

ATLANTIC CENTRE

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THE ATLANTIC DEFENCE CAPACITY-BUILDING CENTRE



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Preface, António Costa Silva

The Atlantic Centre for Defence Capacity Building is an excellent initiative designed to cope with the emergent crisis in a world in convulsion. From the COVID-19 pandemic to the growing economic and social crisis; from the tensions in the geopolitical landscape to the climatic threat and cyber terrorism, we are facing a volatile and complex environment, with plenty of risks and uncertainties. The “old” international order is under erosion with the weakening of multilateral organisations; the lack of a global coordinated response to the pandemic crisis; the growing trade wars; the level of uncertainty and chaos that is emerging in some regions of the globe, specially in the Middle East; the increasing trend of piracy attacks in the Atlantic Ocean, specially in the Gulf of Guinea; the increasing trend in cyber attacks, specially against democratic regimes and its institutions; the lack of a global response to the growing climatic crisis. All these changes imply deep consequences for the Atlantic nations and their stability and security.

In this complex geopolitical situation, the idea of creating the Atlantic Centre, focused on defence capacity building, is crucial to cope with the growing volatility of the international order. The Centre can be a platform to anticipate, manage, minimize, and even prevent the risks faced by the Atlantic nations. The Atlantic Ocean is a key driver for the world trade. In the XXI century 90% of the world trade is made by sea and the Atlantic routes for commerce and energy are a key component of the world maritime routes. The Atlantic Ocean is also re-emerging in the XXI century as a key asset in terms of energy resources both renewables (wind offshore, ocean waves, solar) and non-renewables. The Atlantic Ocean displays also a huge potential in terms of strategic mineral resources (like cobalt and rare-earth minerals) that are essential for the energy transition and for the response to the climatic threat.

On top of that, the Atlantic Ocean fulfills a key role for the stabilization of the Earth climatic system and displays some of the best places in the world, like the Azores Islands, to undertake oceanic and climatic research. This scientific research is crucial to tackle the climatic threat, because a deep understanding of the oceans’ behaviour is essential to prevent their destabilisation and to promote the fight against ocean pollution, acidification, loss of oxygen, and deterioration and destruction of the eco-systems and biodiversity. This is a key challenge, not only for the future, in order to minimize risks and avoid catastrophic events at a global scale, but also for the present, in order to protect against storms and hurricanes and the effects of sea rise.

Making this happen and reinforcing the role, influence, and strenght of the Atlantic, requires capacity building, strong cooperation among the Atlantic nations, and their will for working together in order to valorize the Atlantic assets, geography, resources, infrastructures and the trade and energy networks. The Atlantic Centre is a geopolitical and geoeconomical tool and platform to develop joint solutions and responses to the growing international challenges. In this regard the Atlantic Centre may adopt a multi-dimensional approach based on a broad concept of Defence tailored to address today’s wide-scale threats. This concept goes beyond the defence of the territory and the physical

infrastructures, and covers other dimensions ranging from geoeconomy to the climatic system, from the desertification to the protection of the eco-systems and biodiversity and covering also the digital space and the cyber threats.

The project of the Atlantic Center is progressing well and the first steps have been successfully implemented. The Centre will play a key role in cementing the cooperation of the Atlantic nations in order to guarantee the security of trade and energy flows in the ocean, fight piracy attacks and terrorist actions, build cooperative platforms to defend the Economic Exclusive Zones, ensure capabilities to exploit ocean resources in a sustainable way, monitor sea and space using all the potential of modern technologies and sensors, and also building scientific collaborative platforms and digital data bases in order to study and understand the ocean. This will help to fight ocean pollution and acidification, to protect the eco-systems and biodiversity, to minimize the effects of sea rise and to use smart sensors to design mechanisms of protection against storms, hurricanes and other extreme climatic events. A Centre for Defence Capacity Building in the Atlantic, encompassing geopolitical and diplomatic action and concertation, geoeconomical cooperation, environmental defence of the ocean and climatic mitigation sound programs, is a challenging but also fascinating path to move forward this excellent initiative. The success of the Atlantic Centre will be the success of the Atlantic nations in an increasing complex and uncertain international landscape.

Programme of the Second Seminar of the Atlantic Centre

09:00 – Opening Session:

Prof. Helena Carreiras, Director of the National Defence Institute
LtGen Manuel Rafael Martins, Commander of the Military University Institute
BGen Nuno Lemos Pires, Interim Coordinator of the Atlantic Centre
João Gomes Cravinho, Portuguese Minister of National Defence

09:45 – Keynote Session:

António Costa Silva, Chairman of the Senior Management Committee of Partex

10:45 – First Working Session: Good practices and lessons learned from crisis management

14:30 – Second Working Session: Operational responses to crises

17:00 – Closing Session:

Prof. Helena Carreiras, Director of the National Defence Institute
BGen Nuno Lemos Pires, Interim Coordinator of the Atlantic Centre

Concept Paper for the Second Seminar of the Atlantic Centre

In the aftermath of the 1st seminar of the Atlantic Centre (AC) held on November 21, 2019, the organization of a follow-up event stands as an opportunity to deepen key research lines and reinforce the conceptual grounds to guide future activities. This second seminar will bring together once more experts and policymakers working directly on the Atlantic, with the explicit aim of consolidating the relevance of the AC as an aggregating platform for discussions over different security dimensions in the region.

The seminar will assess recent international developments, as well as pressing interests from countries that make up the Atlantic and multilateral organizations that operate within. Hence, it will be structured around one overarching theme: Multidimensional responses to complex emergencies in the Atlantic. Work proceedings will be dedicated to exploring the ramifications of composite crises, as well as the multifaceted roles contemporary Armed Forces can take upon in this regard, with a particular interest on how Space-related capabilities can assist in developing effective responses.

Given the latent implications of the COVID-19 pandemic, it is increasingly topical to explore how existing political frameworks and defence capabilities suffice to tackle events of this scope and magnitude, both in the Atlantic and beyond. Yet, even though public health issues are currently a top priority, crises of the sort can also easily emerge due to cybersecurity issues, natural disasters resulting from climate change, illegal extraction of resources, or the violation of national sovereign limits, to name the most significant. The response to these complex scenarios requires solutions that recur to innovative data and make use of multiple available resources in an integrated approach. That includes those often associated with traditional defence capabilities, but also those emanating from civil protection structures, technological production and development, including Space-related capabilities.

In order to properly address this thematic, the first session of the seminar will concentrate on mapping a set of good practices and lessons learned that have emerged as a sub-product from varied crises affecting the Atlantic. The second session will then be centered on specific tools to both prevent and mitigate the potential effects of future crises.

The first session will focus on the following sub-topics:

- The provision of emergency humanitarian aid in the Atlantic
- Inter-regional coordination for the design, planning and execution of contingency measures
- Armed Forces and military health cooperation within broader Atlantic defence cooperation initiatives
- Integration of military and civilian resources in rapid reaction mechanisms, policies and activities

We look forward to receiving contributions that address the relevance of these concerns, while highlighting how the AC might contribute on its own to further expand

their discussion. We also expect insights on how these issues are currently perceived from distinct geographical points of view within the Atlantic itself.

For the second session, we aim to center the debate on possible operational remedies. The severity of crises tends to increase in proportion to the lack of reliable and detailed information, which ought to be, in turn, quickly shared across those most affected and those with the means to prevent them. Space, in particular, has emerged as a cutting-edge domain, holding significant untapped applications for crises management and mitigation. Portugal has been especially active in this regard as of recently, by promoting a multinational approach that gathers perspectives from all spectrums of the Atlantic. This might prove particularly advantageous for the role of the AC in fostering a new understanding over the application of Space-related capabilities in emergency contexts.

The second session will focus on the following topics:

- Exchange of information generated by the construction and operation of space infrastructures (e.g. mini, micro and nanosatellites, space ports)
- Scientific research, environmental conservation, tracking of extreme weather phenomena through space technology
- Monitoring of illicit activities in the Atlantic through space

This session will gather experts from countries, international organizations and industry. We value the perspectives of different stakeholders on how space technology can become an effective tool to be used in the context of multifaceted crises, and how the AC can provide further stimuli to this discussion.

The structure and organization of the seminar will follow the molds of the previous event, and will be based on two working sessions in a round table format, where guests will be invited to briefly present their specific contribution to the debate, followed by an exchange of views and discussion among all participants.

Address by Professor Helena Carreiras, Director of the National Defence Institute

Your Excellency, Prof. João Gomes Cravinho, Minister of National Defence of Portugal,

Lieutenant-General Rafael Martins, Commander of the Military University Institute

Brigadier-General Nuno Lemos Pires, Interim Coordinator of the Atlantic Centre
Prof. António Costa Silva, Chairman of the Senior Management Committee of Partex

Admiral António Silva Ribeiro, Chief of the General Staff of the Armed Forces

Admiral António Mendes Calado, Chief of Staff of the Navy

Lieutenant-General Rui Pereira, Vice-Chief of Staff of the Army

General Joaquim Borrego, Chief of Staff of the Air Force

Dr. Marcos Perestrello, President of the National Defence Commission of the Parliament

Distinguished guests and invited speakers

On behalf of the National Defence Institute, allow me to welcome you all to the 2nd Seminar of the Atlantic Centre.

This initiative comes on the footsteps of the 1st Seminar, which also took place here at the National Defence Institute in October 2019. Unlike last year, however, we come together today under different circumstances. The changes brought around by the COVID-19 pandemic have forced us to adapt and adjust to a new reality, while still ensuring that we continue on fulfilling our mission and responsibilities nonetheless. In that sense, the hybrid format of today's event attests not only to such evolving circumstances but also to our common drive in proceeding with what we know best, namely, with gathering and fostering this kind of discussions on pressing topics with security-related impacts and far-reaching ramifications.

It is with great pleasure that I acknowledge all those in attendance here today, following every recommended public health guideline, but also those watching this opening session remotely, hopefully from the four corners of the Atlantic, through IDN's YouTube channel.

The seminar itself provides an accurate reflection of the predicaments associated to our current context. Its overarching theme, "Multidimensional responses to complex emergencies in the Atlantic", not only encapsulates some of the most pressing challenges facing the world and the region at this moment in time, but it also already points to some possible roads ahead that we might choose to pursue. Indeed, threats, both old and

new, remain as relevant and worrisome as before, if not even more heightened or made more complex by the pace and gravity of the global pandemic. But at the same time, the invariable need for stability and well-being of populations requires, more and more, that we cast aside preconceived notions or taboos and take upon a truly holistic approach, bringing shared problems to the table and confronting them heads-on.

The need for such an approach stands out as particularly relevant in the context of the Atlantic space. 66 states that can come together but have been reluctant to do so, might just require the right tools in order to reach more lasting and effective solutions. In other words, the necessity of a platform such as the one the Atlantic Centre aims to become, comes across as both inevitable and uncontroverted. Hence, the reason why this seminar today will dwell on recent international developments inasmuch as it will explore the interests from countries that make up the Atlantic and multilateral organizations that operate within. To this effect, we will hear from experts, policymakers and practitioners working directly on the Atlantic, focusing on either the multifaceted roles that contemporary Armed Forces have assumed in emergency situations, or on how Space-related capabilities can assist in developing effective responses to complex crises.

A final word goes to the role of IDN itself, where I want to thank our support dream team and in particular, Prof. Pedro Seabra for is invaluable support in helping to organize this important seminar. Since the early inception of the Atlantic Centre, IDN has been very closely associated with the vision set out for what the Centre should be and what it wants to turn into in the very near future. And much like last year's first seminar, IDN is honoured to serve once again as host for this initiative, but also to remain an equal institutional partner in the further rollout of its activities. The work that we are able to promote and advance together through such platforms as the one that the Atlantic Centre provides, will certainly generate much valuable food for thought, and will stand out as a worthy contribution to achieve a more effective cooperative security framework in the Atlantic, for all in the Atlantic. This requires, from all of us, commitment, trust and effective involvement.

Once more, I welcome you and I wish you a very productive working day.

Address by Lieutenant-General Manuel Rafael Martins, Commander of the Military University Institute

Excellency, Minister of National Defence,

Excellency, Portuguese Armed Forces Chief of Staff,

Excellency, Portuguese Navy Chief of Staff,

Your Excellency, Portuguese Air Force Chief of Staff,

Distinguished, Portuguese Army Deputy Chief of Staff,

Distinguished, General Secretary of the Ministry of National Defence,

Distinguished, General Director of National Defence Policy,

Distinguished, General Director of National Defence Resources,

Distinguished, Director of the National Defence Institute, thank you for the great support

Distinguished, Acting Coordinator of the Atlantic Centre,

Ladies and Gentlemen,

Honorable Minister, I would like to start by expressing gratitude and honor for the invitation to participate in the Opening Session of the Second Seminar of the Atlantic Centre.

This invitation represents the recognition of the important role that the Military University Institute plays in the creation of Atlantic Centre, as a contributor to its intent:

- promoting dialogue, gathering information, updating and sharing scientific knowledge, developing or reinforcing cooperation mechanisms for a better collective future, preserving peace, protecting the environment, and promoting sustainable development.

Considering the Atlantic Centre as an essential platform for discussion over different security dimensions in the region, and the theme of this seminar “Multidimensional responses to complex emergencies in the Atlantic”, it is essential to bear in mind some definitions.

Starting with Emergency as a sudden condition of danger that requires an immediate response or reaction, added by complexity, referring to the condition with multiple additional, and often intractable, demographic, environmental, economic, and social instabilities.

The term ‘complex emergency,’ though, has no clear definition...but certainly comprehend crises resulting from a combination of instabilities interacting with each other.

