State Capture
Research and Action

CREA

POLICY BRIEFING: TACKLING THE RUSSIAN 'SHADOW' FLEET

The shadow fleet transporting Russian fossil fuels pose two significant challenges. In the first instance, the shadow fleet enables Russia to circumvent the G7/EU oil price cap, to maintain its fossil fuel export revenue, and consequently to fund its war in Ukraine. In the second instance, it is likely only a matter of time before an incident involving an ageing and uninsured shadow fleet vessel occurs that causes an environmental catastrophe with significant economic costs to be borne by affected coastal countries and/or the international community. Urgent action is necessary to make Russian shadow fleet operations unviable.

1. Summary of recommendations

a. Targeted sanctions:

i. Designate all shadow fleet vessels, their owners, operators and managers.

ii. If sanctioned vessels continue to operate – designate key persons and entities that continue to engage with sanctioned vessels, namely:

   a. Vessels and owners/operators that engage in ship-to-ship (STS) transfer operations with designated vessels.
   b. Ancillary maritime service providers that engage with sanctioned vessels (e.g. tugboats, port operators, storage facilities, fuel providers).
   c. Senior crew members (e.g., captain, navigator) operating on sanctioned vessels.
   d. Buyers, brokers and intermediaries that deal with sanctioned vessels and their cargo.

iii. Designate third country facilities that blend or mask Russian-origin oil/oil products.

b. Sectoral sanctions/bans

i. Ban ship-to-ship (STS) transfers of Russian crude oil and oil products in territorial waters and Exclusive Economic Zones (EEZs) and ancillary maritime and other services to such operations wherever they take place.

ii. Ban import of refined/processed oil products made from crude oil of Russian origin.

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c. Environmental and safety measures

i. Require proof of adequate P&I insurance cover for all oil tankers entering territorial waters, EEZs and international straits.

ii. Raise and enforce minimum environmental and safety requirements for oil tankers entering territorial waters, EEZs and international straits.

iii. Enforce compliance with International Maritime Organization (IMO) sulphur oxide fuel standards.

d. Anti-espionage measures: Identify shadow fleet vessels involved in surveillance/espionage activity and prevent their passage through territorial waters and international straits.

e. Enhanced due diligence requirements: Regulate for greater transparency and due diligence standards, including requiring proof of price-cap compliant sale contracts backed by bank-verified statements to obtain insurance and other services.

2. The 'shadow fleet', its purposes and operations

i. What is the Russian 'shadow fleet' and why was it created?

The oil price cap was introduced to reduce Russia's oil revenue.[1] Oil exports are Russia's biggest revenue generator. Between February 2022 and June 2024, Russia earned EUR 475 billion in revenue from oil exports (68% of Russia's total fossil fuel export earnings).[2] In 2023, around one third of all Russia's tax revenue came from the sale of oil and gas.[3] With Russia's military expenditure set to rise above 7% of the GDP in 2024,[4] limiting Russia's oil revenue is crucial to limiting Russia's economic capacity to wage war on Ukraine.

The oil price cap was designed to prevent G7/EU maritime and other service providers from engaging with Russian oil exports above USD 60 USD/barrel. The twin objective of the price

[1] European Commission, "G7 agrees oil price cap: reducing Russia's revenues, while keeping global energy markets stable", 3 December 2022, available at: https://ec.europa.eu/commission/presscorner/detail/it/ip_22_7468.
[2] The Centre for Research on Energy and Clean Air, "Payments to Russia for fossil fuels — since 24 February 2022", 01 July 2024, available at: https://www.russiafossiltracker.com/
[3] Reuters, "Russia's oil and gas budget revenue down 24% in 2023", 11 January 2024, available at: https://www.reuters.com/business/energy/russias-oil-gas-budget-revenue-down-24-2023-2024-01-11/#:~:text=For%202023%20as%20a%20whole,when%20oil%20prices%20were%20higher.
[4] Stockholm International Peace Research Institute, "Russia's new budget law signals determination to see the war in Ukraine through, according to new SIPRI analysis", 13 December 2023, available at: https://www.sipri.org/media/press-release/2023/russias-new-budget-law-signals-determination-see-war-ukraine-through-according-new-sipri-analysis.

cap is to limit Russian oil revenue without affecting global oil supply levels.[5] In response, Russia created a 'shadow fleet' of hundreds of oil tankers that operate outside the organised international shipping industry and are therefore able to circumvent the oil price cap.[6]

Whilst the term 'shadow fleet' applies to a broad range of vessels, shadow fleet tankers typically sail without industry standard insurance, have unclear ownership structures, and frequently change their names and flag registrations.[7] The Russian shadow fleet's primary objective is to trade Russian oil above the price cap, allowing Russia to generate additional revenue – billions of USD – to prop up its economy and fund its war in Ukraine.[8]

ii. The size and characteristics of the shadow fleet

Although the exact size of the shadow fleet is unknown, the International Maritime Organization (IMO) estimates that globally it consists of 300 to 600 tankers, primarily comprised of older vessels, many of which have not been subject to recent inspections or undergone adequate maintenance.[9] In June 2024, 289 vessels exported Russian crude oil and oil products, of which 158 were 'shadow' tankers, with an average age of 17 years. The oldest of these vessels was 37 years, and 30% of these vessels were at least 20 years old (tankers are generally decommissioned after 15 to 20 years of service).[10] Other analysis, however, puts the figure at five times that – 1089.[11]

Russia has continuously sought to expand its shadow fleet since the imposition of the oil price cap (see Annex).[12] Similarly, the share of Russian seaborne crude exports carried by

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[5] UK HM Treasury, Price Cap Coalition - Oil Price Cap (OPC) Compliance and Enforcement Alert, 28 June 2024, available at: https://www.gov.uk/government/publications/russian-oil-services-ban/price-cap-coalition-oil-price-cap-opc-compliance-and-enforcement-alert#:~:text=The%20oil%20price%20cap%20(OPC,against%20Ukraine%3B%20while%202)%20maintaining

[6] According to International Working Group on Russian Sanctions, since Spring 2022, more than 250 vintage tankers have been purchased from the global mainstream fleet and repurposed for use in the Russian shadow trade. The International Working Group on Russian Sanctions Paper #18 Energy Sanctions: Four Key Steps to Constrain Russia in 2024 and Beyond, p.9.

