerala)	Strong		1500 ripe Banana plantation & number of Nutmeg trees uprooted.
7.	9 May	Kottayam (Kerala)	Strong	One child injured.	i) Damage to acres of Rubber & vegetable crops reported. ii) Several Nutmeg, Teak trees uprooted. iii) Damage to one house reported.
8.	21 May	Raichur, Koppal (Karnataka)	Strong	2 children died.	
9.	29 May	Gadag, Havari (Karnataka)	Strong	2 persons died as a tree fell on them.	
10.	31 May	(a)Alappuzha (Kerala)	Strong		i) Some trees/electric poles uprooted. ii) Mavelikkara - Pandalam road traffic disrupted as the trees uprooted & fell across the road.
		(b)Gulbarga (Karnataka)	Strong	One person died & one other injured as zinc sheet fell on them.	
11.	18 Jun	(a)Cuddalore (Tamil Nadu)	Strong		One lakh plantain trees uprooted.
		(b)Alappuzha (Kerala)	Strong		i) Damage to houses & house hold electric appliances reported. ii) A number of trees / electric poles uprooted disrupting power supply for whole day.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
12.	15 Jul	Kollam (Kerala)	Strong	2 children injured.	One house completely damaged as uprooted tree fell over it.
13.	5 Sep	Pathanamthitta (Kerala)	Strong		i) Severe loss to agriculture crops reported. ii) 250 Banana plantations uprooted.

### सारिणी - VI : आंधी 2015

#### निकष

मध्यम : हवा की गति 39 से 74 किलोमीटर प्रति घंटे के बीच और  
क्षैतिज दृश्यता 500 मीटर की दूरी पर ।

तीव्र : हवा की गति  $\geq 75$  किलोमीटर प्रति घंटे और 50 मीटर की दूरी पर क्षैतिज दृश्यता।

### TABLE - VI : DUST STORM 2015

#### CRITERIA

Moderate : Wind speed between 39 to 74 kmph and horizontal visibility up to 500 meters.

Severe : Wind speed  $\geq 75$  kmph and horizontal visibility up to 50 meters.

1.	3 Apr.	Jaipur (Rajasthan)	Severe	2 women died due to wall collapse.
2.	11 Apr.	Udaipur (Rajasthan)	Severe	3 children died in Sukhor
3.	19 May	Baran, Bharatpur, Bikaner, Bundi, Dholpur, Jaipur, Nagaur, Sawai Madhopur (Rajasthan)	Severe	20 persons died. Baran -1, Bharatpur - 6, Bikaner- 2, Bundi - 1, Dholpur - 3, Jaipur - 4, Nagaur - 1, Sawai Madhopur - 2

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
4.	1 Dec	Lucknow (Uttar Pradesh)	Severe	5 persons died & 50 others injured.	i) 6 flights including 2 International flights delayed. ii) Several trees uprooted causing disruption in vehicular traffic & power supply.

### सारिणी - VII : मेघ विद्युत 2015

**TABLE - VII : LIGHTNING 2015**

1.	7 Feb.	Guna (Madhya Pradesh)		2 persons died & one injured Barmauri Block of Guna District.
2.	13 Feb	Jaipur, Puri, Kendrapara (Odisha)		3 persons died.
3.	27 Feb	East & West U.P.		Total 8 persons died. East U.P - 6 , Avadh region - 2
4.	2 Mar	Akola, Amravati, Nagpur, Yeotmal (Maharashtra)		One person died & 2 persons injured.
5.	5 Mar.	Dharmapuri (Tamil Nadu)		4 persons died and 10 injured in Palacode.
6.	8 Mar.	Bellary, Bidar, Gulbarga, Hassan, Raichur, Shimoga (Karnataka)		7 persons died and 9 others injured.
7.	9 Mar.	Belgaum, Bellary, Dakshina Kannada (Karnataka)		2 persons died and 4 others injured. 22 animals perished.

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
8.	13 Mar.	Chittoorgarh (Rajasthan)		One woman died in Bijaypur	
9.	14 Mar.	(a)Belgaum (Karnataka)		One person died.	
		(b)Baran, Sawai Madhopur (Rajasthan)		4 persons died	
10.	15 Mar.	(a)Ajmer, Bikaner, Bundi Rajsamand, Sawai Madhopur, Tonk, Udaipur (Rajasthan)		18 persons died. About 160 livestock perished in Karwar, Dist. Bundi.	
		(b)Jhabua, Rajgarh (Madhya Pradesh)		3 persons died.	
11.	18 Mar.	Khurda (Odisha)		6 boys died in Jaripada panchayat area.	
12.	26, 30 Mar.	Dhenkanal, Ganjam, Khurda, Koraput, Mayurbhanj (Odisha)		8 persons died.	
13.	29 Mar.	Baran, Dholpur (Rajasthan)		2 persons died.	
14.	30 Mar.	(a) Bellary, Hassan, (Karnataka)		3 persons died.	
		(b) Baran (Rajasthan)		One person died in Kasbathana village	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
		(c) Birbhum, Burdwan, Murshidabad (West Bengal)		7 persons died.	
		(d) Darbhanga, Munger, Nalanda, Patna, Samastipur, Siwan, Vaishali, West Champaran(Bihar)		12 persons died & 2 buffaloes perished.	
15.	31 Mar	Mayurbhanj (Odisha)		5 persons died.	
16.	5 Apr.	Howrah, Jalpaiguri, West Medinipur (West Bengal)		4 persons died & 25 injured.	
17.	8 Apr	Bidar, Raichur, (Karnataka)		One person died in Bidar Dist. One animal perished in Raichur Dist.	
18.	9 Apr	Raipur (Chhattisgarh)		One person died.	
19.	10 Apr	Gulbarga, Bijapur, (Karnataka)		4 persons died, One person injured & 4 animals perished.	
20.	11 Apr.	(a) Alirajpur, Barwani (Madhya Pradesh)		2 girls died.	
		(b) Ajmer, Bikaner (Rajasthan)		3 persons died	
		(c) Bidar (Karnataka)		One person died.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
21.	12 Apr.	Vellore, Viluppuram (Tamil Nadu)		8 persons died & 60 goats perished.	
22.	15 Apr.	Raisen (Madhya Pradesh)		One person died.	
23.	16 Apr.	Korba (Chhattisgarh)		One person died.	
24.	20 Apr.	Sivaganga (Tamil Nadu)		2 persons died.	
25.	23 Apr.	(a)Raipur (Chhattisgarh)		2 persons died.	
		(b)Bijapur, Dharwad, Hassan, Haveri , Raichur (Karnataka)		8 persons died & one injured.	
26.	24 Apr	(a)Bastar, Dantewada (Chhattisgarh)		3 persons died.	
		(b)Hassan, Kodagu, Shimoga (Karnataka)		Total 3 persons died. One person in each Dist.	
27.	25 Apr	(a) Raipur (Chhattisgarh)		One person died.	
		(b) Mysore (Karnataka)		2 persons died.	
28.	29 Apr	Lucknow, Sitapur (Uttar Pradesh)		2 persons died.	
29.	30 Apr	Hassan (Karnataka)		One woman died.	
30.	3 May	(a)Raipur (Chhattisgarh)		2 persons died.	



