

## BILATERAL MILITARY AND ECONOMIC COOPERATION WITH THE PALOP IN THE MARITIME AND DEFENCE DOMAINS<sup>1</sup>

### *A COOPERAÇÃO BILATERAL MILITAR E ECONÓMICA NO DOMÍNIO DO MAR E DEFESA COM OS PALOP*

**João Miguel da Mata Soeiro**

Captain (Pilot Aviator) in the Portuguese Air Force  
Master's Degree in Diplomacy and International Relations from the  
Lusófona University of Humanities and Technologies  
F-16 Pilot, 201st Squadron  
2425-022 Monte Real  
jmsoeiro@emfa.pt

#### **Abstract**

The international missions of the Portuguese Armed Forces, as an important foreign policy tool, should be adapted to the national strategic interests by aligning the available capabilities with the levels of ambition that have been defined. The Atlantic and the Portuguese Speaking African Countries are a strategic space for Portuguese interests. Many of these countries lack the maritime patrol capabilities required to exercise sovereignty over their territorial sea. To address this, Portugal performs maritime patrol missions in the territorial waters of Cape Verde and São Tomé and Príncipe under the bilateral Defence Cooperation agreements signed with those countries. This study uses an inductive reasoning methodology, a qualitative research strategy with quantitative elements and a case study research design to analyse Portugal's Defence Cooperation agreements, and recommends options to improve maritime security in Cape Verde and São Tomé and Príncipe. The findings revealed that Portugal has a strategic interest in the ocean economic activities in the areas studied in this work. The recommendations to optimise the maritime security of Cape Verde and São Tomé and Príncipe account for the operational environment and the available capabilities and military resources.

**Keywords:** Maritime security; Atlantic; Exclusive Economic Zone; Bilateral military cooperation; Maritime economy; PALOP.

**How to cite this article:** Soeiro, J. M. M. (2021). Bilateral Military and Economic Cooperation with the PALOP in the Maritime and Defence. *Portuguese Journal of Military Sciences [Revista de Ciências Militares]*, November, IX(2), 158-189. Retrieved from [https://www.ium.pt/?page\\_id=6461](https://www.ium.pt/?page_id=6461)

---

<sup>1</sup> Article adapted from the individual research work carried out in the 2020/21 Field Grade Officers Course. The defence took place in February 2021 at the Military University Institute. The full version is available from Portugal's Open Access Scientific Repositories (RCAAP).

## **Resumo**

*As missões internacionais das Forças Armadas, como importante instrumento de política externa, devem adequar-se aos interesses estratégicos de um país, através de uma correta articulação entre os meios disponíveis com os níveis de ambição propostos. O Atlântico e os Países de Língua Oficial Portuguesa constituem um espaço de interesse estratégico para Portugal. Muitos destes países carecem de meios apropriados de fiscalização marítima para o exercício da sua soberania no mar. Por conseguinte, Portugal tem efetuado missões de fiscalização nas áreas marítimas de Cabo Verde e São Tomé e Príncipe, no âmbito da Cooperação no Domínio da Defesa. Este estudo analisa e recomenda opções para a segurança marítima de Cabo Verde e São Tomé e Príncipe, no contexto da Cooperação no Domínio da Defesa. Recorrendo a uma metodologia de raciocínio indutivo, assente numa investigação qualitativa, com reforço quantitativo e no desenho de pesquisa de estudo de caso, concluiu-se que existem interesses estratégicos, relacionados com as atividades da economia do mar nas áreas marítimas em estudo. O estudo termina com recomendações que visam a otimização da segurança marítima nos mares de Cabo Verde e São Tomé e Príncipe, tendo em conta o seu ambiente operacional, as capacidades e disponibilidade de meios militares.*

**Palavras-chave:** *Segurança marítima; Atlântico; Zona Económica Exclusiva; Cooperação no Domínio da Defesa; Economia marítima; PALOP.*

## **1. Introduction**

“In security terms, the phenomenon of globalisation and the current international geostrategic environment are creating increasingly complex, unpredictable and interdependent movements” in an already turbulent international system (Soeiro, 2016, p. 10).

This interdependence, which is a consequence of globalisation, increases the “[...] risks to international maritime traffic, as security problems in one region can have economic and political effects on distant areas” (Marcondes & Almeida, 2019, p. 85).

The sea is a common element to all Portuguese-Speaking Countries (PALOP), and its potential “[...] comes from, among other things, the strategic resources it contains [...]” (Bernardino, 2016, p. 31).

The Community of Portuguese Language Countries (CPLP) has a strategy for the oceans that lists the following threats to maritime security: illegal fishing, human trafficking, smuggling, drug trafficking and organized crime (CPLP, 2007, p. 6). These challenges are common to all the PALOP, as these countries lack both capabilities and a security strategy (Carlos, 2015).

Over the last decades, Portugal has adjusted its strategic options to make the Atlantic and Lusophone countries a priority. The Programme of the 19th Constitutional Government states that Portugal’s foreign policy should focus on “European, Atlantic and Lusophone options [...]” (Presidency of Ministries Council, 2015, p. 104). The Strategic Concept of National Defence (CEDN) states that “The Atlantic as a whole is a vast area of significant strategic interest. Most of the Portuguese-speaking countries [...] are located in this area” (Government of Portugal, 2013, p. 27). Therefore, “Portugal shall be committed to enhancing military cooperation and

security programmes within the framework of the CPLP [...] namely in the field of security of maritime lines of communication [...]” (Government of Portugal, 2013, p. 30).

Within the framework of the CPLP, Portugal has usually cooperated with the PALOP through its Technical-Military Cooperation (TMC) programme, which is now called Defence Cooperation (DC).

In 2017, the then Portuguese Defence Minister, Azeredo Lopes, spoke about the aspects that would change in the traditional TMC model. “Increasing our participation in joint peace missions, improving the system to monitor all ongoing actions and projects in each programme and involving third countries [...]” would be some of the changes introduced by an innovative cooperation model tailored to the needs of each country (Portuguese Republic, 2017, para. 3).

These synergies are needed to align the ongoing missions with the strategic objectives that have been defined, in order to establish “[...] strategic security partnerships to create relevant frameworks of cooperation aimed at defending common interests, namely in the field of security of maritime lines of communication and crisis management” (Government of Portugal, 2013, p. 23).

This will require analysing the options available to coordinate maritime security with the PALOP, given that these missions have strategic importance in economic and security terms.

Therefore, this work will propose options for a maritime security cooperation model based on a strategy that aims to enhance Portugal’s role in the international system.

This study analyses DC, specifically Portugal’s maritime security cooperation agreements with the PALOP. As advised by Santos and Lima (2019), the following delimitations have been made:

- Temporally, the study covers the period between 2014 and 2020, the dates in which the agreements for the joint supervision of maritime spaces were signed;
- Geographically, it focuses on Cape Verde and São Tomé and Príncipe, as these PALOP have joint supervision agreements with Portugal;
- In terms of content, the study analyses joint maritime patrol missions and ocean-based economic activities.

The study’s general objective (GO) is *To optimise the bilateral DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces.*

Two specific objectives (SO) were also defined:

**SO1:** To describe the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces.

**SO2:** To analyse the effects of joint maritime patrol missions on the ocean economy.

Thus, the following Research Question (RQ) was created to guide the study: *How can the DC agreements between Portugal the PALOP for the joint supervision of maritime spaces be optimised?*

## 2. Theoretical and conceptual framework

This chapter presents the key concepts and methodology used in the study.

## **2.1. Literature review and key concepts**

### **2.1.1. Defence Cooperation**

Military cooperation with the PALOP has been a foreign policy tool since the TMC programme was introduced in the late 1970s (MDN, 2020a).

However, while several sources refer to the concept, its definition has changed over time.

Article no. 1/97 of the Constitutional Law, which describes the mission of the Armed Forces (AAFF), states that the military is charged with "... fulfilling the Portuguese State's [international] commitments in the military field [...]", as well as with performing "... technical-military cooperation actions under the aegis of the national cooperation policy" (1997, p. 5151).

Before these documents were published, Decree-Law 238/96 had already defined that "Technical-military cooperation is an aspect of the Portuguese State's bilateral cooperation policy. [...] it aims to contribute to global peace and development". The same decree adds that this cooperation mainly consists of projects with the PALOP, and that this does not "[...] exclude, however, the possibility that other types of partnership can be considered in specific cases (1996, pp. 4445-4446).

Until 2014, TMC consisted of "[...] training high ranking officials and officers of the National Defence ministries and Armed Forces of those countries, building military capabilities and training military personnel". These projects involved four main components: providing technical advisory services; training personnel; assisting in the restoration of infrastructure and supplying materials and equipment (MDN, 2016, p. 79). With the signing of the treaties for the joint supervision of maritime spaces, a new concept of cooperation emerged.

In 2017, TCM was renamed DC. It aimed to improve "[...] international peace and security, improve and reform the security industries, establish closer relations with partner countries and enhance Portugal's credibility and visibility" (MDN, 2020a, p. 1). Even though one of the reasons for the new definition was to include multilateral partnerships, this type of cooperation still tends to consist largely of bilateral agreements (MDN, 2020a). In addition to technical-military projects, the new DC policy included aspects related to maritime security and "[...] all activities which the MDN develops with those countries [...]" (MDN, 2020a, p. 13).

L. Pires (face-to-face interview, 19 October 2020) explains that the difference between TCM and DC is that the latter involves joint sovereignty-building missions in which "capabilities, forces, resources and units are deployed to conduct activities that serve both States", whereas TCM "consists only of providing support and training to local forces, in order to prepare them to perform their missions".

### **2.1.2. Joint supervision of maritime spaces**

Maritime security actions can be subdivided into different activities (MDN, 2015, p. 3.4). This work addresses the efforts to counter transnational threats to maritime security, and analyses the maritime reconnaissance, surveillance, supervision and patrol missions conducted by the Portuguese Air Force (PoAF) and the Portuguese Navy.

According to the North Atlantic Treaty Organization (NATO), "The primary objective

of reconnaissance and surveillance operations is to provide timely collection from sensors and other collectors” (2014, p. 3.2). By definition, reconnaissance is a one-time or isolated “Mission that is carried out to obtain, through visual observation or other detection methods, intelligence on activities, resources, [and] characteristics [...] of a given area” (MFA 500-11, 2012, p. 1.2). Maritime surveillance, on the other hand, is the “Systematic observation of the marine surface and subsurface, using any available capabilities and methods, to locate, detect, and determine the movement of ships, submarines and other vessels” (MFA 500-11, 2012, p. 1.2).

After the collected data are properly analysed, they become validated information or Intelligence. When this information is used to directly support the planning and execution of operations, it becomes ISR (Intelligence Surveillance and Reconnaissance) (NATO, 2019, p. 1.24).

The difference between reconnaissance / surveillance missions and patrol missions is that the latter involve the use of weapons (H. Ferreira, email interview, 11 December 2020).

On the other hand, supervision can be defined as “the act or effect of supervising, of checking if something or someone is behaving as expected” (Porto Editora, n.d.). Maritime supervision activities include inspections to verify if ships comply with the legal requirements, through actions that may include reconnaissance, surveillance or patrolling.

The agreements between Portugal and the PALOP involve the joint supervision of specific areas under the sovereignty or jurisdiction of these countries using mixed units or crews.

