

## Geographic impact

Typhoon Hagupit (local name: Ruby) made landfall on Dolores, Eastern Samar on Saturday, 6th December 2014 with maximum sustained winds of 195 kph, severely affecting the coastal areas of Northern and Western Samar, Leyte, Masbate, Romblon and Mindoro Oriental. The typhoon also had minor effects in densely populated areas of Quezon and Metro Manila.

Source: GDACS



Geographical profile



**Samar**  
main area of impact



**3800**  
barangays highly affected



**Coastal and hilly terrain**



Profile of the affected population



**1 million**  
households affected



**4 million**  
people affected



**2.5 million**  
people in need of food assistance



Livelihood profile



**Paddy farming**  
is the dominant livelihood



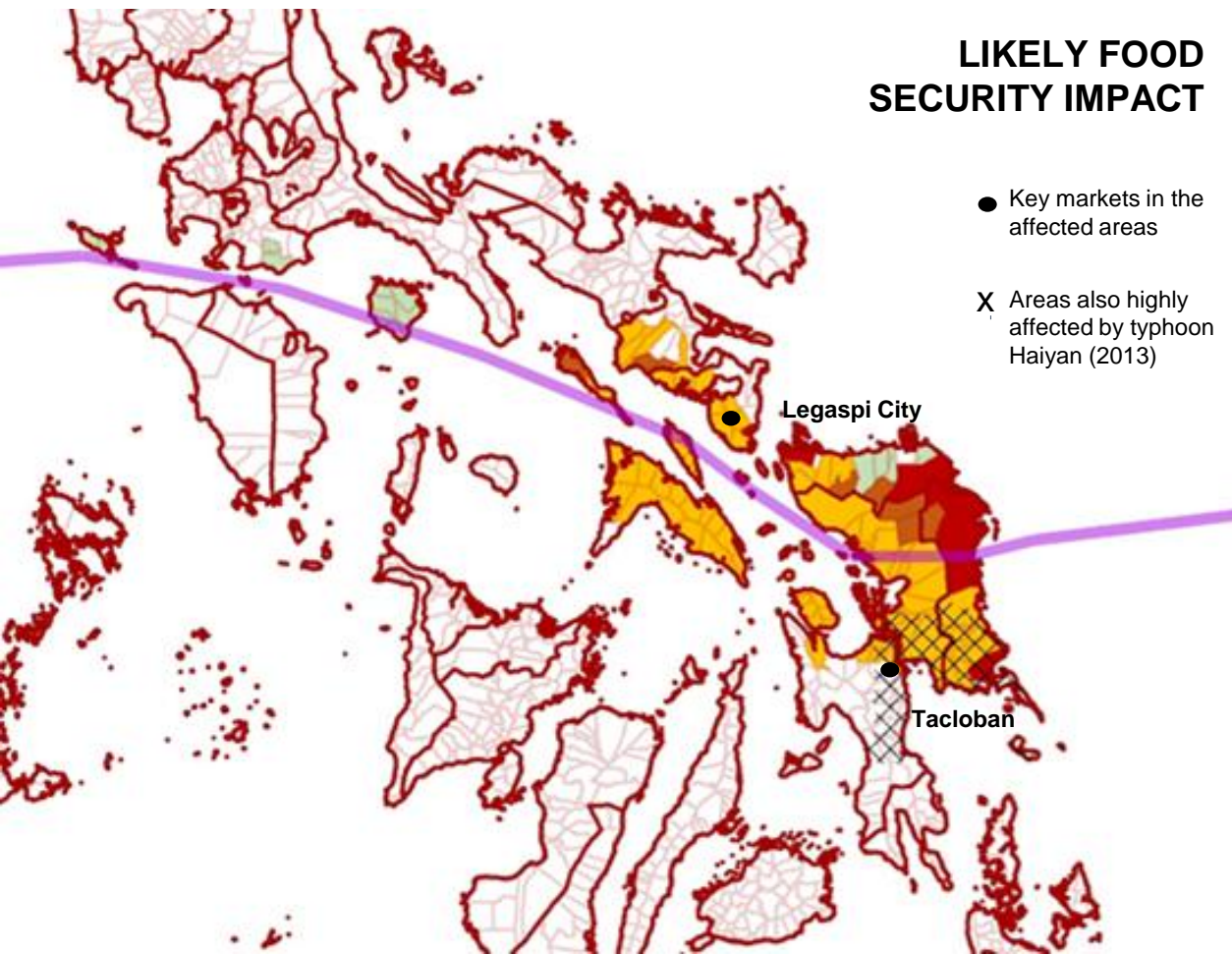
**Coconut farming**  
is a major livelihood



**Fishing**  
is a key livelihood in coastal areas



**Remittances**  
are a major source of income



## LIKELY FOOD SECURITY IMPACT

● Key markets in the affected areas

X Areas also highly affected by typhoon Haiyan (2013)

Legaspi City

Tacloban

### Priority 1 (high food security impact)

Households along the east coast of Samar directly on the path of Typhoon Hagupit as well as areas with high poverty incidence (>50%). Some of these areas were also heavily affected by typhoon Haiyan (2013). These areas have experienced major wind damage, with potential effects on infrastructure and agricultural land. Some coconut-growing areas may have also been affected. All of these areas should be targeted..