<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
		(b) Balasore, Cuttack, Jajpur, Khurda, Nayagarh (Odisha)		Total 14 persons died. Balasore-4, Cuttack-1, Jajpur- 3, Khurda - 5, Nayagarh - 1	
31.	4 May	Kanyakumari (Tamil Nadu)		3 persons died.	
32.	5 May	(a) Belgaum, Bellary (Karnataka)		2 persons died in Belgaum Dist. 14 goats perished in Bellary district.	
		(b) Bolangir, Mayurbhanj Nuapada (Odisha)		Total 8 people died. Bolangir - 4, Mayurbhanj -2, Nuapada – 2	
33.	6 May	Belgaum, Gadag, Haveri (Karnataka)		2 persons died, one person injured & 6 animals perished.	
34.	7 May	Chitradurga, Dharwad, Gadag, Shimoga, Yadgir (Karnataka)		Total 5 persons died. Dharwad-1, Gadag-1, Shimoga-1, Yadgir-2 One sheperd perished in Chitradurga District.	
35.	11 May	Belgum, Dakshina Kannada (Karnataka)		Total 5 persons died. Belgum – 2, Dakshina Kannada - 3 & One injured.	
36.	15 May	Tumkur (Karnataka)		One woman died.	
37.	17 May	Belgum, Dakshina Kannada (Karnataka)		2 persons died one in each dist Belgum, Dakshina Kannada.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
38.	18 May	Raichur, Shimoga (Karnataka)		Total 3 persons died. Raichur-1, Shimoga - 2	
39.	22 May	Gulbarga (Karnataka)		One person died.	
40.	24 May	Bijapur, Gadag, Koppal (Karnataka)		2 persons died one in each Dist. Gadag, Koppal. Two animals perished in Bijapur Dist.	
41.	27 May	Chikkaballapura (Karnataka)		2 persons died.	
42.	29 May	Belgum, Bellary, Chitradurga, Gulbarga, Raichur, Tumkur, Yadgir (Karnataka)		4 persons died one in each Belgum, Chitradurga, Gulbarga, Tumkur Dist. 42 animals perished in Yadgir dist, 2 animals in Bellary & 2 animals in Raichur Dist.	
43.	31 May	(a) Gadag, Hassan (Karnataka)		One person died in Gadag Dist. 200 animals perished in Hassan Dist.	
		(b) Kandhamal (Odisha)		5 persons died.	
44.	1 Jun.	Chhatarpur (Madhya Pradesh)		One woman died at Khajuraho.	
45.	6 Jun	Surguja (Chhattisgarh)		One soldier died.	
46.	7 Jun	Bastar (Chhattisgarh)		One person died & 2 other injured.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
47.	8 Jun.	(a)Betul (Madhya Pradesh)		3 persons died.	
		(b)Bilaspur,Janjgir-Champa (Chhattisgarh)		5 persons died.	
48.	10 Jun.	(a)Guna, Raisen (Madhya Pradesh)		One person died & other injured.	
		(b)Koriya, Surguja (Chhattisgarh)		One person died & 4 others injured.	
49.	11 Jun.	(a) Betul (Madhya Pradesh)		2 persons died in Sodiya village.	
		(b)Wardha (Maharashtra)		One person died & 3 others injured.	
50.	12 Jun	(a)Amravati (Maharashtra)		2 persons died 3 others injured.	
		(b)Gulbarga (Karnataka)		2 men died.	
		(c) Ganjam (Odisha)		3 persons died in Bharanpur area.	
51.	13 Jun	Nagpur (Maharashtra)		One person died	
52.	14 Jun	Korba, Surguja (Chhattisgarh)		4 persons died & 5 others injured.	
53.	15 Jun	Bastar (Chhattisgarh)		One person died	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
54.	17 Jun	Nagpur (Maharashtra)		One girl died.	
55.	19 Jun	Dakshina Kannada (Karnataka)		One person died.	
56.	21 Jun	(a) Betul, Dewas (Madhya Pradesh)		5 persons including 2 women died.	
		(b) Nagpur (Maharashtra)		2 persons died.	
57.	2 Jul	Nagpur (Maharashtra)		3 persons died & 12 others injured.	
58.	3 Jul	Sarguja (Chhattisgarh)		4 persons died.	
59.	4 Jul	Rajnandgaon(Chhattisgarh)		One person died.	
60.	11 & 12 Jul	Bareilly, Budaun, Bulandshahar, Etah, Etawah,Farrukhabad, Hamirpur, Sitapur, Shahjahanpur, Unnao (Uttar Pradesh)		3 persons died.	
61.	13 Jul	Bhadrak, Jagatsinghpur, Kendrapara, Keonjhar (Odisha)		Total 7 persons died. Bhadrak -2, Jagatsinghpur -3, Kendrapara -1, Keonjhar -1	
62.	14 Jul	Bhadrak , Cuttack, Jagatsinghpur, Jharsuguda, Kendrapara, Mayurbhanj (Odisha)		Total 10 persons died. Bhadrak- 2 ,Cuttack -1, Jagatsinghpur - 3, Jharsuguda - 1, Kendrapara - 1, Mayurbhanj - 2	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
63.	22 Jul.	Bhilwara, Chittoorgarh, Jhalawar, Kota (Rajasthan)		9 persons died.	
64.	23 Jul	Ashoknagar, Bhopal, Raisen, Rajgarh, Sehore, Vidisha (Madhya Pradesh)		6 persons died.	
65.	24 Jul	Aurangabad, Kaimur, Nawada (Bihar)		9 persons including 5 women died & 13 others injured.	
66.	31 Jul	Shimoga (Karnataka)		One person died.	
67.	11 Aug	(a)Dhamtari, Janjgir- Champa, Jaspur, Mahasamund (Chhattisgarh)		5 persons died.30 children injured in Jaspur Dist. & 7 persons injured in Janjgir- Champa Dist.	
		(b)Mayurbhanj (Odisha)		3 persons died.	
68.	12 Aug	Mahasamund(Chhattisgarh)		One person died.	
69.	13 Aug.	Raisen (Madhya Pradesh)		One person died & 5 persons injured.	
70.	15 Aug	Barpeta (Assam)		7 persons died & 21 others injured.	
71.	17 Aug	Nagpur (Maharashtra)		2 women died & 10 others several injured.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
72.	29 Aug	Rajnandgaon(Chhattisgarh)		One person died.	
73.	30 Aug	Kanker (Chhattisgarh)		2 persons died & 2 others injured.	
74.	5 Sep	Deogarh, Malkangiri (Odisha)		Total 5 persons died. Deogarh - 3, Malkangiri - 2	
75.	6 Sep	(a)Deogarh, Malkangiri, Nabarangpur (Odisha)		Total 9 persons died. Deogarh - 4, Malkangiri - 2, Nabarangpur - 3	
		(b)East Godavari, Guntur, Krishna, Nellore, Prakasam (Andhra Pradesh)		Total 19 persons died. East,Godavari - 2, Guntur - 3, Krishna - 4, Nellore -6, Prakasam - 4	
		(c)Bhandara, Chandrapur, Osmanabad, Yavatmal (Maharashtra)		Total 6 persons died. Bhandara -2, Chandrapur -2, Osmanabad -1, Yavatmal -1 & 3 other injured.	
76.	7 Sep.	(a) Tirunelveli (Tamil Nadu)			i) Damage to 10,000 Banana trees reported. ii) Damage to 3 electrical poles reported.
		(b) Bellary (Karnataka)		One woman died.	
77.	8 Sep	(a) Chandrapur (Maharashtra)		2 persons died & One other injured in Warora village.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
		(b) Aurangabad (Maharashtra)		One person died.	
78.	12 Sep	Bilaspur, Raigarh (Chhattisgarh)		4 persons died & 4 animals perished.	
79.	13 Sep	Bastar, Kondagaon (Chhattisgarh)		5 persons died.	
80.	14 Sep	Bilaspur, Surajpur, Surguga (Chhattisgarh)		3 persons died & one injured.	
81.	15 Sep	(a) Kanker (Chhattisgarh)		4 persons died. 14 animals perished.	
		(b) Mayurbhanj (Odisha)		6 persons died.	
82.	16 Sep	Cuttack, Khordha, Khurda, Sundargarh (Odisha)		Total 16 persons died. Cuttack - 5, Khordha - 6, Khurda - 4, Sundargarh – 1	
83.	20 Sep	Pauri Garhwal (Uttarkhand)		One man died.	
84.	27 Sep	Rangareddy (Telangana)		3 persons died & 2 injured in Nawangi village.	
85.	28 Sep	(a) Kozhikode (Kerala)		One person died.	
		(b) Chitradurga, Tumkur (Karnataka)		Total 5 persons died. Chitradurga - 3 Tumkur - 2 & 5 injured in Chitradurga Dist.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
86.	2 Oct	Bellary, Bijapur (Karnataka)		One person died & other severely injured in Bellary Dist. 2 animals perished.	
87.	3, 7 Oct	Bolangir, Cuttack, Jagatsinghpur, Keonjhar, Khordha, Koraput, Nuapada (Odisha)		Total 8 persons died. Bolangir-1, Cuttack-2, Jagatsinghpur-1, Keonjhar-1, Khordha-1, Koraput-1, Nuapada-1	
88.	4 Oct	(a) Gulbarga, Yadgir (Karnataka)		Total 7 persons died. Gulbarga - 5, Yadgir - 2	
		(b) Ahmednagar, Aurangabad, Jalna, Latur, Nagpur, Nanded, Nashik, Osmanabad, Parbhani, Wardha, Yavatmal (Maharashtra)		Total 38 persons died. Ahmednagar-5, Aurangabad-4, Jalna- 3, Latur - 2, Nagpur - 2, Nanded - 4, Nashik -4, Osmanabad- 3, Parbhani- 7, Wardha -1, Yavatmal – 3	
89.	5 Oct	(a) Bijapur (Karnataka)		One youth died.	
		(b) Adilabad, Karimnagar, Nizamabad (Telengana)		Total 6 persons died. Adilabad - 2 , Karimnagar - 2, Nizamabad – 2	
90.	8 Oct	Bellary (Karnataka)		One woman died.	
91.	16 Oct	Bahraich (Uttar Pradesh)		3 teenagers died.	
92.	28 Oct.	Betul, Datia (Madhya Pradesh)		2 persons died.	



<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
93.	29 Oct	Karur, Perambalur (Tamil Nadu)		Total 3 persons died. Karur - 2, Perambalur - 1	
94.	3 Nov	Mysore (Karnataka)		2 women died	
95.	5,22,28 Nov	Dhenkanal-Jagatsinghpur, Mayurbhanj (Odisha)		Total 4 persons died. Dhenkanal-1, Jagatsinghpur-2, Mayurbhanj-1	
96.	7 Nov	Tirunelveli (Tamil Nadu)		4 persons died.	
97.	20 Nov	Ernakulam (Kerala)		One person died.	
98.	1 Dec	Auraiya, Bulandshahar (Uttar Pradesh)		2 persons died.	
99.	14 Dec	Ganjam (Odisha)		One person died.	

## सारिणी -VIII : गर्ज के साथ तूफान (थंडरस्टॉर्म) 2015

### निकष

मध्यम : जोर से गरज/गड़गड़ाहट के साथ बार-बार बिजली की चमक,  
मध्यम से भारी बारिश और अधिकतम हवा की गति 29 से 74 किलोमीटर प्रति घंटे ।

तीव्र : सतत गर्जन और बिजली, भारी बारिश और  
अधिकतम हवा की गति  $\geq 75$  किलोमीटर प्रति घंटे ।

**TABLE -VIII : THUNDERSTORM 2015**

### CRITERIA

Moderate : Loud peals of thunder with frequent lightning flashes,  
moderate to heavy rains and maximum wind speed 29 to 74 kmph.

Severe : Continuous thunder and lightning, heavy rains and  
maximum wind speed  $\geq 75$  kmph.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	3 Feb	Lucknow, Sitapur, Shravasti (U.P.)	Severe	2 persons died in Sitapur, Shravasti. 2 injured in Lucknow.	
2.	21 Feb.	Kamrup (Assam)	Moderate	-	i) Extensive damage to houses in at least 20 villages reported. ii) Extensive damage to standing crops reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
3.	26 Feb.	Nalbari (Assam)	Moderate	-	i) Extensive damage to entire area in Bhorbhag Tehsil rendering several families homeless. ii) Extensive damage to standing crops reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
4.	6 Mar.	Medak (Telangana)	Severe	3 persons died.	
5.	9 & 10 Mar.	Karimnagar, Medak, Nizamabad (Telangana)	Severe	-	Damage to Mango fruit & sunflower, Maize crops in more than 5000 acres of land reported.
6.	18 Mar.	Ganjam (Odisha)	Severe	One person died.	
7.	23 Mar.	Golpara (Assam)	Moderate	-	i) Extensive damage to at least 20 villages reported. ii) Damage to pandal of AASU (All Assam Students Union) reported. iii) Extensive damage to standing crops reported. iv) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
8.	31 Mar.	Karimnagar, Rangareddy (Telangana)	Severe	2 persons died.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
9.	4 Apr.	Darrang, Kamrup, Nagaon, Nalbari, Sivsagar & Udalguri (Assam)	Severe	One person died.	i) Extensive damage to standing crops reported. ii) Extensive damaged to more than 100 villages reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
10.	5 Apr.	Baksa, Darrang, Kamrup, (Assam)	Severe	3 persons died.	i) Extensive damage to standing crops reported. ii) Extensive damage to at least 20 villages reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
11.	10 Apr.	Adilabad, Karimnagar (Telangana)	Severe	One person died.	Damage to 25,000 acres of Mango & 60 hectares of Banana fruits reported.
12.	11 Apr.	(a) Jajpur (Odisha)	Severe	One person died.	
		(b) Hyderabad, Mahbubnagar, Medak, Nalgonda, Rangareddy (Telangana)	Severe	One person died.	Damage to Paddy crops & Mango trees reported.
13.	11 to 16 Apr.	Ananthapur, Guntur, YSR Kadapa, Kurnool, Nellore, Srikakulam, Visakhapatnam (Andhra Pradesh)	Severe	Total 15 persons died. Ananthapur - 2, Guntur - 1, YSR Kadapa - 2, Kurnool - 3, Nellore - 1, Srikakulam - 1, Visakhapatnam - 5.	Damage to 1304 hectares of Agriculture crops & 400 acres Horticulture crops reported.

