



ONE ASEAN
ONE RESPONSE

SITUATION UPDATE TYPHOON RAI IN THE PHILIPPINES

No. **2**

Thursday, 23 December 2021, 11:30 hrs (UTC+7)

This Situation Update is provided by the AHA Centre for use of the ASEAN Member States and relevant stakeholders. The information presented is collected from various sources, including but not limited to ASEAN Member States' Government Agencies, UN, IFRC, NGOs, Humanitarian and Dialogue Partners, and News Organisations.

Typhoon RAI (Odette)



Figures are the latest updates as of 23 December 2021



The Philippines: Super Typhoon Rai (Odette)
Affected population by Municipality (as of 08:00, 22 Dec 21)



MA005 v03
Scan for
latest maps

KEY FIGURES



3.05M

AFFECTED PERSONS



631K

DISPLACED PERSONS



258

DEAD



568

INJURED



47

MISSING



200K

HOUSES



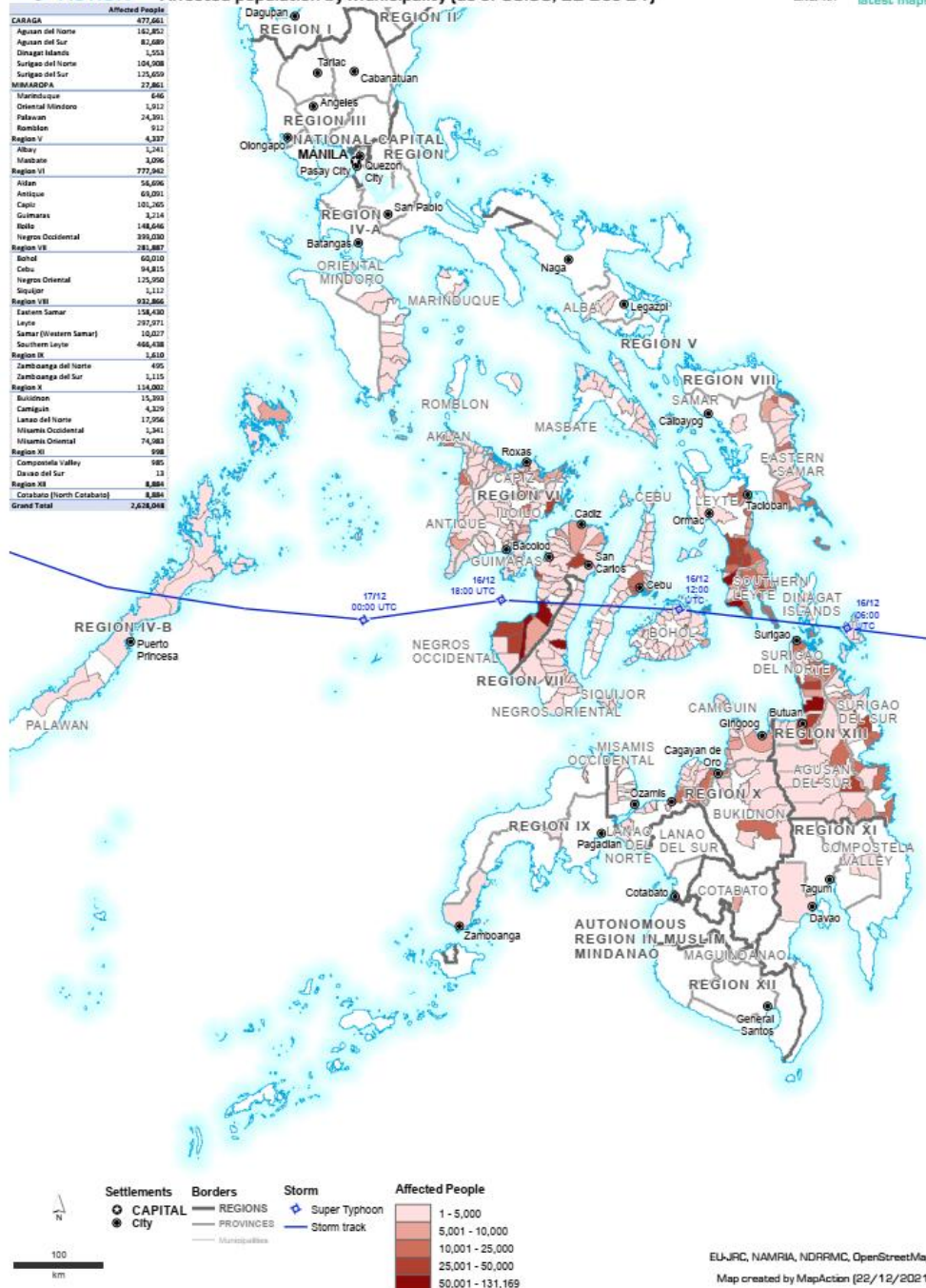
73M USD

WORTH OF DAMAGES TO
AGRICULTURE AND
INFRASTRUCTURE



1.4M USD

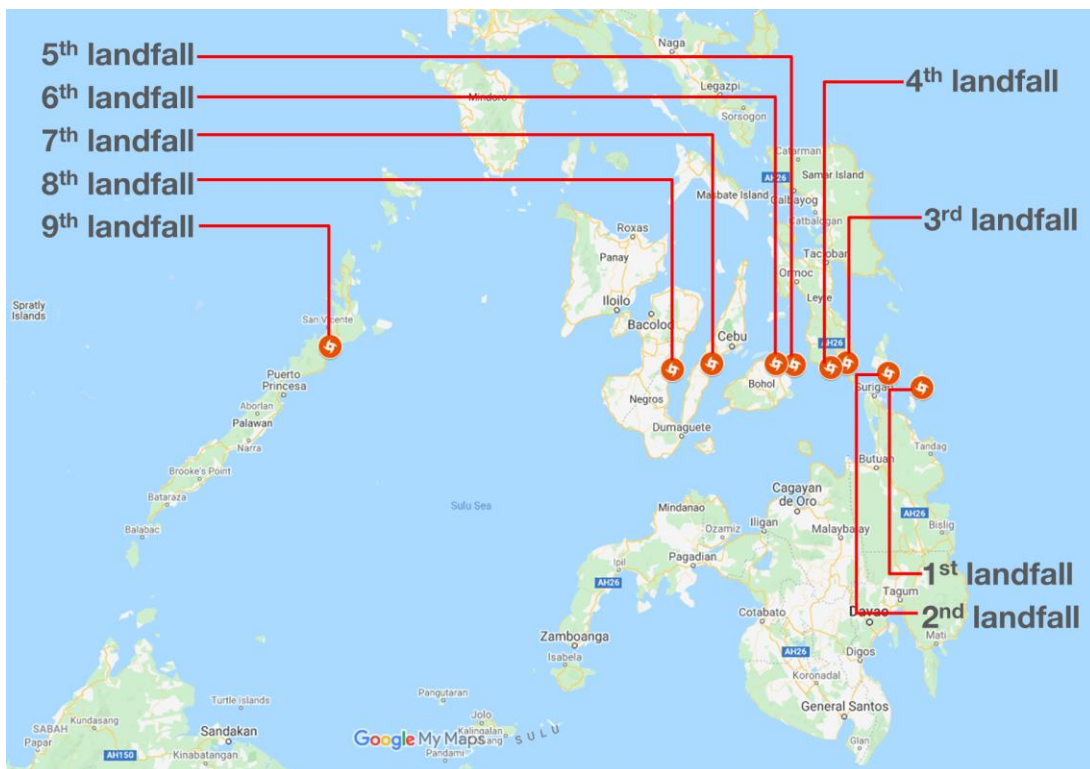
WORTH OF ASSISTANCE



SITUATION UPDATE

1. HIGHLIGHTS

- a. On 14 December 2021, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) has identified Severe Tropical Storm (STS) “RAI” (locally known as “ODETTE”) at 890 km east of Mindanao (8.3°N, 134.4°E), the **Philippines**. On 15 December 2021, “RAI” has intensified into a **Typhoon** as it moved westward over the Philippine Sea, east of Mindanao. On 16 December 2021, Typhoon “RAI” further intensified and made its **first landfall in Siargao Island, Surigao Del Norte at 12:30 PM (UTC+7)**, bringing **severe wind and torrential rains, moderate to heavy rains and light to moderate over several areas**. On the same day, Typhoon “RAI” made a second landfall in **Cagdianao, Dinagat Islands at 2:10 PM (UTC+7)**, third at **Liloan, Southern Leyte at 3:50 PM (UTC+7)**, fourth at **Padre Burgos, Southern Leyte at 4:40 PM (UTC+7)**, fifth at **Pres. Carlos P. Garcia, Bohol at 5:30 PM (UTC+7)**, sixth at **Bien Unido, Bohol at 4:30 PM (UTC+7)**, and seventh at **Carcar, Cebu at 9:00 PM (UTC+7)**. On 17 December 2021, Typhoon “RAI” made its eighth landfall in **La Libertad, Negros Oriental at 11:00 AM (UTC+7)**, and finally, it made its ninth landfall in **Roxas, Palawan at 2:10 PM (UTC+7)**. “RAI” left the Philippine Area of Responsibility (PAR) on 18 December 2021 at 11:40 PM (UTC+7) ([DSWD](#)).

