

Briefing Note – 19 October 2016

# PHILIPPINES

## Typhoon Lawin, northern Luzon Category: 4



Need for international assistance	Not required	Low	Moderate	Significant	Major
	Very low	Low	Moderate	Significant	Major
Expected impact			X		

Early on 20 October 2016, typhoon Haima/Lawin is due to hit the Philippines. Winds up to 185 km/h are expected, and rainfall of 100-200 mm throughout the next two days with local amounts over 300 mm, thus exacerbating the risk of mudslides, especially in higher elevations (Accuweather 18/10/2016)

11.6 million people could be affected, mostly in northern Luzon – including 2.8 million in the Cagayan and Isabela provinces, where it will hit the hardest. Impact on the harvests and sowing is likely to be great, as around half of the people living in the most affected areas work in agriculture, during the harvest. There are 2,112 evacuation centres. Calls for evacuation has been made, including in low-altitude and coastal areas of the Cagayan and Isabela provinces. Population density is likely to worsen the impact, as the most impacted areas have a density greater than 100 people/sq.km.

### Crisis overview

Predicted impact as of 19 October



Source: Rappler 19/10/2016

### Key findings

#### Priorities for humanitarian intervention

- **Food:** Lawin is expected to hugely impact livelihoods. Food access could be scarce.
- **Health:** many people could be killed and injured by trauma if not evacuated. The risk of disease outbreaks, including diarrhoea, respiratory infections and vector transmitted diseases.
- **Shelter and NFIs:** many houses could be destroyed or damaged, particularly in low-altitude or coastal areas.

#### Humanitarian constraints

Bridges, roads, airports and telecommunications could be inaccessible and/or damaged.

#### Limitations

The typhoon's intensity could change.

Crisis impact is anticipatory, as the typhoon has not yet hit the Philippines.

## Crisis impact

Typhoon Lawin is expected to cause significant damage in the Philippines. Tsunamis could occur, with waves up to 4m expected. 11.6 million people could be affected, mostly in northern Luzon – including 2.8 million in the Cagayan and Isabela provinces, where it will hit the hardest. Lawin is expected to greatly damage infrastructure. Many people could die. Effects on food security and health could last for months (Philstar 18/10/2016).

It is expected hit late on 19 October or early on 20 October (OCHA 19/10/2016). Major damage to fields are likely to harm many farmers. It should cause more damage across more sectors than level three typhoon Karen, which hit Aurora on 16 October in the province of Aurora, in Luzon (Accuweather 16/10/2016). Its impact is still felt. 150,000 people have been affected by Karen in the Philippines (ECHO 18/10/2016). Floods and mild landslides were reported. Three people died from lower-intensity typhoon Karen (WFP 28/02/2014).

2013 super typhoon Haiyan, hitting Central islands and affecting to a lesser extent Luzon, killed more than 6,100 and injured more than 28,600. More than 16 million people were affected countrywide (NDRRMC 31/12/2013).

**Food:** Lawin is expected to leave significant livelihood damage (Philstar 18/10/2016). More than half of the people in Cagayan Valley, predicted to be worst hit, work in agriculture (OCHA 30/11/2015). It is currently the main harvesting and second sowing season for rice, and production in Central Luzon, the most important rice-producing area in the Philippines, could be lost due to flooding (IFRC 19/10/2016; Sun Star 18/10/2016; FAO 25/08/2016). The potato harvest and maize sowing are ongoing and will likely be impacted (AO 25/08/2016).

Many people lacked food access following Haiyan. Farmers lost more than one million tons of crops, and fishermen lost their livelihood after Haiyan (FAO 2016). One million farmers were affected by damage or destruction to coconut trees (WFP 28/02/2014).

