

Agenda 3iii: Looking Back: Review & Evaluation of May-October 2022 Climate Outlook Overview of Western N. Pacific over the last 6 Months

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NOAA



Australian Government
Department of Foreign Affairs and Trade
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Outline of Presentation

- WFO Guam and NWS Pacific Region
- Current State of the Climate and Impacts to TC Genesis
- 2022 Western North Pacific Outlook
 - -26 May 2022 Outlook
 - -8 September 2022 Updated Outlook
- 2022 Western North Pacific TCs So Far



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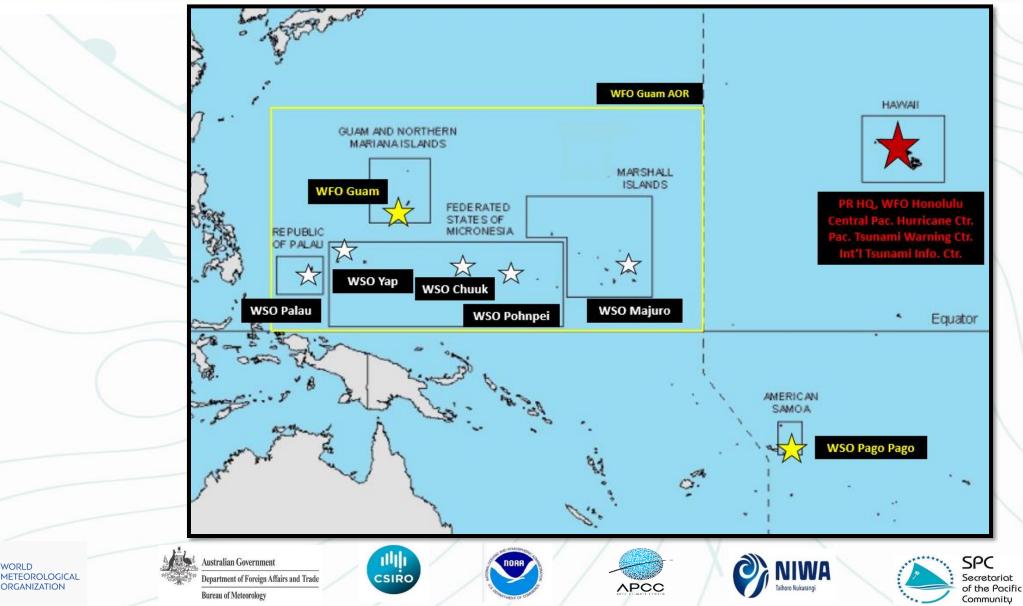






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WFO Guam and the NWS Pacific Region







Current Climate: El Niño/La Niña

- On average, the total number of annual tropical cyclones in the western North Pacific does not vary significantly.
- Location of tropical cyclone genesis can fluctuate significantly from year to year based on the current state of the climate.

Currently:

La Nina Advisory



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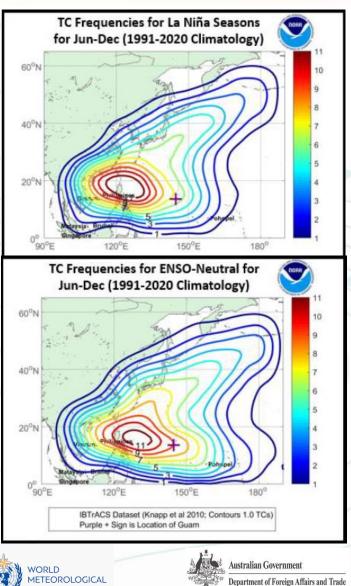






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- Collaborative TC Outlook for USAPI; WFO Guam, NWS Pacific Region, NOAA CPC, ARL, OAR; <u>Not a basin-wide prediction</u>
- Outlook to be Completed and Released by June 1