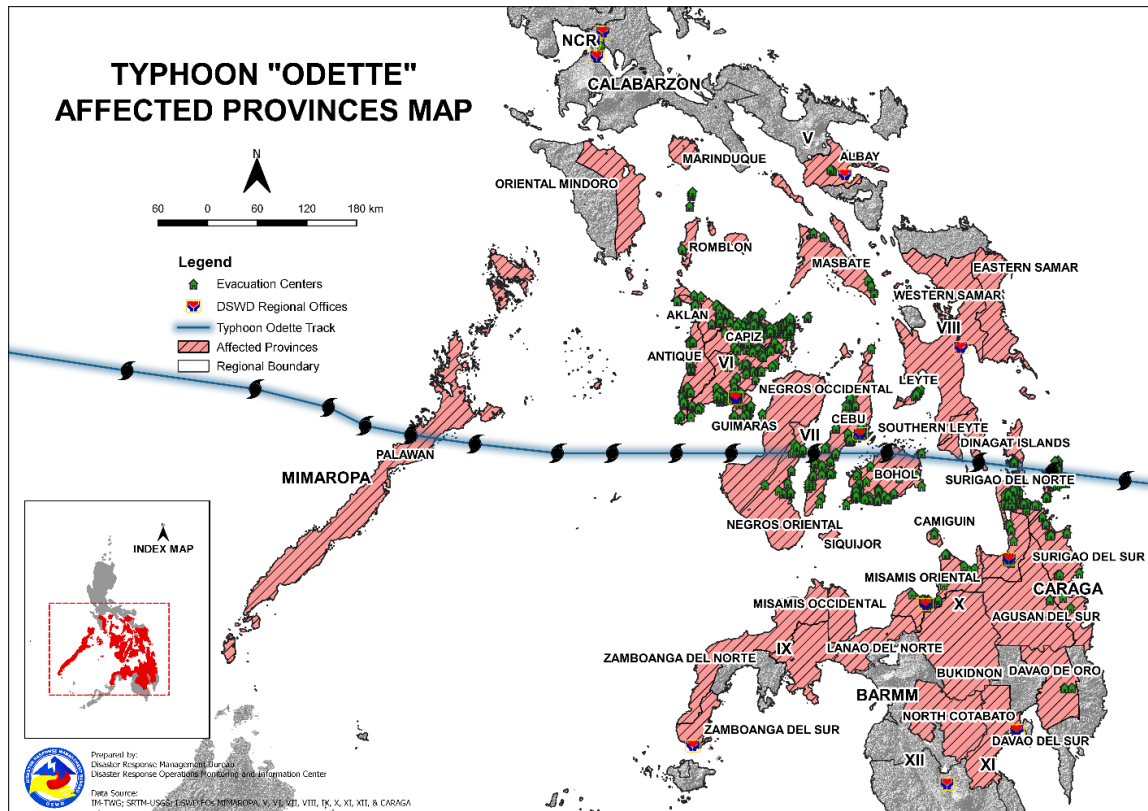


Typhoon RAI landfalls in the Philippines (Data sources: [PAGASA](#)).

- b. A total of **782,475 families** or **3,047,477 persons** were affected by Typhoon “RAI” in **5,155** Barangays (villages/district/ward) in Regions V, VI, VII, VIII, IX, X, XI, XII, MIMAROPA, and CARAGA ([DSWD](#)). Most areas affected by Typhoon RAI are experiencing power outage, water supply outage/interruption, and limited internet access; hence, the challenge in gathering data on affected population and other significant updates. Ongoing assessment and validation are continuously being conducted ([NDRRMC](#)).

* see complete Number of Affected Families / Persons table at [DSWD](#).





Source: DSWD-DROMIC

- c. On 21 December 2021, NDRRMC accepted the AHA Centre's offer of humanitarian assistance, specifically the mobilisation of ASEAN stockpiles stored at the Disaster Emergency Logistics System for ASEAN (DELSA) Satellite Warehouse in Camp Aguinaldo, Quezon City, Philippines. These regional stockpiles are funded by the Japan-ASEAN Integration Fund (JAIF) and Direct Relief. The AHA Centre is currently facilitating the mobilisation of the stockpiles, in coordination with the NDRRMC-OCD.
- d. ASEAN, through the ASEAN Foreign Ministers' Statement, has express sympathies to the Republic of the Philippines especially to the affected people by Typhoon RAI. ASEAN reaffirms its solidarity with the Governments and peoples of the Republic of the Philippines and stands ready to extend its cooperation and support.
- e. [The Government of the Philippines](#) express gratitude to the international community, partners, and allies for the offers of assistance and support, and **is expecting more help from other parts of the world.**

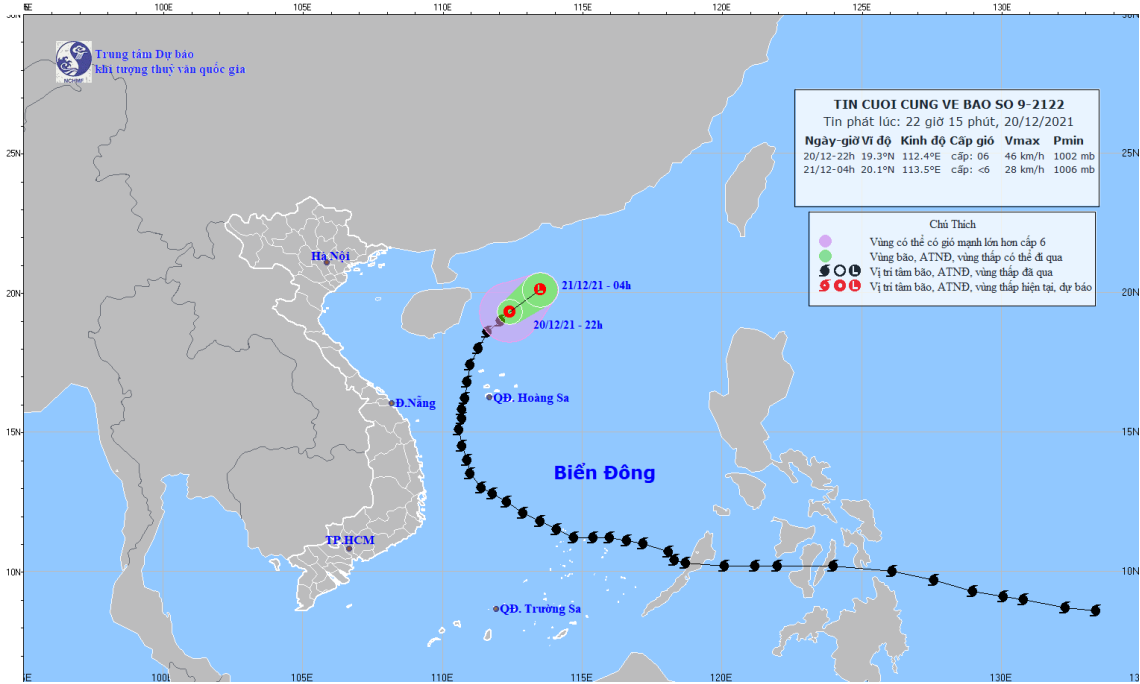
2. SUMMARY OF EVENTS

- a. 12 December 2021 (UTC+7)
 - 08:00 AM: The Low Pressure Area outside the PAR, southeast of Palau has developed into a Tropical Depression.
- b. 13 December 2021 (UTC+7)
 - 10:00 AM: The Tropical Depression outside the PAR maintains its strength as it continues to move westward.

