

What are the key challenges facing Ireland within the maritime domain and how can these be addressed?

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Introduction

“There is a shared belief that the future security environment will be characterised by a range of complex and integrated challenges below and potentially above the threshold of armed conflict” (Speller, 2024, p.204).

This article provides an brief overview of Ireland’s key maritime security challenges, and potential responses, focusing specifically on the role of the Naval Service in this response, taking the approach advised by Speller (2024, p.224) that “naval policy is best understood within the context of a maritime strategy that reflects a nation’s needs”. While we have moved into an era of great power competition, the primary concerns of small island nations, such as Ireland, remain more locally focused, due to a lack of resources, capability, interest, or will.

The article adopts the structure provided by Ken Booth (1977) to outline and capture the key maritime domain challenges facing Ireland. Booth posited that the “functions of navies can be conceived as a trinity” (1977, p.15) with diplomatic, policing and military modes of action. The term ‘policing’ was later updated to ‘constabulary’ by Grove (Grove, 1990). The challenges facing Ireland range across these three modes, and are best viewed through the lens of “three overlapping circles”, as suggested by Speller (2024, p.231-2). In this way, the interconnectedness of the modes is demonstrated, and the way in which “the circles are rarely weighted equally” is illustrated. In the case of Ireland, it is heavily weighted towards the constabulary mode of action (see Figure 1), particularly with the primary day-to-day tasking of the Naval Service being to “provide a fishery protection service in accordance with the State’s obligations as a member of the European Union” (Houses of the Oireachtas, 2023).



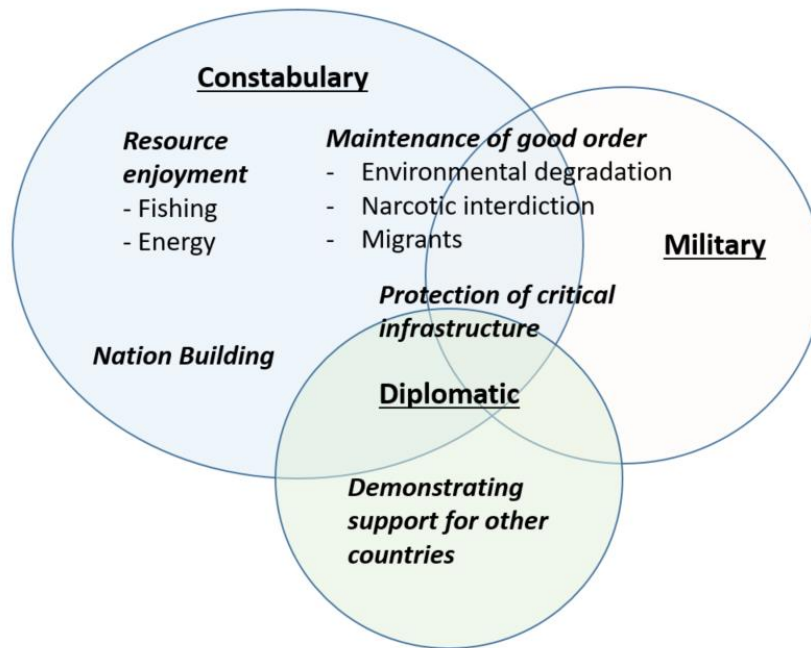


Figure 1: Illustration of Ireland's key maritime challenges through the lens of the Booth taxonomy (Reference: Author's adaption of Booth Taxonomy (1977))

Key challenges facing Ireland within the maritime domain

Constabulary – Resource enjoyment

a) Fishing

According to Bord Iascaigh Mhara (BIM, 2022), the Irish seafood industry is worth €1.3 billion to the Irish economy, with 1,993 registered fishing vessels and 15,373 employed (including indirectly) in the seafood industry. Globally, “for 3.3 billion people, aquatic foods provided at least 20 percent of the average per capita intake of animal protein” (FAO, 2022, p.22), demand for fish will increase in line with predicted increases in global food demand, with a 60% rise expected by 2050 (FAO, 2009).

