



REPUBLIC OF THE PHILIPPINES
NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

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

NDRRMC UPDATE

Final Report re Preparedness Measures and Effects of Tropical Storm "TINO" (16 – 19 November 2017)

Releasing Officer:

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Administrator, OCD

Sources: DOST-PAGASA, DSWD, PCG, OCDROs MIMAROPA, VI, VII, VIII, XI, and CARAGA

I. SITUATION OVERVIEW

A. Chronology and Tropical Cyclone Track

16 November 2017

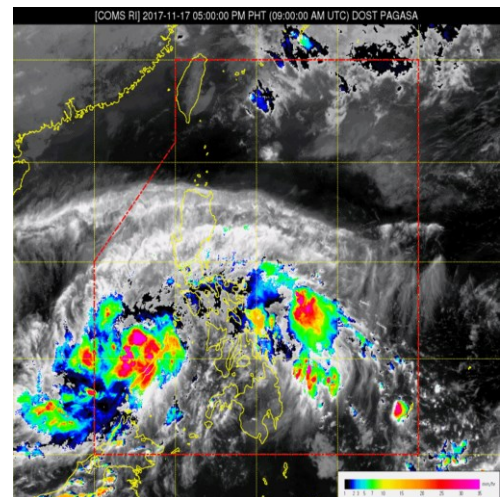
At 10:00 AM, the Low Pressure Area (LPA) was estimated at 150 km East Northeast of Hinatuan, Surigao del Sur (8.8°N, 127.6°E). The weather system brought scattered moderate to heavy rains over the regions of CARAGA, Northern Mindanao, Zamboanga Peninsula, Eastern and Central Visayas, and Lanao del Sur. The LPA is likely to develop into a Tropical Depression (TD) within the next 24 hours.



At 8:00 PM, the LPA was estimated at 95 km West of Dipolog City, Zamboanga del Norte (8.6°N, 122.5°E).

17 November 2017

At 3:00 AM, the LPA was estimated based on all available data at the vicinity of Motong, Zamboanga del Norte (7.5°N, 122.2°E). Northeast Monsoon affecting Northern Luzon. Cloudy skies with scattered to widespread rains and thunderstorms were experienced over CARAGA, Northern Mindanao, Zamboanga Peninsula, Visayas, and Palawan due to LPA. Meanwhile, Bicol region, the rest of Mindanao, and the Provinces of Mindoro, Marinduque, and Romblon were experienced cloudy skies with scattered rains and thunderstorm due to LPA.



At 10:00 AM, the LPA Southeast of Puerto Princesa City, Palawan had developed into a TD and was named "TINO". The center of TD "TINO" was estimated based on all available data at 245 km East Southeast of Puerto Princesa City, Palawan (9.0°N, 120.8°E). It had maximum sustained winds of up to 55 kph near the center and gustiness of up to 80 kph. It was forecasted to move in a West Northwest direction at 28 kph. Tropical Cyclone Warning Signal (TCWS) No. 1 was raised over Palawan.

At 5:00 PM, TD "TINO" had made landfall at Puerto Princesa, Palawan. It exit the Philippine Area of Responsibility (PAR) on 18 November 2017 between 6:00 AM - 9:00 AM.

18 November 2017

At 3:00 AM today, the center of TD "TINO" was estimated based on all available data at 305 km West Northwest of Puerto Princesa City, Palawan (10.6°N, 116.1°E) with maximum sustained winds of up to 55 km/h and gustiness of up to 80 km/h. It was forecasted to move West Northwest at 28 km/h. Northern Luzon was affected by Northeast Monsoon.

At 10:00 AM, TD "TINO" was reported to have intensified and became a Tropical Storm. At 9:00 AM, the center of Tropical Storm (TS) "TINO" was estimated based on all available data at 70 km East Northeast of Pagasa Island, Palawan (11.2°N, 114.7°E), which was outside PAR. It had maximum sustained winds of up to 65 kph near the center and gustiness of up to 90 kph. TS "TINO" was forecasted to move West Northwest at 20 kph.

At 3:00 PM, TS "TINO" was located 130 km West Northwest of Pagasa Island (11.4°N, 113.0°E), outside PAR. Its maximum sustained winds is at 80 kph with gustiness of up to 95 kph and was forecasted to move West at 25 kph.

19 November 2017

At 3:00 AM, TD "KIROGI" (1725) (formerly TS "TINO") was located at 275 km West of Pagasa Island, Palawan (11.0°N, 111.6°E), outside PAR. Its maximum sustained winds is 60 kph with gustiness up to 80 kph and was forecasted to move West at 20 kph.