[7] Atlantic Council, "Russia's growing dark fleet: Risks for the global maritime order", 11 January 2024, available at: https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-growing-dark-fleet-risks-for-the-global-maritime-order/#introduction; CEPA, "Russia's Shadow Fleet Goes Rogue", 26 April 2024, available at: https://cepa.org/article/russias-shadow-fleet-goes-rogue/.

[8] Every additional 10 USD per barrel in oil prices generates approximately 25-30 USD billion/year of export earnings for Russian budget, KSE Institute Russia Chartbook, March 2024: Further Weakening of Russian Macroeconomic Stability Will Require Additional Measures, p. 16, available at: https://sanctions.kse.ua/wp-content/uploads/2024/03/Chartbook_March2024.pdf.

[9] International Maritime Organization, "Addressing ship-to-ship oil transfers and tankers in the "dark fleet"", 4 April 2023, available at: https://www.imo.org/en/MediaCentre/Pages/WhatsNew-1864.aspx/.

[10] The Centre for Research on Energy and Clean Air, "June 2024 — Monthly analysis of Russian fossil fuel exports and sanctions", 12 July 2024, available at: https://energyandcleanair.org/june-2024-monthly-analysis-of-russian-fossil-fuel-exports-and-sanctions/

[11] Vortexa, "The fleet operating in opaque markets - one year since the EU import ban", available at: https://marketinfo.vortexa.com/rs/837-MZE-578/images/Vortexa-Exclusive-Report-Opaque-Markets-Dec2023.pdf?version=0?utm_source=Website&utm_medium=Medium&utm_campaign=2000.EU-Ban-Anniversary--Report.

[12] International Working Group on Russian Sanctions, "Paper #18 Energy Sanctions: Four Key Steps to Constrain Russia in 2024 and Beyond", p.4-5, available at: https://fsi9-prod.s3.us-west-1.amazonaws.com/s3fs-public/2024-02/energy_sanctions_final_2-7-24_2_update.pdf.

shadow fleet vessels has consistently risen since the full-scale invasion of Ukraine, reaching 82% of total Russian seaborne crude oil exports in volume terms in June 2024.[13]

iii. The shadow fleet's operations

Russian shadow fleet vessels operate across the globe – taking Russian crude oil and oil products to customers, storage facilities and refineries located outside the price cap coalition countries. Their purpose is to continue trading Russian oil at market price by avoiding G7/EU ports and maritime services. Shadow fleet vessels often disable their Automatic Identification Systems (AIS), meaning authorities and other vessels do not know their location,[14] which significantly increases the risk of collisions.[15]

iii. a) The Baltic route

Russia continues to rely on Baltic Sea ports for more than 40% of its seaborne crude oil exports.[16] In April 2024, approximately 111.7 million barrels of crude oil were transported through the Baltic Sea.[17] Of these, about 92.4 million barrels were transported by Russia's shadow fleet, constituting around 82% of all exports transiting the Baltic Sea.[18] In 2023, Russian shadow fleet vessels carrying crude oil made 399 individual voyages through the English Channel's Strait of Dover, which separates France and the UK by only 20 miles (32 kilometres) at its most narrow stretch.[19] Between January 2024 and April 2024, 251 voyages carrying Russian crude oil were made from the ports of the Baltic Sea through the Strait of Dover. Of these, 71%, or 178 vessels, were made by Russia's shadow fleet.[20] One maritime insurer reportedly estimated that on an average day, 12 shadow tankers pass through Norwegian waters.[21]

iii. b) Ship-to-ship transfers

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[13] CREA, "June 2024 – Monthly analysis of Russian fossil fuel exports and sanctions", 12 July 2024, available at: https://energyandcleanair.org/june-2024-monthly-analysis-of-russian-fossil-fuel-exports-and-sanctions/.

[14] Atlantic Council, "Russia's growing dark fleet: Risks for the global maritime order", 11 January 2024, available at: https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-growing-dark-fleet-risks-for-the-global-maritime-order/#introduction.

[15] CEPA, "Worse Than Pirates: Russian Shadow Fleet Brings Disaster", 22 July 2024, available at: https://cepa.org/article/worse-than-pirates-russian-shadow-fleet-brings-disaster/.

[16] KSE Institute estimates based on KPLER data, for further details please see KSE Institute Russian Oil Tracker, February 2024, p. 3-4. See also CEPA, "Russia's Shadow Fleet Goes Rogue", 26 April 2024, available at: https://cepa.org/article/russias-shadow-fleet-goes-rogue/.

[17] KSE Institute Russian Oil Tracker, April 2024, available at: https://kse.ua/wp-content/uploads/2024/04/ROT_APR24.pdf.

[18] KSE Institute Russian Oil Tracker, April 2024, available at: https://kse.ua/wp-content/uploads/2024/04/ROT_APR24.pdf.

[19] For details and monthly dynamics, please see KSE Institute analysis based on KPLER data ("Shadow Fleet Voyages through the Strait of Dover") (available on request).

[20] KSE Institute Russian Oil Tracker, April 2024, available at: https://kse.ua/wp-content/uploads/2024/04/ROT_APR24.pdf.

[21] Atlantic Council, "Russia's growing dark fleet: Risks for the global maritime order", 11 January 2024, available at: https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-growing-dark-fleet-risks-for-the-global-maritime-order/#introduction.