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
14.	14 Apr.	Hyderabad, Karimnagar Khammam, Mahbubnagar, Medak, Rangareddy (Telangana)	Severe	2 persons died.	i) Damage to 71,000 acers of Paddy, Maize & Banana crops reported. ii) 50 trees uprooted.
15.	17 Apr.	Dibrugarh, Jorhat, Morigaon (Assam)	Severe	One person died & several injured.	i) Extensive damage to standing crops reported. ii) Extensive damage to more than 100 villages reported. iii) A number of trees/electric poles uprooted disrupting power supply, road traffic and telecommunication services.
16.	18 Apr.	Kamrup, (Assam)	Severe	One person died & 3 injured.	
17.	19 Apr.	Lakhimpur, Nagaon (Assam)	Severe	One person died & 20 injured.	i) Extensive damage to standing crops reported. ii) Extensive damage to more than 35 villages reported. iii) A number of trees/electric poles uprooted disrupting power supply, road traffic and telecommunication services.
18.	21 Apr.	Aararia, Bhagalpur, Darbhanga, Kathar, Kishanganj, Madhepura, Madhubani, Purnea, Samastipur, Sitamarhi (Bihar)	Severe	65 persons died and 2500 people injured.	i) Extensive damage to standing crops, Maize, Wheat, Pulses, Mango & litchi reported. ii) Damage to several houses reported. iii) Several trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
19.	22 Apr.	Darrang (Assam)	Severe	One woman died.	i) Extensive damage to standing crops reported. ii) Extensive damage to several villages reported.
20.	23 Apr.	Barpeta, Bongaigaon, Dhubri, Kamrup (Assam)	Severe	One person died & several injured.	i) Damage to huge amount of standing crops reported. ii) Damage to several houses reported. iii) Some trees/electric poles uprooted disrupting power supply, road traffic.
21.	24 Apr.	(a) Karimnagar, Mahbubnagar, Medak, Nalgonda, Warangal (Telangana)	Severe	3 persons died.	Damage to 1858 hectares of Paddy, Maize & Banana crops reported.
		(b) Darbhanga, Katihar, Madhepura, Madhubani, Purnea, Sitamarhi, Supaul (Bihar)	Severe	Total 57 persons died. Darbhanga-3, Katihar-2, Madhepura - 8, Madhubani - 3, Purnea - 38, Sitamarhi - 2, Supaul - 1 and 442 persons injured in Madhubani	
22.	27 Apr.	Bastar (Chhattisgarh)	Severe	One person died.	
23.	28 Apr	Amethi, Azamgarh, Ballia, Lucknow, Pratapgarh, Raebareli (Uttar Pradesh)	Severe	Total 14 persons died. Amethi - 2, Azamgarh - 1, Ballia - 2, Lucknow - 2, Pratapgarh - 4, Raebareli - 3	Damage to 17 houses reported.

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
24.	1 May	Goalpara Kamrup, Nalbari (Assam)	Severe	One woman died & several others injured.	i) Damage to huge amount of standing crops reported. ii) Damage to at least thousands of houses iii) Some trees / electric poles uprooted disrupting power supply, road traffic.
25.	2 May	Bongaigaon, Chirang, Darrang, Kamrup, Shivsagar (Assam)	Severe	One person died.	i) Damage to huge amount of standing crops reported. ii) Damage to at least thousands of houses iii) Some trees/electric poles uprooted disrupting power supply, road traffic.
26.	3 May	Barpeta, Goalpara Kamrup (Assam)	Severe	One person died & 3 others injured.	i) Damage to huge amount of standing crops reported. ii) Damage to thousands of houses reported. iii) Some trees/electric poles uprooted disrupting road traffic/telecommunication services.
27.	4 May	(a) Nalbari (Assam)	Moderate	-	i) Damage to huge amount of standing crops reported. ii) Thousands of houses Damage to iii) Some trees/electric poles uprooted disrupting road traffic / telecommunication services of several villages including Guwahati City.
		(b) Uttar Dinajpur (West Bengal)	Severe	3 persons died.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
28.	6 May	Golaghat, Nagaon, Sonitpur (Assam)	Severe	2 persons died & 9 injured.	i) Damage to huge amount of standing crops reported. ii) Damage to thousands of houses reported. iii) Some trees/ electric poles uprooted disrupting road traffic/ telecommunication services.
29.	7 May	Barpeta, Dhubri, Kokrajhar (Assam)	Severe	7 persons died & 2 injured.	i) Damage to huge amount of standing crops reported. ii) Damage to some houses reported. iii) Some trees/ electric poles uprooted disrupting road traffic/ telecommunication services.
30.	9 May	Mahbubnagar (Telangana)	Severe	4 persons died.	
31.	10 May	Karimganj (Assam)	Severe	3 children died.	
32.	11 May	Goalpara Kamrup, Kokrajhar, Lakhimpur (Assam)	Severe	4 persons died.	
33.	12 May	Dhubri (Assam)	Severe	One person died.	
34.	15 May	Kokrajhar, Nagaon (Assam)	Severe	3 persons died & 3 livestock perished.	
35.	19 May	Bongaigaon (Assam)	Severe	-	At least 20 shops collapsed.
36.	25 May	Dhubri, Goalpara Kamrup (Assam)	Severe	One person died and 14 others injured.	



<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
37.	31 May	Kamrup (Assam)	Severe	2 persons died	
38.	1 Jun.	Patna (Bihar)	Severe	One person died.	i) Damage to many houses reported. ii) Many trees/electric poles uprooted disrupting power supply, road traffic and telecommunication services.
39.	5 Jun.	Barpeta, Darrang, Goalpara Kokrajhar, Sonitpur (Assam)	Severe	10 persons died & about 20 injured.	
40.	6 Jun.	Dhubri (Assam)	Severe	One person died.	
41.	9 Jun.	(a) Cachar (Assam)	Severe	3 persons died and 40 injured.	
		(b) Mahbubnagar(Telangana)	Severe	One person died.	
42.	12 Jun.	Rangareddy (Telangana)	Severe	One person died & 3 livestock perished.	
43.	13 Jun.	Ranchi (Jharkhand)	Severe	3 persons died and One injured.	
44.	19 Jun.	East Medinipur (West Bengal)	Severe	One person died.	
45.	20 Jun.	Dhubri (Assam)	Severe	2 persons & one child died in Sonapur Village.	
46.	27 Jun.	Ranchi (Jharkhand)	Severe	One person died.	Many trees uprooted.

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
47.	7 Jul.	Morigaon (Assam)	Severe	One person died.	i) Extensive damage to standing crops reported. ii) Extensive damage to more than 30 villages reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
48.	9 Jul	Nagaon (Assam)	Moderate		i) Damage to 20 villages reported. ii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
49.	13 Jul.	West Medinapur (West Bengal)	Severe	3 persons died.	
50.	14 Jul.	Kabri, Analong, Morigaon (Assam)	Severe	5 persons died and 10 other injured.	i) Extensive damage to standing crops reported. ii) A number of trees/electric poles uprooted disrupting power supply, road traffic and telecommunication services.
51.	17 Jul.	Bankura, West Medinapur (West Bengal)	Severe	One person died & 5 persons injured.	
52.	19 Jul.	Lakhimpur (Assam)	Severe	One person died in Balijan Dist.Lakhimpur.	
53.	21 Jul.	West Medinapur (West Bengal)	Severe	One person died.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
54.	24 Jul.	(a) Baksa (Assam)	Severe	3 persons died.	
		(b) Ranchi (Jharkhand)	Severe	2 persons died & 2 other injured.	
55.	25 Jul.	(a) Hooghly, South 24 - paraganas (West Bengal)	Severe	2 persons died.	
		(b) Ranchi (Jharkhand)	Severe	6 persons died & 4 other injured.	
56.	26 Jul.	Lakhimpur, Sonitpur (Assam)	Severe	One person died.	i) Extensive damage to huge amount of standing crops reported. ii) Extensive damage to Several villages reported.
57.	31 Jul	Kamrup, Nagaon (Assam)	Severe	-	i) Extensive damage to standing crops reported. ii) Extensive damage to more than 30 villages reported. iii) A number of trees / electric poles uprooted disrupting power supply, road traffic and telecommunication services.
58.	2 Aug.	(a) North 24 paraganas (West Bengal)	Severe	5 persons died.	
		(b) Ranchi (Jharkhand)	Severe	One person died & one injured.	Damage to katcha houses reported.
59.	3 Aug.	Ranchi (Jharkhand)	Severe	One person died.	Damage to katcha houses reported.
60.	9 Aug.	Koderma (Jharkhand)	Severe	One person died.	

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
61.	10 Aug.	Lather (Jharkhand)	Severe	One person died & 3 others injured.	
62.	15 Aug.	Barpeta (Assam)	Severe	7 persons died and 25 others injured.	The crowded boat lashed over in Beki river.
63.	16 Aug.	Gumla (Jharkhand)	Severe	One person died & 5 persons injured.	
64.	17 Aug	Godda (Jharkhand)	Severe	2 persons died.	
65.	29 Aug.	Godda (Jharkhand)	Severe	2 persons died & 6 others injured.	
66.	6 & 7 Sep.	Ananthapur, Guntur, YSR Kadapa, Krishna, Prakasam, Nellore, Srikakulam (Andhra Pradesh)	Severe	Total 22 persons died & 10 others injured. Ananthapur-1, Guntur-3, YSR Kadapa-1, Krishna-4, Prakasam-5, Nellore-6, Srikakulam-2 7 cattle heads perished.	
67.	14 Sep	Ranchi (Jharkhand)	Severe	One person died.	
68.	16 Sep.	Nizamabad (Telangana)	Severe	3 persons died.	
69.	21 Sep	Ranchi (Jharkhand)	Severe	3 persons died & 2 injured.	
70.	4 Oct	Adilabad, Hyderabad, Karimnagar, Mahbubnagar, Nizamabad, Warangal (Telangana)	Severe	13 persons died.	Damage to 2 houses in Hyderabad Dist. reported.

## सारिणी - IX : ओलावृष्टि 2015

### निकष

हलका : विरल, आमतौर पर छोटे आकार और अक्सर बारिश के साथ संमिश्र ।

मध्यम : पर्याप्त प्रचुर मात्रा में जमीन सफेद करने के लिए।

भारी : बड़े पत्थरों के कम से कम एक अनुपात भी शामिल है।

**TABLE - IX : HAILSTORM 2015**

### CRITERIA

Slight : Sparse, usually small size and often mixed with rain.

Moderate : Fall abundant enough to whiten ground.

Heavy : Includes at least a proportion of large stones.

