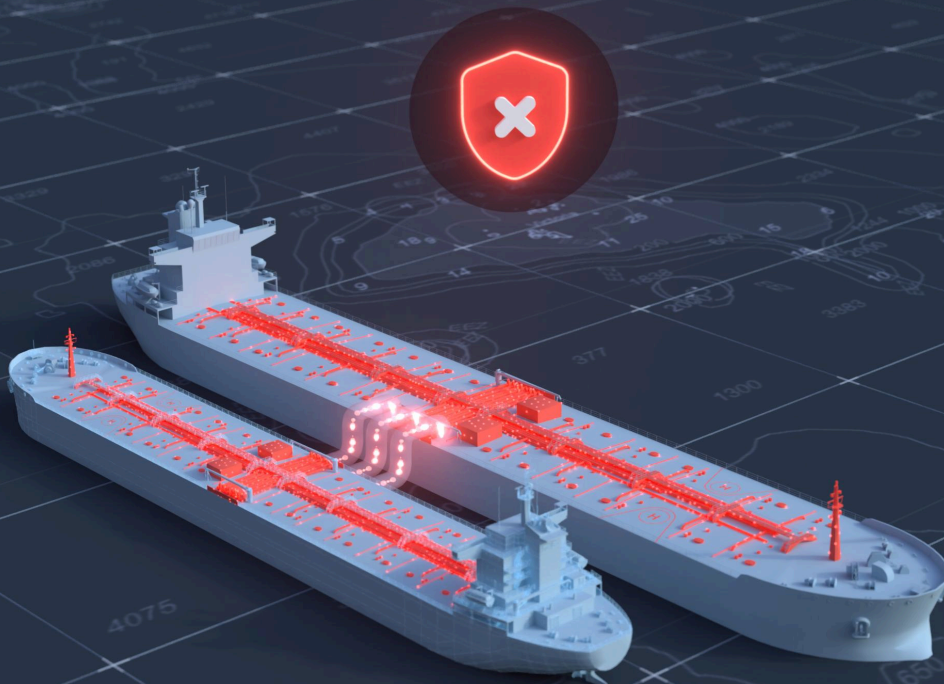


The turning tides

Maritime risk and compliance insights 2025–2026

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Key 2025 insights at a glance

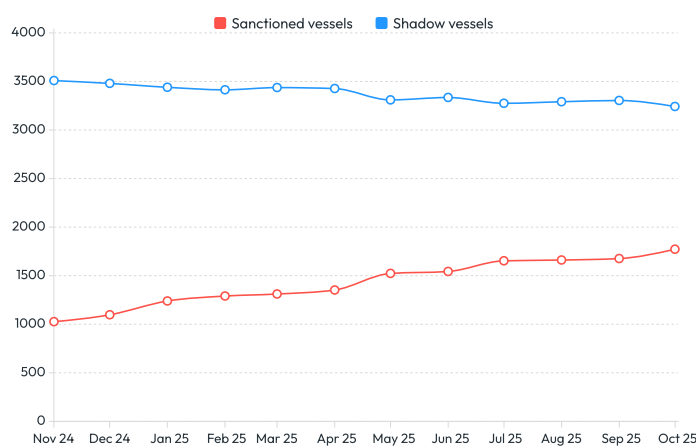
- Enforcement waves hit quarterly in 2025, driving the most active year on record with 686 newly designated vessels.
- Looking into 2026, Kpler Risk and Compliance identifies 262 active vessels at risk of future sanctioning, with particular near-term focus on 71 vessels flagged as high risk under our predictive risk-scoring methodology.
- Deception surged as dark STS activity rose 129% y/y and AIS spoofing climbed sharply at 18.3%, making evasion as a more networked, system-wide practice for 2026.
- More than 100 billion USD worth of crude oil was moved through shadow and sanctioned shipping networks in 2025, showing that this parallel fleet system is now a lasting part of the industry.
- The shadow fleet grew to about 3,300 ships by December 2025, moving roughly 3,733 million barrels of oil - about 6-7% of global crude flows. While slightly lower than the total amount moved in 2024, it represents a temporary reshuffling of shadow trade structures rather than a structural slowdown.
- Kpler's behavioral data now predicts sanction exposure with growing accuracy, positioning predictive compliance as a core market strategy for 2026.

