



# **Global Maritime Traffic Density Service (GMTDS)**

## ***Application User Guide***

Approved for Public Release, 22-062

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## Version History

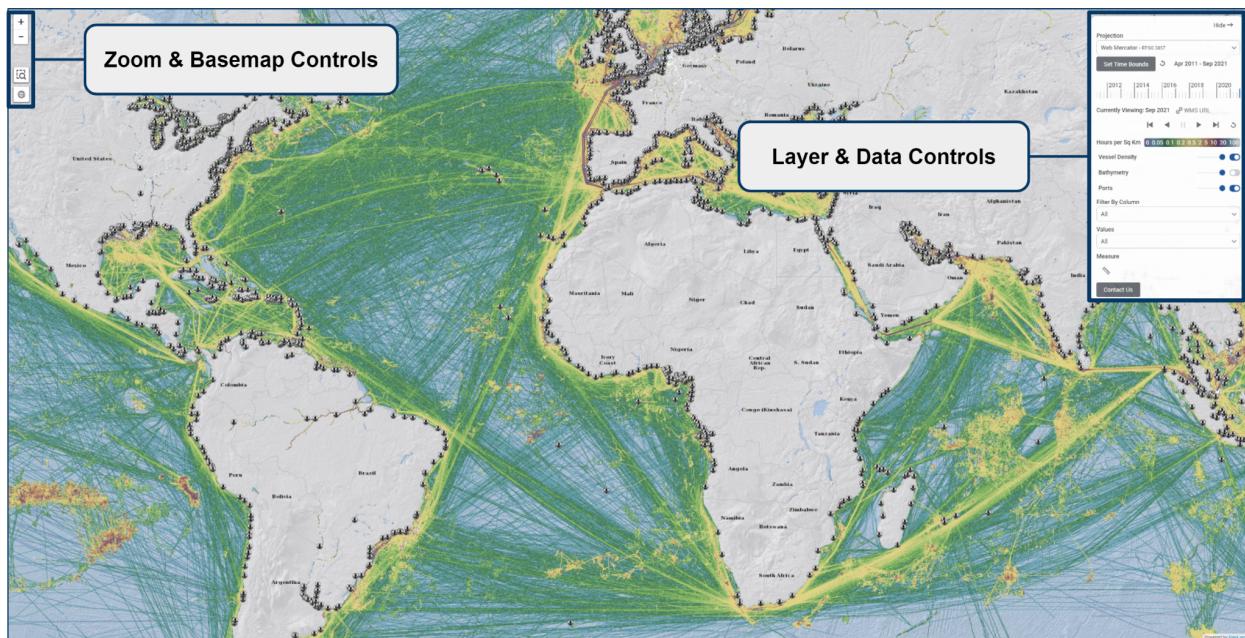
Version	Date	Change
EXT-USERGUIDEv1.0	2021-10-27	Global Maritime Traffic Density Service User Guide for the first public release version of the GTMDS Application.

# The GMTDS Dashboard

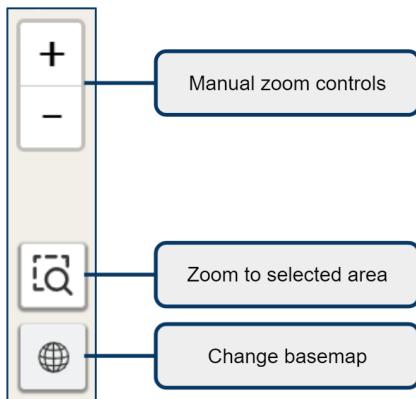
The GMTDS Dashboard is a platform for visualizing the processed GMTDS density rasters. GMTDS cleans and enriches raw AIS messages from individual vessels and aggregates the location data into 1 km<sup>2</sup> grid cells globally, displaying the total time spent in each grid cell for all vessels in a given month. The dashboard provides access to three map layers which the user may toggle on or off as needed:

1. GMTDS density rasters
2. Global bathymetry (depth) raster
3. Port locations

Hovering the mouse cursor over the raster cells or port locations will reveal the data associated with that location. In the case of the GMTDS density and bathymetry rasters, the total monthly vessel hours and water depth respectively. In the case of the port locations, the name of the port is displayed.