With this important indigenous industry, and potential for an increased market volume, the impact of climate change on the fishery industry, is worrisome (Brander, 2007). Migration patterns of shoals are affected by warming seas. Fish, historically found in Irish waters, are being driven further Arctic-wards. The sequestering of excess carbon dioxide is causing rapid acidification of Arctic waters, further threatening fish stocks (Zysk, 2022; Urbina, 2019). Depleting stocks push indigenous fishing vessels further from shore, at increased risk of venturing into contested waters (*ibid*).

Furthermore, the Summer opening of Arctic shipping routes, brought about by melting ice, also portends an increase in competition in the North Atlantic from the vast Chinese Fishing fleet, driven west by a reported 90% decline in fish stocks within the South China Sea (Zysk, 2022). This fleet currently makes up 30% of the world fishing fleet (Oceana, 2021). The historical fishing conflicts (*e.g.* the Cod Wars between Icelandic and British fleets), are likely to reappear, with an added complexity of post-Brexit relationships (Grare, 2021; Reynolds &

Mils, 2020). Ireland has been challenged in this manner by Spanish trawlers in the past (Hogan, 2000). Overfishing by foreign vessels, reducing fish stocks available for local fishermen, has been attributed to the rise in Somalia pirate attacks, as disenfranchised young men with naval skills, were forced towards other means of making a living (Bueger & Edmunds, 2017; Urbina, 2019). While this outcome is unlikely in the Irish context, the impact of illegal, underreported, unregulated (IUU) fishing will increase for the Irish Seafood Industry in an era of depleted stocks and changing fish shoaling patterns (Petrossian, 2015).

Compounding this challenge is the vastness of the Irish exclusive economic zone (EEZ) (Figure 2). The Fishery Monitoring Centre (FMC), based in the Naval Base in Haulbowline is tasked with sea fisheries protection inside the Irish EEZ (Irish Defence Forces, 2024). The ability to monitor and act on threats to our fishery stocks is reliant on information sharing and an ability to interpret vast swathes of information. Automated Identification System (AIS) information relayed to monitoring stations may be erroneous, purposefully misleading, or turned off to avoid detection. This information needs to be validated by visual confirmation, however, the current operating posture of the Irish Naval Service may restrict our ability to conduct surveillance or intervene when a threat is identified (Houses of the Oireachtas, 2023).



Figure 2: Ireland's Exclusive Economic Zone (EEZ) (Department of Agriculture, Food and Marine, 2022)

b) Energy resources

According to Ahearne and Hynes (2020, p.4), “[a]rguably, the greatest marine-opportunity for Ireland lies in the underdeveloped energy potential off our coasts”. With this opportunity, comes challenge. In the increasingly fraught geopolitical environment, state sponsored terrorism against offshore infrastructure needs to be considered (Speller, 2022). Currently, our offshore energy generation assets are limited to the Corrib gas field and small numbers of wind turbines. However, the government has set a target of >5GW of offshore wind energy by 2030 (Government of Ireland, 2023), increasing the magnitude of this vulnerability. At present, the security of these assets is the purview of private companies (McCabe & Flynn,

2023). As the geopolitical situation deteriorates, the added weight of a ‘deterrence posture’ from the Naval Service may be desirable.

The undersea infrastructure, providing for Ireland’s energy needs, is considered a key state vulnerability, featuring on the National Risk Assessment (Department of Defence, 2024) and A Strategic Overview of Risks (Department of the Taoiseach, 2024). Until the Celtic Interconnector is completed to France in 2030, Ireland has a heavy reliance on the electricity-supplying East West Interconnector from England (EWIC) (Department of Environment, Climate & Communications, 2022) and two subsea gas connectors from Scotland (supplying 75% of Ireland’s gas demand). A significant portion of Irish electricity is generated from natural-gas fuelled power stations (approx. 31%) (SEAI, 2022). Given this, attacks such as the Nordstream incident (2022) and the Baltic connector (2023) are significant causes of concern (*ibid*). Recent visits by Russian vessels to Irish waters gives fuel to this fire (Gallagher, 2023). Energy security remains a Government priority, with plans to develop an off-shore Strategic Gas Energy Reserve for greater comfort in supply (Lee, 2023).

