AccuWeather
For Business

2023 Hurricane Season Update

AccuWeather For Business

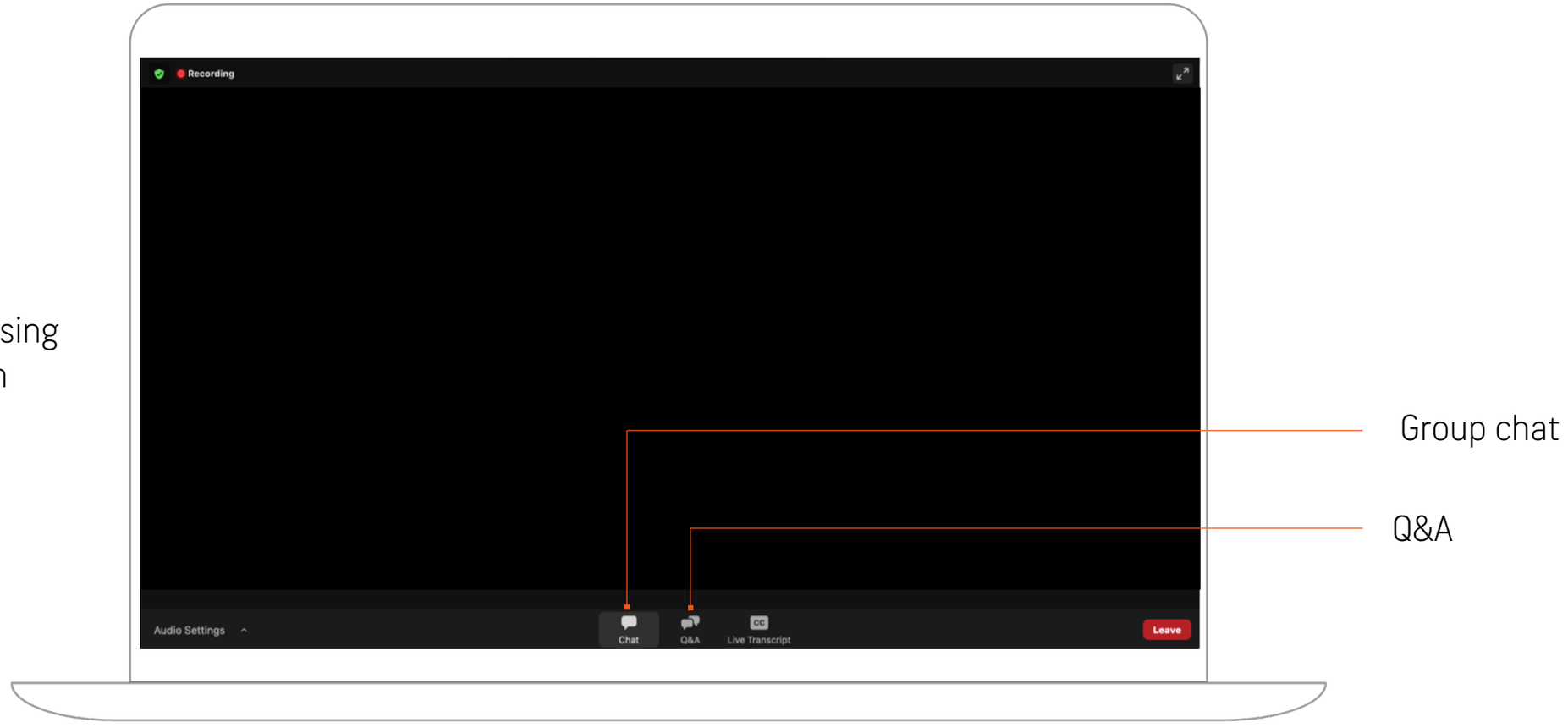
August 2023

Presented by: Alex DaSilva, Hurricane Meteorologist, Long-Range Meteorologist, AccuWeather

Host: Don Coash, Senior Account Executive, Meteorologist, AccuWeather For Business

How Zoom Webinars Work

Submit a question using the Q&A function



Meet the Speakers

Don Coash

Senior Account Executive
Meteorologist
AccuWeather For Business

Alex DaSilva

Hurricane Meteorologist
Long-Range Meteorologist
AccuWeather

Unusual Weather Occurrences

- All three basins have experienced unusual weather events this tropical season.
  - Deadly fires in Maui partially aided by Hurricane Dora moving south of Hawaii.
    - AccuWeather provides state-of-the-art wildfire proximity warnings to clients.

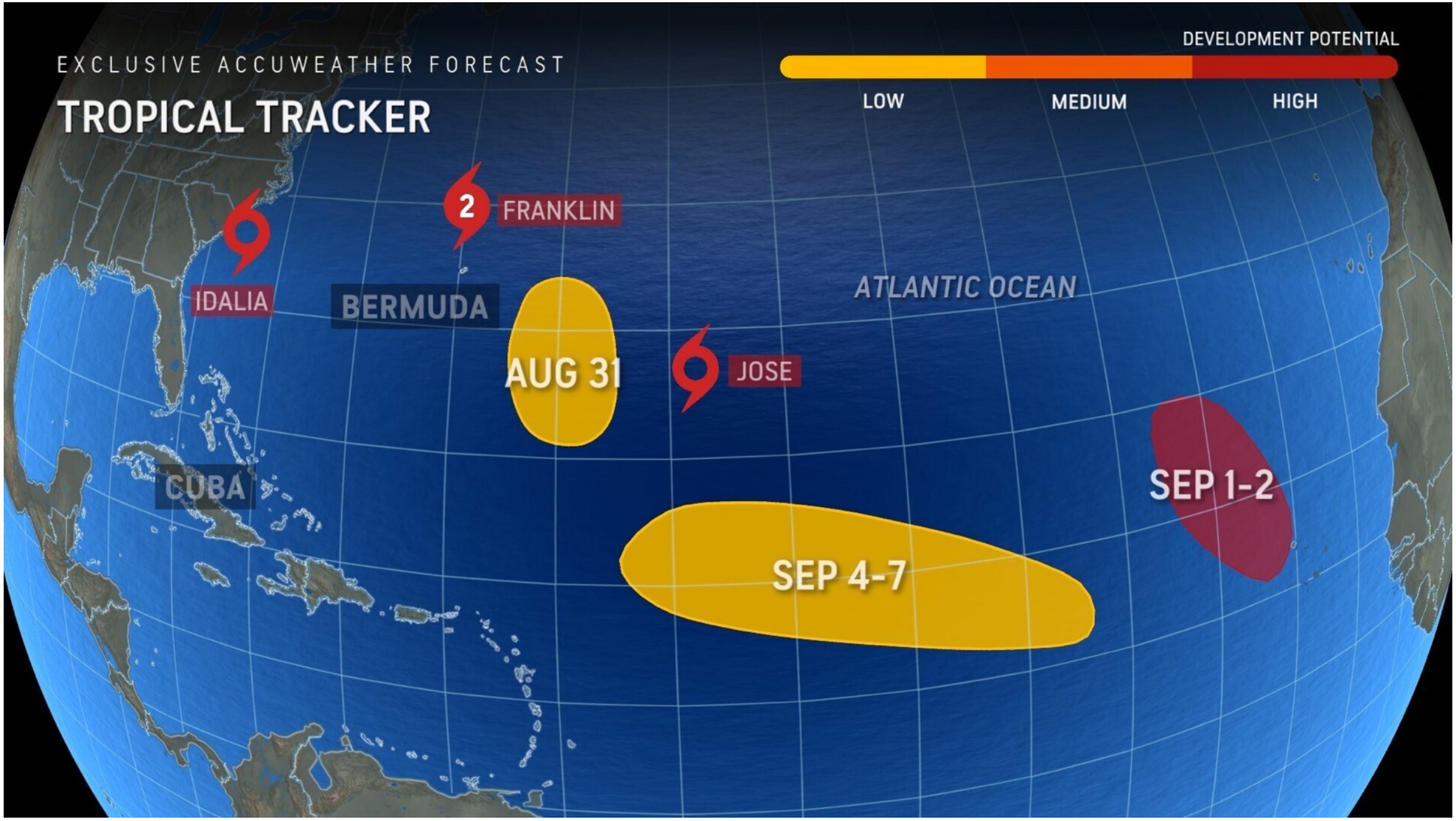
Unusual Weather Occurrences

- All three basins have experienced unusual weather events this tropical season.
  - Tropical Storm Hillary causing dangerous flooding in California.
- An unusually large heat dome over the central U.S. and a dip in the jet stream off the West Coast helped to funnel the storm north.

