



Corvettes An Overview

Michael Cabral | June 2025

In 2024, the Department of National Defence launched the Canadian Multi-mission Corvette project to replace the Royal Canadian Navy's Kingston-class Maritime Coastal Defence Vessels. This report is a selective overview of corvette-classes operating in allied navies as a basis for understanding Canada's options and opportunities.



F 261 "Madgeburg" (Bundeswehr/Sebastian Wilke)

In 2023, the Royal Canadian Navy announced the Multi-Mission Corvette (MMC) project, a first step towards replacing the aging Kingston-class Maritime Coastal Defence Vessels (MCDVs). The proposed replacement remains undefined, with no firm statement of requirements or clear mission set. Today, the Navy is working to refine its vision for this future class of ship.

In an attempt to provide some context on design possibilities, this report offers an overview of existing and future corvette classes employed by Canada's allies. This research is not intended to be comprehensive. It focuses on light warships in the 3,000 - 4,000-ton range, on the understanding that this is the tonnage required for comfortable blue water operations in the North Atlantic. Within this framework, it includes cost estimates, specifications, and mission profiles for existing and planned corvette classes from allies and potential design partners around the world. Importantly, some allied systems and designs are not included due to lack of information (Sweden's Luleå-class corvette) or if the Corvette proposals would designate the warships as Frigates (Damen's SIGMA 10514 proposal for the Hellenic Navy)

Clear distinctions exist between current and future corvette designs in both mission sets and naval specifications, with other nations increasingly orienting their corvettes to defend against, and deter, emerging air, surface, and subsurface threats. Consequently, next-generation corvette platforms are increasingly being designed to achieve greater integration by incorporating enhanced situational awareness, land-attack capabilities, and advanced anti-air, anti-surface, and anti-submarine warfare systems. In general, foreign powers seem to be focusing light warship designs on upgraded stealth features, cutting-edge technologies, and greater firepower — developments that reflect an intensifying global environment of strategic competition.

Bio

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Executive Summary

Ship	Operated By	Entered Service	Displacement	Estimated Cost
Braunschweig Class (K130) Page 4	Germany	Batch I: 2008 Batch II: 2029 (expected)	2,000 tons (t)	€2.5 billion + €521 million (€600 million per unit)
Magen Class (Sa'ar 6) Page 6	Israel	2022	2,000 t	€430 million (€143 million per unit)
Pohjanmaa Class Page 8	Finland	2029 (expected)	3,900 t	€1.43 billion (€358 million per unit)
Ada Class Page 10	Turkey, Pakistan, Ukraine, Malaysia	2011	2,400 t	\$250 million per unit (estimated)
FCx30 Page 13	Qatar, Greece (potentially)	2020	3,250 t	Part of a €5 billion package
Gowind 2500 Page 13	United Arab Emirates (UAE), Egypt, Argentina, Greece (potentially)	2021 (UAE)	1,000-2,500 t	€750 million (€375 million per unit)
MMPC Page 16	European Nations Co-funders: Denmark, Italy, France, Greece, Norway, Spain	TBD	3,000 t	€241.4 million (to date)



F 260 "Braunschweig" (Bundeswehr/Christian Thiel n.d)

The German Braunschweig-Class Corvette (K130)

Introduction

In 2017, Germany announced it was purchasing an additional five K130 Braunschweig-class corvettes from Lürssen Werft, ThyssenKrupp Marine Systems (TKMS), Blohm+Voss, and German Naval Yards.¹ Originally put into service in 2008, the German Navy currently operates five K130 corvettes, referred to as Batch I. These include

- 1. F260 *Braunschweig* (commissioned April 16, 2008)
- 2. F261 Magdeburg (commissioned September 22, 2008)
- 3. F262 Erfurt (commissioned February 28, 2013)
- 4. F263 Oldenburg (commissioned January 21, 2013)
- 5. F264 *Ludwigshafen am Rhein* (commissioned March 21, 2013)

Initially, the five new warships were estimated to cost &2.5 billion, with the expectation that they would be completed by 2026. The new ships were meant to be identical as possible to Batch I in order to reduce costs in the area of training and infrastructure.² Therefore, Batch II was meant to focus on replacing outdated systems — such as upgrading the TRS-3D radar with the more advanced TRS-4D radar.³ However, what was meant to be a low-risk, cost-saving effort has resulted in a project that is 38 months behind schedule, with aded costs of &521 million. Due to the technical and financial constraints presented by the project, the German government has cancelled plans for 3rd Batch of K130 Corvettes.⁴

