

## A case study of flood in India how it impacted human life

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### ABSTRACT

*Floods are a dangerous natural disaster and whole world affected by this. Flood is a major problem in India. Floods are the most common natural disaster in India. The study is based on secondary data of last five years from 2013 to June 2018 of flood in different states of India. The later part studies the impact of floods in India that has occurred in the time period. It has been analyzed that 1187 peoples have died, 14309 villages, 114 districts and 16850000 people are affected, 4099706 people are evacuated, 298177 hectare agriculture land has been damaged. 317299 buildings are damaged and destroyed, 25 bridges collapsed, 99731 houses are damaged and destroyed in last five years. Flood emanated in India due to heavy rainfall in monsoon, because 75% of the rain received in India is in monsoon. Monsoon or rainy season lasts in India from July to September. The primary cause of floods in India is heavy rainfall in short duration of time. Assam is one of India's most flood prone states and invariably sees flooding during this time of year as monsoon rains increase levels of the Brahmaputra and its tributaries.*

### Keywords:

### Flood data of various states in India

During last five years i.e. from 2013 to June 2018, various states of India had suffered the fury of floods. The data that has been analyzed includes the fatalities, the collateral damage, population that has been affected by the flood or had to be evacuated and the reason behind the flood has also been included.

**Table 1: Flood data of different state in India in 2013 to June 2018.**

State	Year	Reason	Death	Population Affected	Evacuated	Property Damage
Assam.	2012	Heavy Rainfall		Over 2 million		
North East India,	May 2013	Monsoon season	06			
Bihar	June 2013	Torrential rain and storms	5			
Uttarakhand	June 2013	monsoon floods	60			400 roads, 20 bridges collapsed
Assam	June 2013	Heavy Rainfall		240 villages. 35000 people 5000 animals		3,340 hectares.
Andhra Pradesh	July 2013	Monsoon		200 villages, 6 districts		100,000 hectares.
West Bengal	August 2013	Heavy		200 villages	15 villages	

Flood came in Assam due to heavy rainfall and over 2 million people were affected. In North East India 6 people died, in Bihar 5 people died, in Uttarakhand 60 people lost their lives and 400 roads and 20 bridges were collapsed. In Assam 240 villages, 35000 people and 5000 animals were affected. In Andhra Pradesh 200 villages and 6 districts were affected. In West Bengal 200 villages got affected and 15 villages were evacuated.

**Table 2: Flood data of different state in Indiasince 2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Property Damaged
<b>Madhya Pradesh</b>	August 2013	Heavy rainfall	30	100 villages and 40,000 peoples.	3,000 people	24,000 houses
Gujarat	September, 2013	Lashingrainfall	13		62,000	
<b>Odisha</b>	October, 2013	Heavy rainfall	10	100 villages	50,000	
<b>Andhra Pradesh</b>	October, 2013	Heavy rainfall	12			
Jammu:	2013	Heavy rainfall	29			15,712 buildings, houses, agriculture buildings.
Assam	<b>June 2014</b>	Heavy rainfall		25000/ 10000 displaced.		
Assam	June, 2015	Heavy rainfall	1	30,000 people.		50 homes/3 destroyed

In Madhya Pradesh death was 30,100 villages and 40000 peoples were affected and 24000 houses were damaged by flood. In Gujarat 13 people died, whereas 62000 peoples were evacuated. In Odisha 10 people lost their lives, 100 villages were affected and 50000 people were evacuated from the flood prone areas. In Andhra Pradesh 12 died due to flood on the other hand in Jammu and Kashmir 29 deaths were recorded,15712 buildings and houses were damaged due to flood. In Assam 25000 people were affected and 10000 people were displaced. In Assam 1 person died,30000 people were affected and 50 houses were damaged and 3 were completely destroyed.