### 2.1.3. Ocean economics

There is no agreed-upon definition of economics or of what constitutes an economic activity. According to Bannock, Baxter and Rees, “Economics is the science that deals with the aspects of human behaviour and with the institutions that use scarce resources to produce and distribute goods and services to fulfil the needs of individuals” (1987, p. 140). On the other hand, “[...] the processes through which products, goods and / or services are provided to meet the needs and desires of a given society” are called economic activities (QueConceito, 2019, para. 1). These economic activities can be further divided into activities or sectors, depending on what they consist of.

Ocean-based economic activities aim to utilise and exploit the oceans, and include:

traditional activities such as fishing, aquaculture and processing industries; offshore oil and gas extraction; maritime transport of cargo and passengers; port facilities and logistics; maritime infrastructure and maritime works; shipbuilding and ship repairs; construction of maritime infrastructure; cruise tourism, coastal tourism, recreational boating, water sports and cultural activities; and education, training and scientific research. This includes activities in emerging fields such as renewable marine energies (wind, waves and tides); marine biotechnology (biofuels, genetic resources, pharmaceuticals); deep-sea mining; protecting maritime areas, ensuring the security of people and property, and conducting maritime surveillance. (Economia Azul, n.d.)

## 2.2. Analysis model

This study was organized according to the model presented in Table 1.

**Table 1 – Analysis model**

General Objective	To optimise the bilateral DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces.				
Specific Objectives	Research Question	How can the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces be optimised?			
	Subsidiary Questions	Concepts	Dimensions	Indicators	Data collection techniques
<b>SO1</b> To describe the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces.	<b>SQ1</b> What do the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces entail?	Defence Cooperation	DC missions	Military cooperation and assistance missions	Literature review and semi-structured interviews
				Cooperative security missions	
		Joint supervision of maritime spaces	Maritime reconnaissance/ surveillance capabilities of Cape Verde and São Tomé and Príncipe	Organization/doctrine	
				Naval aircraft	
				Infrastructures	
				Logistics capacity	
			Threats to maritime security in the EEZs of Cape Verde and São Tomé and Príncipe	Illicit activities that threaten maritime security	
			Maritime reconnaissance/ surveillance capabilities of the Portuguese Armed Forces	P-3 Orion	
C-295					
	UAS				
	NRP Zaire				
<b>SO2</b> To analyse the effects of joint maritime patrol missions on the ocean economy.	<b>SQ2</b> What are the effects of joint maritime patrol missions on the ocean economy?	Ocean economy	Ocean economy	Bilateral agreements to conduct ocean-based economic activities with Cape Verde and São Tomé and Príncipe	

## 3. Methodology and method

This chapter describes the methodology and method used in the study.

### 3.1. Methodology

The study uses an inductive reasoning methodology, a qualitative research strategy with quantitative elements and a case study design.

### 3.2. Method

#### 3.2.1. Sample and procedure

Participants. The study sample consisted of 13 interviewees (Table 2).

**Table 2 – Interviewee sample**

Position	Holder
Founder of the Observatory of the Portuguese Language	Mr Francisco Ramos
Deputy Director-General of the Directorate-General for National Defence Policy (DGPDN)	Brigadier General Lemos Pires
Head of Division at the Sub-Saharan Africa Service Directorate of the Directorate-General for Foreign Policy (DGPE)	Dr Joana Fisher
Technical Director of DC in Cape Verde	Captain Pedro Ribeiro
Chief Executive Officer at UAVision	Engineer Nuno Simões
Head of the External Resources Division of the Directorate-General for Natural Resources, Safety and Maritime Services (DGRM)	Dr Isabel Teixeira
Director-General of the Directorate-General for Maritime Policy (DGPM)	Dr Helena Vieira
Head of the Intelligence, Surveillance and Reconnaissance Centre of the PoAF	Captain Lorindo Garcia
Mission Commander of the NRP Zaire, the Portuguese Republic patrol ship stationed in São Tomé	Lieutenant Rosinha
Officer in the PoAF's Unmanned Aircraft Systems (UAS) Centre	Major Paula Gonçalves
502nd Squadron Commander	Captain Carlos Fialho
601st Squadron Commander	Major Hélder Ferreira
Head of the Brazilian Naval Advisory Mission in São Tomé	Commander Rafael Monteiro, Brazilian Navy

**Procedure.** The potential interviewees were contacted by email to inquire about their availability to be interviewed. Those who confirmed were sent the semi-structured interview script and were informed of their right to anonymity and confidentiality, which all waived.

### 3.2.2. Data collection instrument

Thirteen different semi-structured interview scripts were prepared, tailored to each expert and area of expertise.

### 3.2.3. Data processing technique

The qualitative part of the study consisted of a literature review and a content analysis (*a priori* categories, see Fachada, 2019) of the data obtained in the interviews.

The quantitative aspects addressed in the study were the number of DC missions performed and the costs of those missions.

## 4. Presentation of data and findings discussion

This chapter analyses and answers the research questions.

### 4.1. The DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces

Before describing the joint maritime patrol missions involved in these agreements, this section will provide a background for what constitutes DC. Next, the current situation in

the regions addressed in this study will be analysed, and, finally, the maritime surveillance capabilities of the PoAF and the NRP *Zaire* will be described.

#### 4.1.1. Defence Cooperation missions

The joint maritime patrol missions Portugal conducts in Cape Verde and São Tomé and Príncipe are integrated in DC projects. These missions are a strategic tool to enhance the bilateral partnerships between Portugal and the PALOP (MDN, 2020a).

The guidelines that define the Portuguese policies of cooperation with the PALOP are defined in some of the country's most important documents: the Government Programme, the CEDN, the Strategic Vision for Portuguese Cooperation, the Strategic Plan for Portuguese Cooperation 2014-2020, the Strategic Vision for Portugal's Economic Recovery Plan 2020-2030 and the bilateral Strategic Cooperation Plans.

Based on the above documents, the Ministry of Foreign Affairs (MNE), the Camões Institute and the Ministry of National Defence (MDN) define bilateral cooperation directives in coordination with the DGPE and the DGPDN. The objectives of DC with the PALOP are set out in bilateral agreements established through Strategic Cooperation Programmes, which in turn are defined in Framework Programmes. The latter specify the bilateral defence cooperation activities that will be developed (Camões Intitute, 2016).

There are two types of DC agreements with the PALOP. The first is more technical and involves technical-military capability building and assistance, while the second entails providing direct support to these countries in exercising sovereignty over their territorial waters, including maritime patrol missions.

These two types of DC should be defined in Portugal's general and military strategic papers.

With regard to the strategic options that have been defined for the PALOP, the CEDN states that Portugal should enhance its military and security cooperation within the the CPLP (2014).

The Strategic Military Concept defines the scenarios in which the Armed Forces can be engaged (MDN, 2014a) and provides strategic options for military defence. The technical-military assistance missions carried out in the framework of DC fall within the scope of Military Cooperation and Assistance (C6). These missions include “[...] providing training through Military Cooperation and Military Assistance [...]” and “[...] missions to reform the security industries of third countries [...]” (MDN, 2014b, pp. 5-7). Portugal cooperates with all the PALOP through the projects defined bilaterally in the framework programmes (CDD, 2020).

Joint maritime patrol missions, on the other hand, are included in Cooperative Security (C4) scenarios, more specifically in the sub-scenario “Operations and missions conducted under bilateral agreements”, which are performed by the national deployed forces (FND) (MDN, 2014a, p.23). The Armed Forces Mission Manual classifies these actions as M4.5 missions, which “[...] contribute to the protection of peace and international security, including the protection of strategic lines of communication [...]” (MDN, 2014b, p. 6).

These operations are planned based on joint maritime surveillance treaties signed

bilaterally between Portugal and the governments of Cape Verde and São Tomé and Príncipe. The agreement with Cape Verde concerns the use naval and airborne capabilities, while the one with São Tomé and Príncipe only includes naval capabilities, although Portugal also contributes aircraft. Both agreements state that the head of the supervision crew must be a citizen of the sovereign country with the authority to carry out supervisory activities under the international and domestic laws applicable to maritime spaces (Resolution of Assembly of the Republic No. 97/2014, 2014; Resolution of Assembly of the Republic No. 100/2018, 2018).

Figure 1 outlines the DC framework.

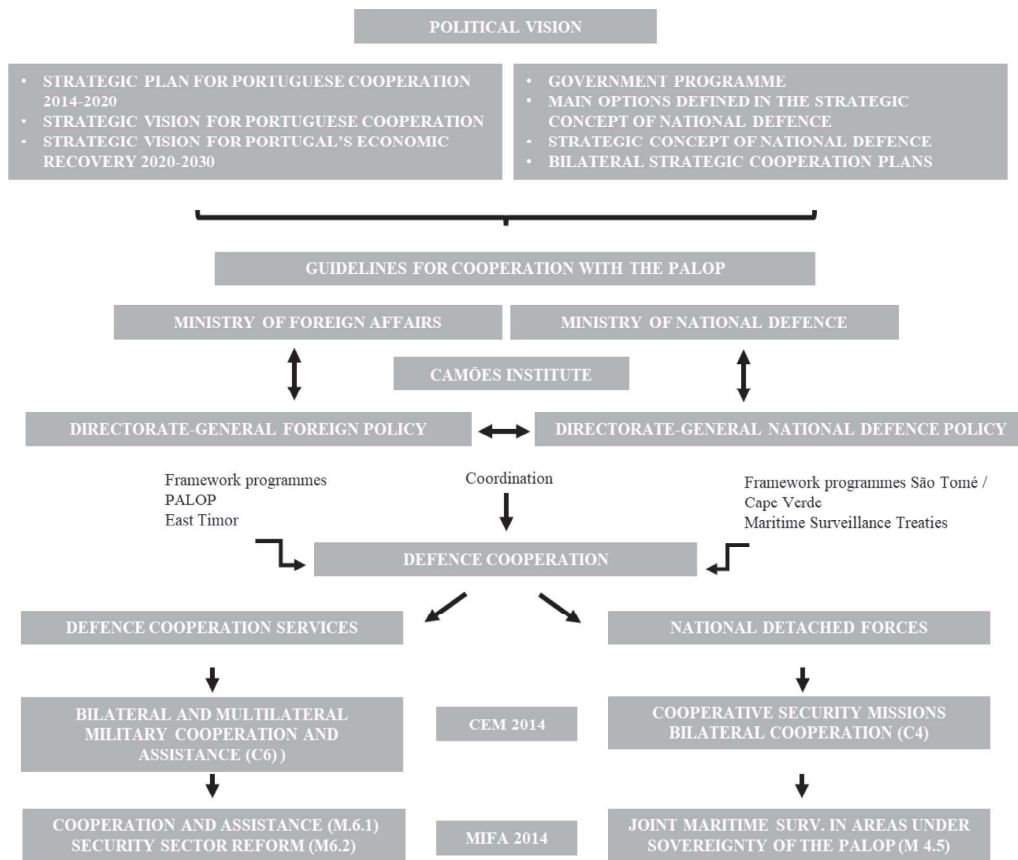
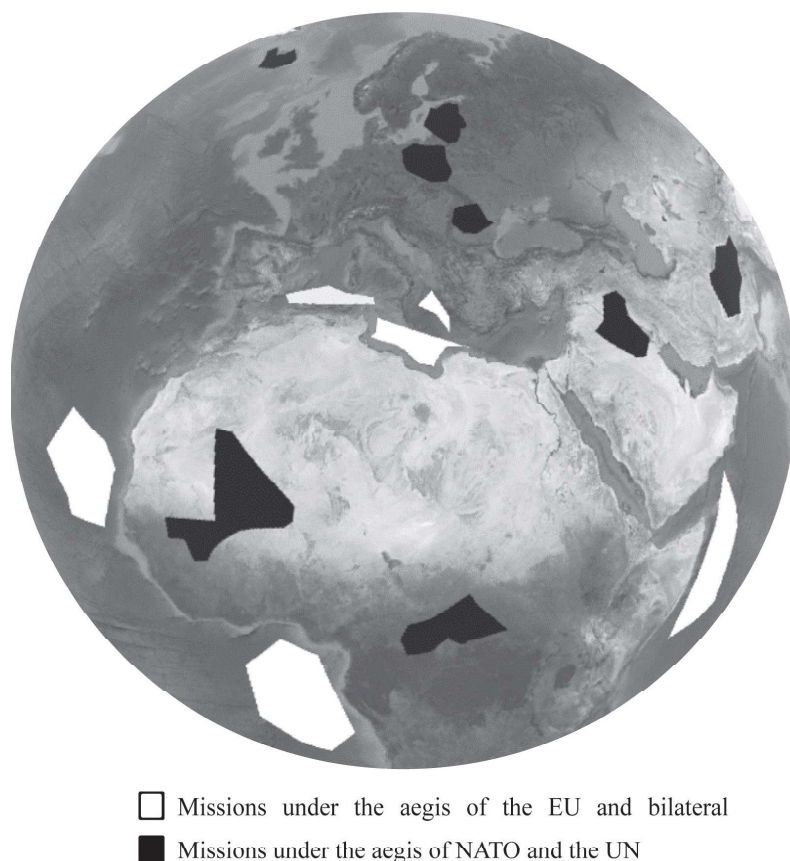


