

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

Marcus Landon Aydlett

Warning Coordination Meteorologist, U.S. National Weather Service

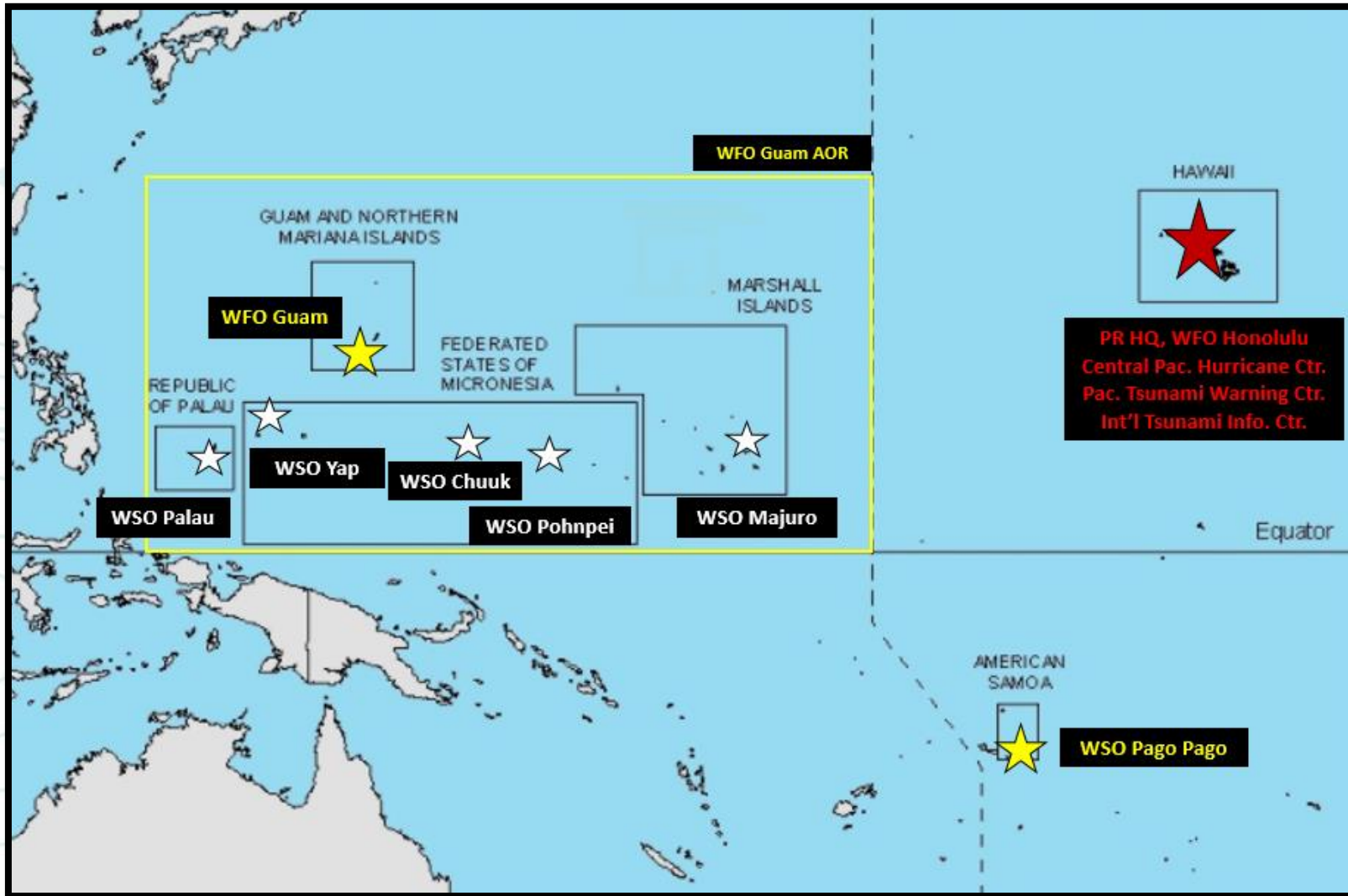
Weather Forecast Office, Guam

NOAA

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**

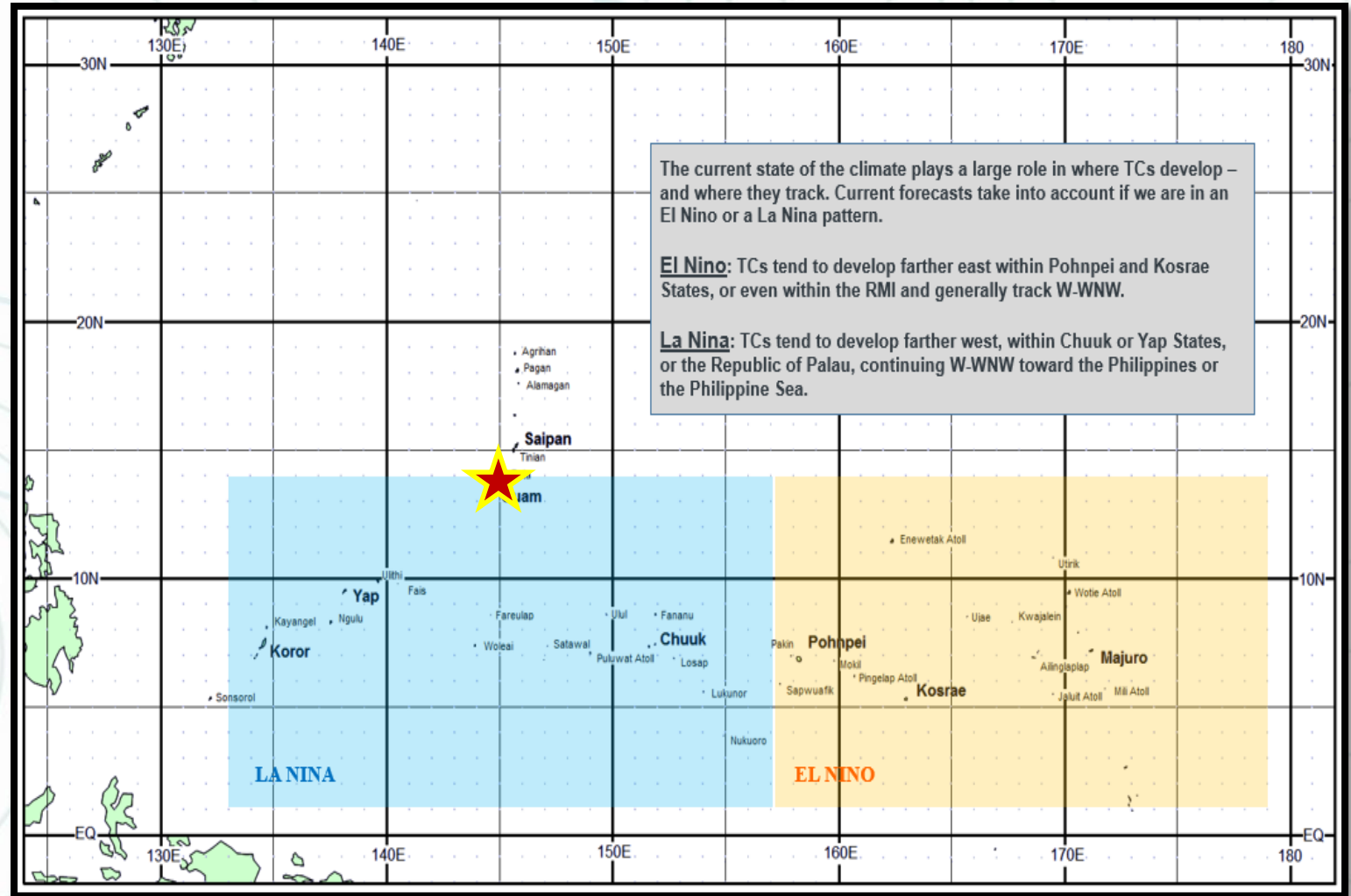
WFO Guam and the NWS Pacific Region



Current Climate: El Niño/La Niña

