

# 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



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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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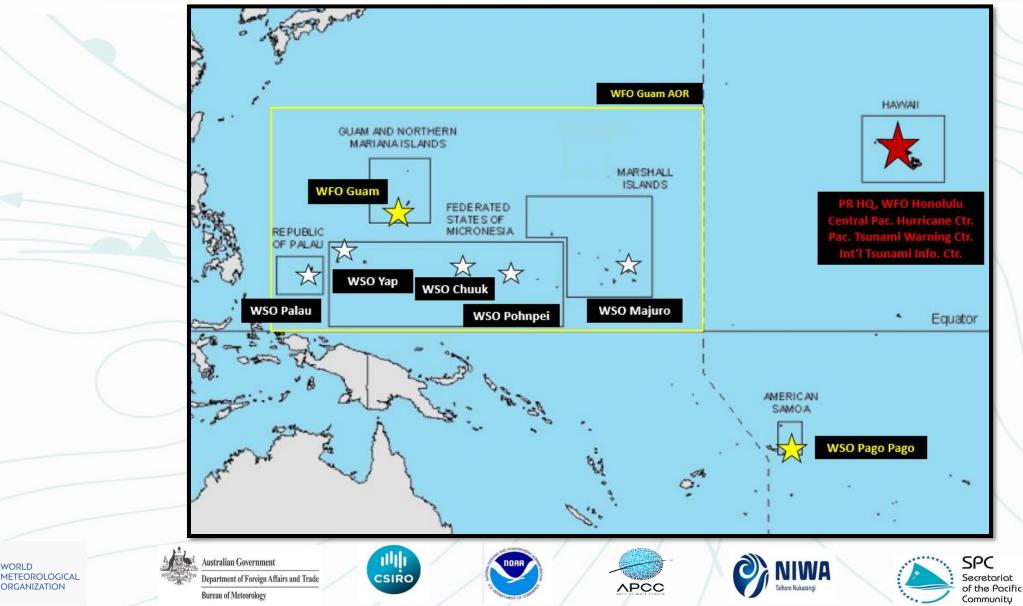






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#### **WFO Guam and the NWS Pacific Region**







### 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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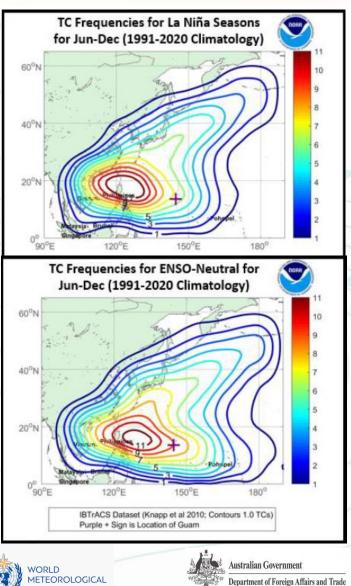






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- Collaborative TC Outlook for USAPI; WFO Guam, NWS Pacific Region, NOAA CPC, ARL, OAR; <u>Not a basin-wide prediction</u>
- Outlook to be Completed and Released by June 1

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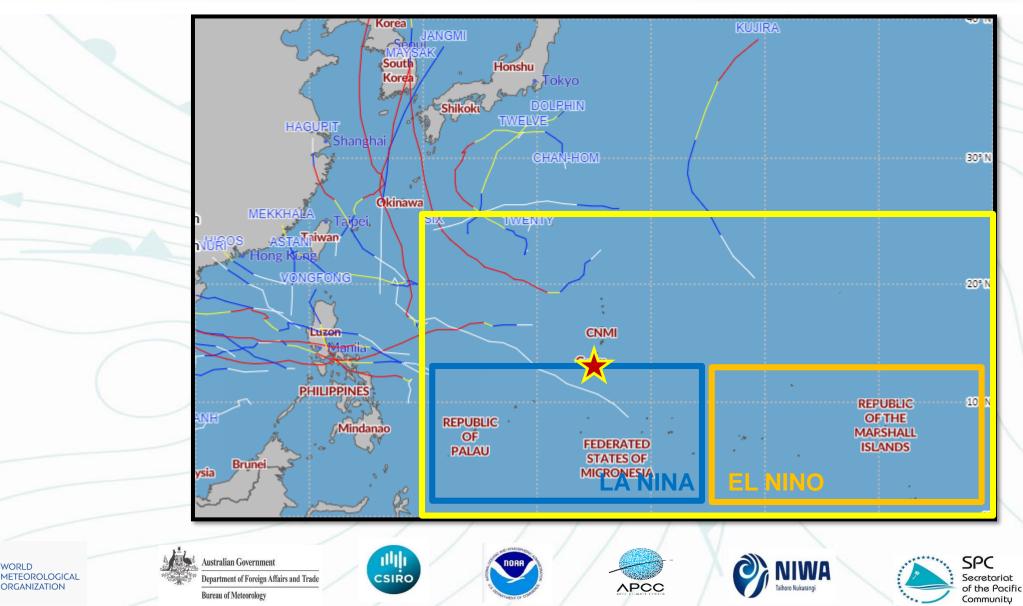
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### **2020 Western Pacific Tropical Cyclones: La Niña**