Shadow fleet vessels are frequently involved in ship-to-ship (STS) transfers – the transfer of cargo from one vessel to another in open water or at port. This can be done to consolidate oil cargo from smaller vessels for long-distance transit, or to blend and mask the origin of oil. A total of 822 STS transfers of Russian oil were recorded in EU waters over the one-year period after the oil sanctions came into force on 5 December 2022.[22] Over half of all STS transfers happened off the coast of Greece (specifically at the Kalamata Lightering zone).[23] The rest were near Malta, Ceuta (Spain), Constanta (Romania), Gotland (Sweden) and Augusta Lightering (Italy).[24] In June 2024, EUR 735 mn of Russian crude oil and petroleum products underwent STS transfers in EU waters, with shadow fleet vessels involved in the transfer of at least EUR 269 mn worth of oil.[25]

Refining loophole

Whilst G7/EU countries have banned imports of oil products refined in Russia, they have not banned imports from third-country refineries that process Russian crude oil. Shadow fleet vessels continue to supply large volumes of Russian crude oil to third country refineries above the oil price cap. Consequently, oil products refined from crude of Russian origin continue to legally flow into G7/EU countries, maintaining demand for and revenues from Russian crude oil.

In 2023, there was a 44% year-on-year increase in sanctioning countries' imports of oil products, by volume, being produced from Russian crude.[26] Between December 2022 and December 2023, oil price cap coalition countries imported EUR 8.5 bn in oil products made from Russian crude.[27]

Blending and re-exporting Russian oil

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[22] Center for the Study of Democracy, "The Elusive Oil Price Cap: Cutting the Flow of Oil Money to the Kremlin", 13 December 2023, available at: https://csd.eu/blog/blogpost/2023/12/13/the-elusive-oil-price-cap-cutting-the-flow-of-oil-money-to-the-kremlin/

[23] CEPA, "Russia's Shadow Fleet Goes Rogue", 26 April 2024, available at: https://cepa.org/article/russias-shadow-fleet-goes-rogue/; Atlantic Council, "Russia's growing dark fleet: Risks for the global maritime order", 11 January 2024, available at: https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-growing-dark-fleet-risks-for-the-global-maritime-order/#introduction.

[24] Bloomberg, "Fake coordinates and tanker tricks expose shadowy Russian oil trade", 27 September 2023, available at: https://www.bloomberg.com/news/articles/2023-09-27/russian-oil-exports-two-tankers-caught-spoofing-tracking-systems?sref=qYiz2hd0; Süddeutsche Zeitung, "Putins Schattendlotte", 2 May 2024, available at: https://www.sueddeutsche.de/projekte/artikel/politik/putin-russland-oel-sanktionen-griechenland-eu-e302502/?reduced=true.

[25] The Centre for Research on Energy and Clean Air, "June 2024 — Monthly analysis of Russian fossil fuel exports and sanctions", 19 February 2024, available at: https://energyandcleanair.org/june-2024-monthly-analysis-of-russian-fossil-fuel-exports-and-sanctions/

[26] The Centre for Research on Energy and Clean Air, "Refining loophole widens: 44% increase in sanctioning countries imports of oil products from Russian crude in 2023", 12 July 2024, available at: https://energyandcleanair.org/publication/refining-loophole-widens-44-increase-in-sanctioning-countries-imports-of-oil-products-from-russian-crude-in-2023/

[27] The Centre for Research on Energy and Clean Air, "Refining loophole widens: 44% increase in sanctioning countries imports of oil products from Russian crude in 2023", 12 July 2024, available at: https://energyandcleanair.org/publication/refining-loophole-widens-44-increase-in-sanctioning-countries-imports-of-oil-products-from-russian-crude-in-2023/

Current legislation does not adequately address the practice of blending Russian oil with non-Russian oil to mask its origin. EU law explicitly allows for some degree of blending in imported oil,[28] and there are few due diligence requirements that would prevent Russian oil and oil products from entering G7/EU markets through blending.

An investigation by the Centre for Research on Energy and Clean Air (CREA) and the Center for the Study of Democracy (CSD) found that the EU had imported 5.16 mn tonnes of oil products valued at EUR 3.1 bn from three Turkish ports with no refining hubs[29] between 5 February 2023 (when the ban on Russian oil products took effect) and the end of February 2024.[30] In this period, 86% of these ports' imports of oil products were from Russia.[31] This raises a strong suspicion that large quantities of oil products of Russian origin were blended with other oil products in Turkey, and sold on to the EU.

Alleged surveillance activity by shadow fleet tankers

Investigative journalists and Sweden's Navy Chief have accused the Russian shadow fleet and other vessels of gathering intelligence around critical infrastructure and pipelines in the North Sea, to potentially sabotage or disrupt them.[32] Such activities would disqualify these vessels from innocent passage rights under international maritime law. Further investigations into these allegations are merited.

3. Environmental risks of shadow fleet operations

The environmental risks associated with shadow fleet operations continue to grow. Around 80% of shadow fleet oil tankers are older than 15 years[33] – an age beyond which tankers begin to represent a serious risk of malfunction, collision, and spillage.[34] Experts opine that it is only a matter of time before a major incident involving Russian shadow tankers will

[28] European Commission, "Oil Imports Related Provisions: Article 3m And Article 3n Of Council Regulation 833/2014", 30 June 2023, available at: https://finance.ec.europa.eu/document/download/0e191eb4-cf94-4180-8046-1bb5c607f770_en?filename=faqs-sanctions-russia-oil-imports_en.pdf

[29] Ceyhan, Marmara Ereğlisi, and Mersin.

[30] Council of the European Union, "EU sanctions against Russia explained", 27 June 2024, available at: https://www.consilium.europa.eu/en/policies/sanctions-against-russia/sanctions-against-russia-explained/

[31] The Centre for Research on Energy and Clean Air, "A Kremlin pit stop: EU imports EUR 3 bn of oil products from Turkish ports handling Russian oil", 15 May 2024, available at: https://energyandcleanair.org/publication/kremlin-pit-stop-eu-imports-eur-3-bn-of-oil-products-from-turkish-ports-handling-russian-oil/

[32] Newsweek, "Russia's Suspected Spy Ship Fleet in North Sea Raises Cold War Era Fears", 21 June 2024, available at: https://www.newsweek.com/russia-spy-fleet-vessels-north-sea-espionage-1915640.