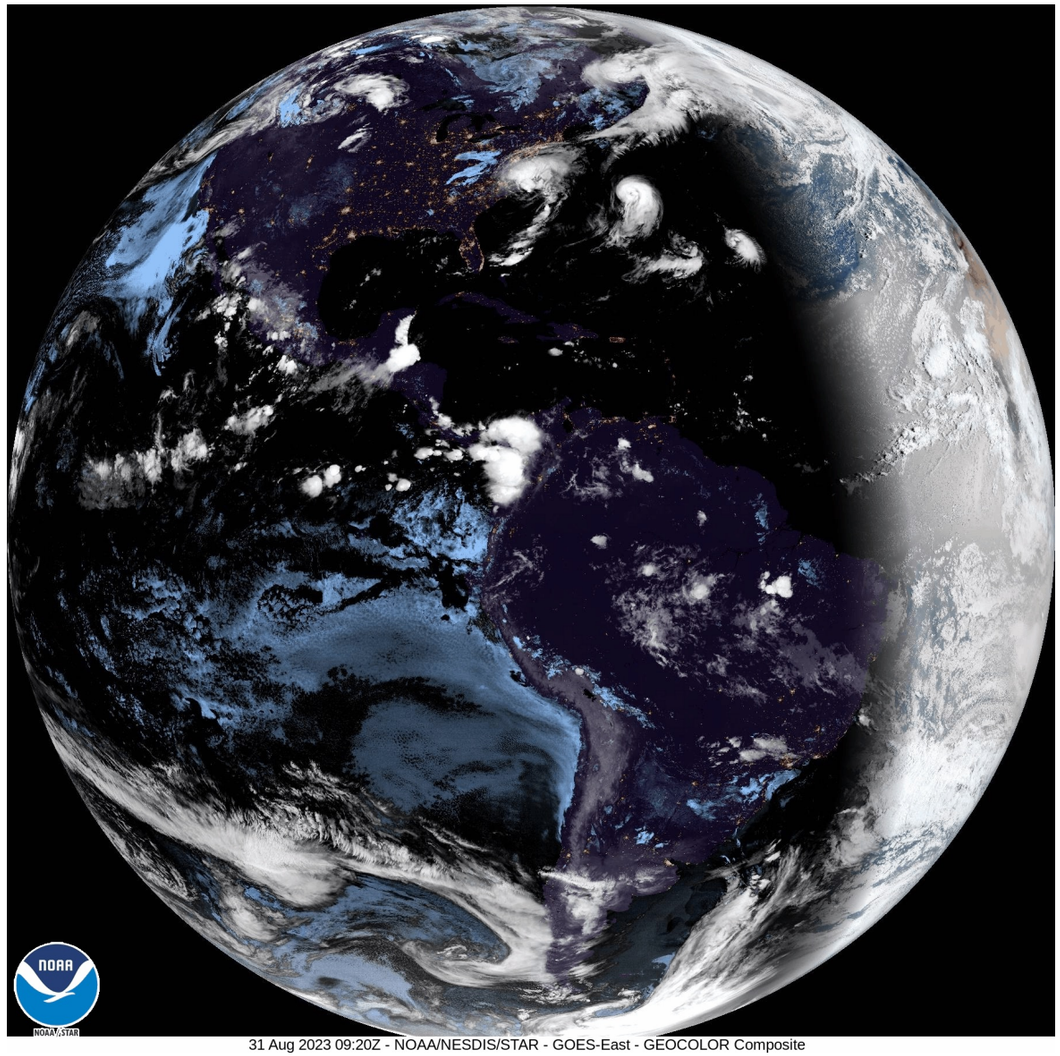
Unusual Weather Occurrences

- All three basins have experienced unusual weather events this tropical season.
  - Hurricane Idalia hit a portion of the Florida coast that has never been hit by a major hurricane (CAT 3+) in recorded history.
- Record warm sea-surface temperatures in the Atlantic.

Tropical Tracker



Current Satellite



31 Aug 2023 09:20Z - NOAA/NESDIS/STAR - GOES-East - GEOCOLOR Composite

Definitions

- El Niño Southern Oscillation (ENSO): A short-term climate fluctuation that is determined by warming or cooling of the central Pacific waters.
- El Niño: A 12- to 18-month period during which anomalously warm sea-surface temperatures occur in the eastern half of the equatorial Pacific. Moderate or strong El Niño events occur irregularly, about once every three to seven years on average.
- La Niña: Opposite of El Niño with anomalously cold sea-surface temperatures occurring in the eastern half of the equatorial Pacific.
- Vertical Wind Shear: The difference in horizontal wind speed and direction between two vertical levels, usually between 5,000 feet and 40,000 feet.
- Analog Years: Past years which have weather patterns similar to current and projected weather patterns. These are often used to estimate possible future trends and impacts during a hurricane season.
- Accumulated Cyclone Energy (ACE): A measure used to express the activity of individual tropical cyclones and entire tropical cyclone seasons. It uses an approximation of the wind energy used by a tropical system over its lifetime and is calculated every six hours.
- East Pacific Basin (EPAC): Defined as the tropical part of the Pacific from 140 West longitude to the west coast of Mexico and Central America.
- Central Pacific Basin (CPAC): Defined as the tropical part of the Pacific from 180 west (date line) to 140 West longitude.