**400,000 people**

### Priority 2 (moderate food security impact)

Households immediately in the vicinity of the typhoon track in parts of Samar where poverty rates are above 35%. Severe wind damage is likely in these areas, with potential effects on coconut farmers. All of these areas should be targeted for food assistance.

**200,000 people**

### Priority 3 (low food security impact)

Households located along the path of the typhoon further west as the typhoon weakened, including Samar, Leyte, Masbate, and Legaspi. These areas may have experienced damage due to strong winds. Main cities include Legaspi City. Food assistance targeted to population who resided in makeshift housing.

**1.8 million people**

### Priority 4 (very low food security impact)

Areas outside of the main track of the typhoon are assumed to have been less severely impacted. Humanitarian impact is likely to be minor, with food assistance requirements targeted to families who were residing in makeshift housing.

**135,000 people**

# OVERVIEW



## Resilience profile

**Resilience:** Households in the most affected areas, where the typhoon first made landfall (Samar), are among the poorest in the country with over 40% of households living under the poverty line.

Consecutive typhoons and floods affecting the Eastern Visayas, including Typhoon Haiyan (2013) have undermined the resilience capacity of households. These multiple- impacted households are expected to be among the least resilient, predominantly residing in South and Eastern Samar, and will need additional long-term assistance.

In areas further west, where the typhoon lost intensity and was downgraded to a Category 2 typhoon, households are more resilient given greater wealth and access to remittances.

**Social protection (most relevant):** The Department of Social Welfare and Development (DSWD) runs three main safety net programmes: conditional cash transfers (4Ps), Food for School, and subsidized food stores (*Tindahan Natin*). Other schemes for livelihood support are also in place.

The 4Ps scheme supports around 3.9 million households throughout the country, who are selected based on economic indicators such as ownership of assets, type of housing, education of the household head, and main livelihood. In the affected areas, the 4Ps programme covers about 660,000 households.

Health transfers are P500/ household, and education transfers are P300/ child (with a maximum of 3 children per household). The maximum monthly cash transfer is P1,400, for households with 3 or more children.



## Livelihood profile

**Livelihoods:** The major livelihood activities in the affected areas are paddy farming, coconut farming, fishing, and livestock rearing (primarily goats and cattle). Some small-scale mining occurs in parts of Camarines Sur.

**Agriculture:** The main crop - paddy - has mostly been harvested so the main impacts of the typhoon may be on food stocks. The typhoon may have damaged a significant proportion of agricultural land, potentially affecting the planting for second season rice, which would normally begin in December/January. The second crop harvest in March/April will therefore likely be lower. Coconut plantations are likely to have been severely affected.

**Fisheries:** Fishing may have been severely disrupted due to severe winds resulting in loss of fishing boats and other assets. Although damage is expected to be minimal due to early warning to coastal communities.

**Lean season:** Normally during the rainy season (June-October).

**Typhoon season:** Normally during June-November.



## Food consumption

**Typical diet:** A typical meal is composed of rice with vegetables and fish; meat, poultry and eggs are also consumed.

**Nutrition:** Nutritional levels in the area are serious to poor. Wasting levels are relatively low (5-10%) in all affected provinces, except Biliran (14.8%).

Stunting levels, however, are generally quite high, with the lowest rates in Batangas, Cavite, Romblon, Catanduanes, and Aklan (20-30%), followed by Albay, Biliran, Leyte, Marinduque, Oriental Mindoro, Samar and Quezon (30-40%), and highest rates found in Northern Samar, Masbate (over 40%).



## Logistics, Infrastructure & Markets

**International airport:** accessibility is through 3 major international airports in Subic, Ninoy Aquino International Airport and Cebu.

**Seaport:** accessibility is good with Pacific Ocean and inland sea ports in the affected area (5 in lower Luzon, 1 in Masbate, 3 in Samar and 5 in Leyte).

**Transport corridors:** in the Philippines there is an integrated network of highways and vehicle ferries with roll-on/roll-off (RoRo) ferries between islands. Lower Luzon has good road connectivity, with primary road networks from Manila to Legazpi and the Matnog sea port connecting Samar via ferry/RoRo. Samar and Leyte islands have good primary road network connectivity around the perimeters of each island with connecting secondary roads. Access between the two islands is the San Juanico bridge, a 2.16km steel girder viaduct built on reinforced concrete piers, accommodating 2 vehicle lanes and pedestrian sidewalks. Masbate island, accessible via Masbate port has secondary and tertiary road access. Road security is generally good throughout the affected areas. Bridges are prone to collapse during typhoons and landslides, often inadequately signed, and without load limits. The single track cape gauge rail network is open from Manila to Legaspi.