B. Tropical Cyclone Analysis

A LPA inside the PAR southeast of Puerto Princesa City, Palawan had developed into a TD with a center estimated at 245 km East Southeast of Puerto Princesa City, Palawan on 17 November 2017, 10:00 AM.

TD "TINO" had moved West Northwest and traversed Central Palawan and intensified into TS as it exited PAR in the morning of 18 November 2017.

The international name "KIROGI" was contributed by North Korea which means a migrating bird (Wild goose), the flock of which comes in autumn to Korea and flies in early spring to the far North.

Maximum daily rainfall and maximum accumulated rainfall during the passage was recorded at Calapan City, Oriental Mindoro with 90.2 mm and 116.4 mm respectively.

Period of occurrence of **TS "TINO"** inside PAR was from 17 November 2017, 8:00AM, to 18 November 2017, 8:00AM. The estimated highest maximum sustained winds attained was 65 kph near the center and gustiness of up to 90 kph with a central pressure of 998 hPa. There were 5 TCWS for shipping and 6 Severe Weather Bulletin (SWB) issued.

Highest TCWS issued was TCWS#1 in Palawan. Further, TCWS No. 1 in Palawan was the highest warning signal issued for this event.

TS "TINO" is the 3rd Tropical Cyclone (TC) in November, the 20th TC for the year 2017, 7th TC with TS category (after "SALOME") recorded in the PAR and occurrence / stay inside the PAR was normal in terms of track.

II. EFFECTS

A. Affected Population

A total of **116 families / 497 persons** were affected in **9 barangays** in **Regions MIMAROPA and XI**. On 18 November 2017, 9:00 AM. All evacuees from the MIMAROPA Region have returned to their homes.

PROVINCE/MUNICIPALITY	NUMBER OF AFFECTED	
	Families	Persons
GRAND TOTAL	116	497
<u>MIMAROPA</u>		
Palawan	46	230
<i>Libertad, Taytay</i>	5	25
<i>Silanga, Taytay</i>	10	50
<i>Alimanguan, San Vicente</i>	10	50
<i>Purok 3 Brgy. Alimanguan, San Vicente</i>	15	75
<i>Caramay, Roxas</i>	6	30
<u>REGION XI</u>		
Davao City	70	267
<i>El Rio</i>	28	75
<i>Maa</i>	31	129
<i>Matina Crossing</i>	6	38
<i>Tigatto</i>	5	25

Sources: OCDROs MIMAROPA and XI

B. Incidents Monitored (3)

MIMAROPA - 2

1. On or about 7:00 AM of 17 November 2017, a flooding incident was reported in Barangays Poblacion, Del Mundo, Teresita, Don Pedro, and Manual in Mansalay, Oriental Mindoro due to overflowed river caused by heavy rains. Flood waters reported ranges from 0.5 – 1 meter deep.
2. On 17 November 2017, 6:00 PM, 3 Barangays in San Vicente, Palawan were reported flooded. Brgys. Alimanguan, Sto. Niño, and Binga experienced approximately 1 meter deep flood. Affected families stayed at the Brgy. Captain's residence while the others were temporarily sheltered in their relatives living in

the higher grounds. On 18 November 2017, 9:00 AM, flood waters were subsiding.

REGION XI - 1

3. On or about 10:00 PM of 16 November 2017, Davao City experienced moderate to heavy rains due to the LPA in Bukidnon. This caused flood in some barangays prompting evacuation of several families. There were no reported casualties.

C. Suspension of Classes

Two (2) municipalities in Palawan suspended classes due to TS “TINO”:

AREA	LEVEL	DATE
PALAWAN		
Culion	All levels (Public and Private)	17 November 2017, resumed 18 November 2017
Puerto Princesa City	Preschool	17 November 2017, resumed 18 November 2017

D. Status of Ports

SEAPORTS

1. On 17 November 2017, 8:00 PM, a total of **243 passengers, 4 vessels, and 4 motorbancas** were reported stranded in Puerto Princesa, Coron, and Cuyo.

CG STATION	STRANDED		
	Passengers	Vessels	Motorbanca
MIMAROPA			
<i>Puerto Princesa</i>	52	-	2
<i>Coron</i>	-	1	1
<i>Cuyo</i>	191	3	1
<i>El Nido</i>	-	-	-
<i>Brooke's Point</i>	-	-	-
TOTAL	243	4	4

Source: PCG SitRep No. 1

2. As per Coast Guard Action Center, on 18 November 2017 there were no reported strandeers in all stations in MIMAROPA Region.
3. Ports in Brooke's Point and El Nido cancelled operations but there were no reported stranded passengers, vessels, and motor bancas. On 18 November 2017, 9:00 AM, both ports were operational.