**Table 3:Flood data of different state in Indiasince2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Damage
<u>Assam</u>	June, 2015	Heavy rains	2	700 villages 15 districts 311,000 people		11,000 hectares of crops
Gujarat	June, 2015	Torrential monsoon rainfall	30	10,000 displaced		
<u>Gujarat, Rajasthan and Madhya Pradesh</u>	July, 2015	Heavy rain	28	2,000 villages		
Odisha	July, 2015	Heavy rainfall	2	240,000 people 282 village, 5 districts		
Gujarat	August, 2015	Rainfall		14 districts 4 million people		
Odisha	July 2015,	Rainfall	5	480,000 people 644 villages.	1,574	
West Bengal	July 2015	Cyclone and rainfall.	48	10,000 villages in 12 districts	200,000 people	38,000 houses.

In Assam 2 died, 700 villages, 15districts, 311000 people were affected and 11000 hectares of crop was damaged due to flash flood. 30 lost their lives in Gujarat while 10000 people were displaced in June. Gujarat was again hit in July along with Rajasthan and Madhya Pradesh, where 28 died and 2000 villages were

affected. In Odisha 2 died, 282 villages, 5 districts and 240,000 people were affected. Odisha was again hit by flash flood in the same month which took 5 lives, whereas 644 villages, 480,000 people were affected and 1574 people were evacuated to the safer places. In August 14 districts and 4 million people were affected in Gujarat. In West Bengal 48 died, 10,000 villages and 12 districts were affected, while 200,000 people were evacuated and 38,000 houses were damaged.

**Table 4: Flood data of different state in India since 2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Property Damage
Manipur	August 2015	Heavy rainfall	20	500 000		
Maharashtra	August, 2015	Heavy rainfall	5			
Assam	August 2015	Heavy rainfall	4	600,000 people in 18 districts		50,000 hectares
Assam	September, 2015	Heavy monsoon rain	20	736,000 people in 18 districts		
Tamil Nadu	November, 2015 to December 2015.	Rainfall	269			
Assam	May, 2016	Heavy rain	11	73,000 people.		
Assam	July, 2016	Rainfall		123,000 people 190 villages.		4,000 hectares

Manipur had faced 20 deaths, 500,000 people were affected due to flood. Maharashtra suffered from 5 deaths due to flood. Assam was hit flood twice in a year with death toll of 4 in August and 20 in September. 1291 villages were affected under 18 districts and 600,000 people were affected and 180,000 people were displaced in August while in September in 18 districts 736,000 people were affected. Tamil Nadu was worst hit with 269 death due to flood. Assam was again hit in May and July of 2016 with 11 deaths in May and 73,000 people were affected. In July, 190 village and 123,000 people were affected and 4,000 hectares agriculture land was badly damaged.

**Table 5: Flood data of different state in India since 2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Property damage
Madhya Pradesh	July, 2016	heavy rain	20	300,000 people		2,360 houses
West Bengal	July, 2016	Heavy rainfall.		50,000 people, 150 village.		17236 houses
Bihar	July, 2016	Long-term rainfall	17	1,500 Villages , 8 district , 3.753 million.	715,158 people.	

Maharashtra	August, 2016	Extreme rainfall	12		3,000	2,000 houses 300 completely destroyed.
Andhra Pradesh	September, 2016	Long-term rainfall	17		10,000	50,000 hectares of crops.
Meghalaya	April 2017	Long-term rainfall			20 people	roads and agricultural, 20 houses displaced
<u>Assam</u>	June, 2017	Long-term rainfall	76	270,000 people.	48,483 people	140,837 crop

In Madhya Pradesh 20 people died, 300,000 people were affected and 2360 houses were damaged 1736 house were destroyed in flood. In West Bengal 150 villages and 50,000 people were affected. In Bihar 17 people lost their lives, 1500 villages in 8 districts and 3.753 million people were affected, 715158 people were evacuated. 12 people of Maharashtra died while 3000 people were evacuated, 2000 houses were damaged and 300 were completely destroyed in the floods. 17 died in Andhra Pradesh while 10,000 people were evacuated to safe areas and crops of 5000 hectares were damaged. In Meghalaya 20 people were evacuated and 20 houses were damaged. Assam death toll got raised to 76, 270,000 people were affected and 48,483 people were evacuated from the flood prone areas, 140,837 hectares crops were damaged due to flood.