Figure 1 – DC missions

#### 4.1.2. Joint maritime patrol missions in cooperative security scenarios

In the section that addresses Portugal’s political priorities and military defence planning guidelines, the CEDN states that the country must have deployable AAFP “[...] with capabilities that enable them to operate both autonomously and integrated in multinational forces [...]” (2013, p. 50). Therefore, Portugal deploys forces in cooperative security scenarios, within the framework of its alliances or as part of bilateral / multilateral commitments (MDN, 2014a).

Since 2014, the Portuguese Armed Forces' ongoing missions have largely been conducted under the aegis of four organizations: NATO, the European Union (EU) and the United Nations (UN), and under bilateral cooperation agreements, as shown in Figure 2. The latter consist of joint supervision actions in the maritime areas under the jurisdiction or sovereignty of Cape Verde and São Tomé and Príncipe, and are integrated in DC projects.

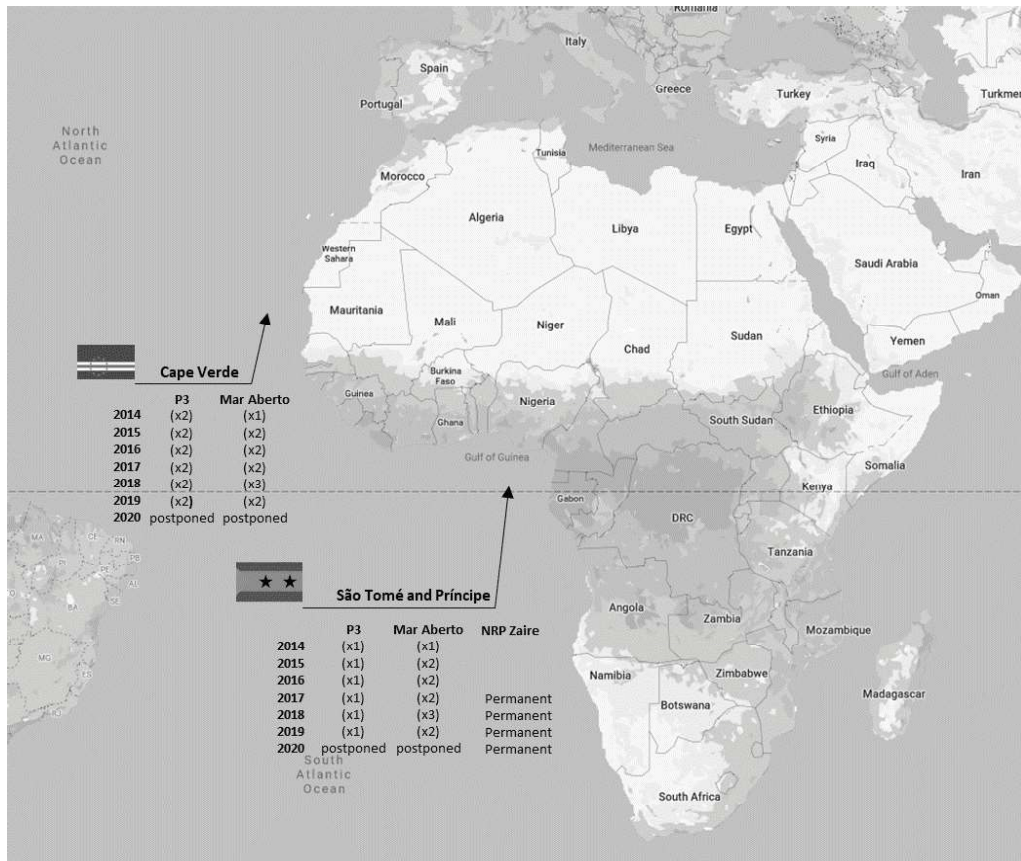


**Figure 2 – Deployment in C4 scenarios**

Source: Adapted from Google (2020).

The following naval capabilities have been deployed to these missions: a patrol ship stationed in São Tomé and Príncipe; the Portuguese Navy contributes naval capabilities to the *Mar Aberto* [Open Sea] Initiatives, which are held annually, and which aim to contribute to the “[...] international efforts to provide the countries of the Gulf of Guinea with capabilities that enable them to conduct maritime security operations and combat illicit activities at sea” (Marinha, 2017). With regard to airborne capabilities, once a year, the P-3 aircraft assigned to the 601st Squadron is deployed to São Tomé and Príncipe to participate in the Obangame

exercise<sup>2</sup>. The same squadron is deployed to Cape Verde twice a year, to participate in the Saharan Express exercise<sup>3</sup> and the Obangame return mission. Figure 3 shows Portugal's joint maritime patrol missions from 2014 to 2020.



**Figure 3 – Joint maritime surveillance**  
 Source: Adapted from Google Maps (2020).

With regards to the budget allocated to DC, the military cooperation and assistance activities carried out by the DC services have had an annual budget of about €5.6 million since 2014 (Saldanha, 2020). As for the budget allocated to joint maritime patrol missions, in 2019, the parts of the *Mar Aberto* missions that involve joint supervision, the NRP *Zaire* mission and the P-3 missions in the two analysed countries have a total budget of €5.3 million, which comes out of the €60 million budget allocated to the FND (EMGFA, 2019).

Since 2014, the budget allocated to FND and joint maritime patrol missions has been increased (MDN, 2020b). Figure 4 provides a graphic representation of these budgets.

<sup>2</sup> US Africa Command exercise to improve security in the Gulf of Guinea (US Africa Command, n.d.).  
<sup>3</sup> Maritime surveillance exercise in Cape Verde (FAP, 2014).

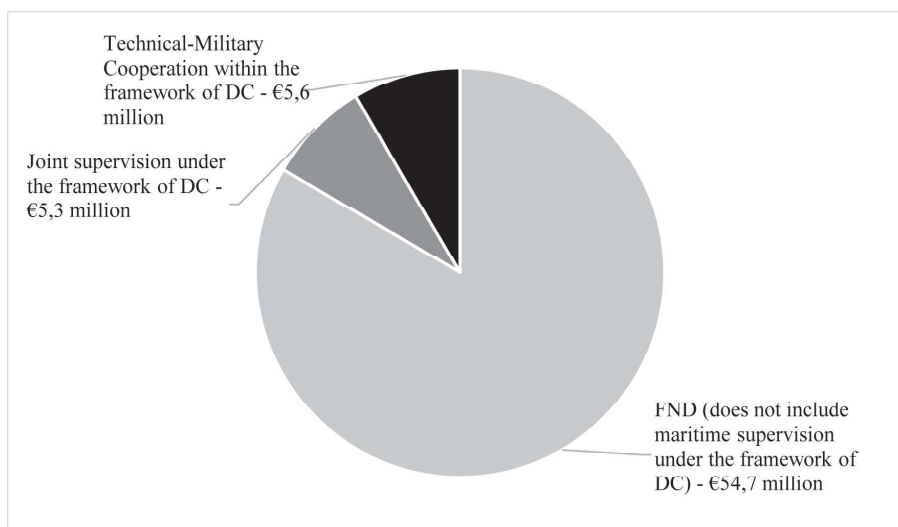


Figure 4 – Budget for C4 and C6 missions

#### 4.1.3. An analysis of the maritime surveillance capabilities of Cape Verde and São Tomé and Príncipe

To assess these countries' maritime security vulnerabilities, their capabilities were analysed and compared to the military capabilities listed in the CEM. Some of the aspects that were analysed were their organization / doctrine, infrastructure / logistics, personnel / training and air capabilities, which must be "[...] coordinated in a harmonious and complementary manner to accomplish a set of operational tasks or achieve a given effect [...]" (MDN, 2014a, p. 38).

##### 4.1.3.1. Cape Verde's capabilities

Cape Verde has an Exclusive Economic Zone (EEZ) of 801,936 km<sup>2</sup>, and the distance that separates the islands can extend to 170 M<sup>4</sup>.

The country currently has some naval assets for maritime surveillance, including a patrol ship (the *Guardião*, weighing 500 tonnes) and two river patrol boats (weighing 150 tonnes, only one of which is operational) (P. Ribeiro, email interview, 26 November 2020). However, the country "[...] does not have the capacity to conduct these supervision actions on an ongoing basis" (Asemana, 2019). This is confirmed by P. Ribeiro (op. cit.), who stated that their naval capabilities should be stationed in more than one island (for example Mindelo and Praia), to improve the country's response capacity. This capacity will be even more reduced in the future, as the *Guardião* patrol ship, the only vessel that can operate across Cape Verde's vast territorial waters, requires "[...] urgent maintenance due to intensive use and will have to be docked" (Almeida, 2020, para.1).

Cape Verde's airborne maritime surveillance capabilities consist of one Dornier-228

<sup>4</sup> Nautical Mile = 1,852 metres.

aircraft, which has been deactivated since 2017 for logistical reasons, and is not expected to be operational again at least until the end of 2021. Currently, the lack of aircraft is the most worrying gap in the country's maritime surveillance capabilities (P. Ribeiro, op. cit.). L. Garcia (face-to-face interview, 28 October 2020) believes that, if Cape Verde manages to acquire aircraft for medical evacuations between islands, it will significantly improve its capabilities, as this will free up spare capacity to operate and maintain the Dornier-228 aircraft assigned to this task.

As for the logistic infrastructure to support the operation of naval vessels and aircraft, the country has sufficient airports and naval ports. The quality of the port infrastructure is high in Mindelo and Praia and Sal; however, in Fogo, St. Antão, Boavista and S. Nicolau it is only satisfactory; and the Maio and Brava ports are in poor condition because the wharves are degraded (P. Ribeiro, op. cit.).

