



REPUBLIC OF THE PHILIPPINES
NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

National Disaster Risk Reduction and Management Center, Camp Aguinaldo, Quezon City, Philippines

National Disaster Risk Reduction and Management Council

INCIDENTS MONITORED

Progress Report No. 2 for the Effects of Intertropical Convergence Zone (ITCZ) in Region XII

DATE OF INCIDENT	April 27, 2025
TIME OF INCIDENT	01:00 pm
DATE ISSUED	May 06, 2025
TIME ISSUED	12:00 pm
OVERVIEW	<p>From April 27 to May 2, 2025, several weather-related incidents were reported in various parts of Region XII due to persistent rainfall associated with the Intertropical Convergence Zone (ITCZ).</p> <p>On April 27, 2025, at approximately 1:00 PM, Barangay Napnapon in Palimbang, Sultan Kudarat experienced a flash flood triggered by heavy rains brought by the ITCZ. Two days later, at around 4:30 PM on April 29, continuous heavy rainfall occurred in Bagumbayan, Sultan Kudarat, which resulted in flooding in Barangays Poblacion and Biwang. Reports confirmed that there were no casualties or evacuations during this incident.</p> <p>On April 30, 2025, at around 1:30 PM, light to moderate rainfall was observed in Maitum, Sarangani. This caused flooding in nine barangays and a landslide along the national highway connecting Sarangani and Sultan Kudarat. Despite the extent of the impact, no casualties or evacuations were reported.</p> <p>On May 1, 2025, at approximately 4:30 PM, severe weather characterized by heavy rains and strong winds affected parts of Tacurong City. The incident caused structural damage, particularly in Barangays Baras and Rajah Muda, where several residential roofs were blown off.</p> <p>On May 2, 2025, at around 2:00 PM, continuous heavy rainfall was observed Pikit, Cotabato Province which resulted flooding incident in four brgys. As per report, no evacuation and casualties happened over the incident.</p>

RELATED INCIDENTS

The following incidents were reported in some areas of SARANGANI, SULTAN KUDARAT, COTABATO.

PROVINCE	Landslide (Rain-Induced)	Flooded Areas			Tornado/Destructive Winds/Strong Winds
		Flooded	Subsided	Receding	
Total	2	0	17	2	8
SARANGANI	1	0	10	0	0
SULTAN KUDARAT	1	0	5	0	8
COTABATO	0	0	2	2	0

AFFECTED POPULATION

A total of 2,946 families or 11,154 persons were affected. Of which, 120 families or 390 persons were served inside 1 ECs and 3 families or 16 persons were served outside ECs:

Affected Provinces	AFFECTED			INSIDE ECs			OUTSIDE ECs	
	Brgy	Families	Persons	No. of ECs	Families	Persons	Families	Persons
TOTAL	29	2,946	11,154	1	120	390	3	16
SULTAN KUDARAT	13	715	3,719	1	120	390	3	16
SARANGANI	11	371	1,855	0	0	0	0	0
COTABATO	5	1,860	5,580	0	0	0	0	0

ROADS AND BRIDGES

A total of 7 road sections and 0 bridges were affected. Below is the current status of affected road sections and bridges:

	NOT PASSABLE		PASSABLE (previously reported as not passable and/or one lane passable)	
	ROADS	BRIDGES	ROADS	BRIDGES
GRAND TOTAL	0	0	7	0
SARANGANI	0	0	6	0
SULTAN KUDARAT	0	0	1	0

DAMAGED HOUSES

A total of 19 damaged houses are reported in SULTAN KUDARAT.

REGION	PARTIALLY	TOTALLY	TOTAL	AMOUNT (PHP)
GRAND TOTAL	16	3	19	0
SULTAN KUDARAT	16	3	19	0

DAMAGE AND LOSSES TO AGRICULTURE (2)