S.N.	Date / Period	Area affected	Intensity	Casualties	Extent of damage
1.	2 Jan.	Akola, Buldana (Maharashtra)	Moderate		Damage to Tur, Wheat, Rabbi crops reported.
2.	7 Feb.	Ashokanagar, Guna, Rajgarh (Madhya Pradesh)	Moderate		Extensive damage to Coriander, Mustard, Gram & Wheat crops reported.
3.	8 Feb.	Jabalpur, Mandsaur (Madhya Pradesh)	Moderate		Extensive damage to Wheat, Masur, Mustard & other crops reported.
4.	6 to 9 Mar.	Adilabad, Karimnagar, Khammam, Mahbubnagar, Medak, Warangal (Telangana)	Heavy		Damage to 4838 hectares area reported.
5.	8 & 9 Mar.	Bijapur, Gulbarga (Karnataka)	Moderate		Extensive damage to Grapes, Jawar, Wheat crops reported.

<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
6.	10 Mar.	(a) Betul (Madhya Pradesh)	Moderate		Extensive damage to Wheat crops reported.
		(b) Kurnool (Andhra Pradesh)	Heavy		Damage to Mango crops worth 250 acers reported.
		(c) Amravati (Maharashtra)	Heavy	2 persons died & 5 others injured	Damage to Wheat, Gram oranges & other standing crops reported.
7.	16 Mar.	(a) Agar-Malwa, Neemuch, Nimar, Morena, Rajgarh (Madhya Pradesh)	Moderate		Extensive damage to Wheat crops reported.
		(b) Fatehpur, Kanpur, Unnao (Uttar Pradesh)	Heavy	5 farmers died	Damage to crops reported.
8.	16 & 17 Mar	Nagpur (Maharashtra)	Heavy	One person died and several injured.	i) Damage to crops reported. ii) Damage to vehicles reported. iii) Loss of Rs.42 lakhs as per MSEDCL (Maharashtra State Electricity Distribution Co. Ltd.).
9.	27 Mar	Godda (Jharkhand)	Heavy	One person died and 128 livestock perished.	Damage to 4855 houses reported.
10.	30 Mar	Many districts in West U.P.	Heavy	12 farmers died.	Damage to crops reported.
11.	31 Mar	Morena (Madhya Pradesh)	Moderate		Extensive damage to Wheat crops reported.
12.	3 & 4 Apr	Chamba, Hamirpur, Kullu, Lahaul and Spiti, Shimla, Solan (Himachal Pradesh)	Moderate		Extensive damage to Wheat & apple orchards in the state reported.

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
13.	7 & 8 Apr	Karimnagar, Medak (Telangana)	Moderate	3600 poultry birds perished.	Damage to Mango, Banana, Papaya crops reported.
14.	11 Apr	Burhanpur (Madhya Pradesh)	Moderate		Damage to crops reported.
15.	11 to 16 Apr	Coastal Andhra Pradesh, Rayalseema (all districts)	Heavy	160 livestock perished & 4621 poultry birds perished	Damage to 6028 hectares of Agriculture crops & 5935 hectares of Horticulture crops reported. (2481.81 hectares i.e. highest damage in Kurnool Dist. followed by 2135.10 hectares in Nellore)
16.	13 Apr	Bangalore Rural, Bellari (Karnataka)	Heavy	One baby died in Bellari Dist.	Damage to Coconut, Banana, Mango, Grapes crops reported.
17.	21 & 22 Apr	Chamba, Mandi, Shimla, Sirmaur (Himachal Pradesh)	Moderate		Extensive damage to Wheat, peas in Mandi district & Apple crops in Sirmaur, Shimla district reported.
18.	22 to 25 Apr.	Anantapur, Chittoor, Krishna, Kurnool, Kadapa (YSR), Prakasam, Visakapatnam, Vizianagaram, West Godavari (Andhra Pradesh)	Heavy	16 livestock perished	i) Damage to 1704 hectares of Agriculture crops reported. ii) Damage to 32 houses reported.
19.	23 Apr	Chikkaballapur [Kolar] (Karnataka)			Damage to Horticulture & vegetable crops worth Rs. 5 crore reported.
20.	3 May	Chatra (Jharkhand)	Moderate		i) Damage to crops & vegetables reported. ii) Damage to many houses reported.

<b>S.N.</b>	<b>Date / Period</b>	<b>Area affected</b>	<b>Intensity</b>	<b>Casualties</b>	<b>Extent of damage</b>
21.	4 May	Ranchi (Jharkhand)	Moderate		i) Damage to crops & vegetables reported. ii) Damage to many houses reported.
22.	17 May	Kupwara (Jammu & Kashmir)	Moderate		Damage to Orchards, Mustard crop, fruit buds of Apple trees, Walnut, Pear, Cherry, and vegetables reported.
23.	25 May	East Champaran, Madhubani, Sitamarhi (Bihar)	Heavy	8 persons died.	i) Damage to crops reported. ii) Damage to several houses reported. iii) Several trees uprooted. Communication disrupted.
24.	2 Jun	(a) Vidisha (Madhya Pradesh)	Moderate		Damage to Some houses reported.
		(b) Banka, Bhagalpur, Lakhisarai, Patna (Bihar)		9 persons died.	The pontoon bridge at Danapur collapsed resulting in complete snapping of traffic between Saran and Danapur via. Diara area.
25.	8 Jun	Gulgam, Kupwara (Jammu & Kashmir)	Heavy		Severe damage to vegetables, Paddy saplings and Orchards reported.
26.	14 Jun	Pulwama, Shopian (Jammu & Kashmir)	Heavy		Damage to Apples, Almond and other crops reported.
27.	26 Jul	Kupwara (Jammu & Kashmir)	Heavy		Damage to standing crops reported.
28.	27 Oct	Budgam (Jammu & Kashmir)	Heavy		Extensive damage to Apple Orchards, vegetables & crops reported.



<i>S.N.</i>	<i>Date / Period</i>	<i>Area affected</i>	<i>Intensity</i>	<i>Casualties</i>	<i>Extent of damage</i>
29.	30 Oct	(a) Nagpur (Maharashtra)	Heavy		Severe damage to crops reported.
		(b) Gumla, Ranchi (Jharkhand)	Moderate	Many animals perished.	Damage to 30,000 hectares of agricultural field reported.
30.	3 Dec	Goalpara, Sonitpur (Assam)	Heavy		i) Extensive damage to more than 100 villages reported. ii) Extensive damage to huge amount of Paddy crops reported. iii) Several trees / electric poles uprooted causing disruption in vehicular traffic & power supply.