The country's logistical capacity to sustain, maintain and perform basic repairs on naval capabilities, in this case, ocean patrol vessels and aircraft was analysed (NATO, 2018). In terms of ship maintenance, Cape Verde's CABNAV<sup>5</sup> has some spare capacity but lacks the logistic capacity to perform maintenance on its aircraft (P. Ribeiro, op. cit.).

With regard to personnel and training, L. Garcia and P. Ribeiro confirm that Cape Verde has well-trained crews, especially officers and sergeants, who try to make the most of the opportunities to train with other Forces (op. cit.).

Regarding organization and doctrine, the same interviewees find it to be of reasonable quality, adding that, while it is based on the Portuguese AAFP, it is increasingly influenced by Brazil.

#### 4.1.3.2. Capabilities of São Tomé and Príncipe

São Tomé and Príncipe has an EEZ of 165,377 km<sup>2</sup>. Part of this area (34,540 km<sup>2</sup>) is a joint development zone shared with Nigeria (JDZ TREATY, 2001; Marine Conservation Institute, 2020).

The country does not have ocean patrol vessels, and thus can only patrol beyond 6 M through the NRP *Zaire* (G. Rosinha, interview via Zoom, 6 November 2020).

As for infrastructure, the airports in São Tomé and Príncipe can provide support to air operations. The São Tomé port is not a deep water harbour, which means that cargo has to be transhipped. To make matters worse, it is a small port with only one pier, which makes operations difficult. A mooring buoy powered from land has been installed as a backup system, which the NRP *Zaire* uses to moor without taking up wharf space (G. Rosinha, op. cit.).

In terms of organization and doctrine, the country lacks a legal framework to regulate the supervision of maritime activities. The fact that the Coast Guard is relatively new means that it does not have an established concept of operations (G. Rosinha, op. cit.; L. Garcia, op. cit.).

Most of its personnel come from the Army and are not trained for maritime operations. Training is mainly provided abroad, in different countries, which leads to lack of uniformity (L. Garcia, op. cit.).

As the country does not have the logistic capacity to perform maintenance, it "the

<sup>5</sup> Cape Verde Shipyards.

maintenance of the NRP *Zaire* is carried out by third countries” (G. Rosinha, op. cit.).

The country has received international support to address these gaps, not only from Portugal, but also from other countries with strategic interests in the region, including Brazil. According to R. Monteiro (email interview, 15 November 2020), Brazil has economic and security interests in the region and cooperates with São Tomé to improve the capacity of its Coast Guard by providing organizational advisory services, logistical support and staff training. The same interviewee added that the country requires aircraft, and that there may be the possibility of multilateral cooperation with Portugal in this area.

#### **4.1.4. An analysis of the threats to maritime security in Cape Verde and São Tomé and Príncipe**

As it would not make sense to examine security problems without analysing the threats that exploit them, the latter were analysed in terms of their: ability or potential to cause harm; intention to cause harm; ability to exploit the vulnerabilities of their target (Ministry of Defence, 2015, p. 3-9).

##### 4.1.4.1. Threats in Cape Verde

The Portuguese Navy has not received any official reports of illegal activities in the Cape Verde EEZ. However, some activities have been detected, and the indirect and significant effects they have on the economy and on the country’s human and social capital can also be observed.

P. Ribeiro (op. cit.) states that the country has a problem with illegal fishing, and that the fishing agreements with the EU are a matter of public record, there is no available public information about the activities of Chinese vessels, which are the largest fleet operating in the area, as the port records confirm.

Drug trafficking is another activity that is only detected indirectly. “In the last 18 months, drug packages dropped at sea have washed ashore on five different occasions” (P. Ribeiro, op. cit.).

Human trafficking and, more recently, illegal immigration are common activities that have Europe as their final destination, but no piracy incidents have been reported (P. Ribeiro, op. cit.).

The mission reports of the 601st Squadron confirm that these activities occur, and there have been sporadic reports of arms trafficking operations (H. Ferreira, op. cit.).

##### 4.1.4.2. Threats in São Tomé and Príncipe

The situation in São Tomé and Príncipe is more serious, as the region is particularly susceptible to illegal activities. According to the Intelligence Division of the Naval Command Centre of Operational Data Management and Analysis (CADOP), these activities mainly consist of: drug trafficking; piracy; illegal fishing; maritime smuggling, especially of fuel; illegal immigration and marine pollution (2020).

In the Gulf of Guinea, “[...] 23 attacks and 31 kidnapped crew members were reported in

the third quarter of 2020 alone. A total of 106 attacks were executed and 100 crew members were kidnapped in 2020” (CADOP, 2020, p. 1). A threat assessment reveals that, even though these incidents mainly take place in Nigeria’s EEZ, the threat level is lower in the areas adjacent to those waters (but has been increasing). In 2020, a piracy attack 80 M northwest of the island of São Tomé, in which fourteen crew members from a merchant vessel were kidnapped, confirmed that the threat is indeed increasing. The NRP *Zaire* was activated to mitigate the problem (Marinha, 2020).

For G. Rosinha, the presence of aircraft would facilitate the efforts to counter illicit activities at sea, as it would reduce the time naval vessels spend on supervision activities, enabling them to deal with threats directly, and thus making their use more efficient (op. cit.).

Table 3 outlines the situation in the two regions analysed in this study.

**Table 3 – Situation analysis**

	CAPE VERDE	SÃO TOMÉ AND PRÍNCIPE
<b>EEZ area</b>	<ul style="list-style-type: none"> <li>801,936 km<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>165,377 km<sup>2</sup> (34,540 km<sup>2</sup> shared with Nigeria)</li> </ul>
<b>Organization Doctrine</b>	<ul style="list-style-type: none"> <li>Reasonable</li> </ul>	<ul style="list-style-type: none"> <li>Poor</li> </ul>
<b>Airborne capabilities</b>	<ul style="list-style-type: none"> <li>1x Dornier 228 (<i>inoperative</i>)</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Naval capabilities</b>	<ul style="list-style-type: none"> <li>1x Patrol vessel</li> <li>2x river patrol boats (1x operational)</li> </ul>	<ul style="list-style-type: none"> <li>≥ 6 M - none</li> <li>NRP <i>Zaire</i> (DC)</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>Sufficient for operation</li> </ul>	<ul style="list-style-type: none"> <li>Sufficient for aircraft</li> <li>Mediocre for ships</li> </ul>
<b>Logistics</b>	<ul style="list-style-type: none"> <li>Sufficient for ships</li> <li>Not sufficient to perform maintenance on aircraft</li> </ul>	<ul style="list-style-type: none"> <li>No maintenance support capacity</li> </ul>
<b>Personnel / training</b>	<ul style="list-style-type: none"> <li>Sufficient</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>Illegal fishing</li> <li>Drug trafficking</li> <li>Human trafficking</li> <li>Illegal immigration</li> <li>Arms trafficking</li> </ul>	<ul style="list-style-type: none"> <li>Drug trafficking</li> <li>Piracy</li> <li>Illegal fishing</li> <li>Maritime smuggling</li> <li>Illegal immigration</li> <li>Marine pollution</li> </ul>

#### 4.1.5. Maritime reconnaissance / surveillance capabilities of the Portuguese AAF

The next section will analyse the maritime reconnaissance / surveillance capabilities of the PoAF and the NRP *Zaire*.

##### 4.1.5.1. P-3 Orion aircraft

The main mission of the P-3 aircraft operated by the 601st FA Squadron is to perform maritime patrol operations and to detect, locate, track and attack submarines and surface vessels (EMFA, 2020a).

The PoAF has a fleet of five aircraft. However, in terms of average availability, fewer than two aircraft were available from 2014 to 2020 (H. Ferreira, op. cit.).

These aircraft are usually employed in maritime security missions that require greater range and autonomy, as they can extend to the boundary of the Santa Maria FIR<sup>6</sup> (L. Garcia, op. cit.).

Their sensors allow them to operate in all types of weather and they have an operating range of 1,300 M in maritime surveillance missions (H. Ferreira, op. cit.).

Portugal regularly deploys its P-3 aircraft abroad to meet its international commitments and participate in cooperative security missions. These deployments include the maritime areas of Cape Verde and São Tomé and Príncipe. However, due to the pandemic situation, no joint surveillance missions were carried out in 2020.

These operations have an estimated cost of €12,348.10<sup>7</sup> per flight hour (EMFA, 2020b). According to L. Pires (op. cit.), the main reason why this aircraft is not used abroad more often is its high operating costs. For example, in 2019, a P-3 deployed to São Tomé for two weeks had a cost of €1,008,392 (EMFA, 2020b).

#### 4.1.5.2. C-295 aircraft

The C-295 aircraft operated by the 502nd Squadron is usually deployed in multipurpose missions that can include military maritime surveillance operations, providing support to civilian agencies, such as SIFICAP<sup>8</sup>, controlling irregular immigration, and monitoring maritime traffic and maritime pollution. This platform is usually employed in medium-range missions, which include the areas of Portugal's permanent strategic interest<sup>9</sup> (L. Garcia, op. cit.).

The PoAF has five aircraft with maritime surveillance capabilities. However, only three are available for this mission due to equipment limitations (C. Fialho, face-to-face interview, 3 December 2020). According to L. Garcia (op. cit.), the PoAF's spare capacity to use these aircraft exclusively in maritime reconnaissance / surveillance missions is somewhat limited, as the platform is also deployed in Frontex<sup>10</sup> missions and in other PoAF missions to support civilian agencies such as the DGRM. When the Squadron is not deployed in Frontex missions (about 6 months per year) it uses its spare capacity to train crews for its assigned missions. Thus, this aircraft is not used abroad more often not because the aircraft is not available, but because there is a shortage of qualified pilots, especially Commanders (C. Fialho, op. cit.).

It has an operating range of 450 M in maritime reconnaissance / surveillance missions and its sensors allow it to operate in all kinds of weather or light conditions (C. Fialho, op. cit.).

It has an estimated cost of €5,237.38<sup>11</sup> per flight hour (EMFA, 2020b). Its maritime surveillance capabilities are similar to the P-3's, with some differences: it does not conduct patrols; it has less autonomy; unlike the P-3, it has sensors capable of identifying marine pollution, which confirm and classify the type of pollution detected.

Figure 5 shows the differences in range between the two aircraft.

<sup>6</sup> Flight Information Region – Oceanic flight information region under Portuguese responsibility (NAV, 2018).

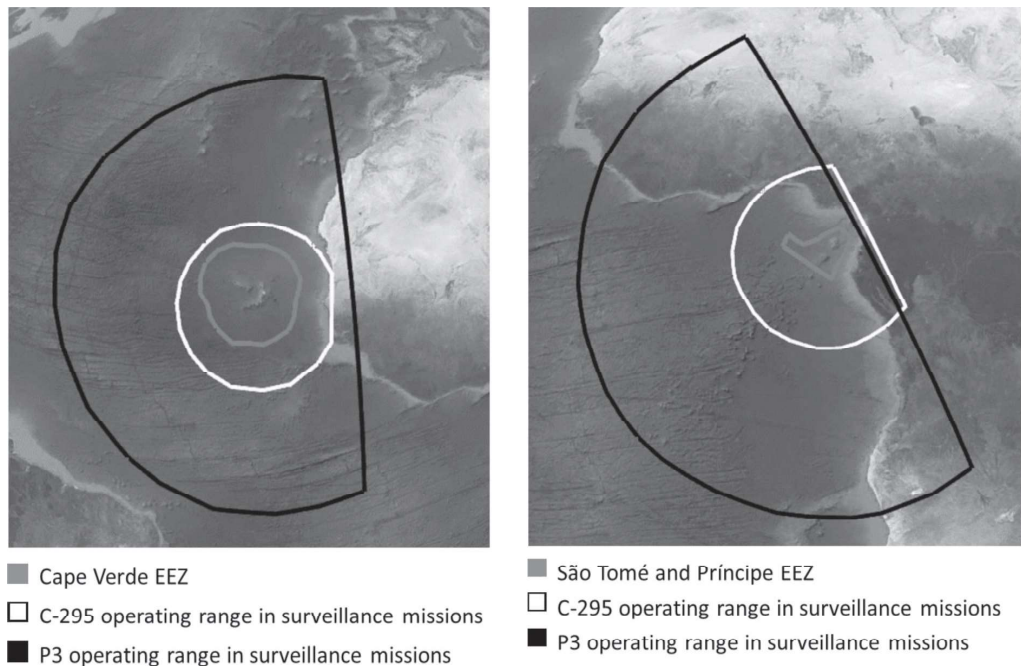
<sup>7</sup> Cost for FND, in 2020. Other agencies are charged €4,841.87.