Executive summary: the turning tides

2025 marked a decisive shift in global shipping. Sanctions accelerated across major jurisdictions, the shadow fleet grew into a multi-commodity system spanning **3,300 vessels**, and deceptive behaviors - from AIS spoofing to dark STS transfers - scaled to levels that can no longer be considered industrialized.

What began as isolated compliance breaches has become a structural layer of global trade in 2025, with obfuscation now functioning as a new operating model rather than an anomaly.

Graph 1: Time trends in Sanctioned and Shadow Vessel Counts (Nov 2024 – Oct 2025)



Source: Kpler

Kpler's Risk and Compliance intelligence across cargo, AIS, and ownership networks reveals how the maritime ecosystem adapted in 2025 - trading visibility for resilience. The industry did not pause under regulatory pressure in 2025 - it reorganized.

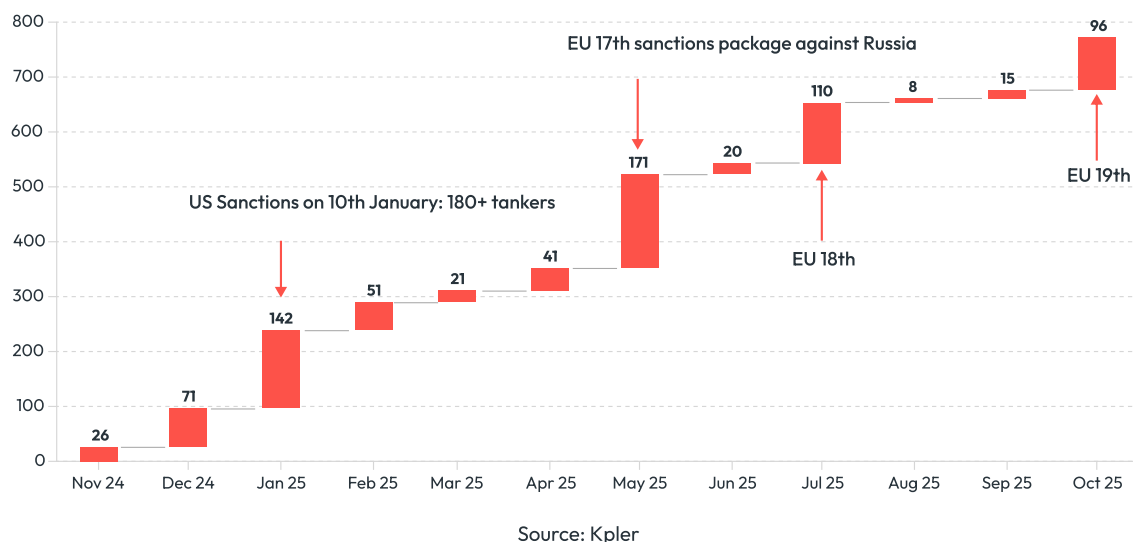
1. 2025 saw a spike in global sanction enforcement, but 2026 holds key geopolitical caveats

This year saw a sharp escalation in global sanctions enforcement with more than 686 vessels and 196 companies designated - with restrictions extending beyond routing and cargo into insurance, service provision, and LNG-linked trade. Regulators focused on increasingly opaque shipping networks, concentrating actions in high-risk regions such as the Eastern Mediterranean, Gulf of Oman, Black Sea, and transshipment hubs tied to Russian crude and LNG flows. Enforcement targeted the mechanisms enabling circumvention - improper AIS use, shell-company ownership, weakly verified insurance, and brokered trades through lightly regulated jurisdictions - bringing shipowners, managers, insurers, and flag states directly into scope.