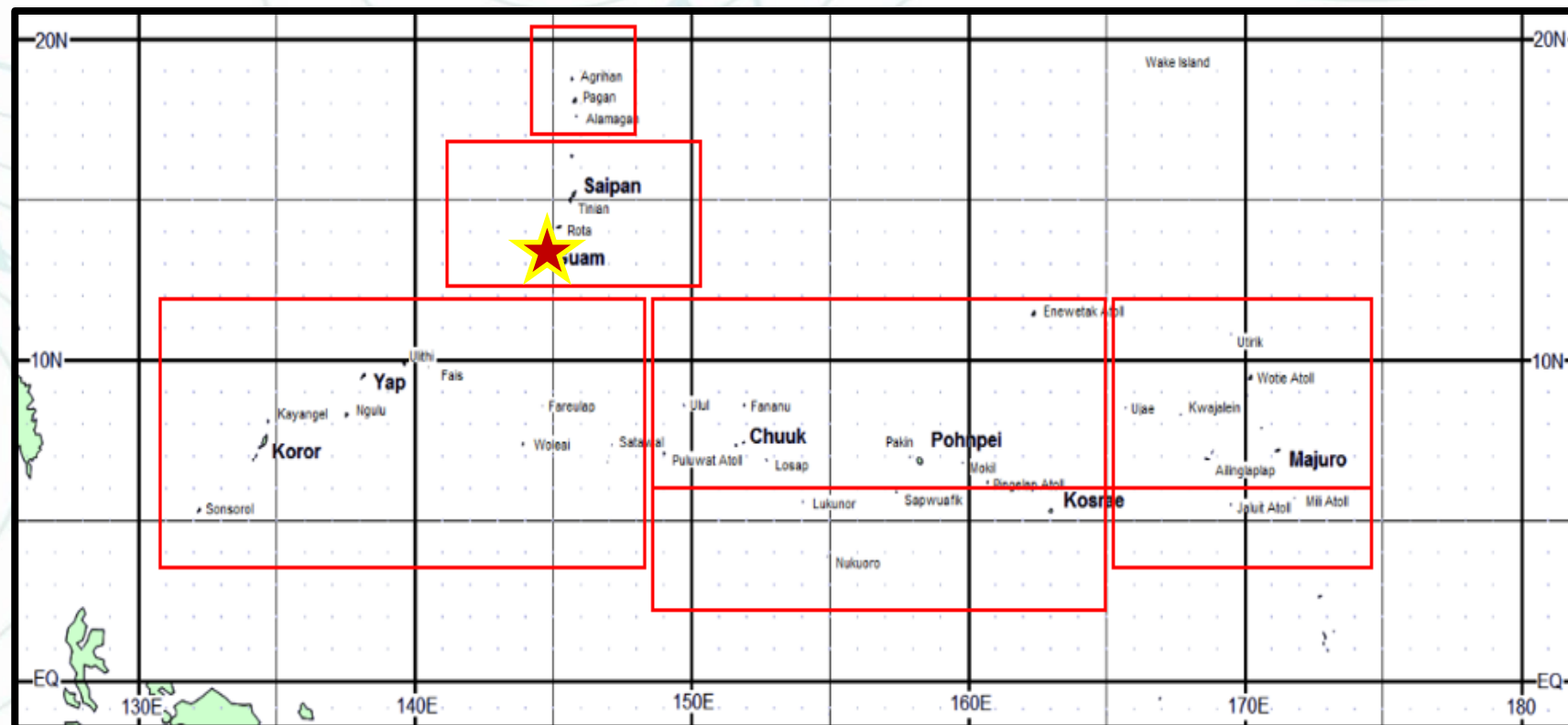
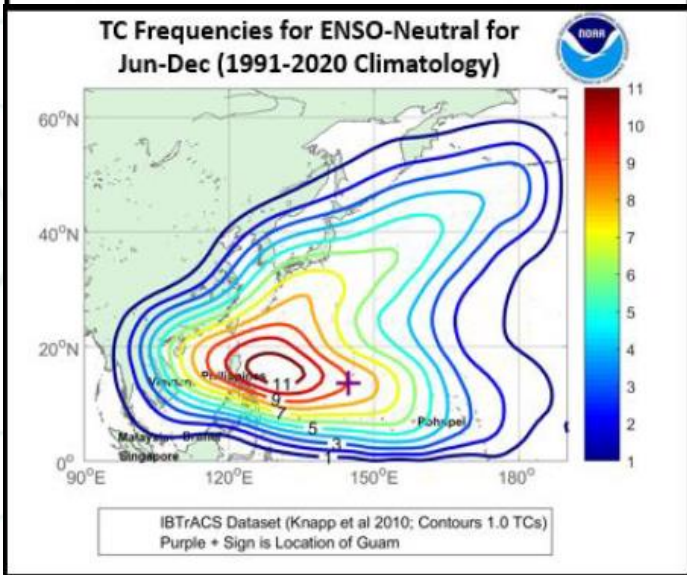
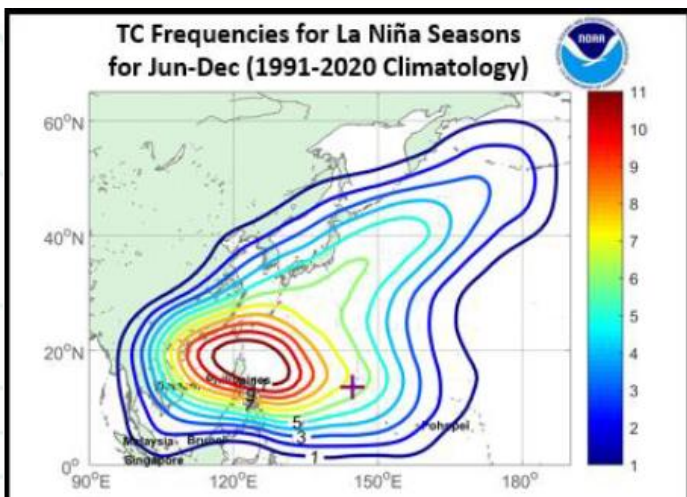
- On average, the total number of annual tropical cyclones in the western North Pacific does not vary significantly.
- Location of tropical cyclone genesis can fluctuate significantly from year to year based on the current state of the climate.