Specifications

The technical data for the K130 corvettes are outlined by the Bundeswehr⁵ as follows:

Mass	 Length: 89.1 metres (m) (all over) Width: 13.3 m Depth: 3.4 m Displacement: 1,800 t
Drive	 2 x diesel engine 14,800 kilowatts (kW) or 20,100 horsepower (hp) total power 1 x bow thruster 2 x propeller Speed of more than 26 knots (kts)
Sensor	 1 x TRS-3D multifunction, range of more than 200 kilometres (km), target-tracking capacity of more than 750 (to be replaced by the TRS-4D for Batch II) 1 x EK system UL 5000 K (electronic reconnaissance/electronic fight) 2 x video target tracking and fire line Mirador 2 x navigation radar
Weapons	 1 x 76-millimetre (mm) OTO Melara main gun. Reach: more than 18 km 2 x machine gun 27 mm MLG (Mauser) 4 x heavy machine gun 12.7 mm 2 x RBS15 Mk3 Range: more than 200 km 2 x starter for short-range response RIM-116 Rolling Airframe Missile (RAM) 4 x mine rail 2 x Täusschstecker beam system MASS (Multi Ammunition Softkill System)
Occupancy	• Regular crew: 61



The NVL Group website⁶ lists the Batch II K130 design as having the following specifications:

- 89 m, about 2,000 tonnes
- 4,100-nautical-mile (nm) range
- Flight deck and uncrewed aerial vehicle (UAV) hangar
- Weapons: 76 mm, 27 mm, surface-to-surface missile (SSM), surface-to-air missile (SAM)

Mission

The existing Batch I K130 corvettes are attached to Corvette Squadron 1, based in Rostock-Warnemünde. According to the German Navy, the K130 corvettes can

- Deploy in shallow waters all over the world, • complementing German frigates
- Operate very close to shore, making them useful for confined areas such as the Baltic Sea
- Support multinational crisis-response forces⁷

Batch II is meant to qualitatively and quantitatively expand the capabilties of the German Navy, with Batch II helping to fufill the existing requirements of Corvette Squadron 1, as well as ensuring secure sea and trade routes.⁸



The Israeli Magen-Class Corvette (Sa'ar 6)

Introduction

In 2015, the Israeli Navy placed an order for four Sa'ar 6 Magen-class corvettes from the German shipyard TKMS. The total program cost amounted to €430 million, of which €111 million was subsidized by the German government. These corvettes are based on TKMS's MEKO A-100⁹ patrol corvettes, with special modifications made by the Israel Defense Forces (IDF). Currently, there are four ships in service:

- 1. INS Magen (delivered November 2019)
- 2. INS Oz (delivered May 2021)
- 3. INS Atzmaut (delivered July 2021)
- 4. INS Nitzachon (delivered July 2021)

Specifications

The MEKO A-100 patrol corvette specifications are listed on TKMS's website: $^{10}\,$

	IS S WEDSILE.		multifunction active electronically scanned array (AESA) radar
Mass Drive	 Length: 98.7 m Beam: 15.0 m Displacement: 2,560 t 2 x diesel engines Electric propulsion - PTI e-motors Range: 4,500 nm Speed: 23.9 kts 		 4 x active arrays operating in S-band frequency Electronic warfare, cyber defence, navigation, radio frequency systems, command and control centres, and communication gear Optical sensors and a communication system on the integrated mast module installed atop the AESA radar
Weapons	 C3 system Up to 12 x vertical launching (VL) SAM cells Up to 8 x heavy anti-ship missiles Close-in weapon system (CIWS) Electronic countermeasure (ECM) decoys Anti-submarine warfare (ASW) torpedoes Organic helicopters: maximum take-off weight (MTOW) 11,000 kilograms (kg) and 1 x 11 m rigid-hulled inflatable boat (RHIB) (GFE) + 1 x 6.25 m RHIB 	Weapons	 40 x Barak 8 (Barak 2) naval surface- to-air missiles (designed to intercept and destroy airborne threats such as anti-ship missiles, cruise missiles, combat aircraft, helicopters, and unmanned aircraft systems (UASs)) [Ranges above 50 nm] C-Dome naval point defence systems will be installed on the bow deck of each ship (to defeat short-range rockets and artillery shells) 1x 76 mm super rapid gun mount (Oto Melara) 16 x anti-ship missiles such as the
Occupancy	• 62 (+ 22 special forces/trainees)		Gabriel, RGM-84 Harpoon, and RBS-15 Mk 3
			 2 x 324 mm ASTT with MK54 lightweight torpedo (LWT) 2 x 30 mm Rafael Typhoon remote weapons stations Accommodate a medium multi- mission helicopter such as the SH-60 Seahawk (AS565SA <i>Panther</i> ASW helicopter)
		Occupancy	 70 crew members