Ireland’s vast and largely unexplored EEZ also has the potential to provide further key economic assets such as oil, gas and manganese nodules (Bueger & Edmunds, 2017). Our ability to exploit and protect any resources found, are key security considerations for the State. The enforcement of jurisdiction over EEZs may result in more pronounced friction between States. The UK Ministry of Defence (MoD) predicts that tensions will intensify with increases in offshore energy cultivation (MoD, 2014).

Constabulary – maintenance of good order (Military – protection)

Historically the ‘global common’, as Mahan termed the oceans, has followed a doctrine of ‘freedom of the seas’ (Speller, 2022, p.3). The codification of regulation in this area came in the form of the long debated UN Convention of the Law of the Sea (UNCLOS) in 1982 (Speller, 2024). Contrarian attitudes to international norms, and subversion of “a rule’s based international order” creates challenges for open, sea-trading economies like Ireland (*ibid* p.204).

a) Narcotic interdiction

The international drug trade creates immensurable misery (Barrio *et al.*, 2017; Delano-Johnson, 2024). Several sources have alluded to the perception that Ireland is seen as a ‘soft target’ for international criminal gangs operating at sea (O’Keefe, 2024a; Michael, 2024; Schiller, 2024; Gallagher, 2024). Recent maritime drug seizures give credence to this assertion (Sheehy, 2024; Kelleher, 2024). It is important to approach this challenge in a strategic and integrated way (Gallagher, 2024), with strongly coordinated inter-agency collaboration (O’Keefe, 2024b). Under the Criminal Justice Act (1994), the Naval Service are legally empowered to “engage in drug interdiction operations” (Government of Ireland, 2015). They form an integral part of the Joint Task Force on Drug Interdiction (JTF), established in 1993, in conjunction with An Garda Síochána and Revenue (*ibid*).

b) Migrants

The sea has long been seen as a “medium for trafficking in persons, illicit goods and weapons” (Bueger & Edmunds, 2017, p.1299). With the deepening climate crisis, the sea trafficking of

migrants, as evidenced in the Mediterranean (Speller, 2024), is likely to escalate (DoD, 2024). Almost 5,000 migrants have crossed the English Channel into the UK since the beginning of this year (Dale & Gupta, 2024). We are not immune, as evidenced by incidents such as the discovery of fourteen migrants in a refrigerated container in Rosslare in January 2024 (Foy & Ryan, 2024). In this case, information from the UK Authorities alerted An Garda Síochána (AGS), reinforcing the importance of intelligence sharing. Search and rescue responsibilities currently reside with the Irish Coast Guard, who sit separately under the Department of Transport and, is staffed primarily with volunteers. In contrast to our limited spending, the UK Authorities have felt the need to commit £70 million to manage small boat arrivals up to 2030 (Casciani, 2023). We may also need to consider this challenge in a more integrated and resource intensive manner.

c) Environmental degradation

Environmental degradation has the potential to negatively impact both the imperilled fishing industry and the marine tourism industry. Prior to the pandemic, the marine tourism industry was worth over one billion euro to the Irish economy, with a large contribution to job creation (approx. 17,471 FTEs) (Ahearne & Hynes, 2020). Embracing the cruise liner industry can be considered a double edged sword. This industry remains a major source of pollution, despite improvements in technology and monitoring (Lloret *et al.*, 2021). Illegal practices, such as the “magic pipe”, brought to light by a whistle-blower on the Caribbean Princess, resulted in a \$40 million criminal penalty for deliberate vessel pollution (Urbina, 2019; Office of Public Affairs, 2016). Such deliberate pollution is not limited to the cruise industry and the problems caused by plastic debris, sewage, effluents, and oil discharge, further endangers fish stocks (Vikas & Dwarakish, 2015). Our ability to deter, monitor, and intervene in deliberate acts of pollution may be compromised by available resourcing.

