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Naval Defence Cooperation in the EU: Potential and Hurdles

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Naval Defence Cooperation in the EU: Potential and Hurdles

By Elio Calcagno, Ana E. Juncos and Sophie Vanhoonacker

1. The maritime domain: The main stage for great-power competition?

Around 90 per cent of global trade is seaborne, and maritime trade volumes are set to triple by 2050.¹ Moreover, the world's seas and oceans are critical to the sustenance of an estimated three billion people, as a source of both employment and food.² They are also the setting of long-standing international disputes with global implications, as is the case with the South China Sea.

Control of the sea is therefore a central dynamic in the current context of growing geopolitical tensions and of great-power competition in general. Indeed, transit through the world's seas is a necessary precondition for any country or alliance that wishes to protect trade and safeguard access to key maritime choke points, namely the Panama and Suez Canals and the Straits of Malacca, Hormuz, Bab el-Mandeb and Gibraltar. In times of crisis, command of the sea also allows a country or coalition to freely transport its armed forces overseas.

During the Cold War, the US was by far the greatest naval power in the world, with a level of technical and numerical superiority that meant its principal rival, the Soviet Union, mainly strived to deny its adversary the unchallenged use of the sea through such "sea denial" capabilities as submarines.³ The end of the Cold War allowed Washington to project its naval military might across the globe. It therefore follows that any peer-level military wishing to challenge the US must bring to bear enough naval power to successfully deter US action and to disrupt the US' seaborne supply lines to such a degree that it cannot continue the fight through conventional means. Today, the rise of China as naval power – Beijing already possesses the largest navy in the world – poses a definite threat to the US' supremacy in the maritime domain and thus, potentially, makes military confrontation between the two countries more likely.

Unsurprisingly, interest and investment in the naval defence field in the EU has rekindled in recent years as a result of growing instability globally and more specifically rising tensions at sea, including in the Eastern Mediterranean, where a number of international disputes have flared up regarding maritime boundaries in relation to natural gas reserves under the seabed.⁴

¹ Organisation for Economic Co-operation and Development (OECD) website: *Ocean Shipping and Shipbuilding*, <https://www.oecd.org/ocean/topics/ocean-shipping>.

² OECD website: *Developing Countries and the Ocean*, <https://www.oecd.org/ocean/topics/developing-countries-and-the-ocean-economy>.

³ Jan S. Breemer, "Rethinking the Soviet Navy", in *Naval War College Review*, Vol. 34, No. 1 (January-February 1981), p. 4-12, <https://digital-commons.usnwc.edu/nwc-review/vol34/iss1/2>.

⁴ David B. Larter, "With Challenges Aplenty, Europe's Navies Are Coming to Grips with High-End Warfare", in *Defense News*, 22 June 2020, <https://www.defensenews.com/smr/transatlantic-partnerships/2020/06/22/with-challenges-aplenty-europes-navies-are-coming-to-grips-with-high-end-warfare>;

In that context, both the EU Maritime Security Strategy (2014) and the EU Strategic Compass (2022) have put enhanced EU maritime security, supported by increased joint capability development and advanced interoperability, high on the agenda. Consequently, the EU and its member states have been seeking to foster defence industrial cooperation in the maritime domain through the Permanent Structured Cooperation (PESCO) and European Defence Fund (EDF) projects, which are means to lower development, construction and maintenance costs while minimising spending duplication. The European Patrol Corvette (EPC) project is a particularly interesting, ongoing example of EU naval cooperation. Indeed, the EPC is the first naval vessel being developed under an EU framework (PESCO and EDF⁵) and thus offers an excellent opportunity to gauge the potential but also the hurdles of this type of cooperation in the Union's context.

2. The EU's approach to security and defence in the maritime domain

European strategic autonomy has become somewhat of a buzzword in the last decade. With the US continuing its pivot to Asia and geopolitical concerns increasing across the board, the EU needs to critically reflect on how it wants to organise its security priorities, including in the maritime domain. While there are almost as many definitions of strategic autonomy as there are EU member states, the Strategic Compass initiative is a step toward the elaboration of a common threat analysis, common strategic objectives and guidelines for military planning. Indeed, its adoption in March 2022 represented a key milestone for the Common Security and Defence Policy (CSDP).