Mass

Drive

Sensor

Official information as to the specifications of the **Sa'ar 6** are limited; however, Naval Technology¹¹ and Wertheim¹² listed them as following:

• Beam: 13.2 m (43 ft)

• Height: 21.5 m

• Length: 90 m (295 feet or ft)

• Displacement: 2,000 t (1,900 t)

• 2 x controllable pitch propellers

diesel propulsion system

• 2 x MTU diesel engines

Maximum speed: 26 kts

• Integrated bridge system

• Range: 2,500 nm

• Powered by a combined diesel and

• ELM-2248 multifunction surveillance,

track and guidance radar (MF-Star)





The IDF highlights that 90% of the defensive systems on Mission board the Sa'ar 6 are Israeli made. They include unique operational capabilities, such as:

- Anti-missile systems and high-trajectory interception based on the 'Adir' radar system
- Sea-to-sea missile capability
- Air and surface target detection capabilities, including responses to existing threats from the air
- Target detection
- Wide battlespace collection capabilities
- Multidimensional communication interoperability with all Israel Defense Forces networks¹³

The commander of the Israeli Navy, Major General Eli Sharvit, described the corvettes' primary mission as

- Defending Israel's exclusive economic zone
- Defending Israel's strategic assets at sea, specifically its marine gas rigs

The Sa'ar 6 was identified as the ideal ship to fulfill this mission.¹⁴

Top: The Sa'ar 6 Corvette (IDF, "Welcoming the Israeli Navy's New 'Sa'ar 6' Corvettes," 2021, https://www.idf.il/en/mini-sites/israeli-navy/welcoming-the-israeli-navy-s-new-sa-ar-6-corvettes/).

Bottom: The Sa'ar 6 Corvette (IDF, "The Sa'ar 6: The Israeli Navy's Newest and Most Advanced Ship," 2022, https://www.idf.il/en/mini-sites/israeli-navy/the-israeli-navy-s-newest-and-most-advanced-ship/).

The Finnish Pohjanmaa-class Corvette

Introduction

In September 2019, the Finnish Defence Forces finalized a contract with Rauma Marine Constructions (RMC) for the construction of new corvettes.¹⁵ As part of Finland's Squadron 2020 project, this €1.43 billion investment, which includes a €200 million cost increase due to the COVID-19 pandemic, will equip the Finnish Navy with four new corvettes by 2029.¹⁶ In response to national security threats, the project also includes the construction of a new multipurpose hall where the corvettes will be built. The facility is estimated to cost €26 million.¹⁷



The Pohjanmaa-class corvette (Puolustusvoimat / The Finnish Defence Forces)



The Pohjanmaa-class corvette (Puolustusvoimat / The Finnish Defence Forces)

Specifications

The Puolustusvoimat-YJA¹⁸ and Naval Technology¹⁹ outline the technical data for the **Pohjanmaa-class** corvette:

Mass	 Length: 117 m Beam: 16 m Draught: 5 m Displacement: 3,900 t
Drive	 Ice-going vessel; ice-strengthened hull (suitable for navigation in ice and in shallow waters) Controllable pitch propellers and shaft lines Modern propulsion system, which will ensure high speed and low underwater noise levels Maximum speed: 26 kts
Sensor	 Surveillance and fire control radar Sonar and towable hydrophone cable Hull-mounted sonar Combat management system: Saab 9LV
Weapons	 PTO2020 Gabriel surface-to-surface missile system (8 x Gabriel 5 surface-to-surface or anti-ship missiles) ITO2020 Sparrow surface-to-air missile system (Mk 41 vertical launchers for firing 32 Evolved SeaSparrow Missiles) Anti-submarine system: lightweight torpedo Torped 47 Mine-laying system: sea mines 1 x 57 mm BAE Bofors Gun 2 x track fire remote-controlled weapons with small, medium, and heavy machine guns, automatic grenade launchers, and lightweight medium-calibre cannons Decoy launchers The stern side of the hull will contain a flight deck to accommodate a single helicopter or multiple unmanned aerial vehicles 1 x hangar and hangar facility
Occupancy	 Approximately 70 persons; accommodation facilities will be available for up to 120 staff members

