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Insights from Windward Maritime AI

A CHAOTIC MARCH & DECEPTIVE SHIPPING PRACTICES INTENSIFY

The maritime ecosystem has experienced a great deal of uncertainty and sudden changes following Russia's decision to invade Ukraine over a month ago. Sanctions, whether self-imposed by companies looking to protect their reputations or government-led, have already significantly impacted the world during a chaotic March, as evidenced by the shift in traffic in the Black Sea and Baltic Sea.

Another important change: freight forwarders are looking for alternatives to China-Europe rail freight routes that pass through Russia. Unsurprisingly, container shipping has noticeably slowed during the conflict. The resurgence of Covid in China, leading to port closures, is negatively impacting an already fragile global supply chain.

Despite the success of trade restrictions and sanctions, there is strong proof that certain entities are already finding workarounds. This is demonstrated by first-time visits to Russian territorial waters by foreign vessels, ship-to-ship interactions between Russia-affiliated and non-Russia-affiliated ships, and vessels removing their Russian flags. Following the OFAC advisory of 2020, the current conflict is yet another reminder that maritime ecosystem players should be proactively monitoring for deceptive shipping practices (DSPs).

This monthly summary is based on the same type of Windward proprietary behavioral data, extracted from our Maritime AI platform, that has been used by major media outlets, such as Bloomberg and The Wall Street Journal in March. The summary is designed to highlight statistical trends that will help you better navigate the fog of war and an evolving seascape, and prepare for the immediate future.

Self-Sanctioning Sets In

Private corporations went beyond the letter of the law in March, with banks and trading companies increasingly engaged in "self-sanctioning" against Russian entities in the shipping and commodities sector to avoid issues with regulators and public displeasure. Many governments are also being tougher than expected.

- Insurers that offered coverage for trading in disputed areas are halting coverage of the Black Sea and the Sea of Azov, due to fear of secondary sanctions

- The British decision to ban ships with a Russian connection from its ports, seemingly set to be followed by the European Union, has broadened the potential scope of sanctions

- Some oil majors, such as Shell, have decided to completely shun Russian oil, with U.S. and UK buyers expected to be under increased scrutiny due to the upcoming ban on these imports

Additionally, the world's largest shipping companies – CMA, MSC, Maersk, Hapag Lloyd, One, and others – have halted all activity with Russia. Using data obtained from our Ocean Freight Visibility solution and the World Bank, **Windward estimates that CMA, MSC and Maersk would have been responsible for moving approximately 101,000 containers in and out of Russia in March.**

A Shift in Traffic (Black Sea & Romania)

Maritime trade and operations in the vicinity of the conflict are noticeably shifting in terms of traffic. This is clear when comparing automatic identification system (AIS) transmissions in the Black Sea from March 2021 to March 2022.
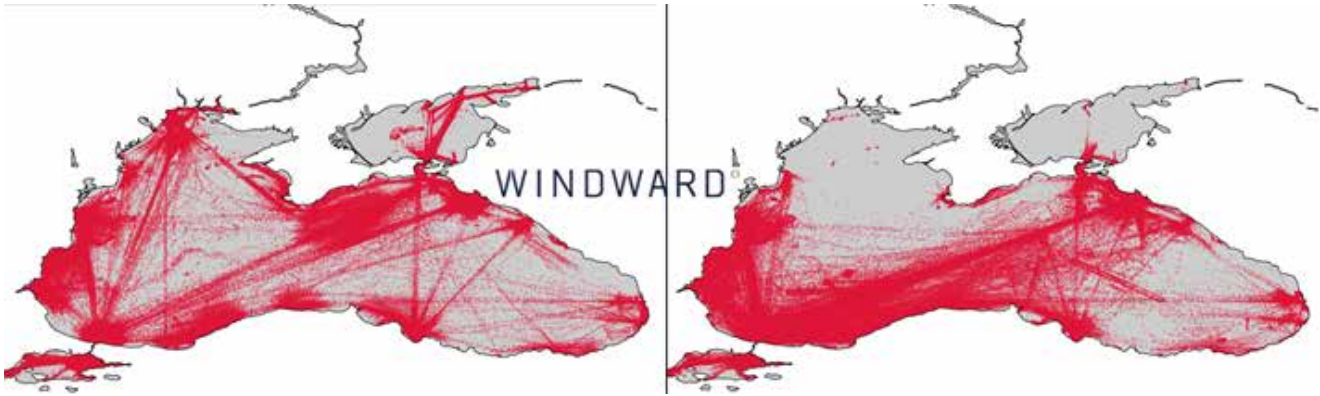

Image 1: *AIS transmissions in the Black Sea in March '21 (left) vs. March '22 (right)*

According to Windward's AI-driven behavioral data, overall **commercial port operations in the Black Sea are at only 79% of the 2022 average** – including decreased operations during the Russian invasion.

