

# Agenda 5iii: Looking Forward: Seasonal and Intra-Seasonal Pacific Guidance for 2021-2022

Northern Hemisphere (West Pacific) and American Samoa Tropical Cyclones

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Australian Government
Department of Foreign Affairs and Trade
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## **Outline of Presentation**

- WFO Guam and NWS Pacific Region
- 2021/2022 American Samoa TC Outlook
- 2021/2022 Tropical Cyclones
- Current State of the Climate and Impacts to TC Genesis
- 2022 Western North Pacific TCs So Far
- 2022 Western North Pacific (For the US Affiliated Pacific Islands (USAPI)) TC Outlook



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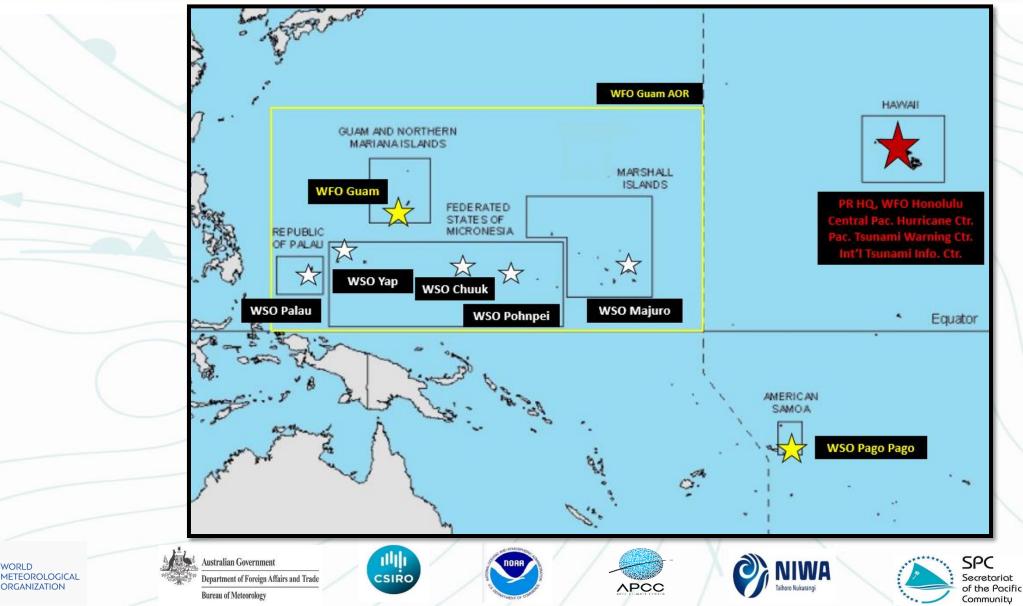




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### **WFO Guam and the NWS Pacific Region**







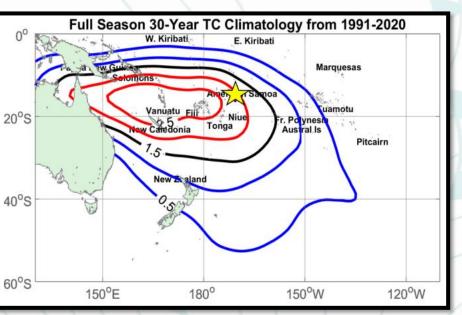
# American Samoa Tropical Cyclone Outlook – NOAA/Oct 2021

- 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 2022
- Predicted a normal to below normal TC Season, specifically, 1 to 2 tropical cyclones
- La Nina typically reduces
   TC activity near American
   Samoa



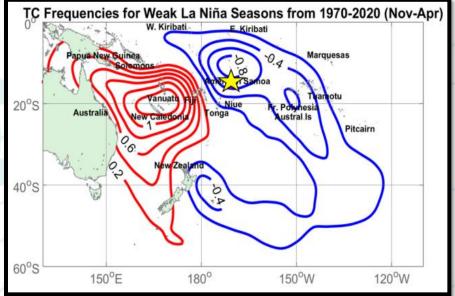
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30-Year Climatology of overall TC Occurrences from 1981-2010 (Data are from the SPEArTC dataset). Blue contours represent less than 1.5 TCs per season; Red contours represent greater than 1.5 TCs per season. Yellow star represents the location of American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