Unique Specifications

Given that Finland's harbours can freeze in the winter and are characterized by islands, shallow waters, and reefs, the Pohjanmaa-class corvettes are being designed for year-round operations under all environmental conditions, including ice.²⁰

Mission

The Finnish Defence Forces highlights that the introduction of the Pohjanmaa-class corvette will

bring about changes to Finland's naval doctrine, as the ships enable

- The use of fire against ground targets
- The enhanced generation of a real-time situational picture
- More extensive cooperation with the Finnish Defence Forces' other units
- More efficient capability of watching out for and engaging sub-surface targets²¹

The Pohjanmaa-class corvette (Puolustusvoimat / The Finnish Defence Forces)



Beginning in 2004, the Turkish Navy initiated the MILGEM program, which aimed to maximize indigenous naval capabilities and maintain a self-sufficient national shipbuilding industry.²² Under this initiative, the Turkish shipbuilder STM delivered four Ada-class destroyers:

- 1. F-511 Heybeliada (commissioned in September 2011)
- 2. F-512 Büyükada (commissioned in September 2013)
- 3. F-513 Burgazada (commissioned in November 2018)
- 4. F-514 *Kınalıada* (commissioned in September 2019)

The fifth of the class, Istanbul, was built larger and is categorized as a frigate.²³ While Turkey has not publicly disclosed the cost estimates for the Ada class specifically, Ukraine recently procured two Ada-class corvettes under a program valued at \$500 million USD, putting the unit estimated cost of the corvettes at around \$250 million USD.²⁴

F-515 "Istanbul" (STM, n.d.)





Specifications

F-511 "Heybeliada" (STM, n.d.)

The technical specifications for the Ada-class corvette are outlined by STM²⁵ and Naval News²⁶ as follows:

Mass	 Length overall: 99.4 m Length waterline: 90.5 m Max beam: 14.4 m Draft: 3.95 m Displacement: 2,400 t
Drive	 Combined diesel and gas (CODAG): 2 x diesel engine + 1 x gas turbine 2 x shaft and 2 x propeller (controllable pitch propeller) Power generation: 4 x diesel generation Max speed: 29 kts Endurance: 3,500 nm at 15 kts
Sensor	 Network-Supported Data Integrated Combat Management System Thales SMART-S Mk 2 air/surface search radar Chaff decoy system Laser warning system Meteksan Yakamos hull-mounted sonar Aselsan Denizgözü (SeaEye) Ahtapot (Octopus) (F-513, F-514) or ASELFLIR-300D (F-511, F-512) electro-optical (EO) system Thales STIR 1.2 (STING) fire control radar ALPER LPI navigation radar Aselsan ARES-2N RESM Infrared (IR) signature monitoring system Integrated communication system X-Band SATCOM (satellite communication) Ship Data Distribution System Sperry Marine VisionMaster navigation radar (W)ECDIS ((Warship) Electronic Chart Display and Information System) WAIS (Warship Automatic Identification System)
Weapons	 Torpedo countermeasure system 8 x Atmaca or Harpoon anti-ship missile (AsShm) 2 x 12.7 STAMP 21 x RAM Block2 1 x 76 mm gun (Oto Melara) 2 x 324 mm Mk.32 triple launchers for Mk.46 torpedoes 2 x RHIBs Capacity to carry 2 x S70 Seahawk helicopters (one in the hangar and one on the platform)
Occupancy	• 106 crew (108 including sickbay)

Mission

According to ${\rm STM},^{\rm 27}$ the Ada-class corvette can

- Perform the determination, location, classification, and identification of air, surface, and underwater targets
- Provide naval gunfire support
- Perform maritime operations, including maritime surveillance and patrol, coastal and infrastructure protection, and the supervision and surveillance of the exclusive economic zone

However, given that Turkey has transitioned the MILGEM program to produce frigates of the Istanbul class instead, it remains unclear how the Turkish Navy will utilize the Adaclass corvettes moving forward.





