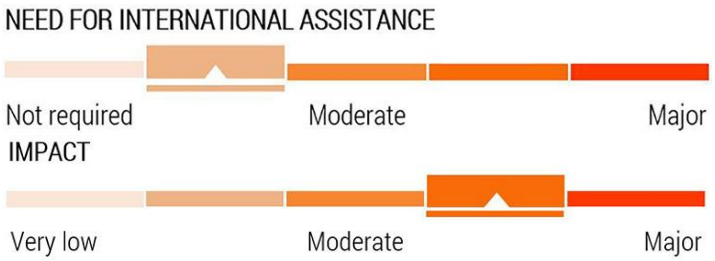
PHILIPPINES

Typhoon Mangkhut Category: 5 Saffir-Simpson

Briefing note – 18 September 2018

Typhoon Mangkhut made landfall on Luzon island in the northern Philippines on 15 September, affecting more than 890,000 people in Ilocos region, Cagayan Valley, Central Luzon, National Capital Region (NCR) as well as Calabarzon, Mimaropa and Cordillera Administrative Region (CAR).

As of 18 September, 236,133 people are displaced, of whom 162,472 are staying in evacuation centres while 73,661 are staying outside evacuation centres (DSWD 18/09/2018). The storm killed at least 65 people and damaged at least 1,477 houses (DSWD 18/09/2018). Shelter repair materials and NFIs are urgently needed. (Rappler 16/09/2018). Strong winds and heavy rain caused significant damage to food crops, increasing livelihood and food needs.



Affected areas	Affected population	People inside evacuation centres (ECs)	People outside evacuation centres (ECs)	Total people displaced in and outside (ECs)
NCR	29,885			
Ilocos Region	217,868	51,928	26,995	78,923
Cagayan Valley	90,523	72,052	8,552	80,604
Central Luzon	461,982	16,100	28,997	45,097
Calabarzon	31,621	946		946
Mimaropa	7,415			
CAR	54,550	21,446	9,117	30,563
Total	893,844	162,472	73,661	236,133

DSWD 18/09/2018

Anticipated scope and scale

As the typhoon left the Philippine Area of Responsibility (PAR), heavy rain and strong winds continued to affect Luzon because of the typhoon's wide diameter. The typhoon enhanced the **southwest monsoon**, and the risk of **landslides and flooding** remains high in the days following the typhoon. This could lead to greater **shelter, food and livelihood needs**.

Key priorities

+890,000
people affected

+230,000
people displaced

+1,470
homes damaged

Humanitarian constraints

Debris on main roads has blocked access across Luzon. Landslides in mountainous areas are causing additional access constraints. Heavy rains are affecting some 120 road sections in regions I, II, III, V, and CAR (AHA Centre 17/09/2018) Flood risks persists Pamanga, Agno and Cagayan river, further constraining access.

Limitations

There is conflicting information on the number of people affected and the needs of the affected population, as assessments are ongoing.