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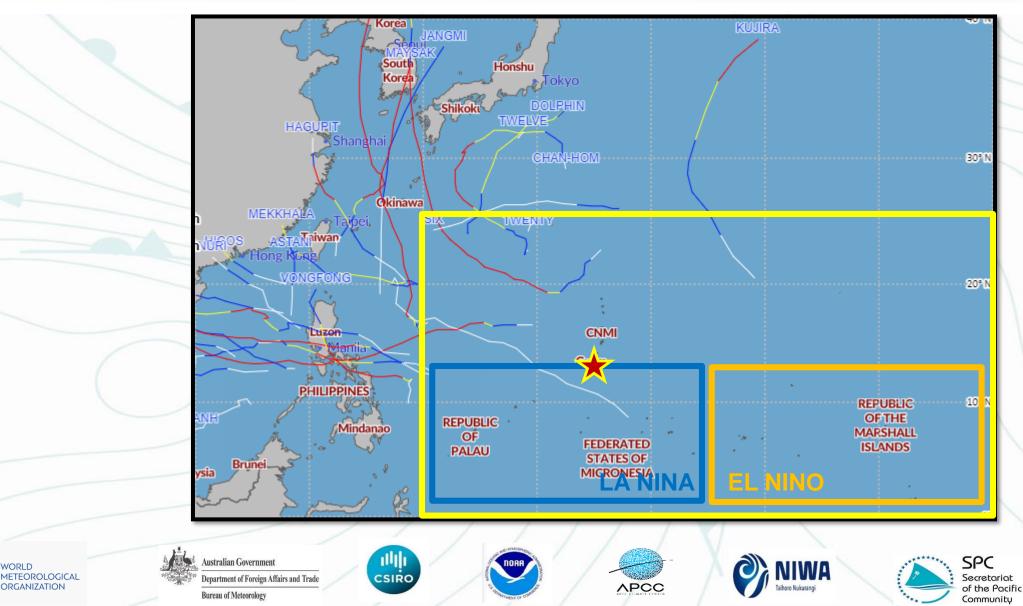
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2020 Western Pacific Tropical Cyclones: La Niña

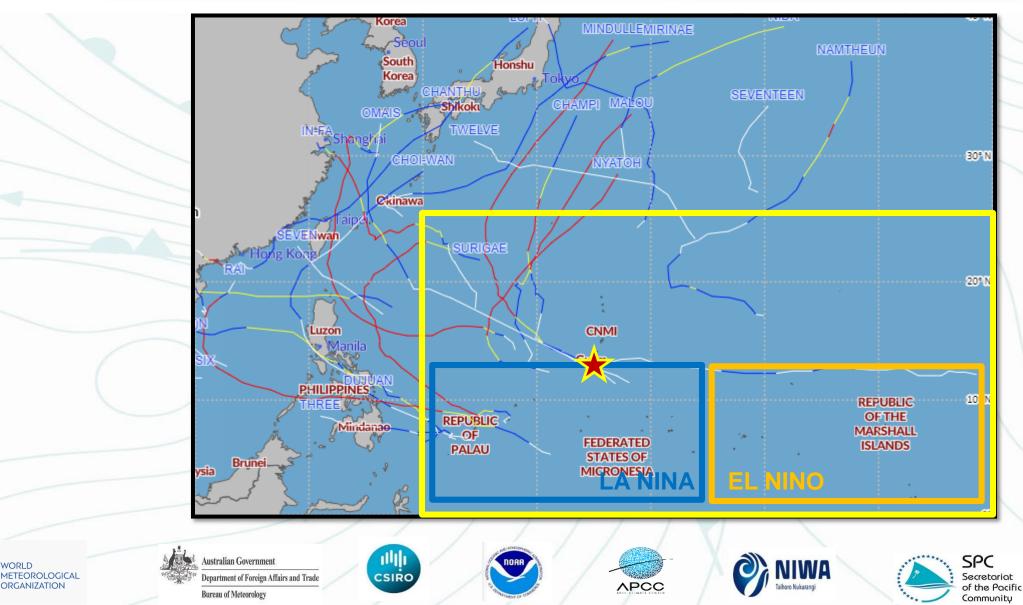






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2021 Western North Pacific Tropical Cyclones: La Niña



