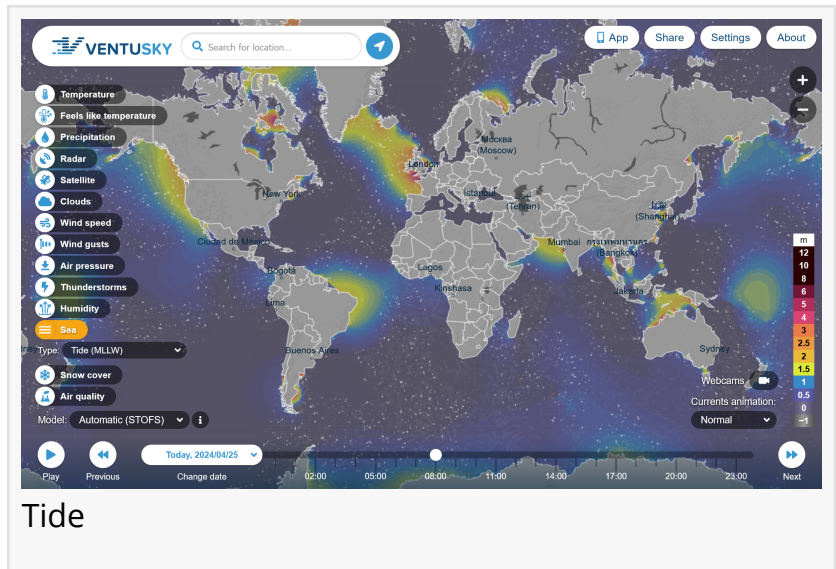


Ventusky Utilizes New NOAA Model to Display Tidal Data Worldwide, Increasing Safety at Sea

The Ventusky platform visualizes meteorological data from more than 20 models, radars, and satellites from around the world.

PRAGUE, CZECHIA, April 25, 2024 /EINPresswire.com/ -- The [Ventusky](https://Ventusky.com/) platform visualizes meteorological data from more than 20 models, radars, and satellites from around the world. The platform has now added data from the STOFS model calculated by NOAA. This model is unique in that it provides a forecast of tide and surge for the entire world, including the prediction of tidal surges.



On Ventusky, the data is visualized on a map, allowing users to see the development of tide and surge in a broader context. The development over time is also captured by animated lines that show ocean currents. If the lines move away from the coast, it is evident that the sea current also moves away, leading to a lowering of the water level. Conversely, if the lines move towards the coast, a tide is occurring, and the water level will continue to rise.

Tide and surge values are differentiated by color. In red-marked areas, they exceed up to 5 meters. The reference level at each location is set as the so-called MLLW. This is the average of the lowest water levels at a given location over several years. The value displayed on the map then indicates how many meters the water level differs from this average at a given time.

Such data captured by users can be found nowhere else on the internet. Tide and surge are now visualized on most websites only through tables, but directly on maps, Ventusky is the first application to capture tides and ebbs on such a scale. By utilizing the STOFS model, Ventusky also captures tidal surges, which is particularly important during tropical storms. If combined with astronomical tides, extensive flooding of coastal areas and significant damage may occur.

For several years now, Ventusky has also offered wave height forecasts using the German ICON

model from the German Meteorological Institute DWD. The visualization focuses on distinguishing waves generated at the location by wind (marked with white animated arcs) and waves generated tens of kilometers away due to swell (marked with black animated arcs). Users can then easily discern their mutual development and the overall behavior of the oceans in the area. On the Ventusky website, you can also find dozens of other layers related particularly to the development of weather in the atmosphere.

Direct Links to the new forecast:

[Tide from the STOFS model](#)

[Tidal and surge from the STOFS model](#)

About Ventusky

The Ventusky application focuses on weather forecasts and the visualization of meteorological data. The name 'Ventusky' combines the Latin word 'Ventus,' meaning wind, and the English word 'Sky,' meaning sky. The beautiful visualizations of meteorological data from the Ventusky application have already been used in articles by leading world newspapers such as the American Washington Post, the French Libération, and the British Daily Mail.

About STOFS

NOAA's Surge and Tide Operational Forecast System (STOFS) is a collaboration between the NOAA/NOS/OCS/Coast Survey Development Lab, University of Notre Dame, Virginia Institute of Marine Science and NOAA/NCEP. STOFS contains the two-dimensional depth averaged global component (STOFS-2D-Global) based on the ADvanced CIRCulation (ADCIRC) model core. STOFS also includes a three-dimensional (3D) model component for the Atlantic basin (STOFS-3D-Atlantic) based on the SCHISM model core (Semi-implicit Cross-scale Hydroscience Integrated System Model). STOFS-2D-Global (displayed on Ventusky.com) runs four times daily producing numerical storm surge, tide, and the combined surge and tide water level model forecast guidance globally out to 180 hours, with a very high coastal resolution of at least 1.5 km globally, with resolution up to 30-120 m along the U.S. coastlines. STOFS enables users to make better decisions in the marine navigation and coastal resilience communities.

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