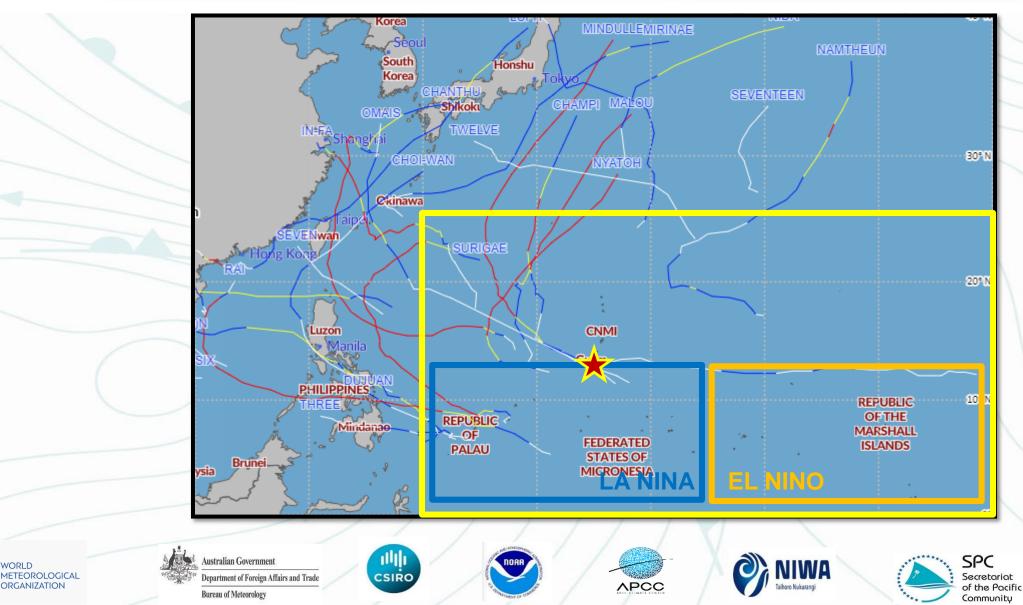






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### 2021 Western North Pacific Tropical Cyclones: La Niña