Currently:
La Nina Advisory

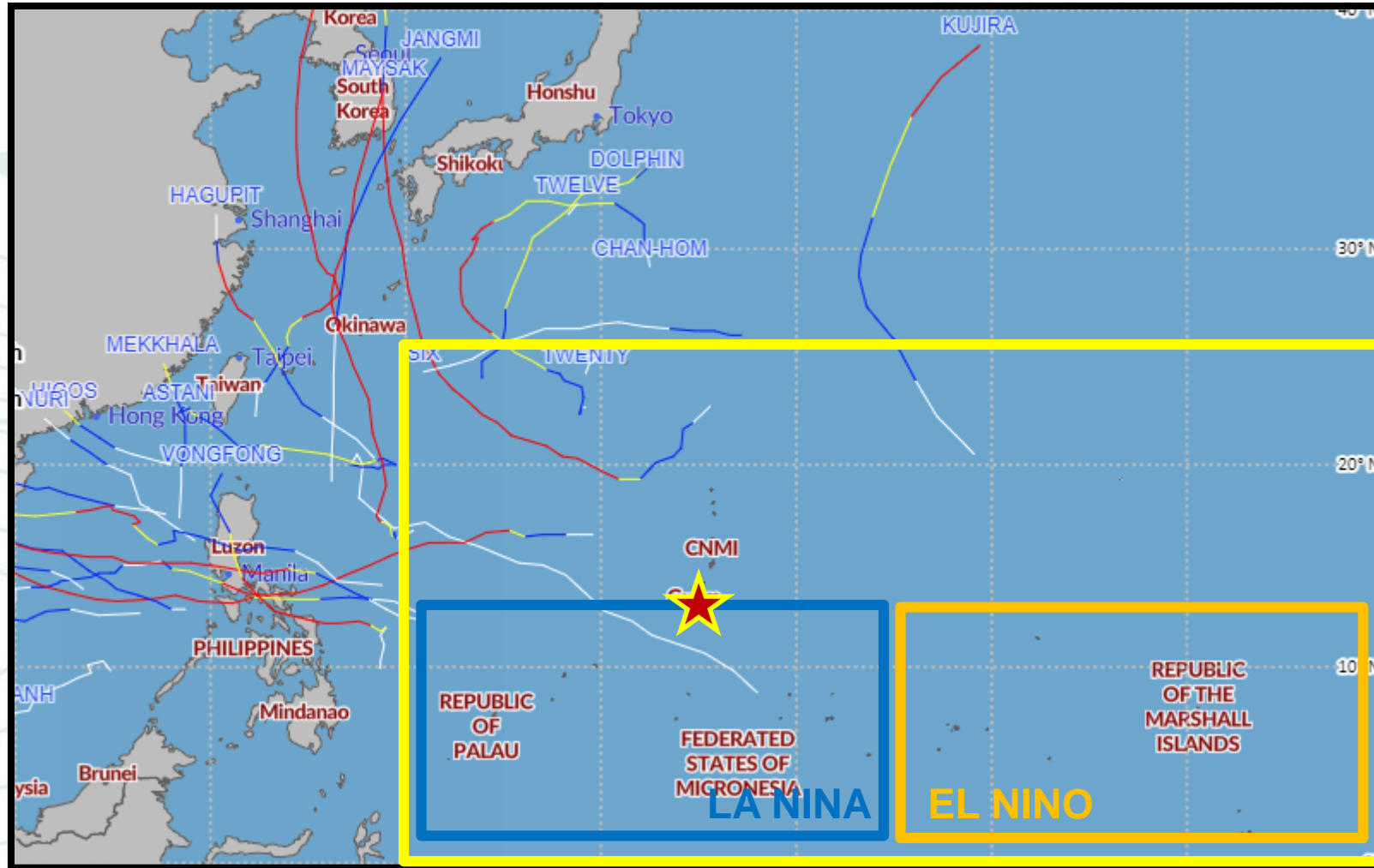


West Pacific (USAPI) Tropical Cyclone Outlook

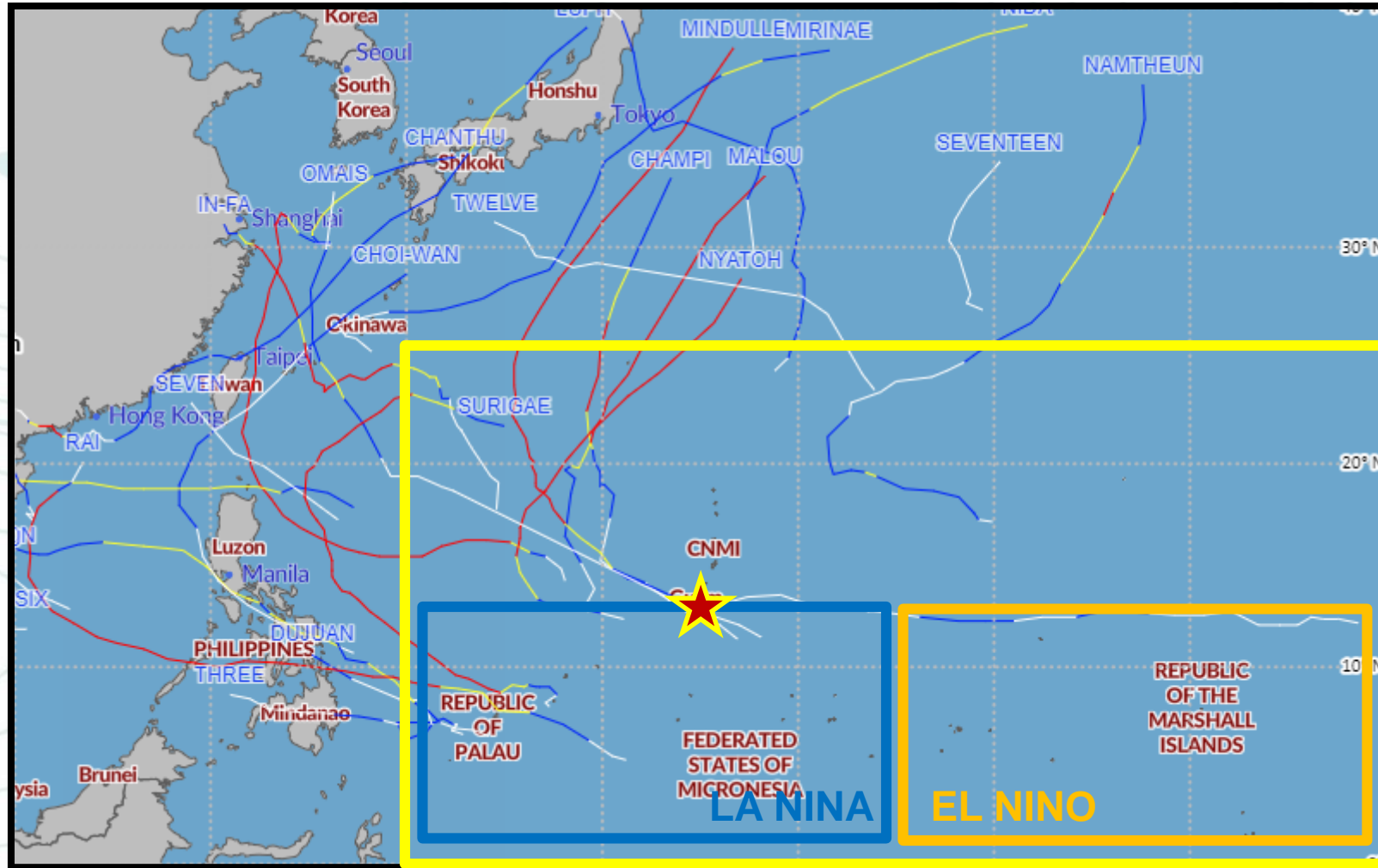
- Collaborative TC Outlook for USAPI; WFO Guam, NWS Pacific Region, NOAA CPC, ARL, OAR; Not a basin-wide prediction
- Outlook to be Completed and Released by June 1



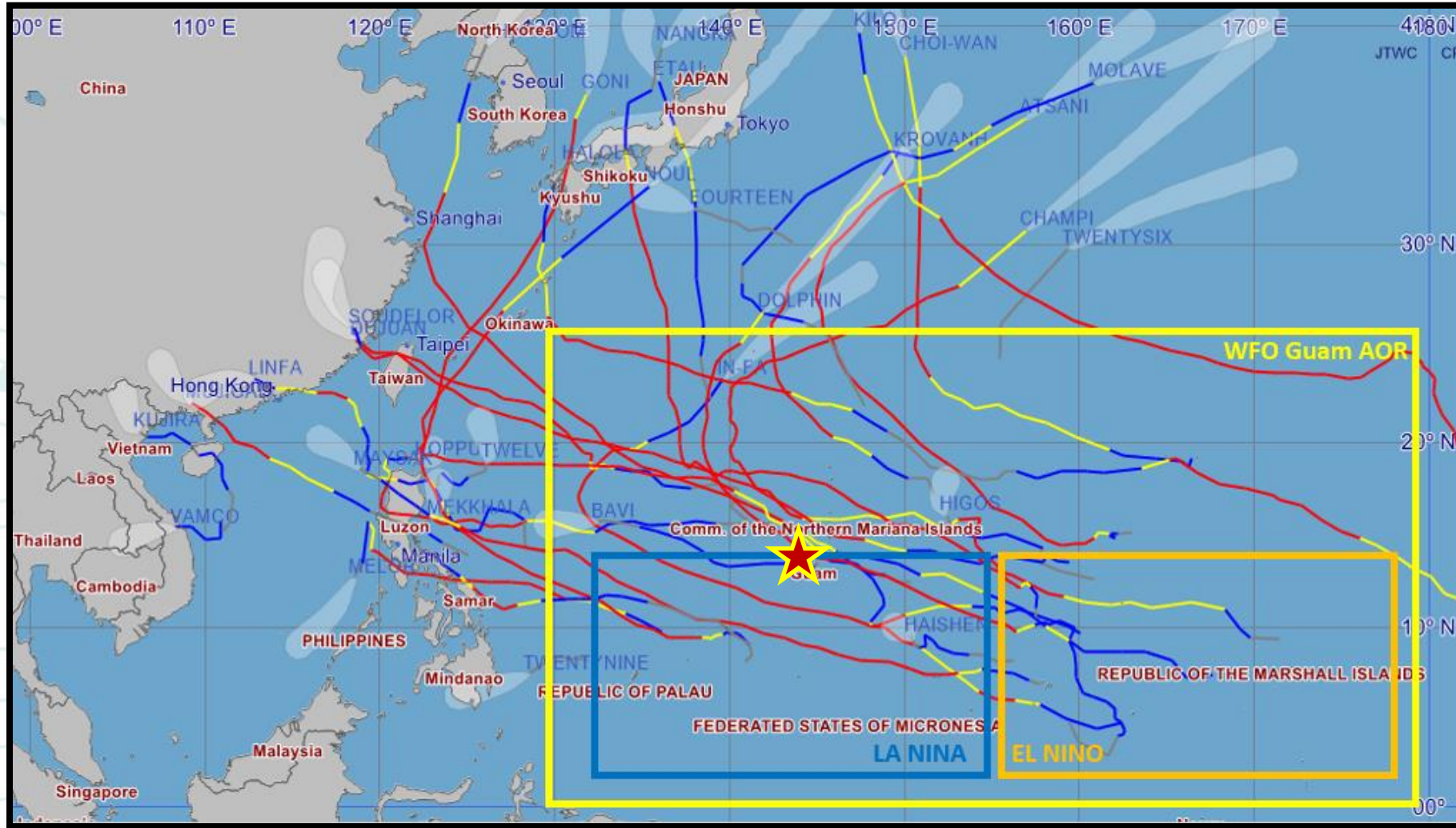
2020 Western Pacific Tropical Cyclones: La Niña