As part of its broader naval modernization strategy, the Hellenic Navy is considering the acquisition of 3+1 corvettes, intending to have at least two constructed by Greek shipyards.²⁸ More recent reports suggest that the plan may expand to include up to six large patrol vessels or corvettes.²⁹ As of 2024, three designs are under active consideration: Naval Group's Gowind 2500, similar to the UAE's Bani Yas-class corvette; Fincantieri's FCx30, similar to Qatar's Al Zubarah-class corvette: and the SIGMA 10514, which is classified as a frigate.³⁰ Additionally, Greece is a member of the European Patrol Corvette program (discussed below) As of 2022, the Greek government estimated the per-unit cost of the corvette program at €400 million: however, limited details are available on the current costs.³¹

The FCx30 is modelled after the Al Zubarah-class corvette built by Fincantieri for the Qatari Emiri Navy. This class consists of four vessels:

- 1. F101 Al Zubarah (launched February 2020)
- 2. F102 Damsah (launched February 2021)
- 3. F103 Al Khor (launched September 2021)
- 4. F104 Sumaysimah (launched March 2022)

The four vessels were purchased as part of a broader package worth €5 billion, which included two OPV/ FACM-type (Offshore Patrol Vessels and Fast Attack Craft Missile) ships (based on the Falaj 2-class), an air defence landing platform dock (LPD) (based on the "BDSL [Bâtiment de Débarquement et de Soutien Logistique] Kalaat Beni Abbes"), and €1 billion for missiles.³²

Meanwhile, the Gowind 2500 design is a variant of the Bani Yas-class corvette, built under contract and valued at €750 million by Naval Group for the UAE. The two UAE vessels are

- 5. P110 Bani Yas (launched December 2021)
- 6. P111 Al Emarat (launched May 2022)

P111 "Al Emarat" (NVL Group, n.d.)



Specifications

The technical specifications for the **Al Zubarahclass corvette** are outlined by Fincantieri³³ and Naval Technology³⁴ as follows:

Mass	 Length: 107 m Beam: 14.7 m Depth: 8.6 m Displacement: 3,250 t
Drive	 Range (at 15 kts): above 3,500 nm Propulsion system: 4 x pulse detonation engine (PDE) + 2 x RG + 2 x FCPP (combined diesel and diesel (CODAD) propulsion system: 4 x diesel engines + 2 x feathered controllable pitch propellers) Generating sets: 4 x diesel generator sets (DGSs) Maximum speed: 28 kts
Sensor	 Multifunctional radar Identification friend or foe (IFF) interrogator and transponder Electronic warfare system (EWS) radar electronic support measures (ESMs) and communication ESM IR search and tracking systems Radar and E/O fire control system Tactical Data Links 11, 16, JREAP (Joint Range Extension Applications Protocol), Y, [22 fitted for] Satellite communications Integrated communications system Obstacle and mine avoidance SONAR Combat management system
Weapons	 Vertical launching system (VLS) for medium-range SAM Towed array torpedo detection system Short-range SAM launchers SSM launchers 76/62 mm super rapid (SR) multi- feeding main calibre gun (OTO Melara super rapid multi-feeding gun) 30 mm calibre secondary guns
Occupancy	Crew: 98 + 14 persons

Mission

Fincantieri³⁵ described the Al Zubarah-class corvette's mission as

- Escort
- Support
- Relief
- Interdiction
- Patrol operations
- Open seas missions
- Protracted helicopter operations



P111 "AI Emarat" (NVL Group, n.d.)

The **FCx30** is described by the following:

	Combat	Patrol
Key Features	First line ship survivabilityDigital and twin shipRedundancy and seaworthiness	Multipurpose configurationStrategic maritime defence capabilitySpecial forces RHIBs
Main Missions	 Master of all warfare domains Tactical ballistic missile defence Extended interoperability 	Maritime counterterrorismInterdiction supportCounter-piracy operations

The specifications for the **Gowind 2500 corvette** are outlined by Naval Technology³⁶ as:

Mass	 Length: 85-105 m (depending on variant) Beam: 16 m Displacement: 1,000-2,500 t (depending on variant)
Drive	 Max speed: 25-27 kts Range: 3,700 nm at 15 kts Combined diesel/electric or diesel engine (CODLOD) hybrid propulsion system
Sensor	 Panoramic sensors and intelligence module SETIS combat management system
Weapons	 Water guns 12.7 mm remotely controlled machine guns 20 mm machine guns 76 mm naval gun on the forward gun deck Anti-ship missiles, ship defence system, and electronic warfare suite 2 x rigid inflatable boats or unmanned surface vehicles Large and smart deployable assets (heavy helicopters, UAVs, RHIBs) [10-tonne helicopters, S-100 type unmanned aerial vehicle]
Occupancy	Crew: 80 persons (helicopter detachment included) [35-60 crew and 15-25 passengers]

The technical specifications for the **Bani Yas-class corvette** (specifically the second vessel, *Al Emarat*) are provided by Naval Group,³⁷ and Vavasseur.³⁸