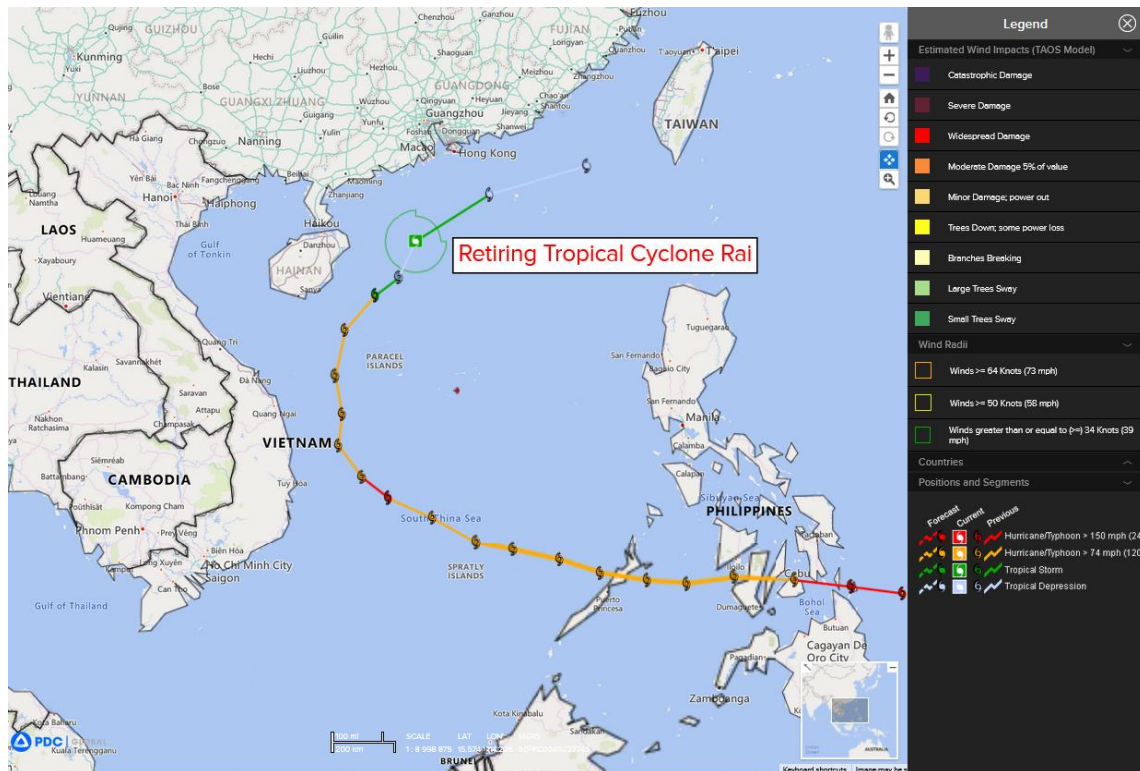


- c. 14 December 2021 (UTC+7)
- 10:00 PM: Severe Tropical Storm "RAI" entered the PAR and was locally named "ODETTE". Tropical Cyclone Wind Signal (TCWS) No. 1 issued over southeastern portion of Eastern Samar; Dinagat Islands, the eastern portion of Surigao del Norte including Siargao and Bucas Grande Islands, and the northern portion of Surigao del Sur.
- d. 15 December 2021 (UTC+7)
- 7:00 AM: "ODETTE" intensifies into a typhoon as it moves westward over the Philippine Sea east of Mindanao. TCWS No. 2 issued over the eastern portion of Surigao del Norte and Surigao del Sur.
 - 10:00 PM: TCWS No. 3 issued over Dinagat Islands, Surigao del Norte, the northern portion of Agusan del Norte, and the northern portion of Surigao del Sur
- e. 16 December 2021 (UTC+7)
- 10:00 AM: TCWS No. 4 issued over Southern Leyte, and the eastern portion Bohol, Dinagat Islands, Surigao del Norte including Siargao and Bucas Grande Islands.
 - 12:30 PM: 1st landfall in Siargao Island, Surigao del Norte
 - 2:10 PM: 2nd landfall in Cagdianao, Dinagat Islands
 - 3:50 PM: 3rd landfall in Liloan, Southern Leyte
 - 4:40 PM: 4th landfall in Padre Burgos, Southern Leyte
 - 5:30 PM: 5th landfall in Pres Carlos Garcia, Bohol
 - 6:30 PM: 6th landfall in Bien Unido, Bohol
 - 9:00 PM: 7th landfall in Carcar, Cebu
- f. 17 December 2021 (UTC+7)
- 11:00 AM: 8th landfall in La Libertad, Negros Oriental.
 - 4:00 PM: 9th landfall over Roxas, Palawan.
- g. 18 December 2021 (UTC+7)
- 1:00 AM: "RAI" decelerates while moving West Northwestward towards the Kalayaan Islands.
 - 3:00 PM: "RAI" exited the Philippines Area of Responsibility (PAR).
- h. As of 20 December 2021, 22:00 (UTC+7) Typhoon "RAI" has rapidly **weakened** into a **tropical depression** and the location of the storm's centre was at about 19.3 degrees North latitude; 112.4 degrees East longitude, about 180km east of Hainan Island (China). It is forecasted that in the next 6 hours, the tropical depression will move to the northeast, about 20km/h and weaken into a low pressure area in the northern part of the East Sea. Thus, the storm is no longer capable of affecting Vietnam's sea and land ([NHCMF](#)).





- i. According to the last Warning No. 32 from Pacific Disaster Centre ([PDC](#)), as of 22 December 2021, 0500 (UTC+7), the cyclone has **weakened Tropical Storm "RAI"** and is located approximately 164 NM south-southwest of Hong Kong with sustained 40 knot winds and gusts to 50 knots. According to the JTWC the circulation has lost all convection as it translates over cooler sea surface temperature. The system is thus expected to imminently become subtropical as the circulation gradually spins down over the next 12-24 hours.



Source: [PDC Weather Wall](#)



3. ASSESSMENT OF IMPACT AND HUMANITARIAN NEEDS

Assessment of Impact in The Philippines

- a. According to [NDRRMC's](#) Situational Report No. 10 as of 23 December 2021, 7AM UTC+7:
 - i. Incidents were reported in some areas of Region II, CALABARZON, MIMAROPA, Region V, Region VI, Region VII, Region VIII, Region IX, Region X, Region XI, Region XII, CARAGA, BARMM, and NCR.
 - ii. Total dead reported: 258, injured: 568, and missing: 47.
 - iii. 16 roads still not passable, while 104 roads were passable (previously reported as not passable).
 - iv. 4 bridges still not passable, while 9 bridges were passable (previously reported as not passable).
 - v. A total of 269 cities/municipalities experienced power interruption/outage. Of which, power supply in 144 cities/municipalities were already restored.
 - vi. A total of 3 cities/municipalities are still experiencing water supply interruption/outage.
 - vii. A total of 348 cities/municipalities are still experiencing communications outage/issues in MIMAROPA, Region 7, Region 8, Region 9, Region 10, CARAGA, and BARMM.
 - viii. A total of 5 airports were reported non-operational, of which, 5 airports were already operational.
 - ix. A total of 25 domestic flights were cancelled.
 - x. A total of 126 Seaports ports were reported non-operational. Of which, 57 seaports were already operational.
 - xi. A total of 1,513 passengers, 690 rolling cargoes, and 5 vessels, were stranded in MIMAROPA, Region 6, Region 8, Region 9, Region 10, and CARAGA.
 - xii. A total of 136,369 damaged houses are reported in MIMAROPA, Region 6, Region 7, Region 8, Region 9, Region 10, Region 11, Region 12, CARAGA, and BARMM.
 - xiii. A total of 427,001 persons were pre-emptively evacuated
 - xiv. A total of 50.5M USD worth of damages to infrastructure
 - xv. A total of 22.9M USD worth of damages to agriculture
 - xvi. Face Mask 500's, Rice, Sardines, Family Food Packs, Meals, Sleeping Kits and Hygiene Kits were provided to MIMAROPA, Region 6, Region 10, Region 11, and CARAGA.
 - xvii. A total of 33 cities/municipalities in MIMAROPA, Region 8, CARAGA had declarations of State of Calamity



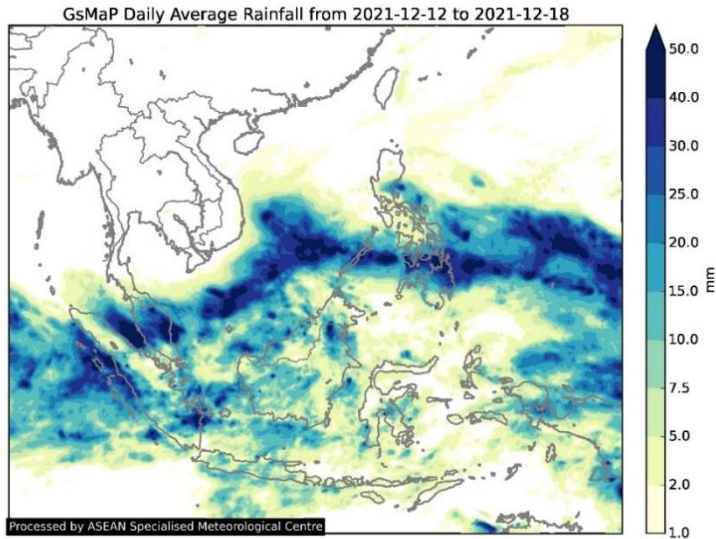
- b. According to [DSWD-DROMIC](#) Report #17 on Typhoon Odette as of 23 December 2021 (05AM UTC+7), there are:
- i. **92,344 families** or **372,421 persons** are taking **temporary shelter** in **2,019 evacuation centers** in **Regions VI, VII, VIII, X, MIMAROPA, and CARAGA**.
 - ii. **75,052 families** or **258,783 persons** are temporarily staying with their relatives and/or friends in **Regions VI, VII, VIII, MIMAROPA, and CARAGA**.
 - iii. **167,396 families** or **631,204 persons** are still displaced in **Regions VI, VII, VIII, X, MIMAROPA, and CARAGA**.
 - iv. A total of **200,245 houses** were **damaged**; of which, **71,139** are **totally damaged** and **129,106** are **partially damaged** in **Regions VI, VII, VIII, IX, X, MIMAROPA, and CARAGA**.
 - v. A total of **1.4M USD** worth of assistance was provided to the affected families; of which, **1.1M USD** from the **DSWD**, **305.9K USD** was provided by the **Local Government Units (LGUs)**, and **21K** from **Non-Government Organizations (NGOs)**.