And there is clear evidence that complex emergency situations are increasing worldwide, as conflicts become persistent and widespread, demographic patterns across the developing world change, income inequality deepens, and the poorest are subject to increased hazards due to climate change...

Coastal Atlantic nations are not immune to complex emergency situations! Diverse, interconnected, open, and exposed, they share and explore common resources, have mutual interests, live in a delicate balance, occasionally approaching, frequently facing crisis and conflict thresholds.

Mainly based on strong and consistent scientific knowledge, the global community will be able to foresee, prepare, identify, commit and coordinate response mechanisms to tackle extreme events and complex emergency situations anywhere and anytime.

Why the Atlantic Centre in Portugal?

Portugal is, by geography, past, present, and as far as we can predict, for the foreseeable future, an Atlantic nation.

For centuries, they have developed a deep knowledge and solid historical relations with all countries and communities across the Atlantic, North and South, East and West.

Their main strategic area of interest is located in the Atlantic, where Portugal has one of the largest Economic Exclusive Zones, and expects to extend its jurisdiction of the continental shelf even beyond, with an area equivalent to the size of Europe.

The importance of the Atlantic.

We must all be aware of the increased responsibility in protecting and preserving natural resources for the future generations, developing sustainable strategies and sharing common interests, with the sea emerging as an incontestable global common, and the Atlantic Ocean as a central domain for understanding and facing the challenges of security and defence among and beyond the Atlantic States.

From a geographical perspective, the Atlantic Ocean encompasses more than 86 million square kilometers, about one quarter of the earth's surface, covering 65 countries. In such a vast area, we can find communities that share values such as, democracy and free trade, coexist with different political, economic, social and cultural traditions, communities with increasing factors of interdependence.

In the Atlantic space, we still find different levels of economic development, institutional stability, security, ideologies and religions. We all know that a secure maritime environment across the Atlantic has positive local regional and worldwide impact, and to preserve this condition requires continuous coordination and effort. Security and Defence is just a part of that, a full-time job, a permanent effort of fundamental importance.

We understand the existence of the Atlantic Centre, as a multinational centre devoted on the defence and capacity building in the Atlantic, that will allow States, regional and international organizations, to collect process and share information for the common cause of social and economic development, in a sustainable way. This Centre will enhance on the gathering of information, from experts and policymakers working on different dimensions of security, in order to provide more consistent and updated information.

The rich and strong Atlantic heterogeneity is one of the main characteristics of this hydrographic basin, in which lies the challenge and emergence of finding common solutions, namely for global problems, such as climate change and the sharp decrease in biodiversity.

The Centre may address phenomena such as desertification, the gradual destruction of forests, acidification and rising sea levels, and its impact on poverty, violence and insecurity, with potential to spread to several countries, regardless of their status.

Also, the so-called “Failed States” and the convergence between transnational criminal organizations are powerful and sophisticated phenomena, requiring collective approach and effort, to expand and share knowledge, understand and prevent the factors that determine their emergence, reducing inequality, migration, conflict and religious radicalism.

The Portuguese Armed Forces and the Military University Institute have a very relevant portfolio and experience in Security and Defence, Strategy and Cooperation within the Atlantic area. Over the years we have been constantly monitoring these issues, through debate and discussion of ideas, translated into lectures, conferences and numerous papers and research activities. With multiple accelerated and complex changes, new studies and permanent monitoring are required to prevent conflicts and increase sustainable development.

Military higher education schools, in their most advanced and specialized courses, generate important research output from the study of crisis and conflicts, within the field of military sciences. The Atlantic Centre is, and will become a more relevant platform for our researchers and specialists to develop and share their ideas, and to point out new reference frames in this very diverse and challenging context.

Within the scope of Cooperation in Defence Domains with Portuguese spoken countries, located in the South Atlantic, the Military University Institute provides advice and teaching assistance and hosts the Centre for Strategic Analysis of the Community of Portuguese Speaking Countries.

The decades of increasing economic development and geopolitical relevance of the Pacific Ocean will not reduce the relevance of the Atlantic. The centrality of the Atlantic will continue decisive for the response to the main challenges of the mankind in the near future.

We believe the Atlantic Centre has enormous potential to generate knowledge, confidence, and sense of belonging to a common project with many opportunities for cooperation.

Finally, I believe that responding to complex emergencies in the Atlantic was an excellent subject of choice, allowing all participants the exercise of focusing on the most probable, or even the unthinkable scenarios that may require a rapid community mobilization effort as a whole. It is an opportunity to meet, share, decide, coordinate and act.

I wish this meeting to be a very profitable and important step for the success of the Atlantic Centre in its auspicious mission to make the Atlantic a more secure and prosperous sea.

Thank you for your attention.

Address by Brigadier-General Nuno Lemos Pires, Interim Coordinator of the Atlantic Centre

Your Excellency, Minister of National Defence, Professor João Gomes Cravinho,
Your Excellency, Chief of the Armed Forces General Staff, Admiral Silva Ribeiro,
Chiefs of Staff of the Navy, Air Force and Vice Chief of Staff of the Army,
Secretary General of the Ministry of Defence, Defence Policy Director, Defence Resources Director,
Professor António Costa Silva distinguished Keynote Speaker,
Honourable members of the parliament,
Ambassadors,
Professor Helena Carreiras (Director of IDN) and General Rafael Martins (Commander of IUM),
Distinguished speakers, guests,
Friends of the Atlantic Centre,

Let me recall Netflix's '*David Attenborough: A Life on Our Planet*' considered as one of "The Most Important Documentary Of The Year" (have you seen it? mandatory in my humble opinion) is a good example of what the Atlantic Centre can do in the near future:

- The first half of the documentary maps our planet and foresees different, possible, probable, and even, terrible scenarios for the mankind but;
- The second half is all about solutions and, above all, a clear demonstration what a cooperative approach, built in by science, dedication and innovation, can really transform everything into a better and resilient future.

The Atlantic Centre, I strongly believe, is indeed needed because, as Attenborough demonstrated, this vast ocean claims an integrated, scientific, "whole of the Atlantic approach", done with a long-lasting determination and inclusive participation from all of us; More than the three tiers, in which we ground our activity, we need to build a north-south, east-west, inclusive platform do determine our common future;

What are we doing at the AC? We have not stopped. Even with COVID-19 pandemic, we are on the move.

The **First Seminar** of the Atlantic Centre took place on November 21, 2019 and its objectives were to deepen the joint knowledge of the challenges for the Atlantic, with focus on the Gulf of Guinea and to consolidate the concept for the Centre. It counted with the participation of about 30 experts from Atlantic States of Africa, North and South America and Europe. Portugal started the AC as a joint venture open to all Atlantic States willing to join and play an active role in setting its agenda. This was the spirit

behind the first international seminar. We asked: “Do we need an Atlantic Centre?”. For all of us was very good to hear an overwhelming response saying YES!

Because as geopolitical and strategic competition is rising in the Atlantic, the AC can be a trigger to get finally the so much needed coordination between the north and the south.

We can join everything as one. 66 nations that border the Atlantic and at the same time ensuring that all different International Organisations, Regional Organisations and non-governmental organisations can, and are welcome in, to cooperate, discuss and openly benefit for all.

Despite the current pandemic, we continued our activities and organized this **Second Seminar**, here in Lisbon, at IDN facilities, under the theme “Multidimensional responses to complex emergencies in the Atlantic”. It will reflect recent international developments, as well as the pressing interests of the countries and organizations that make up the Atlantic. Given the latent implications of the COVID-19 pandemic, it is increasingly important to explore how existing defence capabilities are sufficient to tackle events of this scope and magnitude in the Atlantic space.

As I said, we have not stopped. Many **publications** are already available online for everybody that wishes to see them.

The first and most important of all, published in “*IDN Cadernos*” in a digital format, dedicated to the First Seminar of the Atlantic Centre, aimed to make public the valuable contributions collected during the event - the initial high point of this collaborative effort. Throughout those pages, we gain insight into the vast set of ideas regarding the scope and ambition of this Centre shared by experts and policymakers across the Atlantic, as well as the Portuguese vision for the Atlantic Centre.

Five **Policy Briefs** are published:

1. “*The role of a Centre for Peace and Security to combat violent extremism in the countries on the Atlantic coast of Africa*” by Andreas Velthuisen, University of South Africa, as an output of the discussions held at the first Seminar of the Atlantic Centre.
2. “*The Enabling Power of the Oceans and the Atlantic Centre for Defence Capacity Building*”, by Antonio Ruy De Almeida Silva, from the Political and Strategic Studies Centre of the Brazilian Navy.
3. “*The geostrategic position of the Azores Archipelago and the current space race Opportunities for Portugal*”, by Pedro Miguel da Silva Costa, Officer of the Portuguese Air Force and member of the teaching staff at the Military University Institute.
4. “*Maritime Piracy in the Gulf of Guinea*”, by the Portuguese Navy Captain, Henrique Portela Guedes, former IDN advisor and new Portuguese Defence Attaché in Berlin.
5. Published today, “*A vision for the Atlantic Centre: Building up resilience and cooperative security for a more secure ocean for all*”, co-authored by me, Professor Licínia Simão and Professor Bruno Reis.

About the **infrastructures**, the Centre will be based in the Portuguese island of Terceira, in the Azores, right at the heart of the North Atlantic. The facilities under

construction, located at the Portuguese Air Base 4, are expected to be ready for occupation by 2022. In the meantime, the Atlantic Centre is operating from Lisbon, hosted at the Ministry of National Defence and at the Military University Institute (IUM). Many of you had already the chance to see the video of how the AC venue in the Azores will be like. The video is available online at the AC webpage.

Regarding **training and education**, the first Training Course, scheduled for the beginning of May 2019 in the Azores and dedicated to Maritime Security in the Gulf of Guinea, was postponed due to the pandemic. We are now planning to hold it in between 11 and 14 May 2021, in Azores, for which we would naturally like to count with a large number of participants. Other training opportunities could be sought, namely online, in order to circumvent the limitations of travelling during the pandemic. We will be looking for good opportunities in this regard.

Most important and essential is the **Legal** issues. We are now working with more than 15 “like-minded” Atlantic nations on a Memorandum of Understanding (**MoU**) intended to establish a platform for cooperation in international relations focused on security issues of the Atlantic. We hope that these and hopefully other Atlantic nations will sign this MoU during a ceremony on the first course in Terceira Island (Azores) in May 2021.

This is the basis upon which cooperation can be developed and duly firm by the institutions we represent. Moreover, that will be the basis of the founding charter for the AC and for partners’ commitments.

Our Way Ahead. The expected and natural evolution of the Atlantic Centre is to become an International Organisation. One of the primary tasks of the countries that sign the Memorandum of Understanding is the preparation and negotiation of the AC International Letter.

The Atlantic Centre can gradually become, if a significant number of Atlantic States joins, and as many IOs and Regional Organisations wish to do as well, an important voice in addressing the most pressing shared security concerns that affect the whole of the Atlantic region. This is the vision that has animated our efforts and that has gradually brought others to share them with us.

The AC is on the move. Thank you so much!

Address by His Excellency the Minister of National Defence of Portugal, João Gomes Cravinho

Dear friends of the Atlantic Centre,

It is a great pleasure to host you again here at the National Defence Institute for the Second Seminar of our Atlantic Centre. When I look back at last year's event, which kickstarted this journey, I am very conscious of how important those discussions and reflections were for the process that is now underway.

The Atlantic Centre has been steadily developing under the leadership of its interim coordinator, Brigadier General Lemos Pires, whom I would like to thank, and with the support of a growing number of entities, both from within the Portuguese MoD, and from the Portuguese Ministry of Foreign Affairs, as well as other international partners who have constantly conveyed to us how relevant they believe this Centre to be.

I want to publicly acknowledge all the energy and enthusiasm that all of you have dedicated to the project, and I am very proud of this initial year of the Atlantic Centre, despite all the difficulties, not least the pandemic. We are still in the process of developing the final shape and form of this Centre, but there are several aspects we all have come to agree on.

The first is that the Centre is open to the participation of all Atlantic Countries. It deals with the security and defence issues that partners agree to, and will not have a closed agenda set by one country or one region.

Naturally, on our side there are various specific issues we see as a priority, namely those related to maritime security in the Gulf of Guinea, the control of illegal and criminal activities that foster instability across Africa, Europe and the Americas, including in the digital sphere, and the promotion of cooperative dialogue and cooperative action in managing growing global geopolitical rivalry and its impact in the Atlantic, to name the most urgent ones. From my experience, these are priorities that many other partners also share and they can be the basis for a shared understanding of how best to work together for a more resilient and secure Atlantic, the basis for greater development and prosperity for all in this great ocean.

This seminar will focus on understanding complex emergencies in the Atlantic, and on sharing best practices in responding to this pandemic. This is a timely and necessary topic and one that we hope can assist all of us in having more agile and adequate responses, not just in sharing lessons learned in responding to the pandemic of COVID-19, but also in dealing with other complex emergencies in the future. In an age of climate change, that has made extreme weather events more frequent and more deadly, often particularly affecting coastal areas, it makes sense to address this challenge in the specific context of the Atlantic.

The second aspect that is increasingly clear about the Atlantic Centre is that there are benefits in developing it as an International institution, providing it with a simple but effective management structure, dedicated to specific areas of work.

The Portuguese government has been working on a Memorandum of Understanding to be signed with those states that are interested in deepening cooperation in security and defence issues of the Atlantic. We expect this text to be agreed upon and to form a consensual basis in the coming months, so that we can officially present the Centre in the Azores Islands next Spring, with a common political statement about its ambition and central activities.