**Market Capacity & Constraints:** Market capacity in Luzon is strong with most traders in Luzon able to accommodate an increase in consumer demand of 30-60% of their commodities. The vast majority of markets affected by Typhoon Haiyan had fully recovered, however, key bottlenecks in the supply chain continue to influence affordability with high and volatile prices observed particularly in the Eastern areas and will be particularly vulnerable to Typhoon Hagupit (Ruby).

Market constraints are likely to include initial stock loss, poor food quality, high buying price, lack of demand, lack of credit, irregular supply, transportation challenges and storage constraints.

# ADDITIONAL INFORMATION

## ? ASSUMPTIONS

**Geographic impact:** GDACS wind speed buffer forecast (> 120 km/hr and >90 km/hr) were overlaid on elevation data to identify three categories of impact: high, moderate, and low. Coastal areas in the Eastern Visayas are assumed to be more severely impacted; further west, as the typhoon lost intensity, areas are assumed to be less severely impacted.

**Affected population:** all population according to Census 2010 data residing in Barangays are assumed to have been affected. The extent to which they were affected was based on their proximity to the coast, location along the typhoon track. Population living in areas below the 90 km/hr wind speed as provided by GDACS were not included.

**Priority areas for food assistance:** determined by overlaying geographic impact with vulnerability as measured by the poverty incidence at the municipality level (NSCB, 2009).

**People in need of food assistance:** Includes all population in priority areas 1 and 2. In other affected areas it covers people displaced as estimated by the number of destroyed houses. **These numbers are subject to review based on further assessments.**

**Damaged / destroyed houses:** Data from DSWD provide numbers of households living in makeshift housing. These are assumed to be destroyed or suffered heavy damage in the affected areas.

**Market prices for key commodities:** Includes average market prices for November 2014 in Tacloban (the key market in the most affected region) for commodities in the food basket (rice, pork, chicken, fish, pulses, green leafy vegetables, fruits, oil, sugar). Data are from the Bureau of Agricultural Statistics.



## REFERENCES & LINKS

- Excel spreadsheet on estimated affected population and households by barangay and priority areas.
- PAGASA <http://www.pagasa.dost.gov.ph>
- NDRRMC <http://www.ndrrmc.gov.ph/>
- Bureau of Agricultural Statistics <http://www.bas.gov.ph>
- National Food Authority: <http://www.nfa.gov.ph/>
- OPWeb <http://opweb.wfp.org/>
- OCHA COD/FOD registry <http://www.humanitarianresponse.info/applications/d-ata>
- WFP Geonode <http://geonode.wfp.org>
- Copernicus <http://www.copernicus.eu>
- Sentinel Asia <https://sentinel.tksc.jaxa.jp>



## TRAVELLERS' INFORMATION

The weather is hot and humid, with maximum temperatures reaching 32 degrees Celsius. Moderate rains are forecasted for the next 10 days.

Not available:

- Accommodation
- Food and drinking water
- Shops /restaurants
- Clothing and footwear
- Air conditioning/heating
- Electricity
- Mobile phone network
- Health care



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# STATISTICAL PROFILE

Province	Region	Total population (2010 census)	Children <5 (2010 census)	Affected population	Affected population (% Pop)	Underweight (% children <5, 2011)	Stunting (% children <5, 2011)	Wasting (% children <5, 2011)	Water access (% children <5, 2011)	Food Poverty Incidence (% Pop)*	4P HHs
Albay	V	1,233,432	140,457	454,832	37	26	31	11	100	20	71,739
Batangas	IV-A	2,377,395	253,915	215,039	9	15	27	6	99	7	83,715
Biliran	VIII	161,760	18,809	161,760	100	12	31	3	100	8	6,716
Cebu	VII	4,137,320	391,298	27,270	1	21	39	5	85	8	122,365
Eastern Samar	VIII	428,877	49,054	344,461	80	27	49	5	75	38	28,874
Leyte	VIII	1,808,834	206,991	331,907	18	25	40	8	88	14	100,898
Marinduque	IV-B	227,828	24,814	227,828	100	29	31	8	99	9	11,595
Masbate	V	834,650	116,261	798,809	96	23	43	6	65	20	77,509
Northern Samar	VIII	630,925	74,851	377,759	60	28	45	8	51	24	43,957
Sorsogon	V	740,743	86,224	733,378	99	28	36	10	85	15	58,282
Western Samar	VIII	733,378	88,619	434,370	59	29	45	11	75	23	56,773
<b>SUM</b>		<b>13,315,142</b>	<b>1,451,293</b>	<b>4,107,413</b>							<b>662,423</b>

Market prices for key commodities  
(November, 2014 in Tacloban)

Commodity	Price (PHP/kg)
Rice (regular)	43
Pork, fatty	220
Chicken, dressed	150
Fish (alumahan)	150
Fish (bangus)	150
Fish (galunggong)	110
Fish (tilapia)	125
Pulses (habitchuela)	60
Leafy vegetable (pechay)	30
Fruit (mango)	80
Fruit (papaya)	40
Oil (cooking)	60
Suger, refined	45