Constabulary - Nation Building

As a small island nation, Ireland’s dependence on trade is undeniable, with exports of goods and services over 110% of Irish GDP in 2014, nearly three times the EU average (Purdue & Huang, 2015). The National Risk Assessment highlighted our reliance on Dublin Port for “trade, national and international supply chains”, with any impact on operations potentially risking “our economy and society” (DOT, 2023, p.19). Given this reliance, any sea denial attempt by belligerent nations would have wide reaching impacts (*e.g.* an apparent accidental sinking of a ship, causing obstruction to a key access point). The recent marine accident in Baltimore Harbour, USA, with estimates that damages could reach \$3 billion (BBC, 2024), shows the economic impact of any interruption to operations in large freight ports.

Outside the Irish littoral, other forms of maritime disruption have the potential to stymie desired economic growth, let alone “blue growth” (Bueger & Edmunds, 2017). This could take the form of obstructions in choke points, as demonstrated by the ‘Ever Given’ blockage of the Suez Canal (Speller, 2024); belligerent attacks on shipping from land (escalating in the Straits of Hormuz, instigated by sub-state actors such as Hezbollah and Houthi rebels in Yemen, Speller, 2022) or a return to prior levels of piracy in the Gulf of Aden (portended by Urbina, 2019). As quipped by Giovanni Cremonini (2023), Head of Maritime Security in the EU External Action Service; “no shipping, no shopping”. It is questionable how Ireland can contribute to the international attempts to bolster the marine security of the 90%

of global trade that travels by sea, with our own naval resources already stretched across our extensive EEZ (Bueger & Edmunds, 2017).

Military - Protection of critical infrastructure (Military and Diplomatic also)

In the information age, our reliance on undersea communication cables to facilitate daily life is not fully appreciated (Bueger & Liebetrau, 2021). The preponderance of undersea cables for the transmission of data, within the Irish EEZ, is a security vulnerability (DoT, 2023; DoD, 2024). “Around three-quarters of all cables in the northern hemisphere pass through or near Irish waters” (McCabe & Flynn, 2023, p.3) (see Figure 3). Furthermore, with the government’s target of >5GW of offshore wind energy by 2030 (Government of Ireland, 2023), the energy aspect of this vulnerability is likely to increase. There is a belief at NATO level that mapping of the sub-sea infrastructure of Ireland has been undertaken by the Russian fleet (Gallagher, 2023). Following the Nordstream attack, then Minister of Defence, Simon Conway, admitted to the limited subsea capabilities of the Naval Service and expected an increase in maritime and aerial patrols to protect this infrastructure (House of Oireachtas, 2023). This expectation placed additional demands on the fishery protection patrol resources.