Portugal hopes that our partners will each bring along their own connections to relevant regional organizations from different areas of the Atlantic that can in turn become active contributors to the workings of the Atlantic Centre. We shall be doing this with the European Union.

The third aspect, which resulted from last year's seminar, is the division of the Centre's activities in three tiers. You have heard and read about this, I'm sure. What I would like to highlight is that, having a Centre that focuses on developing a wide-ranging and frank strategic dialogue on security and defence in the Atlantic is the right way to identify areas of shared concern and common cooperative action. Having a Centre dedicated to being a platform for political dialogue across the Atlantic is also a major contribution to combating and overcoming misperceptions.

And finally, having a centre that focuses on training and capacity building in the field of defence, means creating a structure that goes to the heart of what most independent analyses highlight as vital needs for the greater security of this region: political dialogue, shared threat and risk assessments, and capacity building to ensure effective sovereignty in land and at sea.

Ladies and Gentlemen, dear friends,

We are aware that some may still have questions regarding the relevance of investing time and resources in this project. Also, some may wonder about whether it can be a forum that is open to the different historical experiences and geo-strategic concerns of the Atlantic countries.

We feel that we are in a good position to address these concerns. Portugal is a Euro-Atlantic country, and our priority is in promoting peace and prosperity in the North Atlantic region. This is not new. And our commitment to developing sound partnerships with African and Latin American countries is also not new and has been an enduring priority of our foreign and security policy.

Of course, we are not a great power, and there are limits to what we can do to address the needs of this vast area. But this also means we can be effective promoters of this dialogue between partners in the South and in the North.

We believe that the United Nations has, in our view, the central role in international collective security, with the objective of peaceful settlement of disputes, and in the projection of peacekeeping missions where relevant, and this is the case in several countries of the African continent. This is very clear both in the UN Charter, and in the Portuguese Constitution.

We currently have important contributions to United Nations and European Union missions in Mali and in the Central African Republic, as many of you may know. But no

less important is our naval presence in the Gulf of Guinea and in the Indian Ocean off the coast of Somalia. We are equally committed to maritime security in the Mediterranean, and we have supported the peace process in Colombia. We have invested our energy in promoting dialogue and engagement within the Iberian-American community as well as the G7++ format in the Gulf of Guinea as well with the African Union and other regional and sub-regional organisations.

So I am proud of our track record and our commitment to cooperative security, and I am certain that many of you value that approach, particularly at a time when competition and lack of trust are making so many parts of our world unstable and riddled with violence. This is not the scenario we desire for the Atlantic and we are committed to being a force for peace and security in the region.

The Atlantic Centre represents an opportunity to build a more inclusive Atlantic security community. Having people working together from different backgrounds is an investment in networks of contacts that will produce more informed and more knowledgeable leaders in the field of security and defence in the future. Investing in the strengthening of state structures, and training military and civilian officers to exercise sovereignty in a responsible way, is a means of ensuring that illicit activities are tackled jointly, limiting their impact on our societies and economies.

Addressing the likely impacts of climate change or human-made catastrophes, and developing humanitarian responses is an ethical requirement we must recognise and prepare for. It is my sincere hope that this venue and this new platform can prove to be useful in that ambition.

We are hoping this pandemic will allow us to resume our plans to have a first training course in the Azores, in the Spring, dealing with maritime security, as planned, and hope to see you there at that time. But one thing that we can consider to be a beneficial by-product of this terrible pandemic, is that it has illustrated the way that in our interconnected world, we face more and more global risks and threats. Effective responses require national resilience, but they also require regional and global cooperation.

I wish you a fruitful day of work, and I look forward to hearing the conclusions.

Thank you very much.

Working Session 1

**Good practices and lessons learned
from crisis management**

Report WS1

Pedro Seabra

National Defence Institute

The first Working Session concentrated on mapping good practices and lessons learned that have emerged as a sub-product from varied crises affecting the whole of the Atlantic region. A set of operative questions was brought forward beforehand with the aim of guiding contributions and instilling a debate between speakers and participants, including:

1. How to improve the role of the military in the provision of emergency humanitarian aid in the Atlantic?
2. How to improve inter-regional coordination for the design, planning and execution of contingency measures?
3. How have Armed Forces fared in terms of military health cooperation within broader Atlantic defence cooperation initiatives?
4. How to best integrate military and civilian resources in rapid reaction mechanisms, policies and activities?

These propositions were explored with an explicit focus on the Atlantic, consensually perceived as a space vital for the maintenance of existing democratic-liberal frameworks. Its strategic value becomes further evident when attending to several security-related dimensions, such as the fight against a variety of traffics (e.g. human, drugs), piracy and illegal, unreported and unregulated (IUU) fishing; the existence of vast energetic resources; extensive regional food security implications; or the considerable maritime strategic routs that pass through it. Multiple international and regional institutions also characterize this space and have provided occasional piece-meal solutions. However, given the difficulties in tackling all these domains in a wholesome format, decisive actions invariably require a more cooperative approach.

In this context, presentations and discussions in this Working Session focused on four issue areas: 1) the evolving nature of crises and their respective responses; 2) opportunities for more Civ-Mil cooperation whenever such situations arise; 3) the need for inter-regional cooperation in order to provide more comprehensive solutions; and 4) the potential roles the Atlantic Centre can assume in this regard.

1) The changing nature of crises

The first acknowledgement concerns the fact that, despite a recurrent call for standardization and uniformity between regional and international stakeholders, there is still not one single model of conduct and operations that can pre-emptively fit all potential crises; instead, each situation requires a different tailor-made response. This does not mean that the specificities of crises should stand in the way of laying the groundwork for how best to deal with their aftermath. But it does signal that the growing

complexity of emergencies can only be effectively counteracted through more preventive planning rather than through an emphasis on one-size-fits-all solutions.

A second element concerns the growingly diverse nature of crises themselves, particularly when considering the historical track-record thus far. Extreme weather events, for instance, have become more frequent and deadlier in recent decades. This, in turn, has a corresponding impact in terms of how to plan for rapid onset disasters. But global emergencies such as the one unleashed by the COVID-19 pandemic have also shifted away the focus from national capabilities alone and brought the international community more to the forefront, as the need for a more central coordination role became glaring.

A third outtake resides in accounting for how crises may travel in contemporary settings. Whether due to the sheer magnitude of disasters or the communication links provided by globalization, crises can easily affect multiple supply chains, regions, and communities throughout the globe. This generates two immediate implications: (i) the fundamentals behind what can be considered an instance of crisis need to be reconsidered as the actual range may extend well beyond the most immediate zone of impact; and (ii) concrete regional spaces such as the Atlantic may very well be affected by the fallout of a crisis originally triggered far away from its territorial limits.

Fourth, crises often bring established cooperation frameworks under stress. The case of COVID-19 is, yet again, illustrative of the shortcomings made evident at multiple levels, for example, within the European Union (EU) (e.g. competition for the purchase of emergency, sanitary, intensive care, and protection material). Overall, the pandemic has demonstrated that global interdependence does not necessarily translate into more immediate or more effective coordination, particularly when coping with crises of this scale. When all countries dwell on a common problem and, simultaneously require assistance, more collaborative efforts become essential to overcome every possible repercussion. However, those efforts should be neither presumed nor taken for granted.

2) Opportunities for more Civ-Mil cooperation

In this context of increasingly complex crises worldwide, the issue of coordinating capabilities has understandably become of the utmost importance. Previous experiences that have taken place within the Atlantic, whether addressing the dire consequences of tropical storms or earthquakes, hold valuable lessons. Having sizeable means available for rapid deployment or pursuing active cooperation with other intervening partners, for instance, has proven instrumental in achieving quick results. At the same time, the lack of previous comprehensive planning, the vastness of the Atlantic itself, or the temptation to create ad hoc/temporary inter-regional structures, has also stood in the way of major relief efforts. Recent takeaways from the response to the COVID-19 pandemic appear to point in this very same direction: operational limitations within existing institutional frameworks; lack of prior financing and stockpiling of shared capabilities; poor early warning systems; and little attention disbursed to transport capacities, have all taken a toll on what was expected to be a far more concerted and effective response.

Amidst such lessons, coordination between civilian and military actors comprises a key dimension that might assist in tackling some pre-existing debilities in international emergency responses, but which has yet to be sufficiently explored. The topic can be best unpacked if considered in terms of both challenges and opportunities.

On the first account, lingering differences between civilian and military actors ought not to be minimized and should be instead recognized heads-on. The operational integration of military and civilian resources does not represent a simple or easy task, even when the demands of complex crises become more acute. The existence of numerous actors at the national level with similar responsibilities, the recurrent intersection of mandates, and a lack of well-defined integrative frameworks, often lead to mismatched expectations over what is possible to achieve. A modicum of resistance to institutional change is therefore to be expected when pushing for further results in this domain.

This does not mean, however, that more Civ-Mil cooperation should not be actively pursued, particularly when considering that adaptation and incorporation of previous experiences comprise classic trademarks of modern military apparatuses. On the contrary, these characteristics can point to the way ahead. The extensive track-record that Armed Forces have amassed over the years (e.g. providing humanitarian emergency aid, engineering, etc.) represent promising entry-points for more intersections with civilian resources. By relying on existing planning and command structures, highly trained personnel, and multiple existing capabilities on several domains (including space and cyberspace) it is possible to entertain not only the expansion of traditional roles assigned to Armed Forces, but also to consider new venues through which to respond more rapidly and effectively to high-risk situations, in collaboration with other similarly invested actors.

Potential steps to improve coordinated and more integrated responses to crises could involve:

- mapping existing military capabilities in response to emergencies;
- encouraging an interagency line of work with civilian and military personnel working side by side;
- identifying gaps in personnel and equipment;
- providing specialized training and develop specific doctrine;
- developing joint emergency relief units and joint command structures;
- promoting inter-institutional frameworks for the sharing of Civ-Mil experiences;
- reinforcing Civ-Mil interactions within regular large-scale international exercises;
- highlighting the public assistance role of the military in transporting health supplies and helping with medical evacuations.

3) The need for more inter-regional cooperation

The existence of numerous international and regional organizations, structures, and initiatives within the Atlantic comes across as a perennial obstacle for the effective planning and execution of responses to emergency situations. Even if single nations too

often take the lead when the demand for collective leadership surfaces, improving mutual awareness and regular communication between each actor can prove decisive to foment more comprehensive solutions.

Accordingly, it is important to take stock of what is already being carried out in this regard. The EU's approach to various developments and crises in the Atlantic, for instance, needs to be fully accounted for. That includes acknowledging its multiple guidelines and strategies for both the Atlantic and the Gulf of Guinea, but also the pilot projects being put forward for the latter sub-region. On a more operational note, the role of the Military Planning and Conduct Capability (MPCC)/Civilian Planning and Conduct Capability (CPCC) as well as of DG ECHO hold particular significance for crises management and resolution. Likewise, it is worth considering how traditionally invested agencies such as the World Health Organization (WHO) and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), or unavoidable partners such as the US might also participate in a more sustained manner. The capabilities associated to AFRICOM stand out in this regard, but less visible initiatives such as the North Atlantic Coast Guard Forum can also potentially play a part.

However, a problem may emerge when other existing multilateral frameworks – created or established with a similar purpose of preserving and securing the interests of sets of coastal states – are not sufficiently taken into account in these discussions. In order for any holistic approach to be successful within the broader context of the Atlantic, it is required to first expand the awareness over similar counterparts throughout the region, that may be grounded in different historical track-records, interests and goals. That includes, for instance, the Zone of Peace and Cooperation in the South Atlantic (ZOPACAS), the South Atlantic Maritime Area (AMAS), the Yaoundé Process architecture, the G7++ FoG (Friends of the Gulf of Guinea), the Macaronesia forum and several other African regional projects.

Possible remedies to mitigate such disconnects might reside in: relying more visibly on key regional countries as privileged interlocutors between different shores; building upon the role of small island states as honest brokers in shared multilateral settings; adopting a more incremental approach, by which the focus is first disbursed to different sub-regions of the Atlantic, and only afterwards to the Atlantic as a whole; or making good use of less-security driven institutions, such as the Atlantic Ocean Research Alliance (AORA) or the Atlantic International Research (AIR) Centre, as temporary bridge-builders to better involve other sub-regions.

Regardless, intra-regional coordination will continue to stand out as a recurrent priority. When considering the current institutional ecosystem in the Atlantic, more efforts should therefore be invested in:

- sharing lessons learned from past experiences between each active organization focused on the Atlantic;
- identifying gaps or lingering problems in regional cooperation and coordination that may compromise more regular exchanges;
- improving communication channels in order to coordinate more robust responses by sub-regional and regional organizations with similar capabilities.

4) Possible roles for the Atlantic Centre

In light of the topics raised, the relevance of the Atlantic Centre as an aggregating forum comes across as further heightened. The fact that it can play a singular role in promoting increased cooperation between the two sides of the Atlantic for the benefit of all surrounding countries and, specifically, bringing together north and south Atlantic countries in one platform, was particularly acknowledged. Given the different thematic and functional possibilities in its reach, the following recommendations were brought forward concerning the Atlantic Centre's course of action:

- Focus on mapping existing cooperation and coordination mechanisms, through studies or regular reports that explore relevant situational awareness as well as the evolving geopolitical context.
- Focus on sharing lessons learned between relevant regional organizations in the wider Atlantic, with an emphasis on past and present experiences in terms of civilian-military cooperation as well as similar gaps in operational coordination.
- Focus on promoting training and exercises opportunities in terms of civil-military cooperation, so as to improve the capacity to work together in responding to complex emergencies across the Atlantic.
- Focus on establishing regular channels of communication and information exchanges with existing regional organizations, through joint projects and studies of common interest.