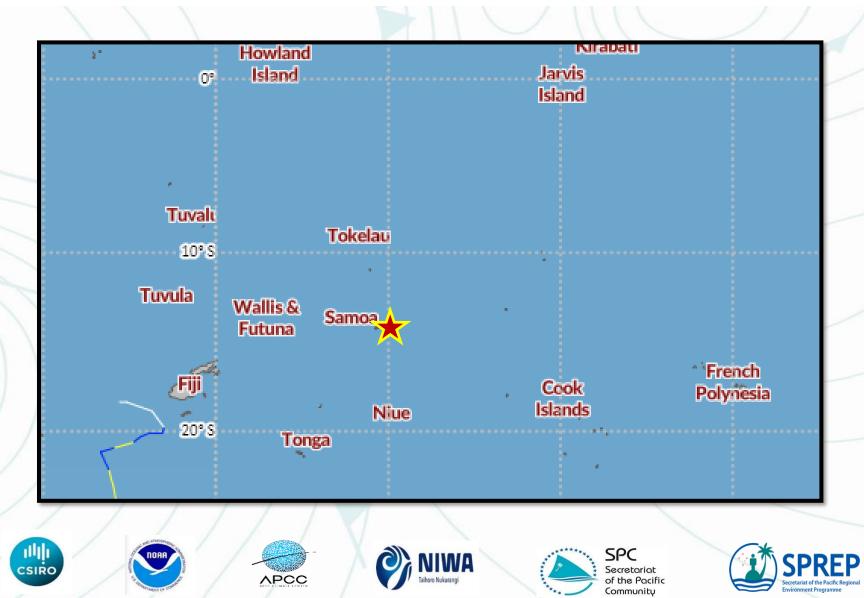
# American Samoa 2021/2022 Tropical Cyclones

 No Tropical Cyclone Activity for the 2021/2022 Season

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# 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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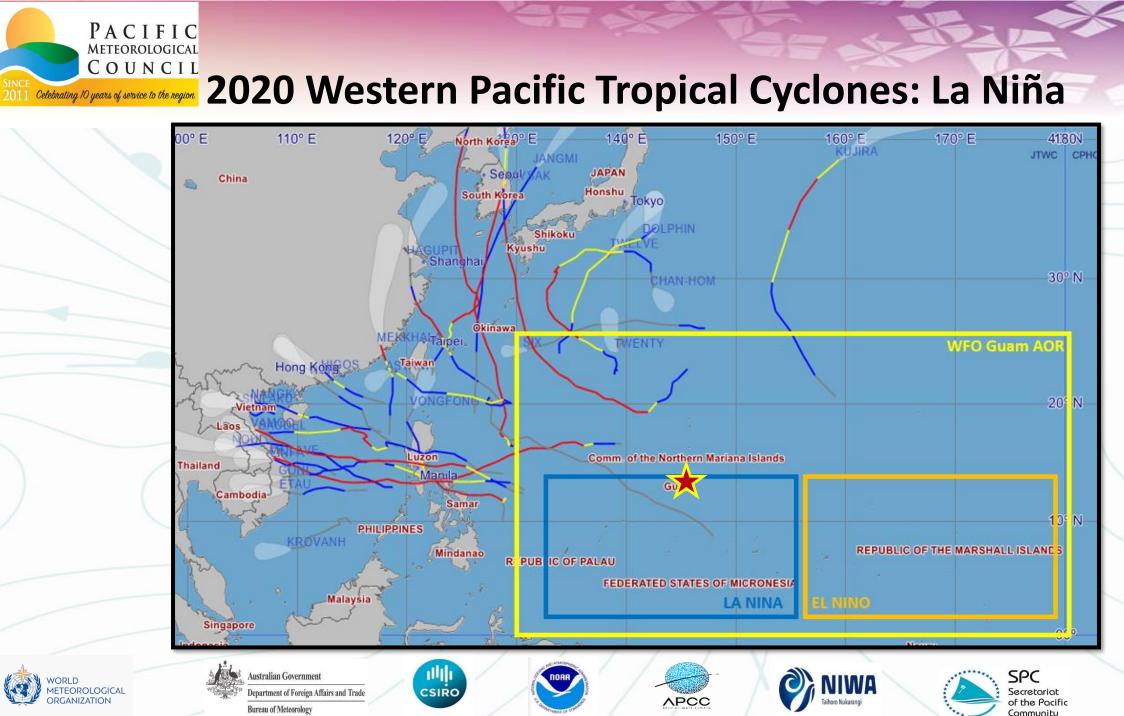
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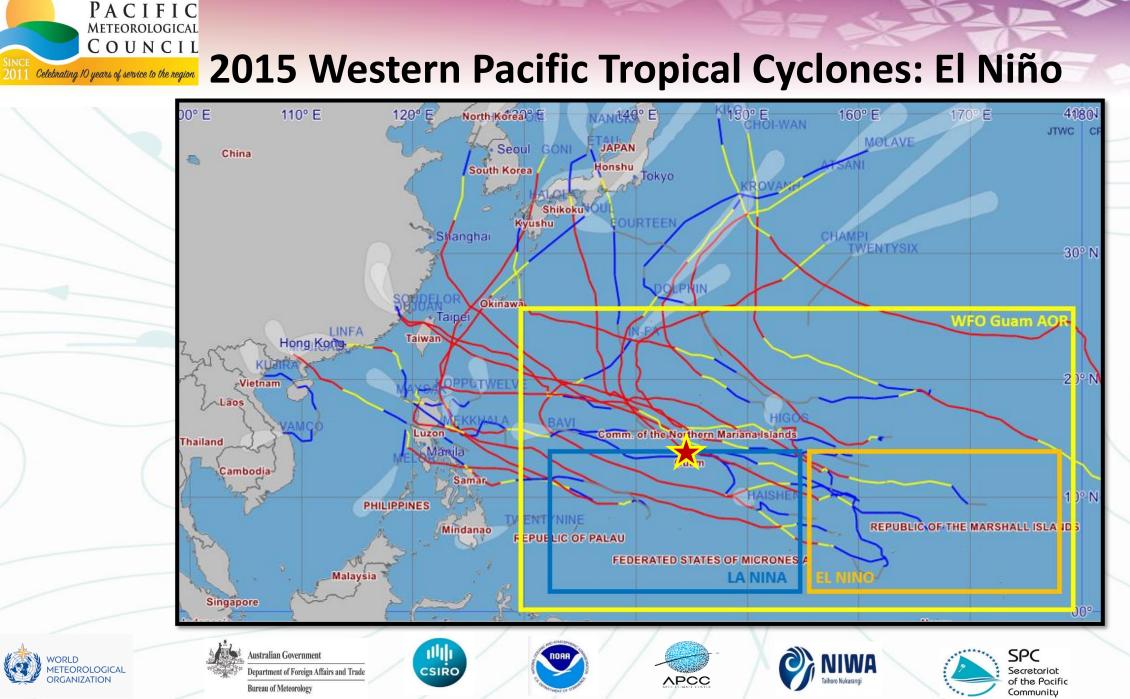
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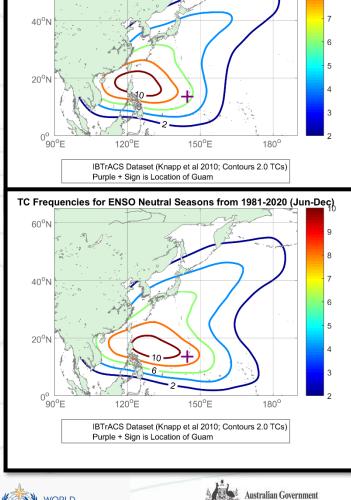
60°N