Three regulatory waves in **January, May and October** defined the 2025 enforcement cycle.

Date	Actor	Measure	Key Targets	Notes
10 Jan 2025	U.S. (OFAC)	Russia-related sanctions	Gazprom Neft; Surgutneftegas; 180+ “shadow fleet” tankers; traders; oilfield service firms; insurers	Major expansion through new energy-sector determination; strong focus on maritime logistics.
27 Jan 2025	EU	Extension of existing measures	Russia	EU sanctions extended to 31 July 2025, signaling long-term pressure.
13 May 2025	U.S. (OFAC)	Iran-related sanctions	~24 companies and vessels moving Iranian oil and funding Iran’s military/proxies	Part of coordinated escalation with the EU.
20 May 2025	EU	17 th Russia sanctions package	189 “shadow fleet” vessels (mostly oil tankers); Surgutneftegas; circumvention networks	Expanded maritime and oil-trading restrictions.
18 Jul 2025 (effective 2 Sep; wind down to 17 Oct)	EU & UK	Oil Price Cap update	Price cap lowered from \$60 → \$47.60/bbl	Included updated UK Maritime Services Ban; stricter documentation and due-diligence rules.
23 Oct 2025	EU	19 th Russia sanctions package	Russian energy & financial sectors; Russian LNG imports (phased ban); “shadow fleet”; third-country facilitators	Sectoral & individual measures; major tightening of financial, trade, and maritime restrictions.

Graph 2: Escalation of maritime sanctions, monthly vessels additions and major regulatory milestones



While authorities shared the goal of tighter controls, they continued to operate with different rules and methods, creating a system aligned in principle but fragmented in practice. These enforcement surges establish 2025 as a high-watermark year for sanctions complexity and set the conditions for greater scrutiny in 2026, as Kpler expects no meaningful easing under current geopolitical stakes. This shift was underscored on 10 December by the seizure of VCLL Skipper, a sanctioned oil tanker carrying Venezuelan crude and intercepted by US forces at sea. The incident signals a potential expansion in enforcement tactics beyond designation alone, introducing a new risk dimension likely to be priced into geopolitical and compliance risk premiums in the near-term.

Looking ahead to 2026, Kpler expects sanctions volatility to remain a defining factor for compliance strategy. The United States will continue to be the primary driver - and the main source of unpredictability-in future enforcement, while market participants prioritize maintaining stability in short-term oil and gas flows. U.S. political dynamics will shape both the frequency and direction of new and existing sanctions, whereas Europe continues moving toward a more harmonized and stringent regulatory framework. Kpler expects U.S. enforcement patterns to align closely with the Trump administration's investment agenda and diplomatic negotiations with key trading partners.

In this uncertain environment, illicit trade practices are likely to keep evolving, adding pressure to oil and gas market balances, heightening price risks, and increasing exposure to environmental incidents.