[33] For details and monthly dynamics, please see KSE Institute analysis based on KPLER data ("Shadow Fleet Voyages through the Strait of Dover") (available on request).

[34] Single hull oil tankers must undergo an assessment and conversion before they reach 15 years of age – see International Maritime Organisation, "Tanker safety – preventing accidental pollution", available at: https://www.imo.org/en/OurWork/Safety/Pages/OilTankers.aspx; All tankers have an economic life of 20-25 years, after which they are no longer considered safe – see Congressional Research Service, "The Global Oil Tanker Market: An Overview as it Relates to Sanctions", 18 March 2024, available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://crsreports.congress.gov/product/pdf/R/R47962/2#:~:text=One%20analysis%20finds%20that%2043,for%20their%20steel%20scrap%20value.

occur.[35] According to one industry expert, '[t]ankers that should have been scrapped by now are doing loads of ship-to-ship transfers of millions of barrels of oil without proper insurance", and this is "an environmental disaster waiting to happen.'[36]

In 2022-2024 over 30 accidents occurred involving shadow vessels.[37] Some notable examples include:

- On 19 July 2024, the 23 year old shadow tanker Ceres I collided with a Singaporean-flagged tanker Hafnia Nile off the Malaysian coast.[38] Both tankers reportedly caught fire and the Ceres I is also reported to have spilled oil.[39] The uninsured Ceres I then turned off its Automatic Identification System (AIS) and fled the scene – creating further risk of collision with other vessels.[40] The Ceres I is uninsured and any costs from the spill and operations is likely to be borne by the Malaysian tax payer.[41]
- On 2 March 2024, a collision involving a Russian shadow fleet tanker – the 15-year old Andromeda Star – occurred in the Danish Strait.[42] The vessel's owners and insurers are unknown, and it is not listed as being covered on the International Group of P&I Clubs' website. Fortunately, the ship was returning to Russia empty and as such did not cause an environmental catastrophe in the Danish Strait.
- In December 2023, the Liberty, a 23-year-old Cameroon-flagged ship carrying sanctioned Venezuelan oil, experienced technical failure and ran aground in the Singapore Strait. A major ecological catastrophe was avoided because Indonesian salvage teams managed to free the vessel.[43]

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[35] The International Working Group on Russian Sanctions, "Paper #18 Energy Sanctions: Four Key Steps to Constrain Russia in 2024 and Beyond", available at: https://fsi9-prod.s3.us-west-1.amazonaws.com/s3fs-public/2024-02/energy_sanctions_final_2-7-24_2_update.pdf.

[36] Bloomberg, "Aging Shadow Fleet Carrying Russian Oil Poses Disaster Risk", 26 March 2023, available at: https://www.bloomberg.com/news/articles/2023-03-26/aging-shadow-fleet-carrying-russian-oil-poses-disaster-risk.

[37] Politico, "Russia's shadow fleet is a disaster waiting to happen", 30 October 2023, available at: https://www.politico.eu/article/russia-shadow-fleet-oil-tankers-ships-accidents-ukraine-war-sanctions/.

[38] CEPA, "Worse Than Pirates: Russian Shadow Fleet Brings Disaster", 22 July 2024, available at: https://cepa.org/article/worse-than-pirates-russian-shadow-fleet-brings-disaster/; Lloyd's List, "Investigators start to examine collision that sparked fires on Hafnia tanker and sanctions-busting VLCC", 19 July 2024, available at: https://www.lloydslist.com/LL1149957/Investigators-start-to-examine-collision-that-sparked-fires-on-Hafnia-tanker-and-sanctions-busting-VLCC.

[39] BBC, "Malaysia tracks down missing oil tanker which fled after collision", 21 July 2024, available at: https://www.bbc.com/news/articles/c047jm8984mo.

[40] The Maritime Executive, "Malaysia Apprehends Shadow Tanker After it is Towed from Scene of Accident", 20 July 2024, available at: https://www.maritime-executive.com/article/malaysia-searches-for-shadow-tanker-as-it-goes-dark-and-departs-accident.

[41] CEPA, "Worse Than Pirates: Russian Shadow Fleet Brings Disaster", 22 July 2024, available at: https://cepa.org/article/worse-than-pirates-russian-shadow-fleet-brings-disaster/.

[42] Bloomberg, "Shadow-Fleet Oil Tanker Damaged in Collision Near Denmark", 19 March 2024, available at: https://www.bloomberg.com/news/articles/2024-03-19/russian-shadow-fleet-oil-tanker-damaged-in-collision-near-denmark.

[43] Splash 247, "Salvage teams in Indonesia attend to grounded dark tanker", available at: https://splash247.com/salvage-teams-in-indonesia-attend-to-grounded-dark-tanker/.

- In October 2023, the Turba, a Russian shadow fleet tanker sailing under the flag of Cameroon, lost engine power some 200 miles off the coast of Indonesia and for about 48 hours the ship's navigation status was 'not under command'" – meaning that the ship was unable to manoeuvre on its own and therefore to keep out of the way of other traffic.[44] The Turba is a 26-year-old vessel that has not had a full inspection since 2017.[45] According to the open database,[46] the Turba lacks P&I insurance.
- In May 2023, the Pablo, a 27-year-old Gabon-registered tanker, suffered a large explosion near the coast of Indonesia. The ship was built in 1997 and was set to be sold for scrap back in 2018, however it was repurposed into a shadow fleet carrying Iranian oil.[47] With no identified insurer, local authorities had to manage the consequences of the incident. Much greater harm was avoided only because the ship was returning after offloading the cargo. Had the vessel been carrying its maximum capacity of 700,000 barrels of oil during the incident, environmental and economic damage would have been huge.[48]

Increasing the risks of shadow fleet tankers even further, it has been reported that tankers carrying Russian oil through the Danish Strait are now routinely refusing to take specialist pilots onboard to assist the navigation through narrow, shallow and difficult waters.[49] Since the start of 2024, at least 20 vessels – carrying a total of an estimated 10 mn barrels of oil – have refused the specialist pilots, and only three of those vessels were insured by a recognised western insurance provider.[50] This further increases the risk of collision and spills in an ecologically sensitive area.