In the Strategic Compass, member states commit to “further asserting [their] interests at sea and enhancing the EU's and Member States' maritime security, including by improving the interoperability of our naval forces”.⁶ In addition to the development of an EU Rapid Deployment Capacity reaction force up to 5,000-strong, which should include maritime components, the Compass also commits EU countries to expanding the EU's Coordinated Maritime Presences beyond the ongoing experience in the Indian Ocean and Gulf of Guinea, also through cooperation with relevant partners.

As an open economy, the EU is deeply reliant on viable maritime trade routes. Notably, 90 per cent of the Union's external and 40 per cent of its internal trade is carried out at sea. Furthermore, 50 per cent of the value of the 1.4 trillion euro worth of trade between Asia and the EU transits through the Indian Ocean.⁷ The adoption of an EU Maritime Security Strategy (EUMSS) in 2014, operationalised by successive action plans (in 2014 and 2018), were the first attempts to foster a more strategic approach to maritime security.⁸ They can also be seen as a broader trend whereby states as well as non-state actors, such as the Houthis in the Red Sea,⁹

Galip Dalay, “Turkey, Europe, and the Eastern Mediterranean: Charting a Way Out of the Current Deadlock”, in *Brookings Doha Center Policy Briefings*, January 2021, <https://brook.gs/2Mr4Jg4>.

⁵ For a broader analysis of the linkage between PESCO and EDF see: Edouard Simon and Alessandro Marrone, “Linking PESCO and EDF: Institutional Mechanisms and Political Choices”, in *Ares Reports*, No. 66 (April 2021), <https://www.iris-france.org/notes/linking-pesco-and-edf-mechanisms-and-political-choices>.

⁶ Council of the European Union, *A Strategic Compass for Security and Defence*, March 2022, p. 26-27, <https://www.eeas.europa.eu/node/106337>.

⁷ Eva Pejsova, “The EU as a Maritime Security Provider”, in *EUISS Briefs*, No. 13 (December 2019), <https://www.iss.europa.eu/node/2398>.

⁸ European Commission website: *Maritime Security Strategy*, <https://europa.eu/!7kcw9B>.

⁹ Arie Egozi, “Houthi Lay Sea Mines In Red Sea; Coalition Boasts Few Minesweepers”, in *Breaking Defense*, 14 June 2021, <https://breakingdefense.com/?p=160679>.

have been focusing more on the maritime domain – and thus naval warfare and maritime [in]security as ways to project power or defend national interests and assets.

Maritime cooperation involves questions about improved capabilities and industrial cooperation. Although the EU, through its member states, has a combined large defence naval industry and some of the world's most advanced shipbuilders and technical know-how in terms of sensor and weapon systems, investment is rather inefficient, with recurring duplications and divergent expenditures into similar platforms and systems. To make a telling example, with 29 different types of destroyers and frigates – compared to four in the US – the EU's market is very fragmented. There is an emerging consensus that in order to maintain the required levels of maritime security against an array of evolving threats, cooperation in designing and building new warships is indispensable. This would help attain better economies of scale and higher levels of interoperability between national navies, and contribute to increased European strategic autonomy.

The decision to jointly develop, in the PESCO framework, a common European Patrol Corvette is therefore a significant novelty. The development of the corvette, under the lead of Italy and with the participation of France, Greece and Spain, makes sense from a cost-effective perspective. It can also be an important step in the development of harmonised standards and increased inter-operability. However, cooperation in the naval defence industrial field is fraught with difficulties, some of which can be observed in past cooperation projects undertaken by EU countries. A successful outcome for the EPC will depend on the ability of involved countries and industries to work toward a shared set of requirements, but especially to ensure that purely industrial considerations do not stand in the way of the project's cooperative goals. However, an analysis of the EPC project can benefit greatly from an overview of some past forms of trans-European naval defence cooperation projects such as Horizon and the Future Multipurpose Frigates, known as FREMM. Although, unlike the EPC project, they took place outside and before PESCO, they do provide relevant lessons regarding the potential opportunities and challenges for naval industrial cooperation in a European context.

3. Past cooperation in the EU naval defence industry

Industrial cooperation in the field of naval defence has been challenging for the EU. This is due to several factors. The Union boasts a large concentration of advanced industries and capabilities in this field, with at least five countries (and their Defence Technological and Industrial Base – DTIB) currently able to design, build and equip military naval vessels with varying degrees of autonomy.¹⁰ These are Germany, France, Italy, the Netherlands and Spain. Therefore, when they are not cooperating, the main actors in EU's naval defence market are first and foremost competitors.