Windward is seeing **a climb in commercial port operations in Romania – 115% from the annual average thus far** – compared to a drop for most other countries in the region.
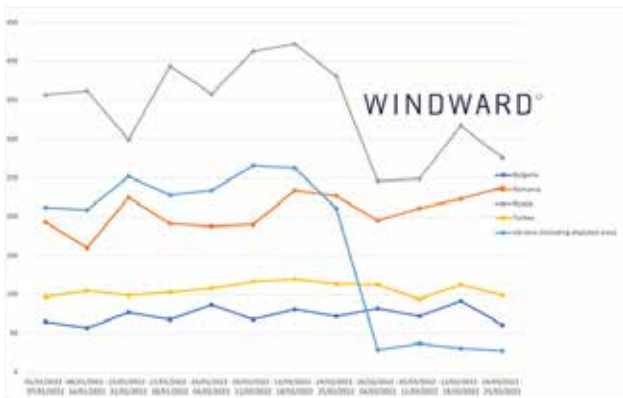

Image 2: *Commercial port operations by country show a climb for Romania*

Image 3: *Breakdown of port calls in Romania by cargo and tanker (commercial vessels)*

Commercial Impact on the Baltic Sea

In the Baltic Sea – which is encircled by Russia, Poland, Sweden, Finland, Estonia, Lithuania, and Latvia – we see an interesting trend that reflects the impact the conflict has had on container shipping in the area. Windward data indicates that before February 24, 2022, the day Russia invaded Ukraine, Poland and Russia were the leading destinations for port calls by container vessels in the area, with weekly averages of 29 and 27 port calls, respectively. Finland was a distant third, with about half (15).
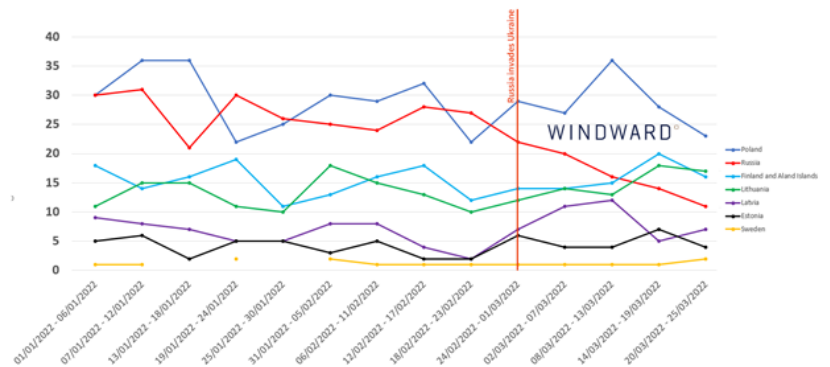

Image 4: *Increased port calls to nearby countries*

Unsurprisingly, Windward's AI-driven behavioral data shows that, **since February 24, container vessel port calls to Russia dropped by 38.3% to an average of 16.6. This has left Lithuania, Latvia, and Estonia to pick up the slack** – each is handling more port calls to close the gap.

Reduced Railways, Corona & China – Container Shipping Trends

Many freight forwarders are seeking to avoid the headache of shipping containers via rail routes that enter Russian territory, increasing the burden on the already strained maritime supply chain. A resurgence of corona in China is adding to certain ports being overloaded.

Shenzhen recently emerged from its latest Covid lockdown, which began on March 14, 2022. An announcement claimed that the shutdown would not affect port operations, but Windward data shows that **the average length of a port call for container vessels in Shenzhen spiked from 26.4 hours in the past 12 months, to an average of 36.5 hours once the lockdown came into effect, peaking at 54 hours on March 19.**

Image 5: *Increased port call lengths for container vessels in Shenzhen*

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When looking at the total number of port calls made to Shenzhen during the lockdown week, Windward data shows that **they experienced a drop to an average of 67% of the previous 12-month average. This brought the monthly average in March down to 78% of the yearly average, the lowest since the last lockdown in Shenzhen back in June 2021.**

Despite official announcements stating that [Shanghai port will remain functional,](#) it is likely that carriers will choose to skip Shanghai to avoid congestion. They can go

Image 6: Monthly port calls made to Shenzhen by container vessels as a percentage of the yearly average

straight to the next port, which Windward data shows has been Ningbo in 26% of cases for container vessels in the past year. Due to its relative proximity to Shanghai, it is equally probable that even container vessels that did not intend to call Ningbo port will choose it over Shanghai to avoid the expected congestion. If that is the case, Ningbo will of course become heavily congested.