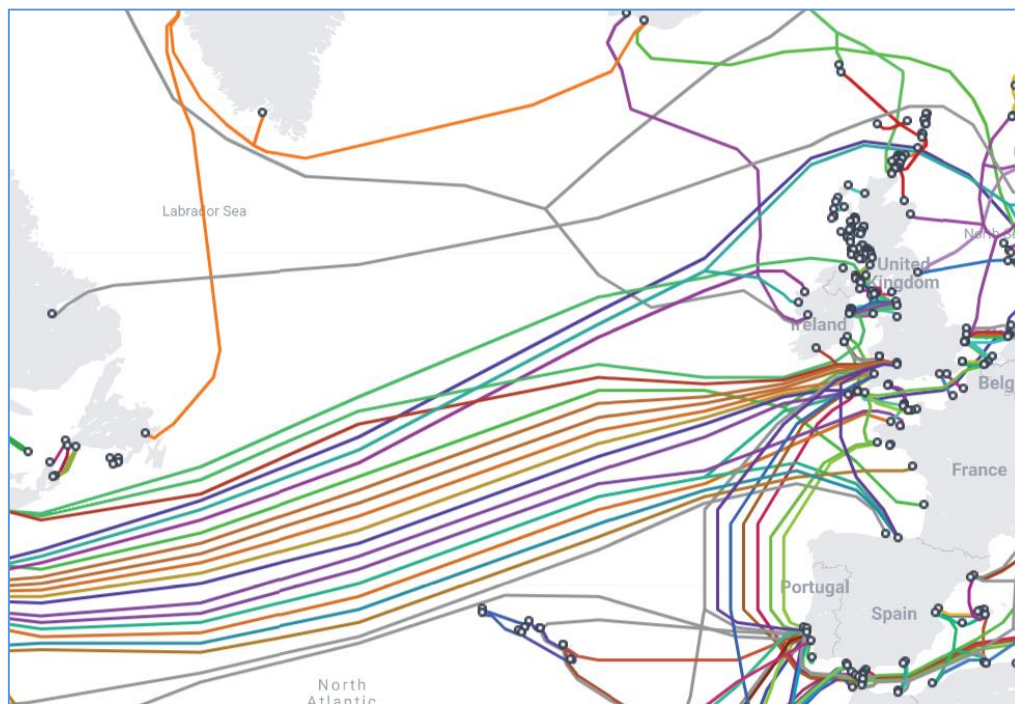


Figure 3: Submarine cables off the coast of Ireland (Reference: Telegeography, 2024)

Diplomatic – Demonstrating support for other countries

Given the size of the Irish Naval Service and competing resource commitments, availability for diplomatic missions is limited. Ireland is not in the position to “project an image of impressive naval force” (Booth, 1977, p.18) or even support “evacuation operations” (Australian Strategic Planning Institute, 2023, p.21). Though the use of LÉ George Bernard Shaw as an St Patrick’s day attraction was questioned, in view of the naval recruitment challenges, we should not undervalue the possibility of such efforts enticing future recruits, or the positive diplomatic impact the can arising from using assets in this way (Booth, 1977).

“Assistance to allied and friendly nations” and “participation in humanitarian assistance and relief” efforts (Australian Strategic Planning Institute, 2023, p.21) are a means by which Ireland can make a diplomatic contribution, without compromising our stance on neutrality (Speller, 2024). Examples of this include Operation Pontus and Operation Sophia in the Mediterranean, providing humanitarian assistance to illegally trafficked migrants (*ibid.*). Participation in Operation Irini, tasked with implementing the UN Security Council resolutions on the arms embargo on Libya (Houses of the Oireachtas, 2023), was a subsequent avenue to show “commitment to help (our) European partners and a capacity to contribute to European security” (Speller, 2024, p.89). Such efforts support the building of partnerships and interoperability experience, which is increasingly important in a deteriorating geopolitical environment. Furthermore, on a practical level, visits to foreign ports give opportunities for building navigation experience and can provide a break in long spells at sea, an aid to retention and recruitment (Irish Echo, 2022).

Fundamental challenges

Underpinning these challenges, is the severe recruitment and retention challenges faced by the Irish Naval Service (currently with a strength of 731, out of an establishment of 1,094, House of Oireachtas, 2024). This is a challenge faced by navies in many regions as a military way of life fails to attract Generation Z (Kayali & Posaner, 2024; Gill, 2024). With numbers in decline, the ability of the Naval Service to continue its role in maritime security may be in jeopardy.

A second important threat is the risk of a successful cyber-attack on the information and operation systems used to facilitate interagency coordination, intelligence gathering and deployment of ships (Oruc, 2020). Belligerent attacks, particularly targeting GPS (via jamming, disabling or spoofing) have been noted (*ibid.*). While significantly broader than a maritime domain challenge, the marine aspect warrants inclusion when considering cyber security of the State.