Photo of TC RAI-battered areas in the towns of Cebu and Bohol on 19 Dec - Presidential photo ([left](#)) and The Philippine Coast Guard Aviation Force takes an aerial shot of Negros Occidental on 18 Dec ([right](#)). (Philippines News Agency).

- c. **Standby Funds** and **Prepositioned Relief Stockpile** have been prepared as follows:
- i. **1.14M USD** worth of Quick Response Fund (QRF) at the DSWD-Central Office; **719.6K USD** available at DSWD-FO V, VI, VII, VIII, IX, and XI; and **579.1K USD** in other DSWD-FOs which may support the relief needs of the displaced families due to Typhoon RAI through inter-FO augmentation.
 - ii. **55,200 FFPs** available in Disaster Response Centers; of which, **47,902 FFPs** are at the National Resource Operations Center (NROC), Pasay City and **7,298 FFPs** are at the Visayas Disaster Response Center (VDRC), Cebu City; **132,517 FFPs** available at DSWD-FO V, VI, VII, VIII, X, XI, MIMAROPA, and CARAGA; **123,723 FFPs** in other DSWD-FOs which may support the relief needs of the displaced families due to Typhoon RAI through inter-FO augmentation.
 - iii. **12.6M USD** worth of food and non-food items (FNIs) at NROC, VDRC and DSWD-FO warehouses countrywide.

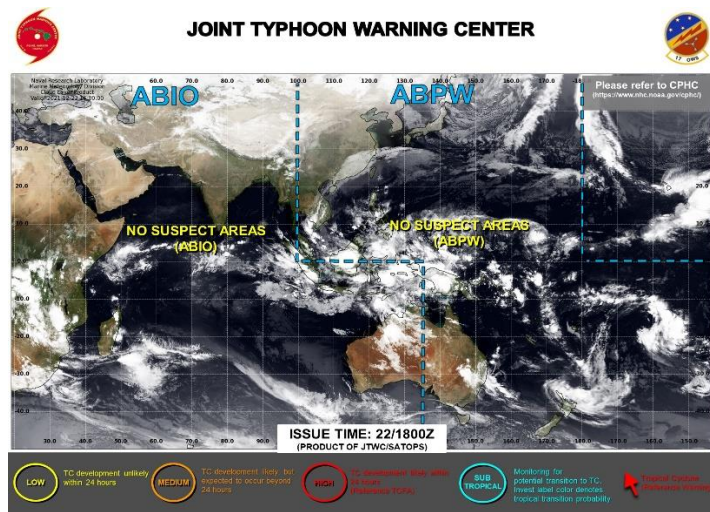




Daily Average Rainfall from 12 - 18 December 2021, as processed by the ASEAN Specialised Meteorological Centre (ASMC), showed high average rainfall in The Philippines and South China Sea.

Anticipated Risks

- As of 22 Dec, 0100 HRS (UTC+7), there's a tropical disturbance being referred to as **INVEST 98W** which is located approximately 644 km east of Palau. According to the [JTWC](#), satellite imagery depicts flaring convection over a broad low level circulation. Environmental analysis depicts generally favorable conditions for development with robust equatorward outflow, low (5-10 knot) vertical wind shear, and warm sea surface temperatures. Global models indicate that 98W will track west-northwestward, and are split on development, with the GFS continuing to be the most aggressive. Maximum sustained surface winds are estimated at 35-45 km/h (18 to 23 knots). The potential for the **development of a significant tropical cyclone within the next 24 hours is Low** ([PDC Weather Wall](#)).
- As of 22 Dec, 1300 (UTC+7), [JTWC](#) reported that there are **no active tropical warnings** in the Northwest Pacific/North Indian Ocean, Central/Eastern Pacific, or Southern Hemisphere at this time. On 23 Dec, 0100 (UTC+7) there is no suspect areas for the development of tropical cyclone.



Source: [JTWC](#)



- c. As of 22 Dec, the low pressure area (LPA) over the Pacific is expected to enter the Philippines Area of Responsibility (PAR) on the 26th or 27th of December. It will be closest to the landmass of Mindanao on the evening of 19th or morning of 30th of December. The LPA has 60-70% chance to develop into a tropical depression ([PAGASA](#)).
- d. As of 23 Dec, [PAGASA](#) forecasted possibility of flashflood or landslides due to moderate and heavy rains over CARAGA, Davao Region, South Cotabato, Sarangani, Basilan, Sulu, and Tawi-Tawi caused by The Inter-Tropical Convergence Zone (ITCZ) and possibility of flash floods or landslides during severe thunderstorms over Metro Manila.

Humanitarian Needs

- a. The NDRRMC-OCD has identified emergency relief needs from the DELSA Satellite Warehouse in Camp Aguinaldo, Philippines as follows:
 - i. 541 bags shelter repair kits
 - ii. 275 family tents
 - iii. 5,000 boxes family kit
 - iv. 1,000 rolls of tarpaulin (4x60 meter)
 - v. 5,000 boxes personal hygiene kit
 - vi. 1,000 boxes kitchen set
- b. The NDRRMC-OCD currently working on the Rapid Damage Assessment and Need Analysis (RDANA);
- c. Based on the latest Situations Report No. 10 (23 Dec) from NDRRMC, a total of 3 cities/municipalities still experiencing water supply interruption/outage, particularly on Puerto Princesa (Palawan), Naawan (Misamis Oriental), and Butuan (Butuan City). Potential needs for these three areas are the **drinking water or a water filtration system**;
- d. According to the data on the number of displaced persons and the availability of the food family packs in each Region, there is potential needs of **Family Food Packs for Region VI, VII, VIII, X, and CARAGA**. According to the data, the Family Food Packs cannot be available for less than a week for the mentioned Regions. There is also potential needs for the **distributions from another Regions stockpiles (transportation)**;

Office	Family Food Packs (FFPs) Available in the Region Stockpile	Displaced Family inside Evacuation Centre	*Estimated Available for (days)	**FFPs Needed
DSWD-FO MIMAROPA	34,528	2,462	33	-
DSWD-FO VI	12,398	42,888	1	116,266
DSWD-FO VII	16,246	19,684	2	42,806
DSWD-FO VIII	9,606	4,780	5	4,734
DSWD-FO X	10,469	4,185	6	2,086
DSWD-FO CARAGA	14,287	18,345	2	40,748

Note: - Stockpile: latest data as of 22 Dec, 11PM UTC+7; Displaced Family: latest report as of 23 Dec, 05AM UTC+7
 *1 FFPs is good for a family (5 persons) for 2-3 days; **estimate needed for 1 week