An oil spill from one oil tanker would cause severe damage to the marine environment and coastal ecosystem. The cost of remedying damage from an oil spill from a shipwrecked Suezmax-class shadow fleet tanker could be anywhere between EUR 120 mn and EUR 1.25 bn.[51] The absence of valid P&I insurance cover would mean that the cost of cleanup and economic loss from the oil spill would be borne by the International Oil Pollution Compensation Funds (where applicable) or failing that, the taxpayers of the coastal country or countries.

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[44] Bloomberg, "Shadow Fleet Oil Tanker Drifted for Two Days in Indian Ocean", 11 October 2023, available at: https://www.bloomberg.com/news/articles/2023-10-11/an-oil-tanker-adrift-in-indian-ocean-is-latest-dark-fleet-menace?sref=NeFsviTJ.

[45] Bloomberg, "Aging Shadow Fleet Carrying Russian Oil Poses Disaster Risk", 26 March 2023, available at: https://www.bloomberg.com/news/articles/2023-03-26/aging-shadow-fleet-carrying-russian-oil-poses-disaster-risk.

[46] Ibid.

[47] Guardian, "How a Burnt out Abandoned Ship Reveals the Secrets of a Shadow Tanker Network", 18 September 2023, available at: https://www.theguardian.com/business/2023/sep/18/how-a-burnt-out-abandoned-ship-reveals-the-secrets-of-a-shadow-tanker-network.

[48] American Enterprise Institute, "Ghost Ships Already Wreak Havoc", 28 November 2023, available at: https://www.aei.org/op-eds/ghost-ships-already-wreak-havoc/.

[49] Financial Times, "Russia's 'dark fleet' rejects navigators for perilous Danish straits", 22 March 2024, available at: https://www.ft.com/content/e86f7d12-fc6b-4167-af72-f52f8f74778c.

[50] Ibid.

[51] Figures are based on preliminary analysis in "Quantification Of the Potential Damage of An Oil Spill in The English Channel From a Ship Carrying Russian Oil", prepared by Tatyana Deryugina et al. (available on request).

The potential impact of a large oil spill from an ageing tanker can be illustrated by the Prestige disaster in 2002 off the coasts of Spain and Portugal. The 26-year old Prestige broke apart and leaked 50,000 metric tons of oil. After sinking, the wreck continued to leak approximately 125 tons of oil a day, polluting the seabed and contaminating the coastline, especially along the territory of Galicia.[52] The Prestige accident is one of the greatest ecological disasters in recent European history and resulted in over EUR 1 bn in damages.[53]

In addition to clean-up costs, an oil spill would harm both economic activity and the environment. Several industries would be affected, including fishing, tourism, and boating. The ecological impacts of a large spill would also be non-trivial. Seabirds, which dive for fish, are highly susceptible to oil spills, as the oil coats their feathers and leads to fatalities. Fish eggs and larvae are also particularly vulnerable to oil spills. Oil spills pose threats to marine mammals and sea turtles, including leatherback sea turtles and fin whales. Finally, oil spills can contaminate coastal habitats, resulting in hypoxia (oxygen deprivation) and organism fatalities.[54]

Finally, shadow fleet vessels are reportedly flouting IMO rules on sulphur oxide limits in fuel to cut transportation costs.[55] Sulphur oxides are harmful to human health, causing respiratory, cardiovascular and lung disease. Once released into the atmosphere, they can lead to acid rain, which impacts crops, forests and aquatic species, and contributes to the acidification of the oceans.[56]

4. Recommended legal and policy measures

The following measures are recommended to address the challenges and risks posed by the Russian shadow fleet.

a. Targeted sanctions

i. *Designate all shadow fleet vessels, their owners, operators and managers adding them to the EU, UK and US sanctions list*

Justification: The designation of shadow fleet vessels has had the biggest impact on shadow fleet operations to date. In the three months prior to US sanctions on vessels (July to September 2023) 41 now sanctioned tankers transported 5.8 million tonnes of Russian oil. This fell to 0.4 million tonnes in the most recent three months (April to June 2024) and

[52] Safety4sea, "Learn from the past: Prestige sinking, one of the worst oil spills in Europe", November 2018, available at: https://safety4sea.com/cm-learn-from-the-past-prestige-sinking-one-of-the-worst-oil-spills-in-europe/.
[53] GCapitan, "Insurer Ordered to Pay $1Billion Over 2002 Prestige Oil Spill", 16 November 2017, available at: https://gcaptain.com/insurer-ordered-to-pay-1-billion-over-2002-prestige-oil-spill/.
[54] Based on preliminary analysis in "Quantification Of the Potential Damage of An Oil Spill in The English Channel From a Ship Carrying Russian Oil", prepared by Tatyana Deryugina et al. (available on request).
[55] Reuters, "Growing armada shipping sanctioned oil burns dirty fuel in a setback for clean-up efforts", 29 May 2024, available at: https://www.reuters.com/sustainability/boards-policy-regulation/growing-armada-shipping-sanctioned-oil-burns-dirty-fuel-setback-clean-up-efforts-2024-05-29/.
[56] IMO, "IMO 2020 – cutting sulphur oxide emissions", available at: https://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx.

represents a 93% drop.[57] US sanctions imposed on shadow fleet vessels appear to deter third-country operators from engaging with those vessels, making their operations more difficult. It is too early to assess the impact of relatively recent EU and UK sanctions against vessels.

ii. *If sanctioned vessels continue to operate – designate key persons and entities that continue to engage with sanctioned vessels, namely*:

- *Vessels (and owners/operators) that engage in ship-to-ship transfer operations with designated vessels*
- *Ancillary maritime service providers that engage with sanctioned vessels (e.g. tugboats, port operators, storage facilities, fuel providers)*
- *Senior crew members (e.g.: captain, navigator) operating on sanctioned vessels*
- *Customers, brokers and intermediaries that deal with sanctioned vessels and their cargo*