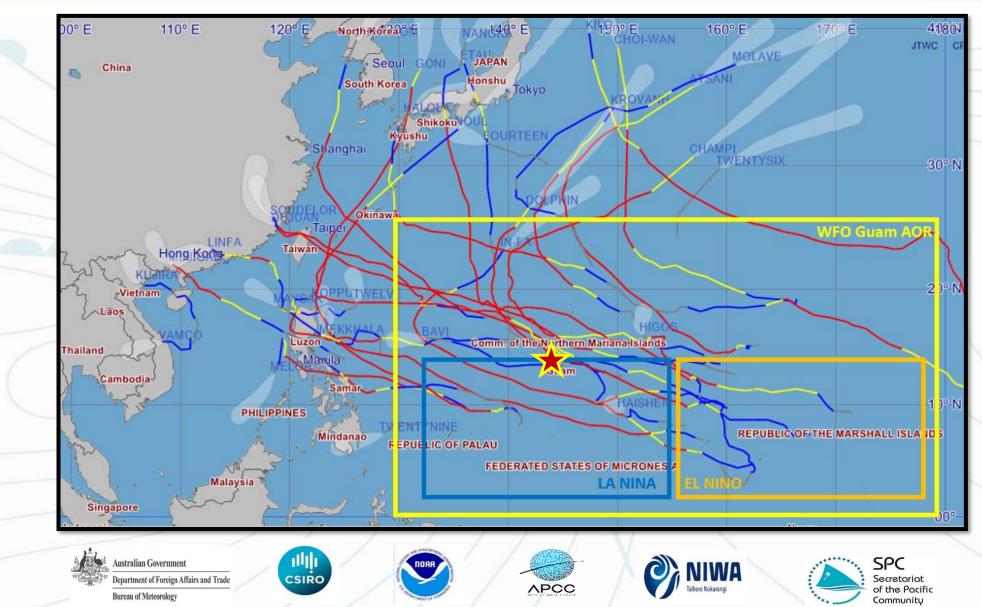




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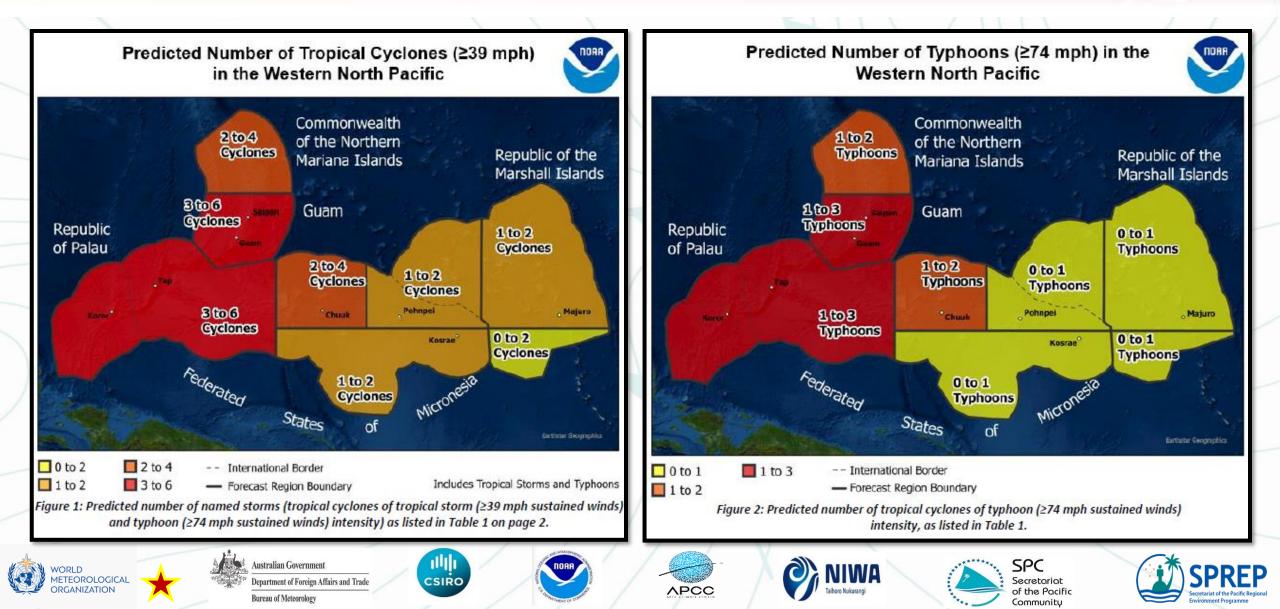
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2015 Western Pacific Tropical Cyclones: El Niño