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Crisis impact

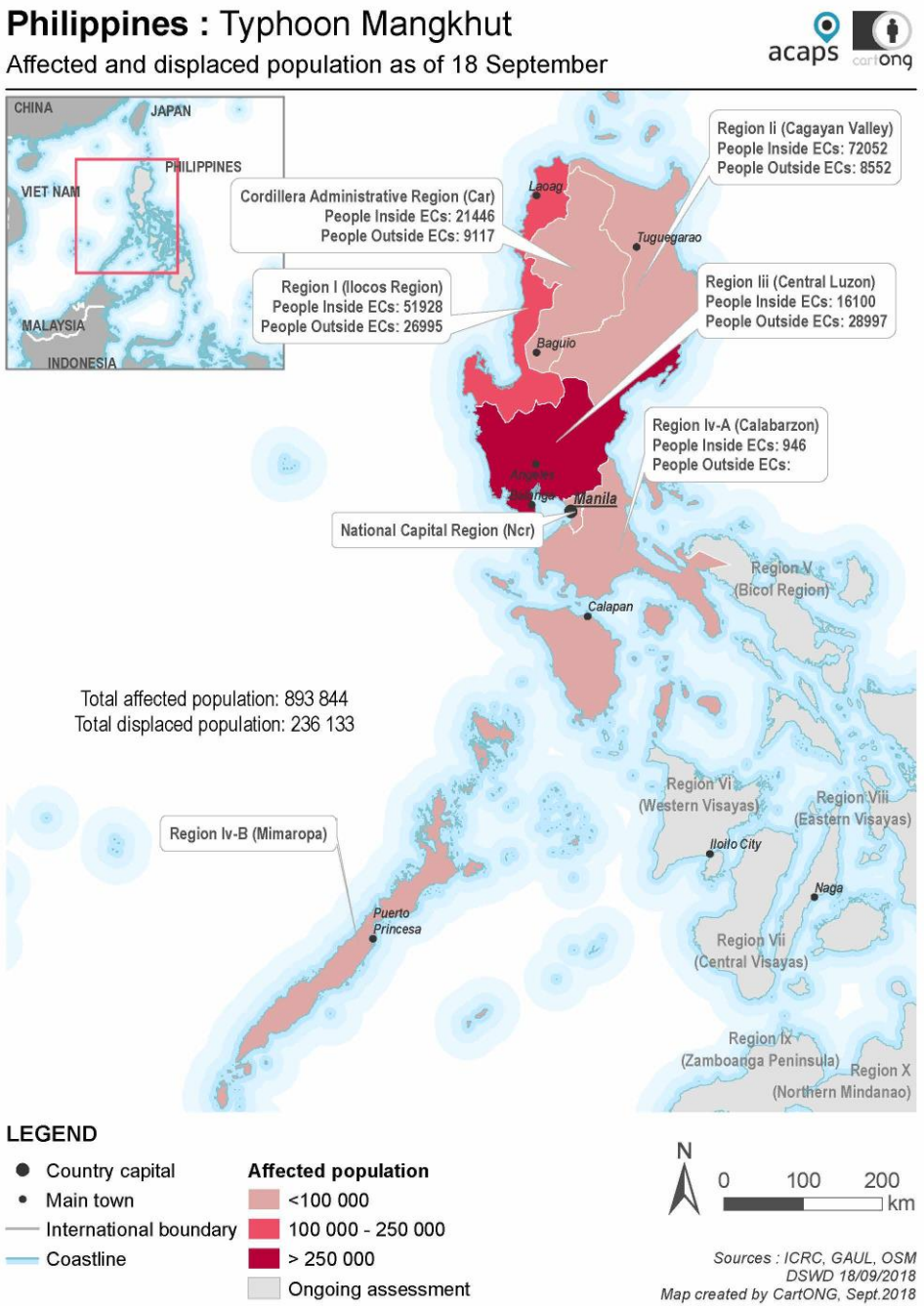
Typhoon Mangkhut, known locally as Ompong, made landfall on Luzon island in the Philippines, at 1:40 am local time on 15 September, affecting the National Capital Region (NCR), Ilocos region (region I), Cagayan Valley (region II), Central Luzon (region III), Calabarzon, Cordillera Administrative Region (CAR) and Mimaropa (CNN 15/09/2018; DSWD 15/09/2018). 893,844 people have been affected and 236,133 people are displaced, of whom 162,472 people are staying in evacuation centres and 73,661 are displaced and staying with friends or families outside evacuation centres (DSWD 18/09/2018). A total of 9,107 people were evacuated before the typhoon.

The typhoon damaged 1,477 houses, including 167 that were destroyed. (DSWD 18/09/2018). At least 65 people have been killed, although the death toll is likely to increase as rescue operations and assessments continue (DSWD 18/09/2018; Business Insider 17/09/2018). In total, 43 people are reported missing and 64 injured (Business Insider 17/09/2018).

Typhoon Mangkhut had winds up to 270 kph, and brought continuous heavy rain (CNN 15/09/2018). The storm caused 51 landslides, in addition to rising flood waters across the region (CNN 15/09/2018).

The typhoon left the Philippine Area of Responsibility (PAR) around 9 pm local time on 15 September (AHA Centre 15/09/2018). However, due to the typhoon's wide diameter of 900km, it continued to affect the region with heavy rain and strong winds in the days after the typhoon made landfall. The typhoon also aggravated the effects of the southwest monsoon. Flash floods and landslides remain a risk due to the enhanced southwest monsoon (Rappler 15/09/2018; ABS-CBN News 15/09/2018). The greatest damage is to shelter, infrastructure and agricultural crops (Oxfam 15/09/2018).