By promoting joint development of these activities, the Atlantic Centre would be able to make a sizeable contribution to the promotion and nurturing of an effective Atlantic cooperative environment.

Concept Notes WS1

Rudi Coninx

World Health Organization

Atlantic Centre Operational Response to Crises

Collaboration between the military and humanitarian actors have always been a topic of heated debate, at least in the humanitarian community.

The World Health Organization (WHO) policy – and the policy of most humanitarian agencies – is still guided by the 2011 IASC Global Health cluster position paper on civil-military coordination during humanitarian health action, the 2008 OCHA Civil-Military Guidelines & Reference for Complex Emergencies document and the 2018 Recommended Practices for Effective Humanitarian Civil-Military Coordination of Foreign Military Assets (FMA) in Natural and Man-Made Disasters, which set the boundaries of our collaboration – or in some cases co-existence.

The insistence of the humanitarian community to strictly apply the humanitarian principles – humanity, neutrality, impartiality, independence – in complex emergencies limits the possibilities of collaborating in complex humanitarian emergencies – areas where conflict is ongoing. In natural disasters the cooperation comes more naturally.

The current **COVID-19** pandemic, however, has offered opportunities to explore new ways of how we can work together, especially in situations that are not conflictual. And we have been in discussion with NATO's Euro-Atlantic Disaster Response Coordination Centre (EADRCC) on how to best use these military assets.

The international community is particularly interested in the logistic capacity of the military and has used it extensively, especially in the European region.

COVID19 spares no one, and as of yesterday [October 15, 2020], there were more than 38 million confirmed cases worldwide (38,394,169), and just over 1 million deaths (1,089,047). Europe and the Americas are hard hit – COVID19 is now the 5th leading cause of death in Europe – and countries take all kinds of measures to come to grips with the epidemic.

The World Health organization provides advice, based on best available evidence.

Test, test, test, said Dr Tedros, our Director-General, and countries have been heeding the call. Getting the supplies was not always easy.

But apart from providing advice, WHO has also procured and provided supplies to countries who need it.

The numbers are staggering:

- 15 million tests and 4.8 million sample collection kits have been procured by WHO and shipped to 142 countries across all regions.
- 223 million items of Personal Protection Equipment – including 180 million surgical masks – have been shipped to 116 countries.
- 42,853 oxygen concentrators have been shipped to 101 countries.

And this is where the military actors come in. A lot of countries had difficulties getting the supplies and WHO has been active in ensuring that countries who have less resources are not left out and made supplies available to them.

In order to get them there, WHO has an agreement with the World Food Program (WFP) to assure the logistics – WFP overseeing the logistics cluster in the UN system. WFP has used military planes to bring supplies to its destination.

In order to avoid the tricky question of using military assets in a conflictual situation, the use of military transport is usually limited to transport supplies from hub to hub. WHO has logistics hubs in Brindisi, Italy, and in Accra, Ghana, or Dubai in the United Arab Emirates and has recently established a hub in Addis Ababa, Ethiopia.

But there is another area where this collaboration can be expanded and that is in the area of **pandemic preparedness**.

The COVID-19 pandemic and the 2014-2016 Ebola outbreak in West Africa provided a catalyst for many countries to explore ways of engaging the military health sector for the national emergency response. The International Health Regulations (IHR, 2005) require the 196 State Parties to detect, assess, report, and respond to public health emergencies of international concern in a timely manner at all levels of government.

To ensure a more functional civil-military health collaboration in the long-term, it is critical to identify pathways for collaboration during ‘peacetime’. For this purpose, WHO has developed the ***National Collaboration Framework for the Public Health and Military Health Sectors*** to strengthen health emergency preparedness.

The document provides guidance for establishing, contributing to, and enhancing the cross-sectoral collaboration at the national level to increase core capacities for International Health Regulations.

And a last area where collaboration is strong is with the **Emergency Medical Teams** Program. WHO has set up a program to ensure minimal standards for emergency medical teams coming to the aid of victims of natural disasters. Several recognized Emergency Medical Teams have a military background and participated in relief actions. The latest example is the Beirut explosion, where several Emergency Medical Teams participated and were part of the EMT coordination cell that WHO set up with the Ministry of Health in Lebanon.

WHO looks forward to a continued collaboration with Armed Forces in the area of COVID19 support and for the support in epidemic preparedness.

Thank you

Elements for the Seminar organised by the Atlantic Centre on ‘Multidimensional responses to complex emergencies in the Atlantic’

- To begin with, I would like to express the appreciation for having invited me to this Seminar. My intervention reflects the EU’s integrated approach to various developments and crises in the Atlantic Ocean.
- Let me recall that the Atlantic is a strategic space for the EU, but also for NATO. As such, the **EU has defined an Atlantic Maritime Strategy since 2011**. Focused on the five themes defined by the European Commission – implementing the ecosystem approach, reducing Europe’s carbon footprint, sustainable exploration of the natural resources on the sea floor, responding to threats and emergencies and socially inclusive growth.
- In **2013, the Commission presented an Action Plan** to implement the Strategy and in the meantime, it has generated about 1200 new maritime projects, representing roughly 6 billion euros in investments. **This Action Plan was updated in July 2020**.
- This plan aims at strengthening the EU ability to support the economic revival given the multiple negative effects stemming from COVID-19, but also to align it with the European Green Deal. There is a strong focus on the EU Atlantic area: France, Ireland, Portugal and Spain. At the same time, the EU will continue to work with international partners, including the US, Canada, Brazil, South Africa, promoting among others maritime multilateralism.
- Turning to crises and emergencies, we have to acknowledge that the oceans and the seas bring both opportunities and risks. Some of these risks have their epicentre in the wider Atlantic area.
- The EU is at the forefront of international efforts to tackle them. For example, **is significantly involved in addressing the multiple security challenges, including for the maritime domain, which the Gulf of Guinea is experiencing**. As you may know, the Gulf of Guinea has maintained itself at the top of piracy and maritime robberies. Since 2013, the EU has been supporting the countries and the regional organisations (ECOWAS and ECCAS) to fight transnational and organised crime in the maritime domain.
- In addition, in September 2020, the EU Political and Security Committee endorsed the **Coordinated Maritime Presences Concept (CMP)** with the Gulf of Guinea as pilot project. This is a new tool that aims to strengthen maritime security awareness and promote international cooperation at sea. The EU is about to reach out to the GoG countries to start this project.
- On the other side of the ocean, we have to deal with **the trans-Atlantic cocaine route**. The EU Commission has renewed in 2018 the financing of the Maritime Analysis and Operations Centre – Narcotics (MAOC-N), based in

Lisbon, until 2021. Is also funding the Seaport Cooperation Project (SEACOP) project, in order to counter maritime illicit trafficking and associated criminal networks in Latin American, the Caribbean and Africa.

- At this point, I would like to recall that the **Atlantic Ocean Research Alliance (AORA)**, established in 2013, should continue to play a key role in sustaining prosperity and security in the Atlantic. Furthermore, **the North Atlantic Coast Guard Forum** should remain a central pillar for discussing emerging Atlantic Ocean risks, while enhancing coordination and cooperation on both shores of the Atlantic.
- At the same time, the EU is working hard to improve its own defence capabilities. Thus, under the guidance of the **European Defence Agency**, works on the OCEAN 2020 project. This project is looking to support maritime surveillance and interdiction missions at sea through successful integration of manned and unmanned air, naval surface and underwater platforms. Other EDA projects include the Naval Manoeuvrability and the Underwater Control.
- Furthermore, through the **Permanent Structured Cooperation**, the EU is seeking to build cutting-edge technologies that may also serve the security in the Atlantic. Several maritime projects are included which shows that the maritime domain is at the forefront of the PESCO joint efforts. As these capabilities become available, they will enhance EU's ability to deal with crises and enhance its profile as a maritime security provider as well.
- At this point, I conclude my intervention. Thank you again for the opportunity to interact with this distinguished audience today.

UK Military Hurricane Relief in the Caribbean

Context

The Caribbean consists of hundreds of mostly low-lying islands which, due to their position in the tropical North Atlantic, are especially vulnerable to hurricanes and other natural disasters.

The UK has a particular interest in the Caribbean as it is the ultimate guarantor of security and stability for the British Overseas Territories, six of which are in the Caribbean and North Atlantic region.

As part of a wider cross-government response, The UK military provides Humanitarian Assistance and Disaster Relief in the immediate aftermath of a hurricane in the region, in order to save lives, limit damage, and help set the conditions for recovery and follow-on support.

How does the UK military prepare?

The UK prepares first and foremost through our military posture:

- Ships of the Royal Navy and Royal Fleet Auxiliary pre-positioned in the Caribbean carrying a specialist military Disaster Response troop and helicopters, as well as hurricane-related aid from the UK Foreign Commonwealth and Development Office.
- Further forces are held at readiness to deploy from the UK should they be required.

In the months leading up to the hurricane season, UK military assets in the region conduct a series of familiarisation visits to key Caribbean nations and territories, taking part in joint exercises to ensure all elements of our hurricane response are ready. Additional COVID-19 challenges have made this particularly important this year.

What other countries and civilian organisations do we engage with?

Multilateral coordination is at the forefront of UK planning. Key allied actors include Canada, France, the Netherlands and the US, who all have territories or national interests in the Caribbean.

The primary civilian coordinating body is the Caribbean Disaster Emergency Management Agency (CDEMA), who are a regional inter-governmental agency for disaster management in the Caribbean Community. The UK's Foreign Office works closely with them to provide assistance when required, and the UK military liaise with CDEMA and other allies through the Multi-National Caribbean Coordination Cell (MNCCC) in Barbados.

The MNCCC's purpose is the sharing of information and optimising the use of ships and aircraft to deliver emergency aid to islands affected by natural disasters. It was initially

set up in Curaçao in 2017 to facilitate military coordination between France, the Netherlands and the UK. It was then augmented in Barbados in 2018 to include the US and Canada, and to facilitate civilian-military coordination with CDEMA who are co-located there.

The way ahead

All nations and coordinating agencies seek to learn lessons from each hurricane season, in order to improve the quality and timeliness of an international response. Through this process, a good variety of multilateral coordinating bodies have been created in the Caribbean, like the MNCCC. These can be activated to coordinate a response to any crisis facing the region, and they are agile enough to adapt to any niche scenarios as there is no ‘one-size fits all’ approach.

In short, the current system has converged over the years on an effective and flexible set up, with multilateral cooperation at the forefront of its design. That said, the region would undoubtedly welcome any wider international contributions to a future disaster response, which could link in with coordination cells already established there, such as CDEMA or the MNCCC.

Said Iziki and Marouane Gziri

Royal Armed Forces of Morocco

It is a great pleasure to participate in this meeting organized by the Atlantic Centre to discuss subjects which concern us all and which concern the space we share together.

I would like to thank our Portuguese friends for inviting our country to take part in this event which will not only be an opportunity for all of us to exchange our knowledge, to draw lessons, but also an opportunity to further strengthen our friendships and sharing of knowledge and experience.

My intervention will deal with two main axes:

- The challenges we face in our region.
- The tools to face these challenges.

Regarding the first part, we all know that the sea is a free space and constitutes a bridge between many nations. It is therefore a space of trafficking and all kinds of threats that countries are trying to thwart. To name only illegal immigration, illicit traffic, marine pollution, incidents at sea...

It is a space that we have not been able to tame due to the changing weather conditions. Although we are improving our maritime resources, the risks of a series of seas can cause us a great deal of material and human damage.

Finally, and to be limited to these points, the sea is full of wealth, which is sometimes badly overexploited or anarchically exploited, making the marine environment a space to be protected against abuse.

Faced with these challenges, and the limitations presented by conventional means, such as ships or aircraft, one of the most promising solutions for monitoring marine space is the use of special technology.

So, we can use satellites to extend our means of communication and use the images provided by satellites as sources of information to find out what is happening in this immense and sometimes dark environment. By continuously monitoring weather conditions, we can, after analysis, anticipate our actions in time and space. For example, through appropriate computer processing we can locate pollution slicks, follow suspicious traffic, learn about maritime traffic or have precise weather forecasts that would help us plan the deployment of our units.

To conclude my intervention, I would point out that this technology is not within everyone's reach, especially for countries which are in the process of developing. Mechanisms should therefore be found to optimize the use of these means and make them available to countries, which do not have the means to obtain them directly, in a spirit of cooperation and exchange of knowledge. Because in the end, the marine space brings everyone together, a problem near a country can easily be transmitted to the neighboring country, like an oil slick, which at sea evolves with the wind and can reach that country or another.

A secure and stable Africa is essential for the European Union and America's security

I am honored and privileged with the invitation to take part in this Atlantic Centre Seminar.

I have had the privilege of commanding one of the EU missions in Africa – the European Union Training Mission in Central African Republic (EUTM RCA) for eighteen months and successively I took over the responsibility of the Military Planning and Conduct Capability (MPCC) Deputy Director and Chief of Staff, approximately one year ago.

MPCC is, along with the European Union Military Staff (EUMS), one of the military structures of the EU Institutions.