Potential Needs



Drinking water or a water filtration system



Family Food Packs (FFPs) for Region VI, VII, VIII, X and CARAGA



Transport for FFPs to Region VI, VII, VIII, X, and CARAGA

4. ACTIONS TAKEN AND RESOURCES MOBILISED

Response by the Government of The Philippines

NDRRMC Response Cluster

<p>A. FOOD AND NON-FOOD ITEMS (F/NFIS)</p> <p><i>Standby Resources Summary</i> 1.14M USD worth of Quick Response Fund (QRF) at the DSWD-Central Office; 723.2K USD available at DSWD-FO V, VI, VII, VIII, IX, and XI; and 581.9K USD in other DSWD-FOs which may support the relief needs of the displaced families due to Typhoon RAI through inter-FO augmentation.</p> <p>74,190 FFPs available in Disaster Response Centers; of which, 66,892 FFPs are at the National Resource Operations Center (NROC), Pasay City and 7,298 FFPs are at the Visayas Disaster Response Center (VDRC), Cebu City; 154,551 FFPs available at DSWD-FO V, VI, VII, VIII, X, XI, MIMAROPA, and CARAGA; 127,190 FFPs in other DSWD-FOs which may support the relief needs of the displaced families due to Typhoon RAI through inter-FO augmentation.</p> <p>12.6M USD worth of food and non-food items (FNIs) at NROC, VDRC and DSWD-FO warehouses countrywide.</p> <p><i>Cost of Assistance Summary</i> A total of 720.9K USD worth of assistance was provided to the affected families; of which, 450K USD from the DSWD, 250K USD was provided by the Local Government Units (LGUs), and 20.9K from Non-Government Organizations (NGOs).</p>
<p>B. CAMP COORDINATION AND CAMP MANAGEMENT and INTERNALLY DISPLACED PERSON PROTECTION (CCCM and IDPP)</p> <p><i>Camp Management Summary</i> -- There are 103,271 families or 413,744 persons taking temporary shelter in 2,302 evacuation centers in Regions MIMAROPA, VI, VIII, X, XI, and CARAGA. -- There are 13,156 families or 50,314 persons temporarily staying with their relatives and/or friends in Regions MIMAROPA, VI, VII and CARAGA.</p>
<p>C. SEARCH, RESCUE, AND RETRIEVAL(SRR)</p> <p>- 582 teams from the AFP, PCG, BFP and PNP were deployed to perform search and rescue in the affected areas. While, a total of 4,377 teams are still available and ready to be deployed. - With this, 112 land assets, 6 sea assets, and 1 air asset were also deployed. While a total of 3,066 (land), 484 (sea), and 17 (air) assets are available for deployment. - With the SAR operations, a total of 10, 842 individuals were rescued while 22 cadavers were retrieved.</p>
<p>D. LOGISTICS</p> <p>-250 land assets, 5 sea assets, and 12 air assets are deployed. While a total of 1,692 (land), 13 (sea), and 37 (air) assets are available and on standby.</p>
<p>E. EMERGENCY TELECOMMUNICATIONS</p> <p>- A total of 37 emergency telecommunications equipments are deployed from DICT and OCD while 573 emergency telecommunications equipment are available and ready for deployment from DICT and OCD.</p>
<p>F. EDUCATION</p> <p>- A total of 796 schools or 4,740 classrooms are used as evacuation centers in Regions, MIMAROPA, V, VI, VII, VIII, IX, X, XI and CARAGA.</p>



G. HEALTH

- There is total of 236.5K USD Prepositioned Logistics in DOH Regional Offices. While 5.5M USD worth of logistics is also available in various DOH regional warehouses.
- A total of 1.34M USD worth of logistics is available in DOH Central Office

Other Response by Ministries and Organisations

Ministries	Actions Taken as of 21 December, 18:00 (UTC+7)
PAGASA	<ul style="list-style-type: none"> ▪ Presented the weather updates during the Weather Updating and PDRA Meetings. ▪ Continuous weather monitoring and provision of weather updates to all stakeholders.
PHILIPPINE COAST GUARD	Deployed assets to assist in rescue and relief operations
MARINA	<ul style="list-style-type: none"> • Directed shipowners to prioritize the delivery of relief items. • Lifted the suspension of the travel of vessels on 18 December 2021, after TC Odette exited PAR. • Directed safety engineers to conduct the appropriate maintenance check of sea vessels before departing.
PPA	Provided the needs of stranded passengers.
CAAP	<ul style="list-style-type: none"> • Restored airport operations to prevent congestion. • Deployed inspection teams to deliver communication equipment to be delivered to damaged airports.
DENR - MGB	Provides a list of cities and municipalities susceptible to landslide and flood to all concerned offices for information, reference, and redundancy of information.
Philippine Disaster Resilience Foundation	<ul style="list-style-type: none"> - Placed SAR teams in Dumaguete, Negros Oriental on standby for deployment. - Prepared 5000 packs of hot meals for deployment to affected areas. - Provided free spaces with charging stations in private facilities for customers to await the safe passing of the storm. - Placed static tanks and water tankers on standby. - Prepared evacuation areas and food provisions. - Pledged medicines, monetary support, drinking water, and flights for the air transport of goods to the affected regions.

Response by the AHA Centre

- On 18 December 2021, the AHA Centre conducted an Emergency Response Organisation Briefing, also attended by the ASEAN Secretariat, to discuss the latest situations in the Philippines and the possibility of support that ASEAN can provide.
- On 18 December 2021, a Letter of Sympathy with the Offer of Assistance was sent to NDRRMC-OCD.
- On 21 December 2021, the Government of the Philippines through the NDRRMC-OCD accepted AHA Centre's offer of assistance. Consequently, the AHA Centre raised its Emergency Operations Centre's Alert Level to **RED** (Active Response).
- In coordination with NDRRMC-OCD, the AHA Centre facilitated the mobilisation of the relief items from the DELSA Satellite Warehouse in Camp Aguinaldo, Quezon City, Philippines:



No	Item	Quantity	Unit	Donor
1	Shelter Repair Kit	541	Bag	Direct Relief
2	Family Tent	275	Tent	Direct Relief
3	Family Kit	300	Box	Direct Relief
	Family Kit	4,700	Box	JAIF
4	Tarpaulin	1,000	Roll	JAIF
5	Personal Hygiene Kit	5,000	Box	Direct Relief
6	Kitchen Set	1,000	Box	Direct Relief



Coordination and handing over ceremony for the relief items from DELSA Satellite Warehouse in Camp Aguinaldo, Philippines between NDRRMC-OCD (Bernardo Rafaelito, Director III, Operation Service, OCD) and the AHA Centre (Jommel Merano, the AHA Centre's National Logistic Officer) on 21 Dec.

- e. On 21 December 2021, the AHA Centre has dispatched 366 shelter repair kits, 55 family indoor tent, and 232 rolls of tarpaulin from the DELSA Satellite Warehouse in Camp Aguinaldo, Quezon City, Philippines.



Relief items distributions from DELSA Satellite Warehouse in Camp Aguinaldo, Philippines on 21 Dec.



- f. On 22 December 2021, the status of the shipment of 366 shelter repair kits, 55 family indoor tent, and 232 rolls is been loaded to Boeing 737 chartered flight by OCD of the Philippines at the Clark Airport, Pampanga, Philippines at 0800 hrs (UTC+7) and is scheduled to be departed on 23 December at 1100 hrs (UTC+7).



Relief items distributions (dispatch on 21 Dec from DELSA Satellite Warehouse Camp Aguinaldo) is been loaded to Boeing 737 chartered flight by OCD of the Philippines at the Clark Airport on 22 Dec at 0800 hrs UTC+7.

- g. Distribution of remaining of 175 shelter repair kits, 220 family tents, 5,000 family kits, 768 tarpaulin, 5,000 personal hygiene kits, and 1,000 kitchen which is currently available in DELSA Satellite Warehouse in Camp Aguinaldo, Philippines will be determine from NDRRMC Cluster Meeting which is conducted on the afternoon of 22 December 2021.

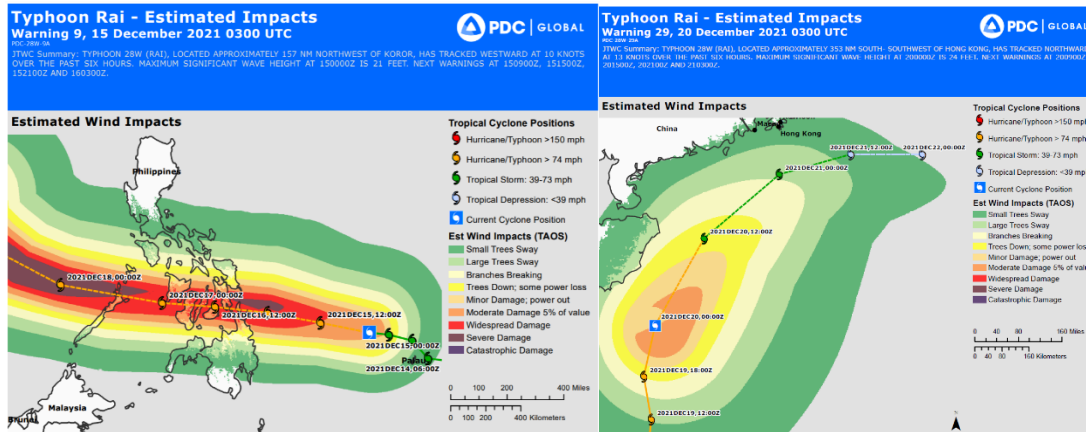


The AHA Centre relief items distributions status as of 22 Dec.