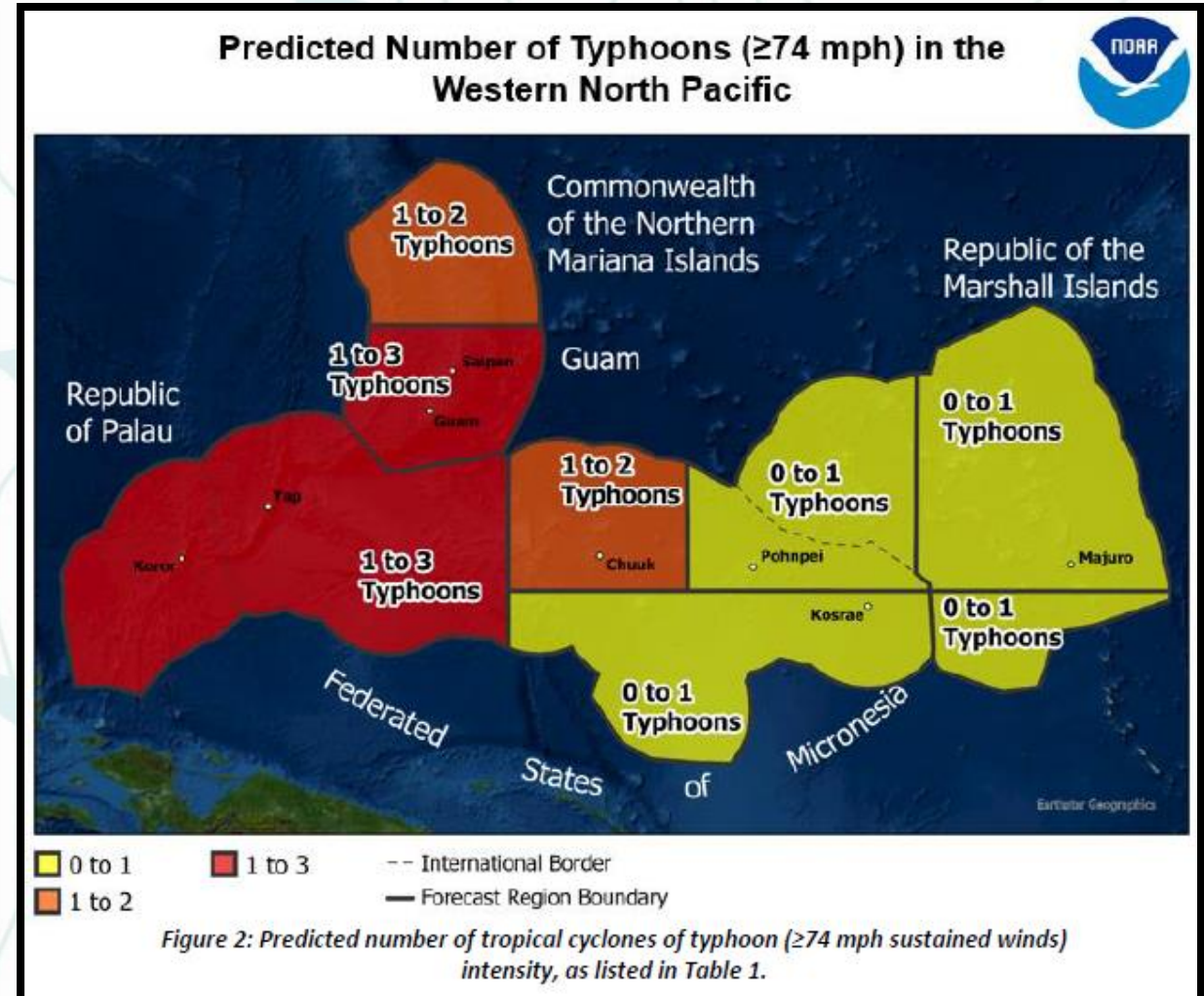
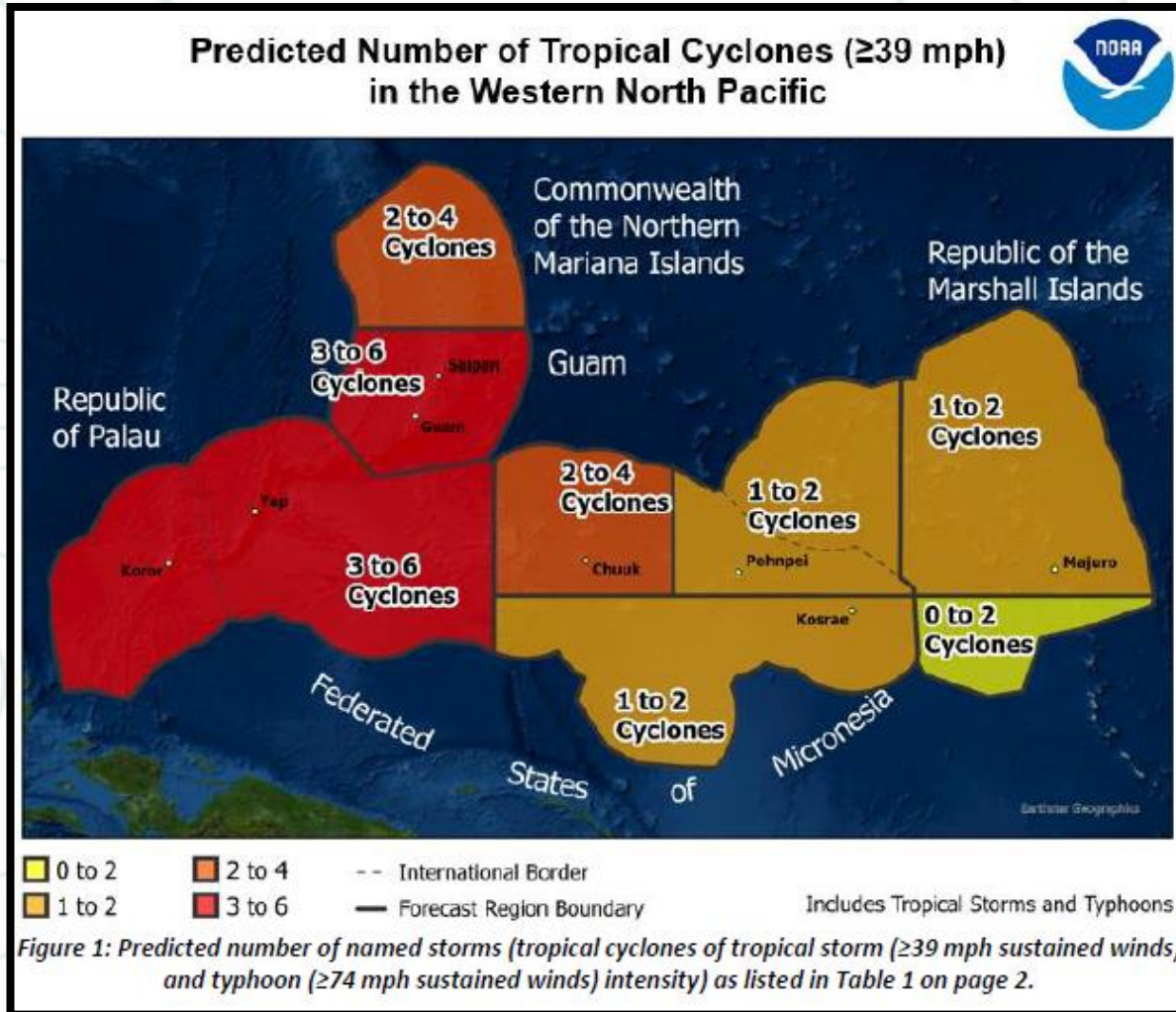
2021 Western North Pacific Tropical Cyclones: La Niña



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)

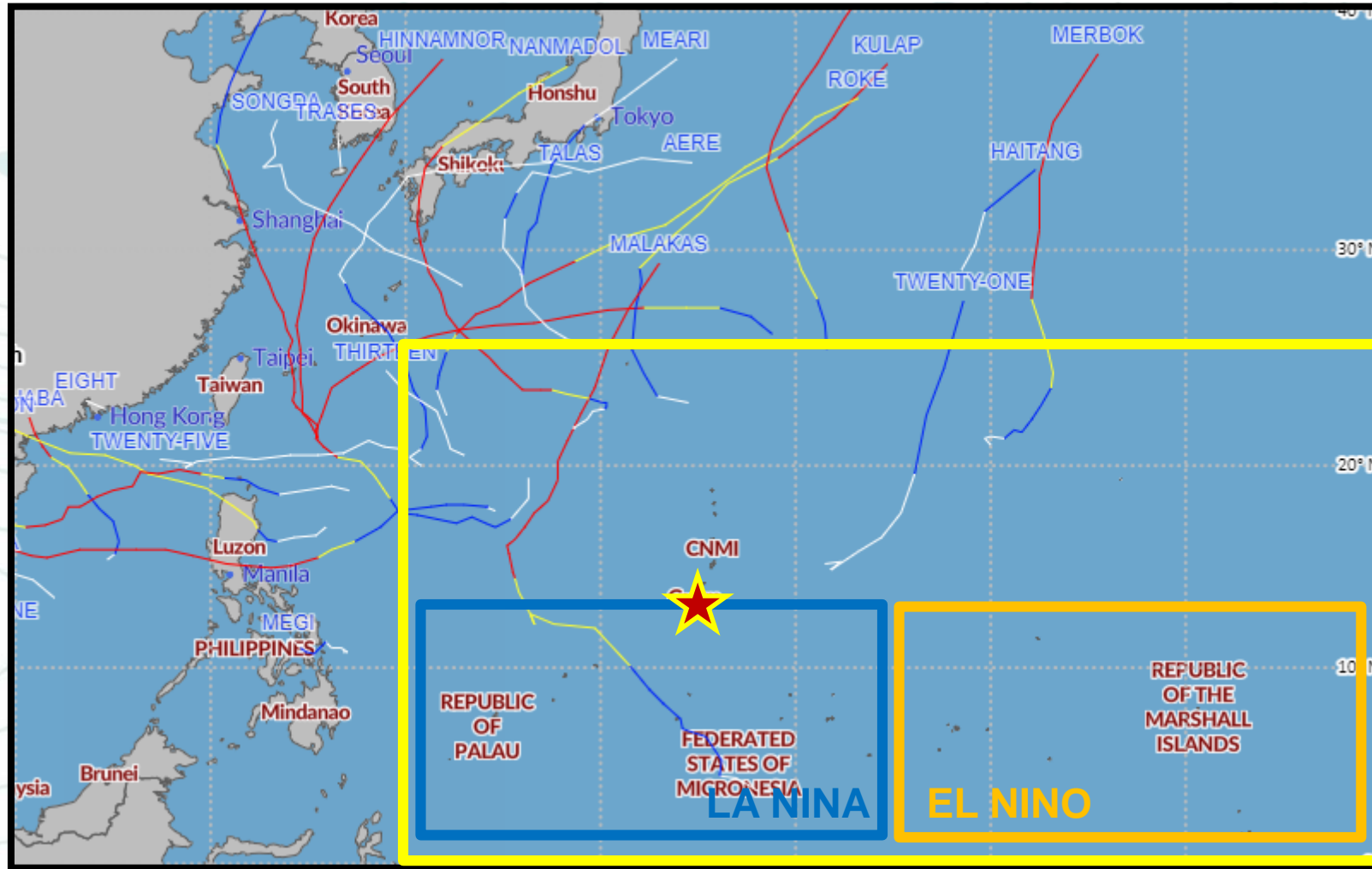
A near-normal TC Outlook was predicted for 2022 for Guam, the CNMI, ROP, FSM and RMI. This was based on the possible transition from La Niña to ENSO-Neutral conditions in late summer or early fall of 2022.