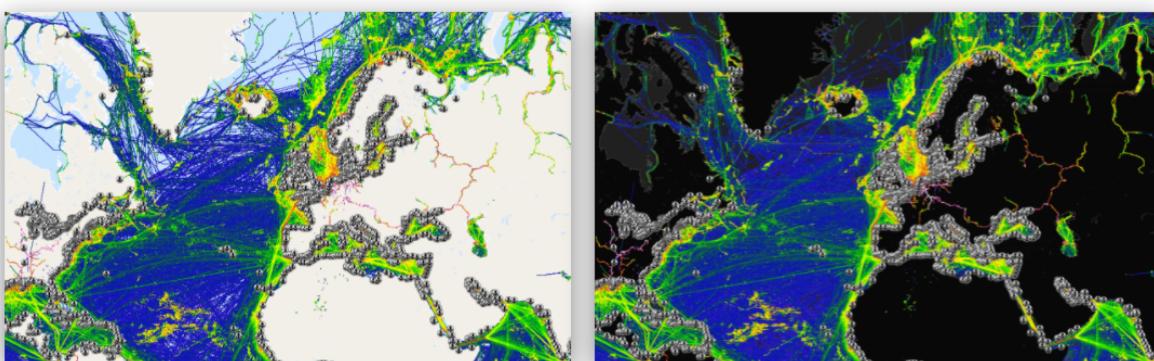


## Zoom & Basemap Controls

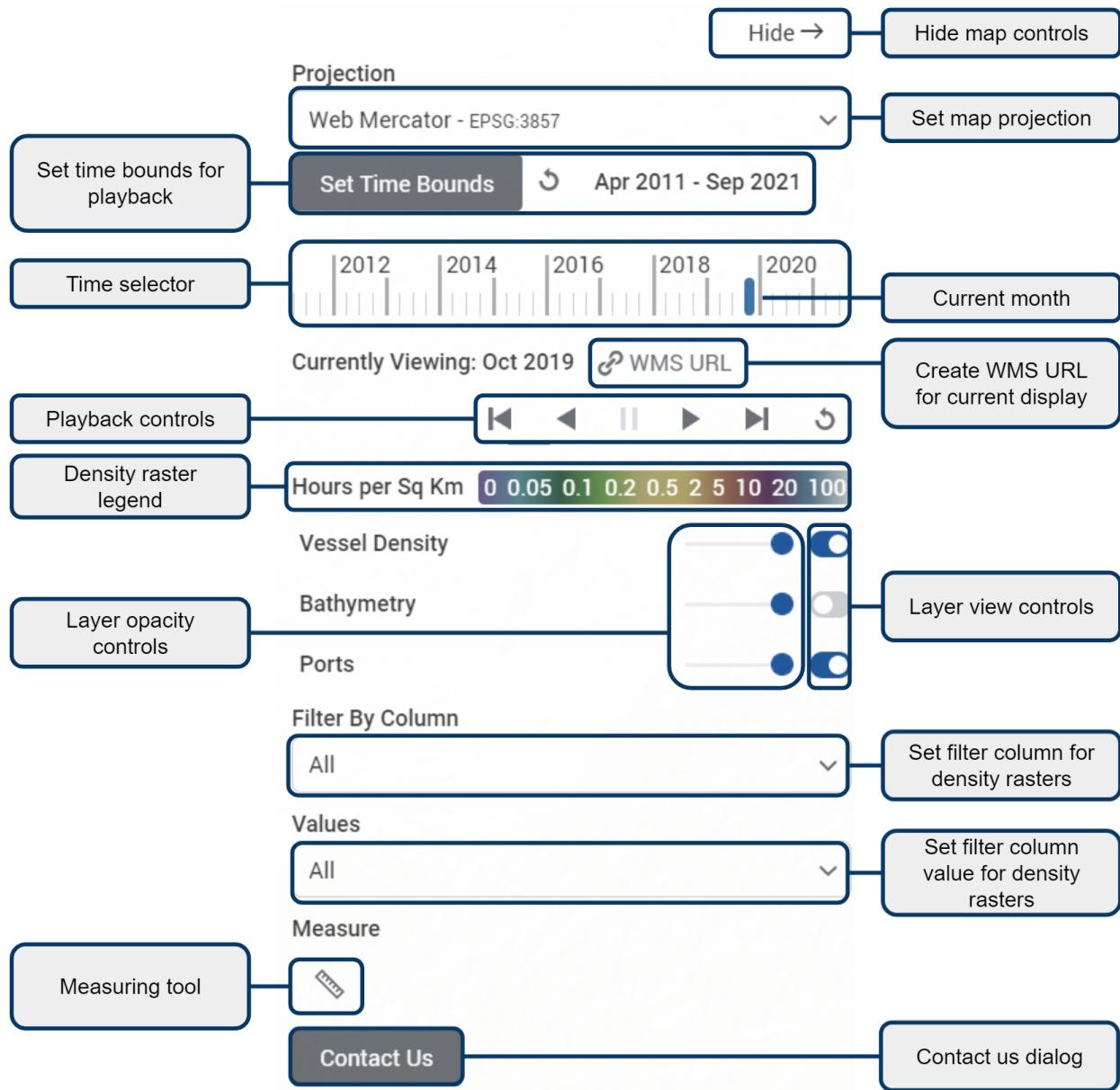


- **Manual zoom controls:** Increase or decrease the map zoom level
- **Zoom to selected area:** Draw a rectangular zoom area on the map
- **Change basemap:** Toggle between light and dark basemaps

### Light and Dark Basemap Examples:



# Layer & Data Controls



**Hide map controls:** Hides the Layer & Data Controls panel

**Set map projection:** Choose from one of four available map projections. Different projections allow for more accurate location placement. Select the projection that best matches your location of interest.

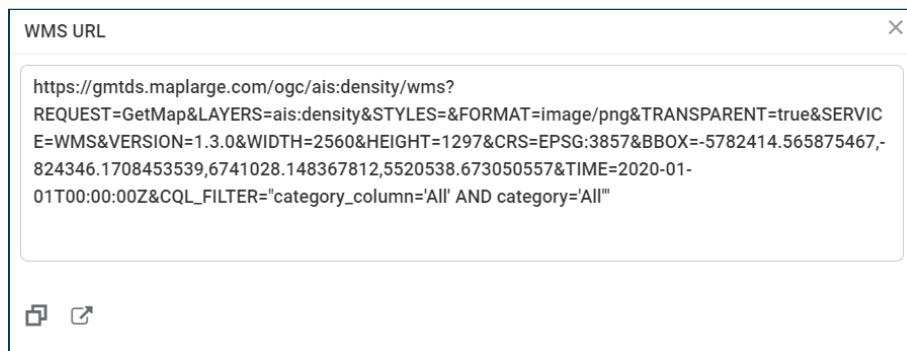
- Web Mercator (EPSG:3857)
- WGS 84 (EPSG:4326)
- Arctic (EPSG:3995) - Ideal for locations near the north pole

- Antarctic (EPSG:3031) - Ideal for location near the south pole

**Set Time Bounds for Playback:** Set the minimum and maximum display time for the time selector and playback controls.

**Time Selector:** View and select the current raster display month by clicking on the time bar

**Create WMS URL for Current Display:** Open a window with a WMS (Web Map Service) URL specific to the currently displayed raster and display area. The URL may be copied to the clipboard or opened in another window using the buttons in the lower left portion of the window.



**Playback controls:** Step forward or backward through the monthly density rasters either manually or via automatic playback, and reset the time marker to the manually selected month prior to playback.