It's "Business as Usual" for Some Entities...

Since the beginning of the Russian military invasion of Ukraine in early March, Windward data shows that **33 vessels visited Russian territorial waters for the first time in their history.**

Interestingly, when looking at the ownership and management data of these 33 vessels, **40% of entities involved in the ownership and management of these vessels are European or North American, and 21% are Chinese, and/or from Hong Kong.**
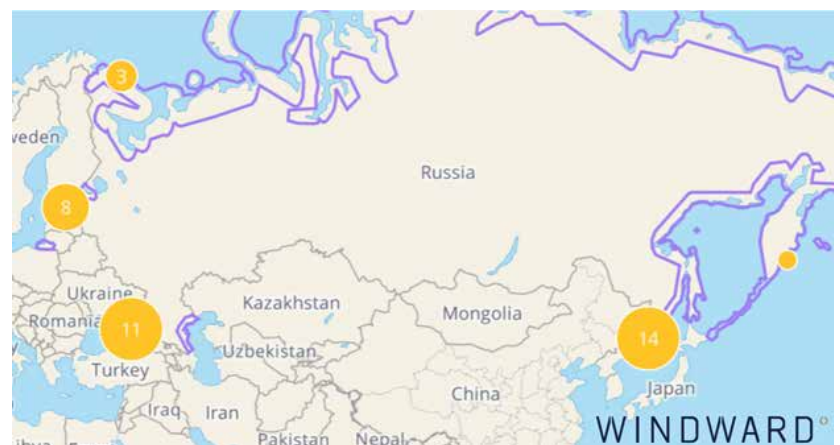

Image 7: Locations where vessels had first-time visits to Russian territorial waters during March 2022

Windward data also illustrates that some vessels and companies are still dealing with Russian affiliated tankers and engaging in ship-to-ship potential bunker operations. In fact, it seems that **the number of ship-to-ship meetings that lasted at least three hours between Russian-affiliated clean product tankers and non-Russian-affiliated vessels remains at 73%, the average in the weeks prior to the Russian invasion of Ukraine, including occasional spikes above that.**
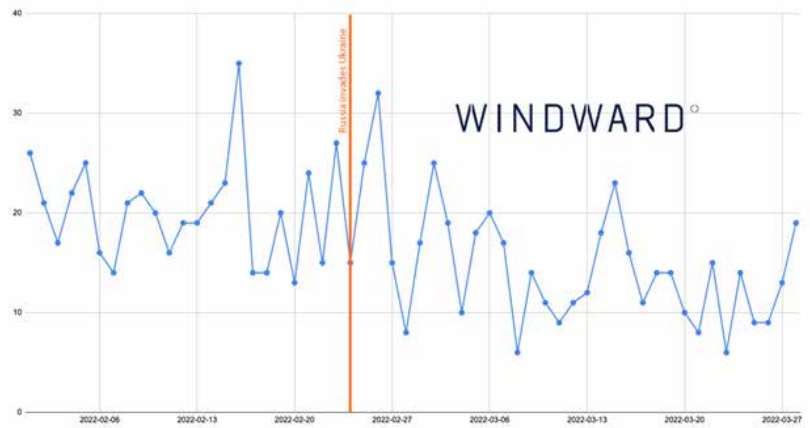

Image 8: *Ship-to-ship operations of Russian-affiliated tankers with non-Russian affiliated vessels in March 2022*

Crude Oil from Russia

Russia, a large exporter of crude oil, is still receiving crude oil tankers to its ports. Despite trade restrictions being in place, many crude oil tankers have called in Russian ports (after March 1, 2022). The quantity of crude oil that was delivered by these tankers is estimated at 55,800,000 barrels. The cargos of crude oil tankers from Russia starting March 1 have arrived to Asia and countries within Europe – and notably not to the U.S.

Aside from the crude oil tankers that arrived at their respective destinations, there are 34 others that called port in Russia after March 1 and still have not arrived at their next respective destinations, including possibly the U.S. In addition to the 34, there are 18 local tankers operating between Russian ports that are seeking their next destination.