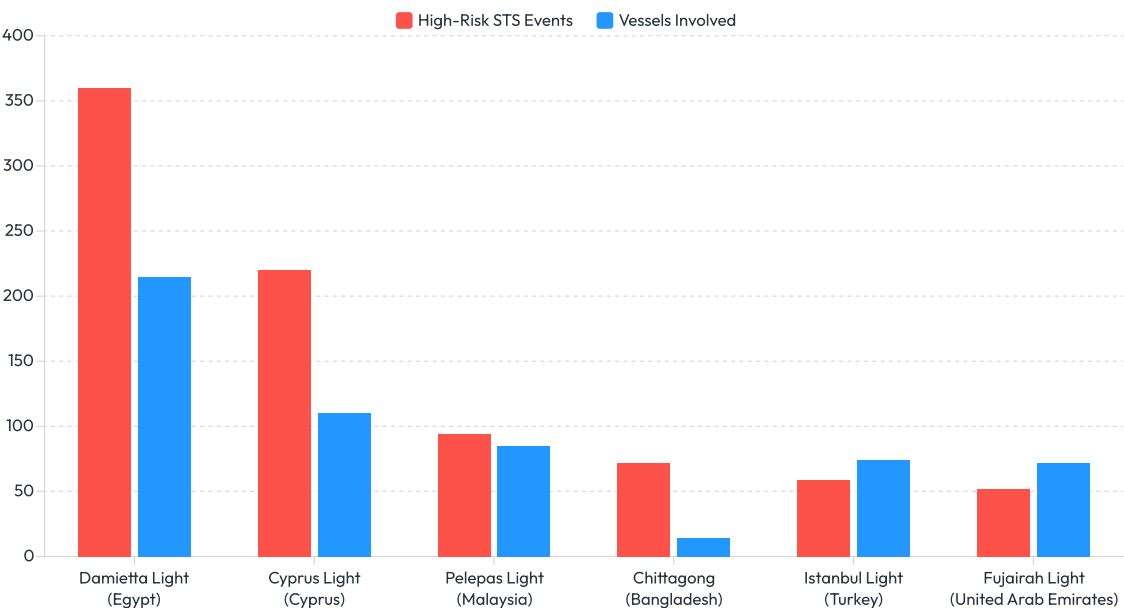
2. Global shadow fleet expansion has declined 6% y/y in 2025 due to stronger enforcement, but existing fleet increased operational resilience

By 2025, the shadow fleet had moved beyond a workaround and established itself as a durable parallel logistics system. The shadow fleet grew to about 3,300 ships, moving roughly 3,733 million barrels of oil; about 6–7% of global crude flows. This is slightly lower than the total amount moved in 2024, which was about 4,735 million barrels.

This scale is sustained by the core mechanisms of opacity: fragmented ownership, rapid and repeated flag changes, AIS manipulation, and irregular STS activity, all of which obscure vessel control and cargo movements. Non-transparent financing and insurance – driven in part by traditional insurers, banks and classification societies reducing exposure to high-risk tonnage – have pushed operators toward self-insurance, non-IG P&I cover, and unregulated registries, further reinforcing the fleet’s resilience.

These structural shifts allow sanctioned and price-capped trades to continue at significant scale, supported by key hubs such as Fujairah, the Black Sea, and the Eastern Mediterranean, which now function as informal redistribution points for Russia-linked and other restricted cargoes. Significant activity persists even after excluding hubs around Russia, Iran, Venezuela, and Syria. These hubs still handle large volumes of high-risk transfers, with 17.3% at Damietta Light., 19.0% at Cyprus Light., 23.0% at Pelepas Light., and 31.4% at Istanbul Light. involving vessels linked to recent Russian port calls – designed to obscure the true movement and ownership of restricted cargoes.

Graph 3: Top High-Risk STS hubs excluding Russia/Iran, Venezuela/Syria for 2025



Source: Kpler

The result is a shadow fleet that is not only larger, but more operationally robust, supported by an ecosystem of opaque ownership, permissive jurisdictions, and parallel service providers that collectively harden the network against enforcement pressure. Regulatory friction is met with operational creativity: when one corridor closes, two alternative routes appear. **The final two quarters of 2025 showed the strongest growth in high-risk STS activity at Fujairah Light., Istanbul Light., and Cyprus Light.,** alongside a rise in AIS-manipulated voyages feeding East Asian and Mediterranean redistribution chains.