Justification: There is evidence that at least four US-designated vessels have attempted to resume service.[58] Whether they succeed in doing so will largely depend on the risk appetite of those who engage with them. The two key risks for third country service providers are: (1) criminal liability for violating US sanctions if their engagement involves transactions in US dollars; or (2) being designated themselves for enabling or associating with sanctioned vessels. It is therefore crucial that US, EU, and UK authorities react swiftly to any engagement by third country persons with sanctioned vessels – these entities or individuals that engage with sanctioned entities and support their business operations should also be added to sanctions lists. Failing to do so will eliminate the deterrent effect of vessel designations.

iii. Designate third country facilities that blend or mask Russian-origin oil/oil products

Justification: Despite the EU ban on Russian oil products, between February 2023 and February 2024, the EU imported 5.16 mn tonnes of oil products valued at EUR 3.1 bn from three third-country ports that import 86% of their oil products from Russia.[59] This suggests that importers are exploiting vaguely worded legislation, poor enforcement, and insufficient due diligence requirements to import Russian oil products blended in third country facilities. Such practices must be thoroughly investigated and prosecuted as violations of oil/oil product import bans. Targeted trade sanctions against facilities that blend or mask Russian oil and oil products would further prevent these facilities from supplying the EU market and deter others from engaging in such practices.

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[57] Based on data analysed by CREA – see illustration 2 in the Annex.
[58] KSE Institute, "Russian Oil Tracker", July 2024, available at: https://sanctions.kse.ua/wp-content/uploads/2024/07/ROT_July24.pdf.
[59] The Centre for Research on Energy and Clean Air, "A Kremlin pit stop: EU imports EUR 3 bn of oil products from Turkish ports handling Russian oil", 15 May 2024, available at: https://energyandcleanair.org/publication/kremlin-pit-stop-eu-imports-eur-3-bn-of-oil-products-from-turkish-ports-handling-russian-oil/

b. Sectoral sanctions/bans

i. Ban ship-to-ship (STS) transfers of Russian crude oil and oil products in territorial waters and Exclusive Economic Zones, and ancillary maritime and other services to such operations wherever they take place

Justification: Ship-to-ship transfers facilitate the movement of Russian crude oil and oil products at prices above the oil price cap. Their purpose is to consolidate shipments from smaller vessels and/or blend oil from different sources to mask its origin – without having to go into port. Ship-to-ship transfers take place near EU coasts and natural harbours to shelter the operations from inclement weather, and for ease of access to ports for personnel and equipment. This proximity to coasts increases the risk of environmental damage from oil spills. Banning ship-to-ship transfers in territorial waters and exclusive economic zones is in line with international maritime law and will make these operations more difficult and costly. Furthermore, ship-to-ship transfers rely on ancillary maritime and other services to operate (e.g., personnel and equipment transfer, fuel and parts for machinery). Coastal states have the right to ban their nationals and registered entities/vessels from providing services to such operations, even if they take place in international waters. A ban on the provision of these services to Russia-linked ship-to-ship operations would make such operations unviable and reduce the risk of environmental damage.

ii. Ban import of refined/processed oil products made from crude oil of Russian origin

Justification: Russia continues to generate profits from crude oil sales despite bans on import of Russian crude oil by the US, EU, UK and allies. Some of the western demand for Russian crude oil has been replaced by increased imports from oil refineries in third countries (some owned by or linked to Russia), often above the oil price cap. The refined oil products are then sold to sanctions coalition countries – indirectly contributing to the Russian economy and war effort. At least EUR 8.5 bn of price cap coalition countries' imports of oil products between December 2022 and December 2023, were made from Russian crude. The same countries increased their imports of oil products made from Russian crude by 44% in 2023 compared to 2022. Whilst these imports currently only represent 3% of the EU's market share,[60] they are likely to grow if left unchecked. Addressing the refining loophole now would have a significant impact on Russian fossil fuel revenues without affecting global supply and prices.

c. Environmental and safety measures

i. Require proof of adequate P&I insurance cover for all oil tankers entering territorial waters, exclusive economic zones and international straits

[60] The Centre for Research on Energy and Clean Air, "Refining loophole widens: 44% increase in sanctioning countries imports of oil products from Russian crude in 2023", 12 July 2024, available at: https://energyandcleanair.org/publication/refining-loophole-widens-44-increase-in-sanctioning-countries-imports-of-oil-products-from-russian-crude-in-2023/

Justification: Adequate P&I insurance is only available to vessels that comply with EU/G7+ sanctions and meet minimum environmental and safety standards. It also provides cover for any spills that could affect coastal areas. Coastal states have the right to legislate for the prevention, reduction, and control of pollution in coastal areas, including international straits (Article 42 UNCLOS). Requiring proof of adequate P&I cover backed by rigorous enforcement would deter shadow fleet tankers away from coastal areas and geographic choke points. This could close the most direct and cost-effective shadow fleet routes and render shadow fleet operations economically unviable. Failure to prove adequate P&I cover would also help sanctioning authorities identify and designate shadow fleet tankers.

ii. Raise and enforce minimum environmental and safety requirements for oil tankers entering territorial waters, exclusive economic zones and international straits

Justification: Most shadow fleet vessels are too old to operate safely and are flagged in jurisdictions with poor enforcement of environmental and safety standards. Some have been switching off their Automatic Identification Systems (AIS), increasing the risk of collision. Coastal states have the right to legislate for the safety of navigation and the prevention, reduction, and control of pollution in coastal areas, including international straits (Article 42 UNCLOS). Enhanced safety standards could include a maximum age for tankers (e.g.: 20 years), proof of regular safety inspection certificates, liability for switching off AIS, and a ban on single-hull vessels. Introducing and enforcing tougher minimum environmental and safety standards for entry into coastal waters and geographic choke points would reduce the risk of environmental damage and collision, increase the costs of operating the shadow fleet, and reduce the supply of tankers available for shadow fleet operations.