E. Damaged Houses

A total of **three (3) houses** (Totally-1, Partially-2) were reported damaged in Palawan:

PROVINCE / MUNICIPALITY	TOTALLY	PARTIALLY
PALAWAN		
<i>Puerto Princesa</i>	1	-
<i>San Vicente</i>	-	2
TOTAL	1	2

Source: OCDRO MIMAROPA

III. DISASTER PREPAREDNESS

A. National Disaster Risk Reduction and Management Council

1. NDRRM Operations Center (NDRRMOC)

- a. The NDRRMOC maintained Blue Alert status to continuously monitor the situation and maintain close coordination with concerned Regional DRRMCs, member-agencies and offices.
- b. Monitored and disseminated weather advisories, 24-hour Public Weather Forecasts, General Flood Advisories (GFAs) to all RDRRMCs/OCDROs through SMS, facsimile, and official social media websites for further dissemination to their respective Local Disaster Risk Reduction and Management Councils (LDRRMCs).

2. Philippine Atmospheric, Geophysical and Astronomical Services Administration (DOST-PAGASA)

- a. Disseminated weather forecasts and General Flood Advisories (GFAs) regarding the Low Pressure Area (LPA).
- b. Provided powerpoint presentation on weather updates for the information of areas likely to be affected and for appropriate action.

B. Regional/Local Disaster Risk Reduction and Management Councils (R/LDRRMCs)

RDRRMC/OCDROs I, MIMAROPA, VI, VII, VIII, XI, and CARAGA disseminated weather advisories/ bulletins to RDRRMC member-agencies, P/C/MDRRMCs, and local media (radio stations) through OCD InfoBoard Text Blast System, and upload the same to social accounts to effectively ensure public safety and achieve zero-casualty.

1. RDRRMC MIMAROPA

Office of Civil Defense (OCD) MIMAROPA

- a. Issued Weather Advisory Nos. 1 and 2 for LPA to R/P/C DRRMCs, Local Radio Station and line member agencies through SMS, Facebook, and Skype accounts to ensure widest dissemination.
- b. Raised the alert status to BLUE for coordination/monitoring and assistance.
- c. Coordinated with response agencies and monitoring of weather situation within area of responsibility (AOR).
- d. Coordinated with RDRRMC member agencies regarding Preparedness Measures for LPA.
- e. Ensured close coordination with response agencies and concerned LGUs regarding situation updates and the possible effects of LPA.
- f. Coordinated with Coast Guard Stations and Substation within the area regarding status of post operations.
- g. Issued a memorandum regarding Blue Alert Status of RDRRMC Member Agencies and concerned LGUs.
- h. Issued a memorandum regarding Pre-emptive Evacuation and No Sail Policy to P/C/MDDRRMO of Palawan.

Department of Interior and Local Government (DILG) MIMAROPA

Informed all Disaster Risk Reduction and Climate Change Adaptation (DRR-CCA) Provincial Focal Persons to coordinate with DILG Regional

Office re preparedness measures of provinces and possible effects of LPA.

Department of Social Welfare and Development (DSWD) MIMAROPA

- a. All members of R/P/C/M Quick Response Teams (QRTs) were on standby for possible deployment.
- b. Advised P/M QRTs to coordinate with concerned LGUs to report any unusual eventualities in respective areas of responsibility.
- c. Prepositioned available stockpile of 23,480 family food packs to all Social Welfare and Development Teams (SWADT) and Regional Warehouses including goods in identified Geographically Isolated and Disadvantaged Areas (GIDA)/critical areas.

WAREHOUSE LOCATION	AVAILABLE FAMILY FOOD PACKS
Regional Office Manila	6,923
Oriental Mindoro	2,946
Occidental Mindoro	3,418
Marinduque	3,130
Romblon	4,462
Palawan	2,601
TOTAL	23,480

- d. With available standby funds amounting to ₱1,369,800.54.

