MariTrace's Maritime Economic Analysis Tools.

OUR SERVICES:

ECONOMIC ANALYSIS

ENTER

MariTrace

www.maritrace.com

Economic Analysis.

What MariTrace does.

Every ship of 300 gross tonnage and upwards engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages, and all passenger ships irrespective of size, by law must broadcast signals reporting their location.

This is part of an anti-collision / safety system.

At MariTrace, we tap into a strategic network of shore-based and satellite receivers that hoover up these positions. We receive circa 2m messages per hour from all over the world, whether in port or at sea, letting us know where they are.

For economic analysis we have two major data sets; Transits Data and Fleet Analysis Data.

01.

TRANSITS DATA

02.

FLEET ANALYSIS DATA

01.

TRANSITS DATA

We stitch together the paths of these vessels and analyse them against our internal database of over 7,500 ports and installations worldwide.

This allows us to build up a database of port-calls for these vessels. By examining data such as the vessel's draught, we can make estimates of the tonnes of cargo (where applicable) each vessel is carrying. By looking at the vessel type, or where that vessel loads or discharges her cargo, in some cases we can make estimates about the specific cargo that vessel is carrying (if anything). Sometimes these cargos are quite broad (e.g., Chemicals, Dry Cargo, Petroleum Products, Containers/TEUs...etc.). Sometimes we can be specific about the cargo (e.g., Coal, Iron Ore, LNG...etc.).

We have analysed data back to January 2015. Each day we record an additional 7,000 (approximately) movements of vessels between ports. At the time of writing, our database contains more than 17 million records and has data up to, and including, yesterday. This will be added to and updated at midnight tonight (UTC) with today's transits.

This dataset records the start port and country for each vessel, the destination port and country, details of the cargo (where relevant), and the vessel making the journey, including details of the vessel owner and controller. This presents unique insights into the state of global trade, and because the database is updated nightly, provides near real-time observations of trade wars, sanctions, import restrictions, and early indicators of shifting trade patterns. This dataset provides detailed data on commodity movements and gives near real-time monitoring of port and terminal throughput.

With the inclusion of company specific data, MariTrace can track the import/export activity of major industry players, monitor the performance of shipping companies, and allow for improved due diligence on shipping investments.

01.

AVAILABLE FIELDS

FIELD NAME	DESCRIPTION
commercial_owner_name	The name of the commercial owner of the vessel
commodity_cat_a	The high-confidence commodity we believe the vessel to be carrying
commodity_cat_b	The lower-confidence commodity we believe the vessel to be carrying
effective_controller_name	The name of the controller of the vessel
end_continent	The continent of the next port the vessel called at after leaving the start port
end_country_code	The country code (ISO 3166-1) of the next port the vessel called at after leaving the start port
end_country_name	The English name of the county of the next port the vessel called at after leaving the start port
end_port_arrival_date	The arrival date (UTC) at the next port the vessel called at after leaving the start port
end_port_departure_date	The departure date (UTC) at the next port the vessel called at after leaving the start port
end_port_locode	The UN LOCODE of the next port the vessel called at after leaving the start port
end_port_name	The English name of the next port the vessel called at after leaving the start port
end_port_uuid	The unique identifier of the next port the vessel called at after leaving the start port
end_region	The region of the next port the vessel called at after leaving the start port
start_continent	The continent of the port the vessel started the transit at
start_country_code	The country code (ISO 3166-1) of the port the vessel started the transit at
start_country_name	The English name of the port the vessel started the transit at

01.

AVAILABLE FIELDS

continued...

FIELD NAME	DESCRIPTION
start_port_arrival_date	The arrival date (UTC) of the port the vessel started the transit at
start_port_departure_date	The departure date (UTC) of the port the vessel started the transit at
start_port_locode	The UN LOCODE of the port the vessel started the transit at
start_port_name	The English name of the port the vessel started the transit at
start_port_uuid	The unique identifier of the port the vessel started the transit at
start_region	The region of the port the vessel started the transit at
status	The status of the vessel on the transit (‘LOADED’, ‘EMPTY’ or ‘UNKNOWN’)
vessel_age_years	The age in years of the vessel upon leaving the start port
vessel_clean_dirty	The status of the tanks of the vessel (if a tanker)
vessel_dwt	The DWT of the vessel
vessel_imo	The IMO number of the vessel
vessel_liquid_cc	The maximum liquid cubic capacity of the vessel
vessel_mmsi	The MMSI number of the vessel
vessel_name	The name of the vessel
vessel_teus	The maximum TEU capacity of the vessel
vessel_tonnes_loaded	The number of metric tonnes loaded on the vessel
vessel_type	The type of vessel