Compounding this, is the impact of climate change on weather patterns and increases in extreme wave height (Grabemann & Weisse, 200). Vice Admiral Mark Mellet (retired), in a recent interview, noted that “the sea conditions off the west coast of Ireland have increased significantly in line with the changes in climate” and that “the largest wave ever measured by scientific instrument was about 300 miles off the north-west coast of Mayo, which was over 100ft in height – and our ships will need to have larger platforms to deal with that” (Kindregan, 2024).

Addressing the challenges in the Ireland’s maritime domain

1) A clear strategy

In 2012, *Harnessing Our Ocean Wealth* (Government of Ireland, 2012) attempted to delineate an integrated approach to our marine domain, addressing enablers such as governance, infrastructure and marine security. While progress has been made on topics such as maritime spatial planning, issues highlighted in this report, particularly “the lack of an integrated governance of the marine sector, with clear roles and responsibilities allocated to governmental departments and agencies” (*ibid.*, p.9) remain elusive. A commitment within the *Programme For Government* (Government of Ireland, 2020) was made for a successor

plan, however, the requirement for the Department of the Taoiseach to centrally coordinate this endeavour may be indicative of the lack of a clear champion (*ibid*).

The *Organisational Capability Review* (OCR) conducted in the Department of Defence (Irish Government, 2022) highlighted “the broad range of departments and agencies (that) have responsibilities in the maritime domain”, including Department of Transport (safety and port security); Department of Agriculture, Food and the Marine (sea fisheries protection, undersea resources); Department of the Environment, Climate and Communications (cyber and pollution at sea); Department of Justice (Maritime Security Act, 2004); Revenue Commissions (combat smuggling); and the Coast Guard (search and rescue). This level of complexity is not unique to Ireland, a mapping exercise conducted by the EU identified 383 organisations that have dealings with maritime security within the EU (Bueger & Edmunds, 2017).

The OCR recommends that “the fragmented state of maritime security to be resolved definitively so that maximum efficiencies and synergies might be achieved in this important, multi-faceted and complex area of national policy” (*ibid*. p.31). This is seconded by the *Commission on the Defence Forces* (2022) report, where a “whole-of-government National Maritime Security Strategy” is recommended. As advocated by Corbett (Speller, 2022, p.4); to be at it is most effective, a nation’s maritime strategy needs to be nested within the overall national strategy. While initial efforts for public consultation in this space were promising (DoT, 2019), progress has slowed and we remain vulnerable in this space (Bury & Murphy, 2023). An increase in pace of the delivery of this strategy is required, in order to provide clarity to the stakeholders involved. In the recently published Defence Policy Review (Government of Ireland, 2024), the pre-eminence of the maritime domain to Ireland’s security interests was recognised, and the Department of Defence tasked with corralling the relevant stakeholders into creating a National Maritime Security Strategy.

This is not to trivialise this issue, as stated by McCabe & Flynn (2023, p.2) “maritime security governance is complex and multilayered. It typically involves multiple stakeholders, crossing multiple jurisdictions and involving the work of multiple agencies”. Maritime security “transcends clear boundaries of governmental responsibility or state competence” (Beugar & Edmunds, 2017, p.1301). Bueger and Edmunds (2017, p.1304) suggest the shared challenge of maritime security needs to be addressed in innovative ways, and support the European Union Maritime Strategy that does not favour the creation of new organisation but instead “emphasis a flexible and problem-oriented approach”. Lambert (2018, p.315) gives heart to those faced with this momentous task, believing that the seapower state legacy of “liberal, progressive and inclusive ideas” will facilitate the necessary innovations.

2) Leverage (and contribute to) partnerships

Cooperating with partners is a key pillar of the EU Maritime Security Strategy (European Commission, 2023). With Ireland’s resourcing challenges in this area, leveraging capabilities of other nations may be a cost effective option. To do this, efforts such as sharing of maritime intelligence data and participation in inter-agency humanitarian operations could contribute to valuable relationship building. Vulnerabilities such as our undersea infrastructure and emerging threats such as narcotic submarines require subsurface capabilities. The UK government have invested in undersea surveillance ships (MoD, 2023), and partnership with

the UK may be an effective method of acquiring an element of protection. Cooperation in inter-agency operations, such as Operation Irini, also provide valuable opportunities to develop and hone skills (Cremonini, 2023).