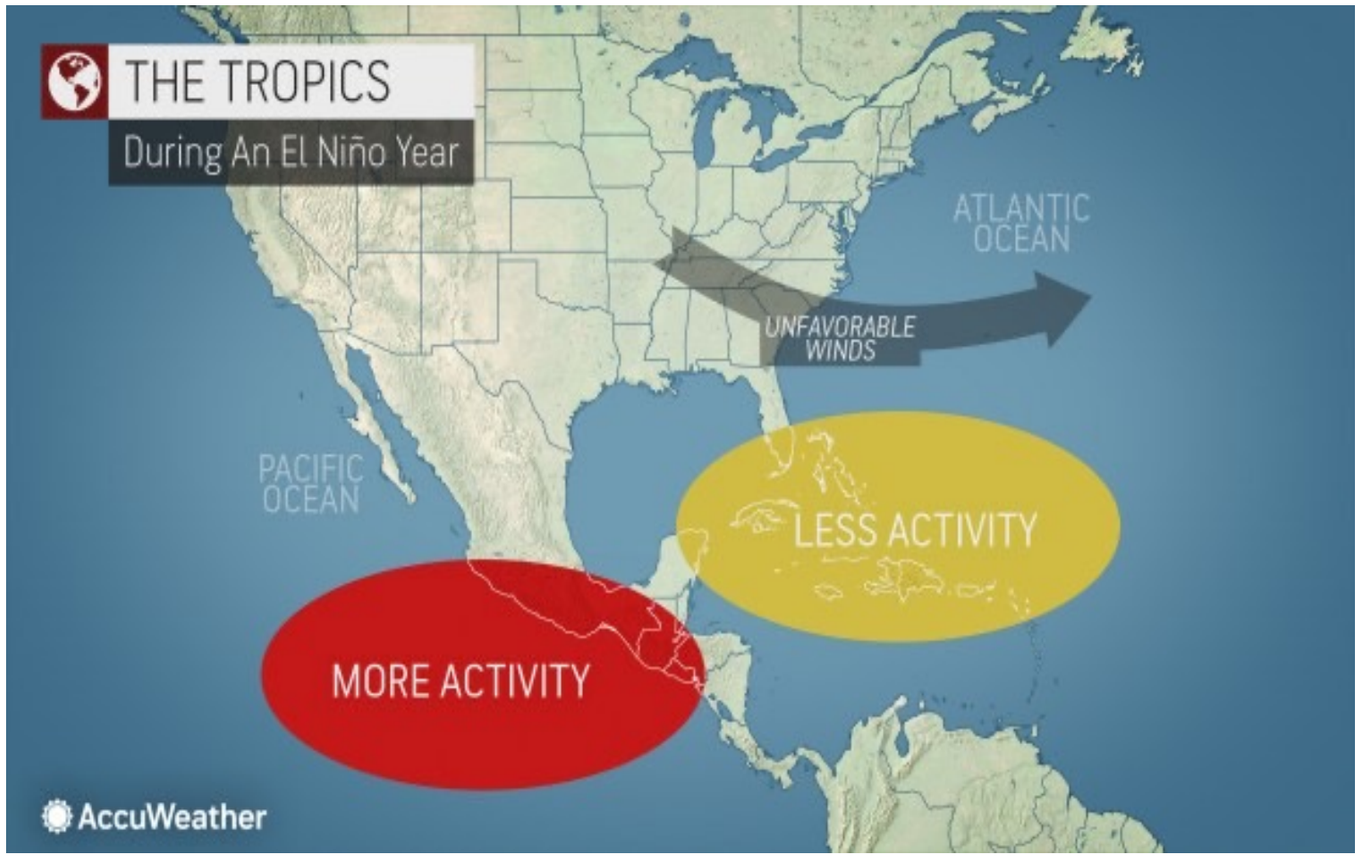
Atlantic Hurricane Season Forecast for 2023
Aug. 1, 2023, Update (New Update Released on Sept. 1)

	Total Storms	Hurricanes	Major Hurricanes	ACE	Direct U.S. Impacts
2023 YTD	11	3	2	49	2
Previous Year (2022)	14	8	2	95	4
Updated 2023 Forecast (updated Aug. 1)	**13-17**	**4-8**	**1-3**	**105-135**	**2-4**
30-year historical average 1990-2020	14	7	3	123	4

=Change from previous forecast

Key Factor This Season (ENSO)

Typical El Niño influence



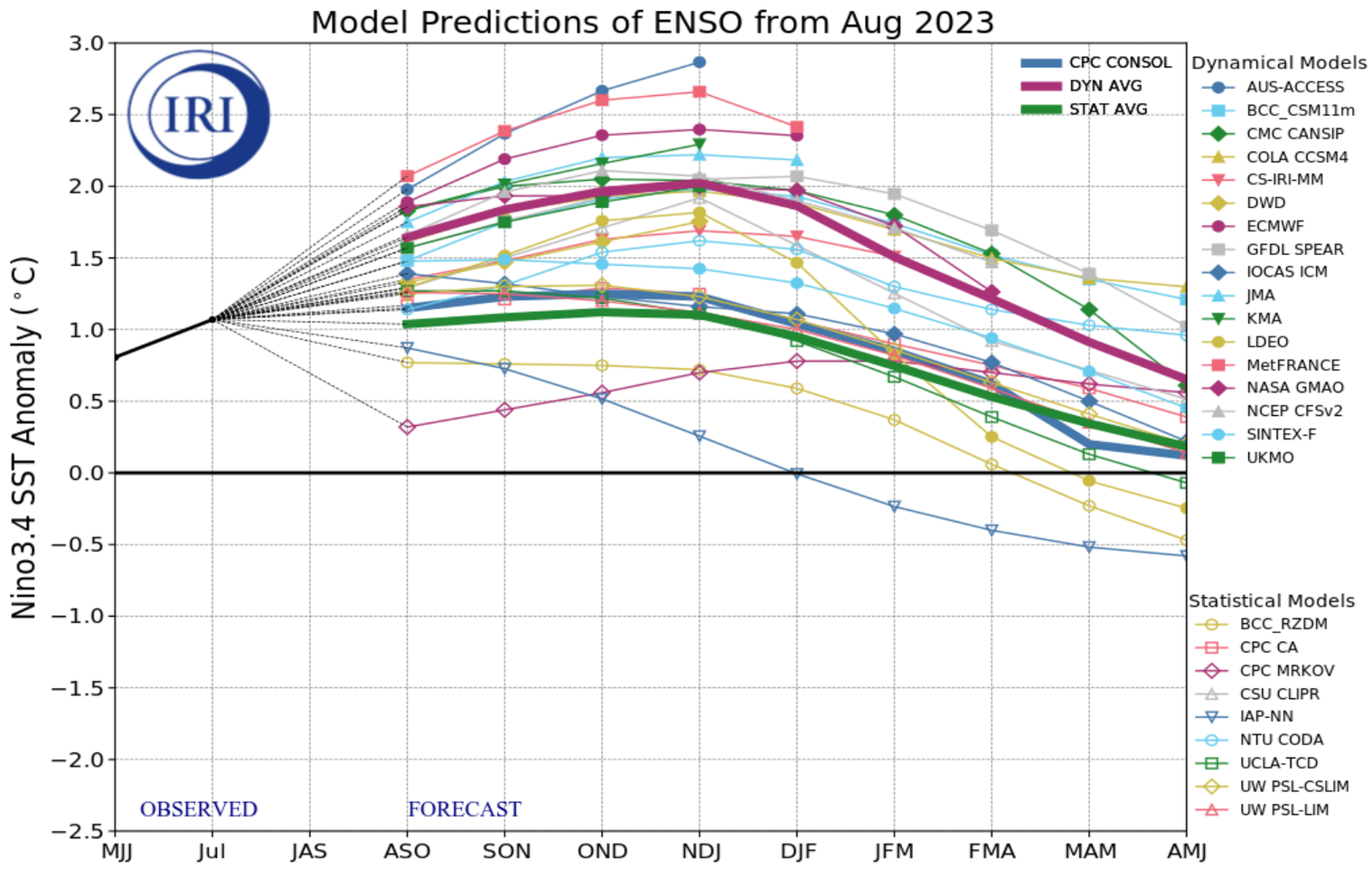
- El Niño conditions continue to remain in place across the Pacific Ocean.
- The continued strength of El Niño the rest of summer into the fall will likely *INCREASE* the chances for frequent and larger coverage vertical wind shear across the basin during the tropical season in the Atlantic.
- The opposite is true in the Pacific where the continued strength of El Niño the rest of summer into the fall will likely *DECREASE* the chances for frequent and larger coverage vertical wind shear.