Department of Agriculture

PROVINCE	NO. OF FARMERS/ FISHERFOLK AFFECTED	AFFECTED CROP AREA (HA)			NUMBER OF DAMAGED INFRASTRUCTURE, MACHINERIES, EQUIPMENT			PRODUCTION LOSS IN VOLUME (MT)	PRODUCTION LOSS / COST OF DAMAGE IN VALUE (PHP)
		WITH NO CHANCE OF RECOVERY (TOTALLY DAMAGED)	WITH CHANCE OF RECOVERY (PARTIALLY DAMAGED)	TOTAL	TOTALLY DAMAGED	PARTIALLY DAMAGED	TOTAL		
GRAND TOTAL	3	0	1.5	1.5	0	3	3	0	0
SARANGANI	3	0	1.5	1.5	0	3	3	0	0

National Irrigation Administration

PROVINCE	NUMBER OF DAMAGED INFRASTRUCTURE		TOTAL	COST OF DAMAGE
	TOTALLY DAMAGED	PARTIALLY DAMAGED		
GRAND TOTAL	0	0	0	0

DAMAGE TO INFRASTRUCTURE

The estimated cost of damage to infrastructure amounting to Php 0 was reported in SARANGANI.

PROVINCE	NUMBER OF DAMAGED INFRASTRUCTURE	COST OF DAMAGE (PHP)
GRAND TOTAL	1	0
SARANGANI	1	0

ASSISTANCE PROVIDED TO AFFECTED FAMILIES

	NO OF FAMILIES REQUIRING ASSISTANCE	COST OF ASSISTANCE	NO OF FAMILIES ASSISTED	% OF FAMILIES ASSISTED
GRAND TOTAL	2,269	2,165,870.2	2,269	100.00
SULTAN KUDARAT	715	1,199,282.2	715	100.00
COTABATO	1,554	966,588	1,554	100.00

Related Incidents

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY		TYPE OF INCIDENT	DATE OF OCCURENCE	TIME OF OCCURENCE	DESCRIPTION	ACTIONS TAKEN	REMARKS	STATUS (for flooded areas)
GRAND TOTAL	29							
REGION 12	29							
SARANGANI	11							
Maitum	11							
Kalaneg		Landslide (Rain-Induced)	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	
Kalaong		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Kiayap		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Kiambing		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Mabay		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Malalag		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Sison		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Wali		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO - Maitum	Subsided
Old Poblacion		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO -	Subsided
Pangi		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO -	Subsided
Pinol		Flooded Areas	30 April 2025	01:30 pm			coordinated thru phone call with MDRRMO -	Subsided
SULTAN KUDARAT	14							
Tacurong	6							
Baras		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	
Rajah Muda		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY		TYPE OF INCIDENT	DATE OF OCCURENCE	TIME OF OCCURENCE	DESCRIPTION	ACTIONS TAKEN	REMARKS	STATUS (for flooded areas)
Calean		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	
Upper Katungal		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	
New Lagao		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	
EJC Montilla		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			Strong winds resulted to damaged houses	
Palimbang	1							
Napnapon		Flooded Areas	29 April 2025	04:30 pm			coordinated thru phone call with MDRRMO - Palimbang	Subsided
Bagumbayan	5							
Biwang		Flooded Areas	29 April 2025	04:30 pm			coordinated thru phone call with MDRRMO - Bagumbayan	Subsided
Poblacion		Flooded Areas	29 April 2025	04:30 pm			coordinated thru phone call with MDRRMO - Bagumbayan	Subsided
Sison		Flooded Areas	29 April 2025	04:30 pm			coordinated thru phone call with MDRRMO - Bagumbayan	Subsided
Masiag		Flooded Areas	29 April 2025	04:30 pm			coordinated thru phone call with MDRRMO - Bagumbayan	Subsided
Chua		Landslide (Rain-Induced)	02 May 2025	07:00 pm				
Esperanza	2							
Daladap		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			coordinated thru phone call with MDRRMO - Esperanza	
Numo		Tornado/Destructive Winds/Strong Winds	01 May 2025	04:30 pm			coordinated thru phone call with MDRRMO - Esperanza	
COTABATO	4							
Pikit	4							
Dalingaoen		Flooded Areas	02 May 2025	02:00 pm			coordinated thru phone call with MDRRMO - Pikit	Subsided
Ginatilan		Flooded Areas	02 May 2025	02:00 pm			coordinated thru phone call with MDRRMO - Pikit	Receding
Takepan		Flooded Areas	02 May 2025	02:00 pm			coordinated thru phone call with MDRRMO - Pikit	Subsided