<sup>8</sup> The DGRM's System for the Surveillance, Supervision and Control of Fishing Activities.

<sup>9</sup> The areas that comprise the "[...] exclusive economic zone and the extended zone that will be defined when the process to expand the continental shelf is concluded (Council of the Ministers Resolution No. 6/2003, 2003).

<sup>10</sup> The EU's European Border and Coast Guard Agency (Frontex Agency, 2020).

<sup>11</sup> Cost for FND, in 2020. Other agencies are charged €2,466.29.



**Figure 5 – C-295 vs. P-3 operating range**

Source: Adapted from Google Earth (2020).

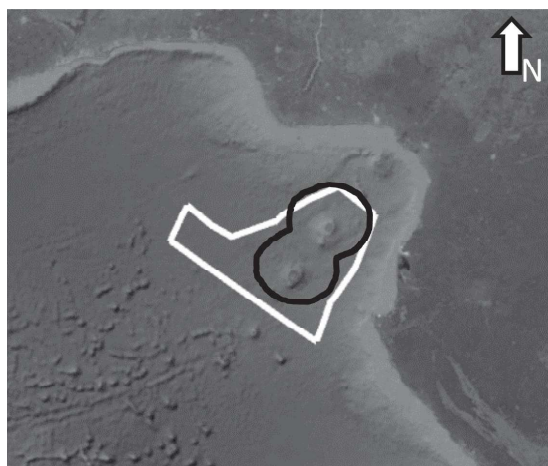
#### 4.1.5.3. Unmanned aircraft

UAS (Unmanned Aircraft Systems) are a relatively new PoAF capability that is still being developed. These aircraft support the Special Rural Fire Fighting Device (DECIR) from June to September and are available during the rest of the year for “[...] environmental surveillance, inspections, record-keeping and other actions that may be required [...]” (Council of Ministers Resolution No. 38-A/2020, 2020).

They have an autonomy of approximately six hours and a maximum range of 60M in maritime reconnaissance / surveillance missions. Their sensors enable them to perform in all kinds of light, but only in good weather conditions (P. Gonçalves, interview via Zoom, 4 November 2020).

These systems require a support base to operate, which consists of a five-person crew, a C2 (Command and Control) system, including antennas and computers, an operations container, generators and support material. When they are deployed outside Portugal, all the equipment required to operate them can be transported by a C-295 aircraft (P. Gonçalves, op. cit.).

For example, in the EEZ of São Tomé and Príncipe, one antenna on each island is sufficient for the system to cover about 55% of the EEZ, as shown in Figure 6.



- São Tomé and Príncipe EEZ
- UAS operating range with C2 antennas installed in the island of São Tomé and the island of Príncipe (55% of EEZ)

**Figure 6 – UAS operating range**

Source: Adapted from Google Earth (2020).

Currently, the PoAF has 12 Class I UAS (< 150 kg). As these capabilities are new, the operating cost has not yet been set by the Resources Division (DivRec) of the PoAF General Staff (EMFA). However, using the Activity Based Costing (ABC) model developed by Novais (2017, pp. Apd D-1-Apd D-4) as a reference, the estimated cost per flight hour of two UAS systems operating 540 hours in a 90-day FND in São Tomé and Príncipe would be €813 (Direction of Supply and Transports, 2020; Council of the Ministers Resolution No. 38-A/2020, 2020).

According to P. Gonçalves (op. cit.), while this operational capability is fairly new and, as such, there is still room for improvement, it is particularly useful in today's maritime security operations.

#### 4.1.5.4. NRP Zaire

The NRP *Zaire* is a patrol vessel used in a range of missions that include “supervision of maritime spaces, anti-smuggling and search and rescue operations, monitoring marine pollution and providing support to people and organizations” (Marinha, 2020).

In 2013, the vessel had to undergo repairs, which had a total cost of €3,997,500. The repairs extended the vessel's life cycle and enabled it to operate in São Tomé (Decision No. 9130/2013).

The vessel has been stationed in São Tomé since January 2018. Its mission objective is to train the country's Coast Guard by providing the opportunity to gain experience deploying and operating a patrol vessel and conducting joint maritime surveillance. Currently, it is the only ship in the country that can conduct surveillance beyond 6 M.

Despite having navigation radars and night vision capability, the ship largely relies on visual target acquisition (P. Rosinha, op. cit.). According to Ribeiro, in 2,000 hours of operation, it has “[...] covered more than eighteen thousand miles and carried out twenty joint surveillance missions and seven ship inspections, during which two alleged violations were detected” (2019, para. 10).

No date has been set to recall this FND. However, the goal is to hand over the ship to the Coast Guard of São Tomé and Príncipe at the end of mission. The ship operates about 1,000 hours per year and, in 2019, it was allocated a budget of about €1 million (EMGFA, 2019).

#### 4.1.6. Brief overview and answer to SQ1

The above analysis provided an answer to SQ1, *What do the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces entail?*

- Portugal’s DC agreements with the PALOP involve two lines of action; the first dates back to the origins of the concept of TMC and includes technical support and capability building actions, which are included in the military cooperation and assistance scenarios, and are coordinated by the DC services; the second concerns bilateral cooperative security missions with Cape Verde and São Tomé and Príncipe, and includes joint maritime patrol missions conducted by FND.

- In cooperative security scenarios, the joint maritime patrol missions with Cape Verde and São Tomé and Príncipe are one of four situations in which the Portuguese AAFP are deployed abroad.

- Cape Verde has some maritime surveillance capabilities. However, there are limitations related to the distance between the islands and logistical limitations related to the aircraft’s operation.

- The situation is more serious in São Tomé and Príncipe, as the country not only lacks capabilities at all levels, but the region is susceptible to maritime threats. The country is only able to exercise sovereignty in its EEZ through the NRP *Zaire*, but lacks the logistic resources required to operate and maintain it.

- Both regions analysed in this study (but especially São Tomé) require airborne capabilities to support maritime patrol operations.

- On the other hand, Portugal uses the P-3 and the C-295 to conduct maritime surveillance / reconnaissance. As for the spare capacity to use these two platforms, the P-3 has limitations related to its high operating costs and currently, the C-295 is used to train crews when it is not committed to Frontex.

- UAS are extremely useful for surveillance / reconnaissance operations. Their main advantages are their low operating costs and versatility. On the other hand, they are class I devices with low operating range and limited sensors.

#### 4.2. The effects of joint maritime patrol missions on the ocean economy

This sub-chapter analyses Portugal’s current maritime economic relations with Cape Verde and São Tomé and Príncipe and examines the impact of military missions on the ocean economy.

#### **4.2.1. Bilateral maritime economic cooperation with Cape Verde and São Tomé and Príncipe**

Bilateral maritime economic cooperation agreements aim to regulate different aspects of the maritime activities that affect the economic relations between two countries.

With Cape Verde, the cooperation in this area is defined in the Memorandum of Cooperation in the field of Maritime Economy, which was signed by both countries in 2018. The document identifies areas for cooperation according to the international commitments set in the 2030 Agenda for sustainable development (MNE, 2017). Essentially, through this cooperation, Portugal provides technical assistance to some sectors of Cape Verde's maritime economy, including fishing, coastal planning, recreational boating and maritime tourism activities (MNE, 2018).

The Standing Bilateral Commission, which meets under the aegis of the Portugal Global - Trade & Investment Agency, is the forum that analyses all cooperation in this area. At the last meeting, in 2019, both parties recognised that, while they wish to cooperate further, there has been little progress in this area (H. Vieira, email interview, 27 October 2020). Cape Verde expressed its desire for further cooperation in fishing activities. Portugal has stated that it is available to collaborate with Cape Verde through the DGPM, which sent a delegation on a technical visit to Cape Verde in 2019, to study the feasibility of cooperating in areas such as ship inspections, technical training and maritime traffic control and training through professional internships (H. Vieira, op. cit.).

Currently, there is no bilateral instrument to regulate maritime economic cooperation with São Tomé and Príncipe. A maritime transport cooperation protocol was signed in 2019, in a meeting of the Ministers of Infrastructure of both countries (H. Vieira, op. cit.).

With regards to fishing, Portugal, as a member of the EU, is prevented from negotiating directly with Cape Verde and São Tomé. These activities are regulated by the agreements that have been ratified by the EU and the countries to the south (Regulation 2019/952, 2019; Regulation 2019/2219, 2019).

Due to their small size and macroeconomic gaps, Cape Verde and São Tomé and Príncipe are not especially relevant, in economic terms, for Portuguese trade. However, Portugal continues to be the main economic partner for these two countries, with which it trades machinery, agricultural and food products, clothing and footwear (AICEP, 2020).

While these two countries are not particularly significant for the national economy, Portugal has strategic interests in these regions related to the ocean economy (J. Fisher, interview via Zoom, 21 October 2020), which is becoming increasingly more important for the Portuguese economy and was estimated at about 5% of the Gross Domestic Product in 2020 (Mar 2020, 2019).

#### **4.2.2. The effects of joint maritime patrol missions on the ocean economy**

Regarding the priorities that have been set for Portugal's economic recovery, the Strategic Vision for the Portugal's Economic Recovery Plan 2020-2030 states that "Portugal should develop (direct and indirect) tools to combat illegal fishing, ships using forced labour, and illicit trafficking, under the authority of the Portuguese Navy, and their area of action

should extend to the Gulf of Guinea” (2020, p. 102). Ribeiro adds that “Portugal’s political and economic interests in the Gulf of Guinea are linked to maritime security concerns [...]”, which illustrates the relationship between the national military and economic strategies (2020, para. 1).

The appointment of a special envoy for maritime security in the Gulf of Guinea, Ambassador João Real, in 2020, confirms that the issue is becoming an increasing concern for Portuguese foreign policy. Portugal wants to become recognised as a global co-provider of maritime security in a region where it has several economic interests (J. Fisher, op. cit.).

Strategically, one of the functions of militaries is to support the goals of foreign policy by creating desired effects in a system (Ladeiro, 2020).

NATO defines an effect as a “change in the state of a system (or system element), that results from one or more actions, or other causes.” These effects, which are derived from the security and economic goals set by foreign policy, “bridge the gap between objectives and actions by describing what changes in a system are required” (NATO, 2013, p. A-3). The next section will address some of the effects of the maritime economic actions studied here.