Shelter and NFIs: Before Typhoon Mangkhut made landfall, 9,107 people were evacuated (CNN 14/09/2018; ABS-CBN News 15/09/2018). As of 18 September, 236,133 people were displaced across Luzon, of whom 162,472 people are staying in evacuation centres and 73,661 are staying outside evacuation centres with friends and family. (DSWD 18/09/2018). President Rodrigo Duterte has advised the National Disaster Risk Reduction Management Council (NDRRMC) to build more evacuation facilities, including in Cagayan and Isabela. Although assessments are continuing, 1,477 houses are reported damaged as of 17 September, including 167 destroyed (DSWD 18/09/2018). Initial reports indicate that housing damage is particularly widespread in Cagayan province (Save the Children 15/09/2018). There is urgent need for shelter repair materials and plastic sheeting for shelter (Oxfam 15/09/2015; Care 15/09/2018; Save the Children 15/09/2018). NFIs such as hygiene kits, blankets, kitchenware, dry clothes, and household items are also needed (Save the Children 15/09/2018; Qatar Red Crescent Society 15/09/2018).



Livelihood & food: Urgent need for food has been reported (Care 15/09/2018). Strong winds and heavy rain caused significant damage to rice, corn, and vegetable crops in central and northern Luzon (Reuters 14/09/2018). Agricultural damage is estimated to be PHP 14.45 billion (USD 267 million) (OCHA 18/09/2018). Many communities rely on farming as their main livelihood source in northern Luzon (Save the Children 15/09/2018). Some 281,000 farmers are affected (OCHA 18/09/2018).The extensive damage to crops could lead to further food shortages and inflation. (NYTimes 15/09/2018) Coastal communities rely on fishing as a primary livelihood activity. As of 13 September, fishers were advised not to venture out to sea in northern Luzon, eastern Visayas and Mindanao (DSWD 13/09/2018). There have been no reports of damage to small fishing vessels, although assessments are continuing. Before the typhoon hit, it was projected to affect 100,000 fishers (ABS-CBN 15/09/2018).

Health: Search and rescue is ongoing (AHA Centre 15/09/2018). A landslide in Kalinga province (CAR) affected the Western Kalinga District Hospital. Eight patients were transferred to a rural health unit in Balbalan (GMA News 16/09/2018). Several other hospitals were severely damaged (AHA Centre 16/09/2018).

The Department of Health has warned of increased risk of leptospirosis following the typhoon. The government has provided PHP 23 million of medical aid to the affected areas. Other major concerns include the risk of waterborne and vector-borne disease in the immediate and midterm phases of recovery. The risks will decrease as WASH facilities are restored (AHA Centre 16/09/2018).

There is need for psychosocial support for the affected population (DSWD 16/09/2018).

WASH: Urgent needs for water and sanitation facilities have been reported (Oxfam 15/09/2015; Care 15/09/2018). Artesian wells, the only source of drinking water in some communities, have been affected (Qatar Red Crescent 15/09/2018) Evacuation centres may lack adequate water and sanitation facilities. Standing water in sanitation facilities can serve as a breeding ground for mosquitos, and lead to an increase in vector-borne diseases (ICRC 31/07/2018).

Education: The typhoon affected 34,900 schools. (OCHA 18/09/2018). Some schools may be badly damaged and children may be unable to return to classes in the coming weeks (Save the Children 15/09/2018). In total, 257 schools are being used as evacuation centres for people displaced by the typhoon (OCHA 15/09/2018). It is likely that thousands of children will be unable to go to school while families remain displaced. Classes were suspended on 13–15 September in the affected regions (Rappler 15/09/2018).

Impact on critical infrastructure

Roads: There are reports of debris on main roads across Luzon. Rubble is being cleared from roads to ensure that humanitarian actors can reach the affected populations (GMA News 15/09/2018). Heavy rains have affected some 215 road sections and 5 bridges in Ilocos Region, Bicol Region, Cordillera Administrative Region, Cagayan Valley. Heavy rain also affected road access in Zamboanga, Mindanao. As of 16 September, 95 road sections and 1 bridge was already passable (AHA Centre 17/09/2018).