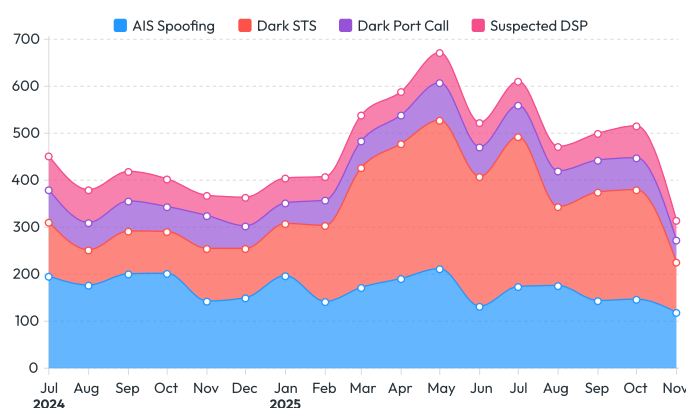
This momentum suggests early 2026 will bring greater concentration rather than expansion of the shadow fleet – fewer hulls, but more heavily utilized, more obscure, and more deeply integrated with permissive jurisdictions and parallel service networks. Enforcement pressure is rising, but the fleet's adaptive architecture means risk will likely migrate rather than recede, with 2026 characterized by **tighter, more sophisticated diversion pathways**, especially around the Eastern Mediterranean, Southeast Asia, and the Gulf of Oman.

3. As deceptive trade practices scale in 2025, 2026 becomes a test of how much unregulated oil and gas flow the global system can sustain

Technology designed for transparency was increasingly used for concealment in 2025. AIS spoofing reached 212 incidents in May—19% above the H2-2024 monthly average – and dark STS transfers hit a record 316, averaging ~224 per month across January–November, a 129% jump from the prior baseline. Kpler's Q1–Q4 monitoring shows these behaviors are not marginal: they underpin the shadow fleet's ability to move hundreds of millions of barrels through channels built to avoid formal oversight.

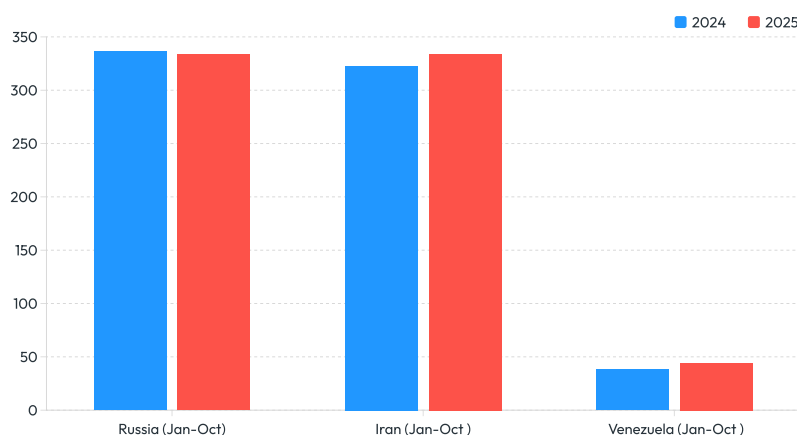
Behavioral analytics reveal a consistent pattern of mechanics: vessels later sanctioned often showed false AIS positions, frequent re-flagging, irregular STS activity, dark port calls, and opaque ownership weeks before enforcement. This recurring signal set now reliably precedes designations, shifting maritime compliance from reactive vessel tracking to predictive risk scoring. As deceptive practices scale and become more coordinated, 2026 will test how far global trade can be maintained under rising opacity and growing regulatory pressure.

Graph 4: Trends in Deceptive Behaviors (2024–2025)



Source: Kpler

Sanctions didn't freeze commodity trade in 2025 - they redrew it. Kpler data shows that YTD exports from the most sanctions-affected suppliers were broadly stable y/y in 2025, proving mounting enforcement didn't disrupt trade flows, instead it changed how those trade move.