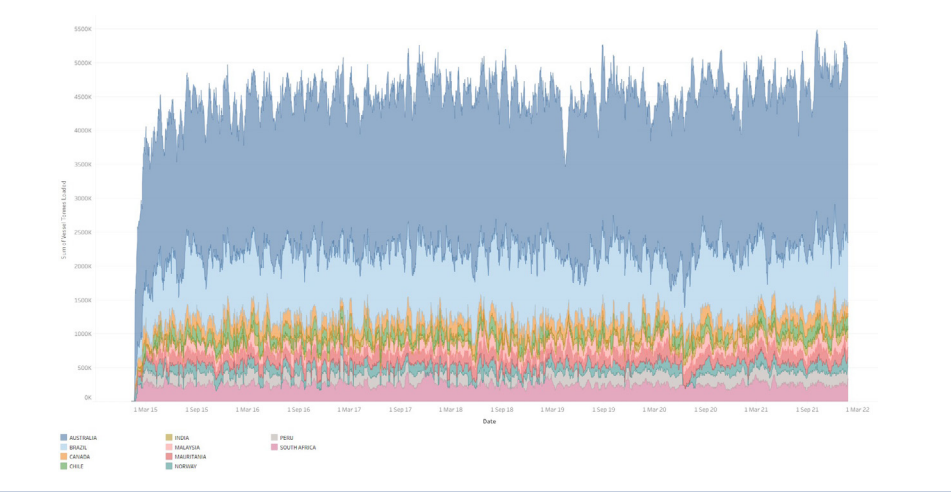
01.

SAMPLE APPLICATIONS

There are hundreds of thousands of ways to filter and analyse the data. Here are a few simple examples of how some of our clients query the data to achieve completely unique output.

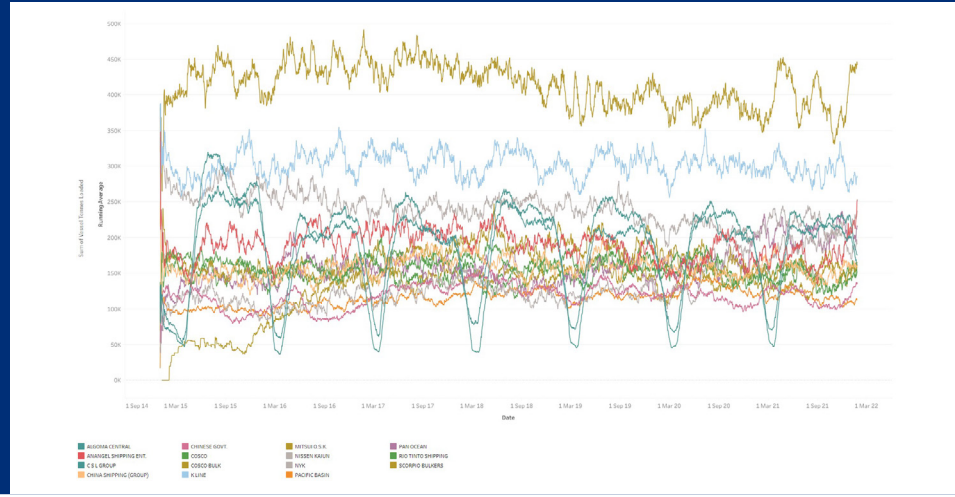
WORLDWIDE IRON-ORE EXPORTED TONNES

Filter on **commodity_cat_a** to show only Iron Ore. Sum on **vessel_tonnes_loaded**. Group on either **start_country_name** to show exporters, or **end_country_name** to show importers.