Key Factor This Season (ENSO)

El Niño

Neutral

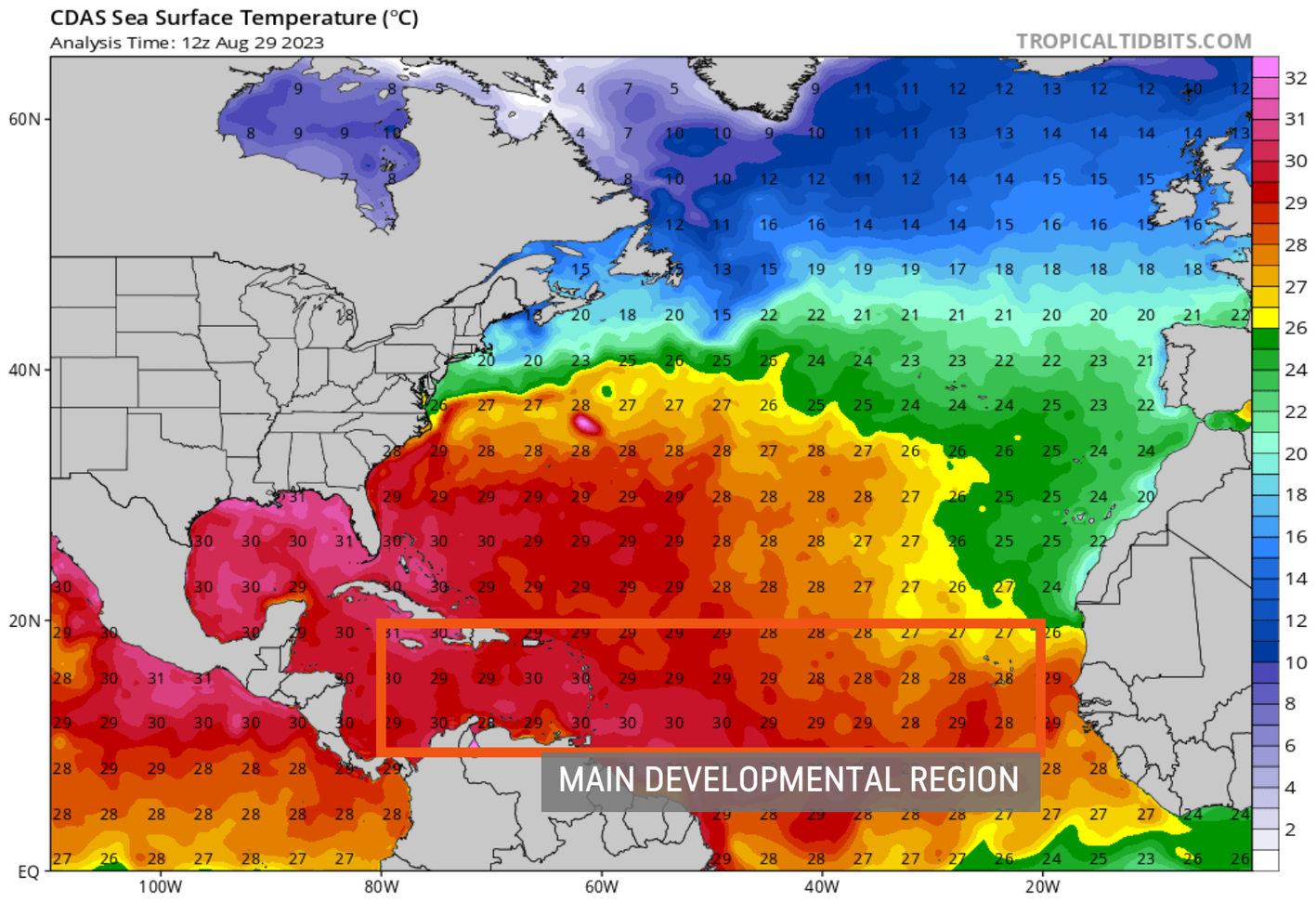
La Niña



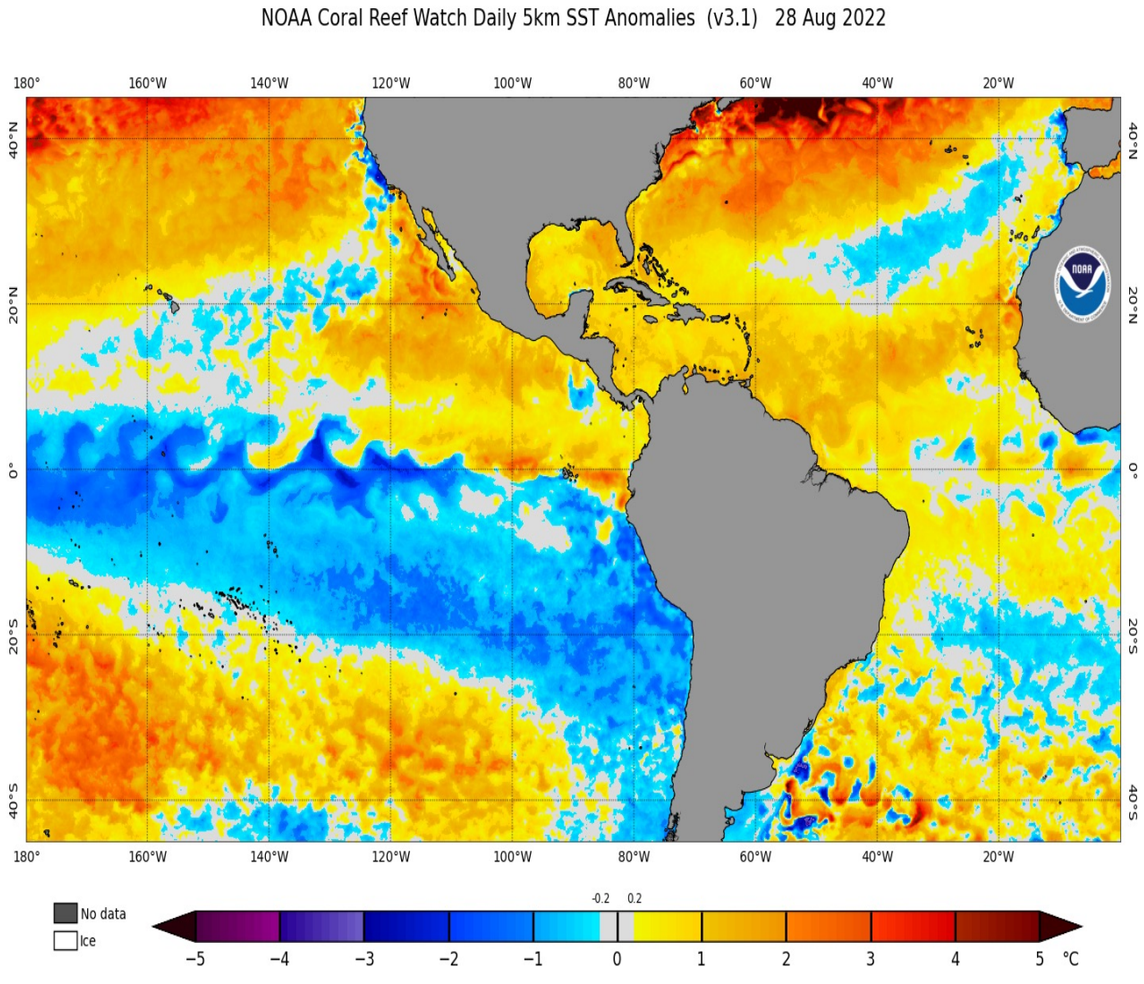
Most Active Time of Year

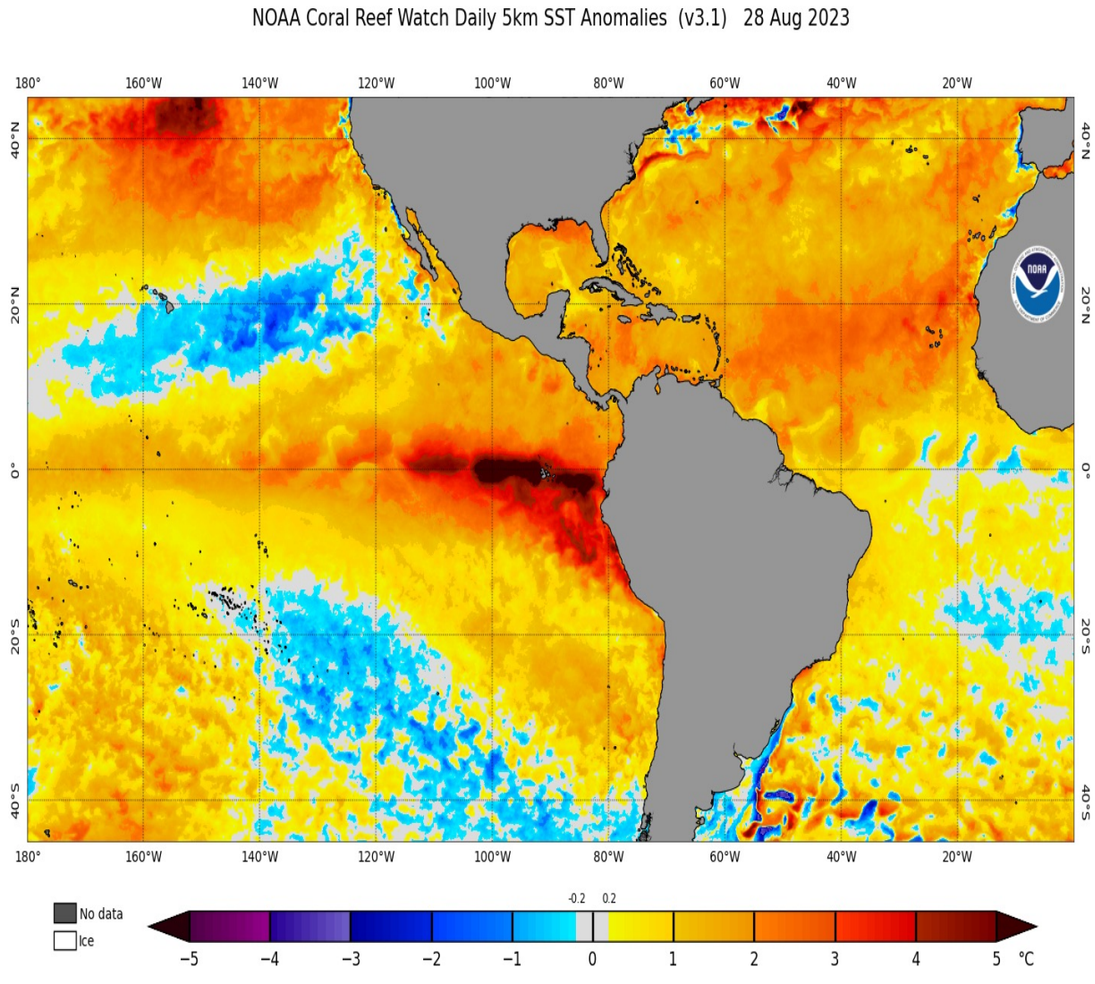
Key Factor This Season (Sea-Surface Temperatures)

- Sea-surface temperatures (SST) above 26 degrees Celsius (78.8 degrees Fahrenheit) are most favorable for tropical development.