Graph 5:

Y/y energy product exports from key sanctioned suppliers (mt) for Jan-Oct

Selected data includes ethane, liquids, LNG and LPG as the primary targets of U.S./EU sanctions and main drivers of revenue for sanctioned producers

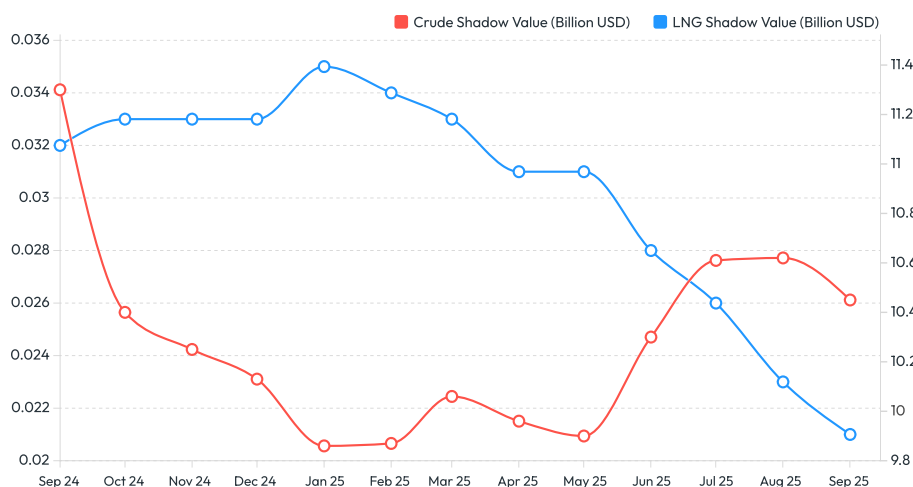
Source: Kpler

By Q3 2025, a 12% share of global oil and gas trade was routed through shadow and gray networks that obscured cargo origin, vessel ownership and final destination. Even as shadow-fleet expansion began to level off by October under new enforcement pressure, risk-associated seaborne flows remained resilient across crude, products and LNG. Shadow crude movements still dominate, but LNG is gaining momentum as political and commercial constraints intensify.

Graph 6:
Shadow Fleet Trade Value (3-month MA, \$bn)

Selected pricing benchmarks include Brent for crude oil and JKM for LNG

Source: Kpler



In crude markets, while the 2022 G7 price cap formally remains in place, practical enforcement has weakened. As of Q3 2025, 27% share of Russia's crude exports moved through the shadow fleet and non-Western service channels, enabling many barrels to trade near market prices. China and India continue to anchor demand for Russian crude despite restrictions, with Indian refiners importing discounted cargoes and re-exporting refined products which fall outside of legal restrictions once chemically altered.

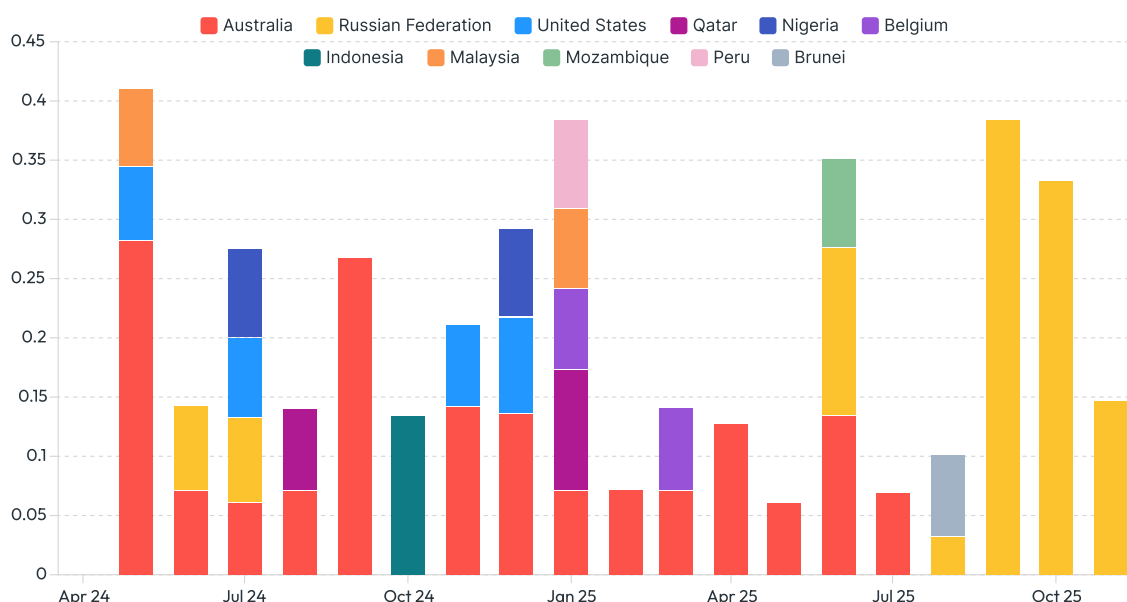
The rise of shadow logistics has also made the "missing barrels" problem more prominent: gaps in the global oil balance increasingly reflect unreported exports, misstated demand or inventory levels, and supply that is effectively invisible to traditional monitoring. This issue has become chronic in 2025, adding concerns to global oil balance disruptions and driven by Iranian, Venezuelan and Russian flows moving through opaque shipping networks.