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 (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 (0 or 1 major)
Guam, Rota, Tinian and Saipan	2 or 3	1 or 2 (0 or 1 major)
Northern CNMI	1 or 2	0 or 1 (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.

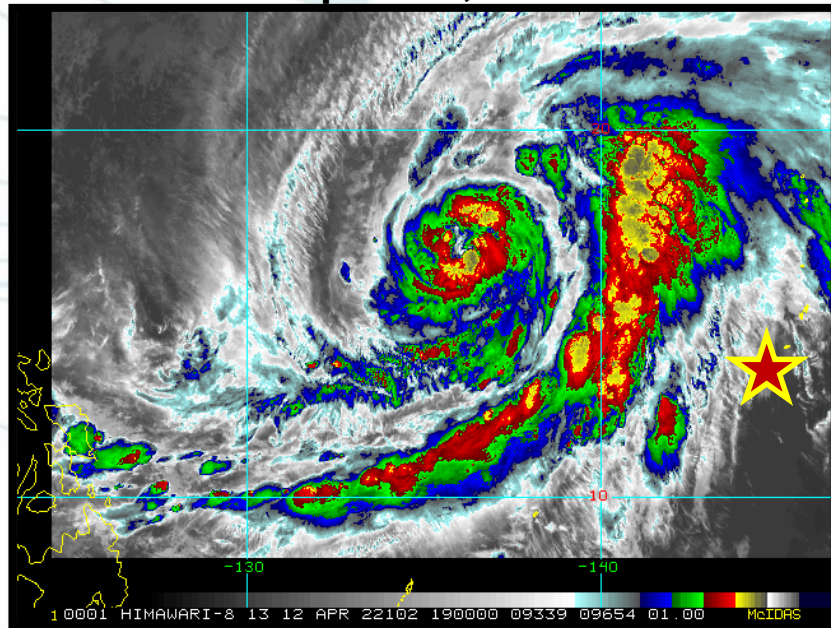
2022 Western Pacific TCs – So Far: La Niña



Western North Pacific 2022 Season – So Far

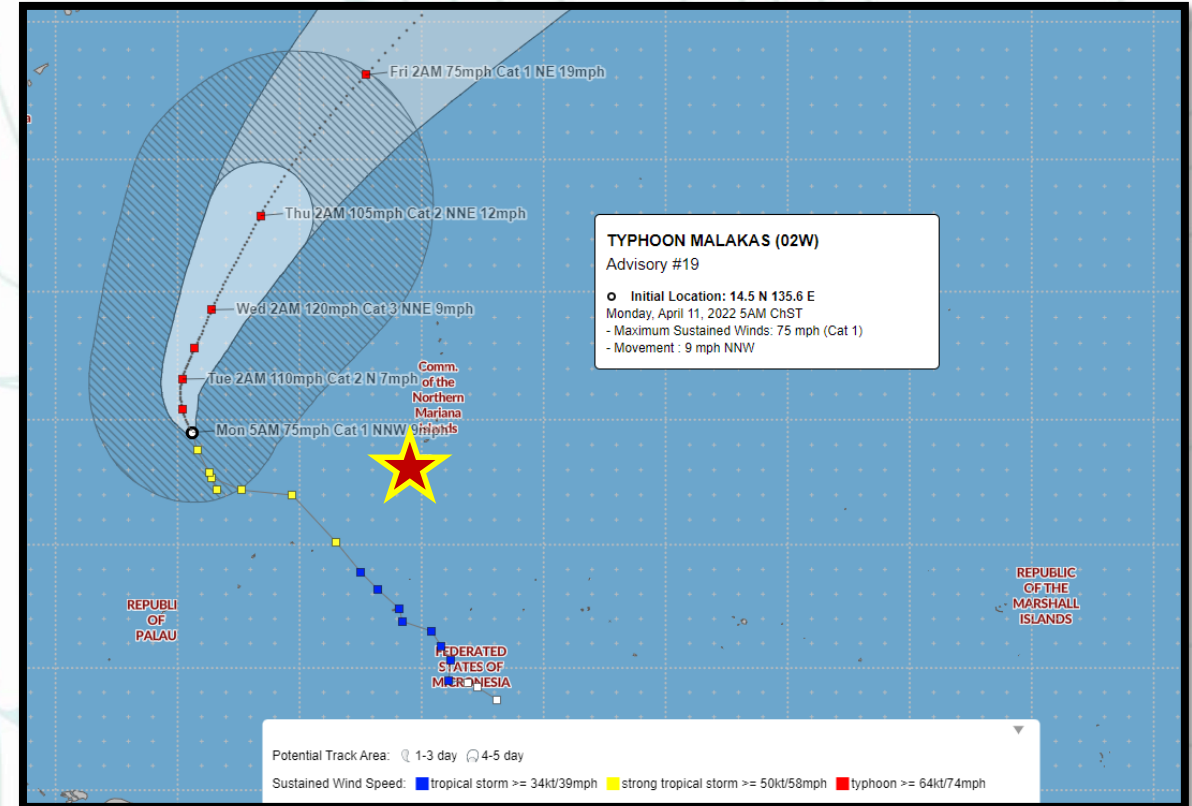
Typhoon Malakas (02W)

