

Patrol Boats for Low Enforcement Enhancing Maritime Security in Africa

Maritime Security Challenges

The global impact of piracy on the world is growing as the economic and social struggle turn to extreme measures to feed their families and make a stand against the vast wealth that is being gained from the oil and other resources in these seas. Also the impact of Illegal, Unreported and Unregulated fishing (IUU) is uncontrolled leading to fears that this will largely affect the African economy and populations on the coast line that are dependent on the fish food. The current economic situation in Africa restricts individual states from being able to effectively tackle the problem. Unclear definitions over territorial laws and a lack of better coordination between African nations has enabled piracy to escalate with ambiguities and ways to avoid conviction or capture.

Maritime security operations entail routine patrols to determine pattern of life in the maritime domain, enhance mariner-to-mariner relations and disrupt the transport of illicit cargo. Through persistent maritime security operations, coastal nations show its commitment to enabling the free flow of commerce for legitimate traffic as well as to contest the battle space in all areas where the transport of illicit cargo is used to fund and/or arm terrorism and other unlawful activities is paramount.

The piracy problem in East and West Africa received global attention in 2007 and stimulated interest in African maritime security challenges. Following a dramatic increase in the number of hijackings, international and regional actors established a large and focused framework for cooperation.

The African states are already working to come to grips with the maritime security challenges. Together, they have developed maritime strategies that serve as platforms for the employment of military, political, and economic measures. More can be done to minimize the risks against international and African maritime interests.

Global Patrol Boat Market

Global patrol boat market is primarily driven by high adoption of various types of patrol boats across the globe. A patrol boat is referred to as patrol ship, patrol craft, or patrol vessel is a relatively small naval vessel. This boat generally designed for coastal defense duties and the patrol

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boat may be operated by the police force, coast guard, nation's navy. In addition, the various types of patrol boat such as large patrol boats, medium patrol boats, and small patrol boats intended for river or marine environments. The patrol boats engaged in several border protection roles such as fisheries patrols, anti-smuggling, immigration law enforcement, and anti-piracy.

The current shipbuilding market ask for a fast patrol able to enhance maritime security in the African continent and to combat piracy, illegal fishing, human and drugs trafficking.

Around the world, patrol boats are critical assets for providing coastal security and surveillance. The coastal patrol boats are designed to enhance maritime surveillance capabilities of the naval forces. In addition to supporting private security efforts, many different types of patrol boats are used within the government and military programs of nearly every nation.

The increasing popularity of large patrol boats and small patrol boats across the globe due to a wide variety of duties performed by these boats in coastal waters, high seas, and rivers across the

globe resulting in rising demand for patrol boats in various regions of the globe. In addition, growing demand for advanced patrol boats especially in emerging economies and increasing penetration of technologically advanced patrol boats across the globe. These are some important reasons for the high growth of the patrol boat market across the globe.

The challenges for the design of reliable patrol boats consist in developing an optimized hull form and integrating state of the art vessel components such as propulsion, power units, and mission equipment in order to offer a highly efficient and flexible platform, improving operability at sea. Patrol vessel designs are answering the operational requirements of surveillance and protection missions.

Patrol Boat Operational Requirements

Large endurance with fuel efficiency, good seakeeping performances by high speed and high sea states, flexibility of the lay-out allowing integrating fast ribs and, autonomous marine vehicles efficient integration of weapon, communication and surveillance systems are the key features of various designs. International shipbuilders can provide many different solutions with tailor-made characteristics for you to protect strategic places. Considering that client's main asset is the crew, ahouls designers pay special attention to the crew comfort and safety by delivering ergonomic lay-out design and high-quality accommodation and mission facilities.

- The patrol boat can be operated and controlled from a flying bridge with large windows, offering a wide-angle view of the horizon on all sides.
- A small caliber canon can be fitted on the fore deck can be fired against speed boats, helicopters and small aircrafts. The patrol boat should be armed with 12.7mm machine guns for defence against lightly armoured targets.
- The onboard HF and VHF radio equipment provides communication over short and long distances, while a stabilized video camera with a laser spotlight is used to detect and identify possible or confirmed targets.
- The boat should be equipped with high-definition marine radar, antenna mast, and searchlights atop of the surveillance bridge. Patrol boat can sail at high speeds and operate over a distance of 1,500nm, when sailing at a speed of 15kt. The hull should be designed to offer high sea-keeping performance.



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- The boat should have the ability to endure for seven days without refueling. It should incorporate two electric generators systems and can be offered with two fixed-pitch propellers or waterjets.

International Shipbuilders R&D teams are continuously improving its patrol vessels – making them faster, quieter, more economical and more environmentally friendly. Designed for ultra-high-speed patrol duties in all waters interceptors patrol boats can outpace most other vessels. From maximizing operations and lowering risk to reducing operational costs. It's clear and obvious that patrol vessel operations can benefit greatly from autonomous vessel technology as well.

NVL (former Lurssen Defence) Fast Patrol Boats are optimised for ensuring the safety of littoral seas, waterways and coastal infrastructure. Combining high speed with exceptional seakeeping abilities, our patrol boats can deploy rapidly to the point of danger and swiftly neutralise any threat. They are built to complete demanding missions with absolute reliability. The integration of lightweight steel and aluminium construction with carefully designed hull forms facilitates fast and stable performance across a range of sea states. Precise levels of performance are customised to your particular needs, with speeds from 28 to as much as 45 knots being achievable. Operations can be sustained for between three and 14 days whilst range can extend up to an impressive 5,000 nautical miles. With patrol boat designs displacing from 50 to 700 tonnes and measuring up to 65 metres in length, NVL Group can readily supply vessels adapted to meet your exact requirements. Whether your mission is the rapid interception of smugglers and pirates or less overt intelligence gathering, we have a patrol boat that will satisfy your needs. Our naval variants are particularly

well-suited for conducting surface warfare operations but are also equipped for defence against aerial threats. They also have the optional ability of being configured for anti-submarine warfare. All our fast patrol boats are sufficiently flexible to conduct a broad spectrum of naval and coast guard duties in territorial waters throughout the world, including operations in confined and shallow waters.