MPCC is a static command based in Brussels, currently responsible at Strategic Level for the operational planning and conduct of EU non-executive military missions, working under the political control and strategic guidance of the Political and Security Committee (PSC). MPCC works in parallel and in close coordination with the Civilian Planning and Conduct Capability (CPCC) increasing the Civ-Mil cooperation in Africa, in support of CSDP civilian and military missions and operations in the same or adjacent geographic areas. MPCC is the first Military-Strategic level Command structure under evaluation in EU, which currently takes place throughout the Integrated Resolve 2020 Exercise. The objective to achieve at this stage is to declare that the MPCC is capable of planning and conduct one executive operation Battle Group size and up to five non-executive military missions at same time. This evaluation will lead to the MPCC review, a process that must be concluded by the end of this year with a Council decision to further continue the MPCC implementation.

While assuming the responsibility of OHQ for IR 20, at the same time MPCC has been engaged in reviewing the mandates and conducting the three EU Missions in Africa (EUTM Mali; EUTM CAR and EUTM Somalia), dealing with the COVID-19 contingency and managing the consequences of the Coup in Mali.

Nobody was prepared to face the crisis situation created by the pandemics. However, at this moment we can say that most of the issues that surfaced during the COVID-19 pandemics have been identified and mitigated. After the outbreak our Missions suspended some training activities, reduced staff numbers and took measures to continue operations while protecting personnel. The missions provided some support to the Host Nations to face the pandemics. Our missions are now at pre-COVID strengths after a planned and coordinated redeployment supported by the Member States.

Three main issues have been identified: (i) Duty of care; (ii) Civ-Mil Cooperation and (iii) Secure Communications. Duty of care was granted by the necessary Health capacities on the ground and Strategic Aero Medical Evacuation under the responsibility of the

Member States. The measures were effective for COVID and also ensuring Missions and local alternatives. Civ-Mil cooperation has functioned well through coordination locally between the Civilian and the Military Missions and at Brussels level between the CPCC and MPCC. The developed solutions that can be transferred into structured procedures are being identified. Investments in secured communications, equipment and networks are being sourced in order to improve the resilience of C2 structures including the Missions. But this crisis is not solved. Our troops continue to operate under COVID-19 environments, training, educating and advising the Armed Forces in different parts of Africa.

For MPCC, Africa is our main priority, as it is for the Union. Africa has also a very important place in the US National Security, Defense, and Military Strategies, justifying a dedicated command – the AFRICOM, with which there is an excellent cooperation towards our common goal.

Cooperation with our North American partners extends from the Horn of Africa to the Sahel and Central Africa and we hope to increase this cooperation in the near future. Cooperation with our South American partners has also become increasingly important, as is the case with the participation of Brazilian military personnel in the Portuguese contingent in the EUTM in Central African Republic.

My point is simple: a secure and stable Africa is essential for the European Union and America's security. For that, a multilateral approach bringing together EU Member States, relevant EU institutions, other international partners and regional organizations, and particularly the United States is paramount. If we are not able to do so, other actors will occupy the space, with different interests and principles both in terms of economic development, peace and security. A power competition for Africa is underway. China and Russia have long recognized the strategic importance of Africa, and continue to seize opportunities to expand their influence across the continent.

The Atlantic Centre can play an important role promoting the cooperation between the two sides of the Atlantic for the best interest of our countries and the future of Africa.

I stand ready to answer questions that may have been raised as well as to share about our Missions in Africa.

At present, I am the President of the Center for Political-Strategic Studies of the Brazilian Navy (CEPE-MB), a Brazilian Navy Think Tank dedicated to Maritime Studies. Like all Think Tanks, CEPE-MB has as one of its main tasks to analyze, reflect and question institutional paradigms. For this, its activities must be developed according to academic standards and parameters, which is why my words in this Seminar, as President of CEPE-MB, reflect this academic approach and not the official position of the Brazilian Navy.

When observing the world from a point in space, it appears clearly that there is only a single ocean in GAIA, a continuous mass of water that covers approximately 70% of the surface of the globe. However, humanity has long referred to this immense and unique ocean according to maritime regions, which it calls oceans or seas, such as the Indian Ocean or Mediterranean Sea. Maritime regions that are in essence social constructs resulting from the aggregation of specific interests, whether political, economic or social, of the coastal societies, which do not necessarily obey geographical dictates, but geopolitical ones, being considered as geopolitically distinct maritime regions. A distinction that, depending on the evolution of these coastal societies' interests within a given temporal frame, may have its relevance highlighted with greater or lesser intensity or even unconsidered. The denomination of "mare nostrum" applied to the Mediterranean Sea during the Roman Empire is a good example of this circumstance.

The Atlantic Ocean is no exception to this rule. Initially seen as a unique maritime region, it developed with unusual importance and intensity the world maritime trade from the 17th to the 19th century. If it is possible to find references to the North and South Atlantic Oceans at that time, this distinction was due to geographical issues, with Ecuador as the dividing geographical mark.

However, this separation begins to acquire, from the end of the 19th century, a geopolitical approach, no longer a geographic one. The construction of the Suez and Panama channels made it possible to establish and expand strong commercial ties between the United States of America, Europe, Asia and the Middle East through these channels, rather than the traditional routes of Cape (contour of Africa) and Cape Horn (contour of South America), thus configuring a "commercial hemisphere" of which the South Atlantic was not part. "Hemisphere" that have acquired great importance, particularly after World War II, due to the political-strategic and commercial constraints of the Cold War, thus reinforcing the concept of "Transatlantic Community" invented by Walter Lippman, as early as 1917, to refer in general terms to the Atlantic Ocean region north of the Tropic of Cancer. A circumstance that accentuated the marginal role of the South Atlantic in the international arena.

The Six-Day War that led to the closure of the Suez Canal brought a renaissance to the maritime relevance of the South Atlantic Ocean, as the large ships that were built to economically compensate for the return of maritime trade along the more extensive Cape Route could no longer transit the Suez Canal after its opening. Renaissance however

that was not able to overcome the geopolitically distinction between North Atlantic and South Atlantic that remained quite striking.

This circumstance led to the creation of international institutions and organizations bringing together coastal countries of the South Atlantic aiming, based on the specific strategic aspects of this region, to develop confidence-building measures capable of fostering a cooperative environment to face threats present in that maritime region, particularly those against maritime security. To counter these threats requires a cooperative approach because, given that the oceans have no limits, boundaries or geographical features, it is not possible to face them through the action of a single actor, however powerful it may be.

Threats that intensify as discoveries of mineral reserves, namely offshore oil and gas, increase the strategic relevance of the South Atlantic. Process that has concrete implications for regional States, not only in defending their economic and commercial interests, but also in ensuring the good order of the sea, due to the significant increase of crimes against maritime security, such as pirate actions, drug traffickers and other crimes against the environmental safety of the ocean. The Gulf of Guinea region is a typical example of this perception.

Thus, the initiative of creation of the Atlantic Centre, whose focus is the approach of the Atlantic Ocean as a single basin, “The Wider Atlantic”, is remarkably interesting for drawing attention to this ocean so important for all of us that have it as “our ocean” and that, therefore, we must constantly deepen our knowledge about its importance and wealth.

By jointly promoting its activities, the Atlantic Centre, in addition to deepening our knowledge of the Atlantic, also contributes strongly to the development of an Atlantic cooperative environment.

However, in this effort, it cannot disregard the various organizations of the South Atlantic, already created or instituted for some time, whose main purpose is related to the defense and preservation of common interests of the coastal states of the South Atlantic, which are not necessarily the same than those of the North Atlantic.

Therefore, in order to better understand this cooperative environment, discuss its circumstances and get to know it in greater depth, we must consider the interests present in the various Atlantic regions, which are not necessarily identical, as well as the different needs of the member states, since a unique approach in the broader Atlantic context may not represent a solution compatible or consistent with the needs of its States.

Among these organizations, one that Brazil considers especially important, even because it has been established for a long time, is ZOPACAS, which brings together 24 countries in the South Atlantic. Its relevance to Brazil was recently highlighted in the speech of the President of the Republic of Brazil on the opening of the UN General Assembly, last September.

Another organization that should be considered in the activities to be developed by the Atlantic Center is the South Atlantic Maritime Area (AMAS), which has also been consolidated for a long time, which in addition to bringing together Argentina, Brazil, Paraguay and Uruguay has recently been strengthening ties with West African countries, particularly those involved with the Yaoundé Protocol.

There is also the Atlantic Research Centre, resulting from the Belem Declaration, whose initial paragraph reinforces the fundamental role that oceans play in the sustainable development of the economies of states and recognizes the relevance of ongoing activities by the Atlantic Ocean Research Alliance and the deepening of scientific cooperation in the North and South Atlantic and Antarctic Ocean, in addition to exploiting synergies with other similar initiatives.

Thus, we believe that the Atlantic Centre should only gain in scope and efficiency in its activities, studies and debates on the Atlantic Ocean, insofar as it recognizes the existence of all these organizations and cooperates with them, developing studies and programs of common interest.

Good practices and recommendations in response to natural disasters in the Atlantic

Background

The characteristics of natural disasters may vary significantly as they can be basically divided in two main different categories: rapid and slow onset disasters.

This paper will focus on the first category, as it requires an immediate response. However, most of this analysis will be applicable to both cases.

Rapid onset disasters should be addressed on a case-by-case basis, as they may include a diverse set of events such earthquakes, hurricanes, tsunamis, landslides, volcanic eruptions, windstorms, wildfires, typhoons, floods, and avalanches.

In certain cases, the magnitude of the natural disaster may exceed the capability of the affected state and it will require the international community to provide disaster relief assistance.

This kind of disasters and civil emergency situations are increasing in numbers and scale and they have led to more situations where military forces and civilian relief agencies are operating in the same environment. In these cases, coordination between civilian and military actors becomes essential for the success of the international emergency response.

Particularly, the vast majority of the Atlantic region countries are coastal states so in addition to be able to receive support through air assets, they can be reached by projecting humanitarian aid on naval assets across the sea.

Operation Hispaniola

The most valuable good practices and lessons learned for the Spanish Armed Forces emerged after the disaster relief operation conducted in response to the earthquake occurred in Haiti on 12 January 2010. Spain responded to appeals for humanitarian aid establishing the “Operation Hispaniola” as a Humanitarian Response Operation to an emergency situation in this country.

In this particular case, due to the limitation of the local infrastructures in Haiti, even though before the disaster, it was recommended to deploy self-sustaining assets. The decision was made to utilise a large amphibious ship as a mobile base capable to host, support and shelter the multiple capabilities required to conduct this relief operation.

However, as an immediate action, a high readiness Search and Rescue Team of the Military Emergency Unit was detached by air in order to provide immediate reaction aid to the victims. At the same time, an Operational Liaison and Reconnaissance Team was deployed as well, in order to gather all the necessary pieces of information for the planning of the operation.

It can be easily understood that the amphibious ship had to get underway well before the operation planning was totally finalised due to the long period required to cross the

Atlantic and the need to save as many lives as possible. However, the impact of the limited time at disposal for planning and force generation was mitigated by detaching some personnel and equipment by air during her oceanic transit.

Because natural disasters can have cascading effects, the following capabilities were implemented:

- **Public Health.**
It included medical care, provision of medicines and vaccination. The public health campaign was coordinated with the local authorities and with the World Health Organisation.
- **Water supply.**
Besides production of fresh water, a water bottling plant was also identified as a requirement.
- **Logistic transportation and evacuation of victims.**
Land vehicles, helicopters, and landing crafts were utilised day and night.
- **Sappers.**
Demolition and removal of debris.
- **Security and Force Protection.**

Operation figures

The overall results of the operation were as follows:

- **Immediate response:** one Search and Rescue team of 37 people.
- **Planned response:** one amphibious ship, four helicopters, two landing crafts multiple land vehicles, one medical unit, one sapper unit, one security unit. A total of 450 troops were deployed for three months.
- **Humanitarian relief services provided:** 8,246 patients received medical treatment, 21,420 people received vaccination and 611,500 liters of fresh water were delivered to the local population.

Lessons learned and good practices

Based on the experience of “Operation Hispaniola” and other humanitarian relief operations and activities conducted by the Spanish Armed Forces and in order to improve the overall effectiveness in this kind of operations, it is advisable to take into account the following recommendations:

- At the political level:
 - Receive from the host nation authorities a detailed initial description of the humanitarian needs in response to the disaster.
 - Coordinate the initial provision of capabilities amongst all donors through an international or regional organisation (ideally) or entity in the shortest time possible in order to deploy the bulk of the emergency relief assets. National Search and Rescue Teams will likely need to be detached immediately after the disaster and always prior to reach a general international agreement.

– At the planning and execution levels:

- Military activities within a disaster relief operation should always lay under civilian control.
- Consider to provide indirect support to the population through civilian organisations, clarifying whether the conditions recommend direct support. It is advisable to lead only if it is requested by the host nation or the leading international organisation.
- Early identification of the most likely areas where the military may be required to assist. This will allow both contingency and deliberate planning.
- Establish the following permanent coordination structures in order to bolster effectiveness and to avoid duplication of efforts:
 - Civil-Military coordination cell to make sure that information exchange takes place between the military with international organisations and NGOs.
 - Direct liaison with the host nation authorities (both at national and local levels), in order to deconflict activities and coordinate assistance from the host nation if needed.
 - Coordination links with other military relief contingents in the same area of operations.
 - Constantly liaise with the population and create trust and acceptance to avoid confusion over the military's role and presence in relief operations. Include women in these cells in order to establish a gender approach to operations.
- Conduct joint civil-military assessments in order to support planning and execution adequately.
- Identify the international organisations or Atlantic defence cooperation structures or initiatives that may have a role in the relief operation.
 - UN entities, funds and programs related with humanitarian assistance and disaster relief¹.
 - European Union².
 - NATO³.
 - International and regional organisations.
 - NGOs with presence in the area.
 - Clusters of organisations for specific categories of projects.
 - Other organisations.