- Very high SSTs are currently along the Southeast coast of the U.S. Sea-surface temperatures are above 30 degrees Celsius (86 degrees Fahrenheit) in some areas.
- This brings a higher risk for a rapid intensifying tropical system like Hurricane Idalia.



Key Factor This Season (Sea-Surface Temperature Anomalies 2022 vs 2023)





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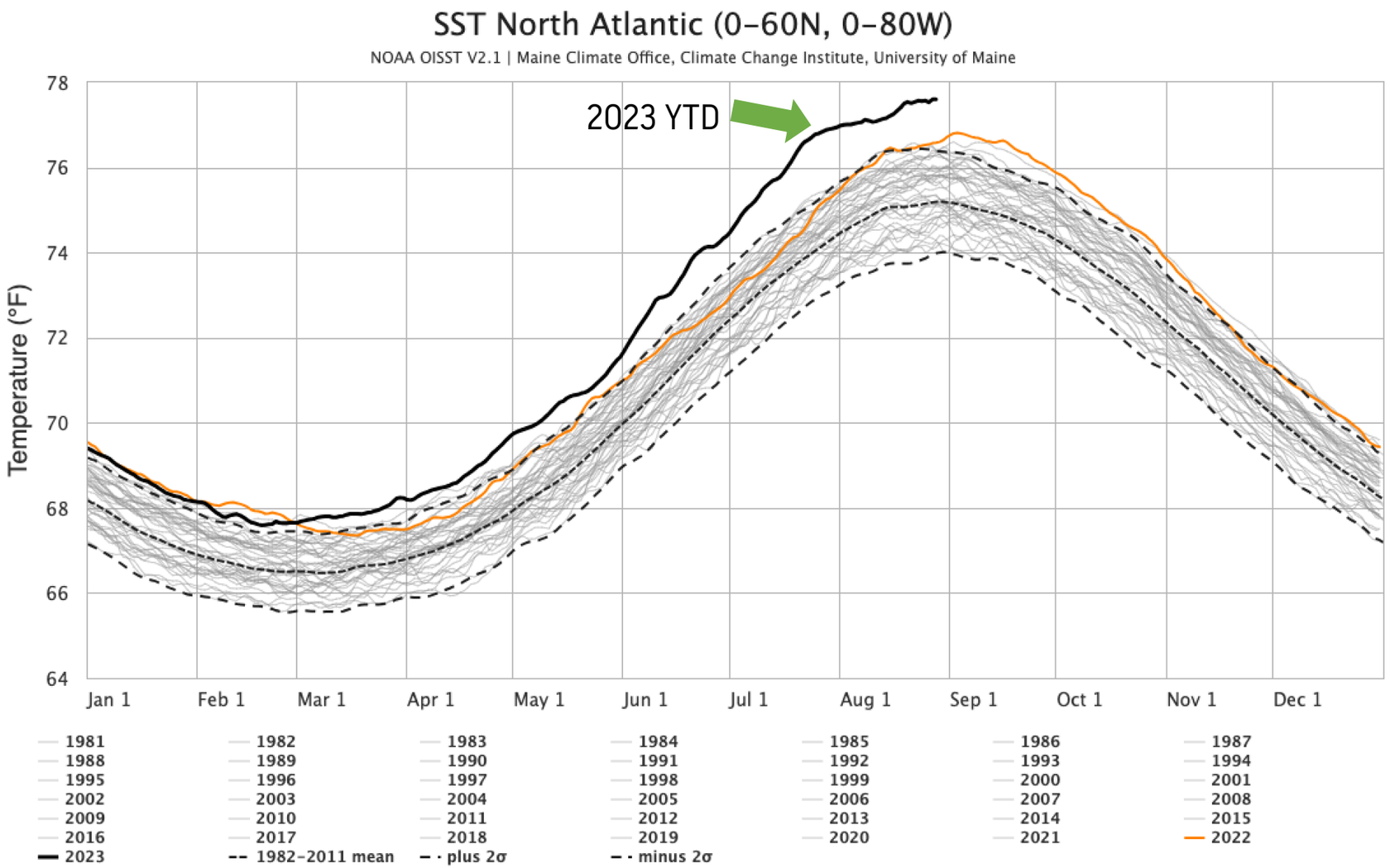