One of the **Israel Shipyards** vessels currently in highest demand, the SHALDAG FPC was designed in the late 1990s, integrating valuable improvements created by Israeli defense experts in response to real-life security challenges. The SHALDAG is most valued for security tasks where high intercept

speeds and easy maneuverability are required. In addition, the vessel is equipped with highly advanced weapons systems, produced by world-recognized Israeli designers.

The combat-proven success of this unique ISL craft was quickly established with the Israeli Navy, attracting the attention of many other Naval forces. Drawing on extensive operational experience in different environments, the craft continued to be improved, including the addition of newer lightweight weapons systems. To date, three types of SHALDAG have been introduced, in addition to several upgrades, Shaldag MK II, Shaldag MK III and Shaldag MK.

Paramount Group serves as a proud partner to numerous African navies, offering a wide range of advanced, multi-role naval vessels; from interceptor, light strike vessels to off-shore patrol vessels. In addition, the company has provided a myriad of systems installation and integration programmes, offering lifetime support in a local capacity, often accomplished through equipment upgrades installation and high-skills training. The company today leverages its 27 years of experience and expertise to develop and upgrade shore facilities in order for each of Paramount Group's partners to operate more efficiently, economically and sustainably.

Damen Shipyards Cape Town (DSCT) has constructed and delivered many vessels to the African continent over the years. Countries that the yard has delivered to include South Africa, Zanzibar, Angola, Kenya, Nigeria and Tanzania. Vessel type constructed and delivered have included inshore and offshore patrol vessels, dredgers, tugs, naval craft, research vessels, pontoons, and supply vessels. DSCT is a recognised supplier to South African Government bodies such as Transnet National Ports Authority (TNPA), Department of Agriculture, Forestry & Fisheries (DAFF), The Robben Island Museum



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(RIM) and the South African Navy (SAN). The company also builds and supplies vessels to private companies such as Smit Amandla Marine and De Beers Marine.

Recent Patrol Boat Deliveries in African Navies

- AIS data showed a second batch of three vessels arrived at the port of Alexandria aboard the heavy-lift ship Rolldock Sun on 14 February, Jane's reports. The vessel left Germany on 28 January carrying a 60-metre patrol boat bearing the pennant 710 and two 40 metre OPB 41 (previously marketed as the CSB 40) coastal patrol craft bearing the pennant numbers 705 and 706. In November 2020 it emerged that Egypt would be receiving nine Lurssen patrol boats and a single coastal defence boat from Germany under a 130 million euro deal after the contract with the original customer, Saudi Arabia, fell through.
- On February 12th, the first of the three new Multi Mission Inshore Patrol Vessels (MMIPV) of the South African Navy (SAN) was christened. According to information from the shipyard, Damen Shipyards Cape Town (DSCT), the 62 x 11-meter ship is the first Sea Ax ship to operate in South Africa. Sea Ax is a design patented by Damen, which is characterized by a straight, ax-shaped bow.
- In July 2020, Israel Shipyards announces an agreement with an African navy for the supply of two OPV 45 offshore patrol vessels. The vessels were designed for a wide range of missions, including protection against the increasing threat of piracy in the region.
- The OPV 45 is designed for a wide range of naval, paramilitary and HLS missions. It enables open sea patrol and surveillance and supports a wide variety of offshore missions such as the protection of facilities

and EEZs, anti-terror/smuggling/illegal activity interdiction, intervention force boarding/landing, close-range naval combat operations, and enhanced search and rescue missions. The OPV 45 can also be equipped for minimizing illegal immigration transits, fishing protection and control, and anti-pollution activities.

- In early November 2020 Israel Shipyards announced the delivery of the last two of four Shaldag fast patrol boats to fulfil an order from the Senegalese Navy.
- Four Defender patrol boats arrived in port at Djibouti City, Djibouti, in two shipments in late February as part of a train-and-equip partnership between the U.S. Department of State and the Djiboutian military. The 27-foot boats were delivered to the Armed Forces of Djibouti (FAD) on 22 February 2020 for use by the Djiboutian Navy. Defender patrol boats combine an unmatched ability to conduct high-speed maneuvers in a compact deployable package.
- South Africa's Paramount Maritime Holdings, through subsidiary Nautic Africa, has delivered a new aluminium patrol and escort vessel to an unnamed Gulf of Guinea maritime security customer.
- The newbuild has a length of 35 metres, a beam of 7.5 metres, a ballistic-protected wheelhouse and deckhouse, facilities for launching and recovering one 8.5-metre boat, X- and S-band radar, and space for six crew and up to 50 passengers. Three Caterpillar C32 1,093kW engines driving fixed-pitch propellers give the vessel a maximum speed of 28 knots and a range of 1,150 nautical miles at 20 knots.
- Rohde & Schwarz has been chosen by the Senegalese Navy to install combat communication systems on the three OPV 58S patrol vessels Dakar ordered at the end of 2019 from the French shipyard Piriou-Kership.
- On 13 July 2018 the United Nations Office on Drugs and Crime (UNODC) Ghana Programme Office, in partnership with the Japanese Government, donated two alligator patrol boats to the Ghana Marine Police to enhance their operations in combating maritime crime.

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