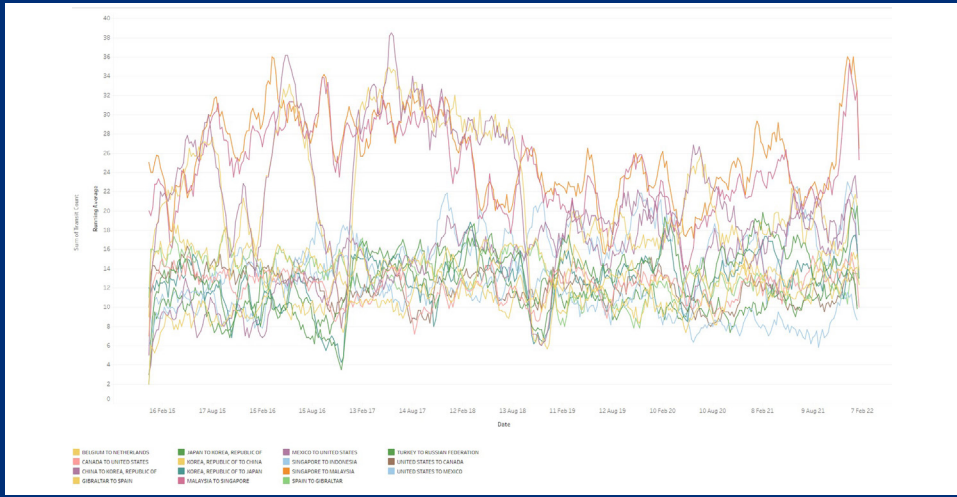
MOST ACTIVE BULK CARRIER COMPANIES

Filter on **vessel_type** to show only bulk carriers. Sum on **vessel_tones_loaded**. Group on **commercial_owner_name**.



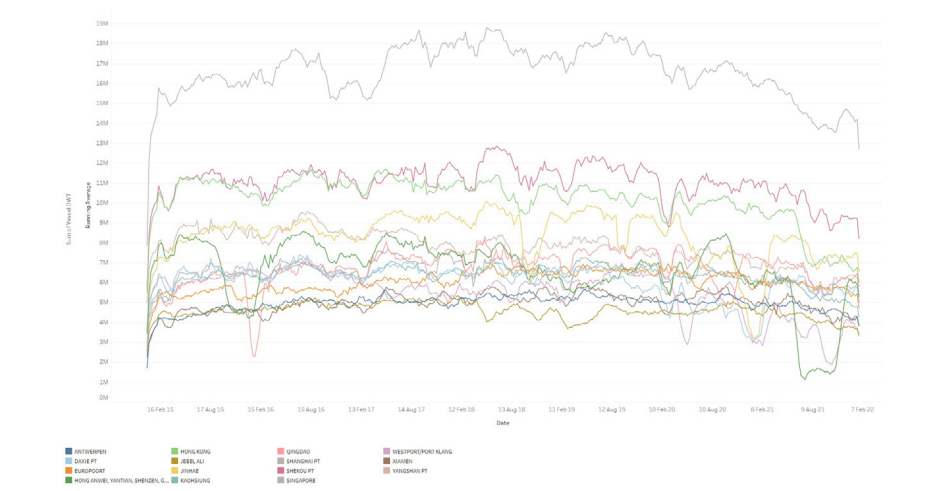
MOST POPULAR TANKER ROUTES

Filter on **vessel_type** to show only tankers. Sum on count of records. Group on **start_country** and **end_country**.