**Health:** Disease outbreaks are common after typhoons; diarrhoea, as well as respiratory infections and vector transmitted diseases are potential outbreaks (WHO 28/10/2015). Many affected areas by Haiyan reported a rise in tuberculosis, after infrastructure that helps prevention was destroyed (WPRO 2014). There was also a rise in drug-resistant diseases, complicating aid. Mental health issues, such as depression and anxiety, can double after major typhoons, mainly due to trauma (HPN 31/01/2015). Damage to health facilities is possible.

**Shelter and NFIs:** Houses could be destroyed by Lawin. 550,000 houses were destroyed and 590,000 damaged by Haiyan (NDRRMC 31/12/2013). 200 houses were damaged by typhoon Karen (European Commission's Directorate-General for European Protection and Humanitarian Aid

Operations 17/10/2016). Houses close to the coastline could be impacted by strong waves (ICRC 31/12/2015).

**WASH:** Water access could be an issue. There was no water access in some areas after Haiyan (OCHA 09/11/2013).

**Protection:** Land and property right were violated after Haiyan in the Philippines. Following Haiyan, the Philippines set up a 40m no-build zone next to the coastline, preventing those who lost their homes from rebuilding in the same location. There were mixed messages about the rule, leading many to mistakenly believe they were safe. Implementation of the rule differed between places (IRIN News 18/07/2014).

## Impact on critical infrastructure

Power outages were reported in the provinces of Pangasinan, La Union, Ilocos Norte and Ilocos Sur by storm Karen (Government 17/10/2016).

Transmission towers could be destroyed by Lawin (Rappler 18/10/2016). The ports of Tabaco, Virac, Bulan as well as Asparri and San Vicente will likely be affected. Some inland flights from and to Manila international airport had already been cancelled on 18 October (NDRRMC 19/10/2016). Smaller regional airports will also be inaccessible.

## Vulnerable groups affected

People living at low altitude are particularly vulnerable to floods and landslides, and this includes many people living in Western Cagayan and Isabela (OCHA 09/11/2013, Flood Map 2014).

Trafficking and gender-based violence reportedly increased against children and women following major typhoons in the past (UNICEF 31/12/2014).

## Humanitarian and operational constraints

Ports, airports, bridges and roads were inaccessible following Karen and damage is still affecting access (OCHA 17/10/2016, GMA Network 17/10/2016)

## Aggravating factors

### Early warning systems and risk of related disaster

Luzon island already received over 400 mm of rain when tropical storm *Karika* that has now evolved into a Typhoon of its own right further north, moved through last week, increasing the risk for major flooding across the region. (Wunderground 18/10/2016) Super Typhoon Haima is likely to bring more rainfall of 100-200 mm throughout the next two days with local amounts over 300 mm thus exacerbating the risk for mudslides, especially in higher elevations. (Accuweather 18/10/2016)

Alerts have been raised for Ilocos, Isabela, Quirino, Nueva Vizcaya, Cagayan, Abra, and Apaya regions as of 19 October and schools have been ordered to stay closed. Sea ports and dams have been put in red alert which is the highest warning level and instructed to take immediate preparedness measures (NDRRMC 19/10/2016).

### Previous storms

Typhoon *Karika* made landfall in Manila on 16 October and brought winds of 130 km/h and gusts of 220 km/h. In the most heavily affected north-eastern Philippines – which is where Haima will likely hit as well - it left at least two people dead, caused flooding and lead to a power cut (Philstar 18/10/2016) Response capacity in the northern island of Luzon will be challenged when hit by yet another Typhoon.

### Bulusan Volcano

The national disaster risk reduction council has raised a volcano alert for Bulusan Volcano located on the very southern tip of Luzon island. The alert is at level 1 and means that eruptions of any magnitude may happen but are not imminent. Citizens are still advised to not come near the volcano (Volcanism alert scale Philippines). It has been very active since May with major eruptions on 30 September and 17 October (NDRRMC 18/10/2016). Though the 17 October eruption did not cause any damage the civil aviation authority has issued a warning advising aircrafts to avoid flying over the volcano (CNN 17/10/2016).

### Population density

The Philippines as a whole are very densely populated, at 337/km<sup>2</sup> in 2015 (World Bank 2015).