Ports and waterways: Sea travel has been restricted since 13 September (DSWD 13/09/2018). More than 4,987 passengers, 934 rolling cargo ships, 173 vessels and 130 motorbancas were stranded at seaports as of 15 September (GMA News 16/09/2018; AHA Centre 15/09/2018).

Power and communications: The typhoon damaged power and communication lines. Power outages occurred in 110 areas in Ilocos Region. Some 77 transmission lines on Luzon island have been affected (NDRRMC 15/09/2018).

Airports: Tuguegarao airport (Cagayan) was significantly damaged. (CNN 15/09/2018).

Humanitarian and operational constraints

The typhoon has caused severe physical access constraints across northern Luzon. Debris is blocking access to affected populations throughout Luzon. In particular, landslides in mountainous regions constrain access. As of 15 September, government agencies aimed to clear debris in 24–72 hours (AHA Centre 15/09/2018). Heavy rain in Ilocos Region, Bicol Region, and CAR and flooding is limiting access (AHA Centre 17/09/2018). he risk of Pampanga, Agno, and Cagayan rivers flooding could hinder efforts to reach affected populations. Damaged power and communication lines have caused operational constraints for field responders (AHA Centre 15/09/2018). Both power and telecommunications were being restored.

Vulnerable groups affected

Women and girls are a particularly vulnerable group affected by the typhoon due to the risk of gender-based violence for those staying in evacuation centres, where abuse and exploitation are of great concern (GBV Working Group 24/08/2017). Overcrowding at evacuation centres, with a lack of privacy and inadequate toilets and washing facilities, increases the risks and vulnerability of women and girls to gender-based violence, sexual exploitation and abuse (GBV Working Group 24/08/2017). There is no disaggregated data on the number of women and girls affected by the typhoon.

In addition, persons with disabilities (PWDs) may face additional vulnerabilities, as evacuation centres are not always accessible to them (ABS-CBN News 29/09/2018). There is no disaggregated data on the number of PWDs affected.

Aggravating factors

Flooding

As heavy to moderate rainfall continues across northern Luzon, persistent flooding and additional floods remain a risk. Three river basins (Pampanga, Agno and Cagayan) and two sub-basins (Binga-Ambuklao-San Roque and Magat) are on flood watch (Pagasa 16/09/2018). In Pampanga River Basin, flooding is likely to persist until 17 September in Zaragoza Station, Rio Chico River. In Pampanga River Basin, flooding will continue for several days in Candaba station, Candaba swamp. The swamp has filled past the 5 metre level. In the Pampanga River, there is still a risk of flooding in Slipan station and San Isidro station. The Agno River and the Sinocalan River are expected to continue flooding for the next few days, affecting low-lying communities (Pagasa 16/09/2018). The threat of flooding continues in Tumauini, Isabela. Although low-lying areas of Tuguegarao, Cagayan, are still flooded, the waters are slowly receding (Pagasa 16/09/2018). Continued flooding could exacerbate housing damage and lead to increased displacement.

Type of housing

Some 51,000 houses made of light material are located within a 125km radius of the typhoon (OCHA 15/09/2018). In addition to the 1,477 houses that were already damaged, the continuous heavy rainfall and persistent flooding increase the risk of further damage to houses, particularly those constructed of light materials. Houses made of light materials in low-lying areas near the Pampanga, Agno and Cagayan rivers are especially at risk. Informal settlements in the densely populated areas in Metro Manila (officially known as National Capital Region) are also more vulnerable to continuous heavy rain.

Mountainous areas

Much of the affected population lives in mountainous areas. Ilocos, Central Luzon, Cagayan Valley and the Cordillera Administrative Region are in the Cordilleras, Caraballos and Sierra Madre mountain ranges. This creates additional constraints to reach the affected population.

Previous storms

The Philippines, one of the most natural-disaster prone countries in the world, often experiences tropical storms (Policy Brief 05/2017). The frequency of tropical storms increases the population's vulnerability. This can increase their shelter, livelihood and food needs.