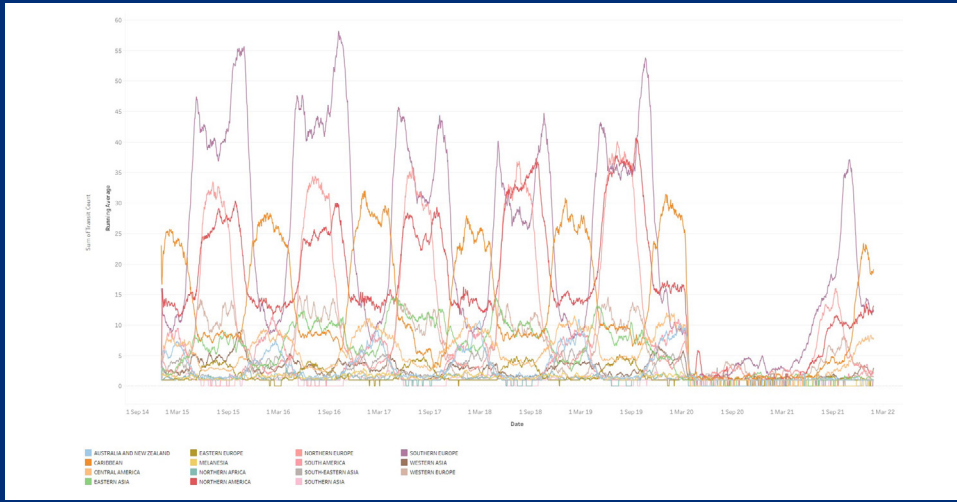
BUSIEST CONTAINER SHIP PORTS

Filter on **vessel_type** to show only container ships. Sum on count of records. Group on **start_country**.



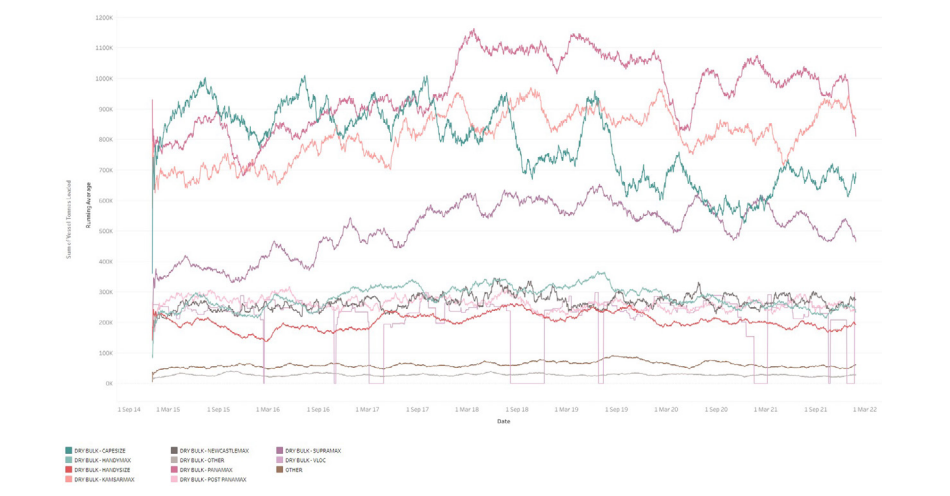
WORST COVID AFFECTED CRUISE SHIP REGIONS

Filter on **vessel_type** to show only cruise ships. Sum on count of records. Group on **start_region**.



MOST UTILISED COAL EXPORTING VESSEL SIZES

Filter on **commodity_cat_a** to show only Iron Ore. **Sum on vessel_tonnes_loaded**. Group on either **vessel_size**.



02.

FLEET ANALYSIS DATA

This performs a similar task to the transits data, in that we monitor positions of vessels, but where the Transits data is concerned with where vessels started and ended a journey (e.g. Australia to China), the Fleet Analysis is simply concerned with the location of vessels at a given time – even when between ports.

These locations are given as the sea or ocean, which country's waters the vessel is in, and which port the vessel is in.

In addition to this, we record several time-specific properties for the vessel itself. This includes the average speed of the vessel on that day, who owns or controls the vessel, if the vessel was loaded and by how much, if the vessel appears to be used for offshore storage...etc. (A complete list of available fields is below.)

We have analysed data back to January 2017. Each day we record an addition 41,000 (approximately) records of vessel positions and properties. At the time of writing, our database contains more than 72 million records and has data up to and including yesterday.

This will be added to and updated at midnight tonight (UTC) with today's data.

This allows us to examine maritime economic indicators regardless of which of the world's fleet are in port. Shifting patterns in vessel positions and properties holds crucial real-time signals exposing (for example by vessel-type or vessel owner) how fleets of vessels might be responding to worldwide commercial events, or even determining them.

02.