iii. Enforce compliance with IMO sulphur oxide fuel standards in all coastal waters

Justification: Sulphur oxides are harmful to human health and the environment, causing respiratory, cardiovascular and lung disease, and crop failures. From 1 January 2020, vessels in all waters must comply with International Maritime Organisation rules on sulphur content in fuel (maximum of 0.5% across all waters and 0.1% in Sulphur Emission Control Areas – including the North and Baltic Seas).[61] Failure to comply (or treat emissions with a compliant scrubber) may result in fines, detention of vessels and de-bunkering of fuel. Shadow fleet vessels have reportedly flouted the IMO rules, using sulphur-heavy fuels to cut costs.[62] Each state is responsible for enforcing the rules and the level of enforcement and consequences vary from state to state. All coastal states should increase inspections, and detain and issue fines to vessels that fail to comply with IMO standards within their coastal waters. This will further increase the cost of shadow fleet operations, undermining their economic viability.

[61] IMO, "IMO 2020 – cutting sulphur oxide emissions", available at: https://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx; See also: DNV, "Global Sulphur Cap 2020", available at: https://www.dnv.com/maritime/global-sulphur-cap/FAQ/.

[62] Reuters, "Growing armada shipping sanctioned oil burns dirty fuel in a setback for clean-up efforts", 29 May 2024, available at: https://www.reuters.com/sustainability/boards-policy-regulation/growing-armada-shipping-sanctioned-oil-burns-dirty-fuel-setback-clean-up-efforts-2024-05-29/.

d. Anti-espionage measures:

i. Identify shadow fleet vessels involved in surveillance/espionage activity and prevent their passage through territorial waters and international straits

Justification: All shadow fleet vessels enjoy the right of innocent passage through territorial waters and international straits. Passage is innocent provided it is not prejudicial to the peace, good order or security of the coastal state – activity aimed at collecting information to the prejudice of the defence or security of the coastal state is considered to be so prejudicial (Article 19 UNCLOS). Coastal states would therefore be justified in inspecting vessels suspected of carrying out surveillance activities, and blocking passage of shadow fleet vessels if they are found to be undertaking such activity (Article 25 UNCLOS). Coastal states may also prevent passage through international straits where vessels do not meet the definition of innocent transit passage (Article 38(3) UNCLOS). Vessels observed carrying out such activities should also be designated for sanctions by all sanctions coalition countries.

e. Enhanced due diligence requirements

i. Regulate for greater transparency and due diligence standards, including requiring proof of price-cap compliant sales contracts backed by bank-verified statements to obtain insurance and other services

Justification: Enforcement of the oil price cap is predicated upon private and public sector actors undertaking effective due diligence to ensure the integrity of the supply chain. CREA's investigations reveal that at least eight UK-insured tankers may have violated the oil price cap, adding over EUR 100 million to Russia's export revenue.[63] Improving the ability of actors to identify attestation fraud and making it more difficult to perpetrate fraud will restrict the provision of services necessary to the shadow fleet operation, which in turn will both increase the operation costs and undermine shadow fleet operations. Greater transparency and due diligence standards in the oil shipping industry should include requiring proof of price-cap-compliant sales contracts backed by bank-verified statements to obtain insurance and other services. Currently, there is a lack of enforcement of the oil price cap policy evidenced by investigations showing that Russian oil traded above the price cap level is being transported using Western P&I insurance. In the case of an oil spill, the insurance to cover the clean-up cost would be invalid when investigated if the transported Russian oil was paid above the price cap level. To prevent this issue of invalid insurance to cover the cost of an oil spill and improve the impact of the price cap policy to reduce Russian oil export earnings, greater due diligence and enforcement is imperative.

[63] The Centre for Research on Energy and Clean Air, "War profiteering: Eight UK-insured tankers violate price cap, boosting Kremlin revenues by GBP 87 mn", 13 June 2024, available at: https://energyandcleanair.org/publication/war-profiteering-eight-uk-insured-tankers-violate-price-cap-boosting-kremlin-revenues-by-gbp-87-mn/

ii. Enhance proof of origin certification for imported oil and oil products

Justification: EU/G7 countries must require strict 'Rules of Origin' documentation when importing oil/oil products from ports or facilities that import oil/oil products from Russia. To enhance transparency and compliance, countries should tighten legislation to require verifiable proof of origin of oil/oil products on customs declarations. Enforcement agencies should be given sufficient powers and resources to conduct regular investigations to verify the veracity of customs declarations.