The estimated capacity of the crude oil tankers that called port in Russia starting on March 1 and will then presumably call port outside of Russia is 25,250,000 barrels of crude oil.

Image 10 below presents two crude oil tankers that increased their reported draft following a port call in one of Russia's ports and were reporting that they were heading to the U.S.

Image 9: *Crude oil tankers underway to a foreign destination from Russian ports.*

Image 10: *Two crude oil tankers heading to the U.S. were expected to arrive there in April*

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Intensification of Deceptive Shipping Practices (DSPs)

Windward data shows a significant increase in dark activity by Russian oil tankers since the beginning of the Russian invasion of Ukraine and the wave of financial and moral sanctions on the country. **Before the sanctions were put into place, the average number of dark activities by Russian oil tankers were five per week. That number more than doubled to 12 dark activities per week on average since then, peaking at 17.3 between March 12-18, more than threefold the weekly average before the sanctions.**
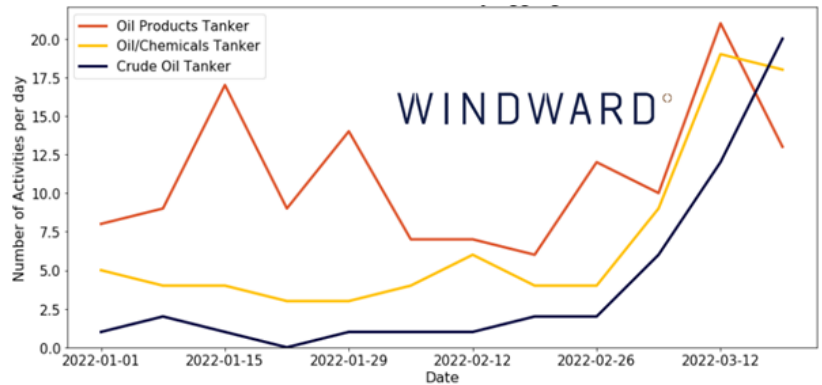

Image 11: Clear spike in the number of Russian oil tankers involved in dark activities since the Russian invasion of Ukraine

Interestingly, crude oil tankers have seen a significant increase in dark activity. Before the invasion and subsequent sanctions, Russian crude oil tankers were barely involved in dark activities, with a weekly average of 1.1 such activities per week. **Between March 19-25, that number skyrocketed to 20!**

"Flag changing" is also quickly becoming an issue.

According to Windward's proprietary behavioral data, March 2022 marked a rush of vessels and even fleets moving away from affiliation with the Russian regime by changing the flags under which they trade from the Russian flag to those of other countries. Changing the flag under which a vessel sails is not an unusual event and can be motivated by various factors.

However, in the context of the current conflict between Russia and Ukraine, such a trend is likely to point to one of two scenarios – honest business people, trying to continue trading as usual without the potential hurdles that a Russian flag could create for them; or bad actors that intentionally hide their Russian identity and/or business connections to deceive authorities and counterparts.

Importantly, some of these vessels are owned or operated by companies registered in Russia.

Image 12: Flag changes from Russian to "other" have started spiking

Looking at Windward's AI-driven behavioral data on flag changes from January 2020 onward, the average number of vessels that changed their flag from Russian to non-Russian was 5.8. In **March 2022, that number spiked to the highest in that entire period to 18 changes, more than three times the average.**

Five of these eighteen vessels are affiliated with Russian companies through their ownership and/or management structure. A possible explanation for these flag changes is an attempt to conceal their Russian affiliation in light of the ongoing conflict.

The most common flag of choice is the Marshall Islands flag, to which 11 of these vessels are changing their registration. Saint Kitts and Nevis has three such vessels, which changed their flag during March, although all three were already registered in that jurisdiction but chose to drop a dual Russian flag.

While deceptive shipping practices have become more common in recent years and made the industry look at changes like these suspiciously, we can clearly see two different trends evolving. Some of these instances may point to bad actors intentionally disguising their identity to conduct business that would not be allowed under the new sanctions, but it seems from the data that most of the recent flag changes have been undertaken by people who are trying to "omit" their affiliation rather than outright lie about it.

Regardless of the motivation, it is important for players in the maritime ecosystem to remain proactive about identifying restricted vessels and containers by obtaining full visibility, in order to act ethically, while avoiding potential penalties and reputational harm. The conflict and Covid outbreaks have created an extremely fluid situation requiring the predictive analytics of Maritime AI.