Second, the naval defence industry has not experienced the same level of intra-European consolidation as other defence sectors, such as the missile domain through the merger of a number of European companies into MBDA (Matra BAE Dynamics Alenia).

Third, the naval defence industry presents a number of peculiarities that complicate cooperation among different EU states. Workshare is certainly one of the most prominent factors. Not only does it determine how many jobs a certain project generates in a certain shipyard and its surrounding region, but it also has important implications for the nature of the work assigned

¹⁰ Interview, 9 February 2022.

to an individual company or DTIB in terms of technical and technological know-how. In other words, the more (technologically) advanced the assigned task is within a larger programme, the more an individual company or the broader DTIB can reap benefits in terms of the newly-acquired skills, know-how and intellectual property rights (IPR) that result from innovation-rich work. As an example, a company responsible for developing a sophisticated radar system for a ship will benefit proportionally more than the company tasked with producing low-value goods for the same ship.

Each of the larger EU countries has its own industrial champion in the ship-building industry, often partly owned by the state. Furthermore, shipyards are large employers and, in some cases, generate a high return on the local economies. Indeed, disputes as to who should build what system or ship, after a tender has been assigned, are common also within countries where an individual company has multiple shipyards and facilities. This has happened in Spain (with Navantia) as well as Italy (Fincantieri) and France (Naval Group).¹¹ Hence, governments are often wary of cooperation to avoid controversy.

Against a background of stagnating budgets and increasing development costs for new technologies, the last two decades have nonetheless seen a small number of instances of two or more countries jointly taking on large projects in the naval defence field – with varying degrees of success. The Horizon programme, which led to the development and construction of advanced destroyers for the French and Italian navies, stands out as one of the earliest and most important examples in terms of scale.¹² Horizon can both serve as an example of the potential advantages of such cooperation, but also of its obstacles and pitfalls. The UK was originally involved at the start of the project in 1992, along with France and Italy. Arguments during the development stage regarding requirements, with the Royal Navy keen on a larger vessel with long-range capabilities, eventually led London to exit the project in 1999. This allowed France and Italy to work a set requirements which were aligned from the early stages on anti-air and anti-missile capabilities – a context which greatly favoured the success of the project.¹³ The design process eventually resulted in nearly-identical ships for the French and Italian navies, although they have increasingly diverged during their operational life.¹⁴ This divergence, which reflects the evolution of requirements that follow the changing nature of threats, has led to disagreements over the required updates in the context of the ongoing Horizon mid-life upgrade programme.

Horizon shows how the continued interoperability of a jointly-developed vessel cannot be taken for granted but has to be actively maintained throughout its operational life.¹⁵ In late 2019 Italy's Fincantieri and France's Naval Group conceived of the joint venture Naviris also with this goal.¹⁶ From an EU defence perspective, the high degree of interoperability among Horizon-class ships is not only important in that it results in a pool of systems and spare parts that can be shared among navies when the need arises, but also in that it greatly enhances the potential for cross-border maintenance and mixed crews aboard such vessels.¹⁷

¹¹ Interview, 17 February 2022.

¹² Military Today website: *Horizon Class*, http://www.military-today.com/navy/horizon_class.htm.

¹³ Ibid.

¹⁴ Interview, 10 February 2022.

¹⁵ Interview, 9 February 2022.

¹⁶ Ibid.

¹⁷ Ibid.

Another transnational European cooperative project standing out is the European multi-purpose frigate (*Fregata Europea Multi-Missione/Frégate Européenne Multi-Mission* – FREMM).¹⁸ Unlike Horizon, the FREMM project did not achieve the expected level of commonality and interoperability. The French and Italian FREMM vessels are quite different in terms of design, armaments and scope. It is worth noting that, although this project only involved two countries already used to defence industrial cooperation, it still exposed substantial difficulties in agreeing on common requirements, thus failing to produce a common platform.¹⁹ Furthermore, frictions between France and Italy about FREMM export arrangements laid bare another hurdle that all cooperative defence programmes potentially face as they enter the export market. If not properly defined *ex ante*, rules governing the export of jointly developed defence industrial programmes can severely harm cooperation in the naval defence field. Participating countries have an interest in finding export markets, for which they could build more hulls and/or produce more components and systems. This can enhance the economy of scale of a joint programme while also improving the prospective sales for an individual company or national industry beyond the procurement capability of the respective national armed forces. However, as in the aforementioned case of the FREMM, national defence industries partnering for a particular project might end up competing for the same market niches. In a telling example, rumours that Morocco, whose navy already operates a French-built FREMM, was in negotiations to acquire two additional Italian-built FREMM frigates were perceived as damaging by the French industry. As of today, Morocco is still to actually acquire any new FREMM, either Italian- or French-made.²⁰