AVAILABLE FIELDS

FIELD NAME	DESCRIPTION
commercial_owner_name	The name of the commercial owner of the vessel
effective_controller_name	The name of the controller of the vessel
position_averagespeed	The average speed of the vessel on that day (knots)
position_date	The date that the sample position was taken
position_eez	The Exclusive Economic Zone that the vessel was in
position_in_port	Whether the vessel was in port or not
position_moving	Whether the vessel was moving or not
position_port_name	If the vessel was in a port, the name of that port
position_sea	The name of the sea / ocean that the vessel was in
status	The status of the vessel
vessel_age_years	The age of the vessel in years
vessel_clean_dirty	The status of the tanks of the vessel (if a tanker)
vessel_dwt	The DWT of the vessel
vessel_flag_state	The flag state of the vessel
vessel_liquid_cc	The maximum liquid cubic capacity of the vessel
vessel_offshore_storage	Whether the vessel appears to be being used as offshore storage (only applies to 'TANKER' vessel type)
vessel_teus	The maximum TEU capacity of the vessel
vessel_tonnes_loaded	The number of metric tonnes loaded on the vessel
vessel_type	The type of vessel

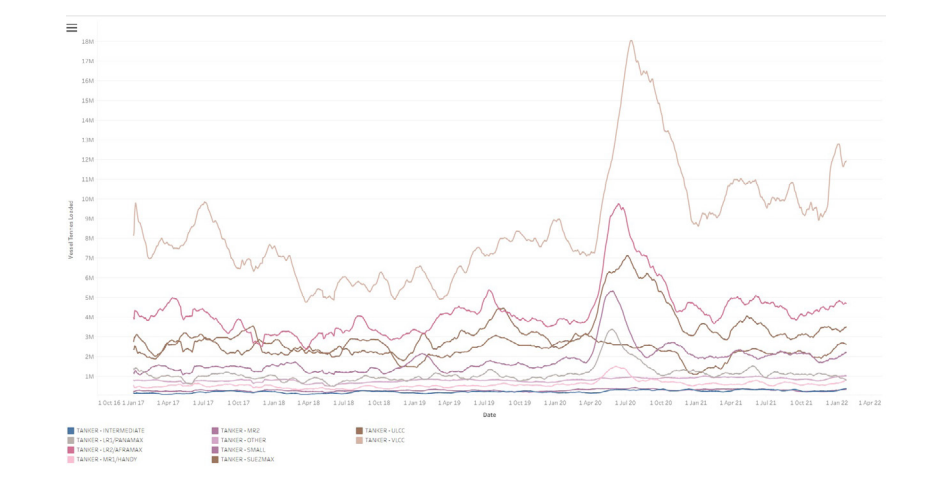
02.

SAMPLE APPLICATIONS

There are hundreds of thousands of ways to filter and analyse the data. Overleaf are a few simple examples of how some of our clients query the data to achieve completely unique output.

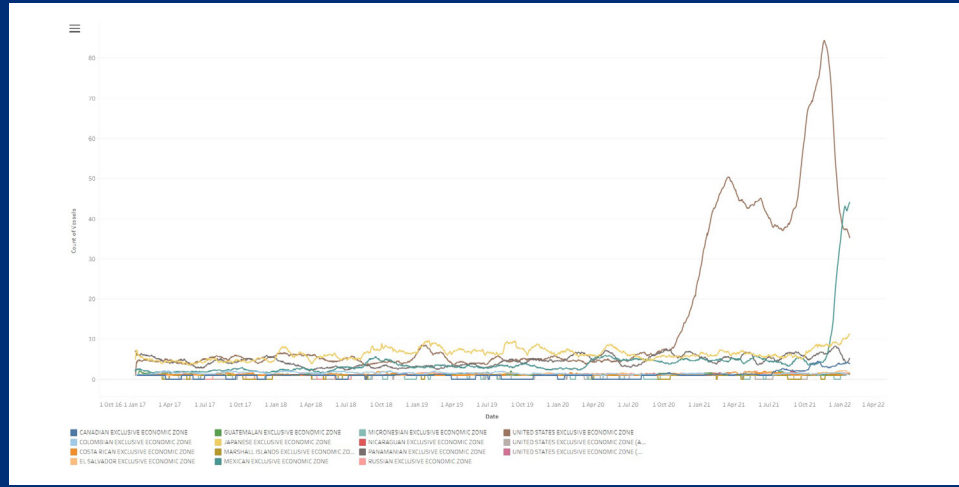
TANKER OFFSHORE STORAGE UTILISATION BY VESSEL TYPE

Filter on **vessel_type** to show only tankers, and **vessel_offshore_storage** for true. Sum on **vessel_tones_loaded**. Group on vessel size.