सारिणी X - बाढ़ और भारी बारिश 2015

TABLE XI - FLOODS AND HEAVY RAINS 2015

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
<b>STATES</b>					
<b>ANDHRA PRADESH</b>					
1.	20 & 21 Jun.	East Godavari, Srikakulam, Visakhapatnam and West Godavari	Heavy rains		i) Damage to 2000 hectares of crops reported. ii) Inundation of low lying areas.
2.	15 - 23 Nov.	Anantapur, Chittoor, East Godavari, Krishna, Nellore, Prakasam, West Godavari, YSR Kadapa	Heavy rains	88 persons died. 16710 animals perished. (844 big animals 3986 small animals & 11880 poultry birds)	i) Extensive damage to Agricultural crops (more than 33% area i.e. 2.18 lakh hectares reported. ii) Rs.786.68/- estimated loss. iii) Damage to 32743 houses reported. iv) 5,673 families in 550 villages affected. v) Extensive damage to 1296.77 km roads reported. vi) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
3.	22 Dec.	Vishakhapatnam	Heavy rains	4 persons died due to landslips.	Landslips
	* Whole year			i) 28 human lives lost. ii) 420 cattle lost.	103 houses damaged.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
<b>ARUNACHAL PRADESH</b>					
1.	10 Jun.	Parts of Arunachal Pradesh	Heavy rains	2 persons died.	
	* Whole year	Area affected 0.014 m.ha.		i) 29 human lives lost. ii) 848 cattle lost.	i) 0.177 million population affected. ii) 1702 houses damaged. iii) Crops in 0.014 m.ha. damaged.
<b>ASSAM</b>					
1.	19 Feb	Parts of Assam	Heavy rains	2 persons died due to landslide.	
2.	1 to 6 Jun.	Barpeta, Dhemaji, Golpara	Heavy Rain		About 900 people of 135 villages affected.
3.	9 to 17 Jun.	Baksa, Barpeta, Darrang, Dhemaji, Dibrugarh, Goalpara Jorhat, Kamrup, Kamrup (M), Lakhimpur, Morigaon, Nagaon, Nalbari, Sivsagar, Sonitpur, and Tinsukia	Flood (Brahmaputra and tributaries)	3 persons died in Sonitpur & Baksa.	i) About 3,17,182 people of 580 villages badly affected. ii) Damage to cropland of area 11,421 hectares reported.
4.	20 to 24 Jun.	Barpeta, Dhemaji, Lakhimpur, Morigaon and Tinsukia.	Flood (Brahmaputra and tributaries)	One person died.	i) About 27248 people of 72 villages affected. ii) The crops about 1582 hectares of crop land affected.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
5.	14 to 17 Jul.	Parts of Assam	Flood (Brahmaputra and tributaries)	5 persons died & 10 injured due to severe TS on 14 <sup>th</sup> July.	i) 2,89,788 population affected. ii) Extensive damage to 174 villages reported. iii) Damage to cropland of area 18060 hectares reported.
6.	19 to 23 Aug.	Barpeta, Bongaigaon, Chirang, Darrang, Dhemaji, Dhubri, Dibrugarh, Golaghat, Goalpara Jorhat, Kamrup, Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, Sivsagar, Sonitpur, and Tinsukia	Flood (Brahmaputra and tributaries)	8 persons died.	i) 5,76,537 population affected. ii) Extensive damage to 1200 villages reported. iii) Damage to cropland of area 55,553 hectares reported.
7.	25 to 31 Aug.	Barpeta, Baksa, Darrang, Dhemaji, Dhubri, Dibrugarh, Golaghat, Goalpara Jorhat, Kamrup, Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, Sivsagar, Sonitpur, and Tinsukia	Flood (Brahmaputra and tributaries)	7 persons died.	i) 7,35,829 population affected. ii) Extensive damage to 1597 villages reported. iii) Damage to cropland of area 1,18,403 hectares reported.
8.	1 to 12 Sep.	Barpeta, Baksa, Bongaigaon, Cachar, Darrang, Dhemaji, Dhubri, Dibrugarh, Golaghat, Goalpara Jorhat, Kamrup, Kamrup(M), Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, Sivsagar, Sonitpur, and Tinsukia	Flood (Brahmaputra and tributaries)	28 persons died.	i) 17,67,159 population affected. ii) Extensive damage to 2080 villages from 21 districts reported. iii) Damage to cropland of area 1,72,308 hectares reported.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
9.	23 to 25 Sep.	Dhemaji, Goalpara Kamrup and Lakhimpur,	Flood (Brahmaputra and tributaries)		i) 23,497 population affected. ii) Extensive damage to 48 villages reported. iii) Damage to cropland of area 2383 hectares reported.
	* Whole year				i) 0.018 million population affected. ii) 16 houses damaged. iii) Crops in 0.002 m.ha. damaged.
<b>BIHAR</b>					
1.	24 Jul.	Parts of Bihar	Heavy Rains	2 persons died.	Several trees / electric poles uprooted causing disruption in telecommunication services, vehicular traffic & power supply.
	* Whole year			i) 27 human lives lost. ii) One cattle lost.	i) 0.279 million population affected. ii) 518 houses damaged.
<b>CHATTISGARH</b>					
1.	3 Sep.	Mungeli	Heavy rains	One child died & 4 persons injured.	Several trees / electric poles uprooted causing disruption in telecommunication services, vehicular traffic & power supply.
2.	18 to 22 Sep.	Bastar, Mahasamund Rajnandgaon	Raipur, Heavy rains	2 persons died & 4 others injured.	Several trees / electric poles uprooted causing disruption in telecommunication services, vehicular traffic & power supply.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
<b>GUJARAT</b>					
1.	1 <sup>st</sup> Jun to 30 <sup>th</sup> Sep. [13, 23, 24, 25 Jun, 21, 22, 23, 25, 26, 27, 28, 29, 30 Jul, 4, 19, 25, 26 Aug, 9, 13, 14, 15, 19, 20, 21, 22 Sep ]	Parts of Gujrat, Saurashtra & Kutch	Heavy rains & Flash Floods (Shatrunjaya river)	About 70 persons died & 9053 animals perished.	i) Loss of Rs.1896.87 Crore reported. ii) 40 lakh population affected. iii) Worst affected district was Amreli.
	* Whole year			98 human lives lost.	4.000 million population affected.
<b>HIMACHAL PRADESH</b>					
1.	3 & 4 Apr.	Shimla	Heavy rains	One woman died in Shimla due to landslide.	
2.	20 & 21 Jun.	Chamba	Heavy rains (Cloud Burst)	One woman died in Chamba Dist. due to cloud burst.	i) Damage to crops due to flash floods & cloud burst reported. ii) Damage to 6 houses reported. iii) Damage to 2 power projects reported.
3.	10 & 11 Jul.	Hamirpur, Kangra, Kullu, Mandi, Shimla and Sirmaur	Heavy rains		i) Power projects shut down in Shimla & Kullu Dist. ii) Air India flights canceled at Gaggal Airport. iii) Roads blocked due to landslides. iv) The Bora Bhargal valley of Kangra Dist. cut off as Hanny bridge collapsed due to flash floods.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
4.	16 & 17 Jul.	Hamirpur, Kangra, Shimla Sirmaur and Solan	Heavy rains (Cloud Burst)	3 workers washed away due to cloud burst at Puncha Nallah in Kullu Dist.	i) Damage to crops reported. ii) 2 trucks loaded with material washed away in Solan Dist. iii) Bridge collapsed at Sadhupul Khud in Solan Dist.
5.	26 Jul	Shimla	Heavy rains	3 persons including 2 children died due to landslide.	
6.	8 -12 Aug.	Bilaspur, Chamba, Hamirpur, Kangra, Mandi, Shimla, Sirmaur, Una	Heavy rains (Flood in Swan river)	i) 3 persons died due to landslide. One man swept away in Swan river, Una Dist. & 2 persons missing. ii) Several cattle heads perished.	i) Damage to vegetables & Maize crops reported. ii) A bus stand at Dharampur, Dist. Mandi inundated. iii) Several vehicles washed away in flashflood. iv) 100 shops submerged. v) Several roads including Theog Hatkoti road, Kangra - Dharamshala NH-88 roads blocked due to landslides.
7.	19 Aug	Kullu	Heavy rains	10 persons died due to landslide.	Landslide.
	* Whole year	Area affected 0.006 m.ha.		i) 133 human lives lost. ii) 686 cattle lost.	i) 6.865 million population affected. ii) 3264 houses damaged.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
<b>JAMMU &amp; KASHMIR</b>					
1.	21 Mar.	Pulwama	Heavy rains	One person died & one injured due to house collapsed by landslide.	
2.	30 Mar	Budgam	Heavy rains	16 persons died due to landslide.	i) Damage to 18 houses reported. ii) National highway remained closed.
3.	4 Apr	Jammu & Kashmir	Heavy rains	24 persons died due to landslide & landslips.	Massive Landslide.
4.	6 Jul	Pulwama	Heavy rains (Cloud Burst)	One woman died.	
5.	9 -16 Jul	Anantnag, Ganderbal	Heavy rains	11 persons died & 2 others missing.	i) Several villages washed away. ii) Damage to about 50 houses reported. iii) Extensive damage to Government owned Trout Fish Hatcheries reported.
6.	24 Jul	Jammu	Heavy rains (Cloud Burst)	3 persons died.	Damage to several houses reported.
7.	25 - 31 Jul	Badgam, Ganderbal, Kishtwar, Ramban	Heavy Rain & Flash Flood	4 persons died & 19 other injured near base camp of Amarnath yatra at Baltal.	i) Damage to Agricultural land reported. ii) Damage to several Govt. buildings & residential houses reported.



S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
8.	23 Sep	Anantnag, Kulgam	Heavy Rain & Flash Flood		i) Damage to Orchards and standing crops reported. ii) Damage to a dozen houses, two school buildings and several cowsheds reported.
	* Whole year			3 human lives lost.	
KARNATAKA					
1.	6 - 14 Mar.	Ballari, Dakshina Kannada, Gadag, Hassan, Uttar Kannada	Heavy rains	One man died due to temple wall collapse. 4 cattle heads perished.	i) Damage to standing crops & Mango, Banana trees reported. ii) Damage to 8 houses reported.
2.	7 - 12 Apr.	Ballari, Bidar, Hassan, Kodagu, Raichur	Heavy rains	4 persons died & One girl injured due to roof of house collapsed.	i) Damage to Paddy crops, thousands of Banana plants, hundreds of Coconut trees & Rice bags reported ii) Damage to many houses reported. iii) Damage to about 250 Tin-sheds reported. iv) Many trees/electric poles uprooted.
3.	22 & 23 Apr.	Bangalore Urban, Shimoga, Tumkur	Heavy rains	One person died due to wall collapse in Bangalore Urban & 4 persons injured in Shimoga Dist.	i) Damage to Banana, Coconut, Mango, Jackfruit trees reported. ii) Damage to several houses reported. iii) Damage worth lakhs rupees reported. iv) Many trees / electric poles uprooted.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
4.	4 - 11 May	Raichur, Tumkur	Heavy rains	2 persons died & one other injured due to wall collapse	Damage to Paddy crops resulting loss of lakhs of rupees reported.
5.	27 - 31 May	Bangalore Rural, Bangalore Urban, Chitradurga, Hassan	Heavy rains	One person died & 4 other injured.	i) Damage to more than 3000 Banana plants, Onion crop in 40 acre land, Coconut trees, pomegranate, Betel nuts reported. ii) Damage to Rose garden causing loss of lakhs of rupees reported. iii) Damage to many houses reported.
6.	20 - 25 Jun.	Chickmangalur, Dakshina Kannada, Hassan, Kodagu, Shimoga	Heavy rains & Flood	8 persons died & 8 persons injured.	i) Damage to Betel nut crops reported. ii) Damage to many houses reported. iii) About 400 electric poles uprooted causing disruption in power supply for a week.
7.	10 -20 Jul.	Bellary ,Dakshina Kannada, Udupi	Heavy rains	10 persons died.	
8.	5-7 Sep.	Bellary, Bangalore Urban, Chitradurga	Heavy rains	5 persons died & one injured.	i) Damage to many acres of Paddy, Sugarcane, Cotton, Pulses, Onion crops, Banana plantation reported. ii) Choultry (Dharmshala) in front of Vijaya Vittala Mandir in Haampi village collapsed.
9.	29 Sep.	Uttara Kannada	Heavy rains		Damage to 200 acres of Sugarcane & 70 acres of Banana plantation reported.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
10.	1-4 Oct.	Bagalkot, Belgaum, Bellary, Chitradurga, Davangere, Dharwad, Gulbarga, Tumkur	Heavy rains	4 persons died.	i) Damage to crops standing crops of Sugarcane, Tobacco & sowing grains of Jowar, Cotton, and Paddy crops reported. ii) Damage to several houses reported. iii) A small bridge collapsed causing inundating the road & disruption in traffic. iv) Several trees uprooted.
11.	2 Nov.	Chitradurga	Heavy rains		6 houses collapsed.
	<i>* Whole year</i>	<i>Area affected 0.014 m.ha.</i>		i) <i>128 human lives lost.</i> ii) <i>430 cattle lost.</i>	i) <i>10427 houses damaged.</i> ii) <i>Crops in 0.174 m.ha. damaged.</i>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
<b>KERALA</b>					
1.	3 - 9 Mar.	Alappuzha, Ernakulam, Kottayam, Malappuram, Thrissur, Pathanamthitta	Heavy rains		<ul style="list-style-type: none"> <li>i) Damage to Paddy fields, vegetable plantations, thousands of Banana crops, Betel-leaves, Tapioca, Yam, Nutmeg Coconut trees, fruit crops etc. reported.</li> <li>ii) Roof of Co-operative bank building &amp; a school building blown away causing damage to all files in the staff-room.</li> <li>iii) Rice sacks kept for afternoon meals for school children extensively damaged in Pathanamthitta Dist.</li> <li>iv) Damage to several houses reported.</li> <li>v) Several trees / electric poles uprooted causing disruption in telecommunication services vehicular traffic &amp; power supply.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
2.	13-17 Mar.	Alappuzha, Kottayam, Thrissur, Thiruvananthapuram	Heavy rains	3 persons injured in Thiruvananthapuram Dist.	<ul style="list-style-type: none"> <li>i) Damage to thousands of Banana crops, vegetable plantation &amp; Coconut, Teak, Jackfruit, Nutmeg trees reported.</li> <li>ii) Damage to several houses reported.</li> <li>iii) Boat capsized causing damage to several fishing equipments. In Alappuzha Dist.</li> <li>iv) Rs.12 lakhs worth damage reported.</li> <li>v) Several trees / electric poles uprooted causing disruption in telecommunication services vehicular traffic &amp; power supply.</li> <li>vi) Several electric cable lines damaged completely.</li> </ul>
3.	27 - 31 Mar.	Alappuzha, Pathanamthitta	Heavy rains		<ul style="list-style-type: none"> <li>i) Damage to around 3500 Banana plantation uprooted. Damage to Tapioca, Bitter gaud crops &amp; Cashew, Jackfruit, Peepal trees reported.</li> <li>ii) Damage to 3 acers of cultivation land &amp; Gingily crops reported.</li> <li>iii) Several road side trees uprooted causing disruption in vehicular traffic.</li> <li>iv) Several electric cable lines damaged causing disruption in power supply.</li> <li>v) Damage to worth Rs.15 lakhs according to Agriculture Department reported.</li> <li>vi) Partial damage to 58 houses in Haripad town reported.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
4.	6 -10 Apr.	Alappuzha, Ernakulam, Palakkad, Idukki, Kollam	Heavy rains	One person injured.	<ul style="list-style-type: none"> <li>i) Damage to 250 acres of Paddy crops, 500 Banana plantation, vegetables &amp; Gingili crops reported.</li> <li>ii) Damage to worth Rs.30,000/- reported.</li> <li>iii) Several trees / electric poles uprooted causing disruption in vehicular traffic &amp; power supply for few hours.</li> </ul>
5.	11 - 16 Apr.	Ernakulam, Idukki, Kollam, Kozhikode, Malappuram, Pathanamthitta, Thiruvananthapuram, Wayanad	Heavy rains	5 persons injured.	<ul style="list-style-type: none"> <li>i) Damage to more than 12,000 Banana plantation, more than 350 acres of vegetable cultivation &amp; Teak, Rubber trees reported.</li> <li>ii) Damage to several houses reported.</li> <li>iii) Approx Rs. 8 lakhs worth damage reported.</li> <li>iv) Several trees uprooted &amp; fell across the road causing damage to small vendors &amp; traffic disruption.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
6.	19-25 Apr.	Alappuzha, Idukki, Kasaragod, Kannur, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram			<p><b>Alappuzha:</b></p> <ul style="list-style-type: none"> <li>i) Vegetable crops e.g. Beans, Pumpkin, Cucumber submerged.</li> <li>ii) Alappuzha – Kottayam - Pathanamthitta road traffic disrupted</li> <li>iii) Several areas submerged.</li> <li>iv) Low-lying areas flooded.</li> </ul> <p><b>Idukki:</b></p> <ul style="list-style-type: none"> <li>i) Severe damage to Agriculture crops including Rubber Teak, Banana, Arecanut, Cardmon and Coconut reported.</li> <li>ii) Damage to 3 houses fully &amp; 4 houses partially reported.</li> </ul> <p><b>Kasaragod:</b></p> <ul style="list-style-type: none"> <li>i) Damage to 50 houses fully &amp; 20 houses partially reported.</li> <li>ii) Damage to 15,000 Banana plantation, Rubber, Nutmeg, Coconut &amp; more than 100 acres of agriculture crops reported.</li> <li>iii) Loss worth cores as per Krishi Bhavan authorities reported.</li> </ul> <p><b>Kannur :</b> Damage to Banana &amp; vegetable crops reported.</p>
				2 persons injured in Idukki Dist.	
				3 persons injured in Kannur Dist. due to wall collapsed.	

