



## TROPICAL CYCLONE BULLETIN NO. 16

### Super Typhoon KARDING (NORU)

Issued at 11:00 AM, 25 September 2022

Valid for broadcast until the next bulletin at 2:00 PM today

#### SUPER TYPHOON "KARDING" INTENSIFIES FURTHER AS IT MOVES WESTWARD TOWARDS THE NORTHERN PORTION OF QUEZON – SOUTHERN PORTION OF AURORA

##### Location of Center (10:00 AM)

The center of the eye of Super Typhoon KARDING was estimated based on all available data including those from Daet and Baler Doppler Weather Radars at **175 km East of Infanta, Quezon (15.0°N, 123.3°E)**

##### Intensity

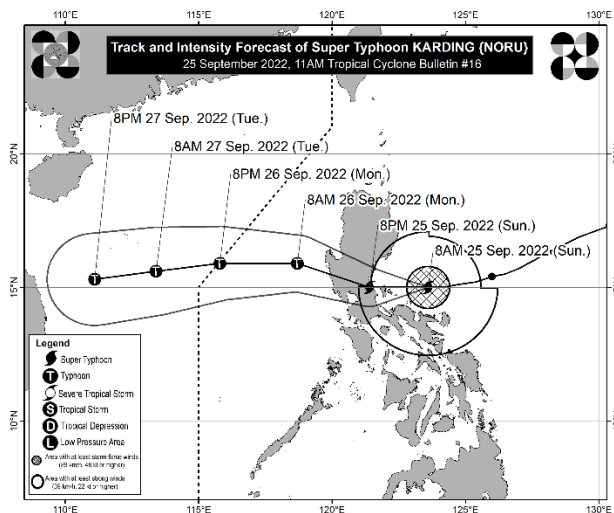
Maximum sustained winds of **195 km/h** near the center, gustiness of up to **240 km/h**, and central pressure of **920 hPa**

##### Present Movement

**Westward at 20 km/h**

##### Extent of Tropical Cyclone Winds

**Strong to typhoon-force winds** extend outwards up to **290 km** from the center



#### TRACK AND INTENSITY FORECAST

Date and Time	Center Position			Intensity		Movement dir. and speed (km/h)
	Lat. (°N)	Lon. (°E)	Location	MSW (km/h)	Cat.	
<b>12-Hour Forecast</b> 8:00 PM 25 September 2022	15.0	121.4	In the vicinity of General Nakar	185	STY	W 20
<b>24-Hour Forecast</b> 8:00 AM 26 September 2022	15.9	118.7	180 km West of Dagupan City, Pangasinan	155	TY	WNW 25
<b>36-Hour Forecast</b> 8:00 PM 26 September 2022	15.9	115.8	490 km West of Dagupan City, Pangasinan	150	TY	W 25
<b>48-Hour Forecast</b> 8:00 AM 27 September 2022	15.6	113.4	705 km West of Iba, Zambales (Outside the PAR)	155	TY	W 20
<b>60-Hour Forecast</b> 8:00 PM 27 September 2022	15.3	111.1	950 km West of Central Luzon (Outside the PAR)	165	TY	W 20



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TROPICAL CYCLONE WIND SIGNALS (TCWS) IN EFFECT			
TCWS No.	Luzon	Visayas	Mindanao
<b>5</b> Wind threat: <b>Typhoon-</b> <b>force winds</b>	<b>Polillo Islands and the extreme northern portion of Quezon</b> (the northern and central portions of General Nakar, and the northeastern portion of Infanta)	-	-
	Warning lead time: <b>12 hours</b> Potential impacts of winds: <b>Extreme threat to life and property</b>		
<b>4</b> Wind threat: <b>Typhoon-</b> <b>force winds</b>	<b>Calaguas Islands, the southern portion of Aurora</b> (San Luis, Dingalan, Baler, Maria Aurora), <b>the northern portion of Quezon</b> (the rest of General Nakar, the rest of Infanta, Real), <b>the southeastern portion of Nueva Ecija</b> (Gabaldon, General Tinio, City of Gapan, Peñaranda), <b>the eastern and central portions of Bulacan</b> (Doña Remedios Trinidad, Norzagaray, San Miguel, San Ildefonso, San Rafael, Angat, City of San Jose del Monte), <b>the northeastern portion of Rizal</b> (Rodriguez, City of Antipolo, Tanay, San Mateo, Baras), and <b>the extreme northern portion of Laguna</b> (Famy, Siniloan, Santa Maria, Pangil)	-	-
	Warning lead time: <b>12 hours</b> Potential impacts of winds: <b>Significant to severe threat to life and property</b>		
<b>3</b> Wind threat: <b>Storm-force</b> <b>winds</b>	<b>The central portion of Aurora</b> (Dipaculao), <b>the southeastern portion of Nueva Vizcaya</b> (Alfonso Castaneda, Dupax del Sur, Dupax del Norte), <b>the rest of Nueva Ecija, Tarlac, the rest of Bulacan, Pampanga, Zambales, Bataan, Pangasinan, Metro Manila, the rest of Rizal, the northern and central portions of Laguna</b> (Mabitac, Pakil, Paete, Kalayaan, Lumban, Cavinti, Pagsanjan, Luisiana, Majayjay, Magdalena, Santa Cruz, Pila, Liliw, Nagcarlan, Victoria, Rizal, City of San Pedro, City of Biñan, City of Santa Rosa, Cabuyao City, City of Calamba, Los Baños, Bay, Calauan), <b>the northeastern portion of Cavite</b> (Bacoor City, Imus City, Kawit, City of Dasmariñas, Carmona, Gen. Mariano Alvarez, City of General Trias, Rosario, Silang), <b>the rest of the northern portion of Quezon</b> (Infanta, Real, General Nakar, Mauban), and <b>the northern portion of Camarines Norte</b> (Vinzons, Paracale, Jose Panganiban, Capalonga)	-	-
	Warning lead time: <b>18 hours</b> Potential impacts of winds: <b>Moderate to significant threat to life and property</b>		