Recent tropical storms include Tropical Storm Yagi, which did not make landfall in the Philippines. As of 8 August the Tropical Storm aggravated the southwest monsoon, causing heavy rain and severe flooding in Ilocos Region, Calabarzon, and NCR. Two casualties and an estimated PHP 36.5 million of damage were reported. (Pagasa 16/08/2018) Tropical Depression Luis entered PAR on 2 August. As of 25 August, total damage to agriculture and infrastructure reached PHP 996 million as result of monsoon rains in Ilocos Region, Cagayan Valley, and Cordillera Administrative Region. (Pagasa 29/08/2018) As of 6 September, the southwest monsoon had affected 1,706,298 people, enhanced by Tropical Depression Karding. A total of 2,061 people were displaced. These occurrences have all made the population more vulnerable to Typhoon Mangkhut (DSWD 06/09/2018).

Key characteristics

- Demographic profile: National population: 100,981,437
  Population density : 337 (people per sq. km) (2015 Census) (PSA 2015)
- Nutrition levels: Prevalence of moderate and severe stunting 33% (UNICEF, 2016)
- Health statistics: National under-five mortality rate: 27.1 per 1,000 live births (UNICEF, 2016)
- WASH statistics: Proportion of population using basic sanitation services: 74%, proportion of population using limited sanitation services: 18%, proportion of the population using piped water sources: 43% (UNICEF, 2016)
- Education: National school attendance: 69%, literacy rate: 98.3% (Philippine Statistics Authority 2015)

Response capacity

Local and national response capacity

The Philippines has a strong local and national response capacity. The National Disaster Risk Reduction Management Council oversees the welfare of people during emergencies such as Typhoon Mangkhut. The Office of Civil Defence administers the NDRRMC, which plays a key role in warning signals, communication, rescue operations and evacuations, as well as rehabilitation. The DRRMC is implemented at the regional, local and barangay

levels. Any request for international assistance would be coordinated through the national DRRMC (AHA Centre 15/09/2018).

The Department of Labour and Employment is preparing employment opportunities for the affected population as part of the Welfare Assistance Programme, which started in 2016. The Department of Health has prepared health advisories. The AHA Centre dispatched an in-country liaison team to the Philippines that is on standby (AHA Centre 15/09/2018).

The Department of Social Welfare and Development provided PHP 21,038,986.15 to the affected people, local government unions (LGUs) provided PHP 5,937,889.50 and NGOs provided PHP 510,370.00 (DSWD 18/09/2018)

Several local NGOs have been responding to the needs of the affected population (Oxfam 15/09/2018) (HI 16/09/2018) (AHA Centre 17/09/2018) Volunteers have helped clear debris off the roads to ensure access to the affected population.

International response capacity

The Government of the Philippines has not made any request for international assistance. Some international actors have indicated that they have provided funding for humanitarian supplies.

The Government of Australia has provided AUD 800,000 for NFI humanitarian supplies for 25,000 people; this will be distributed through the Philippines Red Cross. (Government of Australia 16/09/2018) Australia has also deployed humanitarian experts to the Philippines (AHA Centre 17/09/2018).

Information gaps and needs

Needs assessments are continuing as the extent of the typhoon's impact is still unknown. Reports of the number of people affected increase as the assessments continue. (AHA Centre 15/09/2018).

Gaps in needs and in assistance may not have been reported, as telecommunication lines were down (AHA Centre 15/09/2018).

There is a lack of data based on gender, age and PWDs. There is a need for more information on sectoral needs.

Lessons learned

Lessons learned from previous storms have showed that pre-emptive evacuations are key to reduce casualties. Before the typhoon made landfall, more than 9,107 people evacuated (CNN 14/09/2018). Flood early-warning systems also allow communities to evacuate flood-prone regions in the days leading up to and following the storm. In April 2017, the Philippine Atmospheric, Geophysical and Astronomical Services Administration launched a flood early warning system for NCR. An early-warning system has also been developed for floods, storm surges and landslides. (The Manila Times 17/09/2018; UN Spider 06/02/2014). A total of 45 early alert and warning messages were sent throughout the preparedness and emergency response period starting from 13 September (AHA Centre 16/09/2018).

Close coordination between humanitarian actors is essential in the early stages of a response. In the case of Typhoon Haiyan, international NGOs should have more frequently consulted the staff at the local government level to improve overall coordination. In case of international response, it is vital that humanitarian actors effectively coordinate at all levels (HC 04/2014).

There is a need to create more participatory opportunities to ensure that communities can participate in assessments and planning processes for response (Climate and Disaster Governance 2010).