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
				One person injured in Malappuram Dist.	<b>Malappuram:</b> <ul style="list-style-type: none"> <li>i) Damage to 100 acres of agricultural land &amp; 2220 Banana plantation reported.</li> <li>ii) Loss worth lakhs rupees reported.</li> <li>iii) Several trees including 25 Coconut, Arecanuts uprooted.</li> </ul>
				2 persons injured in Palakkad Dist.	<b>Palakkad:</b> <ul style="list-style-type: none"> <li>i) Damage to more than 10,000 Banana crops reported.</li> <li>ii) Damage to more than 20 houses reported.</li> <li>iii) Rs.1.5 crores worth damage estimated.</li> <li>iv) Several trees, 25 electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> </ul> <b>Pathanamthitta:</b> <ul style="list-style-type: none"> <li>i) Damage to 20 acres of agricultural land reported.</li> <li>ii) 15 shops inundated.</li> <li>iii) Damage to several vehicles, computers and motors of different shops reported.</li> </ul>



S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
				One person died & 5 persons seriously injured in Thiruvananthapuram Dist.	<b>Thiruvananthapuram:</b> <ul style="list-style-type: none"> <li>i) Extensive damage to Agricultural crops Banana, Tapioca, vegetable in Meenmootil, Vamanapuram, Nelimood, Neyyattinkara, Vellarada etc. reported.</li> <li>ii) City area, Coastal areas, low-lying areas &amp; several houses in Poovar, Kanjiramkulam, Pulluvilla &amp; Vanjiyoor police station flooded.</li> <li>iii) Damage to about one hundred houses reported.</li> <li>iv) Damage to Thycaud-Women &amp; child hospital reported.</li> <li>v) Several trees/electric poles uprooted causing disruption in telecommunication services vehicular traffic &amp; power supply.</li> <li>vi) Loss worth lakhs of rupees reported.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
7.	26-30 Apr.	Alappuzha, Ernakulam, Kannur, Kottayam, Malappuram, Pathanamthitta Thiruvananthapuram, Wayanad			<p><b>Alappuzha :</b></p> <ul style="list-style-type: none"> <li>i) More than 200 fishermen families affected.</li> <li>ii) Damage to 7 boats, nets, engine &amp; fishing equipments in Neerkunam-Pounnapra coastal area reported.</li> <li>iii) Around 15 lakhs rupees worth damage reported.</li> </ul> <p><b>Ernakulam:</b></p> <ul style="list-style-type: none"> <li>i) Damage to 200 Banana &amp; Rubber Coconut, vegetable crops reported.</li> <li>ii) Damage to Agriculture crops worth lakhs of rupees reported.</li> <li>iii) Damage to several houses reported.</li> <li>iv) Irrigation &amp; drinking water supply disrupted.</li> </ul> <p><b>Kannur:</b></p> <ul style="list-style-type: none"> <li>i) Damage to 50 houses reported.</li> <li>ii) Damage to 300 acres of agriculture crops reported.</li> </ul> <p><b>Kottayam:</b></p> <ul style="list-style-type: none"> <li>i) Damage to hundreds of Rubber, Banana, Tapioca, Teak Coconut &amp; vegetable crops reported.</li> <li>ii) Damage to few houses reported.</li> </ul>
				One person injured in Kannur Dist.	
				One person injured in Kottayam Dist.	

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
					<p><b>Malappuram:</b></p> <p>i) Around 5000 hectares of Paddy fields flooded.</p> <p>ii) Seeds ready for harvest, fell &amp; got sprouted.</p> <p><b>Pathanamthitta :</b></p> <p>i) Damage to 2500 Tapioca plantation reported.</p> <p>ii) Damage to 5 houses reported.</p> <p><b>Thiruvananthapuram &amp; Wayanad</b></p> <p>i) Thousands of Banana plantations uprooted.</p> <p>ii) Several electric cable lines damaged.</p>
8.	3 - 5 May	Ernakulam, Idukki, Palakkad, Thiruvananthapuram.	Kannur, Heavy rains Thrissur,	2 persons injured as uprooted tree fell over the car.	<p>i) Damage to more than 2500 Banana crops reported &amp; severe loss to Nutmeg, Tapioca &amp; vegetable reported.</p> <p>ii) Damage to more than 80 houses reported.</p> <p>iii) Damage to portion of a school building, portion of a mosque reported.</p> <p>iv) Damage to several electric cable lines including 11 KV electric lines reported.</p> <p>v) Several trees uprooted causing disruption in vehicular traffic &amp; power supply.</p>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
9.	7 - 9 May	Kottayam, Palakkad, Thrissur	Heavy rains	One person injured in Palakkad Dist.	<p><b>Kottayam :</b></p> <ul style="list-style-type: none"> <li>i) Damage to Agriculture crops reported.</li> <li>ii) Transformer collapsed.</li> <li>iii) Damage to few houses reported.</li> <li>iv) Damage worth Rs. 4 lakhs reported by KSEB (Kerala State Electricity Board) authorities.</li> </ul> <p><b>Palakkad &amp; Thrissur:</b></p> <ul style="list-style-type: none"> <li>i) Damage to more than 70 houses (Pookotkavu village - 40, Srikrishnapuram village - 29) reported.</li> <li>ii) Damage to around 400 plantations reported.</li> <li>iii) 15 Rubber trees &amp; more than 50 electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> <li>iv) Damage to Anganwadi building reported as uprooted tree fell over it.</li> <li>v) Water supply disrupted for 2 days.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
10.	10 - 14 May	Ernakulam, Idukai, Kannur, Kasaragod, Kollam, Kozhikode, Mallapuram, Palakkad, Thrissur, Wayanad	Heavy rains	4 persons injured.	i) Damage to Agriculture crops Banana, Rubber crops & 500 acres of Paddy fields reported. ii) Damage to several houses reported. iii) Water logging in low lying areas. iv) Loss worth Rs.60,000/-. v) Well caved in. vi) A huge tree uprooted & fell across Kozhikode-Vythiri-Ooty State Highway causing traffic disruption.
11.	15-28 May	Kasaragod, Kollam, Thiruvananthapuram	Heavy rains		<b>Kasaragod:</b>  Worth rupees One lakh damage reported.  <b>Kollam:</b>  i) Extensive damage to Agricultural crops mainly Banana, Tapioca crops reported. ii) 6 houses inundated. iii) Low-lying areas, fields & Neduvathur-Palmootti canal flooded. iv) Damage to house-hold electric appliances & wiring reported. v) Several trees uprooted causing disruption in vehicular traffic & power supply.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
				5 persons died in Pozhiyoor, Thiruvananthapuram Dist. 15 persons injured in Thiruvananthapuram Dist.	<b>Thiruvananthapuram:</b> <ul style="list-style-type: none"> <li>i) Agriculture crops including Banana, Rubber crops submerged.</li> <li>ii) Around 650 farmers affected.</li> <li>iii) Low-lying areas flooded.</li> <li>iv) Damage to more than 300 houses reported.</li> <li>v) People shifted to relief camps.</li> <li>vi) Eastfort, Killipalam, Karmana, Poojappura &amp; Pazhavangadi areas inundated.</li> <li>vii)Thampanoor railway station, Bus stand, bus terminus flooded.</li> <li>viii) Several trees/electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> <li>ix) Varkala beach area affected.</li> </ul>
12.	8- 16 Jun.	Alappuzha, Kannur, Kollam, Thrissur, Thiruvananthapuram			<b>Alappuzha :</b> <ul style="list-style-type: none"> <li>i) Damage to two acres of Banana crops reported.</li> <li>ii) Damage to 10 houses reported.</li> <li>iii) 26 families of 90 persons shifted to relief camps.</li> <li>iv) Water supply disrupted in beach areas.</li> </ul>

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
					<b>Kannur :</b>  District office of Kerala Aided School Employees' Provident fund caved in.
				One person injured in Kollam Dist.	<b>Kollam :</b>  Damage to a house reported as coconut tree uprooted fell over it.
				One person died due to wall collapsed in Thrissur Dist.	<b>Thrissur :</b>  i) Damage to 5 houses reported. ii) Low-lying areas inundated. iii) Severe waterlogging in the low-lying areas.
					<b>Thiruvananthapuram :</b>  i) Damage to 15 houses reported. ii) Damage to Fiber boat factory reported. iii) Around One lakh rupees worth damage reported. iv) Several trees uprooted.