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY		TYPE OF INCIDENT	DATE OF OCCURENCE	TIME OF OCCURENCE	DESCRIPTION	ACTIONS TAKEN	REMARKS	STATUS (for flooded areas)
Ladtingan		Flooded Areas	02 May 2025	02:00 pm			coordinated thru phone call with MDRRMO - Pikit	Receding

Affected Population

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY		NO. OF AFFECTED			No. of ECs		Inside Evacuation Centers				Outside Evacuation Centers				TOTAL SERVED (Inside + Outside)			
		Brgys.	Families	Persons	CUM	NOW	Families		Persons		Families		Persons		Families		Persons	
							CUM	NOW	CUM	NOW	CUM	NOW	CUM	NOW	CUM	NOW		
GRAND TOTAL	29	29	2,946	11,154	2	1	122	120	396	390	3	3	16	16	125	123	412	406
REGION 12	29	29	2,946	11,154	2	1	122	120	396	390	3	3	16	16	125	123	412	406
SULTAN KUDARAT	13	13	715	3,719	1	1	120	120	390	390	3	3	16	16	123	123	406	406
Bagumbayan	4	4	573	3,008	1	1	120	120	390	390	0	0	0	0	120	120	390	390
Poblacion		1	485	2,658	1	1	120	120	390	390	0	0	0	0	120	120	390	390
Biwang		1	38	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sison		1	30	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Masiag		1	20	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Palimbang	1	1	95	475	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Napnapon		1	95	475	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tacurong	6	6	43	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baras		1	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rajah Muda		1	20	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calean		1	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Upper Katungal		1	8	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Lagao		1	8	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EJC Montilla		1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Esperanza	2	2	4	21	0	0	0	0	0	0	3	3	16	16	3	3	16	16
Daladap		1	3	16	0	0	0	0	0	0	3	3	16	16	3	3	16	16
Numo		1	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SARANGANI	11	11	371	1,855	1	0	2	0	6	0	0	0	0	0	2	0	6	0
Maitum	11	11	371	1,855	1	0	2	0	6	0	0	0	0	0	2	0	6	0
Kalaong		1	90	450	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiambing		1	72	360	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiayap		1	15	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY		NO. OF AFFECTED			No. of ECs		Inside Evacuation Centers				Outside Evacuation Centers				TOTAL SERVED			
		Brgys.	Families	Persons	CUM	NOW	Families		Persons		Families		Persons		Families		Persons	
							CUM	NOW	CUM	NOW	CUM	NOW	CUM	NOW	CUM	NOW	CUM	NOW
Mabay	1	16	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malalag	1	45	225	1	0	2	0	6	0	0	0	0	0	2	0	6	0	0
Old Poblacion	1	6	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pangi	1	13	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinol	1	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sison	1	12	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalaneg	1	93	465	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Upo	1	6	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COTABATO	5	5	1,860	5,580	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pikit	5	5	1,860	5,580	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dalingaoen	1	480	1,440	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ginatilan	1	574	1,722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Takepan	1	50	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ladtingan	1	450	1,350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calawag	1	306	918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Roads and Bridges

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		TYPE	CLASSIFICATION	ROAD SECTION/BRIDGE	STATUS	DATE REPORTED (passable)	TIME REPORTED (passable)	DATE REPORTED (not passable)	TIME REPORTED (not passable)	REMARKS
GRAND TOTAL	8									
REGION 12	8									
SARANGANI	6									
Maitum	6									
Kalaneg		Road	National (primary)	Sarangani-Sultan Kudarat Road	PATV - PASSABLE ALL TYPES VEHICLES	30 April 2025	04:20 pm	30 April 2025	01:30 pm	due to landslide
Malalag		Road	National (secondary)	Sarangani-Sultan Kudarat Road,	PATV - PASSABLE ALL TYPES VEHICLES	30 April 2025	07:00 pm	30 April 2025	01:30 pm	
Sison		Road	Provincial	Sison Provincial Road	PATV - PASSABLE ALL TYPES VEHICLES					ongoing validation for the date and time of the report

