

TROPICAL CYCLONE PRELIMINARY REPORT

Tropical Depression ROMINA
PABUK (2426)

21 to 25 December 2024

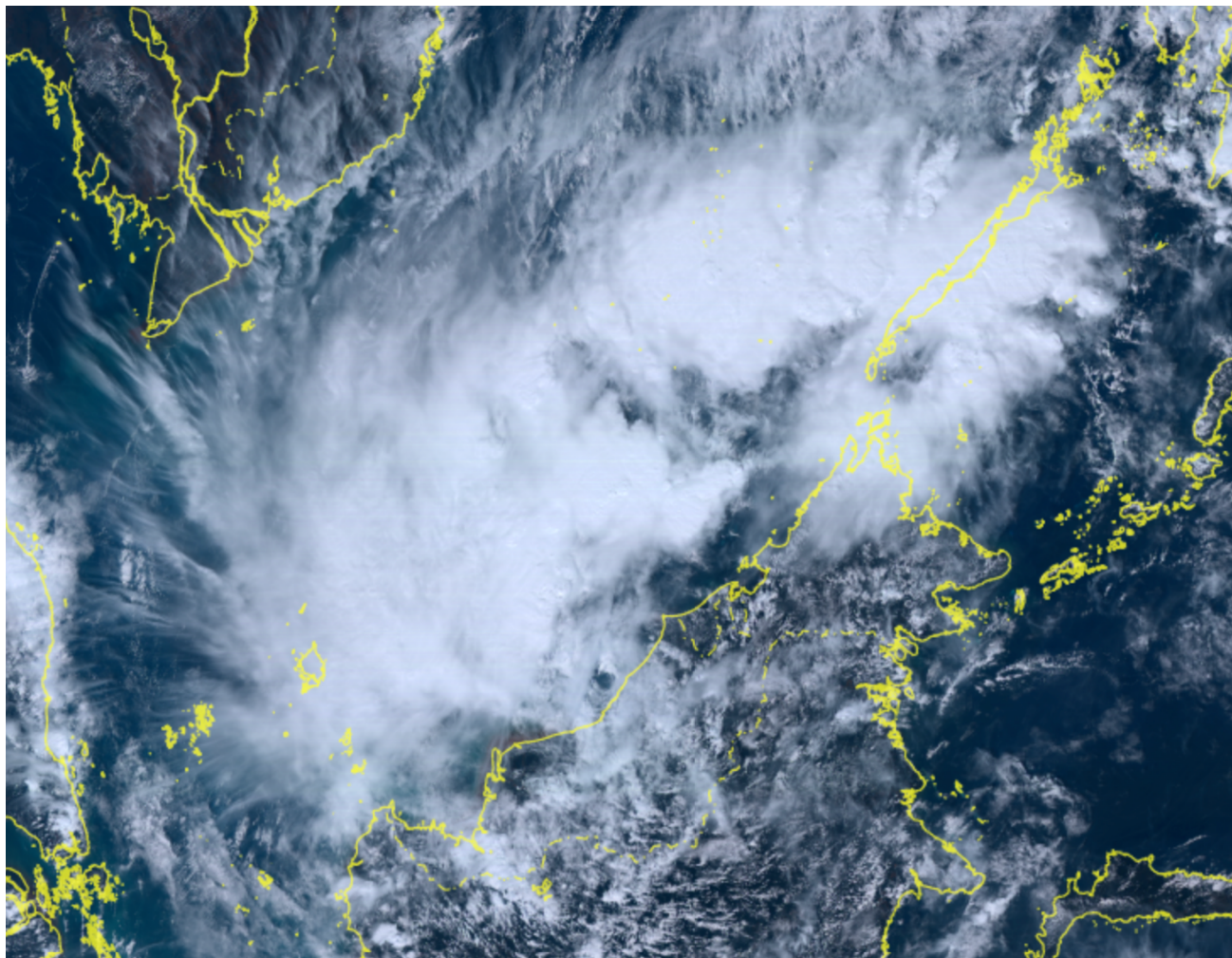


Fig. 1. Himawari-9 AHI true color RGB image of Tropical Depression ROMINA at 05 UTC on 21 December 2024 while off the coast of Sarawak, Malaysia, with its trough extending further north into Palawan and interacting with a prevailing cold surge. Image courtesy of National Institute of Information and Communications Technology (NICT), Japan.