1 These include the Office for the Coordination of Humanitarian Affairs (UN OCHA), World Food Program (WFP), the UN High Commissioner for the Refugees (UNHRC), the UN Children's Fund (UNICEF), World Health Organization (WHO), and the UN Development Program (UNDP) as well as many others.

2 European Civil Protection and Humanitarian Aid Operations (ECHO) is responsible for rapid and effective delivery of EU relief assistance in response to natural disasters.

3 Euro-Atlantic Disaster Response Coordination Centre (EADRCC) and the Euro Atlantic Disaster Response Unit (EADRU) are basic elements of the Euro-Atlantic Disaster Response Capability which contributes and supports UN entities during disaster relief operations.

- A framework of security is a key enabler of all humanitarian relief activity for civilian and military presence. In certain cases, only the international military contingents may have the ability to generate such environments.
- Do not overextend the disaster relief support beyond the available capabilities and capacities, as this may endanger the overall military mission.
- Develop an exit and transition to civilian ownership strategy as early as possible for the services that are being provided.
- From a health perspective:
 - A large and varied stock of medicines should be always available as a large consumption rate is always expected in this kind of operations.
 - Include a vaccination campaign and preventive medicine assets for the civilian population.
 - Include medical specialists and medicine spares of gynecology, obstetrics and pediatrics as these areas are expected to be some of the most hampered by any disaster situation.
 - Coordinate with other organisations or agencies in order to establish processes for the distribution of medical material.
- Establish a logistic support structure prior to the deployment of the military contingent. Whenever feasible, private logistic operators should reach the military end-users for deliveries, in order to allocate the military logistic resources to the provision of services to the local population (directly or indirectly through civilian entities).

Conclusions and Proposals

The most significant difficulties observed during the planning phase of these kind of operations are related with the lack of time to develop a comprehensive Operations Plan at the national level.

A recommended action to mitigate these difficulties at the national level is to draw up a Generic Contingency Plan in order to facilitate the drafting of an Operations Plan for a specific Humanitarian Response Operation and its proper coordination with the international relief effort.

Any national level Generic Contingency Plan should be ideally integrated within an overarching Contingency Plan at the international or regional levels, in order to maximize effectiveness, to avoid duplication of efforts and to shorten the coordination needs to trigger the real-world operation. It should include at least the following:

- Set of generic relief capacities associated with any specific type of emergency.
- Initial set of assets required to facilitate and shorten a future force generation process.
- Identify relations with international and regional organisations with responsibilities in humanitarian relief activities. It would include visibility on their regional contingency plans, if they exist.

- Integrate governmental civilian and military resources as national contributions.
- Establish a basic Command and Control structure at the regional and national levels.

The integration of military and civilian resources is not simple, even though belonging to the same country. In the case of the military, it is often easier to integrate with military from a different country as their internal organisation and procedures are usually very similar. In the case of the coordination of the military with NGOs, because the latter have an enormous diversity of structures, it is advisable to establish permanent information exchange links and to deepen this coordination only on a case-by-case basis.

On the other hand, the vastity of the Atlantic space doesn't facilitate the employment of a single organisation in order to coordinate in advance the contribution of all countries that potentially could become donors of a humanitarian relief operation.

Furthermore, it doesn't seem advisable to create brand new inter-regional disaster relief structures that will highly likely increase the complexity of any humanitarian relief planning activity. However, national and international security and defence centres and research institutions could provide a valuable contribution to the development of concepts and doctrine related to this and other matters.

In this regard, single nation coordination through the existing international and regional organisations, structures and initiatives is recommended as the most practical way for the design, planning and execution of contingency measures in response to emergency situations.

Lessons learned for response to complex emergencies post-COVID-19

Good morning to everyone here in Lisbon and to those of you linked via VTC from across the different shores of the Atlantic.

Many thanks to the organizers for inviting me. I am well aware how hard you have worked for this to be possible in these very challenging pandemic times.

This is a topic that is especially dear to me. Namely the importance of civil-military cooperation in general, and, especially, the vital role of civil-military cooperation in providing an effective response to complex emergencies. Complex emergencies like the pandemic of COVID-19 we have been facing. But also complex emergencies like the extreme weather events that have become more frequent and more deadly in recent decades, due to climate change, including massive tempests and floods to which our coastlines are especially vulnerable.

In addressing this topic, in the setting of this seminar, it is important to underline something that we are all probably well aware but is crucial: not just in the Atlantic basin but across the whole Globe more than half of the human population and more than half of the most vital economic activities are concentrated in a narrow coastal strip of 100 kilometers from our oceans.

It is therefore vital to incorporate this dimension of resilience and response to complex emergencies in a better, broader more comprehensive understanding of maritime security. We can no longer view the response to complex emergencies as an afterthought to be done ad hoc by national defence. The Armed Forces have a unique ability to function effectively in very challenging circumstances, they have uniquely robust and projectable capabilities from logistics to health.

Fortunately, the military is meant to be a learning institution. To be effective the Armed Forces must be capable of adapting to new threats and responding to new challenges. Of course, there is always resistance to change in any and all human institutions, it is often costly, demanding and creates some uncertainty. But not by accident the Armed Forces have a tradition of engaging in lessons learned exercises after an armed confrontation.

We do need to move past a traditional paradigm in which the mission of the Armed Forces was to fight big conventional wars against the Armed Forces of another State. This is no longer the case even when dealing with armed conflicts, which are increasingly irregular, unconventional. And the primary mission of the Armed Forces is not to fight other States, it is to defend the lives of its citizens and preserve the ability of institutions to function normally. We cannot ignore that complex emergencies are a growing threat in this respect and one that requires the unique expertise and capabilities of the Armed Forces in close coordination with other sectors of the State.

Fortunately, in the case of the Portuguese Armed Forces there is a long tradition, embedded in the official military doctrine, regarding the vital importance of engagement

with local populations as an indispensable component of the success of any military mission, and in doing so of helping to address some of the basic needs of the people. This is a solid basis upon which to build in terms of further developing civil-military cooperation in response to complex emergencies.

Now looking more specifically at the questions that we were asked to address they can basically be divided into two main issues:

How to improve the role of the military in the provision of emergency humanitarian aid?

- Historically the military has always been used in providing emergency relief. The massive earthquake and tsunami of 1755 that destroyed large areas of the city of Lisbon, one of the strongest in recorded history, is a good early example of this. The Portuguese military had a major role in providing relief as well as security and helping plan and implement the rebuilding of downtown Lisbon. This is a reminder of the fact that from early on the modern military has had a major contribution to make in responding to complex emergencies because of its superior planning and command structure, robustness in terms of projecting men and material, capabilities in logistics and transport, and last but not least, highly trained personnel trained to be effective in high risk situations.
- The earthquake and tsunami of 1755 also reminds us of another crucial fact, because it affected not just Portugal but also parts of Spain and Morocco. It is therefore a powerful reminder that complex emergencies due to natural disaster or to pandemics almost always affect more than one country. To try to cooperate effectively in responding to them is not just a matter of humanitarianism, but of creating transnational structures of response to transnational threats that might be in the national interest in the future.
- The use of the military in response to complex emergencies is, therefore, not a novelty. But this increasingly vital mission means that we need to systematically map relevant existing capabilities in response to emergencies across the military.
- We should identify gaps in personnel and equipment.
- We should provide specialized training and exercises as well as develop further specific doctrine.
- We should develop joint emergency relief units and joint complex emergency cells in command structure that will help to improve the effectiveness of the response and liaise with national and multilateral emergency response systems.
- We need to promote greater regional and inter-regional coordination in response to these emergencies, and this takes us to the next question raised by the organizers of the seminar.

How to improve inter-regional coordination?

- This is a major challenge but also a most promising task. If a country is especially affected by a complex emergency, the best way to provide relief is, as a rule, by resorting to help from neighboring states that can provide it more rapidly and often

- benefit from a degree of local knowledge and existing connections. This means, in our case, first the different subregions of the Atlantic, and then the Atlantic as a whole.
- It is crucial to share lessons learned, identify capabilities gaps and problems in regional cooperation mechanisms and improve the ability to request help, communicate and coordinate more robust response to complex emergencies primarily via existing sub regional and regional organizations.
 - Portugal has been a strong advocate of this in the context of NATO and the UE. This is in fact one of the priorities of the Portuguese Presidency of the European Union from January 2021.
 - We can work for these lessons to be shared more widely between the different relevant regional organizations in the wider Atlantic. We should map existing cooperation and coordination mechanisms. We should also work in creating mechanisms not just to share experiences, but also share relevant situational awareness as well as mechanism for improved dialogue, and hopefully greater coordination between these regional organizations. This could be the object of a specific study or regular reports by the Atlantic Center in the future.
 - I believe these aspects would benefit greatly from shared training and exercises, to improve our capacity to work better together in responding to complex emergencies across the whole of the Atlantic. Capacity building with this specific focus of a better contribution by the military and better civil-military cooperation in response to complex emergencies could also be a priority of the Atlantic Centre in the future.

Thank you.

EU response to the COVID-19 pandemic: good practices and preliminary lessons learnt

1. Introduction

In late 2019, a novel coronavirus (the SARS-CoV-2) caused an outbreak of a new respiratory and potentially lethal disease (COVID-19). The pandemic has triggered a major global crisis with ramifications in different areas. The European Commission has provided a comprehensive response to this major crisis from different angles (economic, border management, public health, etc.). This concept note will set focus on the crisis management aspect of the EU response, notably through the involvement of the Directorate General for Civil Protection and Humanitarian Aid operations (DG ECHO).

DG ECHO is directly responsible for the Union Civil Protection Mechanism (UCPM), a policy instrument bringing together all EU Member States and six non-EU countries, that facilitates coordination in disaster management, and which can be activated by any country in the world. During the peak of the pandemic, Member States resorted to the Union Civil Protection Mechanism (UCPM) for support, especially on to the newly emergency medical stockpiling reserve under rescEU, one of the key innovations of the UCPM reform in 2019. In addition to the UCPM, DG ECHO has also been at the forefront of the EU response to the crisis, notably in the framework of the ‘Emergency Support Instrument’ (ESI) managing the so-called ‘Mobility Package’. Through its double-hatted role, DG ECHO has also been active in providing humanitarian assistance and relief.

The Emergency Response Coordination Centre (ERCC), the 24/7 operational hub, has been at the centre of operations and has played a key role in the coordination of all DG ECHO’s activities.

2. EU civil protection across Europe

Since the beginning of the crisis, the UCPM has received 53 times requests for assistance in relation to the COVID-19 pandemic. With these unprecedented figures, the EU has been helping coordinate and finance the delivery of medical equipment and related items (protective facemasks, disinfectant and other products) across Europe and the world, to countries that have sought assistance.

In early April, for instance, European Medical Teams composed of doctors and nurses from Romania and Norway were deployed to Italy via the UCPM and coordinated by the ERCC. Moreover, through the UCPM, 17 Member States have offered more than 90,000 items of in-kind assistance to Greece, such as shelter, health and sanitation items, some of these are used to support efforts in preventing a coronavirus outbreak.

3. An emergency medical ‘safety-net’ – RescEU stockpile

On 19 March, the European Commission created a strategic rescEU capacity – a common European reserve – of emergency medical equipment, such as ventilators, protective masks, gloves and laboratory supplies to help EU countries face the coronavirus pandemic. The Commission finances 100% of the capacity (including the procurement, maintenance and the delivery costs), which is hosted by several Member States and is constantly replenished. Germany and Romania were the first Member States to host the rescEU reserve, followed by Denmark, Greece, Hungary and Sweden in September. The hosting States are responsible for procuring the equipment with the support of the Commission. The Emergency Response Coordination Centre manages the distribution of the equipment to ensure it goes where it is needed most.

On 2 June, the Commission proposed to reinforce rescEU with €2 billion over 2021-2027, to strengthen the response capabilities of the European Union in cases of additional cross-border emergencies. The additional funding will be used to create reserves of strategic equipment to cover health emergencies, forest fire outbreaks, chemical, biological, radiological, or nuclear incidents or other major emergencies. As such, the total budget for the European Union Civil Protection Mechanism will top €3,1 billion. The Emergency Response Coordination Centre is managing the distribution of the equipment to ensure that it quickly reaches those in need.

So far, 650,000 FFP2 and FFP3 protective facemasks from the rescEU medical reserve were delivered to Italy (142,000), Spain (173,000), Croatia (65,000), Lithuania (20,000), Montenegro (62,000) and North Macedonia (148,000) and Serbia (10,000). Additionally, protective gowns were further distributed to Montenegro (15,000) and North Macedonia (35,000).

The rescEU reserve is constantly replenished and deliveries happen regularly based on the needs of the participating countries.

4. Bringing stranded citizens home

Another area where the Commission and other EU services, notably the EEAS, have provided essential support is around the coordination of assistance and consular repatriation operations of EU citizens from across the world.

Since the beginning of the pandemic, more than half a million people have been flown back to Europe thanks to flights organised by the Member States. In addition, the UCPM has facilitated the over 82,000 EU citizens to Europe from all over the world.

5. Emergency Support Instrument – Transport support through the Mobility Package

The Emergency Support Instrument (ESI) was reactivated in March 2020 to provide a flexible and comprehensive framework for EU institutions to support Member States. Under its umbrella, different initiatives are being undertaken, being the so-called ‘Mobility

Package’ entrusted to DG ECHO. With a budget of EUR 220 million, the ESI Mobility Package helps EU countries around three key strands:

- a) the transport of medical items to where they are most needed, by financing the cargo transport of assistance and relief items to and between EU Member States;
- b) the transfer of patients between EU Member States or from Member States to neighbouring countries, so that where health services risk being overwhelmed, spare capacity elsewhere can be used, so ensuring treatment for as many patients as possible;
- c) the transport of medical personnel and mobile medical teams between EU Member States and into the EU from other neighbouring countries, to help people wherever medical assistance is needed most.