Furthermore, this type of competition in many cases does not follow simple market competition dynamics as foreign acquisitions do not always result from a public call for proposals and may instead be part of government-to-government (g2g) agreements or larger deals including the sale of other weapons and/or systems.²¹ For instance, Egypt recently acquired two Italian-built FREMMs in an arrangement reached between Fincantieri and the Egyptian government.²²

A corvette is generally defined as the smallest class of warship. Corvettes are indeed relatively small and nimble, with a shallow draft that allows them to operate in littoral and shallow waters. On top of combat-related tasks, the ability to operate close to shore makes them ideal for operations in the maritime security domain: from border patrol to preventing trafficking or other criminal activities. As a consequence, designing versatile corvettes that can be equipped for front line combat or maritime security activities, starting from a common base, is an excellent way to maximise development costs of a much-needed asset. Costs to build and operate corvettes are also relatively low compared to other classes of warships, meaning that they are useful for both large and small navies.

¹⁸ Naval Technology, *FREMM European Multimission Frigate, France/Italy*, 14 February 2019, <https://www.naval-technology.com/projects/fremm>.

¹⁹ The two platforms have a common propulsion system, though the main gas turbine was off-the-shelf acquisition from the UK's Rolls Royce. From interview, 17 February 2022.

²⁰ Chiara Rossi, "Fincantieri, chi in Francia teme per la vendita delle Fremm al Marocco", in *Start Magazine*, 21 July 2021, <https://www.startmag.it/?p=155874>.

²¹ See in this regards Alessandro Marrone and Ester Sabatino, "Defence G2G Agreements: National Strategies Supporting Export and Cooperation", in *Documenti IAI*, No. 20|17 (September 2020), <https://www.iai.it/en/node/12070>.

²² Nathan Gain, "Second Italian-Built FREMM Delivered to Egypt Reaches Alexandria", in *Naval News*, 20 April 2021, <https://www.navalnews.com/?p=21275>.

A project on a common set of requirements for a European Patrol Corvette was approved as within PESCO in November 2019. Led by Italy and involving France, Greece and Spain, the EPC aims to condense all national requirements into the smallest possible amount of ship configurations so as to replace Italy's Comandanti, Costellazioni I and II classes, the Spanish Serviola-class and Infanta Elena-class vessels and the French Florean-class frigate. Portugal joined the project as an observer nation in 2021, showing there was potential interest for acquisition beyond the participating member states.

The PESCO project gained momentum in July 2022, when the European Commission, following a call under the EDF, approved a proposal for a Modular and Multirole Patrol Corvette (MPCC). A consortium of over forty companies, led by Naviris and Spain's Navantia, submitted a successful research proposal (worth 60 million euro) in December 2021. According to EDF regulations, the industrial offer was supported by the so-called "co-founder" countries, which will provide additional funding for over 5 million euro. Participating companies hail from PESCO project members France, Spain, Italy and Greece as well as Denmark and Norway. To date, Italy has committed to buying eight warships, and France and Spain six vessels each. The objective of the proposal is to carry out research activities with a view to a second EDF call focusing on development and eventually leading to the construction of a prototype. The first EDF call thus is only the latest step in a process that started with CARD, defined common requirements through PESCO and was finally put in motion with EDF. But clearly it is not meant to be the end of it.

The PESCO project and the EDF MPCC call are strictly related, with the overarching goal of developing a common and versatile ship that can be fitted with different systems and payloads to achieve diverse tasks and missions. The corvette project also seeks to address a capability gap identified in the European Defence Agency's Capability Development Plan (CDP), namely improving maritime situational awareness, surface superiority and power projection. The EPC's possible tasks include the fight against piracy, combating smuggling (including of migrants), freedom of navigation and combat missions.

