



MARITIME THREAT PRIMER

Uncrewed Surface Threats and One-Way Drones

What these systems are, why they change the defensive problem, and the broad categories of response, with a calibrated near-term outlook.

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For most of the modern era, a threat to a merchant ship arrived in a recognisable shape. A pirate skiff needed people aboard who wanted to climb the hull and survive the encounter. A mine sat and waited. A missile was expensive, scarce, and the preserve of states. Each of these shaped how ships defended themselves, and the logic of that defence was stable for a long time. That stability is what uncrewed systems have unsettled. This primer explains, in plain terms, what uncrewed surface vessels and one-way attack drones are, why they change the defensive problem for merchant shipping rather than simply adding one more item to the threat list, and what broad categories of response exist. It avoids any detail that would help someone build or use these weapons, because the point here is awareness, not instruction.

BOTTOM LINE UP FRONT

- 1 Uncrewed surface vessels and one-way attack drones are expendable, removing the attacker's need to risk or recover people. That breaks defences built for piracy, which assumed an adversary who wanted to survive.
- 2 Against the most capable of these systems, a merchant ship has limited ability to stop a determined strike on its own. The decisive protections are not on the deck.
- 3 Responses rank by protection per unit of effort: avoidance first, then awareness, connection to naval forces, and consequence management, with active defeat last and largely outside the merchant world.

01 What these systems are, in general terms

An uncrewed surface vessel, in the threatening sense relevant to shipping, is a boat with no one aboard that can be sent toward a target. A one-way attack drone is an aircraft, often small, that flies toward a target and is not meant to return. The shared idea is that the platform is expendable. There is no crew to recover, no pilot to bring home, and the machine itself is treated as part of the cost of the attack. This is a meaningful break from the older threat picture, where the attacker generally had to risk people and wanted them back.

These systems are not new in the abstract. A small boat laden with explosives struck the destroyer USS Cole in Aden in 2000, and navies have understood the danger of fast attack craft for far longer. What has changed is that the technology became cheap, widely available, and good enough. Components that

once required a state arsenal can now be assembled at modest cost, and the result is that non-state groups and lightly resourced state proxies can now field weapons that hold even well-defended ships at risk. Over recent years these systems have been used against merchant and naval vessels in more than one theatre, and during 2025 and into 2026 they featured in attacks that damaged and in some cases sank commercial ships.

It helps to separate the two halves of the title, because they pose different problems. A surface drone boat travels on the water at boat speed and is, in principle, something a good lookout or a radar watch can see coming, which means the older habits of watchkeeping retain some grip on it. A one-way aerial drone arrives faster, from a different axis, and gives far less time to react. The genuinely hard case is the two used together, where a crew trying to make sense of contacts on the water is also dealing with something approaching from the air. A defence shaped around one of these threats does not automatically cover the other.

02 Why this changes the defensive problem

The shift is not that ships face a new weapon. It is that the new weapon breaks several assumptions that older defences were built on. Five of those assumptions are worth drawing out.

The first is the assumption that an attacker is deterred by risk to their own people. Self-protective measures designed for piracy lean partly on the idea that the attacker wants to live, climb aboard, and leave with hostages. An expendable machine removes that lever entirely. There is no one aboard to deter, to injure, or to negotiate with.

The second is the assumption that getting a grip on the hull is the decisive moment. Against a boarding, delay is protection, since every minute the attacker spends failing to get aboard is a minute for help to arrive. Against a system designed to strike from a distance, there is no boarding to delay, and the decisive moment is the approach, which is faster and harder to interrupt.

The third is the assumption that an attack comes from one direction and in small numbers. A watch team sized to track one or two pirate skiffs faces a different problem when cheap, uncrewed contacts arrive together from several bearings, because each one carries no person and none has to be brought home. Numbers and simultaneity stress the human capacity to observe and react.

The fourth is the assumption that cost favours the defender. Historically the expensive party was the attacker, who needed scarce weapons and trained people. Expendable systems invert this. An attacker who loses ten of them has lost very little, while a defender struck once may lose a ship. The imbalance runs

the other way too: the guided weapons a navy spends to stop these systems can cost many times more than the systems themselves, and the ship and cargo at stake are worth far more again.

The fifth is the assumption, often unstated, that a ship knows where it is and can say so. Several of the regions where these attacks occur also suffer persistent interference with satellite navigation. Degraded position-keeping complicates both the ship's own seamanship and its ability to report accurately to the forces that might protect it. The interference is sometimes a warning in its own right, since it can accompany hostile activity rather than occur at random, and it carries a second danger when it nudges a ship off its intended track into waters where mines have been laid, a hazard that has reappeared alongside drones in some of the same areas.

Against the most capable of these threats, a merchant ship has limited ability to stop a determined strike on its own.