# West Pacific (USAPI) Tropical Cyclone Outlook - NOAA/May 2022

- Collaborative TC Outlook Underway for USAPI; WFO Guam, NWS Pacific Region, NOAA CPC, ARL, OAR; Not a basin-wide prediction
- Outlook to be Completed and Released by end of May
- Tentative Outlook: Based on current climate pattern: Average Activity

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TC Frequencies for La Niña Seasons from 1970-2020 (Jun-Dec)

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REGION	TROPICAL STORMS	TYPHOONS
Marshall Islands (north of 6N)	1 to 2 (1)	0 to 1 (0)
Marshall Islands (south of 6N)	0 to 1 (0)	0 to 1 (0)
Pohnpei State (north of 6N)	1 to 2 (1)	0 to 1 (0)
Chuuk State (north of 6N)	2 to 3 (1)	1 to 2 (1 major) (0)
Kosrae, Pohnpei, Chuuk States (south of 6N)	1 to 2 (0)	0 to 1 (0)
Yap State and Palau	2 to 3 (3)	1 to 2 (1 major) (2)
Guam, Rota, Tinian and Saipan	2 to 3 (2)	2 to 3 (1 to 2 major) (0)
Northern CNMI	1 to 2 (0)	1 to 2 (1 to 2 major) (0)

A near-normal TC Outlook was predicted for the remainder of 2021 for Guam, the CNMI, ROP, FSM and RMI. Numbers in () represent Tropical Cyclones observed.