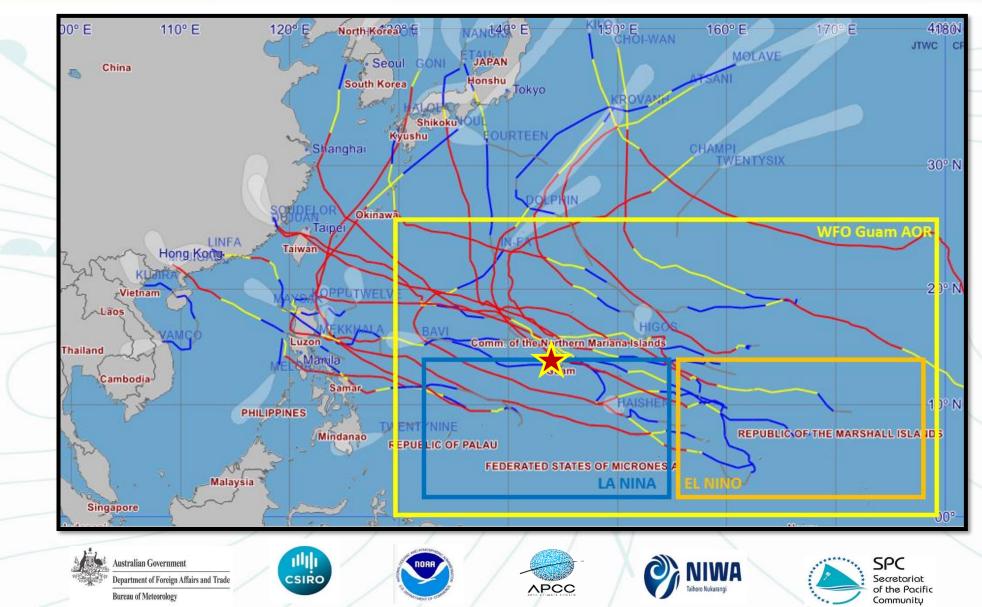




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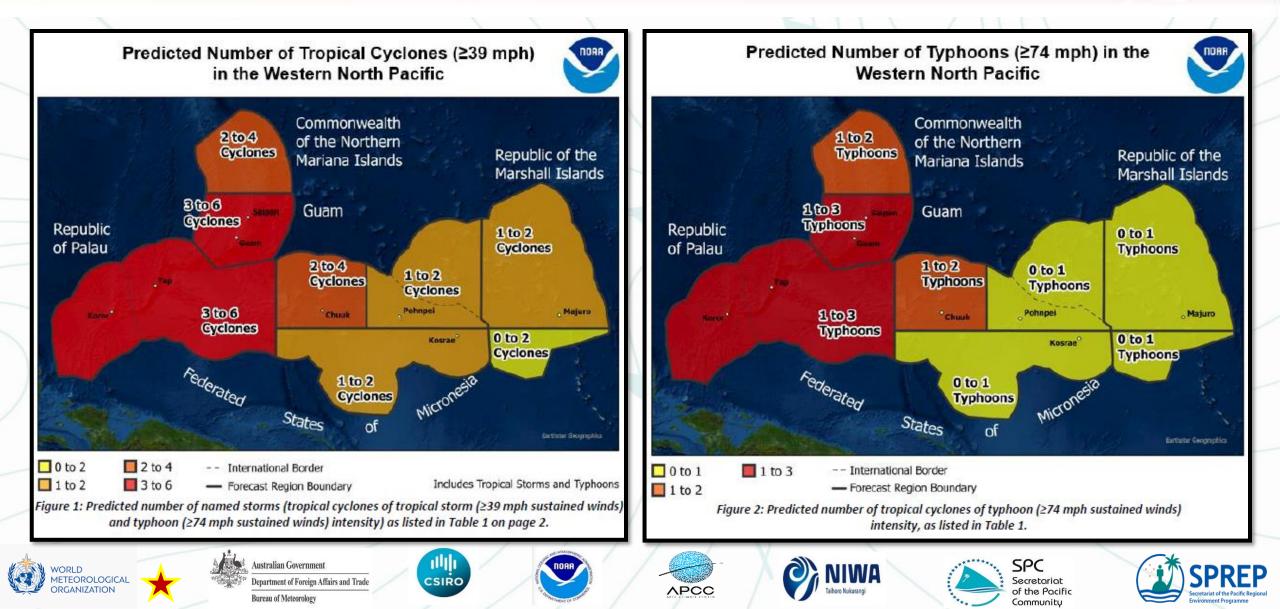
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## 2015 Western Pacific Tropical Cyclones: El Niño





### 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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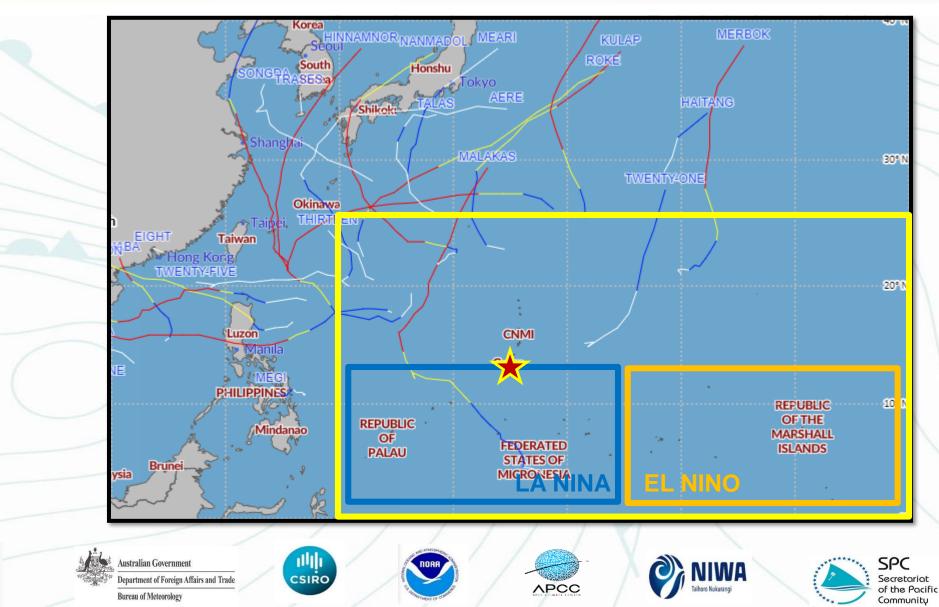