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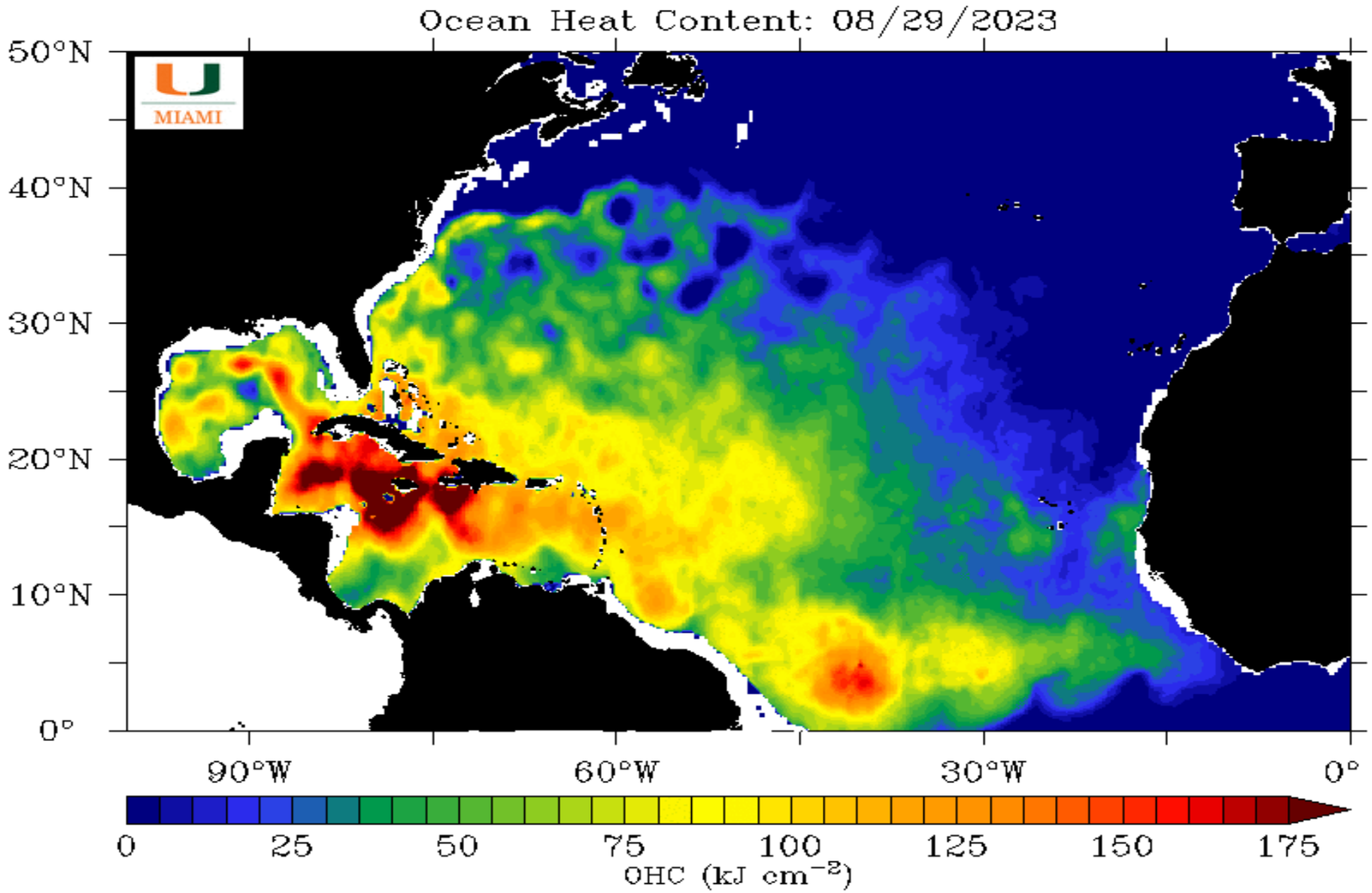


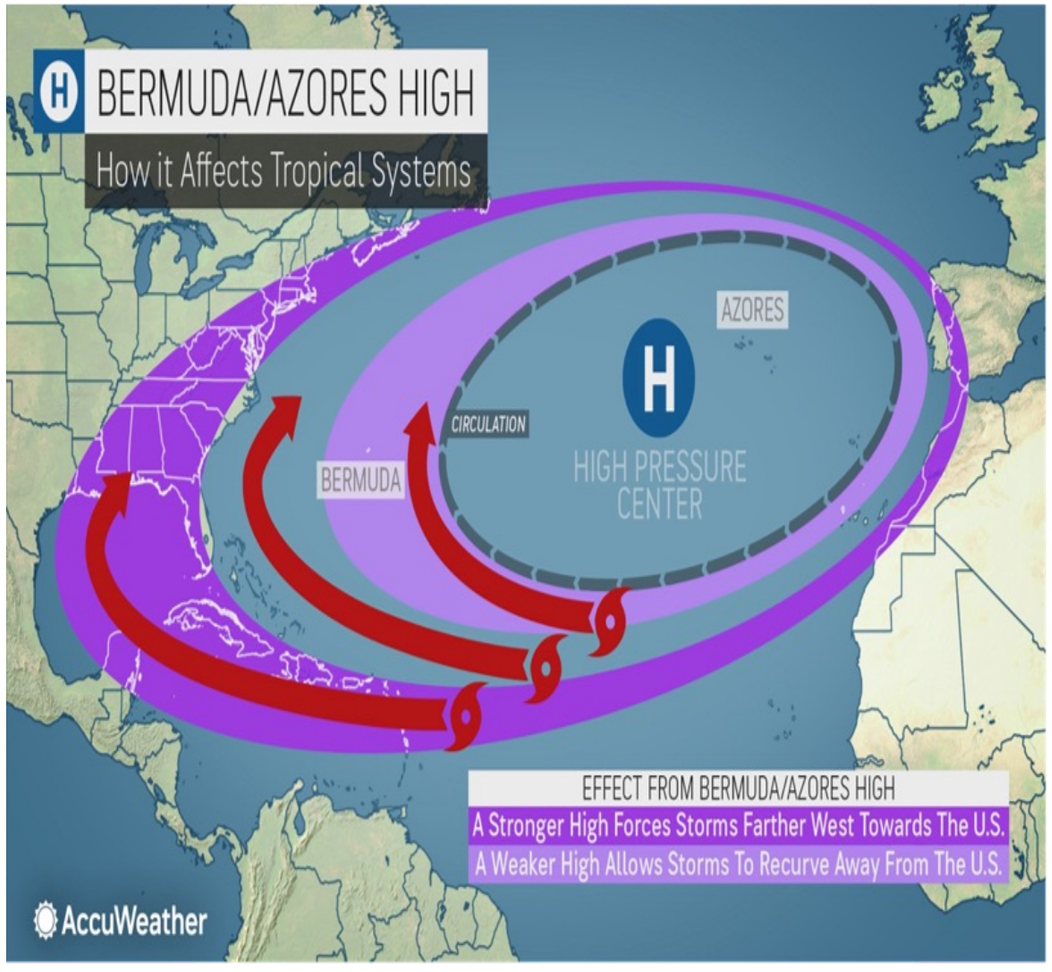
Things To Monitor For The Remainder of The 2023 Atlantic Hurricane Season