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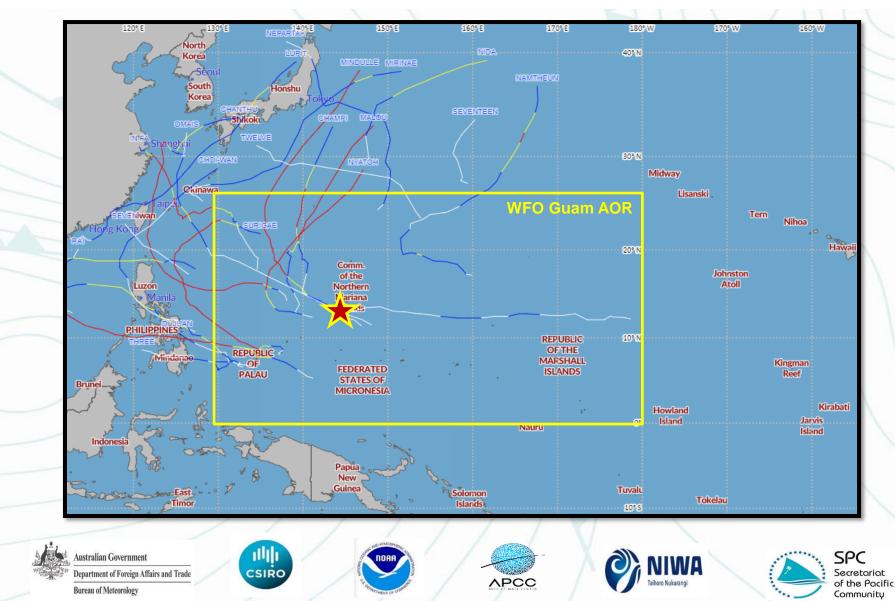












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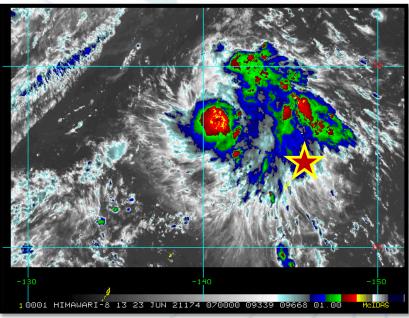




## Western North Pacific 2021 Season

#### Typhoon Champi (06W) June 2021

Guam, USA



#### Typhoon Champi IR 2021-06-23 07:20

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



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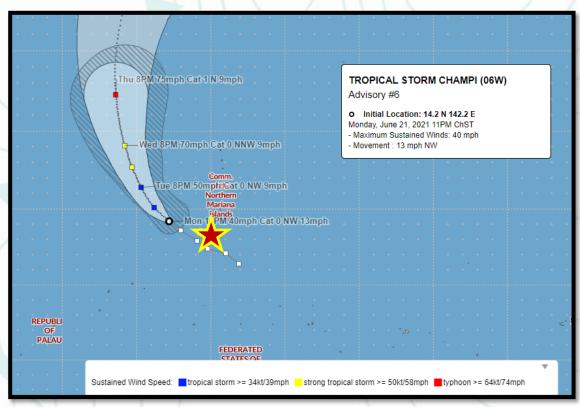
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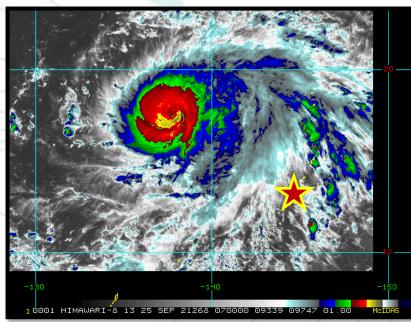
#### NOAA NWS Typhoon Champi (06W) Forecast Track and Uncertainty Graphic



## Western North Pacific 2021 Season

Okinawa

#### Super Typhoon Mindulle (20W) September 2021 Guam, USA



Super Typhoon Mindulle IR 2021-09-25 07:00

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



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SUPER TYPHOON MINDULLE (20W)

aturday, September 25, 2021 11PM ChST

Maximum Sustained Winds: 165 mph (Cat 5)

O Initial Location: 18.9 N 136.6 E

Advisory #16

Movement : 3 mph NM



NOAA NWS Super Typhoon Mindulle (20W)