This collaborative multinational project necessarily pursues a modular and flexible approach to fit the specific needs and requirements of each participating country's navy. Different versions of the EPC could entail diverse dimensions, sensors, weapon and propulsion systems in order to accomplish various tasks ranging from combat to surveillance. As of mid-2022, the project aims to design two separate variations of the EPC based on the involved countries' priority requirements. France and Spain are interested in a long-range version able to operate far from home ports for long periods to conduct patrol operations. Greece and Italy, on the other hand, are looking for a shorter-range version that could be more heavily armed with a greater focus on combat.

The EPC is a litmus test for the ability of the EU naval defence industry to funnel national resources and assets into a consolidated project resulting in capable and more cost-effective vessels. The industry by and large agrees that EDF funds are welcome but still too small to drive technological progress forward at the pace that is required in today's world. Yet all involved countries and companies have a clear interest in the success of the EPC as a pioneering project in the naval defence field and EDF funding has certainly helped move the PESCO project forward.

4. The European Patrol Corvette: A game changer in the EU naval sector?

According to the EU's Coordinated Annual Review on Defence (CARD) report from 2020, twenty member states currently operate about 45 different off-shore patrol vessels. This figure illustrates just one side of the ongoing fragmentation of the European defence sector.²³ According to CARD, one area where synergies can be achieved is the development of a common European patrol corvette.

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²³ Giulia Tilenni, "European Patrol Corvette: A True European Programme?", in *Maritime Defence Monitor*, 6 April 2021, <https://msd-mag.com/2021/04/articles/22526>.

²⁴ Luca Peruzzi, "The PeSCo's European Patrol Corvette (EPC) Programme Gains Momentum", in *EDR News*, 19 October 2020, <https://www.edrmagazine.eu/?p=13803>.

²⁵ Tom Kington, "Denmark, Norway Join European Corvette Programme", in *Defense News*, 13 December 2021, <https://www.defensenews.com/global/europe/2021/12/13/denmark-norway-join-european-corvette-program>.

²⁶ Ibid.; Tayfun Ozberk, "EU to Accelerate Naval Projects under Huge Defense Investment Budget", in *Naval News*, 26 July 2022, <https://www.navalnews.com/?p=36111>.

²⁷ "European Shipbuilders Submit Industrial Offer for MMPC Corvette", in *Naval News*, 13 December 2021, <https://www.navalnews.com/?p=28055>.

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²⁸ PESCO website: *European Patrol Corvette (EPC)*, <https://www.pesco.europa.eu/project/european-patrol-corvette-epc>.

²⁹ Global Security website: *European Patrol Corvette (EPC)*, <https://www.globalsecurity.org/military/world/europe/epc.htm>.

³⁰ Gaia Ravazzolo, "European Corvettes on the Horizon. The Naviris Proposal", in *Decode39*, 14 December 2021, <https://decode39.com/?p=2514>.

³¹ Interview, 17 February 2022 and discussions with EU defence stakeholders.

Conclusions

As is all too well illustrated by the war in Ukraine, rising geopolitical tensions, with numerous flashpoints located in and around the sea, require stronger and more efficient naval forces – including for EU countries. However, despite the increasing development costs of many new technologies, the European naval defence industry is plagued by duplication, inefficient investment and competition between member states. In addition to the high level of fragmentation which characterises the entire EU defence industry, the naval field presents peculiar challenges when it comes to EU cooperation. Many shipyards and the surrounding industry are large local and regional employers, meaning that discussions on workshare not only relate to the acquisition or retention of technological know-how, but also to local politics.

Although the EDF's financial appeal is relatively small from an industry perspective, its existence is a positive first step to put in place incentives for increased cooperation. An unstable European security environment, the high costs of developing, acquiring and maintaining increasingly sophisticated material, and the need for more interoperability make it imperative for EU member states and their respective naval industries to find ways to combine resources and technological know-how. While challenging, increased industrial cooperation in the naval defence field presents an opportunity to make investment more efficient while boosting technological development by lowering production, acquisition, training and maintenance costs and possibly increasing exportability.

With high intensity conflicts between states becoming a less remote possibility in a context of rising global tensions, the EPC project, in conjunction with financial support of the EDF, is likely to set the tone for the future of EU cooperation in this field, the first step on a long path that should lead to the joint design and development of the more expensive warship classes, such as attack submarines, frigates and destroyers.

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