May 2022 Western Pacific TC Outlook for USAPI





May 2022 Western Pacific TC Outlook for USAPI

REGION	NAMED STORMS (≥39 mph max sust'd)	TYPHOONS (≥74 mph max sust'd)
Marshall Islands (north of 6N)	1 to 2	0 to 1
Marshall Islands (south of 6N)	0 to 2	0 to 1
Pohnpei State (north of 6N)	1 to 2	0 to 1
Chuuk State (north of 6N)	2 to 4	1 to 2 (1 major)
Kosrae, Pohnpei, Chuuk States (south of 6N)	1 to 2	0 to 1
Yap State and Palau	3 to 6	1 to 3 (1 major)
Guam, Rota, Tinian and Saipan	3 to 6	1 to 3 (1 to 2 major)
Northern CNMI	2 to 4	1 to 2 (1 to 2 major)

A near-normal TC Outlook was predicted for 2022 for Guam, the CNMI, ROP, FSM and RMI. This was based on the possible transition from La Niña to ENSO-Neutral conditions in late summer or early fall of 2022.



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September 2022 Western Pacific TC Outlook: UPDATE

REGION	NAMED STORMS (≥39 mph max sust'd)	TYPHOONS (≥74 mph max sust'd)
Marshall Islands (north of 6N)	0 or 1	0 or 1
Marshall Islands (south of 6N)	0 or 1	0 or 1
Pohnpei State (north of 6N)	1 or 2	0 or 1
Chuuk State (north of 6N)	2 or 3	1 or 2 <mark>(</mark> 0 or 1 major)
Kosrae, Pohnpei, Chuuk States (south of 6N)	1 or 2	0 or 1
Yap State and Palau	3 or 4	1 or 2 <mark>(</mark> 0 or 1 major)
Guam, Rota, Tinian and Saipan	2 or 3	1 or 2 <mark>(</mark> 0 or 1 major)
Northern CNMI	1 or 2	0 or 1 <mark>(</mark> 0 or 1 major)

The seasonal outlook was updated on 8 September following guidance on La Niña conditions persisting through the end of 2022. Therefore, below-normal activity was expected through the end of 2022.



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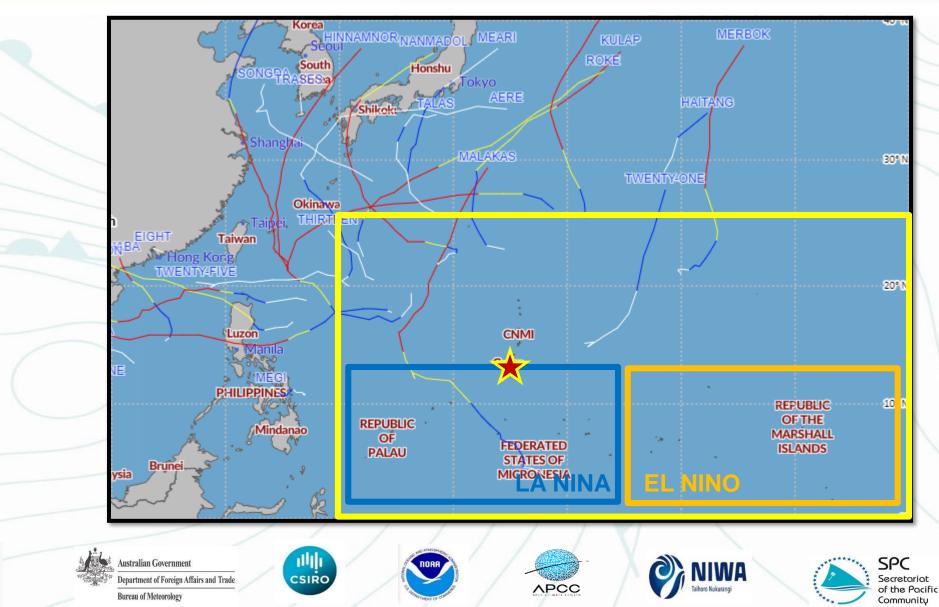




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2022 Western Pacific TCs – So Far: La Niña