Regions of Ilocos, Cagayan Valley, Cordillera Administrative Region, and the northern part of Central Luzon, however, are likely to be severely affected (AccuWeather 18/10/2016). Cordillera Administrative Region has a density of 84 /km<sup>2</sup> (Philstar 08/09/2016). Ilocos is

more densely populated with 366 people per km<sup>2</sup>, while Cagayan Valley has a density of 114 people/km<sup>2</sup>. Central Luzon province is the most densely populated of them all with 460 people/km<sup>2</sup> (PSA 2010). Central Luzon is therefore the most endangered province in terms of potential people affected.

Other regions on Luzon and the megacity of Manila will probably be spared the worst of the Typhoon as they lie off the track of the Typhoon.

### Proximity of critical infrastructure

The ports of Tabaco, Virac, Bulan as well as Asparri and San Vicente will likely be affected. Some inland flights from and to Manila international airport had already been cancelled on 18 October (NDRRMC 19/10/2016).

### Political stability and security

Under its new President Duterte, who was inaugurated on 30 June, the Philippines have embarked on a “War on Drugs” (CNN 30/06/2016). As of 31 August, 2,448 people, mostly drug dealers and users have been killed. The unlawful nature of these killings create an atmosphere of insecurity among the population. Although up to 600,000 drug dealers have allegedly turned themselves in to the police already, anybody can be arrested or killed on the suspicion of being a drug user or dealer not just by police but by pro-government type militia s well (Al Jazeera 01/09/2016, Die Zeit 25/08/2016). As has been shown in previous disasters the political situation has not been an issue for emergency response activities.

## Response capacity

### Local and national response capacity

National Disaster Risk Reduction and Management Council (NDRRMC) is the overarching agency in charge of responding to national disasters. Disaster Management in the Philippines is governed by the 2010 Philippine Disaster Risk Reduction and Management Act (DRRM Act), a legislative and policy framework with a broad focus on preparedness, response, prevention and mitigation, and rehabilitation and recovery. The Act is replicated at the regional, provincial and local (city/municipal) levels. Early warning mechanisms are highly functional in the Philippines. Next to a national structure the Philippines coordinate well with the international response system and are generally willing to cooperate (SC 08/2013). To each international cluster there is a corresponding and responsible ministry in charge of affairs.

## International response capacity

The international humanitarian infrastructure such as the HCT, clusters, and a wide range of agencies are already there. Similarly, to the national approach the international relief system uses the cluster approach as well. In correspondence with their clusters, many sectoral agencies have a permanent presence (SC 08/2013).

## Population coping mechanisms

During previous disasters the destruction of livelihoods has been one of the biggest issues for the host population. In the past, this has led to an increase in the demand for casual labour. Cash for work interventions by government and international organizations have had a positive effect in rehabilitating livelihoods (MCNA 20/12/2013).

The collection of junk and scrap has been a coping mechanism in and around Tacloban City post-Typhoon (Oxfam 19/11/2013).

Overall the availability of cash is key. The quick recovery of financial institutions, despite problems with ID documents, ensures the ongoing transfer of remittances in past disasters (Oxfam 19/11/2013).

## Information gaps and needs

No information gap as this is anticipatory.

## Lessons learned

- Several initiatives have been since undertaken to make the agricultural sector more resilient. Ee.g. the immediate distribution of vegetable seeds such as bitter melon, jambalaya, string beans, squash, eggplant, okra and tomato contributed to the quick recovery of communities following Typhoon Melor (FAO 08/04/2016)
- During Typhoon Haiyan communities were left without sufficient access to health, water and sanitation. 46–62% of health facilities were severely damaged and unusable in affected municipalities, as well as many of the main water works and toilet facilities. The deployment of local and foreign medical teams to affected areas was critical (MIRA I, 11/2013).
- Given market functionality in the Philippines, cash/voucher programming is highly feasible. Most assessments recommend programming in forms such as cash for work (especially for debris clearance in the initial period), unconditional grants, and

vouchers for specific commodities where supply chains are under stress (WFP 10/12/2016).