J. Fisher (op. cit.) states that the Gulf of Guinea and the Cape Verde EEZ are strategic areas of high economic interest for Portugal because important trade routes that supply our country go through those areas. Both are important areas for global maritime travel, and about 20 ships flying the Portuguese flag cross the Gulf of Guinea every week (Cravinho, 2019).

In 2020, piracy activity in the Gulf of Guinea increased 40% when compared to 2019 (ICC, 2020). This means that “ship-owners have had to negotiate ransoms, which leads to a spike in insurance prices and, as a result, the whole activity becomes more costly” (J. Fisher, op. cit.). Furthermore, the situation constitutes a threat to the countries’ food and energy security.

There are other illicit activities, such as drug trafficking and illegal immigration, which have a negative impact on human and demographic security, which in turn affects the economy. The Portuguese AAF can help improve the situation through DC agreements (J. Fisher, op. cit.).

Regarding fishing activities, in the last decade, piracy incidents have led Portuguese companies to reduce their operations in the Gulf of Guinea. Therefore, if the security conditions improve, this activity may resume (I. Teixeira, interview via Zoom, 27 October 2020). On the other hand, lack of supervision has led to an increase in illegal fishing, which has estimated value of \$2 billion per year in the Gulf of Guinea region alone (TheGuardian, 2018). These illegal and uncontrolled fishing practices pose a serious threat to the environment and to the food security of these countries (I. Teixeira, op. cit.).

For L. Pires (op. cit.), the Portuguese DC missions facilitate important trade relations, and the military forces stationed in the Gulf of Guinea are a reassuring presence for the Portuguese companies who invest in the region. Moreover, “if the Portuguese military presence is credible and based on longstanding relations, that reputation will extend to Portuguese businesses.” Furthermore, these enduring relations facilitate new regional partnerships, since, “if we are credible in our dealings with São Tomé, it is only natural that neighbouring countries will also consider us reliable”, which may open up new business

opportunities (L. Pires, op. cit.).

For example, “the PALOP are extremely interested” in UAS technology and the Portuguese companies that produce it, and DC can help these companies expand their activity to new markets (N. Simões, email interview, 20 December 2020). However, there is no protocol to involve UAVision in these missions (N. Simões, op. cit.).

Even though Portugal’s economic relations with both countries are not particularly significant, as F. Ramos points out, DC is part of a broader comprehensive plan to make the most of Portugal’s cultural and historical ties in Africa (interview via Zoom, 21 October 2020). The significant strategic potential of the Portuguese language and the CPLP can be harnessed through cooperation to encourage Portuguese businesses to invest in Africa. With regard to economic relations, “Portugal has the advantage of sharing a language and having friendly relations [with the PALOP], more so than other countries that are also investing in Africa, such as Russia and China” (F. Ramos, op. cit.). However, much of this economic potential has yet to yield results, and military cooperation can help boost that potential.

Military actions have direct and indirect effects on the ocean economy, and vice versa, as they help implement a security system.

Figure 7 summarises some of the effects of maritime patrol actions.

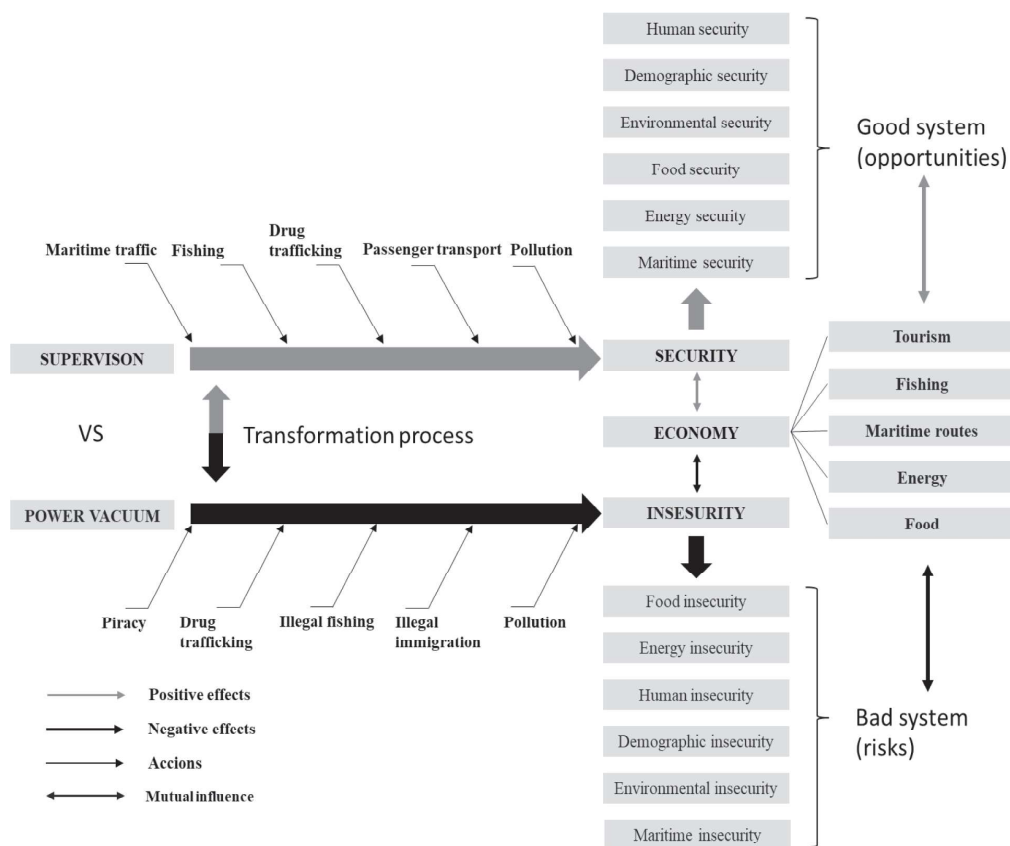


Figure 7 – Effects of maritime surveillance

#### 4.2.3. Brief overview and answer to SQ2

The answer to SQ2, *What are the effects of joint maritime patrol missions on the ocean economy?*

- Portugal's instruments for maritime economic cooperation with Cape Verde and São Tomé and Príncipe are insufficient, and bilateral economic relations in this area are not particularly significant in comparison to Portugal's global trade. However, Portugal has a strategic interest in the maritime economic activities developed in these areas.

- Joint maritime patrol missions present several opportunities. The following security actions create direct positive effects on the ocean economy: protecting sea lines of communication improves energy and food security in the PALOP and in Portugal; providing assistance in supervising fishing activities improves food security; monitoring maritime pollution improves environmental security; controlling illegal immigration improves demographic security; and monitoring drug trafficking improves human security. Moreover, DC lends credibility to Portuguese business operating in Africa. As a result, the missions analysed in this study are instrumental in implementing a more secure system, which in turn will lead to an increase in ocean-based economic activities.

#### 4.3. Answer to the RQ

The answer to the RQ, *How can the DC agreements between Portugal the PALOP for the joint supervision of maritime spaces be optimised?* is that:

- Portugal should find logistic solutions to enable Cape Verde to operate airborne maritime surveillance capabilities;

- Furthermore, it should consider stationing airborne capabilities in São Tomé and Príncipe to assist in the supervision of maritime spaces;

- The memorandum for the joint supervision of the maritime spaces of São Tomé and Príncipe should include airborne capabilities (similar to the memorandum signed with Cape Verde);

- As São Tomé and Príncipe has few capabilities, Portugal should continue to have a military presence in the archipelago, especially because the country does not have the logistic capacity to operate and maintain the NRP *Zaire* in the future, as had been planned. Moreover, maintaining a constant military presence in the Gulf of Guinea serves Portugal's foreign policy interests.

- Portugal should develop more robust instruments for bilateral maritime economic cooperation with the PALOP, as this will increase the economic activities related to the ocean.

- To further boost these activities, Portugal encourage national companies to participate in DC missions, which should be coordinated between the DGPE and the DGPDN. One possibility would be to involve Portuguese UAS companies in DC activities, such as the *Mar Aberto* missions, as these aircraft are less costly, which is an advantage in a market that lacks the means to acquire and operate conventional maritime surveillance aircraft.

Deploying airborne capabilities to São Tomé and Príncipe can be done in two ways, jointly or separately. The first and cheaper option would be to use UAS, which would cover about 55% of the country's EEZ. The second option would involve the deployment of a

C-295, although this would only be possible in the months when Portugal is not committed to Frontex. As there is currently a shortage of Pilots, and especially Commanders, this may prove difficult. Portugal should consider the possibility of a joint deployment, on a rotation system, with other countries with strategic interest in the region, such as Brazil. This would be an example of multilateral DC within the CPLP. A short-term deployment in a rotation system would be compatible with the level of ambition set out in the CEM, which states that the PoAF should have the “Capacity to deploy and sustain up to three small-scale aircraft in short-term collective security and defence operations” (2014, p. 37).

## 5. Conclusions

In a world that is becoming increasingly more globalised and interdependent, ensuring the security of States becomes even more challenging because threats are not only more multifaceted and unpredictable, but lead to multiple crises that spread both domestically and abroad. These challenges are even greater in the maritime domain, as it is difficult to exercise sovereignty in vast, unpopulated areas which are easily targeted by illicit activities that have a negative impact on all countries.

The Atlantic is an area of strategic interest for Portugal, particularly in economic and security terms. It is also the area where most PALOP are located, and these countries generally lack the capabilities required to exercise their sovereignty and combat illicit activities at sea. Therefore, Portugal has cooperated with the PALOP, and specifically with Cape Verde and São Tomé and Príncipe, through joint maritime patrol actions conducted through its DC programme.

The strategic importance of the maritime areas of the PALOP located in the Atlantic and the threats posed by illicit activities, which have both direct and indirect effects on the ocean economy, justify the need to analyse Portugal’s options for cooperation in maritime security activities.

The methodology used in this study consisted of inductive reasoning, a qualitative research strategy with quantitative elements and a case study research design. The data were collected through a literature review and content analysis of semi-structured interviews.

To accomplish the GO and answer the RQ that guided the study, two SO were defined and operationalised through two SQ.

To answer SQ1, and thus achieve SO1, *To describe the DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces*, DC missions were classified according to the AAFP’s scenarios of engagement. A situational analysis of those scenarios was carried out and the military capabilities relevant to this study were analysed. The data collected through the literature review and the semi-structured interviews revealed that:

- The policy that regulates DC with the PALOP includes military cooperation and assistance missions (C6) and cooperative security missions (C4);
- Portugal’s joint maritime patrol missions with Cape Verde and São Tomé and Príncipe are bilateral cooperative security missions that aim to help these countries exercise their sovereignty in their territorial waters;
- These missions are one of four situations in which the Portuguese AAFP operate abroad through FND;

- While Cape Verde has some maritime surveillance capabilities, they are limited by the distance between the islands that comprise the archipelago and by the lack of logistic capacity to operate aircraft;
- São Tomé and Príncipe lacks maritime surveillance capabilities at all levels and can only exercise sovereignty beyond the 6M through the NRP *Zaire*. The country urgently requires aircraft to patrol its maritime spaces;
- With regard to threats, both countries have been affected by illicit activities that threaten maritime security. However, the situation is more serious in São Tomé and Príncipe, as the region where the country is located is particularly susceptible to piracy activities;
- Portugal uses P-3 and C-295 aircraft for maritime surveillance / reconnaissance. However, there are constraints in deploying these aircraft abroad, as the P-3 has a high operating cost, while the C-295 is limited by its Frontex commitments and by the shortage of Pilots, and especially Commanders;
- The PoAF's UAS are a new operational capability that is particularly useful in maritime security operations, as these versatile aircraft are easy to deploy and have low operating costs. On the other hand, they are class I devices with a low operating range and limited sensors.