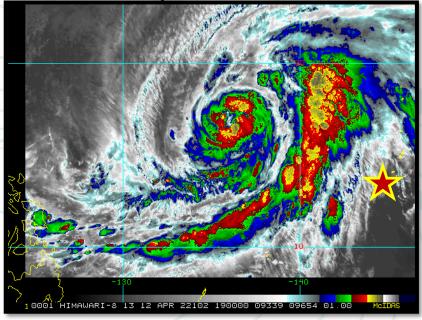






Typhoon Malakas (02W) April 2022

Yap State, FSM



Typhoon Malakas IR 2022-04-12 19:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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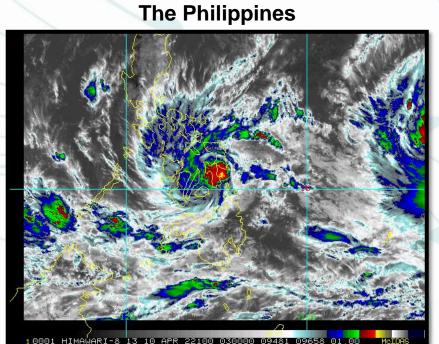


ri 2AM 75mph Cat 1 NE 19mph -Thu 2AM 105mph Cat 2 NNE 12mph **TYPHOON MALAKAS (02W)** Advisory #19 o Initial Location: 14.5 N 135.6 E Monday, April 11, 2022 5AM ChST Maximum Sustained Winds: 75 mph (Cat 1) Anvement : 9 mph NNV 2AM 110mph Cat 2 N 7r REPUBLIC OF THE REPUBL MARSHALL Potential Track Area: @ 1-3 day Q 4-5 day Sustained Wind Speed: tropical storm >= 34kt/39mph strong tropical storm >= 50kt/58mph topical storm >= 64kt/74mph

NOAA NWS Typhoon Malakas (02W) Forecast Track and Uncertainty Graphic



Tropical Storm Megi (03W) April 2022



Tropical Storm Megi IR 2022-04-10 13:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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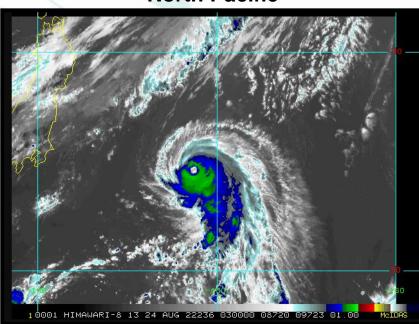


TROPICAL STORM MEGI (03W) Advisory #6 Initial Location: 10.7 N 125.3 E Sunday, April 10, 2022 7PM UTC+10 Maximum Sustained Winds: 40 mph Movement : 7 mph SW CNM Tue 4AM 25mph NE 2mph And APM 30mph NW 2mph – Tue 4PM 25mph E 4mph PHILIPPINES Sun 7PM 40mph SW 7mph Mon 4AM 35mph NW 1mph Mindanac REPUBLI OÉ PALAU FEDERATED STATES OF MICRONESIA

NOAA NWS Tropical Storm Megi (03W) Forecast Track and Uncertainty Graphic







Typhoon Tokage IR 2022-08-24 13:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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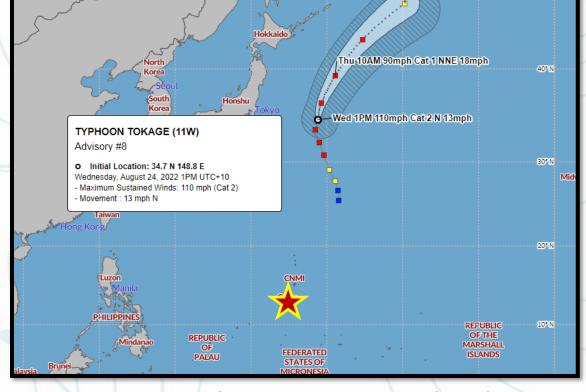
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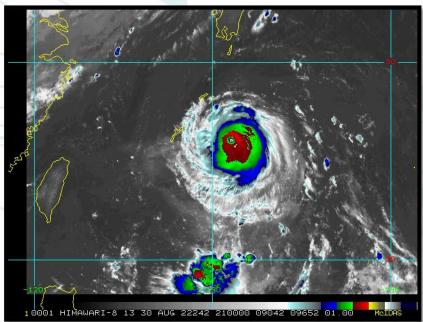