Department of Health (DOH) MIMAROPA

- a. Prepositioned water disinfectant and collapsible Jerry Cans in flood-prone areas of MIMAROPA and Provincial Department of Health Office (PDOHO).
- b. Advised Quad-Cluster Teams (Health, NIE, MHPSS, WASH) to be on standby for deployment and augmentation of services.
- c. Advised Human Resource Management for Health to be available on its catchment areas to augment health services and establish health assistance desk once evacuation starts.
- d. Coordinated with other Regional agencies including, Philippine Coast Guard (PCG), Philippine Ports Authority (PPA), RDRRMC, OCD, LGUs, Philippine National Police (PNP) station, PDOHO, DOH retained hospitals, and HEMS point persons for any untoward incident.
- e. Advised PDOHO to conduct roving to all areas of concern regarding potential risk for mass casualty incident and evacuation.
- f. Coordinated with Philippine Air force 505 Search and Rescue for the utilization of Air Medical Services in the Provinces of MIMAROPA as contingency for Air Medevac.
- g. Advised PAMAS Air Ambulance Services through the Provincial DOH-Palawan for possible utilization of air evacuation.
- h. Advised PDOHO-Palawan to observe Air Medevac (Medical Evacuation Protocols).
- i. Coordinated with Regional Epidemiology and Surveillance Unit (RESU) MIMAROPA and advised to send Event-based Surveillance System (ESR) updates and notifiable diseases.
- j. Coordinated with Health Promotion Unit MIMAROPA to disseminate and establish health information kiosk to areas of gathering.

- k. Advised PDOHO to render duty at the PDRRMO Operations Center to ensure seamless and effective multi-agency coordination for the potential effects brought by the LPA in its respective catchment areas.
- l. Prepositioned drugs, medicines and medical supplies in strategic areas and areas of concern as well as vehicles amounting to ₱3,977,083.20.
- m. Prepositioned water disinfectants and collapsible jerry cans amounting to ₱1,536,880.

Department of Science and Technology (DOST) MIMAROPA

Provided update to LGUs and uploaded same on Facebook page thru DOST Provincial Science and Technology Center (PSTC).

Department of Public Works Highways (DPWH) MIMAROPA

- a. Alerted maintenance crew of the District Disaster Risk Reduction and Management Teams to monitor condition of National Roads and Bridges and other infrastructures facilities.
- b. Prepared all equipment for mobilization if situation warrants.

Coast Guard District (CGD) Southern Tagalog

- a. Advised all CG stations and sub-stations to ensure strict implementation of Guidelines on the movement of vessels during heavy weather pursuant to HPCG Memo Circular 01-09 and in the absence of weather bulletin in the locality pursuant to HPCG Memo Circular 03-01.
- b. Placed Deployable Response Groups (DRGs) on 24/7 standby status.
- c. Placed assets on standby status ready for deployment on flood-prone and coastal areas.
- d. Ensured the operational status of HF and VHF radio communications in support to the province operational concern in case of power black-out.

CGD Palawan

- a. Advised all CG station and sub-station to ensure strict implementation of guidelines on the movement of vessels during heavy weather pursuant to HPCG Memo Circular 01-09 and in the absence of weather bulletin in the locality pursuant to HPCG Memo Circular 03-01.
- b. Ensured the strict implementation of Standing Operation Procedure No. 001-12 on PCG Alert and Response Procedures in conducting Pre-Departure Inspections (PDI) to all vessels/motorbancas within the AOR.
- c. Prepared PCG boarding teams, SAR assets, and DRG Teams and closely monitors maritime traffic and weather condition for prompt, sustained, and effective implementation of existing command policies, rules and regulations, and doctrines.
- d. Placed assets on standby status ready for deployment on flood-prone and coastal areas.

Police Regional Office (PRO) MIMAROPA

- a. Ensured the availability of search and rescue assets and personnel, alerted all Police Provincial Office down to their lower units and continuous monitoring of situation in its respective AORs.
- b. Coordinated with PAGASA, PDRRMC, and other agencies.
- c. Directed lower units to undertake precautionary measures and other disaster preparedness activities such as the following:
 - Strengthen resilience of emergency communications.

- Ensure readiness of the SRR equipment and supplies to support operational requirements (e.g. rubber boat, utility rope, floating device, multi-tool items, 30L of GOL for generator, flashlights with extra battery, communications equipment, first aid kit, and MRE).
 - Forward deployment and pre-positioning of Search and Rescue (SAR) assets.
- d. Coordinated with Local DRRMCs and activated Disaster Incident Management Task Groups (DIMTG) as the situation may require.