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TCWS No.	Luzon	Visayas	Mindanao
<b>2</b> Wind threat: <b>Gale-force winds</b>	<b>The southern portion of Isabela</b> (Dinapigue, San Guillermo, Echague, San Agustin, Jones), <b>Quirino</b> , <b>the rest of Nueva Vizcaya</b> , <b>Benguet</b> , <b>La Union</b> , <b>the rest of Aurora</b> , <b>the rest of Cavite</b> , <b>Batangas</b> , <b>the rest of Laguna</b> , <b>the central portions of Quezon</b> (Calauag, Perez, Alabat, Quezon, Tagkawayan, Guinayangan, Sampaloc, Lucban, City of Tayabas, Lucena City, Pagbilao, Padre Burgos, Atimonan, Agdangan, Unisan, Plaridel, Gumaca, Lopez, Pitogo, Dolores, Candelaria, Sariaya, Tiaong, San Antonio, Macalelon, General Luna, Catanauan, Buenavista), <b>the rest of Camarines Norte</b> , <b>the northern portion of Camarines Sur</b> (Del Gallego, Ragay, Lupi, Sipocot, Libmanan, Pamplona, Pasacao, San Fernando, Pili, Minalabac, Ocampo, Tigaon, Cabusao, Magarao, Gainza, Canaman, Camaligan, Milaor, Naga City, Bombon, Calabanga, Tinambac, Siruma, Goa, Lagonoy, San Jose, Garchitorena, Presentacion, Caramoan, Sagñay), and <b>Catanduanes</b>	-	-
	Warning lead time: <b>24 hours</b> Potential impacts of winds: <b>Minor to moderate threat to life and property</b>		
<b>1</b> Wind threat: <b>Strong winds</b>	<b>The southern portion of Cagayan</b> (Tuao, Solana, Enrile, Tuguegarao City, Iguig, Peñablanca), <b>the rest of Isabela</b> , <b>the southern portion of Apayao</b> (Conner), <b>Kalinga</b> , <b>Abra</b> , <b>Mountain Province</b> , <b>Ifugao</b> , <b>the southern portion of Ilocos Norte</b> (Nueva Era, Badoc, Pinili, Banna, City of Batac, Currimao, Paoay, Marcos), <b>Ilocos Sur</b> , <b>the rest of Quezon</b> , <b>the northern portion of Occidental Mindoro</b> (Abra de Ilog, Paluan, Mamburao, Santa Cruz) <b>including Lubang Islands</b> , <b>the northern portion of Oriental Mindoro</b> (Puerto Galera, San Teodoro, Baco, City of Calapan, Naujan, Victoria, Pola, Socorro, Pinamalayan), <b>Marinduque</b> , <b>the rest of Camarines Sur</b> , <b>Albay</b> , <b>Sorsogon</b> , <b>Burias Island</b> and <b>Ticao Island</b>	-	-
	Warning lead time: <b>36 hours</b> Potential impacts of winds: <b>Minimal to minor threat to life and property</b>		



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#### HAZARDS AFFECTING LAND AREAS