NOAA NWS Typhoon Tokage (11W) Forecast Track and Uncertainty Graphic



Super Typhoon Hinnamnor (12W) September 2022

N. Philippine Sea, Taiwan, S. Korea/W. Japan



Super Typhoon Hinnamnor IR 2022-08-31 07:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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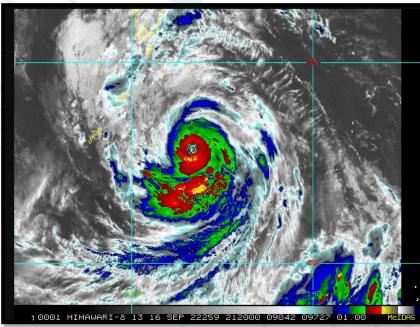
SUPER TYPHOON HINNAMNOR (12W) Advisorv #11 Initial Location: 26.1 N 131.2 E Vednesday, August 31, 2022 7AM UTC+10 Aaximum Sustained Winds: 160 mph (Cat 5 Mon 4AM 130mph Cat 4 N 8mpl Wed 7AM 160mph Cat 5 WSW 18mp Sun 4AM 120mph Cat 3 NNW 5 Thu 4AM 150mph Cat 4 SW 12mph Sat 4AM 110mph Cat 2 WNW 2 i 4AM 125mph Cat 3 SW 4mpl

NOAA NWS Super Typhoon Hinnamnor (12W) Forecast Track and Uncertainty Graphic



Super Typhoon Nanmadol (16W) September 2022

Philippine Sea, Japan



Super Typhoon Nanmadol IR 2022-09-17 07:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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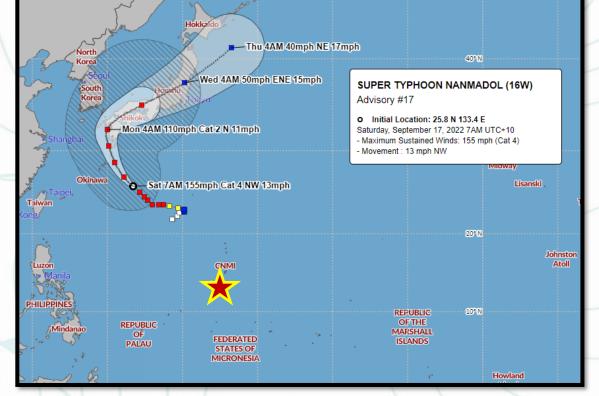










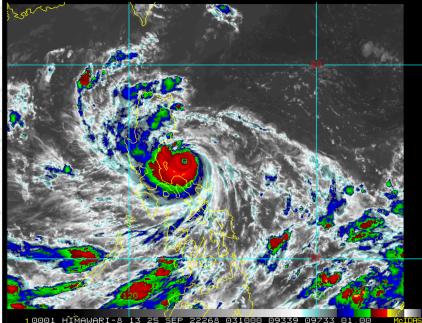


NOAA NWS Super Typhoon Nanmadol (16W) Forecast Track and Uncertainty Graphic



Super Typhoon Noru (18W) September 2022

Philippines, Vietnam



Super Typhoon Noru IR 2022-09-25 13:00

https://rammb-data.cira.colostate.edu/tc_realtime/



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SUPER TYPHOON NORU (18W) Advisory #13 o Initial Location: 15.0 N 123.1 E Sunday, September 25, 2022 1PM UTC+10 Maximum Sustained Winds: 160 mph (Cat 5) ovement · 12 mph W Tue 10AM 115mph Cat 3 W 15mph 0mphW10mph Thu 10AM 65mph W 10 Sun 1PM 160mph Cat 5 W 12mph PHILIPPINE REPUBL MICRONESIA

NOAA NWS Super Typhoon Noru (18W) Forecast Track and Uncertainty Graphic



Thank You! Contact Information

NWS Weather Forecast Office Guam

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> WFO Guam: <u>www.weather.gov/gum</u> Facebook: <u>www.facebook.com/NWSGuam</u> Twitter: <u>www.twitter.com/NWSGuam</u>