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Wed 8PM 125mph Cat 3 NNE 13mph

n 8PM 150mph Cat 4 NW 3mph

Sat 11PM 165mph Cat 5 NW 3mph

Tue 8RM 140mph Cat 4 NNW 8mph

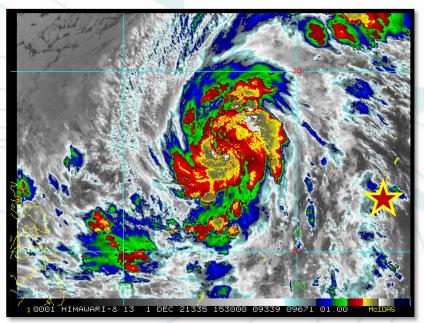
Mon 8PM 145mph Cat 4 NNW 6mp

Forecast Track and Uncertainty Graphic



## Western North Pacific 2021 Season

#### Typhoon Nyatoh (27W) November/December 2021 Guam, USA



#### Typhoon Nyatoh IR 2021-12-01 15:30

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



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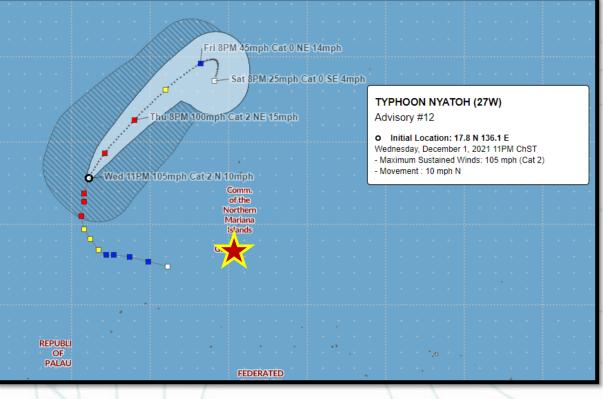
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#### NOAA NWS Typhoon Nyatoh (27W) Forecast Track and Uncertainty Graphic

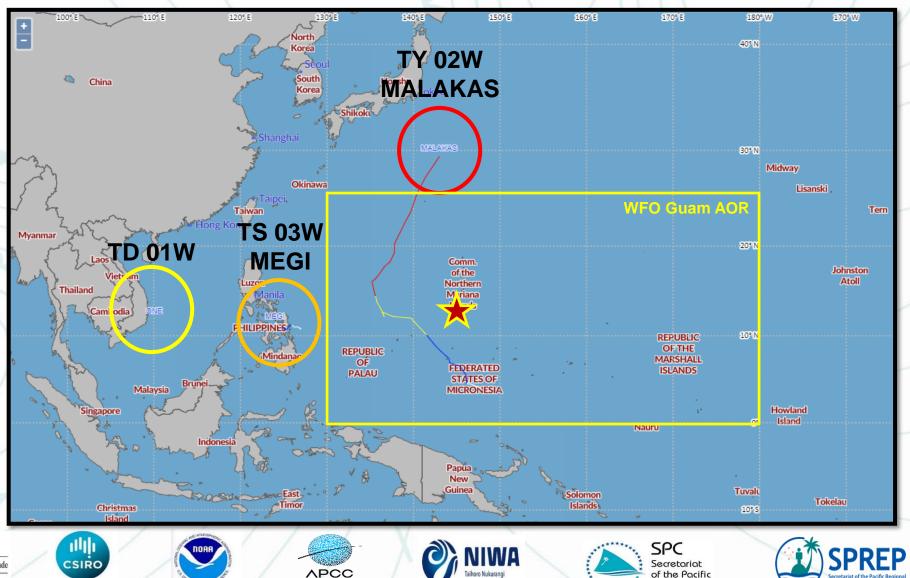


# **2022 West Pacific Tropical Cyclones – So Far**

- 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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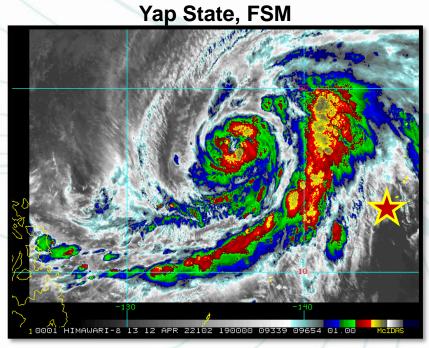


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## Western North Pacific 2022 Season – So Far

### Typhoon Malakas (02W) April 2022



#### 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 Initial Location: 14.5 N 135.6 E Monday, April 11, 2022 5AM ChST Maximum Sustained Winds: 75 mph (Cat 1) lovement · 9 mph NNV 2AM 110mph Cat 2 N 7 REPUBLIC OF THE REPUBL MARSHALI 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



## **Thank You! Contact and R.C.C. Information**

Join WFO Guam as we host our 2<sup>nd</sup> Annual Regional Climate Conference

This 2-hour Webinar will feature weather, climate and preparedness topics of interest to islands across the western North Pacific

<u>When:</u> Thu, May 26, 2022, 9:00-11:00 AM Guam Wed, May 25, 2022, 1:00-3:00 PM Hawaii

For Registration Information: Email: Marcus.Aydlett@noaa.gov

### **NWS Weather Forecast Office Guam**

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