IS 445 - ACG/ACU: Data Visualization - Fall 2023

Visualization Report 2

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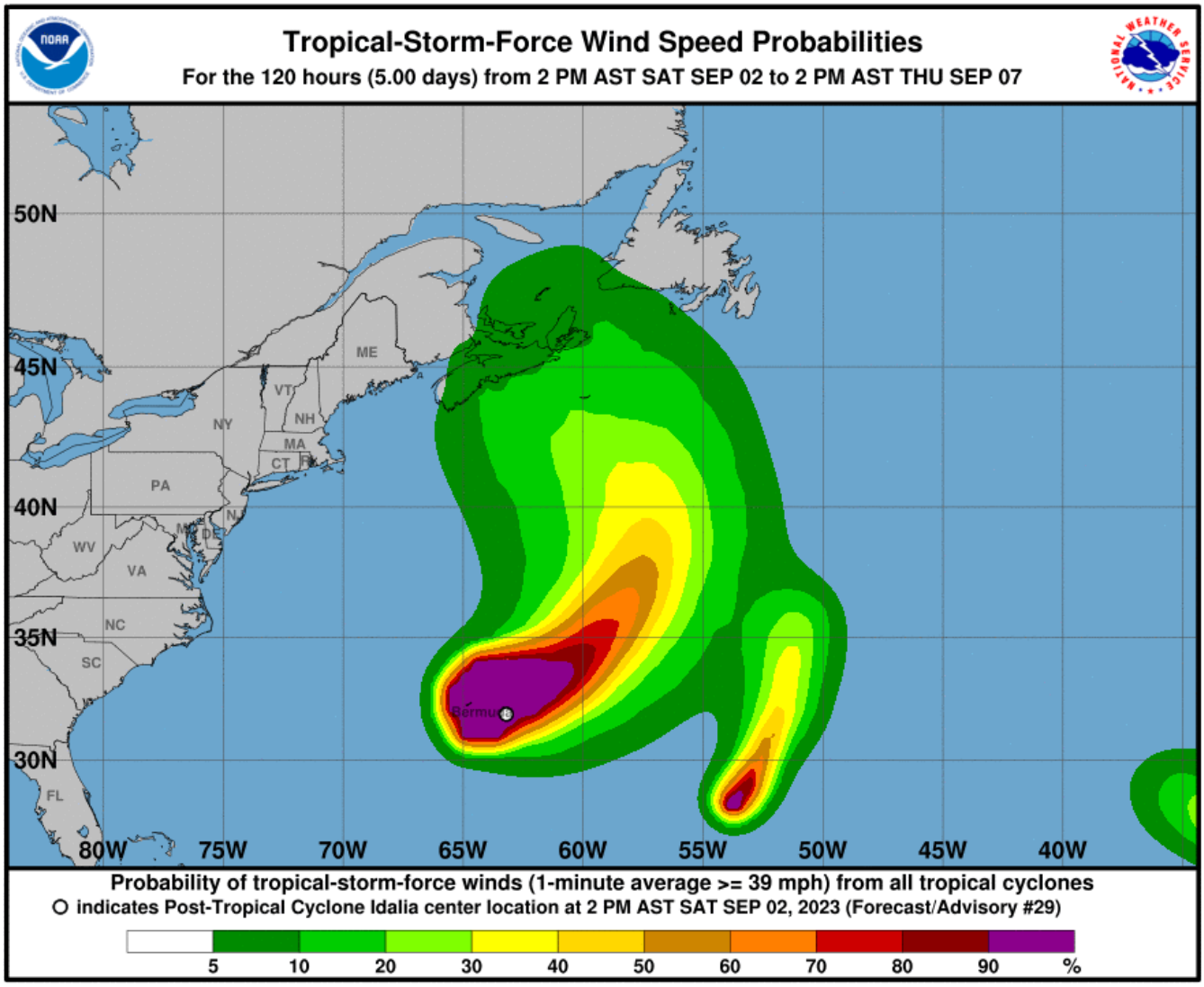
The visualization below was published by the National Hurricane Center (NHC) website on September 02, 2023, studying the development of the tropical cyclone Idalia and its probability of turning into a hurricane. The Visualization shows the probability of surface wind speeds equal to or greater than 39 mph, sustained for an average of 1 minute. The wind speed probability estimates were based on the NHC official wind intensity and radii forecast during the past hurricane occurrences in recent years. Therefore, wind speed and intensity data were measured in 12-hour intervals for 120 hours (5 days) and converted into probability data displayed in the visualization.

I liked the color choice in the visualization to indicate areas in danger and areas with less probability of tropical storm occurrence. Areas marked with red colors had a higher probability of experiencing tropical storms or even hurricanes than areas in lighter colors. Regions in the east were less prone to the storm than regions in the west, which coincided with the actual occurrence of Hurricane Idalia and the regions it impacted.

However, the visualization would best be presented as an animated graph to track the incidence of the storm at each measured time point. This would give a better understanding of where the storm started and the direction of where it is heading than only presenting a snapshot of a single time period.


Tropical-Storm-Force Wind Speed Probabilities
For the 120 hours (5.00 days) from 2 PM AST SAT SEP 02 to 2 PM AST THU SEP 07
50N
45N
40N
35N
30N
80W
75W
70W
65W
60W
55W
50W
45W
40W
ME
VT
NH
NY
MA
CT
RI
PA
NJ
MD
DE
WV
VA
NC
SC
FL
Bermuda
Probability of tropical-storm-force winds (1-minute average >= 39 mph) from all tropical cyclones
indicates Post-Tropical Cyclone Idalia center location at 2 PM AST SAT SEP 02, 2023 (Forecast/Advisory #29)
5
10
20
30
40
50
60
70
80
90
%