

# Web Platforms for Visualizing Monthly and Daily Land Surface Anomalies

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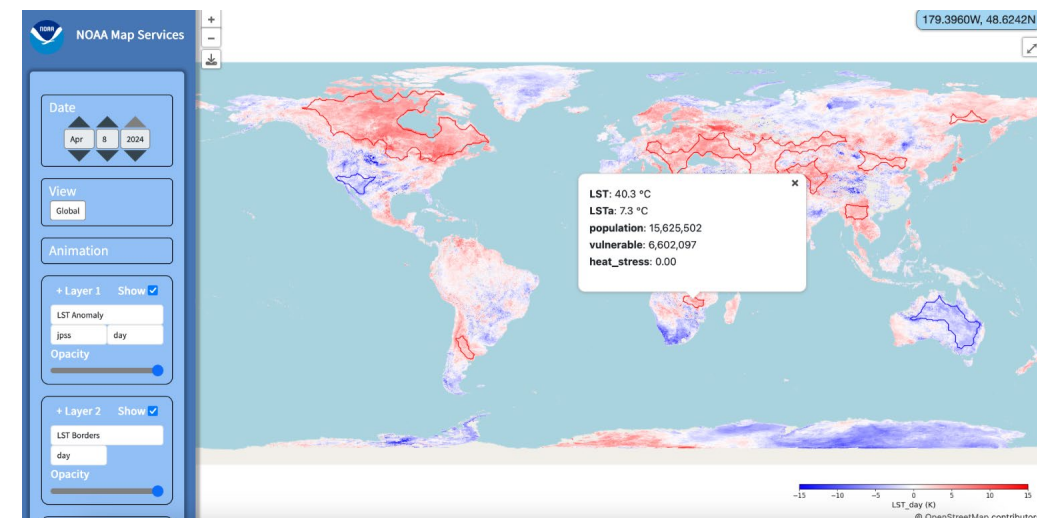
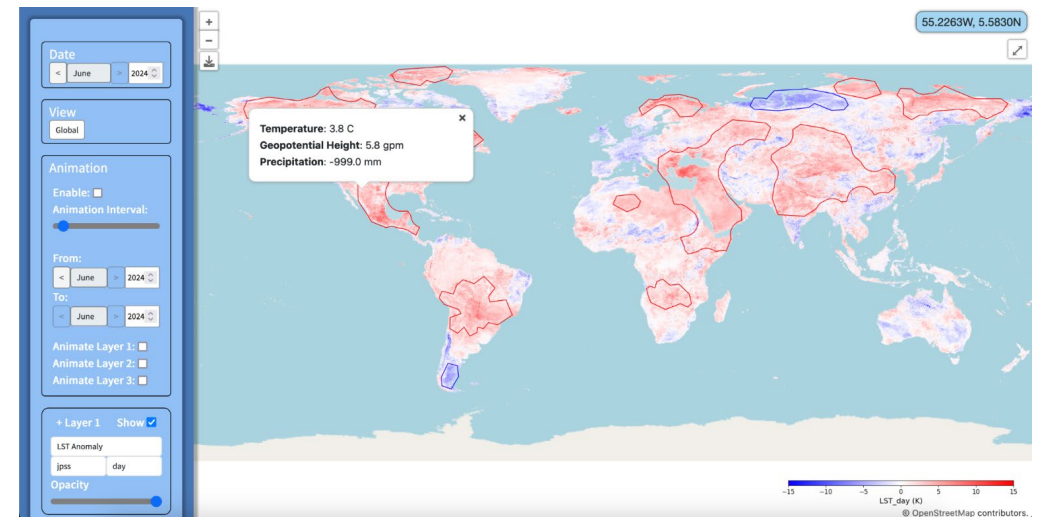
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## Objectives

- Develop web-based software for researchers to view and analyze changes and relationships in land surface anomalies across multiple parameters (LSTA, LST, NDVI, etc.) on a monthly scale.
- Create an additional website with an interactive interface for quick visualization of surface heat condition changes on a daily scale.
- Implement the display of statistics based on a heat/cold events detection algorithm.