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Summary of Meteorological History

Based on PAGASA preliminary best track¹ position and intensities

| | |
|--|---|
| First tracked as a low pressure area | 0000 UTC, 20 December 2024 Over the South China Sea off the coast of Sarawak, Malaysia |
| Developed into a tropical cyclone | 0000 UTC, 21 December 2024 Over the South China Sea off the coast of Sarawak, Malaysia 940 km SW of Southwestern Luzon (3.3°N, 112.7°E) |
| Weakened into a remnant low or transitioned into a post tropical low | 1800 UTC, 25 December 2024 Over the South China Sea SE of Bình Thuận Province, Vietnam 610 km WSW of Pag-asa Island, Kalayaan, Palawan (8.8°N, 109.2°E) |
| Peak intensity (lifetime ²) | 30 kt (55 km/h), 1000 hPa, Tropical Depression 1800 UTC, 22 December 2024 |
| Period of occurrence (lifetime) | 3 days and 18 hours |
| Entered the PAR region (as tropical cyclone) | Not applicable (did not occur within the PAR region) |
| Exited the PAR region (as tropical cyclone) | Not applicable (did not occur within the PAR region) |
| Peak intensity (within the PAR) | Not applicable (did not occur within the PAR region) |
| Period of occurrence (within the PAR) | Not applicable (did not occur within the PAR region) |
| Observed landfalls in the Philippines | None |

¹ With preliminary best track as reference, the information provided in this report may be different from those reported during the warning period of the subject tropical cyclone.

² Lifetime is the period from the development into a tropical depression to its weakening into a remnant low or its transitioning into a post-tropical low.

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Extremes of Surface Weather Observations during Tropical Cyclone Days³

Based on reports from PAGASA manned surface weather stations

Table 1. Highest storm duration (21 to 22 December 2024) over land.

| Location of weather station | Rainfall (mm) |
|---------------------------------------|------------------|
| Catarman, Northern Samar ⁴ | 371.1 |
| Puerto Princesa City, Palawan | 278.5 |
| Borongan City, Eastern Samar | 148.0 |
| Tacloban City, Leyte | 122.4 |
| Juban, Sorsogon | 120.6 |

Table 2. Highest 24-hour rainfall over land.

| Location of weather station | Rainfall (mm) | Date |
|---------------------------------------|------------------|------------------|
| Catarman, Northern Samar ⁵ | 327.2 | 22 December 2024 |
| Puerto Princesa City, Palawan | 220.6 | 21 December 2024 |
| Borongan City, Eastern Samar | 136.8 | 22 December 2024 |
| Catbalogan City, Samar | 103.6 | 22 December 2024 |
| Juban, Sorsogon | 87.0 | 22 December 2024 |

Note:

- For peak gust data retrieved using hourly synoptic observation reports, “*rep.*” indicates the time when the observation was reported in the message, but not necessarily its time of occurrence.
- The DOST-PAGASA manned weather station at Pag-asa Island in Kalayaan, Palawan was not operational at the time of the passage of ROMINA. As such no extremes of rainfall, mean sea level pressure, and peak gust were reported.

³ Also called “storm duration”, it refers to the meteorological days of occurrence of the tropical cyclone within the PAR region. However, for the case of ROMINA, which did not enter the PAR, the period of 21-22 December was considered due to its proximity to the Kalayaan Islands during this period.

⁴ Another manned weather station within Catarman, Northern Samar (i.e., an agrometeorological station) reported 335.7 mm of two-day rainfall, making it rank #2 in terms of highest storm-duration rainfall. However, due to discrepancy in the date of peak 24-hour rainfall when compared against the nearby synoptic station, the observation from the agrometeorological station was not included.

⁵ Another manned weather station within Catarman, Northern Samar (i.e., an agrometeorological station) reported 324.0 mm of 24-hour rainfall, which makes it rank #2 in the highest 24-hour rainfall. However, due to the discrepancy in its date of occurrence when compared to the report from Catarman synoptic station, the data from this agrometeorological station was not included.

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Summary of Tropical Cyclone Product Issuances

Issued by the Weather Division, DOST-PAGASA

Tropical Cyclone Products:

- Tropical Cyclone Advisories: None issued
- Tropical Cyclone Bulletins:
 - First issuance: 11:00 AM, 22 December 2024
 - Last issuance: 5:00 AM, 23 December 2024
 - Total issued: 6
- Tropical Cyclone Warnings for Shipping:
 - First issuance: 11:00 AM, 22 December 2024
 - Last issuance: 5:00 AM, 23 December 2024
 - Total issued: 4
- WC SIGMET: None issued

Tropical Cyclone Wind Signals:

- Highest level of wind signal hoisted: Wind Signal No. 1
- Number of provinces where wind signals had been hoisted: 1
- Timeline of hoisting/lifting of wind signals:
 - 11:00 AM, 22 December 2024: Initial hoisting of Wind Signal No. 1
 - 5:00 AM, 23 December 2024: Lifting of all hoisted Wind Signals

Other Pertinent Information

- DOST-PAGASA decided to assign a domestic name to this tropical cyclone despite not entering the Philippine Area of Responsibility (PAR) due to the severe weather threat that it posed to Balabac and Kalayaan, Palawan. It must be noted that the Kalayaan Islands are situated outside the PAR region.
- The synoptic situation during the occurrence of ROMINA was typical of a cold surge event during the Northeast Monsoon, with the tropical depression originating from a Borneo vortex circulation over the southern portion of the South China Sea. The existence of the tropical depression circulation sustained the cold surge and its associated steep pressure gradient and strong low-level winds, which, in turn, persisted the shear line which brought heavy rainfall over Eastern Visayas and portions of Bicol Region.
- No notable impacts were reported by the National Disaster Risk Reduction and Management Council due to the occurrence of ROMINA, although flooding and rain-induced landslide incidents were reported by local disaster risk reduction and management offices in the areas directly affected by the shear line and by the extended trough of ROMINA.
- The Regional Specialized Meteorological Center (RSMC) Tokyo – Typhoon Center assigned an international name to ROMINA since it reached tropical storm category in their analysis. The international name “PABUK” (meaning: big fresh water fish in Mekong River) was contributed by the Lao People’s Democratic River. However, DOST-PAGASA and the US Joint Typhoon Warning Center maintained ROMINA as a tropical depression only.

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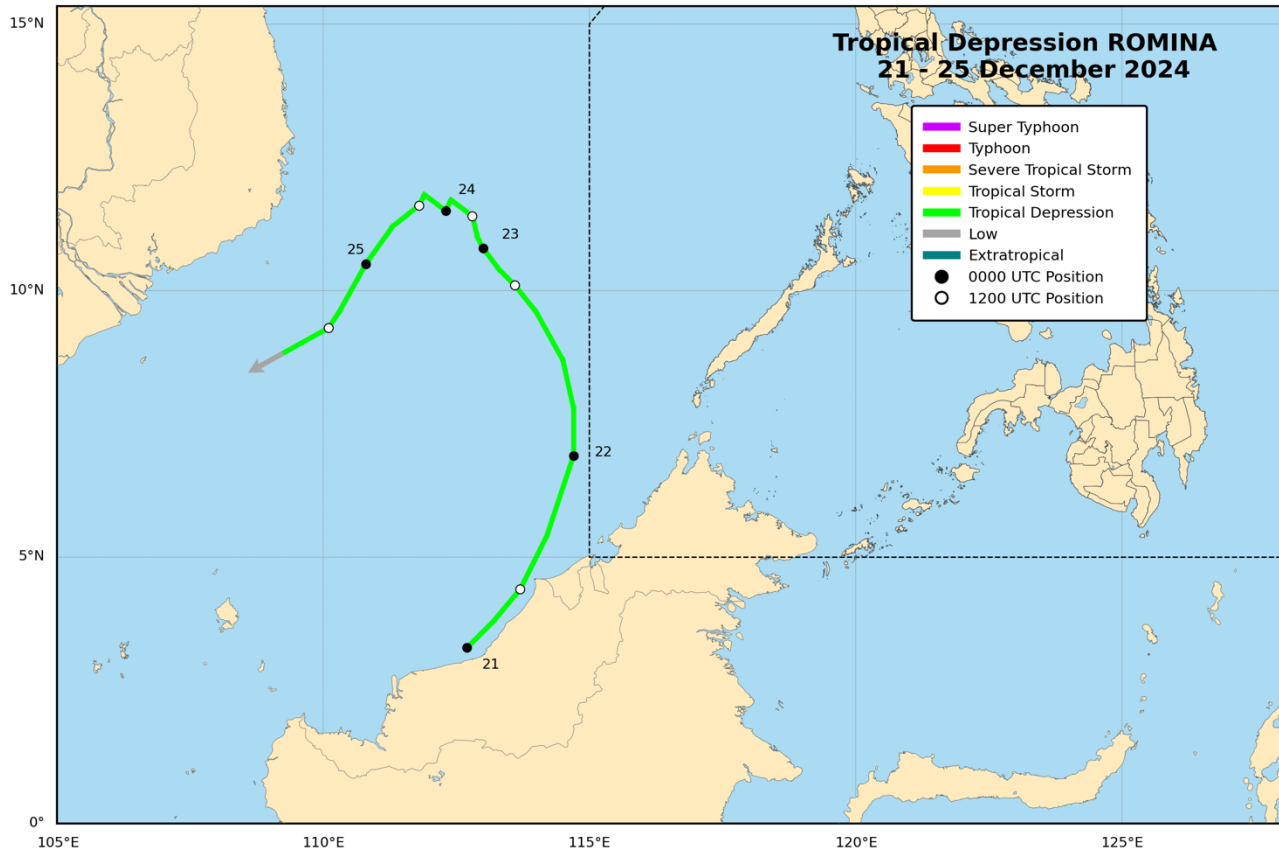