To answer SQ2 and achieve SO2, *To analyse the effects of joint maritime patrol missions on the ocean economy*, the current bilateral maritime economic agreements between Portugal and the two PALOP were analysed, and the potential effects of joint maritime patrol missions on maritime economic activities were described.

The literature review and the content analysis performed on the semi-structured interviews to experts in the field revealed that:

- There are few bilateral agreements for maritime economic cooperation with Cape Verde and São Tomé and Príncipe;
- The maritime economic activities that Portugal develops with Cape Verde and São Tomé and Príncipe are not particularly significant in comparison to Portugal's foreign trade; however, Portugal is the main economic partner of these two countries in other activities not related to the ocean economy;
- Despite the fact that Portugal's trade with the PALOP analysed here is not particularly significant, Portugal has a strategic interest in these countries' EEZs, both in security and economic terms, and in the activities developed in these regions, which represent potential economic opportunities;
- The joint maritime patrol missions that Portugal conducts under its DC agreements create positive effects for maritime economic activities. These actions include: protecting sea lines of communication, which improves energy and food security in the PALOP and in Portugal; providing assistance in monitoring fishing activities, which improves food security in the PALOP; and combating illicit activities that have a negative impact on the ocean economy.

The answer to the RQ, which achieves the corresponding GO: *To optimise the bilateral DC agreements between Portugal and the PALOP for the joint supervision of maritime spaces*, revealed that:

– Providing maritime security assistance to Cape Verde will entail finding a logistic solution to sustain the operation of airborne capabilities, as the country requires greater autonomy in this area;

– Portugal should consider deploying aircraft to São Tomé and Príncipe on a permanent basis to assist in the maritime supervision mission, either UAS or a C-295 platform. However, due to the limitations of these aircraft and the level of ambition set out in the MSC for air deployments in cooperative security missions, the possibility of providing aircraft through multilateral DC agreements should be considered;

– An analysis of the current situation in São Tomé and Príncipe revealed that the country is unlikely to be able to autonomously ensure the maritime surveillance of its EEZ in the near future. As the Gulf of Guinea is a region of strategic interest for Portugal, the Portuguese Navy should continue to have naval capabilities stationed in São Tomé and Príncipe to assist in the supervision of the country's maritime spaces.

– Portugal should develop bilateral instruments for maritime economic cooperation with Cape Verde and São Tomé and Príncipe, in order to boost activities in this area.

– Furthermore, it should encourage national companies that develop activities related to the ocean economy to participate in DC missions.

The study's findings provide a **contribution to knowledge** because they describe the current situation in the maritime areas analysed here in terms of threats, available capabilities and maritime security vulnerabilities; explain how to use the AAFP resources more effectively, through DC agreements with the PALOP, in order to position Portugal as a global security provider; describe the effects achieved by DC missions and the economic opportunities they provide.

This work had one **limitation** – the CPLP Strategic Analysis Centre was not available for an interview, which is a sign that it may not be operating efficiently. It was also unfortunate that the embassies of Cape Verde and São Tomé and Príncipe did not respond to the request for an interview.

**Future studies** are needed to determine if it would be possible for Portuguese companies to participate in the maritime economic activities carried out under bilateral cooperation agreements with the PALOP.

As a result of this study, it is **recommended** that a general military strategy be defined in coordination with the MNE, the MDN and their respective Directorates-General, to deploy a FND to São Tomé and Príncipe with airborne capabilities, which could involve the participation of other countries through a strategic bilateral or multilateral cooperation partnership. To achieve this, the EMFA Operations Division would have to conduct a study to assess the feasibility of deploying aircraft to São Tomé and Príncipe, and the EMFA's DivRec would have to calculate the operating cost of UAS per flight hour.

## References

- Almeida, S. (2020). Navio-patrolha “Guardião” necessita de manutenção urgente. Retrieved from <https://expressodasilhas.cv/pais/2020/09/22/navio-patrolha-guardiao-necessita-de-manutencao-urgente/71435>
- Asemana. (2019). Cabo Verde com notáveis fragilidades na guarda costeira, dizem especialistas. Retrieved from <https://www.asemana.publ.cv/?Cabo-Verde-com-notaveis-fragilidades-na-guarda>
- Bannock, G., Baxter, R. E., & Rees, R. (1987). *Dicionário de Economia*. (Ferreira, M. L., Sotomayor, A. M., Trad.). Lisbon: Artes Gráficas, Lda.
- Bernardino, L.M.B. (2016). *Uma Nova Visão Estratégica da Defesa para a CPLP*. Lisbon: Lisbon University Institute.
- Camões Institute. (2016). Memorando de Entendimento entre os Governos da República Portuguesa e República de Cabo Verde Relativo ao Programa Estratégico de Cooperação para o Quinquénio 2016-2020. Retrieved from: [http://www.instituto-camoes.pt/images/cooperacao/me\\_ptcv\\_jan2016.pdf](http://www.instituto-camoes.pt/images/cooperacao/me_ptcv_jan2016.pdf)
- Camões Institute. (2016). Programa Estratégico de Cooperação Portugal - São Tomé e Príncipe 2016-2020. Retrieved from [https://www.instituto-camoes.pt/images/cooperacao/PEC\\_STP\\_2016-2020.pdf](https://www.instituto-camoes.pt/images/cooperacao/PEC_STP_2016-2020.pdf)
- Carlos, J. (2015). CPLP pretende estreitar cooperação na proteção dos mares. Retrieved from <https://www.dw.com/pt-002/cplp-pretende-estreitar-coopera%C3%A7%C3%A3o-na-prote%C3%A7%C3%A3o-dos-mares/a-18507491>
- Community of Portuguese Language Countries (CPLP). (2007). *Estratégia da Comunidade dos Países de Língua Portuguesa para os Oceanos*. Retrieved from <https://oceano.cplp.org/media/1134/estrategia-da-cplp-formatada.pdf>
- Cooperation in the Defense Domain (CDD). (2020). *PALOP Framework Programmes*. Lisbon: Author.
- Costa, A. (2020). *Visão Estratégica para o Plano de Recuperação Económica de Portugal 2020-2030*. Lisbon.
- Council of the Ministers Resolution No. 196/2005. (2005). *Uma Visão Estratégica para a Cooperação Portuguesa*. [A Strategic Vision for the Portuguese Cooperation]. Diary of the Republic, 1st Series-B, 244, 7180-7201. Lisbon: Presidency of Ministries Council. Retrieved from <https://dre.pt/application/conteudo/464205>
- Council of the Ministers Resolution No. 38-A/2020. (2020). *Despesa com a aquisição de sistemas aéreos não tripulados para vigilância aérea no âmbito do Dispositivo Especial de Combate a Incêndios Rurais*. [Expenses for the acquisition of UAS Special Rural Fire Fighting Devices]. Diary of the Republic, 1st Series, 96, 30(2)-30(3). Lisbon. Presidency of Ministries Council. Retrieved from <https://dre.pt/home/-/dre/134021984/details/maximized>
- Council of the Ministers Resolution No. 6/2003. (2003). *Conceito Estratégico de Defesa Nacional*. [Strategic Concept of National Defence]. Diary of the Republic, 1st Series-B, 16, 279-287. Lisbon: Presidency of Ministries Council. Retrieved from <https://dre.pt/application/conteudo/172728>
- Council of the Ministers Resolution No. 72/2009. (2009). *Estratégia Nacional Sobre Segurança e Desenvolvimento*. [National Strategic for Security and Development]. Diary of the Republic, 1st Series, 165, 5603-5608. Lisbon: Presidency of Ministries Council.

- Cravinho, J. (2019). Iniciativa Mar Aberto. Retrieved from <https://www.portugal.gov.pt/pt/gc21/comunicacao/noticia?i=iniciativa-mar-aberto-foi-um-grande-sucesso>
- Decision No. 9130/2013, of 12 July (2013). *Repair and Maintenance accord for the NRP “Zaire” ship*. Diary of the Government, 2nd Series, 148, 24246. Lisbon: Ministry of National Defence - Navy - Office of the Chief of Staff of the Portuguese Navy. Retrieved from <https://dre.pt/application/conteudo/2653174>
- Decree-Law No. 238/96, of 13 december (1996). *Statute of military personnel in actions of technical military cooperation abroad*. Diary of the Government, 1st Series, 288, 4445-4447. Lisbon: Military Technical Cooperation. Retrieved from <https://dre.pt/application/conteudo/188492>
- Direction of Supply and Tranports. (2020). *Information for FND costs in São Tomé and Príncipe*. (Information). Lisbon: Author.
- Economia Azul. (s.d.). Economia Azul: A nova economia do mar [Online]. Retrieved from <https://www.economiaazul.pt/economia-azul-economia-do-mar>
- Fachada, C. P. A. (2019). *O piloto aviador: traços disposicionais, características adaptativas e história da vida [Perceptions of risky flight behavior among air force pilots]*. Sesimbra: Sumário colorido.
- Foreign Affairs Ministry (MNE). (2006). *Uma Visão Estratégica para a Cooperação Portuguesa*. [A Strategic Vision for Portuguese Cooperation]. Lisbon: Texttype.
- Foreign Affairs Ministry (MNE). (2017). *Objetivos de Desenvolvimentos Sustentável 2030*. Lisboa. Retrieved from [https://sustainabledevelopment.un.org/content/documents/15771Portugal2017\\_PT\\_REV\\_FINAL\\_28\\_06\\_2017.pdf](https://sustainabledevelopment.un.org/content/documents/15771Portugal2017_PT_REV_FINAL_28_06_2017.pdf)
- Foreign Affairs Ministry (MNE). (2018). *Memorando Específico de Cooperação*. [Specific Memorandum for Cooperation]. Lisbon.
- Frontex Agency. (2020). *Vision Mission and Values* [Online]. Retrieved from <https://frontex.europa.eu/about-frontex/vision-mission-values/>
- Government of Portugal. (2013). *Conceito estratégico de Defesa Nacional*. Retrieved from [https://www.defesa.gov.pt/pt/comunicacao/documentos/Lists/PDEFINTER\\_DocumentoLookupList/10\\_Conceito-Estrategico-de-Defesa-Nacional.pdf](https://www.defesa.gov.pt/pt/comunicacao/documentos/Lists/PDEFINTER_DocumentoLookupList/10_Conceito-Estrategico-de-Defesa-Nacional.pdf)
- Government of Portugal. (2019). *Iniciativa Mar Aberto* [Online]. Retrieved from <https://www.portugal.gov.pt/pt/gc21/comunicacao/noticia?i=iniciativa-mar-aberto-foi-um-grande-sucesso>
- Internacional Chamber of Commerce (ICC). (2020). *IMB Piracy & Armed Robbery Map 2020*. Retrieved from <https://www.icc-ccs.org/piracy-reporting-centre/live-piracy-map>
- JDZ TREATY. (2001). *Treaty between The Federal Republic of Nigeria and The Democratic Republic of São Tomé e Príncipe on the Joint Development of Petroleum and other Resources in respect of Areas of the Exclusive Economic Zone of the two states*. Retrieved from <https://web.archive.org/web/20100202064636/http://www.nigeriasaotomejda.com/PDFs/treaty.pdf>
- Ladeiro, B. F. S.(2020). *EM 01. Instrumento Militar*. Lisbon: Military University Institute.
- Mar 2020. (2019). *A economia do mar representa 5% do PIB em 2020 empregará 140 mil pessoas*. Retrieved from <http://www.mar2020.pt/noticias/a-economia-do-mar-representa-5-do-pib-e-em-2020-empregara-140-mil-pessoas/>