##### Heavy Rainfall

- *This morning through early afternoon:* Moderate to heavy rains over Isabela, Aurora, Quezon including Polillo Islands, Catanduanes, Camarines Norte, Camarines Sur, and Isabela. Light to moderate with at times heavy rains over mainland Cagayan, Quirino, Nueva Vizcaya, Marinduque, Romblon, and the rest of Bicol Region.
- *This early afternoon through tomorrow early morning:* Heavy to intense with at times torrential rains over Metro Manila, Zambales, Bataan, Tarlac, Pampanga, Nueva Ecija, Bulacan, Aurora, Rizal, and the northern portion of Quezon including Polillo Islands. Moderate to heavy with at times intense rains over Isabela, Nueva Vizcaya, Quirino, Benguet, Ifugao, Mountain Province, Pangasinan, Cavite, Laguna, the central portion of Quezon, and Camarines Norte. Light to moderate with at times heavy rains over Mindoro Provinces, Marinduque, and the rest of CALABARZON and Bicol Region.
- *Tomorrow early morning through early afternoon:* Heavy to intense with at times torrential rains over Zambales, Bataan, Pampanga, and Bulacan. Moderate to heavy with at times intense rains Metro Manila, Pangasinan, Cavite, Occidental Mindoro, and the rest of Central Luzon. Light to moderate with at times heavy rains over Mountain Province, Ifugao, Benguet, Quirino, Nueva Vizcaya, Oriental Mindoro, and the rest of CALABARZON.
- Under these conditions, **scattered to widespread flooding and rain-induced landslides are expected**, especially in areas that are highly or very highly susceptible to these hazard as identified in hazard maps and in localities with significant antecedent rainfall.
- Due to the Southwest Monsoon enhanced by KARDING, occasional to monsoon rains are also possible over Visayas and the rest of Southern Luzon, especially on their western sections. For more information, refer to the 24-Hour Public Weather Forecast issued at 4:00 AM today. Furthermore, the issuance of Weather Advisory for Southwest Monsoon is not ruled out.

##### Severe Winds

During the passage of KARDING, areas under Wind Signal No. 4 and No.5 will experience winds peaking at **typhoon-force** strength, while winds may reach **storm-force** in strength within any of the areas where Wind Signal No. 3 is hoisted. **Gale-force** conditions are likely any of the areas where Wind Signal no.2 is hoisted, while **strong winds (strong breeze to near gale strength)** will be experienced within any of the areas where Wind Signal No. 1 is currently in effect.

##### Coastal Inundation

There is a **high to very high risk of storm surge more than 3.0 m in height** in the low-lying and exposed coastal areas of northern Quezon including Polillo Islands and Aurora. In addition, a **moderate to high risk of storm surge** is also possible over Camarines Norte, Pangasinan, Zambales, Bulacan, the northern portion of Metro Manila, the southern portion of La Union, and the rest of Quezon. The combined effects of storm surge and high waves breaking along the coast may cause **life-threatening and damaging inundation or flooding**. For more information, refer to **Storm Surge Warning #2** issued at 11:00 AM today.



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#### HAZARDS AFFECTING COASTAL WATERS

- Under the influence of KARDING, a marine gale warning remains in effect over the eastern and western seaboard of Luzon. For more information, refer to **Gale Warning #3** issued at 5:00 AM.
- In the next 24 hours, KARDING and the enhanced Southwest Monsoon will also bring **moderate to rough seas** over the northern and western seaboard of Luzon that are not under any gale warning (1.5 to 3.5 m) and the western seaboard of Visayas (1.2 to 2.5 m). These conditions may be risky for those using small seacrafts. Mariners are advised to take precautionary measures when venturing out to sea and, if possible, avoid navigating in these conditions.

#### TRACK AND INTENSITY OUTLOOK

- Super Typhoon KARDING is forecast to track generally westward in the next 6 to 12 hours, then west northwestward for the remainder of the day. On the forecast track, KARDING will likely make landfall in the vicinity of the northern portion of Quezon or the southern portion of Aurora tonight. The possibility of an earlier (afternoon) landfall or close approach in the vicinity of Polillo Islands is not ruled out.
- For the remainder of this evening post-landfall through tomorrow early morning, KARDING will traverse the landmass of Central Luzon and emerge over the West Philippine Sea via the coastal waters of Zambales or Pangasinan. The typhoon will then continue tracking generally westward over the West Philippine Sea for the remainder of the forecast period.
- KARDING is forecast to continue intensifying and may make landfall at or near a **peak intensity of 185-205 km/h**. Frictional effects during landfall and traverse of the Luzon landmass will weaken KARDING throughout the evening through tomorrow early morning, although it is highly likely that this tropical cyclone will remain a typhoon while crossing the landmass.

Considering these developments, the public and disaster risk reduction and management offices concerned are advised to take all necessary measures to protect life and property. Persons living in areas identified to be highly or very highly susceptible to these hazards are advised to follow evacuation and other instructions from local officials. **For heavy rainfall warnings, thunderstorm/rainfall advisories, and other severe weather information specific to your area, please monitor products issued by your local PAGASA Regional Services Division.**

The next tropical cyclone bulletin will be issued at 2:00 PM today.

**DOST-PAGASA**

Prepared by:   
**SMRR**

Checked by:   
**SFD**