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		TYPE	CLASSIFICATION	ROAD SECTION/BRIDGE	STATUS	DATE REPORTED (passable)	TIME REPORTED (passable)	DATE REPORTED (not passable)	TIME REPORTED (not passable)	REMARKS
Sison		Road	Barangay	Sison-Wali Road	PATV - PASSABLE ALL TYPES VEHICLES					ongoing validation for the date and time of the report
Sison		Road	Barangay	Sison-Zion Road	PATV - PASSABLE ALL TYPES VEHICLES					ongoing validation for the date and time of the report
Wali		Road	Barangay	Prk. Morning Star Provincial Road	PATV - PASSABLE ALL TYPES VEHICLES					ongoing validation for the date and time of the report
SULTAN KUDARAT	2									
Bagumbayan	2									
Chua		Road	National (secondary)	S00743MN Isulan-Jct.-Ninoy Aquino Rd, K1809+0850 - K1810+0900	OLP - ONE LANE PASSABLE	02 May 2025	10:30 pm	02 May 2025	07:00 pm	
Chua		Road	Barangay	K1813+0500 to K1813+0500	OLPLV - One-Lane Passable to Light Vehicles			02 May 2025		ongoing validation for the date and time of the report

Damaged Houses

REGION PROVINCE CITY/ MUNICIPALITY BARANGAY	NO. OF DAMAGED HOUSES			AMOUNT (PHP)	REMARKS
	TOTALLY	PARTIALLY	GRAND TOTAL		
GRAND TOTAL	3	16	19	0	
REGION 12	3	16	19	0	
SULTAN KUDARAT	3	16	19	0	
Tacurong	0	15	15	0	
Baras	0	3	3	0	No estimated amount of the damaged houses
Rajah Muda	0	12	12	0	No estimated amount of the damaged houses
Esperanza	3	1	4	0	
Daladap	3	0	3	0	No estimated amount of the damaged houses
Numo	0	1	1	0	No estimated amount of the damaged houses

Damage and Losses to Agriculture (2)

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		CLASSIFICATION	TYPE	NO. OF FARMERS/ FISHERFOLK AFFECTED	AFFECTED CROP AREA (HA)			NUMBER OF DAMAGED INFRASTRUCTURE, MACHINERIES, EQUIPMENT			PRODUCTION LOSS IN VOLUME (MT)	PRODUCTION LOSS / COST OF DAMAGE IN VALUE (PHP)
					WITH NO CHANCE OF RECOVERY (TOTALLY DAMAGED)	WITH CHANCE OF RECOVERY (PARTIALLY DAMAGED)	TOTAL	TOTALLY DAMAGED	PARTIALLY DAMAGED	TOTAL		
GRAND TOTAL	2			3	0	1.5	1.5	0	3	3	0	0
DA TOTAL	2			3	0	1.5	1.5	0	3	3	0	0
NIA TOTAL				0	0	0	0	0	0	0	0	0
REGION 12	2			3	0	1.5	1.5	0	3	3	0	0
SARANGANI	2			3	0	1.5	1.5	0	3	3	0	0
Maitum	2			3	0	1.5	1.5	0	3	3	0	0
Sison		Others (please specify)	Vegetable Garden	1	0	1.5	1.5	0	1	1	0	0
Kiayap		Others (please specify)	Fish pond	2	0	0	0	0	2	2	0	0

Damage to Infrastructure

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		TYPE	CLASSIFICATION	INFRASTRUCTURE	NUMBER OF DAMAGED	UNIT	QUANTITY	STATUS	COST(PHP)	REMARKS
GRAND TOTAL	1				1		1		0	
REGION 12	1				1		1		0	
SARANGANI	1				1		1		0	
Maitum	1				1		1		0	
Kiayap		Water System	Local	EI Fak Water System	1		1	Partially Damaged	0	No estimated cost of the damaged