Mass	 Length: 102 m Beam: 16 m Draft: 5.4 m Displacement: 2,800 t
Drive	 Max speed: 25.5 kts Range: 21 days Propulsion: CODLOD 2 x diesel engines (MTU) 2 x electric engines (Leroy-Somer)
Sensor	 Panoramic Sensors and Intelligence Module (PSIM) integrated mast Thales NS110 surveillance radar with integrated IFF STIR 1.2 EO Mk2 FCR Radar ESM (R-ESM)/communications ESM (C-ESM) system by Elttronica (Elt) Roma HGH infrared search and track (IRST) system based on two SPYNEL-X 8000 electro-optical sensors fixed on either side of PSIM 4 x up-link antennas and transmitted for the guidance of SAM Thales KINGLIP Mk2 hull-mounted sonar (HMS) CAPTAS-2 variable depth sonar (VDS) TDS 2 x navigation radar Marine navigation system Netans Data Distribution Remote-controlled dual-head Glamox CL25 searchlights featuring white HMI (hydrargyrum medium-arc iodide) and UV (ultraviolet) lights
Weapons	 1 x OTO 67 mm SR gun with STRALES system (and DART [Driven Ammunition Reduced Time of Flight] guided ammunition) 16 x VL MICA (VL MICA NG in the future) SAM 8 x MM40 EXOCET Block 3C SSM in two quadruple launchers amidships 2 x triple torpedo launchers for MU90 lightweight torpedoes 21-cell RAM CIWS 2 x guided rocket launcher (by LIG Nex1)
Occupancy	Crew: 80 persons (helicopter detachment included) [35-60 crew and 15-25 passengers]

Mission

According to Naval Technology,³⁹ the Gowind's mission is

- Anti-piracy
- Sea control and denial
- Combat
- Counter-terrorism
- Drug interdiction and anti-smuggling operations
- Oil and gas platform protection
- Search and rescue
- Fisheries protection
- Environmental protection
- Humanitarian support

In July 2022, the European Commission selected a proposal from a consortium led by Naviris (comprising Italy's Fincantieri and France's Naval Group), working in coordination with Spain's Navantia, for the development of the European Patrol Corvette.⁴⁰ On May 15, 2024, the European Union reaffirmed its commitment to the project, aiming to establish a unified development framework for this new class of warship.⁴¹ Phase 1 of the program was allocated €87 million, including €60 million from European Commission grants and €27

million from member states Denmark, France, Greece, Italy, Norway, and Spain. Phase 2 added up to \notin 154.4 million in funding, bringing the total project budget to \notin 241.4 million to date.⁴²

At the onset, the project will feature two versions:

- 1. The long-range multipurpose vessel
- 2. The full combat multipurpose vessel⁴³



artist rendition of the EPC sailing, source Wikicommons

Specifications

There are limited known technical specifications at this time; however, Defence Industry Europe,⁴⁴ Naval Technology,⁴⁵ and the EPC⁴⁶ highlight the following regarding the **MMPC**:

Mass	Length: 110 mDisplacement: 3,000 t
General	• Second-line vessel (NATO definition: limited warship unit)
Drive	 Green propulsion systems Electric power plants Power management and marine systems
Weapons	Multi-drone operations

Mission

The potential missions for the MMPC are described by the $\mathsf{EPC}^{\mathsf{47}}$ as

- Patrol and surveillance
- Long-range oceanic patrol
- Maritime interdiction operations (MIOs)
- Limited sea control (SC)
- Escort when integrated with a naval force
- ASuW operations/SAG
- ASW limited escort
- Environmental security
- Asymmetric security

Notes

¹ Naval News, "German Navy Launches K130 Batch 2 Corvette Production," February 8, 2019, <u>https://www.navalnews.com/naval-news/2019/02/german-navy-launches-k130-batch-2-corvette-production/</u>.

² Bundesministerium der Verteidigung, "19. Bericht des Bundesministeriums der Verteidigung zu Rüstungsangelegenheiten, Teil 1," 2024, <u>https://www. bmvg.de/resource/blob/5820310/c30ac0f6b643783872</u> 0d9d7e1298f6a8/19-ruestungsbericht-teil-1-data.pdf.

 ³ Alex Luck, "Germany's K130 Batch 2 Corvette Program 2 Years Behind Schedule," Naval News, October
 17, 2022, <u>https://www.navalnews.com/event-news/</u> <u>euronaval-2022/2022/10/germanys-k130-batch-2-</u> <u>corvette-program-2-years-behind-schedule/</u>.