3) Harnessing Maritime Domain Awareness and technology enhancements

Critical to addressing the maritime challenges, particularly with a constrained ability to get ships to sea, will be the innovative and strategic use of data. Recent developments in the area of maritime domain awareness (MDA) and maritime situational awareness (MSA) will be central to this approach. Developed initially to aid with weather condition awareness, these initiatives are now viewed through the lens of possibilities to “counter human-made threats to the maritime domain” (Bueger & Edmunds, 2017, p.1303). MDA leadership also features as a pillar in the EU Maritime Security Strategy (European Commission, 2023). The Fisheries Monitoring Centre already avail of the data provided by AIS and this can be further expanded through partnerships. Knowledge management is a challenge in the information age given the vastness of available information, however, harnessing artificial intelligence and centralised data mining techniques give options for translating data into actionable insights (Bueger & Edmunds, 2017).

4) Increasing capability of the Irish Naval Service to enable increased presence and ability to address threats

Numerous commentators have pointed to a historic underinvestment in the Naval Service (McCabe & Flynn, 2023; Fitzgerald, 2023; Gallagher, 2024). The current naval fleet comprises four offshore patrol vessels and two large patrol vessels (Irish Defence Forces, 2024). The *Commission on the Defence Forces (CoDF) (2022) Detailed Implementation Plan (2023)*, committed to reaching a Level of Ambition 2 (LOA2) for the Defence Forces by 2028. In terms of naval capability improvements, the CoDF recommended: increasing, refitting, and replacing, the fleet (to include a multi role vessel), establishing mine-counter-measures, enhancing air, surface and sub-surface capabilities, increasing patrols, adding additional naval support bases, and integrating modern technology and unmanned options. The LOA2 recommendations align with our current challenges, and may “deliver a real maritime defence capability and a comprehensive maritime picture”, as asserted by the CoDF (2022 p.37). Progress has been made, with two in-shore patrol vessels (IPVs) procured from New Zealand, delivered in 2023 (Burns, 2024) and two new CASA 295 aircraft replacing the current CASA CN235-100 for airborne fishery patrols (The Journal, 2023). Regardless of assets, the critical choke point remains the difficulty in recruiting naval staff and intensive efforts to turn the tide of recruitment and retention issues are necessary if Ireland is to meet the marine security challenges it faces. It is also worth considering, with the increasingly fraught geopolitical environment, whether the current absorption of naval resources into fishery protection continues to best serve the Irish nation’s maritime security needs. It is timely, therefore, that the Defence Policy Review 2024 has identified a lead for the creation of a National Maritime Security Strategy and that this critical work can now accelerate.

Conclusion

Ireland faces a number of significant maritime security challenges. The lack of a central maritime strategy and the myriad of agencies involved in Irish maritime security, creates a

veritable minefield for those operating in this space. A strategy that attempts to address the complexity of threats facing the Irish maritime domain, ranging from IUU fishing to the narcotic trade, from belligerent actors with malicious interest in our underwater infrastructure to cyber criminals, is a challenging ask. Clarity in this area, complemented with leveraging partnerships, and technology enhancements, may help to make inroads in this critical area.

A fundamental challenge to maintaining Irish maritime security is the current level of capability of our Naval Service. If the LOA2 ambitions of the CoDF are achieved by 2028, we will be better placed to meet our current maritime security challenges, however, the “limited defensive conventional maritime warfighting capability” of LOA2 were acknowledged (CoDF, 2022, p.37). In the deteriorating geopolitical situation, as cautioned by Speller (2024, p.204) “unfortunately, the need may arise more quickly than is sometimes anticipated and events can force a change in policy with a speed that cannot be matched by naval production or procurement”.

Please note that the views expressed above are those of the author alone and should not be taken to represent the views of the Department of Defence or of any other group or organisation.

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