April 2022
Yap State, FSM



Typhoon Malakas IR
2022-04-12 19:00

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

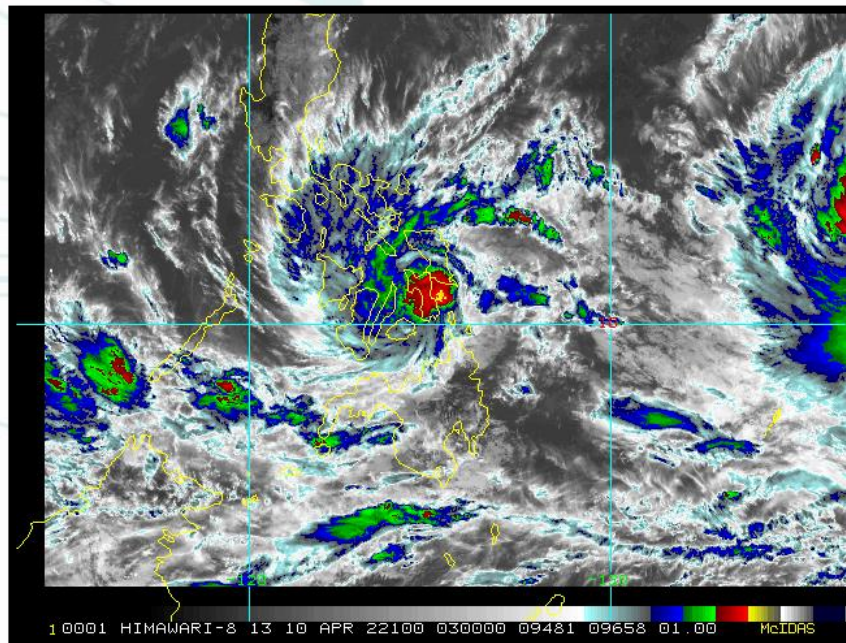


NOAA NWS Typhoon Malakas (02W)
Forecast Track and Uncertainty Graphic

<https://www.weather.gov/gum/Cyclones>

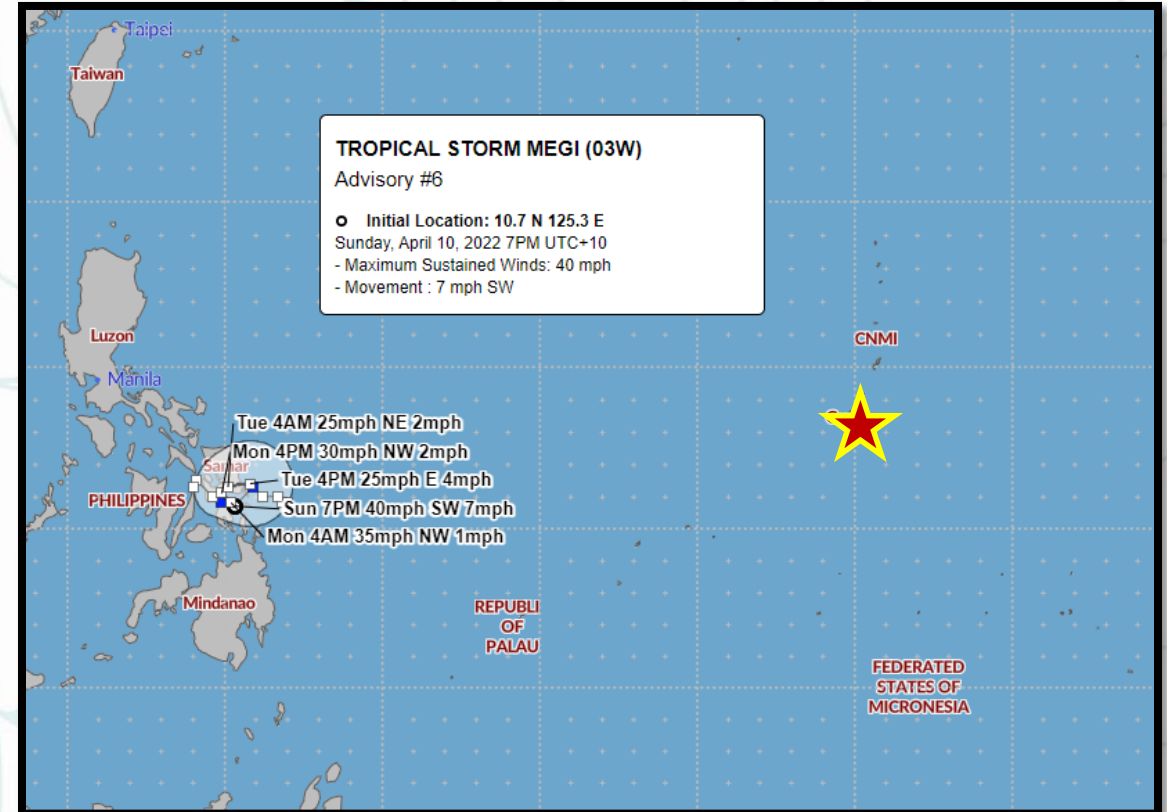
Western North Pacific 2022 Season – So Far

Tropical Storm Megi (03W) April 2022 The Philippines



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

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

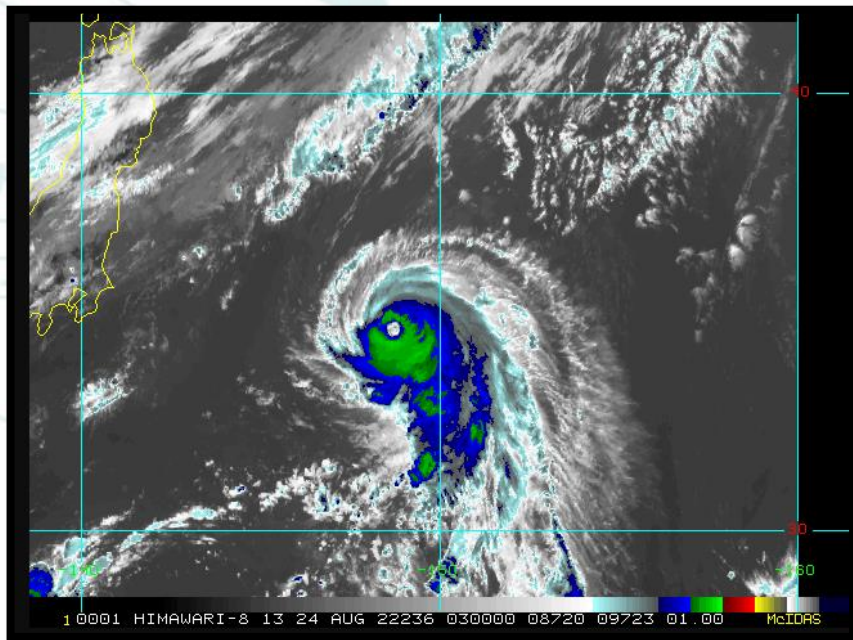


**NOAA NWS Tropical Storm Megi (03W)
 Forecast Track and Uncertainty Graphic**

<https://www.weather.gov/gum/Cyclones>

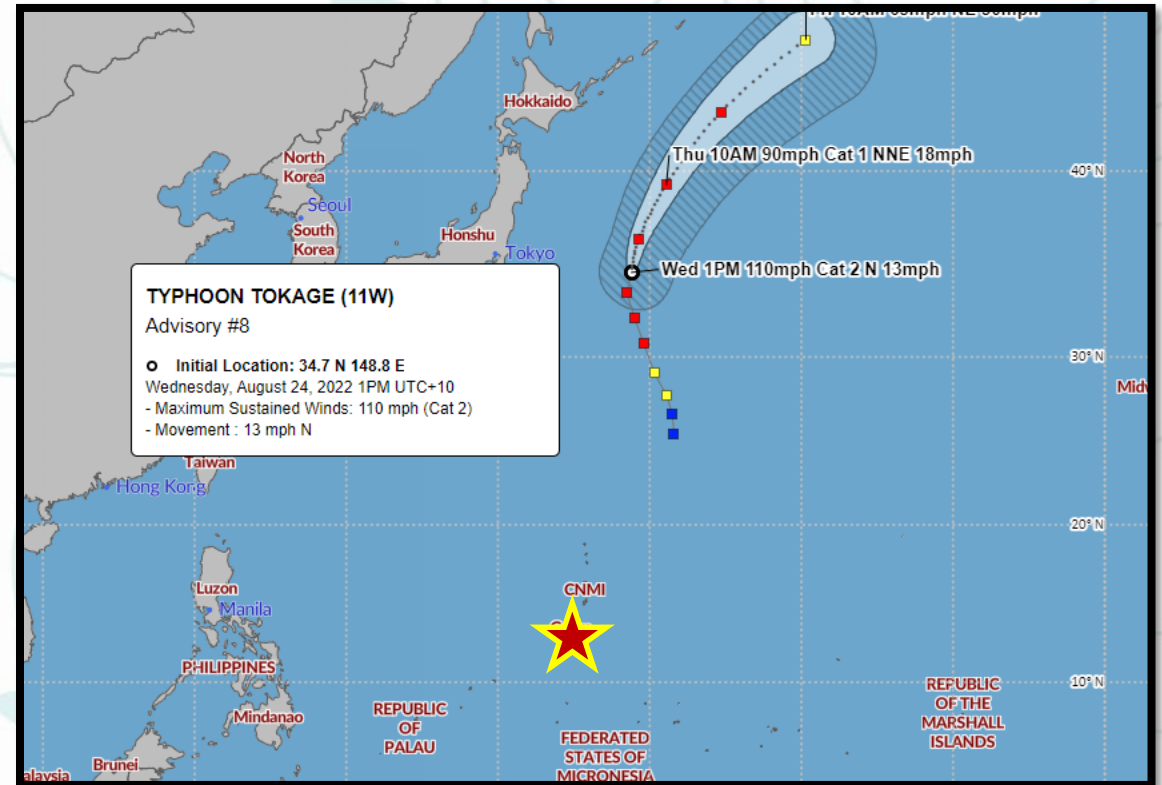
Western North Pacific 2022 Season – So Far

Typhoon Tokage (11W) August 2022 North Pacific



**Typhoon Tokage IR
 2022-08-24 13:00**

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



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

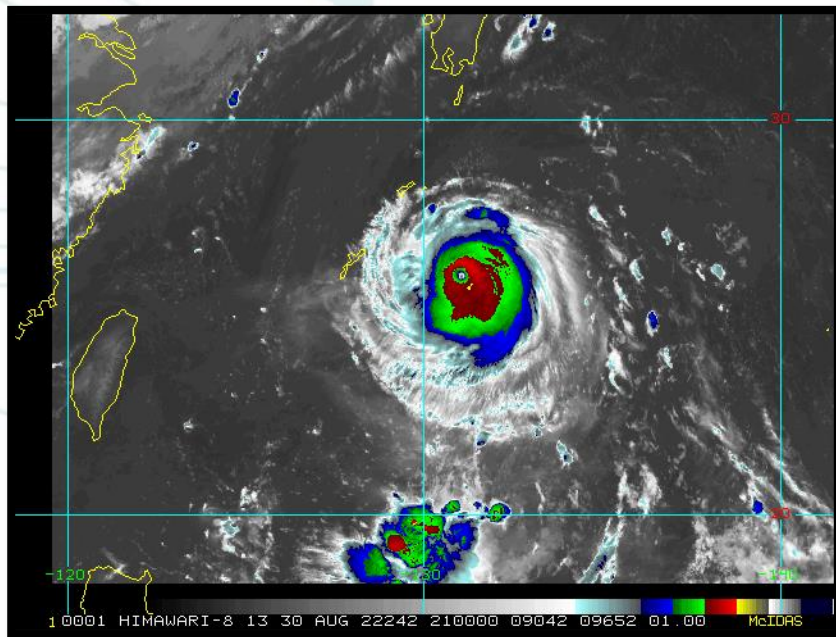
<https://www.weather.gov/gum/Cyclones>

Western North Pacific 2022 Season – So Far

Super Typhoon Hinnamnor (12W)