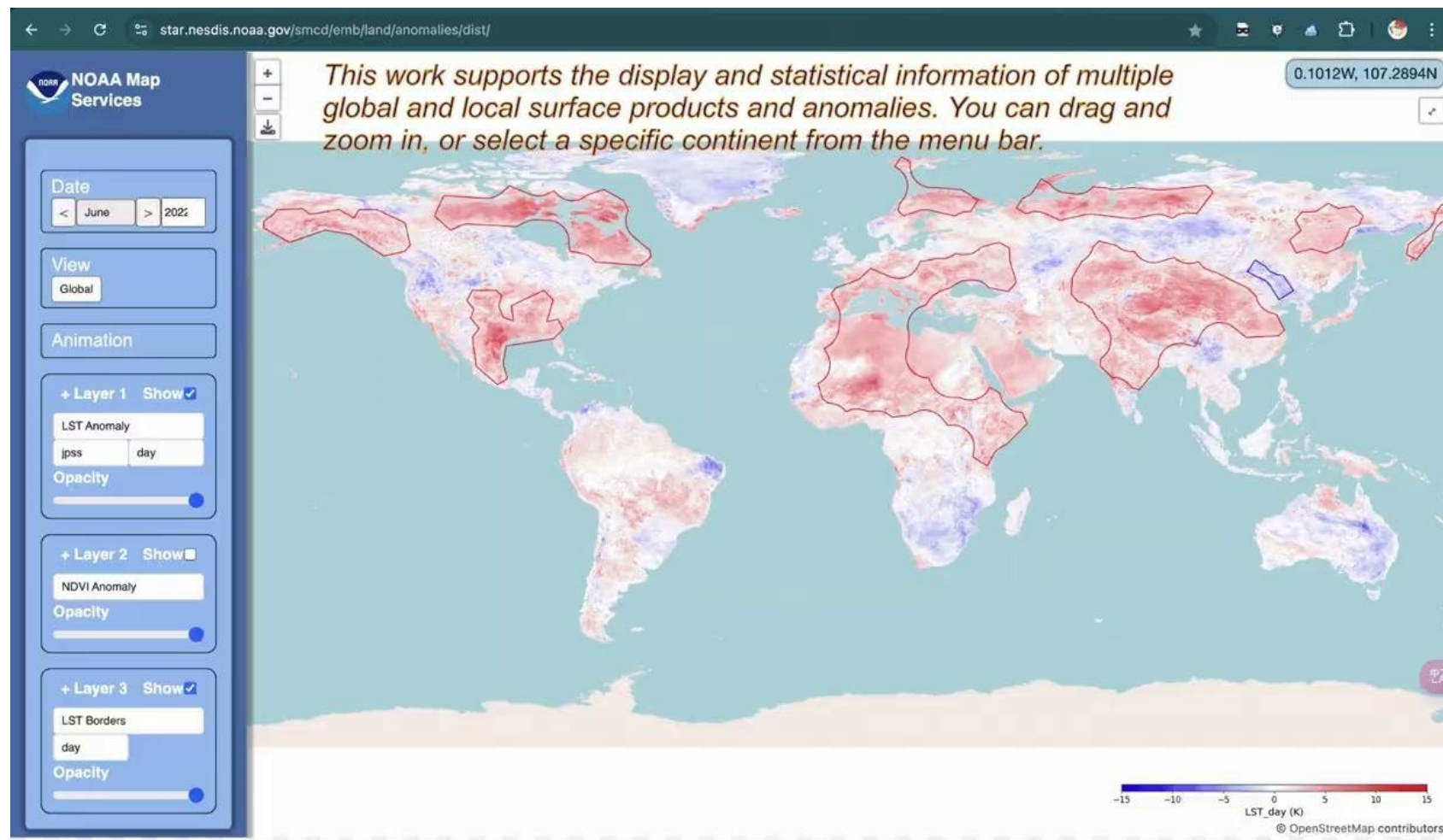
## Results

- Both websites have been successfully launched.
- The design and functionality of the websites exceeded expectations, significantly enhancing the user experience with features such as: Animation, Clickable products, View selection, Longitude and latitude display for precise location tracking
- These features effectively supported the analysis presented in the NOAA STAR team's monthly land surface temperature anomaly [reports](#).

