Smooth Sailing for the Viana Do Castelo Class Patrol Vessel

Interview with Rear Admiral Prof. António Manuel Fernandes da Silva Ribeiro, Deputy Vice-Chief of Naval Staff of the Portuguese Navy

(1) Portugal has one of the biggest Exclusive Economic Zones in Europe. Can you describe how the new Viana do Castelo class patrol vessel will help to police this area in terms of:

a. Value for money for the Navy

b. Multi-role capability of the vessels

c. The technological improvement they bring from their predecessors

The mission of the Portuguese Navy is to provide naval forces for the integrated defense of national territory, including surveillance and control of territorial waters and unrestricted use of national ports and harbors. The Navy's mission also includes the control of the Economical Exclusive Zone, through non-military tasks such as: maritime law enforcement, search and rescue, fishery protection, environmental protection or prevention of pollution, response to emergencies.

When compared to the ships the Navy currently employs in those tasks, the new OPV *Viana do Castelo* allows for better endurance, with reduced fuel consumption and fewer personnel on board. The technological improvements are mainly on a new integrated platform management system, C3 and extra accommodation and storage space. Though survivability in combat was not a main construction feature, built in C3 capability ensures it can integrate a force and be employed as a modular capacity (transport for a marine detachment, mine-warfare or diving operations support platform, etc.). Nonetheless, spare bunks can be made available to accommodate a ship protection team, this increasing the ship's survivability in coastal and in-shore operations.

However, the available room can be of the utmost use for non-military related tasks such as NAFO missions where there is the need to embark civilian fishery inspectors. On the other hand, the ships can perform well in busy information environments, being able to build and maintain a sound maritime recognized picture and contribute towards maritime situational awareness, which makes them particularly fit to work in the interagency domain.

(2) There is a growing trend for Navies to downsize corvettes and frigates and replace them with OPVs with a multi-role capability. Some of these OPVs are very well armed, but isn't there a danger that, despite their ability for domestic policing operations, they remain inferior products in times of war and expeditionary roles?

The reasoning behind *power projection* has to be closely matched with the level of ambition, especially when balancing the ability to act autonomously against other multilateral options. The dual role concept of the Portuguese Navy ensures a common doctrine is put in place to merge ship's operational standards and training into the same logical approach, thus naval assets can be used under different operational and planning situations.

Multi-role, as we see it, is a dormant capacity that can be brought to bear when needed. The balance between *inexpensive* platforms and what they can deliver in a more complex environment depends on how to employ these ships. What we need and what to ensure in the ship's project is closely related to this definition.

Portuguese OPVs can maintain a tactical picture and thus be part of a force. They have the ability to accommodate special teams, meaning they can ensure its own ship protection and vessel search, board and seizure capabilities. They have high-quality navigation systems, low draught and excellent manoeuvrability; therefore they are especially fit for inward operations. In turn, they are very limited in their ability to counter modern warfare AAW or ASW threats, needing the (area) protection provided by more robust ships. That's the role of the frigates and the submarines that PRT Navy still keeps on its force inventory.

Normal tasks of the PRT Navy will see the different type of ships performing diverse primary tasks, with the blue water fleet of multi-role frigates employed in expeditionary and power projection missions, and the new OPV assigned to sea protection related duties. Our strategy is to have a balanced mix of capabilities covering different operational needs, but drawing over an operational concept that can bring assets together within a task force, especially when there will be the need for a mix of off-shore area and coastal control operations.

The global tendency to build smaller ships and, consequently, cheaper ones, but yet multi-tasked performers has to be taken carefully. OPV will not be able to replace frigates unless we are willing to take more risks. Long before globalization, the interrelation between warfare environments was already a reality. Multi-role as a flexibility feature is inherent to the ship's employment. Multi-role as a capacity to fight and survive in a complex warfare environment is something completely different. At the end of the day, there would be the need to fit these small ships with a lot of equipment which would make them less effective – EMI would obviously be an issue – and very expensive.

OPVs are not inferior products for power projection. They are a relatively inexpensive option to strengthen a naval force and to avoid having more capable assets confined to coastal and specific tasks on behalf of their wide-raging control and fighting capabilities.

(3) There is a lot of excitement about Portugal's new OPV; however, there is a fundamental problem with most patrol vessels in that they cannot be used for fast interdiction operations. What C4ISR technology and fast interception platforms will be used to compensate the speed limitations of the Viana do Castelo?

Viana do Castelo OPVs have two fast RIBs (with available speed up to 32 knots) that can be used for coordinated interceptions and the ship also has the ability to operate with a non organic helicopter. Therefore, we do not consider its top speed to be an issue or limitation for these operations.

