The Baltic wrote the rulebook on ECAs – now it needs to show enforcement can keep pace

Paper rules?

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The Baltic Sea has a claim few other waters can make: it was the world's first Sulphur Emission Control Area, designated in 2006 and tightened to today's 0.10% limit in 2015. Two decades on, that head start is about to matter more than ever. The International Maritime Organization (IMO) has adopted a new ECA for the North-East Atlantic, covering waters off Greenland, Iceland, the Faroe Islands, Ireland, the UK, France, Spain, and Portugal, introducing the same cap limit from 2028 under Resolution MEPC.407(84). It follows the Mediterranean, which became a 0.10% ECA in May last year, and the Canadian Arctic and Norwegian Sea, where that same limit kicks in from March 2027.

Add the Baltic, North Sea, North American, and Caribbean ECAs already in force, and a growing share of the routes feeding Baltic ports now sit under the strictest sulphur controls available. That should be good news for a region that has spent over 10 years living with this regulation. But it also means the Baltic's enforcement record is no longer a regional footnote. It is the closest thing the industry has to a preview of what awaits every new ECA now being drawn on the map.

Credibility itself

Sulphur emissions from shipping contribute to respiratory disease, cardiovascular illness, and premature mortality. Concentrated in the densely populated coastal areas, seafarers and port workers carry a disproportionate share of that exposure. The disparity that justified ECAs in the first place has not gone away either – road fuel (diesel and gasoline) across the EU has been capped at 10 parts sulphur per million since 2009, while marine fuel burned outside an ECA can still run to 0.50%, 50 times higher.

The core enforcement tools in most Baltic and European ports remain documentation review, such as bunker delivery notes and fuel records, and physical sampling that is accurate but slow, resource-intensive, and often conclusive only after the ship has sailed on. By the time a sample confirms non-compliance, the vessel may already be in the next jurisdiction's waters, and the damage to air quality and public health is already done. Consequently, the very credibility of the ECA itself erodes.

That creates a genuine grievance for the operators who have invested in compliant fuel, scrubbers, and emissions management to trade into the Baltic. They are competing, at least sometimes, against vessels that calculate whether the odds of detection are low enough to run cheaper, non-compliant bunker and absorb the occasional fine. Where verification is inconsistent, it is compliant owners who pay the price for a 'level' field that's anything but.

Scaling this from one sea to eight ECAs multiplies the problem. Ships transiting from the Baltic into the North Sea and now the North-East Atlantic cross several


Photo: Canva

enforcement regimes on a single voyage, each with its own inspection resources, sampling capacity, and reporting systems. Without improved coordination and better tools, a larger ECA network means more jurisdictional seams for non-compliant operators to exploit.

This is where the Baltic is well-placed to lead rather than simply absorb the lesson. Continuous emissions monitoring and real-time digital verification are already moving compliance checking away from retrospective sampling and towards direct, ongoing measurement, transmitted to port state control and flag administrations while the vessel is still underway. That closes the window between a breach occurring and one being identified, which is precisely the gap that documentation-based enforcement cannot catch up with.

Tamper-proof

This is no longer a pilot-stage idea – classification societies are starting to treat that approach as ready for real-world use. Lloyd's Register this summer extended Type Approval to a continuous stack-monitoring system for CO_2 reporting, adding to an SO_2 approval it granted the same technology earlier in the year. FuelEU Maritime, the EU Emissions Trading System, and the prospective IMO Net-Zero Framework are only as effective as the mechanisms used to enforce them. Consistent, tamper-proof monitoring gives compliant operators a real benefit too, since it exposes competitors cutting corners and reduces the risk of being penalised for emissions a ship never produced.

Charterers, cargo owners, insurers, and financial institutions are increasingly asking for verified emissions data, not self-reported figures, to support environmental-social-governance disclosure and counterparty risk assessment. Poseidon Principles signatories, for instance, could draw on this kind of data to assess how far their ship-finance portfolios align with climate targets, and greener vessels may secure preferential financing terms accordingly. A region demonstrating continuous, auditable compliance has a genuine commercial case to make to that audience, alongside the environmental one.

Enforcing the ambition

The expansion of the ECA network across Europe and the Arctic is a real achievement, and the Baltic can reasonably claim some credit for proving the model over the past decade. But a rule on paper is not the same as an enforced one, and the region's own experience is sufficient evidence of that. The industry's confidence in every new ECA now being adopted will rest on whether enforcement infrastructure catches up with regulatory ambition. Having gone first, the Baltic has the standing, and arguably the obligation, to step up on enforcement too. □

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