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American Samoa Tropical Cyclone Outlook: COMING SOON

- Collaborative Seasonal Outlook with WSO Pago Pago, NWS Pacific Region, NOAA CPC, ARL, OAR
- Outlook Released October
 2021 for A.S. and waters
 out to 300 nautical miles

• Next Outlook: Oct/Nov 2022

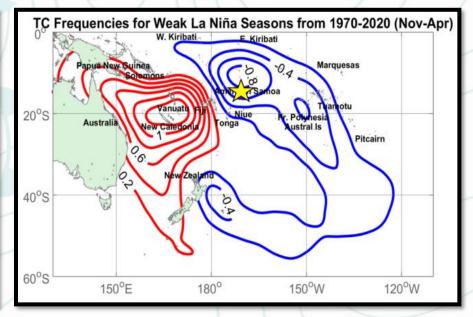
- Predicted a normal to below normal TC Season, specifically, 1 to 2 tropical cyclones
- La Niña typically reduces TC activity near American



Full Season 30-Year TC Climatology from 1991-2020 W. Kiribati E. Kiribati Marquesas Vanuatu Fi 20°S r. Polynes Caredonia Tonga Austral Is Pitcairn 40°S 60°S 150°E 150°W 120°W 180°

30-Year Climatology of overall TC Occurrences from 1981-2010 (Data are from the SPEArTC dataset). Blue contours represent less than 1.5 TCs per season; Red contours represent greater than 1.5 TCs per season. Yellow star represents the location of American Samoa.

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Full Season Tropical Cyclone frequencies anomalies during La Niña seasons from 1970-2020; data are from the South Pacific Enhanced Archive of Tropical Cyclones (SPEArTC) dataset (Diamond, et al 2012); Red (Blue) contours represent Above (Below) normal TC occurrences. Yellow star represents the location of American Samoa.







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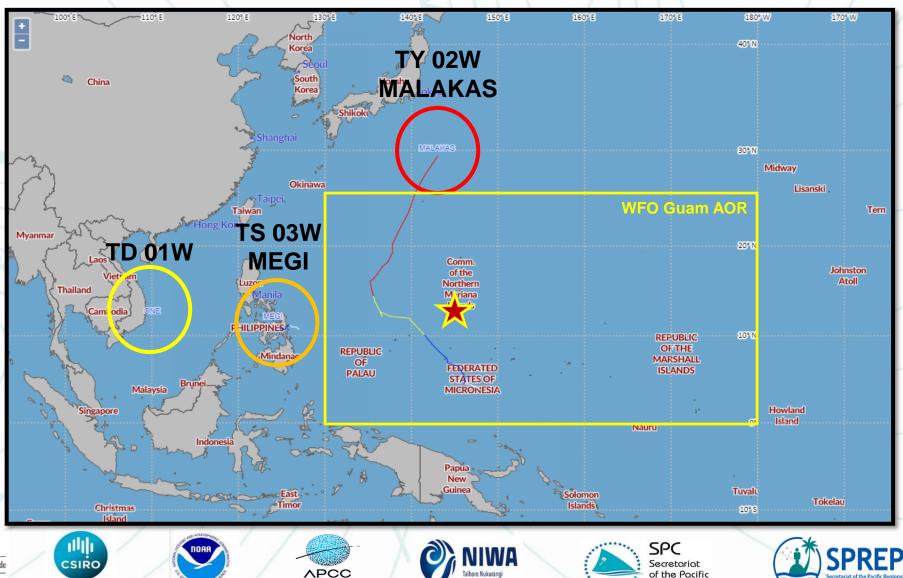


2022 West Pacific Tropical Cyclones – So Far

- Tropical Depression 01W
 - JTWC Advisories: 1
 - March 31 to March 31
 - Landfall: Vietnam
- Typhoon 02W Malakas
 - JTWC Advisories: 34
 - April 7 to April 15
 - Yap State, FSM
 - WFO Guam Watches/ Warnings Issued
 - Tropical Storm 03W Megi
 - JTWC Advisories: 10
 - April 9 to April 11
 - Landfall: Philippines
 - Catastrophic Flooding



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