Annex

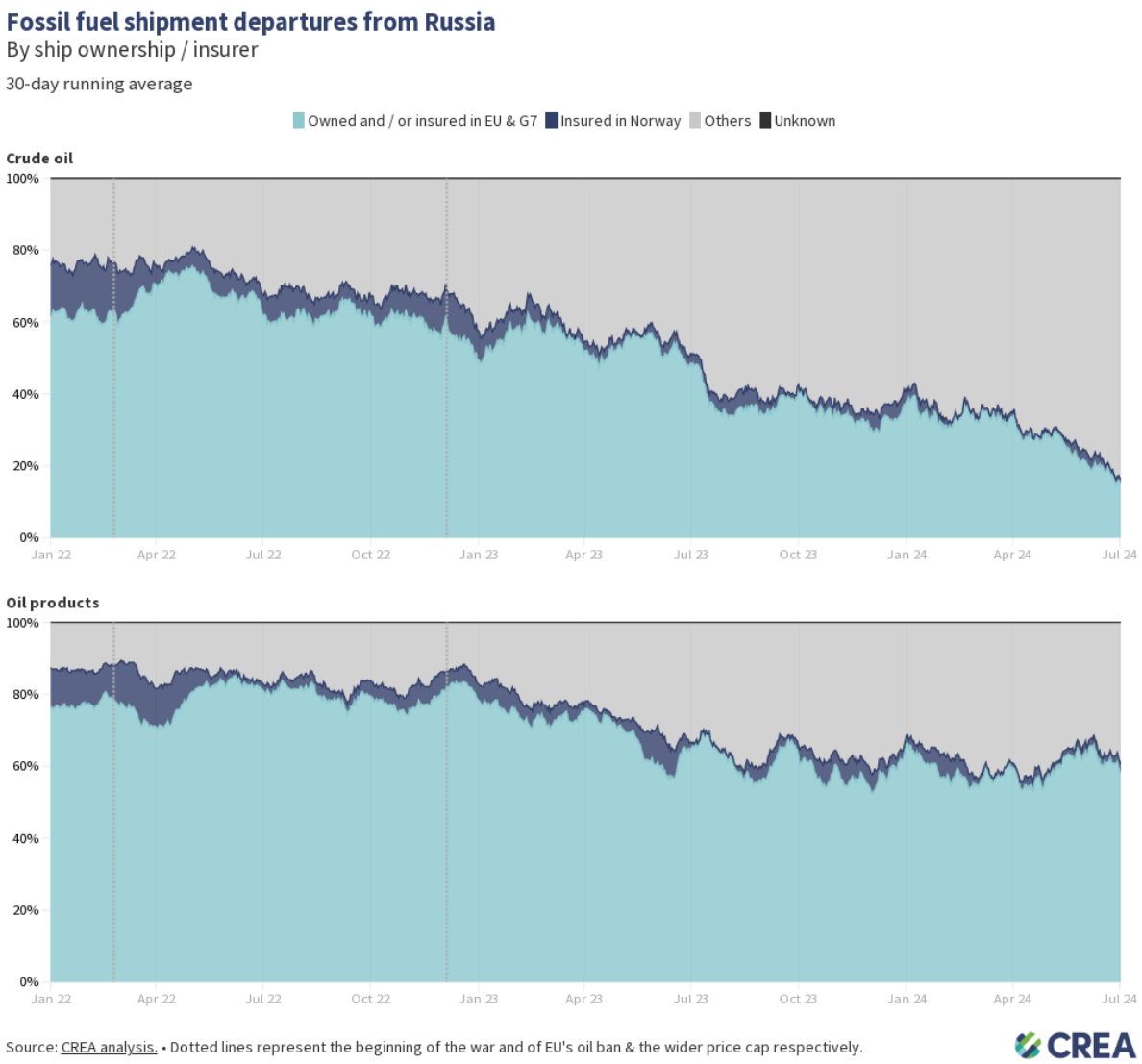

Figure A1 - Fossil fuel shipment departures from Russia from January 2022 to July 2024 by tanker owner or insurer region

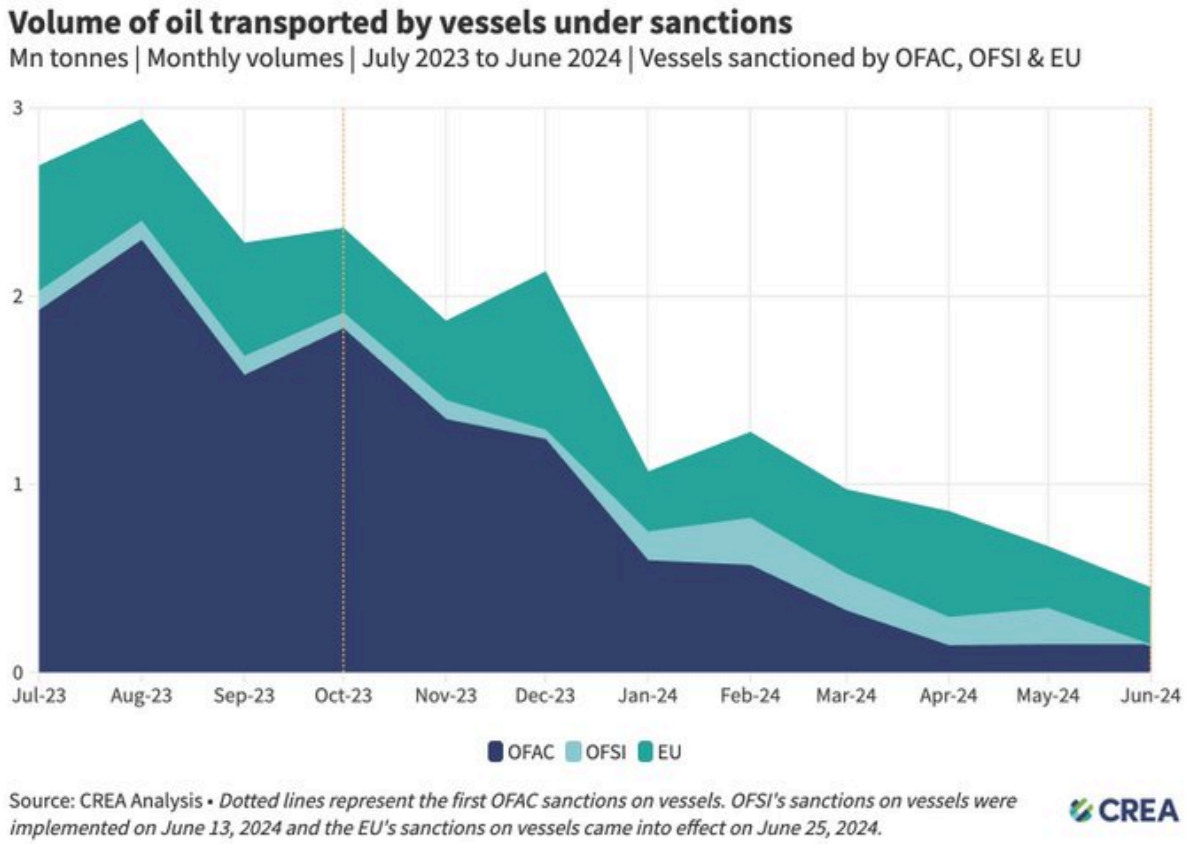

Figure A2 - Volume of oil transported by sanctioned tankers