**Density raster legend:** The color scale corresponding to the total number of vessel hours in each raster grid cell.

**Layer opacity controls:** Set the transparency of each layer on the map canvas.

**Layer view controls:** Show or hide layers on the map canvas.

**Set filter column for density rasters:** Select from the following raster filter categories:

- **All (default):** Display raster data for all categories
- **Ship Type:** Enable filtering by MMSI reported ship type category
- **Draft:** Enable filtering by MMSI reported draft depth
- **Loitering:** Enable filtering by loitering or non-loitering vessels

**Set filter column value for density rasters:** Provides the following filter options for each filter column selection:

- **Ship Type:**
  - Cargo Ships
  - Fishing
  - Ice Breakers
  - Non-commercial ships
  - Passenger Ships

- Service Ships
- Tankers
- All Others

■ **Draft (vertical distance between the waterline and the bottom of the hull):**

- 0.1 - 2.0 meters
- 2.1 - 5.0 meters
- 5.1 - 10.0 meters
- 10.1 - 15.0 meters
- 15.1 - 20.0 meters
- Greater than 20.1 meters
- Unknown and 0 meters

■ **Loitering:**

- Loitering (vessels dwelling greater than 6 hours in a grid cell)
- Non-loitering (vessels dwelling less than 6 hours in a grid cell)

**Measuring Tool:** Calculate and display distances between two or more points on the map canvas.

**Contact Us Dialog:** Opens a dialog enabling the user to contact MapLarge directly with comments, questions and concerns.

Submit Help Request X

Name

**Value is required.**

Email

Message

Bug Report ^

Bug Report

Feature Request

General Comment/Question

Data Concern