But countering illicit activities at sea is not only about acting. It is probably more important to be able to anticipate and prevent situations so one can timely deploy assets to dissuade or counter it. To do this, we talk about surveillance, information sharing, analysis and C2 around a sound Maritime Situational Awareness (MSA). To address MSA, both as a contributor and a user, the PRT OPVs have the necessary systems for data gathering, are equipped with information and decision support tools, and external connectivity for taskforce or *stand-alone* (area) ops.

In close cooperation with the Portuguese industry, the Navy is currently developing a C3 automatic tool able to fuse different information sources and to provide operators with a *tailored to the mission* man-machine interface. Data and information sources will include external sensing like UAVs that are being addressed by the Navy's naval center of investigation as a capability to be fit and operated from small platforms. The future UAV will thus augment OPVs surveillance and data gathering capacity, making these ships a fundamental part of a wider capability to further enhance Navy's MSA.

From a more technical point of view, the ships are fit with GMDSS, DSC, AIS and access to all emergency frequencies. They have a built-in network to support an automatic information system, allowing connectivity through an in-port door at pier, or via HF /UHF/ VHF or SATCOM (via secure or non-secure link). They also bear the ability to provide access to electronic mail via internet and intranet, access to Recognized Maritime Picture Broadcast, Web Information Services Environment, Military Message Handling System, Message Text Format, and telemedicine.

In addition, the ships have two navigation radars, one with "SAR Transponder" and ARPA (Automatic Radar Plotting Aid) capability, with real time automatic registration and record. They are also fitted with VHF communication surveillance and azimuth finder, low intensity night vision goggles with electro-optics Vigy MK3, and record of target image (photographic and video) that includes the integration of its geographic position and time/data. This all merges within a navigation system which provides information that can be used as proof in a court of law.

(4) The Middle East is an incredibly exciting market for shipbuilders looking to export their products and many of the nations there are looking at purchasing OPVs in the next few years. Do you think the Viana do Castelo class would be a reasonable fit for this market? If so, what advantages does it bring over other new OPVs which are being positioned for export to the Middle East?

We honestly trust in the capabilities and modular approach of the Viana do Castelo OPVs and the high value that this ship can bring to other navies. Pending on the requirements of each specific country, we believe the project can be tailored in order to give the desired outcome. In fact, from the initial draft, the project design already suffered a few changes in order to make it custom-made to the Navy's needs in certain areas such as the operation with helicopters and RIBs. This OPVs has good sea-going capabilities and endurance, optimized for prolonged surveillance and presence (fishery protection, securing of offshore facilities, etc.) and for law enforcement patrols (smuggling and drugs, migration) far off the coast and, aside from that, also performs numerous (semi) civilian tasks (disaster relief, supply, SAR, floating hospital, etc.).

We've already proved some of the ships operational features and, as we get more experienced with it, the Navy can contribute towards new solutions that, ultimately, will make the ships even better at lesser cost. The exchange of know-how with other navies will make this project stronger towards a yet more robust platform to operate either in the Atlantic, in the Pacific or in the Indic Ocean.

(5) The Offshore Patrol Vessels Middle East Summit has senior flag officers from all over the world imparting their knowledge to Navies and Coast Guards from the Gulf. You are representing the Portuguese Navy at this event; in your opinion what is the strongest aspect of the Portuguese Navy, its unique capability or expertise, which you feel can benefit the audience most?

The Portuguese Navy approach to maritime operations builds over three fundamental concepts:

a) **Dual Role**, meaning the capability of the Navy to engage in both military tasks and non-military (constabulary) tasks. The dual role approach stands as an operational drive to boost economy of effort at sea;

b) **Optimization**, meaning the ability to generate functional elements (as in the DOTMLPFI approach to a capability) on behalf of the dual use required by the military and non-military employment of resources and assets. Optimizing refers to the alignment of support functions (service providers) to its best efficiency and the implementation of adequate management methodologies, in order to support the effectiveness of the different institutional products (military, constabulary,

scientific and cultural). It entails, among others, the pursuit of unity of command in the planning and the use of assets;

c) **Balance**, meaning a capability matrix able to provide a broad response capacity through the availability of multipurpose force strength. Balancing is the opposite of specializing and seeks the economy of assets by introducing *multirole* into the genetic planning process.

The Portuguese Navy has the expertise, the knowledge and the means to act and to support other agencies at sea, thus avoiding unnecessary duplications and spend of public resources. The OPVs have been ordered and built under this logical approach, and bear the right characteristics to ensure a sound and cost-effective non-military operation pattern, whilst being ready, under standing Navy doctrine, to be reconfigured and employed for the more demanding military endeavors.

As a result, today Portugal has a highly versatile, mission tailored navy, which can act both in a power projection role and in a constabulary (non-military) function, either by itself or in support and cooperation with other national public departments in the inter-agency domain.