- Last year's typhoon season brought heavy rainfall that triggered flash floods, landslides and intense flooding, causing some USD 300 million in damage to the agriculture sector. At least 852,689 metric tonnes of crops were lost, including rice, corn, cassava and high value crops.
- Livelihoods recovery is intimately linked to the reconstruction of homes, which for the vast majority remains the clear priority. Temporary housing should be sited as much as possible in proximity to the sources of livelihoods to prevent dislocation. Conversely, the impact of subsequent disasters on livelihoods can also be mitigated by more resilient community infrastructures and eventual transition to formal housing units (World Bank et al. 2011).
- Previous disasters in the Philippines repeatedly show that those who depend on family-based livelihoods, wage labour and the informal sector (small traders, vendors etc) are particularly vulnerable to disasters. These tend to be poor and live in flimsy housing in high risk areas such as floodplains and embankments. (World Bank et al. 2011).
- Recovery efforts should aim at supporting local government units (LGUs) in re-establishing critical community, governance and services infrastructure to limit disruptions. Better still, this support should aim to strengthen joint support systems among neighbouring LGUs, and together with civil society, the private sector, NGOs etc. (Bohol Earthquake Interagency Preliminary Assessment 17/10/2013).

## Key characteristics

The table below should be adapted according to need. It is a suggestion, to give some form of comparison if the disaster has affected more than one area.

Key indicators	Ilocos Region	Cordillera Administrative Region	Cagayan Valley	Central Luzon
Total population and density per km <sup>2</sup> (2015)	5,026,128 (387)	1,722,006 (88)	3,451,410 (122)	11,218,177 (510)
% population in rural areas (2010)	87.3%	73.7%	88.4%	48.4%
Gender and age distribution of population (2010)	M:F 50.4:49.6 Under 5: 10.4% 5-19: 31% 20-64: 52.5% 65+: 6%	M:F 50.9:49.1 Under 5: 10.5% 5-19: 32.5% 20-64: 52.4% 65+: 4.6%	M:F 51:49 Under 5: 10.7% 5-19: 31.5% 20-64: 53% 65+: 4.8%	M:F 50.4:49.6 Under 5: 10.6% 5-19: 31.3% 20-64: 53.7% 65+: 4.4%
State capital (2015)	San Fernando La	Baguio	Tuguegarao	San Fernando
Total population (% Region total population)	Union 786,653 (15.6%)	345,366 (20%)	153,502 (4.4%)	306,659 (2.7%)
Lighting and cooking sources (2013)	Cooking with wood: 44.8% , 22.4% in urban areas, 65.5% in rural areas (Philippines) Cooking with gas: 36.1% , 55.9% in urban areas, 17.8% in rural areas (Philippines) Access to electricity: 87.5% , 94.1% in urban areas, 81.5% in rural areas (Philippines)			
WASH (2013)	access to improved sources of drinking water, 95.2%: 98.6% in urban areas, 92.2% in rural areas (Philippines) access to improved sanitation: 70.1%: 73.7% in urban areas, 66.8% in rural areas (Philippines)			
Health figures (2013)				
infant mortality,	16/1000	16	20	23
under-5 mortality,	26/1000	25	21	31
maternal mortality (*2010)	1/1000	0.5	0.6	0.7
Food security (2011)				
Households who experienced food insecurity	54,6%	57,2%	66,5%	63,7%
Nutrition levels (2013)				
Sev. wasted (0-5yo),	3.0%	3.4%	1.8%	2.9%
Mod. wasted (0-5yo)	6.8%	2.5%	6.1%	5.4%
Literacy rates (2013)	9,6%	9,9%	20,6%	15,6%
Max. completed elementary:				

Sources : PSA 2016, PSA 2013, PSA 2012, PSA 2010, PSA 2014, FNRI-DOST