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### 2022 Western Pacific TCs – So Far: La Niña

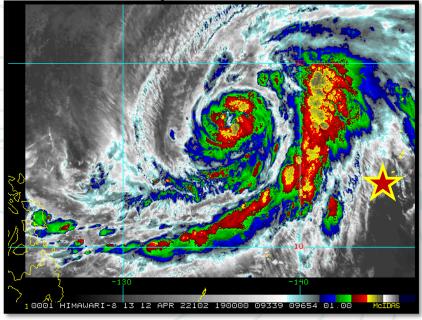






#### Typhoon Malakas (02W) April 2022

Yap State, FSM



#### Typhoon Malakas IR 2022-04-12 19:00

https://rammb-data.cira.colostate.edu/tc\_realtime/



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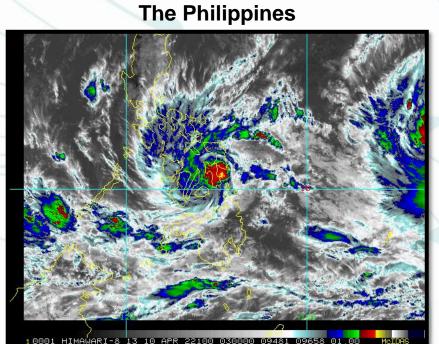


ri 2AM 75mph Cat 1 NE 19mph -Thu 2AM 105mph Cat 2 NNE 12mph **TYPHOON MALAKAS (02W)** Advisory #19 o Initial Location: 14.5 N 135.6 E Monday, April 11, 2022 5AM ChST Maximum Sustained Winds: 75 mph (Cat 1) Anvement : 9 mph NNV 2AM 110mph Cat 2 N 7r REPUBLIC OF THE REPUBL MARSHALL Potential Track Area: @ 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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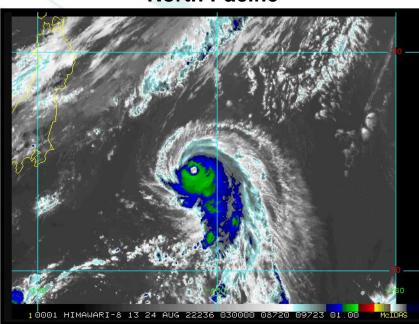


TROPICAL STORM MEGI (03W) Advisory #6 Initial Location: 10.7 N 125.3 E Sunday, April 10, 2022 7PM UTC+10 Maximum Sustained Winds: 40 mph Movement : 7 mph SW CNM Tue 4AM 25mph NE 2mph And APM 30mph NW 2mph – Tue 4PM 25mph E 4mph PHILIPPINES Sun 7PM 40mph SW 7mph Mon 4AM 35mph NW 1mph Mindanac REPUBLI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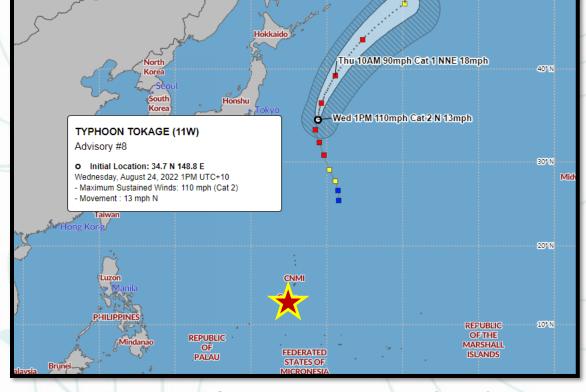
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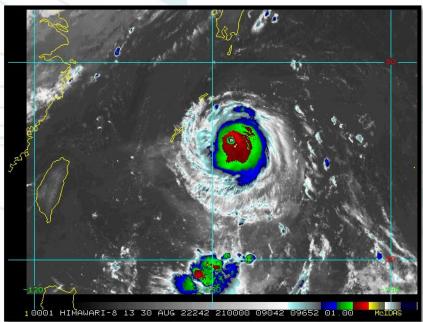