In LNG, the Russia-China corridor remained the primary channel for sanctioned volumes. After longer delays linked to sanctions on Arctic LNG 2, the operator delivered roughly 19 discounted cargoes in YTD 2025, beginning with the first unloading at Pipechina's Beihai LNG terminal in August. Although Beihai is not on the OFAC/SDN list, it has exclusively received sanctioned Russian cargoes since mid-August - representing the first clear example of operational ring-fencing in LNG.

This ring-fencing is however only functional rather than structural: ownership has reportedly not changed, but operations have been configured to limit reliance on Western insurers and service providers, schedule Russian cargoes through dedicated berths, and route documentation through state-linked entities. Beihai's small scale and operational flexibility make it a manageable node for isolating sanctioned LNG flows compared with larger, internationally integrated terminals.

Graph 7: Beihai LNG monthly imports by origin (mt)

Terminal isolation from non-Russian originated LNG cargoes took place mid-August



Source: Kpler

In 2026, market participants will increasingly seek replacement volumes to rebalance supply away from risk-exposed crude and LNG flows. New EU-27 measures taking effect next year will tighten restrictions on fuels produced from Russian-origin crude, putting a significant share of Indian refined product exports to Europe at risk - approximately 240-260 kbd a year. At the same time, Europe will continue diversifying away from Russian LNG, amplify reliance on alternative suppliers and raise exposure to spot-market volatility.

The reorganization of flows through opaque networks increases pricing volatility, complicates supply assurance for compliant buyers, and raises the risk of sudden shifts in available volumes as enforcement evolves. Firms entering 2026 must assume that trade will continue - but through increasingly opaque channels that add material commercial, logistical, and compliance risk.

4. From detection to prediction: 2025 sanction designations increasingly follow trails that data analytics can detect first

The state of global maritime compliance in 2025 requires more than vessel tracking. Kpler analysis shows that sanction designations increasingly followed behavioral patterns that data flagged first- AIS gaps and spoofing, unusual STS activity, ownership shifts, and changes in insurance or registry profiles.

Within Risk and Compliance’s proprietary risk-scoring method, we have identified 302 active shadow-fleet vessels at risk of future designation, outlined in our October 2025 publication Deceptive Shipping Practices. In the interval since the previous publication, 42 of those vessels have been sanctioned, representing 14% of the cohort and confirming the method’s accuracy.

Looking into 2026, Kpler believes that the remaining 261 vessels show significant risk of sanctioning, with 71 vessels already scoring within critical risk ranges.