Fig. 2. Preliminary best track positions and intensities (as categories) of Tropical Depression ROMINA. Line color indicates the category of tropical cyclone. Shaded circles with date labels indicated 00 UTC positions while open circles indicate 12 UTC positions.

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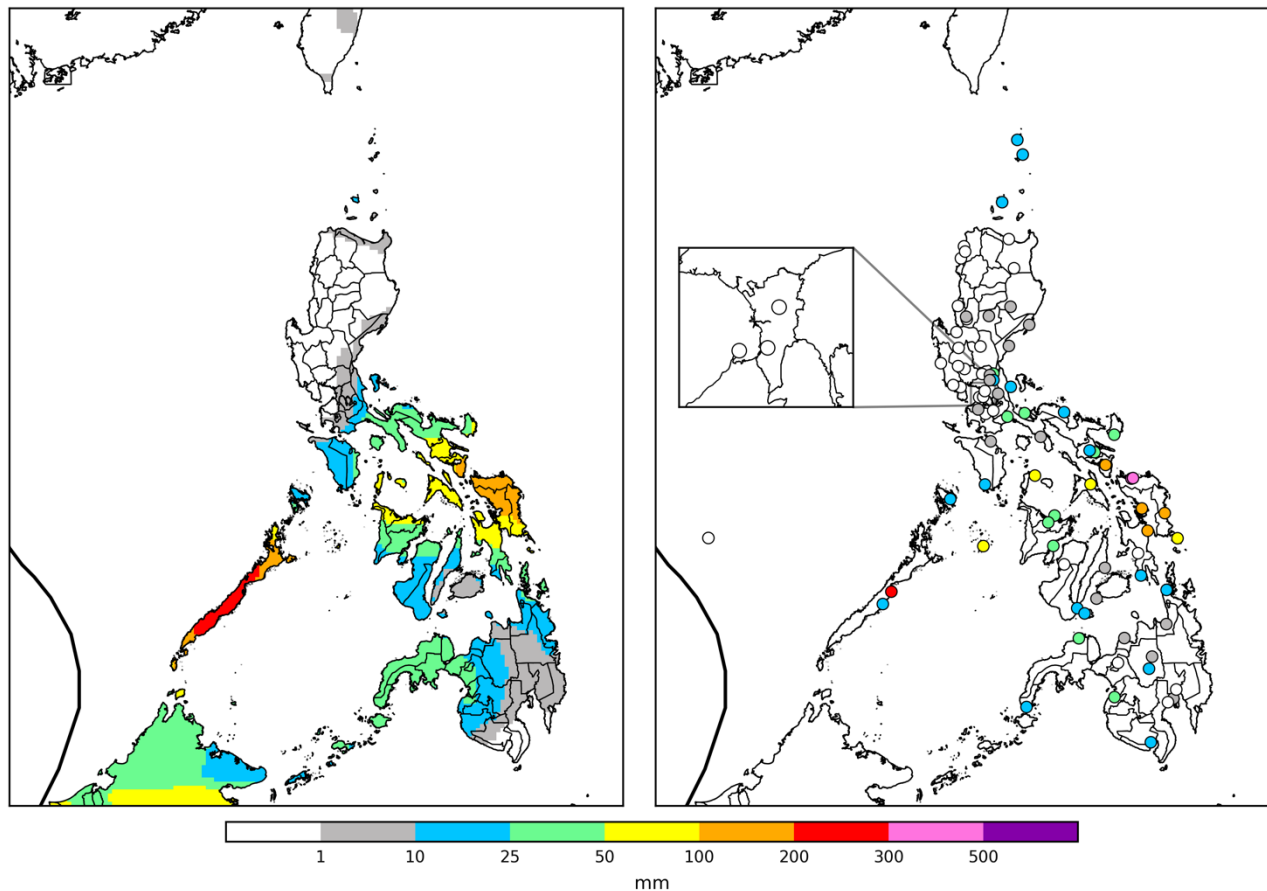


Fig. 3. Nationwide satellite-derived estimates and corresponding gauge observations from PAGASA manned surface weather stations of accumulated rainfall for the period of 21 to 22 December 2024. The preliminary best track is shown as thick black line.