S.N.	Date/ Period	Area affected	Intensity (Rivers)	Casualties	Extent of damage
13.	19-29 Jun.	Alappuzha, Ernakulam, Idukki, Kasaragod, Kottayam, Kozhokode, Palakkad, Pathanamthitta, Thrissur, Thiruvananthapuram, Wayanad	Heavy Rain	One person drowned, one person injured in Alappuzha Dist.	<p><b>Alappuzha :</b></p> <ul style="list-style-type: none"> <li>i) Extensive damage to Paddy fields and lakhs rupees worth damage to standing crops reported.</li> <li>ii) Damage to more than 300 houses and several shops reported.</li> <li>iii) 102 persons of 29 families shifted to relief camps.</li> <li>iv) Loss of worth Rs. 5.3 lakhs estimated.</li> <li>v) Several trees/electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> </ul> <p><b>Ernakulam :</b></p> <ul style="list-style-type: none"> <li>i) Damage to 40,450 Banana plantation and 1200 Rubber trees reported.</li> <li>ii) Damage to more than 135 houses reported.</li> <li>iii) Loss of Rs.2.5 crore reported.</li> <li>iv) Several trees/electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> </ul>



S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
				4 persons died in Idukki, Dist. as uprooted trees fell on them.	<b>Idukki :</b> i) Damage to 22.28 hectares of cultivated land reported. ii) Damage to 4 houses fully and 189 houses partially reported according to official of the District Disaster Management Cell. iii) Loss to standing crops estimated Rs. 2.28 crore and houses Rs.26.62 lakh reported. iv) Damage to Edamalakkudy Gram-Panchyat in Munnar forest division reported.
				3 people injured at Kasaragod Dist.	<b>Kasaragod :</b> i) Damage to standing crops and some buildings reported. ii) Loss worth Rs. 1.67 lakh reported.
					<b>Kottayam :</b> i) Extensive damage to crops reported. ii) Total loss of Rs. 19 lakh reported. iii) Damage to more than 200 houses

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
					<p><b>Kozikode :</b></p> <ul style="list-style-type: none"> <li>i) A crop loss on 3.35 hectares reported by district administration.</li> <li>ii) Damage to 20 houses fully &amp; more than 160 houses partially reported.</li> <li>iii) A big well caved in at Kundamangalam in Kozikode Dist.</li> </ul> <p><b>Palakkad :</b></p> <ul style="list-style-type: none"> <li>i) Damage to 12.13 hectares of cultivated land reported.</li> <li>ii) Loss of standing crops worth at least Rs. 3 crore due to landslips reported.</li> <li>iii) Damage to around 453 houses reported Assam more than 20 families relocated to temporary shelters.</li> <li>iv) Loss of Rs. 1.5 crore reported.</li> <li>v) Loss of Rs. 70 lakh reported by Kerala State Electricity Board in Attappady alone. More than 150 electric poles uprooted.</li> </ul>

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
					<b>Pathanamthitta :</b>
					<ul style="list-style-type: none"> <li>i) Damage to houses reported.</li> <li>ii) Three 11 KV electric posts damaged as a giant tree uprooted &amp; fell over it.</li> </ul>
				2 persons injured in Thrissur Dist.	<b>Thrissur :</b>
					<ul style="list-style-type: none"> <li>i) Damage to houses reported.</li> <li>ii) Water logging in low lying areas.</li> <li>iii) Several trees/electric poles uprooted causing disruption in vehicular traffic &amp; power supply.</li> </ul>
				2 persons drowned & 2 other missing in Thiruvananthapuram Dist.	<b>Thiruvananthapuram :</b>
					<ul style="list-style-type: none"> <li>i) Hundreds of people affected due to water logging.</li> <li>ii) Damage to more than 35 houses reported.</li> <li>iii) Low lying areas inundated.</li> <li>iv) 361 people moved to safer places.</li> <li>v) Several cars washed away.</li> </ul>

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
					<b>Wayanad :</b>
					i) Damage to 445.54 hectares cultivated plantain and Ginger reported. ii) Damage to around 485 houses reported. iii) A loss of about 10.30 crore rupees incurred in the rain related calamities. iv) 450 persons of 80 families shifted to relief camps. v) Loss of Rs. 50 lakh reported by Kerala State Electricity Board due to damage of 500 electric poles.
14.	18-20 Jul.	Kannur	Heavy Rain	9 persons died.	i) Damage to 465 hectares of land & Rs. 3.76 crore of crops reported. ii) Damage to 8 houses fully & 416 houses partially reported. Property loss of Rs.97.92 lakh reported.
15.	12 Aug.	Kannur	Heavy Rain		i) Complete damage to one house reported. ii) 2 lakhs rupees worth damage reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
16.	5 -6 Sep.	Pathanamthitta, Thiruvananthapuram	Heavy Rain (Flood in Killi river)	Around 3000 hens perished in Thiruvananthapuram.	<p><b>Pathanamthitta :</b></p> <p>Loss of worth Rs.3 lakhs reported as compound wall of a house collapsed.</p> <p><b>Thiruvananthapuram :</b></p> <ul style="list-style-type: none"> <li>i) Damage to Agricultural crops including Rubber plantation, Banana, Tapioca worth crores reported.</li> <li>ii) Damage to several shops, workshops, Govt. Dept., houses, bridges Oil-mill completely submerged causing damage worth Rs.8 lakhs.</li> <li>iii) Medicines of worth Rs.3 lakhs damaged, as Anand Veterinary hospital inundated.</li> <li>iv) Low lying areas inundated.</li> <li>v) 200 houses marooned.</li> </ul>
17.	27-28 Sep.	Kannur, Wayanad	Heavy Rain		<ul style="list-style-type: none"> <li>i) Damage to 3.5 acres of Paddy crops reported.</li> <li>ii) Loss worth lakhs of rupees reported as 2 acres of land damaged.</li> <li>iii) Many roads washed away.</li> </ul>

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
18.	8 & 9 Oct.	Thiruvananthapuram	Heavy Rain	One person injured.	i) Damage to Agricultural crops including Rubber, Coconut trees reported. ii) Damage to more than 150 houses reported.
19.	30 & 31 Oct.	Thiruvananthapuram	Heavy Rain	More than 100 hens perished.	i) Extensive damage to Agricultural crops reported. ii) About 150 houses inundated. iii) Low lying areas flooded. iv) Several trees / electric poles uprooted causing disruption in vehicular traffic & power supply.
20.	1-21 Nov.	Ernakulam, Malappuram, Pathanamthitta, Thiruvananthapuram	Heavy Rain	2 persons died.	i) Damage to Agricultural crops including Banana, Tapioca, Betel-leaves, vegetables reported. ii) Several houses inundated & complete damage to 11 houses reported. iii) Many people shifted to safer places. iv) Damage to about 70 vehicles reported. v) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
21.	8-19 Dec	Alappuzha, Thiruvananthapuram	Heavy Rain		i) Damage to more than 2000 acres of Paddy cultivation and agricultural crops including Rubber, Banana, Tapioca, Yam, vegetables reported. ii) Low lying areas flooded. iii) Tones of the seeds washed away. iv) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
	<i>* Whole year</i>	<i>Area affected 0.014 m.ha.</i>		<i>i) 74 human lives lost.</i> <i>ii) 4 cattle lost.</i>	<i>i) 0.017 million population affected.</i> <i>ii) 6705 houses damaged.</i> <i>iii) Crops in 0.006 m.ha. damaged.</i>
<b>MADHYA PRADESH</b>					
1.	19-21 Jul.	Betul, Burhanpur, Harda, Indore, Khandwa Sehore, Ujjain, Vidisha	Heavy rains & Floods in Kshipra river	15 persons died including 5 people swept away in flood water.	i) About 6300 people affected. ii) Railway, Bus, electricity & telephone services disrupted.
2.	13 Aug.	Betul	Flood	One woman swept away.	
<b>MAHARASHTRA</b>					
1.	7-16 Jun.	Aurangabad, Beed, Hingoli., Jalna, Latur, Nanded, Osmanabad, Parbhani,	Heavy rains	17 persons died.	i) Roofs of houses blown away. ii) Several trees / electric poles uprooted causing disruption in vehicular traffic & power supply.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
2.	23 Jun.	a) Pune	Heavy rains	3 persons died due to landslide on Pune Express way.	i) Several areas inundated. ii) Normal life paralyzed.
		b) Nagpur	Heavy rains	3 persons died.	
3.	20 Jul.	Pune	Heavy rains	2 persons died & 3 other injured due to landslide on car on Pune Express way.	
4.	28 Jul.	Mumbai	Heavy rains	4 persons died at Vakola Santacruz.	
5.	29 Jul.	Mumbai, Mumbai Suburban, Thane	Heavy rains	9 persons died & 10 injured.	
6.	6-14 Aug.	Akola, Amravati, Chandrapur, Nagpur, Wardha	Heavy rains	7 persons died & one cyclist swept away in Nagpur . One teenage injured due to wall collapsed in Chandrapur Dist.	i) Wide spread damage to crops reported. ii) Damage to many houses reported. iii) Thousands of people affected. iv) Water logging in at most places including Railway Station, Bus stand & over bridge. v) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
* Whole year				2 human lives lost.	