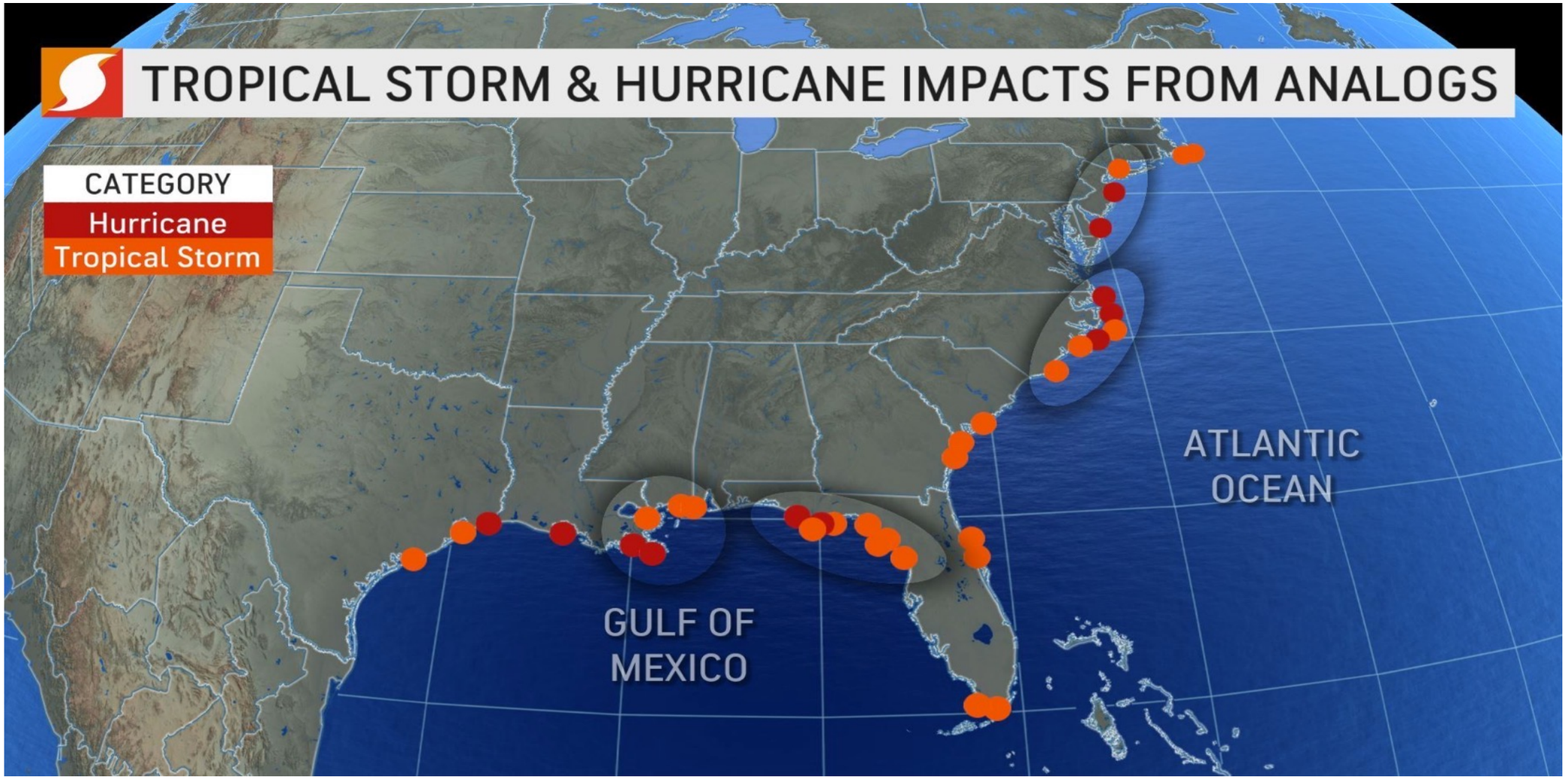
ENSO

- The strength of El Niño during the rest of the tropical season will have a dramatic impact on vertical wind shear across the basin. The stronger the El Niño, the more shear is likely to be present across the basin.

Bermuda High

- As with every year, the exact orientation of the Bermuda high will play a major role on potential U.S. impacts. Small shifts east or west can drastically impact the storm tracks.





Analog years: 1976, 1986, 2001, 2002, 2006, 2009, 2012, 2014, 2018

In Summary Atlantic Basin

- We still expect that a strengthening El Niño will increase the coverage and frequency of vertical wind shear across the Atlantic basin, limiting development, especially late in the season.
  - Despite the forecast for more frequent wind shear across the basin, we still are forecasting a near to above-average hurricane season due to the record high sea-surface temperatures.
- Water temperatures across the Atlantic basin are at record levels.
- Late in the season, two competing factors will determine how active the Atlantic basin is: a strengthening El Niño and warm Atlantic SSTs.
  - Higher sea-surface temperatures also enable more development than likely would have occurred if they were not as high.
  - The higher sea-surface temperature values also increase the chance for storms to strengthen very rapidly (i.e., Hurricane Ian in 2022)
- A weaker and farther south Bermuda High this summer so far led to the common charge of dry and dusty air that limits tropical development. This late start has allowed for more robust tropical waves and development.
- Based on the analog tracks, the highest risk for direct impacts this year continues to remain from the northern Gulf of Mexico, Florida and north to the Carolinas. There is a lower risk for significant direct impacts for Texas.

Eastern Pacific Hurricane Season Forecast for 2023

	Tropical Storms	Hurricanes	Major Hurricanes	ACE	Direct Impacts to Mexico/Central America
2023 YTD	9	6	4	103.5	2
Previous Year (2022)	19	10	4	116.5	7
Updated 2023 Forecast	17-21	8-12	4-8	145-175	4-8
30-year historical average 1990-2020	15	8	4	132	2-3