⁴ Bundesministerium der Verteidigung, 2024

⁵ Bundeswehr, "Korvetten der Braunschweig-Klasse," n.d., <u>https://www.bundeswehr.de/de/ausruestung-</u> <u>technik-bundeswehr/seesysteme-bundeswehr/</u> <u>korvette-k130</u>.

⁶ NVL, "Corvettes: Advanced Capacity Tailored to Your Deployment Needs," n.d., <u>https://nvl.de/en/naval-vessels/corvettes</u>.

⁷ Bundeswehr, "1 Corvette Squadron," n.d., <u>https://www.bundeswehr.de/en/organization/navy/organization/flotilla-1/1-corvette-squadron</u>.

⁸ Bundesministerium der Verteidigung, 2024

⁹ Eric Wertheim, "Sa'ar 6 Missile Corvette Joins Israel's Navy," U.S. Naval Institute, February 2021, <u>https://www.usni.org/magazines/proceedings/2021/february/saar-6-missile-corvette-joins-israels-navy</u>.

¹⁰ ThyssenKrupp, "Corvettes & Light Frigates," n.d., <u>https://www.thyssenkrupp-marinesystems.com/en/</u> <u>products-services/surface-vessels/light-frigates</u>.

¹¹ Naval Technology, "Sa'ar 6-Class Corvettes," August 27, 2020, <u>https://www.naval-technology.com/projects/</u> <u>saar-6-class-corvettes/</u>.

¹² Wertheim, "Sa'ar 6 Missile Corvette Joins Israel's Navy."

¹³ IDF, "The Sa'ar 6: The Israeli Navy's Newest and Most Advanced Ship," 2022, <u>https://www.idf.il/en/mini-sites/</u> <u>israeli-navy/the-israeli-navy-s-newest-and-most-</u> <u>advanced-ship/</u>.

¹⁴ IDF, "The Sa'ar 6."

¹⁵ Rauma Marine Constructions, "Government and Research Vessels," 2022, <u>https://rmcfinland.fi/products-and-services/government-and-research-vessels/</u>. ¹⁶ Robin Häggblom, "Finland's First Pohjanmaa-Class Corvette Is Hull-Ready," Naval News, February 5, 2025, <u>https://www.navalnews.com/naval-news/2025/02/</u> finlands-first-pohjanmaa-class-corvette-is-hull-ready/.

¹⁷ John Hill, "Rauma Lays Keel for First Finnish Squadron 2020 Corvette," Naval Technology, April 24, 2024, <u>https://www.naval-technology.com/news/rauma-layskeel-for-first-finnish-squadron-2020-corvette/?cfview</u>. Rauma Marine Constructions, "Rauma Marine Constructions is preparing for the Finnish Navy's Squadron 2020 pro-ject by building a new multipurpose construction hall at Rauma shipyard — construction will start in November." Media Release, November 13, 2021. <u>https://rmcfinland.fi/rauma-marine-constructionsis-preparing-for-the-finnish-navys-squadron-2020project-by-building-a-new-multipurpose-constructionhall-at-rauma-shipyard-construction-will-start-in-nov/</u>

¹⁸ Puolustusvoimat-YJA, "Pohjanmaa Class," n.d., <u>https://</u> <u>puolustusvoimat.fi/en/equipment#/asset/view/id/326</u>.

¹⁹ Naval Technology, "Pohjanmaa-Class Multi-Role Corvettes," October 17, 2019, <u>https://www.naval-</u> <u>technology.com/projects/pohjanmaa-class-multi-role-</u> <u>corvettes/</u>.

²⁰ Aker Arctic, "First Corvette for Squadron 2020," April 16, 2024, <u>https://akerarctic.fi/arctic-passion/first-corvette-for-squadron-2020/</u>.

²¹ Puolustusvoimat-YJA, "Pohjanmaa Class."

²² Eric Wertheim, "MILGEM Evolution: The Istanbul-Class Turkish National Frigate," U.S. Naval Institute, October 2024, <u>https://www.usni.org/magazines/</u> <u>proceedings/2024/october/milgem-evolution-istanbulclass-turkish-national-frigate</u>.

²³ Tayfun Ozberk, "Analysis: The Future of the Turkish Navy," Naval News, February 15, 2021, <u>https://www.navalnews.com/naval-news/2021/02/analysis-the-future-of-the-turkish-navy/</u>; Wertheim, "MILGEM Evolution."