- Marcondes, D., & Almeida, A. R. (2019, dezembro). Globalização Segurança e Defesa no Atlântico Sul. *Nação e Defesa* (154), pp. 69-88. Retrieved from [https://comum.rcaap.pt/bitstream/10400.26/32224/4/SILVAAntonioRuyAlmeida\\_MARCONDESDanilo\\_Globaliza%C3%A7%C3%A3oseguran%C3%A7aedefesanoAtl%C3%A2nticoSul\\_ND\\_154\\_p\\_69\\_88.pdf](https://comum.rcaap.pt/bitstream/10400.26/32224/4/SILVAAntonioRuyAlmeida_MARCONDESDanilo_Globaliza%C3%A7%C3%A3oseguran%C3%A7aedefesanoAtl%C3%A2nticoSul_ND_154_p_69_88.pdf)
- Marine Conservation Institute [Online]. (2020). Exclusive Economic Zones. Retrieved from <https://mpatlas.org/countries/STP>
- Marinha. (2017). Mar Aberto [Online]. Retrieved from <https://www.facebook.com/MarinhaPortuguesa/photos/a-iniciativa-mar-aberto-surge-como-parte-do-contributo-de-portugal-para-o-esfor%C3%A7/1420092964678549/>
- Marinha. (2020). NRP Zaire participa em ação contra a pirataria no Golfo da Guiné [Online]. Retrieved from <https://www.marinha.pt/pt/media-center/Noticias/Paginas/NRP-Zaire-participa-em-acao-contra-a-pirataria-no-Golfo-da-Guine.aspx>
- Ministry of Defence. (2015). Allied Joint Doctrine for Force Protection - Allied Joint Publication 3.14. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/454616/20150804-AJP\\_3\\_14\\_Force\\_Protection\\_Secured.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/454616/20150804-AJP_3_14_Force_Protection_Secured.pdf)
- Ministry of National Defence (MDN). (2014a). *Conceito Estratégico Militar 2014*. [Military Strategic Concept]. Lisbon.
- Ministry of National Defence (MDN). (2014b). *Missão das Forças Armadas*. [Armed Forces Mission]. Lisbon.
- Ministry of National Defence (MDN). (2015). *Conceito Estratégico Naval*. [Naval Strategic Concept]. Lisbon.
- Ministry of National Defence (MDN). (2016). *Anuário Estatístico da Defesa Nacional*. [Statistics Yearbook of National Defence]. Lisbon.
- Ministry of National Defence (MDN). (2020a). *Cooperação no Domínio da Defesa* [Online]. Lisbon. Retrieved from <https://www.defesa.gov.pt/pt/pdefesa/cdd>
- Ministry of National Defence. (2020b). *Nota Explicativa OE 2020*. [2020 Budget Explanatory Note]. Lisbon.
- Naval Command Centre of Operational Data Management and Analysis (CADOP). (2020). *Security analysis in Golf of Guinea (3rd Trimester)*. Alfeite: Author.
- North Atlantic Treaty Organization (NATO). (2013). *Allied Command Operations Comprehensive Operations Planning Directive COPD INTERIM V2.0*. NATO Standardization Office.
- North Atlantic Treaty Organization (NATO). (2014). *AJP-3.3.3 Allied Joint Doctrine for Air-Maritime Coordination*. NATO Standardization Office.
- North Atlantic Treaty Organization (NATO). (2017). *ALP 4.1 Multinational Maritime Force Logistics*. NATO Standardization Office.
- North Atlantic Treaty Organization (NATO). (2018). *AJP-4 Allied Joint Doctrine for Logistics*. NATO Standardization Office.
- North Atlantic Treaty Organization (NATO). (2019). *AJP-3 Allied Joint Doctrine for the Conduct of Operations*. NATO Standardization Office.
- North Atlantic Treaty Organization (NATO). (2020). *AJP-4 Allied Air Forces Doctrine For LogisticsS*. NATO Standardization Office.

- Novais, H. S. (2017). *Custo da Hora de Voo de Veículos Militares Não Tripulados : Aplicação do Modelo ABC* [Cost per flight hour of Remoted Piloted Aircraft System - ABC Model Application]. (Individual Research Paper). Military University Institute. Lisbon.
- Organic Law No. 1/97 of 20 september (1997). *Alterações à Constituição*. [Constitutional Amendment] Journal of the Republic, 1st Series, 218, 5130-5196. Lisbon: Assembly of the republic. Retrieved from <https://dre.pt/web/guest/legislacao-consolidada/-/lc/337/202002171639/128274/element/diploma#128274>
- Porto Editora. (s.d.). Infopédia Dicionários Porto Editora [Online]. Retrieved from <https://www.infopedia.pt/dicionarios/lingua-portuguesa/fiscaliza%C3%A7%C3%A3o>
- Portugal Global Trade & Investment Agency (AICEP). (2020). Mercado Cabo Verde [Online]. Retrieved from <https://myaicep.portugalexporta.com/mercados-internacionais/cv/cabo-verde>
- Portuguese Air Force (FAP). (2014). Força Aérea em exercício multinacional em Cabo Verde [Online]. Retrieved from <https://www.emfa.pt/noticia-517-forca-aerea-em-exercicio-multinacional-cabo-verde>
- Portuguese Air Force Headquarters (EMFA). (2020a). Squadron 601 “Lobos” [Online]. Retrieved from <https://www.emfa.pt/esquadra-43-esquadra-601-lobos>
- Portuguese Air Force Headquarters (EMFA). (2020b). *Preço da Hora de voo por frota da FA*. [Flying hour costs per fleet in the Air Force]. Alfragide: Resources Division.
- Portuguese Air Force Manual (MFA) 500-11. (2012). *Conceito de Operação para o Reconhecimento e Vigilância*. [Concept of Operation for reconnaissance and surveillance. Alfragide: Operations Division.
- Portuguese Air Navigation (NAV). (2018). Espaço aéreo sob responsabilidade de Portugal [Online]. Retrieved from [https://www.nav.pt/en/nav-portugal-newhp\\_en/air-navigation-services-1/airspace/santa-maria-fir](https://www.nav.pt/en/nav-portugal-newhp_en/air-navigation-services-1/airspace/santa-maria-fir)
- Portuguese Armed Forces Headquarters (EMGFA). (2019). *Ficha de Financiamento ao Desenvolvimento Ano de Reporte 2019*. [Development budget report for the year of 2019] Lisbon: Resources Division.
- Portuguese Republic. (2014). *Conceito estratégico de Cooperação Portuguesa 2014-2020*. [Strategic Concept for Portuguese Cooperation 2014-2020]. Retrieved from [https://www.instituto-camoes.pt/images/cooperacao/160208B\\_ConceitoEstrategico\\_bilingue.pdf](https://www.instituto-camoes.pt/images/cooperacao/160208B_ConceitoEstrategico_bilingue.pdf)
- Portuguese Republic. (2017). *Governo reformula cooperação técnico-militar para melhor envolver parceiros estratégicos*. [Reformulation of Technical-Military Cooperation for better involvement of strategic partners]. Retrieved from <https://www.portugal.gov.pt/pt/gc21/comunicacao/noticia?i=20170222-mdn-cooperacao>
- QueConceito. (2019). Conceito de atividade económica. Retrieved from <https://queconceito.com.br/atividade-economica>
- Regulation 2019/2219 of 24 de October (2019). *Repartição das possibilidades de pesca ao abrigo do Protocolo de participação de Parceria no domínio da Pesca entre a UE e São Tomé e Príncipe*. [allocation of fishing opportunities under the Protocol on the implementation of the Fisheries Partnership Agreement between EU and São Tomé and Príncipe]. Official Journal of the European Union, L333/31-L333/32. Brussels: European Union Council.

- Regulation 2019/952 of 17 May (2019). *Repartição das possibilidades de pesca ao abrigo do Protocolo de Aplicação do Acordo de Parceria no domínio da Pesca entre a Comunidade Europeia e a República de Cabo Verde (2019-2024)*. [allocation of fishing opportunities under the Protocol on the implementation of the Fisheries Partnership Agreement between EU and Cape Verde]. Official Journal of the European Union, L154/31-L154/32. Brussels: European Union Council.
- Resolution of Assembly of the Republic No. 100/2018. (2018). *Protocolo Adicional ao Tratado entre a República Portuguesa e a República de Cabo Verde no Domínio da Fiscalização Conjunta de Espaços Marítimos sob Soberania ou Jurisdição da República de Cabo Verde*. [Additional Protocol to the Treaty Between Portuguese and Cape Verde Republics About Joint Supervision of Maritime Areas Under the Jurisdiction or Sovereignty of Cape Verde]. Diary of the Republic, 1st Series, 70, 1560-1561. Lisbon: Decree of the President of the Republic No. 106/2014.
- Resolution of Assembly of the Republic No. 52/2009. (2009). *Tratado entre a República Portuguesa e a República de Cabo Verde no Domínio da Fiscalização Conjunta de Espaços Marítimos sob Soberania ou Jurisdição da República de Cabo Verde*. [Treaty Between Portuguese and Cape Verde Republics About Joint Supervision of Maritime Areas Under the Jurisdiction or Sovereignty of Cape Verde]. Diary of the Republic, 1st Series, 146, 4886-4889. Lisbon: Assembly of the Republic.
- Resolution of Assembly of the Republic No. 97/2014. (2014). *Acordo de cooperação entre a República Portuguesa e a República de São Tomé e Príncipe no domínio da fiscalização conjunta de espaços marítimos sob soberania ou jurisdição da República Democrática de São Tomé e Príncipe*. [Cooperation Treaty Between Portugal and São Tomé and Príncipe for Joint Supervision of Maritime Areas Under the Jurisdiction or Sovereignty of São Tomé and Príncipe]. Diary of the Republic, 1st Series, 224, 5892-5895. Lisbon: Decree of the President of the Republic No. 106/2014. Retrieved from <https://dre.pt/application/conteudo/58940161>
- Ribeiro, S. (2019). O NRP Zaire e a segurança marítima de São Tomé e Príncipe. Retrieved from <https://www.publico.pt/2019/12/27/politica/opiniao/nrp-zaire-seguranca-maritima-sao-tome-principe-1898366>
- Saldanha, J. (2020). Anual Budget for Cooperation in the Defense Domain. (Information). Lisbon: Cooperation in the Defense Domain Services.
- Santos, L. A., & Lima, J. M. (2019). *Orientações Metodológicas para a Elaboração de Trabalhos de Investigação*. Lisbon: Military University Institute.
- Soeiro, J. M. (2016). *Política de segurança e Defesa para a Europa*. (International Relations and Diplomacy Master's Thesis). Lusófona University of Humanities and Technologies, Lisbon.
- TheGuardian. (2018). GOG nations worried about loss of \$2 billion yearly to illegal fishing. Retrieved from <https://guardian.ng/business-services/gog-nations-worried-about-loss-of-2-billion-yearly-to-illegal-fishing/>
- US Africa Command. (n.d.). Obangame Express. Retrieved from <https://www.africom.mil/what-we-do/exercises/obangame-express>