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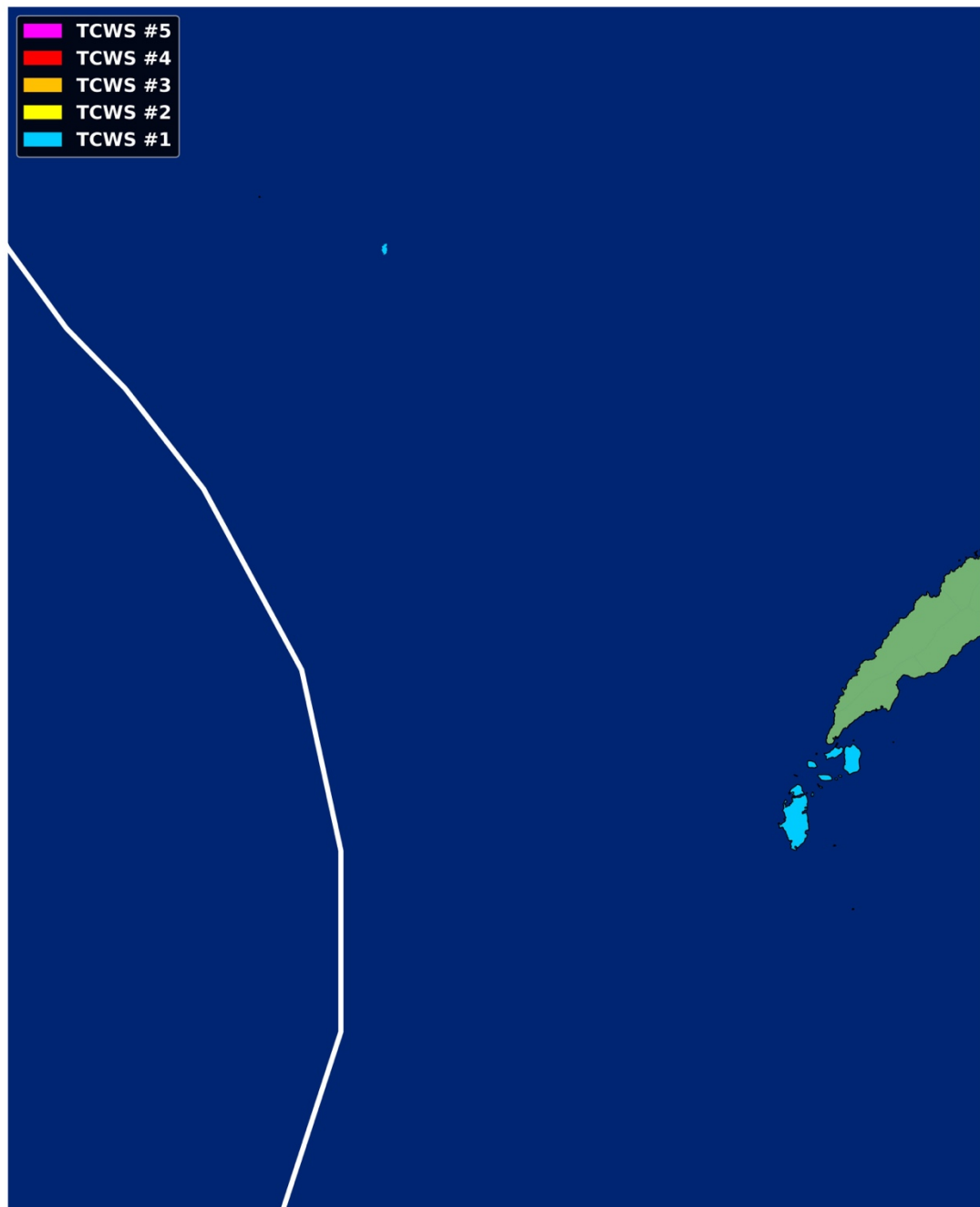


Fig. 4. Highest level and maximum extent of hoisted wind signals during the occurrence of Tropical Depression ROMINA. The preliminary best track is shown as thick white line.

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While we ensure the factual correctness and accuracy of the entries in this preliminary tropical cyclone report, readers are advised to report any text or figure in this report which may require correction to the Marine Meteorological Services Section by email at **typhoon.ops@pagasa.dost.gov.ph** with the subject *“Prelim Report [Name of TC], [Year]: For Correction”*

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