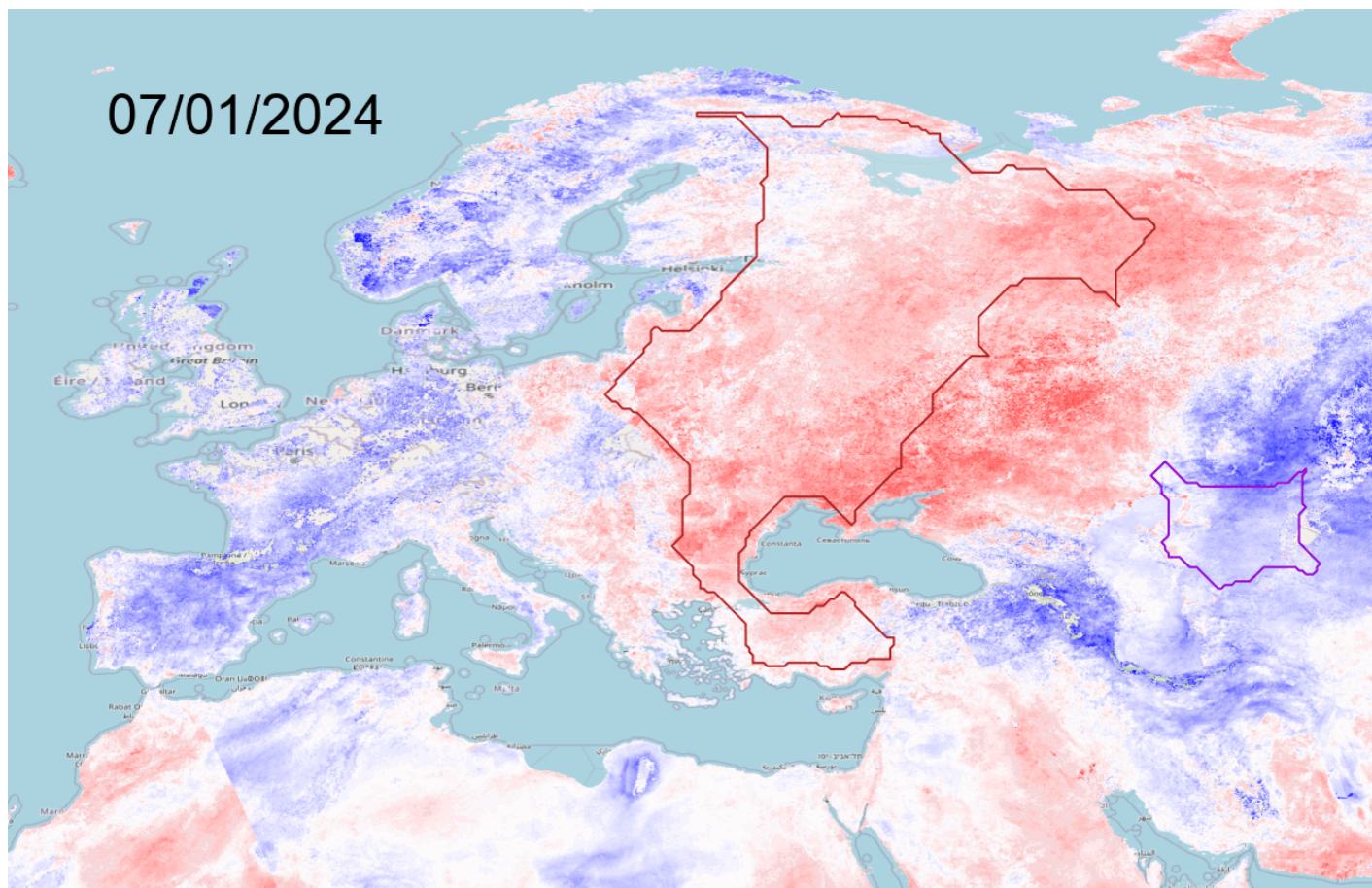


# Monthly Web Platform for Comprehensive Analysis of Land Surface Anomalies

- The primary feature of the monthly website is its ability to provide in-depth analysis and visualization of long-term trends and patterns in land surface anomalies.
- It allows researchers to examine changes across multiple parameters (such as LSTA, LST, and NDVI) through layering, date selection and more, offering a comprehensive view of climate anomalies over time.
- We utilize the dragging and zooming and view options to interact with the map



# Daily Web Platform for Rapid Monitoring of Surface Dynamics



LST anomaly (°C)

In July 2024, a severe heatwave swept across Europe, particularly affecting countries bordering the Mediterranean. Temperatures soared well above 40°C, with some areas experiencing highs up to 45°C. This extreme heat, led to significant impacts, including wildfires in Greece and the Balkans, and strained conditions for the Summer Olympic athletes in France. The Mediterranean Sea also experienced a marine heatwave, with water temperatures surpassing 30°C, raising concerns about potential severe weather events later in the year. This heatwave has been described as "virtually impossible" without the influence of global warming ([Phys.org](#)) ([Severe Weather Europe](#)).