Taken together, these shifts move the merchant ship from a defender that could meaningfully raise the cost and difficulty of an attack to one that, against the most capable of these threats, has limited ability to stop a determined strike on its own. That is an uncomfortable conclusion, and it is the heart of why the problem is genuinely different.

03 What broad categories of response exist

Because no single measure answers a threat this varied, responses fall into a few broad families. None is a silver bullet, and they work best layered together. For a merchant ship, they are listed roughly in order of how much protection they deliver for the effort involved.

AVOIDANCE The highest-value lever most operators hold. The most reliable protection a merchant ship has is to not be where these weapons are being used. Routing and timing decisions, informed by current threat information, keep a ship outside active areas or reduce the time it spends exposed. It costs flexibility and sometimes a longer voyage, and it buys more safety than anything else available, because it addresses the threat before any defensive contest begins.

AWARENESS Cheap, and it underpins every other choice. Knowing what is around the ship matters, and so does knowing whether the ship itself fits the profile an attacker is targeting. In some theatres targeting has been political, turning on a vessel's ownership, flag, or recent ports of call rather than on anything the crew does at sea. That profile can be concrete in unexpected ways: some of the surface-drone strikes of early 2026 fell on sanctioned or falsely flagged tankers, so a ship's own

paperwork and trade can raise or lower its risk. It sits alongside the familiar work of keeping a good watch and reading the warning signs, including navigational interference.

CONNECTION Costs little and matters most against the worst weapons. Against a missile or a drone, the actors capable of defeating them are navies. Registering with the relevant coordination bodies, reporting position and incident information, and using naval coordination or escort where it is offered are what link a vulnerable ship to the only parties that can reliably intercept such a threat. Much of the value is established long before any incident, through the discipline of being known to the right people and reachable by them.

CONSEQUENCE Does not prevent a strike but limits what it does to the people aboard. Briefing and preparing crews for these specific scenarios, thinking through where people are safest, and rehearsing what happens if a ship is hit and has to be abandoned all belong here. It costs training time and buys resilience, and it has grown more important precisely because the threat now puts seafarers in the water in a way that a boarding rarely did.

DEFEAT Active defeat of the incoming system is largely outside the merchant world and sits last for that reason. Detecting, jamming, or destroying a drone or a drone boat is demanding, contested, and in most places not something a civilian crew may lawfully do. It is advancing quickly as a naval and critical-infrastructure capability and is worth understanding, but for a merchant ship it ranks well behind avoidance, awareness, connection, and consequence management in both practicality and law.

04 What this costs operators beyond the deck

For a commercial operator, the threat often bites in the ledger before it bites on the hull. The presence of these weapons in a waterway drives war-risk insurance premiums up, sometimes sharply and at short notice, and can make cover conditional or hard to obtain at all. It pushes operators toward longer routes, such as around the Cape of Good Hope rather than through an affected chokepoint, with the added fuel, time, and schedule cost that implies. It raises questions of crew welfare and the law around ordering people through hazardous waters, and it feeds into charter terms, liability, and the commercial calculations that decide whether a voyage happens. These consequences are part of the threat as operators actually experience it, and they are often what turns a distant security story into a board-level decision.

05 Near-term outlook

Over the next year or two, the trajectory points toward a threat that is more widespread rather than less. The systems are cheap, the knowledge to use them

has spread, and they have proven effective enough that the actors who employ them have little reason to stop. The geography has already broadened beyond a single chokepoint, with incidents now seen across more than one strategic waterway, and the same interference with navigation has appeared in several regions at once. At the same time, the defensive side is moving quickly. Naval coalitions have expanded their presence in the most affected waters, and counter-drone capability is among the fastest-growing areas of defence investment, though most of that capability protects warships and key infrastructure rather than individual merchant vessels. The likely near-term reality is therefore a continuing contest in which the offence remains cheap and adaptable and the defence improves unevenly, with merchant shipping protected mainly by where it chooses to go and by the naval forces it can stay close to.

The calibrated judgement is this: the uncrewed and one-way drone threat to merchant shipping is very likely to persist and probably to spread geographically over the next twelve to twenty-four months, while remaining concentrated in waters tied to specific conflicts rather than becoming uniform across all trade routes. Confidence in that direction of travel is moderate to high, resting on consistent recent patterns and the underlying economics of the weapons. Confidence in the specific pace and locations is lower, because those depend on political and conflict developments that are inherently hard to forecast.

CONFIDENCE MODERATE TO HIGH ON DIRECTION

CONFIDENCE LOWER ON PACE AND LOCATION

For operators, the durable conclusion is that the most dependable protections are the least technological ones, namely choosing routes wisely, understanding the ship's own risk profile, staying connected to protective forces, and preparing crews honestly for a threat that the ship cannot always stop by itself.

CLASSIFICATION	DESK	DATE	SCOPE
ILLUSTRATIVE ANALYSIS SAMPLE	MARITIME THREAT DESK	REV. A · JUN 2026	AWARENESS, NOT INSTRUCTION

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