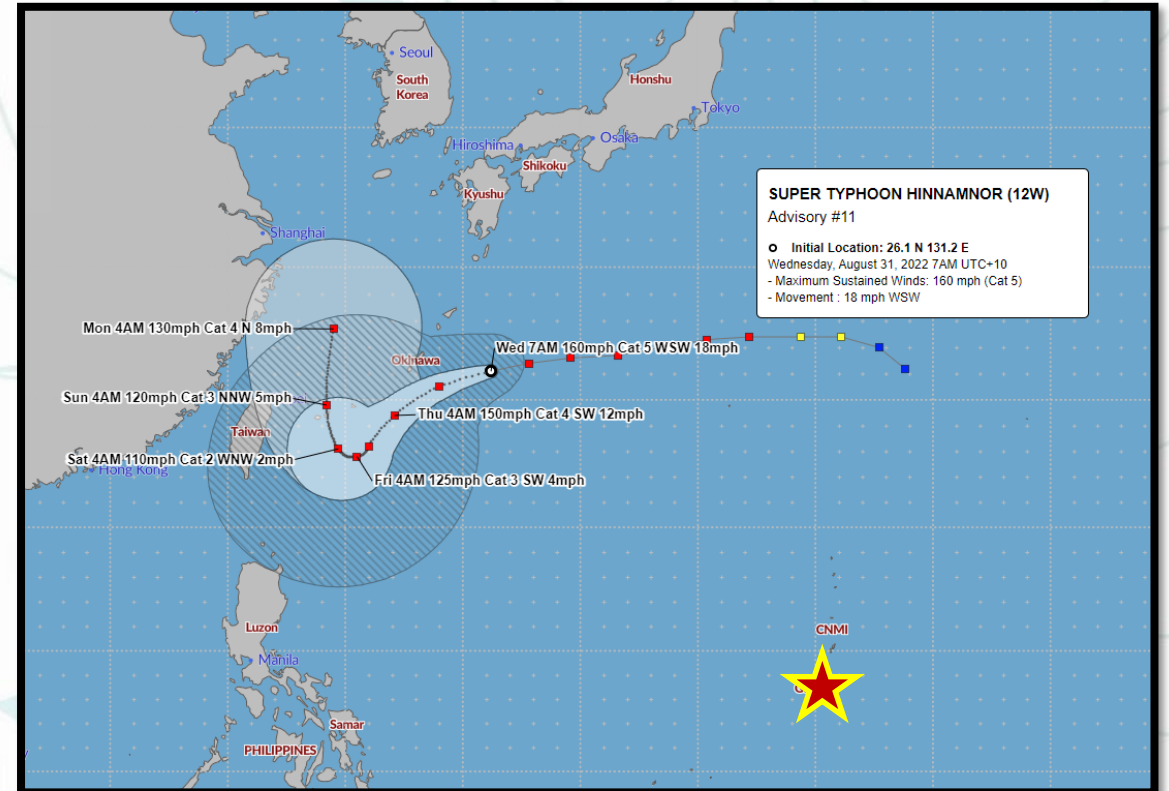
September 2022

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/



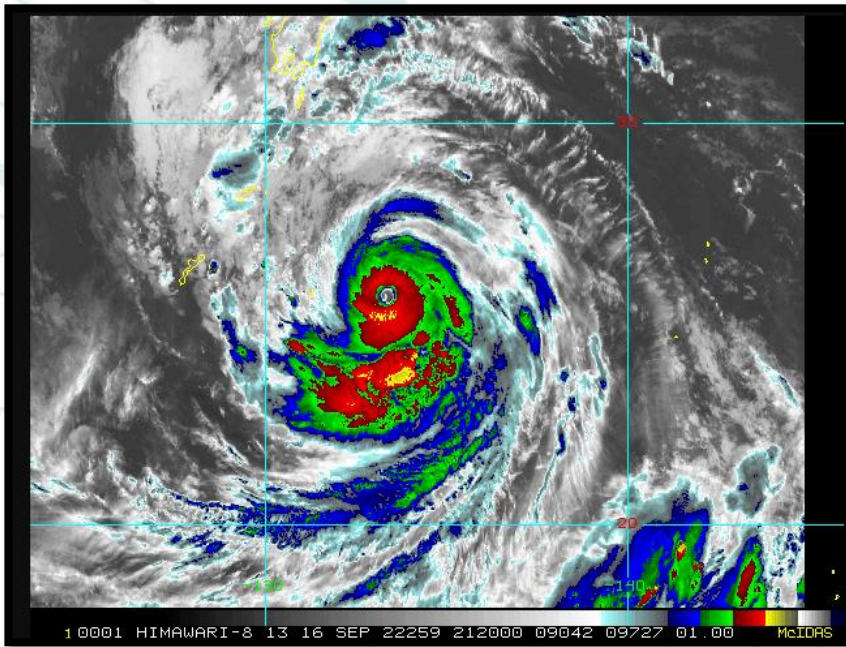
NOAA NWS Super Typhoon Hinnamnor (12W)
 Forecast Track and Uncertainty Graphic

<https://www.weather.gov/gum/Cyclones>

Western North Pacific 2022 Season – So Far

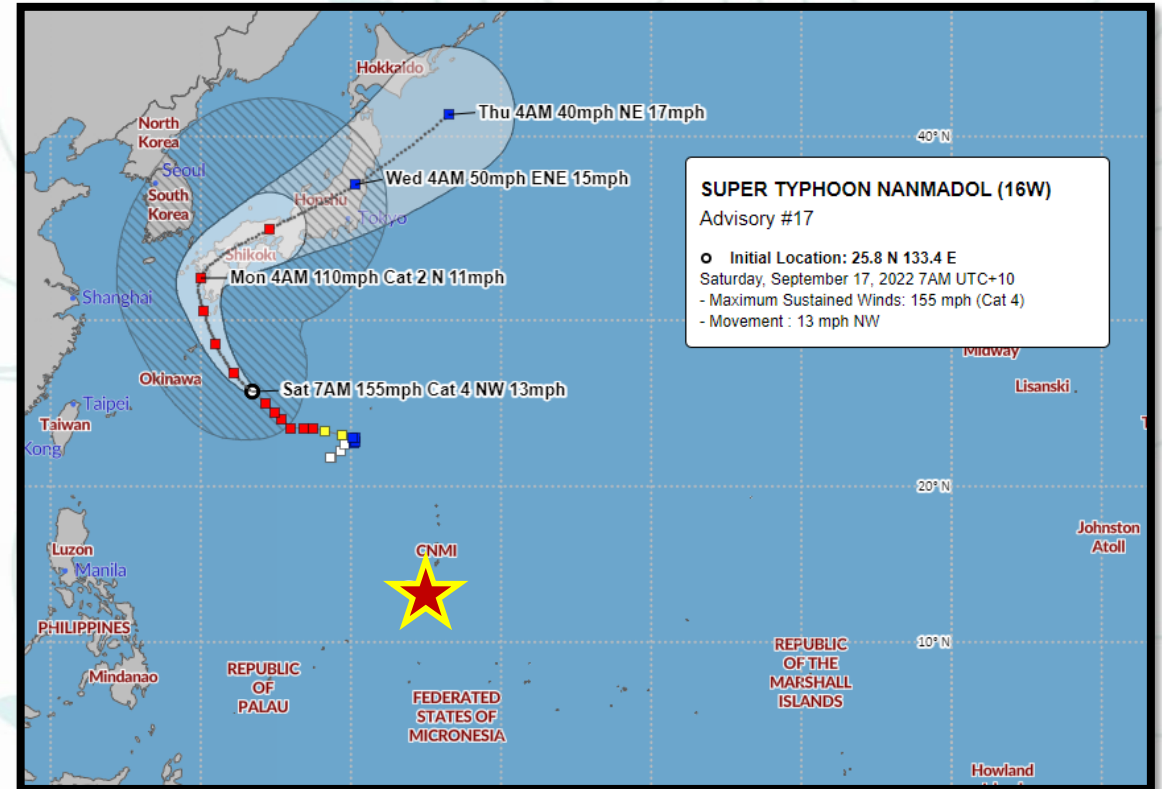
Super Typhoon Nanmadol (16W)