In Summary East Pacific Basin

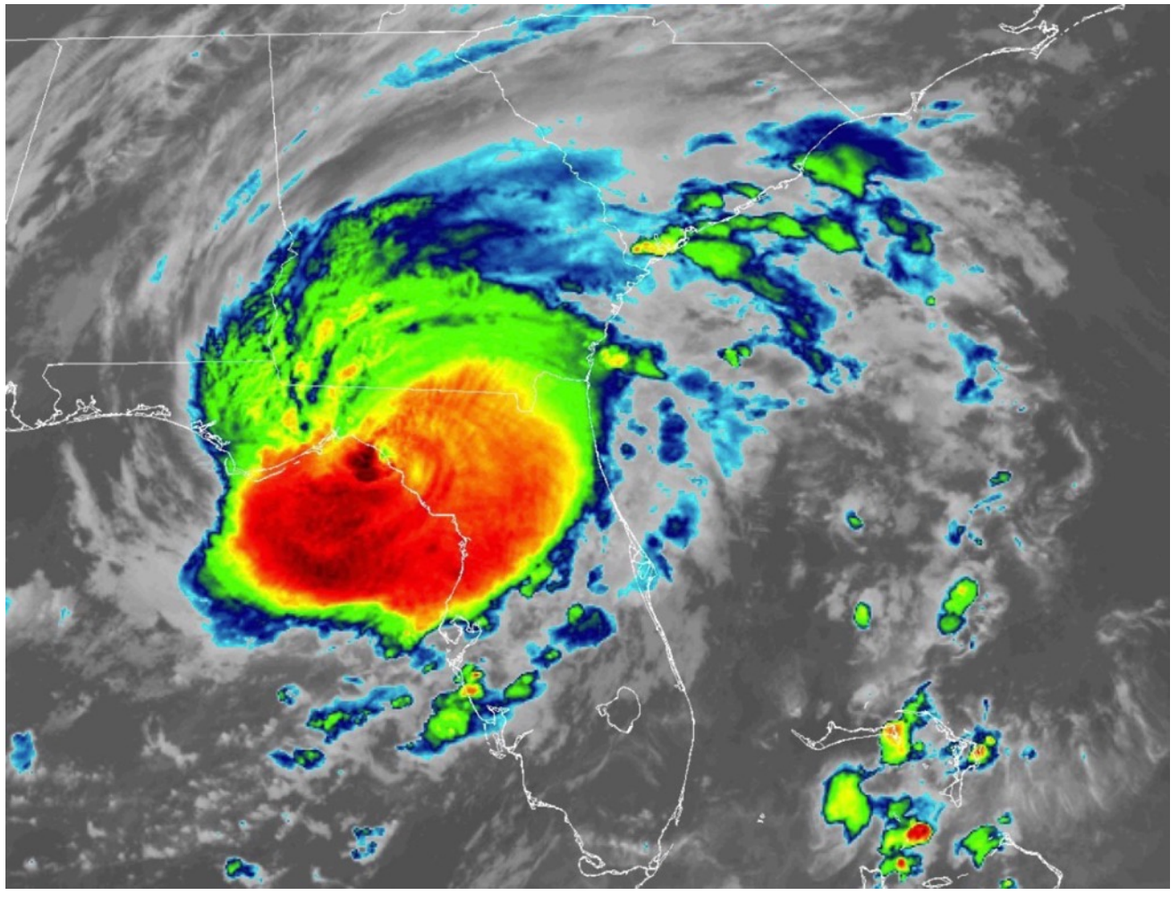
- The 2023 hurricane season is still forecast to feature an above-average number of tropical storms and hurricanes.

- Sea-surface temperatures across most of the basin remain warmer than average, promoting a favorable environment for development.

- The phase of ENSO, the onset of El Niño, will play a significant role in the amount of wind shear across the basin this season. The stronger the El Niño becomes, the less frequent the wind shear will likely be across the basin.

- Analog years chosen for this season suggest that there remains an above-average chance for direct impacts along the West coast of Mexico and Baja California.

AccuWeather's Superior Accuracy™



- AccuWeather's forecasts and warnings saved clients:
  - Tens of billions of dollars
  - Saved lives of employees
  - Reputational harm
- Hurricanes: AccuWeather's Forecasts
  - Hurricane Track 3% more accurate than National Hurricane Center
  - 13% more accurate forecasting intensity of hurricane winds along the eye path

Hurricane Ian: September 28 – October 3, 2022

- AccuWeather was the **ONLY** source to forecast a 16-20′ storm surge in Fort Meyers.
- The National Weather Service only predicted a 12-16′ storm surge.
- The actual storm surge was 18′.
- AccuWeather For Business experts hosted a live interactive webinar days before Ian hit to discuss its path, impacts, and possible business disruptions.
- AFB customers with AssetReport™ were able to automatically identify specific company assets at risk, how much surge, wind, and rainfall was expected, and over what timeframe in their specific area.

Q & A

Contact us to learn more about AccuWeather's Hurricane Warning Service or use the QR Code below.

For more information about AccuWeather For Business products and services visit: www.afb.accuweather.com

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Thank you

Contact us to learn more about all the ways you can partner with AccuWeather.

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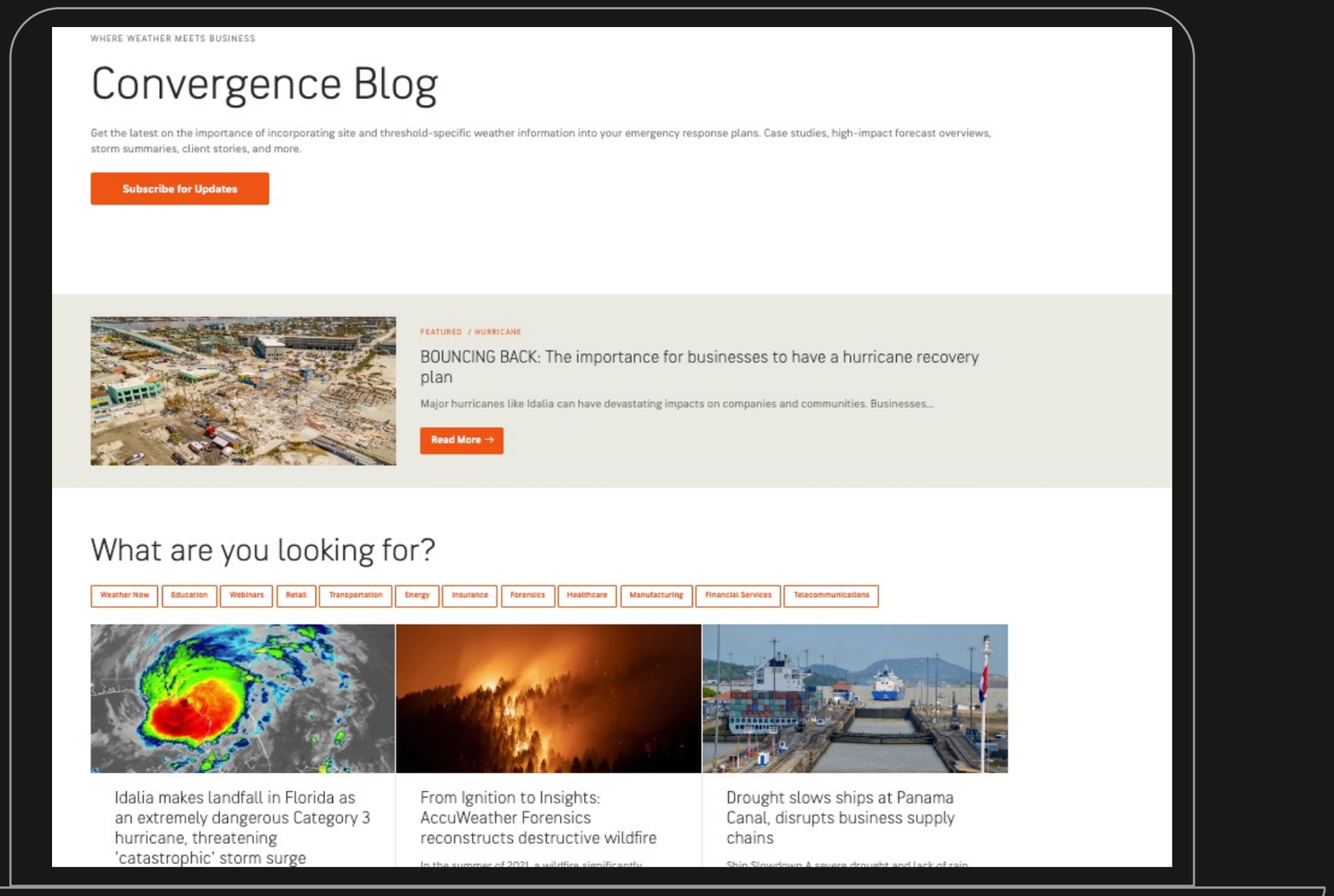

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