#### NOAA NWS Typhoon Tokage (11W) Forecast Track and Uncertainty Graphic



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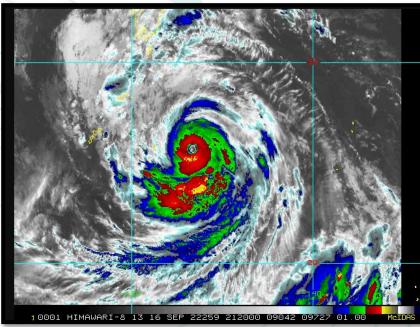
SUPER TYPHOON HINNAMNOR (12W) Advisorv #11 Initial Location: 26.1 N 131.2 E Vednesday, August 31, 2022 7AM UTC+10 Aaximum Sustained Winds: 160 mph (Cat 5 Mon 4AM 130mph Cat 4 N 8mpl Wed 7AM 160mph Cat 5 WSW 18mp Sun 4AM 120mph Cat 3 NNW 5 Thu 4AM 150mph Cat 4 SW 12mph Sat 4AM 110mph Cat 2 WNW 2 i 4AM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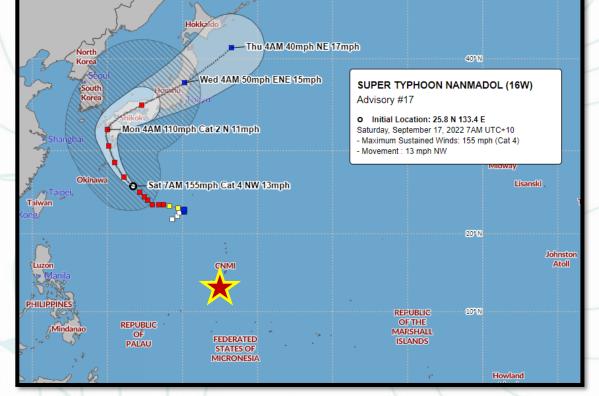










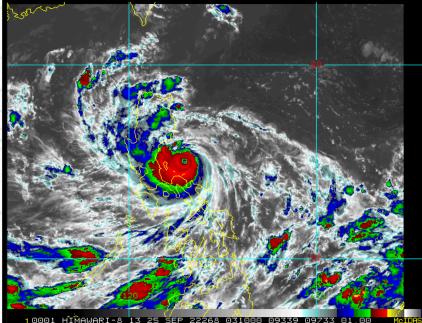


#### NOAA NWS Super Typhoon Nanmadol (16W) Forecast Track and Uncertainty Graphic



#### 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**

#### **Marcus Landon Aydlett**

**Warning Coordination Meteorologist** 

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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

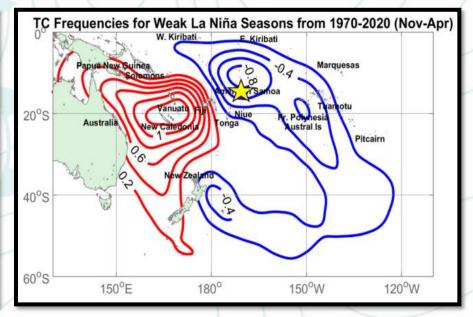
- Predicted a normal to below normal TC Season, specifically, 1 to 2 tropical cyclones
- La Niña typically reduces TC activity near American



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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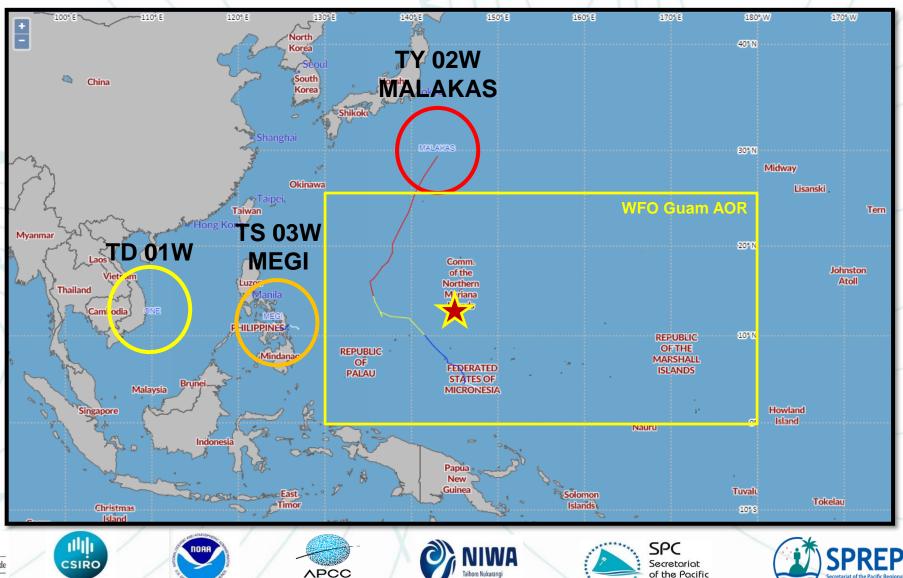


### **2022 West Pacific Tropical Cyclones – So Far**

- 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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