²⁴ Bob Nugent, "The MILGEM Programme: Turkish Naval Procurement and Exports," European Security & Defence, May 31, 2023, <u>https://euro-sd.com/2023/05/</u> <u>articles/31367/the-milgem-programme-turkish-navalprocurement-and-exports/</u>.

²⁵ STM, "Naval Engineering," n.d., <u>https://www.stm.com.</u> <u>tr/uploads/docs/1689770206_navalengineering.pdf</u>.

²⁶ Xavier Vavasseur, "Turkish Navy Ada-Class Corvette Called in France for First Time", Naval News, December 24, 2023, <u>https://www.navalnews.com/navalnews/2023/11/turkish-navy-ada-class-corvette-calledin-france-for-the-first-time/</u> ²⁷ STM, "Naval Engineering."

²⁸ Dimitris Mitsopoulos, "Hellenic Navy Reveals Its Surface Fleet Modernization Plan," Naval News, May 26, 2024, <u>https://www.navalnews.com/event-news/cne-2024/2024/05/hellenic-navy-reveals-its-surface-fleetmodernization-plan/</u>.

²⁹ Lefteris Papadimas, "Greece to Spend More than 25 Bln Euros in Arms Procurements by 2036," Reuters, March 12, 2025, <u>https://www.reuters.com/business/</u> <u>aerospace-defense/greece-spend-more-than-25-bln-</u> <u>euros-arms-procurements-by-2036-2025-03-12/</u>.

³⁰ Dimitris Mitsopoulos, "Fincantieri Reveals Details of Its FCX30 Corvette Proposal to Greece," Naval News, May 14, 2023, <u>https://www.navalnews.com/navalnews/2023/05/fincantieri-reveals-details-of-its-fcx30corvette-proposal-to-greece/;</u> Mitsopoulos, "Hellenic Navy Reveals Its Surface Fleet Modernization Plan"; Sigma Combatants, n.d.

³¹ Dimitris Mitsopoulos, "Greece Postpones Corvette Program Decision to Early 2023," Naval News, December 20, 2022, <u>https://www.navalnews.com/navalnews/2022/12/greece-postpones-corvette-programdecision-to-early-2023/</u>.

³² Xavier Vavasseur, "Naval Group Launches 'Bani Yas', the First Gowind Corvette for UAE Navy," Naval News, December 4, 2021, <u>https://www.navalnews.com/navalnews/2021/12/naval-group-launches-bani-yas-gowindcorvette-uae/</u>.

³³ Fincantieri, "Al Zubarah Class," n.d., <u>https://www.</u> <u>fincantieri.com/en/products-and-services/naval-vessels/</u> <u>al-zubarah-class/</u>.

³⁴ Naval Technology, "Al Zubarah Class Corvettes, Qatar," February 9, 2023, <u>https://www.naval-technology.</u> <u>com/projects/al-zubarah-class-corvettes-gatar/?cf-view</u>. ³⁵ Fincantieri, "Al Zubarah Class."

³⁶ Naval Technology, "Gowind Class Corvette Multi-Mission Combatant," May 5, 2023, <u>https://www.naval-</u> technology.com/projects/gowind_corvettes/?cf-view.

³⁷ Naval Group, "Delivery of the First Gowind® Corvette for the United Arab Emirates Navy."

³⁸ Vavasseur, "Naval Group Launches 'Bani Yas'."

³⁹ Naval Technology, 2023

⁴⁰ Naviris, "European Patrol Corvette (EPC)," n.d., <u>https://www.naviris.com/what-we-do#1</u>.

⁴¹ EPC, "Design & Innovation," 2024, <u>https://</u> europeanpatrolcorvette.eu/epc-design-innovation/.

⁴² Naval Technology, "European Patrol Corvette (EPC), Europe," August 9, 2024, <u>https://www.naval-technology.</u> <u>com/projects/european-patrol-corvette-epc-</u> <u>europe/?cf-view</u>.

⁴³ Naval Technology, "European Patrol Corvette (EPC)."

⁴⁴ Defence Industry Europe, "European Modular and Multirole Patrol Corvette: Preliminary Consortium Agreement Signed at Euronaval," October 18, 2022, <u>https://defence-industry.eu/european-modular-and-</u> <u>multirole-patrol-corvette-preliminary-consortium-</u> <u>agreement-signed-at-euronaval/</u>.

⁴⁵ Naval Technology, "European Patrol Corvette (EPC)."

⁴⁶ EPC, "Design & Innovation."

⁴⁷ EPC, "Design & Innovation."