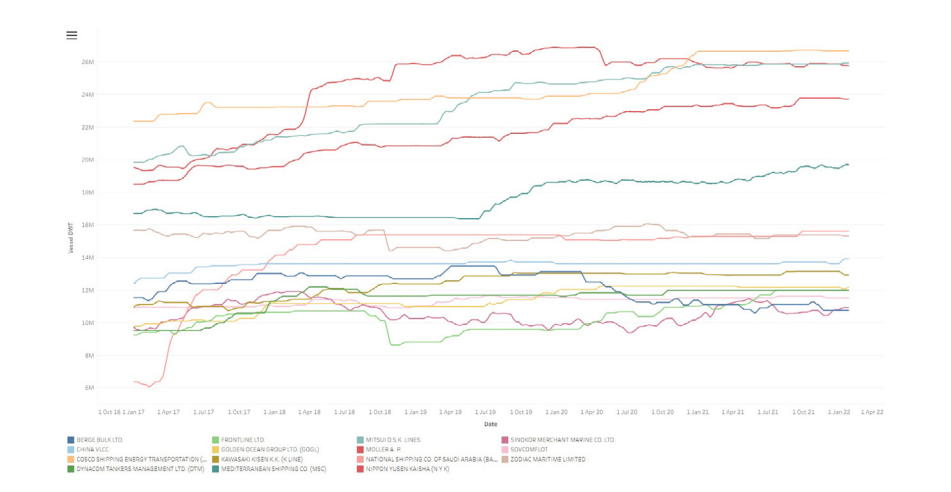
CONTAINER SHIPS WAITING FOR US WEST COAST PORTS

Filter on **vessel_type** = container ships, **position_sea** = North Pacific, **position_in_port** = false, and **position_averagespeed** to < 5. Sum on count of records. Group on **position_eez** to show in whose waters those vessels are waiting.



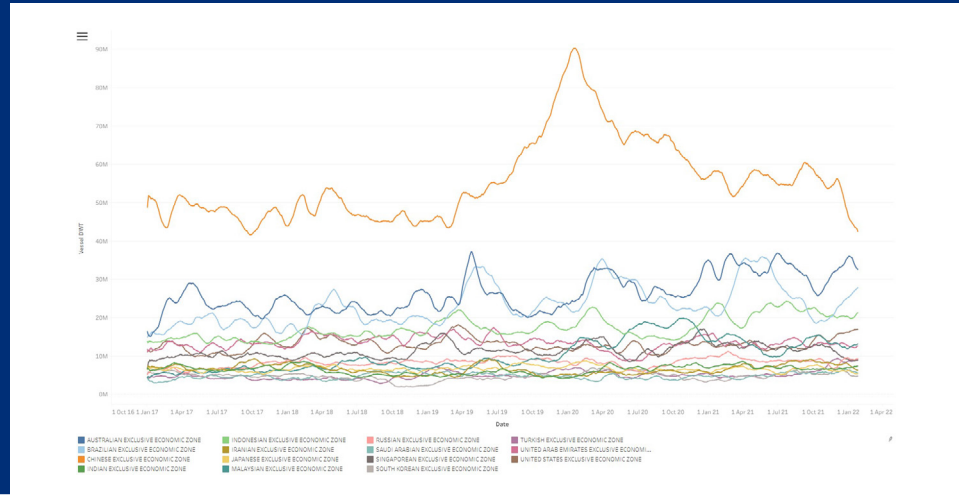
VESSEL OWNERSHIP BY DWT OVER TIME

Sum by **vessel_dwt**. Group on **commercial_owner_name**.



LOCATIONS OF INACTIVE TONNAGE

Filter on **position_averagespeed** <5, and **status** = Ballast. Sum by **vessel_dwt**. Group on **position_eez**.



Get in touch.

Questions, comments, or requests?
Feel free to reach out, we'd love to hear from you.

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