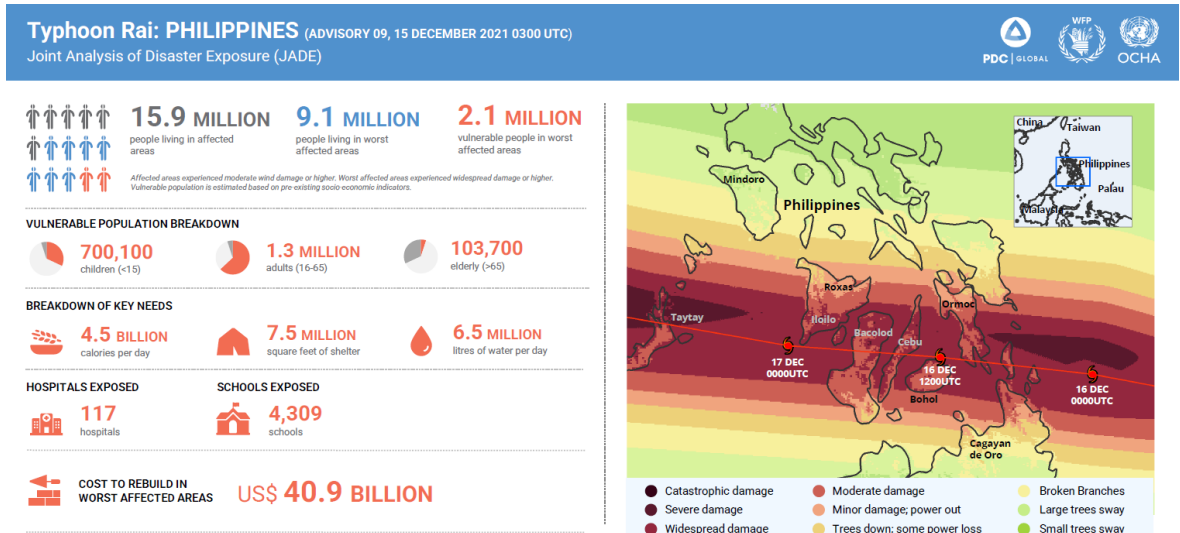


Response by Other Humanitarian and Operational Partners

- a. **PDC** has issued the first Warning on 13 December 2021 0300 UTC, with the name **Tropical Depression "Twenty eight"** originating from JTWC, then at 1500 UTC developed into **Tropical Storm "RAI"**. On the 9th Warning, the PDC declared that the TS had transformed into Typhoon 28W or **Typhoon "RAI"**. Until 20 Dec, 2100 UTC PDC has issued 32 Warnings related to Typhoon "RAI" that have been distributed through DisasterAWARE products and their derivatives (DMRS, PhilAWARE, etc.)



- b. **PDC**, **WFP** and **OCHA** have released the [Joint Analysis of Disaster Exposure \(JADE\)](#) product on 15 December 0300 UTC which displays breakdown impact estimates based on population, vulnerable groups, key needs, hospitals exposed, school exposed, and cost to rebuild in worst affected areas. The product have been distributed through email lists of relevant stakeholders, DMRS, DisasterAWARE, PhilAWARE, ThaiAWARE, EMOPS, as well as WFP and UNOCHA's ReliefWeb websites.



	PEOPLE LIVING IN WORST AFFECTED AREAS			AGE BREAKDOWN FOR POPULATIONS IN WORST AFFECTED AREAS			
	PEOPLE LIVING IN AFFECTED AREAS	PEOPLE LIVING IN WORST AFFECTED AREAS	VULNERABLE PEOPLE IN WORST AFFECTED AREAS	0-4 years	5-14 years	15-49 years	65+ years
CEBU CITY, CEBU	990,417	907,909	190,660	100,777	193,384	476,652	43,579
LAPU-LAPU CITY, CEBU	470,229	470,229	98,748	52,195	100,158	246,870	22,571
ILOILO CITY, ILOILO	434,306	434,306	86,861	48,207	92,507	228,010	20,846
TALISAY CITY, CEBU	241,346	241,346	50,682	26,789	51,406	126,707	11,584
BACOLOD CITY, NEGROS OCCIDENTAL	531,520	240,383	69,711	77,884	51,201	126,201	11,538

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- c. **UNOSAT/UNITAR** has released Tropical Cyclone RAI-21 **Preliminary Satellite-Derived Standing Waters Analysis** as follows:
- (i) On December 17th, for [Region VIII \(Eastern Visayas\) and Region XIII \(CARAGA\)](#) of the Philippines, with Summary of Findings:
 - No major floods observed in Libjo Municipality, Dinagat Island, Region XIII (CARAGA) as of 17 December 2021.
 - Increase of standing waters level in Southern Part of Dinagat Island, Region XIII (CARAGA) observed as of 17 December 2021.
 - Large inundated areas in Siargao Island, Region XIII (CARAGA) observed as of 17 December 2021.
 - Standing waters in urban areas and affected agricultural area in Surigao City, Surigao Del Norte Province Region XIII (CARAGA) observed as of 17 December 2021.
 - Standing waters near Claver municipality, Surigao Del Norte Province, Region XIII (CARAGA) observed as of 17 December 2021.
 - No major floods observed in Hinunangan Municipality, Southern Leyte Province, Region VIII (Eastern Visayas) as of 17 December 2021.
 - No major floods observed in San Francisco Municipality, Southern Leyte Province, Region VIII (Eastern Visayas) of 17 December 2021
 - (ii) On December 20th, for [Region IV-B \(Mimaropa\) and Region VII \(Central Visayas\)](#) of the Philippines, with Summary of Findings:
 - Increased standing waters observed in the northern parts of Bohol Island as of 17 December 2021
 - Standing waters observed in Carcar's agricultural area, Cebu Island as of 20 December 2021
 - No major floods observed in Mandaue city, Cebu island as of 20 December 2021
 - No major floods observed in the vicinity of La Libertad city, Negros Island as of 20 December 2021
 - Inundated agricultural area observed in Roxasand Dumarán Municipalities, Palawan Island as of 18 December 2021
 - (iii) On December 20th, for [Dinagat Island, Siargao Island, and Southern Leyte province, Region XIII \(CARAGA\)](#) of the Philippines, with Summary of Findings:
 - Potentially damaged structures in Cuarinta Village, Dinagat Island, Region XIII (CARAGA) as of 18 Dec 2021.
 - No visible damage in Cagdianao village, Dinagat Island, Region XIII (CARAGA) as of 19 Dec 2021.
 - Severally damaged structures and affected areas along the coastal areas of Surigao Del Norte Province, Region XIII (CARAGA) Region XIII (CARAGA) observed as of 18 and 19 December 2021.
 - Decreasing waters observed in several areas in Siargao Island, Region XIII (CARAGA) observed as of 19 and 20 December 2021.
 - Damaged structures in Burgostown, Surigao Del Norte Province, Region XIII (CARAGA) observed as of 20 Dec 2021.
 - Potentially damaged structures in Rizal village and Del Carmen town Surigao Del Norte Province, Region XIII (CARAGA) observed as of 19 Dec 2021.
 - Potentially damaged structures in Dapatown, Siargao Island, Region XIII (CARAGA) observed as of 18 December 2021.
 - Affected structures by standing waters in Twin-twin, Santa Fe, Libertad, Santa Lnes, and Catangnan villages and General Luna town, Siargao Island, Region XIII (CARAGA) observed as of 18 December 2021.



- Potentially damaged structures and affected area al in Pinut-an Village and Liloan town, Southern Leyte province, Region XIII (CARAGA) as of 18 Dec 2021.
- d. **Changi RHCC**'s has released SPOT Report 01/21 for Typhoon "RAI" ("ODETTE") on Dec 16, 1600 (UTC+8).
- e. **WFP** has released 9 times the [ADAM](#) (Automated Disaster and Mapping) product since December 15, 03:39:07 UTC which estimates Population Exposure from Typhoon "RAI".
- f. As reported on **UNOCHA**'s FLASH UPDATE [No.2](#) and [No. 3](#), Philippines: Typhoon Rai/Odette, as of 17 & 20 December 2021, 8 p.m. local time, consist of following highlight:
- The United Nations Resident and Humanitarian Coordinator Gustavo Gonzalez extended Humanitarian Country Team's (HCT) coordinated support to augment government's relief efforts. OCHA is coordinating with the Office of Civil Defense and regional partners and has already activated UNOSAT Charter for satellite image analysis of the initial landfall areas.
 - Over the weekend, several humanitarian partners will support a conduct of rapid needs assessment to analyze the extent of damage.
 - UN agencies, NGO partners, the Philippine Red Cross and the private sector CBI network PDRF are on red alert and many commenced conducting situation analysis reports and supporting evacuation operations.
 - Humanitarian partners coordinated with the authorities to temporarily lift COVID-19 testing requirements on some islands for fully vaccinated humanitarian workers.
 - The Emergency Telecommunications Cluster, through the Department of Information and Communications Technology (DICT), in collaboration with WFP, has 2 MOVE Sets currently stationed in Surigao City and Ormoc City to facilitate access to electricity and internet to the government and partners. IOM is ready to deploy assessment teams and about 2,000 USAID-funded tarpaulins alongside DSWD in various locations.
 - In Cagayan de Oro City, CARE and ACCORD assisted affected families in urban poor areas to locate possible evacuation centers as the primary evacuation centers are already at full capacity. NGO partners have food prepositioned and are activating procurement of other in-kind assistance through the ECHO-funded Rapid Response Mechanism of the REACH Project.
 - On 19 December, the Government of the Philippines accepted the offer of the HCT to provide coordinated humanitarian assistance. Humanitarian partners have started providing support to local authorities through national line agencies with immediate relief and logistics support. However, some mobilization of humanitarian assistance was hampered by prevailing COVID-19 related precautionary measures and travel restrictions
 - On 20 December, ad hoc HCT and ICGG meetings were organized to discuss strategic and operational priorities separately. A diplomatic briefing was also held on the same day to share priority needs identified based on rapid assessments done by the MHT and ICGG members. The RC/HC together with several Ambassadors will conduct a high-level mission to Dinagat Islands on 22 December to visit some of the most affected areas and discuss the situation with the authorities.
- g. **International Federation of Red Cross and Red Crescent Societies (IFRC)** has issued an [Emergency Appeal](#) related to Typhoon Rai on December 18, with Appeal numbered MDRPH045 aims to support the Philippine Red Cross in response to Typhoon Rai. The operation aims to meet the immediate and early recovery needs