Bureau of Fire Protection (BFP) MIMAROPA

- a. Coordinated with LGUs NGOs and other government agencies to support the operational activities.
- b. Established linkages and coordination with Police Forces, Barangay Officials, Tanods, and Citizen Crime Watch to provide security to the evacuation centers.
- c. Alerted all BFP personnel for any disaster related response.
- d. Prepared all trucks and response asset in case it is needed.

PDRRMC Palawan

- a. Activated Operations Center for monitoring, coordination, and assistance.
- b. Disseminated weather bulletins and monitor the of track of **TS “TINO”**.

MDRRMC Roxas, Palawan

- a. Activated Operations Center for monitoring, coordination, and assistance efforts.
- b. Disseminated weather bulletins and monitored the track of **TS “TINO”**.

2. RDRRMC VI

OCD VI

- a. Disseminated NDRRMC Advisories to concerned stakeholders thru email, text blast, and social media.
- b. Continuously monitored the situation.

3. RDRRMC VII

OCD VII

Coordinated with PCG regarding monitoring of ports and vessels.

DPWH VII

Alerted and activated DPWH District DRRM Team for possible damages that may affect the area of jurisdiction.

DSWD VII

- a. Prepositioned 30,000 family food packs (FFPs) and non-food items.
- b. Advised all personnel regarding the weather disturbance.
- c. Coordinated with different Provincial Action Teams (PATs), Provincial/City/Municipal (P/C/MLs), Social Welfare and Development Teams (SWADTs), Social Welfare Officers (SWOs), and various Municipal Action Teams (MATs) for any incidents that may occur.
- d. Quick Response Team (QRT) on standby for possible deployment.

PDRRMC Negros Oriental, Siquijor, and Cebu

Monitored its respective AORs regarding status of weather condition brought by LPA.

4. RDRRMC VIII

OCD VIII

- a. Disseminated advisories to all LDRRMCs, RDRRMC member-agencies, and other stakeholders.
- b. Coordinated with LDRRMC/Os regarding the effects of **TS “TINO”** in its AOR.
- c. Conducted Emergency Response Preparedness Meeting at OCD Conference Room, 2nd Floor Uytingkoc Building, Avenida Veteranos, Tacloban City regarding the effects of LPA in the region and gathered response preparedness measures being conducted in the preparation for **TS “TINO”**.

DSWD VIII

- a. Alerted Social Welfare and Development Team (SWADT) of the different provinces to closely monitor **TS “TINO”**.
- b. Prepositioned a total of 41,246 Family Food Packs (FFP) in various LGUs.
- c. Alerted all the staff in the warehouses to ensure readiness in dispatching the food and non-food items.
- d. QRT on standby for possible deployment..

DOH VIII

- a. Activated the Operations Center.
- b. Coordinated with the Regional Hospital and DOH Retained Hospital for needs and reports. Closely coordinated and monitored all Provincial DOH Offices, Provincial Health Offices, and City Health Offices for any untoward health emergencies and incidents. In close coordination with the RDRRMC and Health Emergency Management Bureau (HEMB).
- c. Esqtablished the Information and Logistics Management of the Health Emergency Management System.

PCG Eastern Visayas

Placed QRTs and floating assets on standby for possible deployment.

Philippine Navy

Placed all personnel for possible deployment, 1 M35 truck and 1 multicab on standby for emergency transportation and evacuation.

Philippine Air Force

Placed 1 QRT on standby for possible deployment.

PDRRMO Biliran

Advised all MDRRMOs to monitor **TS “TINO”** for appropriate action.

PDRRMO Eastern Samar

- a. Activated the Operations Center.
- b. Advised all the MDRRMOs to be on alert status.
- c. Placed Emergency Response Team (ERT) in on-call status.

PDRRMO Samar

- a. Coordinated with rescue volunteers and other responsible agencies.
- b. Established evacuation centers and relief goods in respective municipalities.

CDRRMO Tacloban City

Prepared all assets needed for evacuation and transportation.

5. RDRRMC XI**OCD XI**

Advised all RDRRMC member agencies and the LDRRMCs to take precautionary measures and monitor its respective AORs and situation reports for their preparedness measures.

CDRRMO Davao City

- a. Conducted pre-emptive evacuation of families with the help of Davao Central 911 and BDRRMCs.
- b. Provided food assistance to the affected families.

6. RDRRMC CARAGA**OCD CARAGA**

- a. Advised all LDRRMC to take precautionary measures for possible occurrence of flooding and landslides in its respective AOR and placed local responders on standby status.
 - b. Placed QRT members and 6 vehicles on standby for possible deployment.
 - c. Coordinated with private trucking companies on the availability of transport vehicles.
-