September 2022
Philippine Sea, Japan



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

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

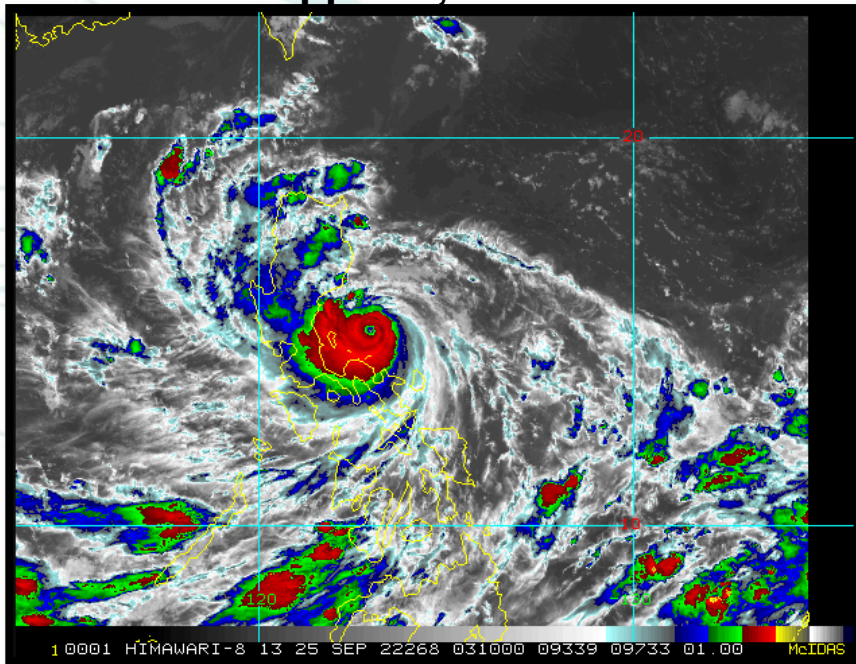


NOAA NWS Super Typhoon Nanmadol (16W)
Forecast Track and Uncertainty Graphic

<https://www.weather.gov/gum/Cyclones>

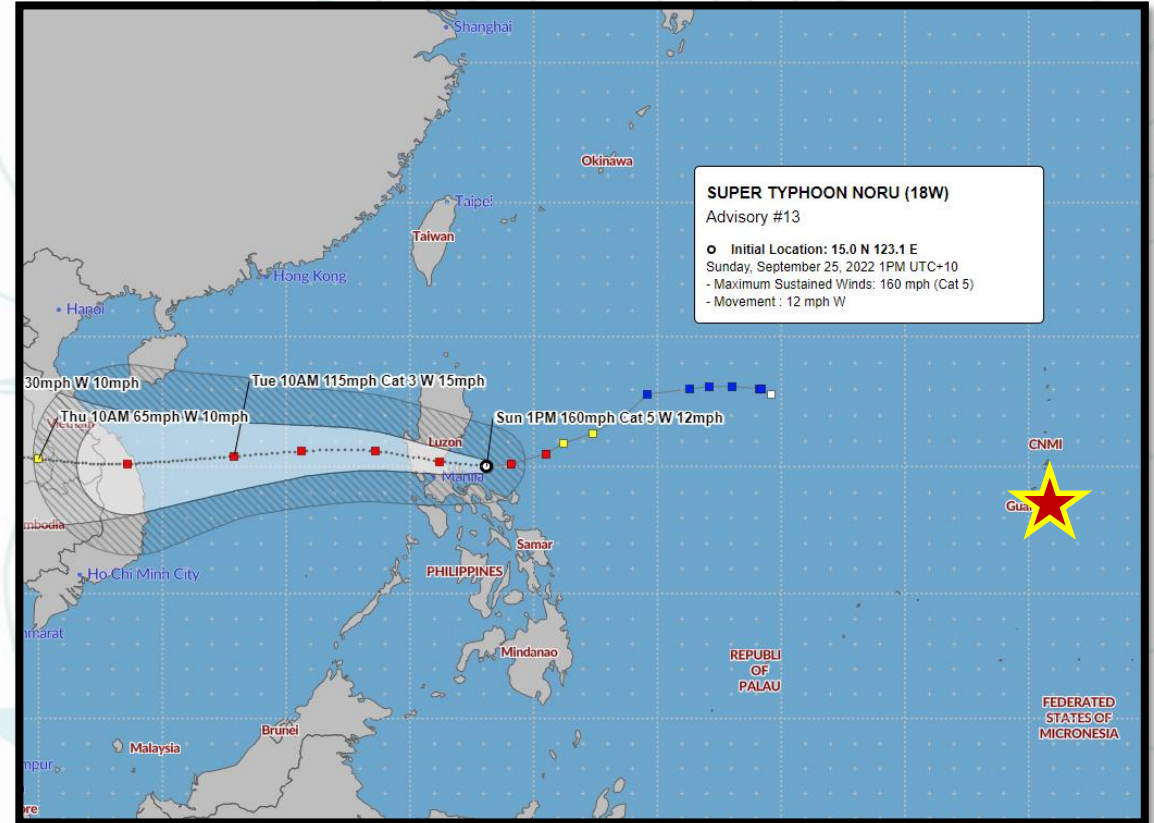
Western North Pacific 2022 Season – So Far

Super Typhoon Noru (18W) September 2022 Philippines, Vietnam



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

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



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

<https://www.weather.gov/gum/Cyclones>

Thank You!

Contact Information

NWS Weather Forecast Office Guam

Marcus Landon Aydlett

Warning Coordination Meteorologist

Marcus.Aydlett@noaa.gov

671-777-5337 (C)

671-472-0946 (O)

WFO Guam Operations: nws.gum.operations@noaa.gov

671-472-0900

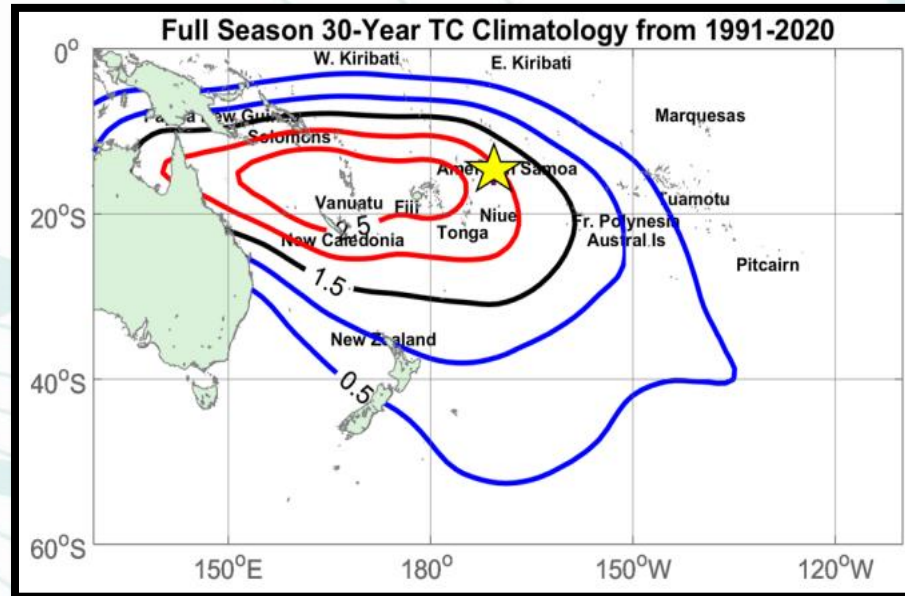
WFO Guam: www.weather.gov/gum

Facebook: www.facebook.com/NWSGuam

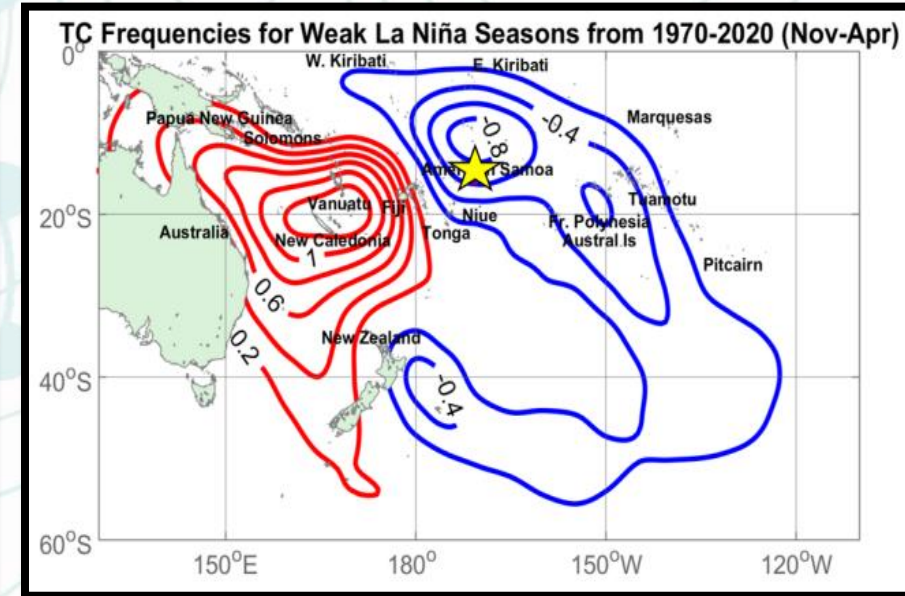
Twitter: www.twitter.com/NWSGuam

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 Samoa



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.



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.

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