The Commission has allocated EUR 150 million to support 18 Member States and the UK to finance cargo shipments between April and September 2020, including life-saving personal protective equipment, medicines and medical equipment. For example, the action supported the transport of a shared shipment of more than 1,000 tonnes of essential personal protective equipment to Czechia and Slovakia.

6. Assistance outside the EU

DG ECHO has also contributed to the global EU response to the pandemic, following the ‘Team Europe’ approach, combining resources from the EU, its Member States and financial institutions to support each partner country.

One of the flagship initiatives managed by DG ECHO has been the ‘EU Humanitarian Air Bridge’ (EU HAB). Since the coronavirus pandemic has brought about critical logistical challenges for the humanitarian community, on 8 May the Commission decided to set up this temporary initiative based on a set of air transport services enabling the delivery of humanitarian aid and essential medical supplies for the coronavirus response to countries mostly affected by air transport constraints. The air bridge flights carry essential medical equipment, humanitarian cargo and staff, and in turn have also assisted with repatriation flights organised by EU Member States.

To date, over 67 Air Bridge flights, fully funded by the Commission, have delivered tons of medical equipment and supplies, as well as medical and humanitarian staff to critical areas in Africa, Asia and Latin America.

7. Reflections for the future

As outline in this concept note, the COVID-19 crisis has triggered a strong European response, showing concrete and tangible solidarity amongst Member States and EU institutions.

The crisis has also exposed shortcomings at multiple levels and in different sectors, including European as well as national. The pandemic has shown that the complex interdependent global system we live in cannot cope with crises from a simple national perspective, and that joint efforts and solidarity are essential to cope with and overcome its impact.

Disclaimer: *The views and opinions expressed in this article are those of the author and do not necessarily reflect the official position of the European Commission. The document might contain figures that may no longer be accurate. For updated information, please check the specific official European Commission website: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/crisis-management-and-solidarity_en*

Multidimensional responses to complex emergencies in the Atlantic

I would like to thank the invitation of the Portuguese defence ministry for this opportunity to participate in this second Atlantic Centre seminar. It is a pleasure to be here. Our contribution to this first section of work will focus on the response in the area of maritime security that an archipelagic country like Cape Verde, in the fight against the pandemic COVID-19 and the lessons learned.

Cape Verde is undoubtedly a maritime nation, it is a small archipelagic country with a land surface of 4,033 square kilometers, it gains dimension through its geographical position and the vast maritime space that it has, about 800,000 square kilometers. Naturally, the maritime economy plays a crucial role in its economy, since most products for the consumption of the population are transported by sea.

The maritime economy in this archipelago is based on three main economic activities: tourism, maritime transport and fishing or fishing industry.

So, it's easy to guest, the role of a Coast Guard or a Navy in an archipelagic country that depends a lot on the maritime economy, had and have to be paramount.

The emergency situation we are experiencing, the COVID 19 pandemic, has forced the implementation of several exceptional measures, with a view to achieving the first priority in combating the pandemic - protecting people.

We adopted rigorous self-protection behaviors, which allowed us to continue fulfilling our mission, while responding to the countless tasks that we were called upon to do.

We focused on ensuring the availability and readiness of the means, with priority in maritime interdiction operations (- disembarkation and embarkation, coming ashore or boarding, for passengers or crew, international and fishing vessels; -inter-island maritime connections for passenger transport and berthing or docking of cruise ships, recreational ships and sailboats, from abroad, except in exceptional situations); and in the logistical support to health services, in the transport of medical material and medical samples for COVID 19 tests, between the islands, participating decisively in the contribution of the Cape Verde Armed Forces to the national effort to combat the pandemic. We have increased our missions and the number of hours of navigation of our ships has doubled compared to previous years.

None of this could be accomplished if the interagency task force created for that purpose had not worked.

For the first time at the same table, agencies and institutions were seated under the command of the Coast Guard, in an effort to effectively control our waters. The maritime police, as well as some civilians, vessels, were under tactical command of the Coast Guard. The maritime assets were not enough to control a wide area, but at least together, we solved some difficult situations. There were 7 agencies that since March

18, 2020, working together. The strategy was to carry out joint patrols. Putting all assets available from coast guard, Maritime Police and civilians, a very large sharing and crossing of information between agencies, and we involve non-governmental organizations and riverside communities to put all available means so that we can fulfill our mission.

The results are visible: 110 missions of COVID 19 samples were transported for testing, 345 inspections of vessels, 56 of which were found in illegal situations, 45 MEDEVAC operations.

Despite the victories achieved with an interagency approach, many problems have come to surface. Institutional weaknesses in the maritime safety sector persist. These weaknesses are related to the multiplicity of institutions with formal responsibilities in this area and a certain disorganization of the sector, due to the absence of a well-defined integrative framework. A considerable part of the maritime safety activity is closely linked to the exercise of the maritime authority whose competence is spread across various bodies, but this authority is not globally harmonized. State authority at sea is exercised in a disaggregated and departmentally unified manner, which induces direct impacts on the effectiveness of the model that brings together figures and organs from different somewhat disconnected systems, constituting in conceptual and doctrinal terms an obstacle to its efficient and effective operation.

Institutional reform will need to be carried out by the maritime safety bodies; The National Strategy for State Action at Sea must be put into practice urgently. And we should consider performing inter-agency exercises very often. In this field very important victories have been achieved thanks to the international exercises that are performed regularly like OBANGAME EXPRESS and GRAND NEMO.

In this pandemic struggle, strong international cooperation was necessary, for many poor countries like Cape Verde, several donations in health materials were made by friendly countries, which we thank immensely. But with regard to international military cooperation, there have been very few initiatives in this area. We think that the military could have a word in this field, transporting health supplies, conducting COVID-19 tests or even helping the host country with the necessary medical evacuations are examples of the things we can do.

With the economic recession scenarios that are expected in the near future, the maritime security forces will also be extremely affected, with regard to their maintenance operating budgets, also in their fleet renewal programs. Despite the decrease in budgets, maritime security forces are going to be called on to other missions that we expect to be part of the worldwide reinforcement of medical and humanitarian missions. Crews must prepare to protect from COVID-19. Boarding teams will move to medical protection equipment as well as military protection equipment. Disinfection missions will increase. Maritime security forces as a way to mitigate the lack of funds for their operations should reinforce interagency and cooperative security operations by increasing them.

Collaboration is the key.

Thank you very much.

Working Session 2:
Operational responses to crises

Report WS2

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The second Working Session aimed to discuss ‘Operational responses to crises’. The complexity and severity of crises – current and future – identified in the first session is expected to increase in proportion to the lack of reliable and detailed information, which ought to be, in turn, quickly shared between those most affected and those with the means to prevent and mitigate them. Therefore, this session focused on tools that can be put to good use amidst ongoing and future crises in the Atlantic region, namely through the identification of alternative and innovative solutions to collect, distribute and analyse information. In this context, space-based capabilities have emerged as a cutting-edge domain, holding significant untapped applications for crises management and mitigation.

A set of operative questions was brought forward beforehand with the aim of guiding contributions and instilling a debate between speakers and participants, including:

- How to foster greater exchange of information generated by the construction and operation of space infrastructures within the Atlantic space?
- How to best combine scientific research, environmental conservation, and tracking of extreme weather phenomena through space technology?
- How to best use space-related capabilities for the monitoring of illicit activities in the Atlantic?
- How space technologies can become an effective tool to be used in the context to multifaceted crisis, and how the Atlantic Centre can provide further stimuli to this discussion?

Presentations and discussions in this Working Session focused on four issue areas: 1) the use of space-based technologies in civilian and military contexts; 2) obstacles to data access, sharing and analysis; 3) constellations, diversification of tools and democratization of data; 4) and the recognition of the Atlantic Centre as meeting-point for dialogue, inter-operational knowledge, and training and education.

1) The use of space-based technologies in civilian and military contexts

The Atlantic region is particularly challenging considering its vast extension, which demands a great amount of reliable and detailed information in order to prevent and mitigate crises. There is a widespread consensus in both civilian and military realms over the utility of space-based capabilities as alternative and innovative tools to overcome such kind of geographic obstacles. Furthermore, data collected from satellites is important to produce scientific knowledge that can help tackle current problems, particularly those related with climate change.

Nevertheless, it is important to note that the Atlantic is not a homogenous region: while in the North there are military and civilian regional organizations with available funding and involved in deeper cooperation, in the South, South American and African countries do not have access to the same capabilities, financial or operational.

In the civilian realm, space-based technologies, namely satellites, have been used for several purposes in terms of prevention and mitigation of crises. For instance, satellite capabilities from the European Maritime Safety Agency (EMSA) have been used to improve situational awareness, by providing comprehensive, reliable and timely information; and to support/aid crisis management systems, such as safety, security, search and rescue activities, by enabling a wide area monitoring or a specific monitoring of crises. EMSA has used several systems including: vessel traffic monitoring systems, such as space-based systems (e.g. satellite AIS and Long-Range Identification and Tracking); satellite-based earth observation for oil spill monitoring and vessel detection service; and remotely Piloted Aircraft Systems, that rely on satellite communications and provide new opportunities for enhanced surveillance.

Space-based technologies have also been used in operational responses to natural disasters and humanitarian emergencies, both at the preparedness and at the response level. In this context, these technologies can have a beneficial impact in improving disaster assessments, particularly when considering the:

- Use of satellite communications, especially during a disruption in mobile/cellular networks in affected countries or regions;
- Use of satellite imagery to portray the effects of disasters and support responses in a wide variety of contexts:
 - Major storms (hurricanes, typhoons, cyclones) – it can assist with the identification of wind damage, mobility on roads and river systems, flooding effects, etc. For instance, during the Katrina flooding in New Orleans, satellite images provided the estimated size of the disaster and magnitude of the crisis, and helped to guide emergency teams to the most affected areas;
 - Seismic and tsunami damage – it can assist in the identification of collapsed structures, access/mobility restrictions, damage to critical infrastructure, etc. For instance, during the 2011 tsunami in Japan, satellite images provided unique data on the highways and railways available to bring relief to the victims as well as on the critical situation of the Fukushima nuclear power station;
 - Monitoring and predicting of disasters such as volcanic eruptions, drought, food insecurity and famine;
 - Wildfires fighting efforts – when connected with database on geographical information, space-based technologies have enabled the development of such tools as geolocation of operational assets, weather forecast, prediction of affected areas, communications, surveillance of theatre of operations during and after a fire, observation of released energy and burnt areas, and support to terrestrial and aerial navigation. These tools support the synchronization and integration of information to all levels of decision

from strategic to operational, including the establishment of a Common Operational Picture;

- Supporting Humanitarian Notification Systems in conflict scenarios.

Space-based technologies are also useful in monitoring illegal activities, such as illegal vessel traffic, piracy control, and violations of national sovereign limits.

In the military realm, space-based technologies have been used for multiple operations, namely naval operations. Space-based technologies have already been used for communication and navigation systems, given the needs of navies and air forces for communications around the globe and to navigate with precision. Furthermore, naval forces have used space-based technologies to create situational awareness, considering that they are often asked to go into areas where they may not have a complete picture – including the physical (geography, terrain, littorals), the electromagnetic (signals in the radio frequency) and environmental (seas, upper atmosphere weather, heliosphere weather, etc) contexts.

2) Obstacles related to data access, sharing and analysis

Knowledge is key to overcome the complexity and severity of emergent crises in the Atlantic region, both at the civilian and at the military level. In order to produce useful and timely knowledge for strategic and operational decisions, one must first collect data and dispose of sufficient analytical capabilities to turn it into information. Nevertheless, despite the utility of space-based technologies to collect data, several problems have been identified, namely issues related to access, availability and sharing of data; lack of interoperability; and lack of analytical capability.

Firstly, even though data comprises a central tool to better understand and produce knowledge on contemporary challenges, access, availability and sharing of that same data can easily become a challenge. On the one hand, sharing of information in the military realm is prevented due to classified information and national security rationale; on the other hand, information is blocked in the commercial/private sector due to competitive and intellectual protection motivations. Moreover, in the context of the Atlantic region, the absence of homogeneity, means unequal access to information. For instance, in the context of EMSA, third countries that are not EU Member States, can only access information in specific programs allowed by the EU.

Consequently, two core scenarios emerge: one more cooperative and one more competitive. In the first scenario, countries and organisations tend to be more cooperative in the areas of search and rescue as well as in scientific research and are usually quick and proactive in sharing information. In the second scenario, when considering the exploitation of natural resources, the economic exclusive zone (EEZ) or other aspects involving national interests, the information sharing process is all too often blocked.

Secondly, and somewhat contradictory to the problem concerning the sharing of data, the existence of several clusters providing the same kind of information can lead to

a lack of interoperability and confusion, which in turn may affect the effectiveness and efficiency of any intended response.

Thirdly, even though collection and sharing of data is important, the lack of analytical capability may still prevent the production of knowledge, which is key for decision-making. Therefore, there is an urgent need to develop capabilities to turn technical data into information in support of strategic and operational decisions or, in other words, to turn data into knowledge.

3) Constellations, diversification of tools and democratization of data

In order to better prevent and respond to crises, and turn early warning systems into early action responses, information must not only be openly and transparently shared in a relevant timeframe, it should also be accurate and timely. Hence, space-based capabilities and particularly satellites have been identified as an alternative and innovative solution to collect data.