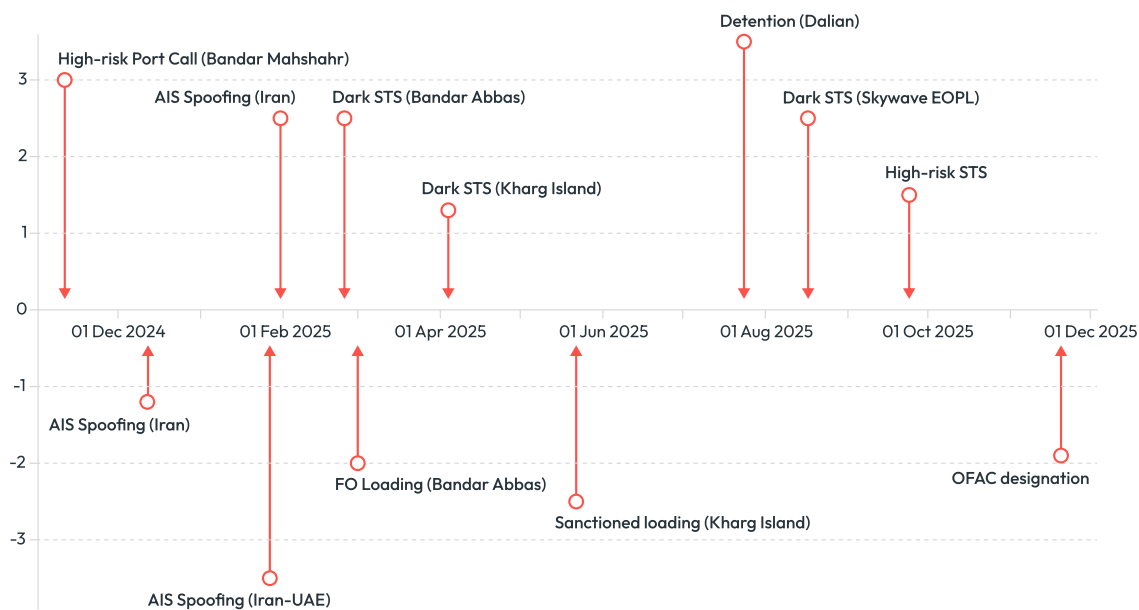
Risk	Score range	Number of vessels	Interpretation
Low	< 50	N/A	Sparse risk signals
Emerging	50-59	94	First risk flags
Elevated	60-80	52	Multiple risk indicators
Severe	81-99	44	Compounding risk
Critical	≥ 100	71	Threshold breach

Compliance is now moving toward predictive intelligence, where fused models identify high-risk voyages days or weeks before regulators act.

Three shifts define this transition into predictive intelligence. Regulators are no longer focused on individual ships but on entire facilitation networks across brokers, insurers, managers and intermediaries. Real-time compliance data is becoming a commercial differentiator as traders, charterers and banks adopt integrated risk feeds to prevent operational and financial disruption. Transparency tools - flag-risk layers, dashboards, APIs and automated attestations - are being built into risk systems as insurers and classification societies reduce exposure to high-risk tonnage.

A clear such example is **AQUARIS (IMO 9251822)**: over the past 12 months, it exhibited a textbook escalation pattern detected by analytics well before regulators acted. Starting from early indicators, Kpler Risk and Compliance flagged the like hood of such designations based on risk scoring of repeated Iranian port calls and the onset of AIS spoofing and gaps. This evolved into an **escalation phase** with multiple dark STS events in Iranian zones, sustained AIS manipulation, and successive FO and crude liftings from Bandar Abbas, Bandar Mahshahr, and Kharg Island. By mid-2025 the vessel reached **peak illicit activity**, with continuous Kharg Island crude movements, dark STS operations with tankers in Iran-China shadow-fleet corridors, spoofing episodes in Indonesia, and a detention in Dalian for nine deficiencies. The vessel's behavioral arc aligned precisely with predictive typologies - and OFAC formally sanctioned it on 6 February 2025.

Graph 8: Mini-map series showing vessel's timeline



Source: Kpler Risk and Compliance

Collectively, these developments signal a shift from reactive watchlists to proactive, data-driven risk control. This shift means compliance is now a forward-looking operational risk, not a back-office function. Companies that rely on static watchlists will face higher disruption, asset exposure and financing constraints.

In 2026, Kpler Risk & Compliance won't chase risk -
it will predict it.

Request demo