of 81,000 of the most vulnerable affected households (405,000 people) in 15 chapters in Regions V, VI, VII, VIII, X, XI, CARAGA, and MIMAROPA within 24 months. The strategy focuses on the following sectors:

- Health & Care including Water, Sanitation and Hygiene (WASH) including Mental Health and psychosocial support / Community Health / Medical Services.
 - Integrated assistance (Livelihoods, Multi-purpose Cash, Shelter, Housing and Settlements)
 - Protection and Prevention (Risk Reduction, Climate adaptation and Recovery, Protection, Gender and Inclusion (PGI), Migration, Environmental Sustainability)
- h. On December 19, **UNOCHA** has published [Typhoon Rai \(Odette\) Operational Presence \(Preparedness\) Map](#) as of Dec 19. The map shows humanitarian partners scattered throughout the Philippines to provide humanitarian response and assistance.
- i. On December 20, DG ECHO has published Tropical Cyclone RAI (Odette) – [DG ECHO Daily Map](#).
- j. On December 20, the **Humanitarian Country Team (HCT)** and the **Mindanao Humanitarian Team (MHT)** has published [Consolidated Rapid Assessment Report for Super Typhoon Rai \(Odette\)](#). The Report builds on the **Joint Analysis for Disaster Exposure (JADE)** developed by the **Pacific Disaster Centre (PDC)**, **WFP** and **OCHA** on 15 December and updated on 16 December, modeling the potential disaster impact on communities and the economy ahead of Super Typhoon Rai's landfall. The Assessment & Analysis Cell (A&A Cell) was also activated and provided remote support. The report consists of Impact Assessment and Priority Needs including Education; Emergency Shelters; Camp Coordination and Camp Management; Emergency Telecommunications; Food Security and Agriculture, Nutrition; Health, Sexual Reproductive Health and Mental Health and Psychosocial Services; Logistics; Protection, including Child Protection and Gender-Based Violence; Water, Sanitation and Hygiene; Early Recovery and Livelihoods; and Coordination and Community Engagement. The report also described the existing Operational Constraints and Information Gaps. The report also mentioned that as of 19 December, at least 8 UN agencies - including **DSS, IOM, OCHA, UNHCR, UNICEF, UNFPA, WHO, WFP** - as well as at least 16 international and local NGOs and foundations - including **AAH, ACCORD, ADRA, Americares, Bidlisiw Foundation, CARE, Caritas Germany, CFSI, CRS, Handicap International, Oxfam, RAFI, Relief International, ShelterBox, Save the Children, Sumpay Mindanao, World Vision** - participated in the **rapid needs assessment exercise**. In addition, authorities in Dinagat Province submitted an assessment form. Overall, partners shared 33 assessment forms with data from Regions VII, VIII, IX, X, BARMM, and CARAGA.
- k. On December 20, in response to the recent climate emergencies in Malaysia and the Philippines (TC "RAI"), the [Singapore Red Cross \(SRC\)](#) is pledging US\$100,000 in humanitarian aid (US\$50,000 respectively) to the Malaysian Red Crescent and the **Philippine Red Cross**, in support of their ongoing relief efforts. The homegrown humanitarian organisation is also launching public appeals, where funds raised would go towards the relief and recovery of affected communities, with a focus on emergency healthcare, first aid assistance and distribution of hygiene kits, shelter tool kits, tarpaulins, hot meals, clothes, mats, blankets, surgical masks to evacuation centres. In the Philippines, Singapore Red Cross will also support a local organisation to distribute relief items including water, rice, groceries to 1,000 households across



six communities in need of support. Psychological first aid is also provided in evacuation centres to affected persons.

- l. On December 20, upon the request of the Government of the Republic of the Philippines, the [Government of Japan](#) has decided to provide emergency relief goods (generators, portable jerry cans, tents, sleeping pads, and plastic sheets) through the **Japan International Cooperation Agency (JICA)** to the Philippines in response to the damages caused by Typhoon Odette. In light of the humanitarian perspective and the close relations between Japan and the Republic of the Philippines, Japan has decided to provide emergency assistance to the Philippines in support of survivors of the typhoon disaster.
- m. On December 21, [UNICEF](#) sends supplies to Typhoon "RAI" areas in response to the needs of children and families in affected areas based on initial assessments which around 845,000 children need urgent assistance. UNICEF staff is on the ground conducting assessments and is leading the Water, Sanitation and Hygiene (WASH), Nutrition, Education and Child Protection clusters together with the Philippine Government and partners. UNICEF's emergency supplies are ready to be dispatched to respond to people's needs for safe drinking water, sanitation, hygiene, nutrition, education, and child protection.
- n. On December 21, [Philippines News Agency](#) reported that **Canada, Hungary, the United Kingdom, and New Zealand** have pledged to provide over 3.74M USD to assist provinces hit hard by the onslaught of Typhoon Odette. Several countries like China, the United States, Japan, Israel, and Australia allocated in-kind goods for immediate deployment to the affected families.
- o. On December 22, [Ministry of Foreign Affairs Republic of Korea](#) reported that the Korean government has decided to provide 2M USD in immediate assistance to support people severely affected by Super Typhoon "Rai" in the Philippines. The Korean government hopes that its assistance will contribute to the relief efforts of the Philippines government and help bring stability to lives of people of the Philippines. [Government of Ireland](#) also earmarked 283K USD (EUR250K) worth of disaster relief assistance to the affected people by Typhoon RAI in the Philippines.
- p. On December 22, [Philippines News Agency](#) reported that China coursed 1M USD cash donation to the Philippine government, through the Department of Foreign Affairs. The United States is extending another 200K in immediate assistance to help procure food, water, hygiene supplies, and other relief items to people affected in Surigao del Norte and Dinagat Islands.
- q. [Plan International](#) Philippines has mobilized an Emergency Response Team to assist affected communities in Southern Leyte and Surigao del Norte and currently conducting Rapid Gender and Needs Assessment. On December 22, 1,500 water kits, 1,500 hygiene kits, and 1000 MHM kits are scheduled to be distributed in selected communities in Southern Leyte. An additional 2,000 water and hygiene kits and 100 HM kits will be distributed in other impacted areas of Southern Leyte on December 23-24. Additional items from our Pampanga (in Luzon) and Cotabato City (in Mindanao) are being prepared to augment the response. For the initial response, Plan International aim to support six municipalities and will cover interventions on WASH, Child Protection in Emergencies, Gender-Based Violence in Emergencies, and Cash Voucher Programming.
- r. **UNOSAT/UNITAR** has released Tropical Cyclone RAI-21 **Preliminary Satellite-derived Building Damage Analysis** as follows:
 - (i) On December 22nd, for [Siargao Island of Region XIII \(Caraga\) and Negros Oriental Province of Region VII \(Central Visayas\)](#) of the Philippines, with Summary of Findings:



- Widespread damage observed in Siargao Islands, Region XIII (Caraga) as of 19 Dec 2021.
- Affected areas along the shoreline observed in Siargao Islands, Region XIII (Caraga) as of 19 Dec 2021.
- Severally damaged education facilities of Del Carmen National High School, Surigao State College of Technology, Sayak Elementary School, Bagacay Primary School, Numancia Central Elementary School, Oguing Navarro Mem. National High School, Mariano Matugas Memorial National High School, Tuboran Elementary School, Mabuhay elementary School, Santa Cruz Elementary School, Salvacion Elementary School, Pilar National High school, Caridad National High School, Tigasao, Elementary School in Siargao Islands, Region XIII (Caraga) observed as of 19 Dec 2021.
- Damaged health facilities of Del Carmen District and Pilar Municipal Hospitals in Siargao Islands, Region XIII (Caraga) observed as of 19 Dec 2021.
- Widespread damage observed in La Libertad town, Negros Oriental Province, Region VII (Central Visayas) as of 22 Dec 2021.
- Affected area along the shoreline observed in Negros Oriental Province, Region VII (Central Visayas) as of 22 Dec 2021.
- Standing waters in agricultural areas observed in Negros Oriental Province, Region VII (Central Visayas) as of 22 Dec 2021.