**Table 6: Flood data of different state in India since 2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Property damage
Odisha	July 2017	Heavy rainfall		12 villages, 40,000 people.		5 bridges
Gujarat	July 2017	Extreme rainfall	94	350,000 people.	32,000 people	15 buildings
West Bengal	August 2017	Heavy rainfall	39	47,000 , People	1,125,140 people.	256,181 building
Bihar	August 2017	Long-term rainfall	41	180,000 people in 10 districts	696,811 people	24,350 building
Assam	August 2017	Long-term rainfall		1,800,000 people.	183,584 people.	
Bihar	August 2017	Long-term rainfall	253	7,000 villages in 20 districts	696,811 people.	24,350 Buildings destroyed
Uttar Pradesh	August 2017	Long-term rainfall		2,000,000 people	92,125 people	1182 Buildings destroyed

In Odisha 40,000 people of 12 villages were affected, 5 bridges were damaged due to flood. In Gujarat 94 people died, 350,000 people were affected while 32,000 people were evacuated safely and 15 buildings were damaged. In West Bengal 39 people died, 47,000 people were affected and 1,125,140 people were evacuated safely, 256,181 buildings were damaged due to flood. Bihar lost 41 people, 180,000 people of 10 districts were affected however 696,811 people were evacuated to safe areas and 24,350 buildings were damaged. In Assam 1,800,000 people were affected whereas, 183,584 people were evacuated from the flood prone areas. Bihar witnessed 253 deaths, while 7,000 villages in 20 districts were badly affected and 696,811 people were safely evacuated. 24,350 buildings were completely destroyed in flood. In Uttar Pradesh

200000 people were affected and 92125 people were evacuated whereas 1182 buildings were destroyed in floods.

**Table 7:Flood data of different state in India since 2013 to June 2018**

State	Year	Reason	Death	Population affected	Evacuated	Property damage
Tripura	May, 2018	Heavy rainfall	15		25000	1200 houses
Assam	May-June 2018	Torrential monsoon rainfall	3	167,000	36000	1376 hectares crops
Karnataka	May, 2018	Extreme rainfall	3		545	

In May, 15 people died in Tripura, while 25000 were evacuated to the safe places and 1200 houses suffered the damage. In May—June, 2018 Assam received torrential monsoon rains that took away 3 lives and the crop on 1376 hectares was damaged badly. In Karnataka 3 people lost their lives due to flood while 545 people were rescued from the flood prone areas.

**Table 8: Total damage due to flood since 2013 to June 2018**

Fatalities	Affected	Evacuated	Damaged
1187	14309 village, 114 districts and 17017000 people are affected ,	4161251 people were evacuated ,	299553 hectare agriculture land. 316063 buildings, 25 bridge collapsed, 100931 houses

#### **REMARKS:**

It has been analyzed that 1187 people lost their lives. 14309 villages were highly affected by the disaster. 17017000 people of 114 districts were affected, whereas 4161251 people were evacuated safely from the flood prone areas. Agriculture land of 299553 hectare was damaged along with 316063 buildings that were destroyed. 25 bridges were collapsed and 100931 houses were damaged and destroyed in the last five year. Flooding in India happens due to heavy rainfall during monsoon because India receives its 75% of the annual rain during monsoon. Flooding is the result of heavy rainfall in less time. Higher frequency of rain results in floods and is the most common natural disaster in India.

#### **CONCLUSION:**

Floods impact on both individuals and communities, and have social, economic, and environmental consequences. Flood is one of the major problems of India that occurs almost every year during monsoon. Assam lies in the heart of Monsoon belt and so gets an overabundance of rain and is worst hit by flooding in the country.. Many north-eastern states, along with states of Bihar and West Bengal are annual victims of flooding. It ruins states' already impoverished economy and finance completely or partially. Many lives are lost, many people loose their houses, and livelihood of many gets ruined. Floods need to be worked on in the country because states comes a full circle after a year's progress.

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