Assistance Provided to Affected Families

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		NO. OF FAMILIES AFFECTED	NEEDS	NO. OF FAMILIES REQUIRING ASSISTANCE	F/NFIs PROVIDED					NO. OF FAMILIES ASSISTED	% OF FAMILIES ASSISTED	REMARKS
					QTY	UNIT	COST PER UNIT	AMOUNT	SOURCE			
GRAND TOTAL	20	2,269		2,269			16,271	2,165,870.2		2,269	100.00	
REGION 12	20	2,269		2,269			16,271	2,165,870.2		2,269	100.00	
SULTAN KUDARAT	16	715		715			13,783	1,199,282.2		715	100.00	
City of Tacurong	6	43		43			3,732	26,746		43	100.00	
EJC Montilla		1	Family Food Pack	1	1	Pack	622	622	DSWD	1	100.00	

REGION PROVINCE CITY /MUNICIPALITY BARANGAY		NO. OF FAMILIES AFFECTED	NEEDS	NO. OF FAMILIES REQUIRING ASSISTANCE	F/NFIs PROVIDED					NO. OF FAMILIES ASSISTED	% OF FAMILIES ASSISTED	REMARKS
					QTY	UNIT	COST PER UNIT	AMOUNT	SOURCE			
New Lagao		8	Family Food Pack	8	8	Pack	622	4,976	DSWD	8	100.00	
Upper Katungal		8	Family Food Pack	8	8	Pack	622	4,976	DSWD	8	100.00	
Calean		3	Family Food Pack	3	3	Pack	622	1,866	DSWD	3	100.00	
Baras		3	Family Food Pack	3	3	Pack	622	1,866	DSWD	3	100.00	
Rajah Muda		20	Family Food Pack	20	20	Pack	622	12,440	DSWD	20	100.00	
Bagumbayan	8	573		573			8,807	1,114,686		573	100.00	
Masiag		20	Family Food Pack	20	20	Pack	622	12,440	DSWD	20	100.00	
Sison		30	Family Food Pack	30	30	Pack	622	18,660	DSWD	30	100.00	
Biwang		38	Family Food Pack	38	38	Pack	622	23,636	DSWD	38	100.00	
Poblacion		485	Family Food Pack	485	485	Pack	622	301,670	DSWD	485	100.00	
Poblacion		0	Family Kits	0	120	kit	2,758	330,960	DSWD	0	0	
Poblacion		0	Hygiene Kits	0	120	kit	1,948	233,760	DSWD	0	0	
Poblacion		0	Sleeping Kits	0	120	kit	1,418	170,160	DSWD	0	0	
Poblacion		0	Water Container	0	120	pc	195	23,400	DSWD	0	0	
Esperanza	1	4		4			622	2,488		4	100.00	
Daladap		4	Family Food Pack	4	4	Pack	622	2,488	DSWD	4	100.00	
Palimbang	1	95		95			622	55,362.2		95	100.00	
Napnapon		95	Family Food Pack	95	95	Pack	622	55,362.2	DSWD	95	100.00	
COTABATO	4	1,554		1,554			2,488	966,588		1,554	100.00	
Pikit	4	1,554		1,554			2,488	966,588		1,554	100.00	
Dalingaoen		480	Family Food Pack	480	480	pack	622	298,560	DSWD	480	100.00	
Ginatilan		574	Family Food Pack	574	574	pack	622	357,028	DSWD	574	100.00	
Takepan		50	Family Food Pack	50	50	pack	622	31,100	DSWD	50	100.00	
Ladtingan		450	Family Food Pack	450	450	pack	622	279,900	DSWD	450	100.00	

Progress Report No. 2 for the Effects of Intertropical Convergence Zone (ITCZ) in Region XII

ACTIONS TAKEN

Region 12

OCD XII

- Continuously monitors and coordinates with concerned LGUs

DPWH XII

- Conducted debris clearing operations of reported damaged and unpassable roads

DSWD XII

- Coordinated with affected LGUs for validation and data gathering of initial disaster data
- Provided and distributed Food and Non-Food Items to the affected families

MDRRMO - Maitum

- Deployed Quick Response Team (QRT) and RDANA team to conduct assessment on the reported incident caused by heavy rainfall
- Heavy equipment was deployed for clearing operations on reported landslide road
- Continuous monitoring of the situation in the affected areas

CDRRMO – Tacurong

- Coordinated with respective BDRRMCs for monitoring on the affected areas
- Conducted ocular inspection in the affected areas

MDRRMO - Bagumbayan

- Conducted assessment and validation of affected families
- Continuous monitoring on the situation in the affected areas