S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
<b>MANIPUR</b>					
	<i>* Whole year</i>			<i>i) 16 human lives lost.</i> <i>ii) 29 cattle lost.</i>	<i>i) 0.427 million population affected.</i> <i>ii) 11607 houses damaged.</i> <i>iii) Crops in 0.045 m.ha. damaged.</i>
<b>MEGHALAYA</b>					
1.	17 Jun.	Parts of Meghalaya	Heavy rains	5 persons died.	
	<i>* Whole year</i>			<i>One human live lost.</i>	<i>i) 0.427 million population affected.</i> <i>ii) 50 houses damaged.</i>
<b>MIZORAM</b>					
	<i>* Whole year</i>	<i>Area affected 0.189 m.ha.</i>			<i>i) 4 houses damaged.</i> <i>ii) Crops in 0.189 m.ha. damaged.</i>
<b>ODISHA</b>					
1.	1 Aug.	Keonjhar	Heavy rains	One person died.	
2.	2 Aug.	Angul, Keonjhar	Heavy rains	5 persons drowned.	
3.	14 to 16 Sep.	Koraput, Nabarangpur , Kalahandi, Kandhamal, Malkangiri	Heavy rains & Flood	4 persons died.	Damage to 504 houses in Koraput & Nabarangpur reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
	<i>* Whole year</i>			<i>3 human lives lost.</i>	<i>i) 0.012 million population affected.</i> <i>ii) 573 houses damaged.</i> <i>iii) Crops in 0.046 m.ha. damaged.</i>
<b>PUNJAB</b>					
1.	1 Jun to 30 Sep.	Amritsar, Bhatinda, Barmala, Firozpur, Fazilka, Jalandhar, Moga, Pathankot, Roopnagar, Sangrur, Sri Mukatsar Sahib, Taran-Taran	Heavy rains	11 persons died & 14 cattle heads perished	i) Damage to 70894 acres of crops of estimated value of Rs. 55 crore reported. ii) 31,754 populations affected. iii) Loss of estimated cost Rs.46,78,900/- reported as 226 houses damaged.
	<i>* Whole year</i>	<i>Area affected 0.037 m.ha.</i>		<i>i) 11 human lives lost.</i> <i>ii) 23 cattle lost.</i>	<i>i) 0.032 million population affected.</i> <i>ii) 462 houses damaged.</i> <i>iii) Crops in 0.037 m.ha. damaged.</i>
<b>RAJASTHAN</b>					
1.	14 & 15 Mar.	26 districts of Rajasthan	Heavy rains	15 persons died & 1381 livestock perished.	i) Extensive damage to Wheat, Gram, Masur, Mustard etc, Rabbi crops & all types of vegetables (near about 50 to 70%) for all districts reported. ii) Damage to 4964 houses reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
2.	22-31 Jul.	Ajmer, Barmer, Bhilwara, Bikaner, Dholpur, Jalore, Jhalawar, Nagaur, Pali, Sirohi	Heavy rains	20 persons died & 50 cattleheads perished.	Damage to 50 houses in Manohar Thana Tehsil of Jhalwar district reported.
3.	1-5 Aug.	Parts of Rajasthan	Heavy rains	41 persons died.	i) Damage to Wheat, Gram, Masur, Mustard etc, Rabbi crops & all types of vegetables reported. ii) Damage to several houses reported.
4.	16 Aug.	Pali	Heavy rains	2 persons died.	
	<i>* Whole year</i>			<i>40 human lives lost.</i>	<i>0.001 million population affected.</i>
<b>SIKKIM</b>					
1.	1 Jul.	Parts of Sikkim	Heavy rains	18 persons died due to landslide.	Landslide.
2.	5 Jul.	Parts of Sikkim	Heavy rains	41 persons died due to landslide.	Massive landslide.
	<i>* Whole year</i>			<i>303 cattle lost.</i>	<i>Crops in 0.600 m.ha. damaged.</i>
<b>TAMIL NADU</b>					
1.	12 Apr.	Virudhnagar	Heavy rains		Damage to 30,000 tons of Mangoes reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
2.	21 Apr.	Thiruvavarur	Heavy rains	One person died & one injured due to wall collapse.	
3.	25 Apr.	Vellore	Heavy rains	3 persons died.	
4.	14 May.	Coimbatore and Pudukkottai	Heavy rains	3 persons died due to house collapse.	
5.	17-19 May.	Thiruvallur, Virudhnagar	Heavy rains	8 persons died & 3 children washed away.	
6.	17 Jun.	Chennai	Heavy rains	One person died due to wall collapse.	
7.	21 Jun.	Nilgiris	Heavy rains	One person died.	
8.	17 Jul.	Chennai	Heavy rains	One person died due to wall collapse.	
9.	9 Nov.	Most Parts of Tamil Nadu	Heavy rains	13 persons died in different incidences.	i) 2000 acres of Paddy fields submerged ii) Damage to 900 acres of Banana crops reported. iii) Power generation stopped as the mines flooded in Cuddalore Dist. iv) Damage to 45 thatched houses reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
10.	11 - 13 Nov	Chennai, Cuddalore, Dharampuri, Erode, Niligiris, Thiruvallur, Toothukudi, Villupuram	Heavy rains	25 persons died in different incidences.	i) Damage to more than 28 houses reported. ii) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
11.	18 - 22 Nov	Chennai, Cuddalore, Kanchipuram, Kanyakumari, Krishnagiri, Nagapattinam, Pudukottai, Tiruneveli, Tiruvannamalai, Thiruvarur, Toothukudi, Villupuram	Heavy rains	Total 47 persons died. Chennai -7, Cuddalore-16, Kanchipuram - 4, Kanyakumari - 2, Krishnagiri - 2, Nagapattinam - 3, Pudukottai-1, Tiruneveli - 1, Tiruvannamalai - 2, Thiruvarur-1, Toothukudi - 1, Villupuram – 7 & 240 cattle heads perished.	i) 2000 hectares of Paddy crops submerged. ii) Damage to several houses reported. iii) Several trees / electric poles uprooted causing disruption in vehicular traffic & power supply.
12.	23 Nov.	Most Parts of Tamil Nadu	Heavy rains	50 persons died.	i) Damage to 300 houses reported. ii) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
13.	28 - 30 Nov.	Chennai, Villupuram	Heavy rains & Floods (Adyar river)	32 persons died.	i) Extensive damage to 2800 hectares of Paddy field reported. ii) Damage to several houses reported. iii) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
14.	1 - 3 Dec.	Most Parts of Tamil Nadu	Heavy rains	17 persons died.	i) Damage to crops reported. ii) Damage to many houses reported. iii) Several trees / electric poles uprooted causing disruption in vehicular traffic & power supply.
15.	8 - 11 Dec.	Most Parts of Tamil Nadu	Heavy rains	30 persons died. 1210 cattle heads perished.	i) Extensive damage to 25 hectares of Paddy crops reported. ii) 20,000 hectares of Cotton plants submerged. iii) Damage to 5631 huts fully & 331 huts partially reported. iv) Damage to around 25 lakh vehicles reported.
<b>TRIPURA</b>					
	<i>* Whole year</i>	<i>Area affected 0.001 m.ha.</i>		<i>i) One human lives lost. ii) 21cattle lost.</i>	<i>i) 0.014 million population affected. ii) 3255 houses damaged. iii) Crops in 0.001 m.ha. damaged.</i>
<b>TELANGANA</b>					
1.	6 to 12 Apr.	Adilabad, Karimnagar, Khammam, Mahbubnagar, Medak, Nalgonda, Nizamabad, Rangareddy and Warangal	Heavy rains	5 persons died & 91 cattleheads perished.	i) Damage to 40131.88 hectares of Agricultural crops & 35175.2 hectares of Horticulture crops reported. ii) Damage to about 286 houses reported.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
UTTAR PRADESH					
1.	4 Apr.	Barabanki, Mainpuri, Sitapur	Heavy rains	12 persons died.	i) Damage to crops reported. ii) Damage to several houses reported.
2.	11 & 12 Jul.	Bareilly, Budaun, Bulandshahar, Etah, Etawah, Farrukhabad, Hamirpur, Sitapur, Shahjahanpur, Unnao (U.P.)	Heavy rains	15 persons died.	i) Damage to crops reported. ii) Damage to many houses reported.
3.	28 Oct.	West U.P.	Heavy rains	2 persons died & several injured.	i) Damage to crops reported. ii) Damage to few houses reported.
4.	1 Dec.	South-west Uttar Pradesh	Heavy rains	5 persons died & many injured.	i) Damage to crops reported. ii) Damage to several houses reported.
	* Whole year				i) 0.010 million population affected. ii) 6 houses damaged.
UTTARAKHAND					
1.	26 Jul.	Parts of Uttarakhand	Heavy Rain	One person died.	
	* Whole year			i) 33 human lives lost. ii) 181 cattle lost.	411 houses damaged.

S.N.	Date / Period	Area affected	Intensity [River(s)]	Casualties	Extent of damage
<b>WEST BENGAL</b>					
1.	1-10 Jul.	Darjeeling, Kolkata	Heavy rains	39 persons died & 8 others missing.	i) Damage to crops reported. ii) Damage to several houses reported. iii) Several trees/electric poles uprooted causing disruption in vehicular traffic & power supply.
2.	20-24 Jul.	South 24 Paraganas, South Dinajpur	Heavy rains	5 persons died.	i) Damage to crops reported. ii) Damage to several houses reported.
	<i>* Whole year</i>			<i>i) 338 human lives lost. ii) 22774 cattle lost.</i>	<i>i) 10.840 million population affected. ii) 830245 houses damaged. iii) Crops in 1.300 m.ha. damaged.</i>
<b>UNION TERRITORY</b>					
<b>PUDUCHERRY</b>					
1.	2 Dec.	<i>Puducherry</i>	Heavy rains	2 persons died.	

\* Input from Central Water Commission and Ministry of Agriculture



## सारिणी - XII : चक्रवाती तूफान 2015

**TABLE - XII : CYCLONIC STORM 2015**

During 2015, two (2) Cyclonic Storms (ASHOBAA, KOMEN), two (2) Extremely Severe Cyclonic Storms (CHAPALA, MEGH), one (1) Cyclonic Storm (KOMEN) formed over the Bay of Bengal & remaining formed over Arabian Sea. Out of these KOMEN caused some damage, details of the same are out lined below:-

S.N.	Date/ Period	Area affected	Intensity	Casualties	Extent of damage
<b><u>BAY CYCLONE</u></b>					
1.	26 July to 2 August	<p><b><u>Formation</u></b> Near Lat. 22.0°N / Long. 90.5°E, about 95 kms south-southwest of Chittagong (Bangladesh) &amp; about 300 kms east-southeast of Kolkatta at 1800 UTC of 29<sup>th</sup> July.</p> <p><b><u>Landfall</u></b> It crossed Bangladesh coast between Hatia and Sandwip near lat. 22.5°N and 91.4°E during 1400 and 1500 UTC of 30<sup>th</sup> July.</p> <p><b><u>Dissipation</u></b> Weakened into a well marked low pressure area over Jharkhand and adjoining areas of north Odisha &amp; north Chhattisgarh at 1200 UTC on 2<sup>nd</sup> Aug.</p>	Cyclonic Storm (KOMEN)	<p>i) 69 persons died 10,088 livestock perished in West Bengal.</p> <p>ii) 5 persons died in Odisha.</p> <p>iii) 20 persons died in Manipur due to landslides.</p>	<p><b><u>West Bengal:</u></b></p> <p>i) 61,29,965 people from 12 districts affected.</p> <p>ii) Damage to 1,07,808 houses completely &amp; 3,68,238 houses partially reported.</p> <p><b><u>Odisha:</u></b></p> <p>About 5 lakh people affected.</p>

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