Response by Other Partners

- a. On December 17, the Manila Observatory (MO) has made an emergency observation request and acquired available data and maps from the Data Analysis Nodes (DAN) (Asian Institute of Technology and Earth Observatory of Singapore) of the Asian Disaster Reduction Center (ADRC) through the [Sentinel Asia OPTEMIS Dashboard](#).

5. RECOMMENDATIONS AND PLAN OF ACTIONS

The AHA Centre's Plan

- a. The AHA Centre stands ready to support and provide additional assistance, if and when requested by NDRRMC.
- b. The AHA Centre will continue its close coordination with NDRRMC-OCD and will issue necessary updates accordingly.



Prepared by:

The AHA Centre - Emergency Operations Centre (EOC)

ABOUT THE AHA CENTRE

The AHA Centre - ASEAN Coordinating Centre for Humanitarian Assistance on disaster management - is an inter-governmental organisation established by 10 ASEAN Member States – Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam - to facilitate the cooperation and coordination among ASEAN Member States and with the United Nations and international organisations for disaster management and emergency response in the region.

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ANNEXES: Information Products from Partners

Pacific Disaster Center (PDC), WFP and OCHA

Typhoon Rai: PHILIPPINES (ADVISORY 09, 15 DECEMBER 2021 0300 UTC)
 Joint Analysis of Disaster Exposure (JADE)

15.9 MILLION people living in affected areas
9.1 MILLION people living in worst affected areas
2.1 MILLION vulnerable people in worst affected areas

Affected areas experienced moderate wind damage or higher. Worst affected areas experienced widespread damage or higher. Vulnerable population is estimated based on pre-existing socio-economic indicators.

VULNERABLE POPULATION BREAKDOWN

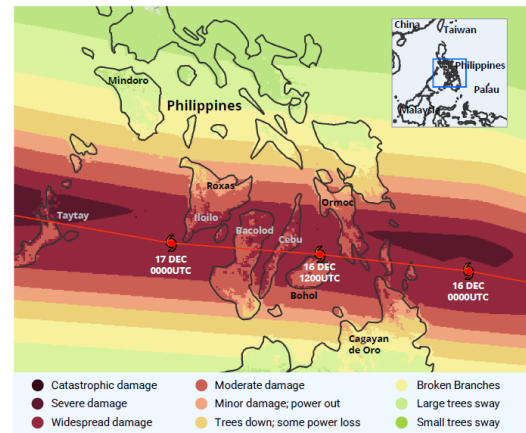
- 700,100** children (<15)
- 1.3 MILLION** adults (16-65)
- 103,700** elderly (>65)

BREAKDOWN OF KEY NEEDS

- 4.5 BILLION** calories per day
- 7.5 MILLION** square feet of shelter
- 6.5 MILLION** litres of water per day

HOSPITALS EXPOSED **117** hospitals
SCHOOLS EXPOSED **4,309** schools

COST TO REBUILD IN WORST AFFECTED AREAS **US\$ 40.9 BILLION**



	PEOPLE LIVING IN AFFECTED AREAS	PEOPLE LIVING IN WORST AFFECTED AREAS	VULNERABLE PEOPLE IN WORST AFFECTED AREAS	AGE BREAKDOWN FOR POPULATIONS IN WORST AFFECTED AREAS			
				0-4 years	5-14 years	15-49 years	65+ years
CEBU CITY, CEBU	990,417	907,909	190,660	100,777	193,384	476,652	43,579
LAPU-LAPU CITY, CEBU	470,229	470,229	98,748	52,195	100,158	246,870	22,571
ILOILO CITY, ILOILO	434,306	434,306	86,861	48,207	92,507	228,010	20,846
TALISAY CITY, CEBU	241,346	241,346	50,682	26,789	51,406	126,707	11,584
BACOLOD CITY, NEGROS OCCIDENTAL	531,520	240,383	69,711	77,884	51,201	126,201	11,538

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Joint Analysis of Disaster Exposure (JADE) for Typhoon Rai - The Philippines
https://reliefweb.int/sites/reliefweb.int/files/resources/PDC_Typhoon_Rai_Philippines_UNOCHA_WFP_JADE_15DEC0300UTC.pdf

United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT)

AOI 1-2: SOUTHERN PART OF DINAGAT ISLAND, REGION XIII (CARAGA)

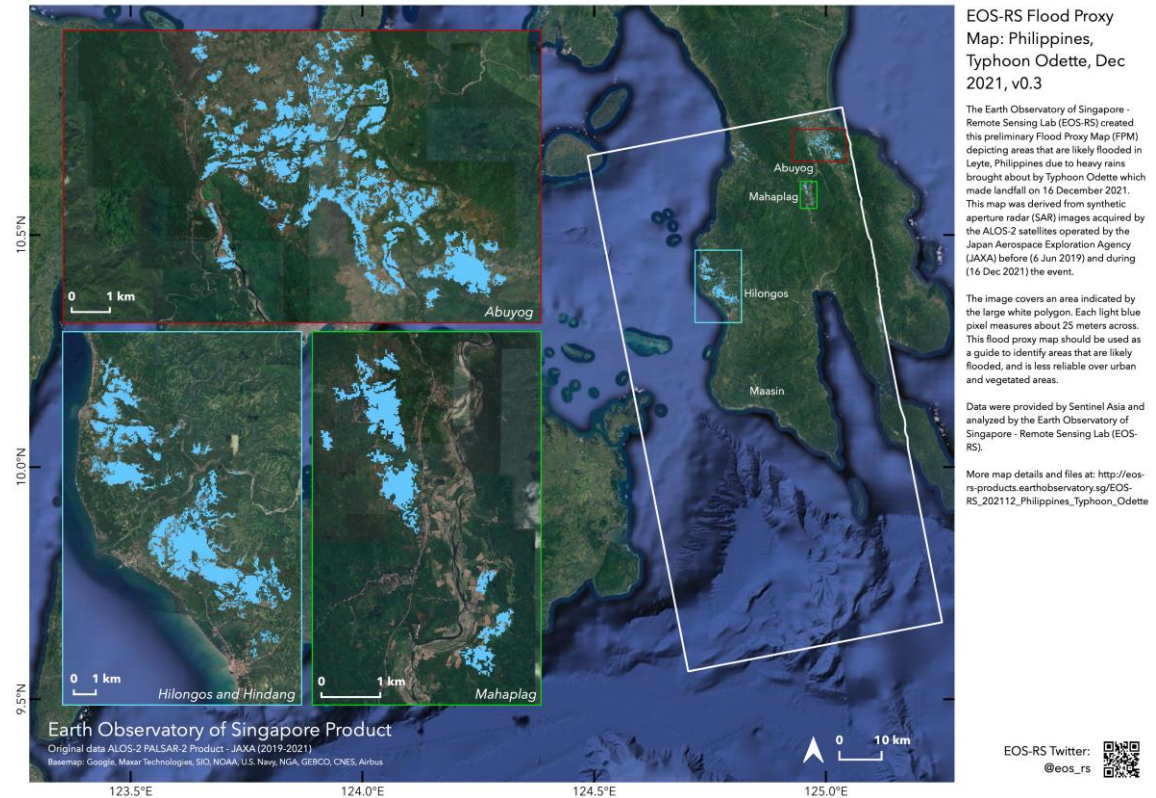
Standing waters increase

BEFORE (Sentinel-2 / 12 December 2021) vs **AFTER** (Sentinel-2 / 17 December 2021)

Preliminary Satellite-Derived Standing Waters Analysis for:

1. Region VIII (Eastern Visayas) and Region XIII (CARAGA) (https://unosat-maps.web.cern.ch/unosat-maps/PH/TC20211216PHL/UNOSAT_Preliminary_Assessment_Report_TC20211216PHL_17Dec2021.pdf)
2. Region IV-B (Mimaropa) and Region VII (Central Visayas) (https://unosat-maps.web.cern.ch/PH/TC20211216PHL/UNOSAT_Preliminary_FloodAssessment_Report_TC20211216PHL_Mimaropa_CentralVisayas_20Dec2021.pdf)
3. Dinagat Island, Siargao Island, and Southern Leyte province, Region XIII (CARAGA) (https://unosat-maps.web.cern.ch/unosat-maps/PH/TC20211216PHL/UNOSAT_Preliminary_Assessment_Report_TC20211216PHL_20Dec2021.pdf)

Earth Observatory Singapore – Flood Proxy Map



Asia Institute of Technology (AITC) – Detected Flood Area