Given the challenges associated to the process of collecting, sharing and transforming data into knowledge, several measures can be proposed based on already existing experiences:

- In order to improve the collection of data, overcome the need to have more frequent data, and provide valuable data, with an unprecedented revisit time and short latency, the Atlantic International Research (AIR) Centre and the Portuguese Space Agency (PT-Space) have, for instance, jointly started an international collaborative project to deploy a constellation of small satellites – the Atlantic Constellation.
- Actors such as EMSA have also identified the need to diversify and combine tools, following a toolbox approach, in which instruments are not used in competition, but in combination with each other. In this context, EMSA is developing a tool that combines drones and satellites – High Altitude Pseud Satellite (HAPS) – with the purpose of improving capacity in terms of situational awareness.
- In order to improve data sharing and accessibility, partnerships with the private sector should also be considered. A data policy focused on promoting data democratization and regulation of the distribution of data should also be implemented. In this context, PT-Space is already building, promoting and operating a digital platform – Digital Planet – with the goal of integrating and making available multiple data sources, namely spatial data. Moreover, the AIR Centre has been developing scientific and technological solutions through its Data Centre and is particularly predisposed to exchange data with all Atlantic countries.

4) The Atlantic Centre as meeting-point for dialogue, inter-operational knowledge, training and education

Collecting, accessing, sharing and analysing large amounts of data has proved particularly challenging amidst the prevention and mitigation of complex crises in the Atlantic region. Accordingly, the Atlantic Centre can become a relevant and innovative platform if it considers several possible roles:

- The Atlantic Centre as a platform for dialogue. The problems concerning data access and sharing, demand the creation of a platform for sharing information between both public and private actors, and between the North and the South of the Atlantic.
- The Atlantic Centre as a platform that produces inter-operational knowledge in order to support decision-making processes. Considering the problems related with the lack of analytical capability, the Atlantic Centre can emerge as a meeting-point that collects, receives and integrates data provided by different clusters (civilian and military, as well as public and private) and translates it into relevant and timely strategic and operational input.
- The Atlantic Centre as a platform for training and education. Considering the problem of turning data into knowledge, the Atlantic Centre not only has the potential to produce relevant publications, but it can also contribute to the training and education of military and civilian personnel.

Concept Notes WS2

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European Maritime Security Agency

EMSA's use of satellite capabilities in the prevention and mitigation of crises

1. Introduction

As seen with the COVID-19 outbreak, crises can arise from a single event, are difficult to predict and can have a global impact on a wide range of activities. The impact during the on-going COVID-19 crisis on activities in the maritime has been severe: ranging from port closures due to lockdowns, reduction to maritime transport due to decrease in demand but also due to the quarantine of seafarers or the impossibility to carry out crew changes, significant reduction of the cruise and passenger ship activities and severe impacts to fisheries. In the maritime surveillance domain, traditional assets at sea were limited due to active cases, quarantine procedures and additional social distance requirements put in place by different health authorities, which in some cases caused significant reduction in the level of maritime awareness in certain regions. This reduction in using assets for surveillance was mitigated by utilizing satellite-based technologies, which were mostly unaffected by the outbreak, and could in some cases close the emerged surveillance gap.

Satellite based information can play an essential role in all phases of crisis management:

- 1) Pre-crisis: by providing comprehensive, reliable and timely information, satellite-based capabilities can contribute to planning, prevention and preparation activities enabling the reduction of known risks.
- 2) Crisis response: for events affecting the maritime domain, satellite information can support the response by enabling wide area monitoring or specific monitoring of a crisis situation. For instance, in the current COVID-19 crisis, EMSA was able to provide day-by-day an impact assessment of the pandemic of certain shipping activities by analysing vessel traffic data received by land based and satellite based sensors and providing reliable figures to assist in the definition of the recovery policies and for defining specific measures. These figures are being used by EU stakeholders (EU institutions, maritime administrations and shipping industry) in determining a recovery strategy in the context of the economic crisis that Europe is facing. Additionally, and for surveillance related applications, satellite monitoring was expanded (mostly via the Copernicus Maritime Surveillance service) to provide support to Member States which suffered limitations in deployment of naval and aerial assets due to the outbreak.
- 3) Post-crisis: In the post crisis scenario, information from satellites can contribute to the continuous improvement of crisis management plans, assessing risk areas as well as to supporting the assessment of implemented measures and lastly to improving the preparations for the likelihood of a new crisis.

2. EMSA's Satellite based capabilities in the maritime domain

EMSA deploys a range of services which are used by national and EU authorities for maritime domain awareness and surveillance, and which could contribute in the different phases of crisis management. The goal of maritime surveillance can only be achieved if authorities have the complete picture of what is going on at sea.

Since 2005, EMSA was at the forefront of developments in vessel traffic monitoring systems, including space-based systems such as satellite AIS (provided through the SafeSeaNet service) and Long Range Identification and Tracking [LRIT]). The CleanSeaNet service, a satellite based earth observation oil spill monitoring and vessel detection service has also been operational in EMSA since 2007. Now through the Copernicus Maritime Surveillance (CMS) Programme, EMSA provides its users with extensive satellite earth observation data for a range of other activities at sea. More recently, technologies such as Remotely Piloted Aircraft Systems (RPAS), which rely on satellite communications to expand its range beyond radio line of sight, are also providing new opportunities for enhanced surveillance.

Satellite surveillance is particularly useful in support to crisis management in areas like the Atlantic Ocean, which presents significant challenges concerning maritime domain awareness, due to large areas to be monitored, high costs of traditional surveillance assets and relatively long deployment times. Satellites can cover large areas in a cost efficient way, can be quickly tasked, and establish an activity baseline that can be used synergistically with other assets, increasing operational efficiency. Moreover, as demonstrated by the response to the current COVID-19 crisis, satellite monitoring is highly resilient when compared to other surveillance means.

It is fundamental that all the information generated by the different surveillance assets is integrated to create a tailored maritime picture. The Integrated Maritime Services (IMS) platform managed by EMSA integrates and combines the different types of maritime information to provide the most comprehensive and up-to-date maritime picture. It provides horizontal data processing, correlation and integration capabilities. Over 150 different authorities across 26 EU and EFTA Member States, five EU bodies and the European Commission currently use the service.

Another recent tool, that also uses information gathered by satellite – and that was developed by EMSA – is the automated behaviour monitoring (ABM); it can be particularly useful to support crisis management, both at the pre-crisis and crisis response phases as it analyses a wide range of maritime information by detecting and alerting specific ships' behaviour. Patterns, such as entering an area of interest, encounters at sea, approach to shore, and deviation from the usual route, are detected and operators are automatically alerted, which is particularly useful when monitoring large areas of open ocean, such as the Atlantic. This tool is already in use by an ever-growing number of EU Member States and EU Bodies in various operational contexts, like fisheries control, border control, security, safety of marine traffic, coastal protection, and environmental protection.

3. Conclusion

In a crisis, besides having access to different sources of satellite-based data, it is fundamental to have the necessary tools to quickly leverage the necessary information and knowledge. For this purpose, EMSA has a strong experience in deploying a range of integrated satellite-based services which are used for maritime domain awareness and surveillance, and which can have a positive impact on each of the crisis management phases.

Digital Planet and a New Space Data policy – A contribution for better understanding the space and oceans interactions

The Challenge of open data

Without additional mitigation efforts, “warming by the end of the 21st century will lead to high to very high risk of severe, widespread, and irreversible impacts globally” (Intergovernmental Panel on Climate Change, 2014).

The message is clear: without additional mitigation efforts at the international level to address the causes of the climate change, we can expect several consequences like loss of lives, ecosystem degradation, extinction of plant and animal species, economic losses, social disruption...

Addressing climate change requires precise, continuous monitoring of a multitude of variables related to the atmosphere, land, oceans, and atmosphere interactions, sustained over long periods of time.

The Space Age started in the 1950s (1957) and since then, around 470 Earth Observation (EO) Satellites were launched. 180 of them were government owned and more than 35 nations have been involved in the operation of EO Satellites.

But today, with so many variables to be collected, so precisely and over such long periods, there are still gaps in our ability to adequately monitor climate change despite the development of new sensors with new capabilities in the new satellite generation.

Satellites play an important role in collecting data about climate. They represent a unique advantage point and ability to provide continuous global coverage and can be matched by *in situ* observation systems. These advantages are particularly relevant in remote or sparsely populated areas like oceans and over the Arctic and the Antarctic.

But today, besides the increasing number of satellites and the disruptive environment of the so-called New Space, with mega constellations and diversity of new sensors (AIS, RF sensing, Optical and Sar images, narrow and broad band communication systems), the outcome of data available is still a barrier to develop earth observation applications and computing models, basically because this represents a market and the investments of the companies should have the return of their investments and therefore the data available is restricted or expensive and this represents a big limitation to the development of EO applications.

Let us think for a moment about the navigation data made available since the 1990's by the Global Position System (GPS). In the very beginning, the simple idea to open this data sparked several concerns about the security aspects, and open data were considered a threat for national security.

But trade-off mechanisms were implemented to live simultaneously with the high precision position data and the so-called latter commercial position precision, and we well know the results in terms of the development of applications and the global impact in all sectors of our society. Today, crucial services running over the globe are based in the navigation data made available by their data policy.

This is the path that EO data and the respective data policy should take.

Currently there are few EO satellites that provide a real open EO data. A good example is the Copernicus Program with their Generation of Sentinel Satellites.

But these satellites are limited in terms of resolution (time and space) and there are some applications that require more resolution, like fire monitoring, tracking vessels, precision agriculture, ports monitoring, etc.

The concept of public availability of the data is quite simple: the governments (taxpayers) pay the upstream (Satellite, Ground stations and Operations) and the data is made available open and free to public institutions and research institutions. This is the concept of Copernicus.

But why is there reluctance in seeking a higher resolution (time and space) for the next generation of European Copernicus Satellites? National security is the main reason invoked. But this is not completely true.

There are several companies that invested in this high-resolution imagery market and they represent a strong lobby for continuing to provide this high-resolution data to the market.

The fact is that the national security cannot be an excuse to go forward for the high-resolution data for Copernicus also because there are mechanisms that can be put in place to address these concerns, particularly the same concept that was implemented for the Galileo program, the public regulated services (PRS): the mechanism that monitors the institutions that have access to the high precision Galileo navigation signals.

Regarding the EO Data, no EO company is currently known to be profitable in the private data market. Behind these markets there are always governments or governmental agencies that assure part of their business, buying large amounts of data to implement their national data policies, for example distributing this data to R&D institutions.

This is one of the big challenges of this decade and particularly when this EO data will be needed in massive quantities to face the problems of climate change to be used to feed new computing models to better understand and therefore to predict the interactions between oceans, atmosphere, space, and climate.

Promoting access to data, defining, and implementing Government data policies and, at the end, imposing the changes needed, are the roles of the Space Agencies. Agencies for space play an important role regarding data policies:

- They should act as the hubs to access to this data.
- They should promote the upstream, fostering the development of the downstream applications.
- The agencies should implement public data policies that lead to costs reduction regarding access to data.

We need to look forward to democratizing the access to data (satellite data in particular).

Imagine, using your mobile phone, that you ask: What is the quality of the air today in my city and what will be the quality of the air in the next two hours? And a simple question, what is the health of our country today?

These two simple questions could only have an answer if we have a permanent source of data without boundaries! This is the dream: to have open data with quality.

The reality and the needs will impose these policies for sure. It will be needed one initiative and the rest will follow.

The Portuguese Space Agency is looking forward to fostering new data policies and it is committed to address two great challenges, thus contributing to the development of the EO downstream applications: fostering the development and launch of a satellite constellation, together and in partnership with other Atlantic Nations with the perspective to get high resolution data; developing an EO multiplatform data to foster the development of downstream applications.

These are the two commitments of the Portuguese Space Agency to tackle the access to EO data to envisage the creation of a National EO Ecosystem based in a new public data policy.

Military forces and systems are generally perceived as readily available assets in most sorts of complex crises.

Even more so, if a crisis situation starts to develop in the maritime environment. There are no “free roaming” elements rapidly available for a fast response, and state actors respond with what’s mostly at their hands, their Navies.

But, at the same time, the past few decades have seen a constant development of commercial systems aimed to increase the safety at sea that range from GPS to satellite communications or AIS. These systems aren’t directly related to military forces, even if they’re available to them. Satellite observation from space has grown into a fully mature instrument for sea control, and the access to satellite imagery in different ranges of the spectrum is nowadays available to the general public (at a given price, of course).

While several western navies have nearly unlimited access to the byproducts of their own nation’s space programs, South American and African countries have to depend on much more limited national satellite resources, or pay the costs associated to a commercial service.

In the response to a crisis at sea, three capabilities become critical:

- Detection and tracking, in order to properly assert the situation.
- Communications, in order to control and coordinate the response.
- Presence and resilience, in order to act and sustain the activity on scene.

Maritime Domain Awareness frames these capabilities and provides the base for better resolution of a crisis by providing a better understanding of its origins and context and allowing a more suitable response.

The first two aforementioned capabilities are heavily dependent on technology, and, in most situations will demand interaction and cooperation between units from different countries but also between civilian and military / coast guard vessels. The former relies heavily on combined training, which has become the norm rather than the exception, and is assisted by standard procedures based on similar doctrine, and so it becomes “relatively” simple, even in complex situations. The rapid deployment and coordination of the international effort after the loss of the submarine ARA “SAN JUAN” off the coast of Argentina in November 2017 has proved so.

On the other hand, the interaction between civilian ships and crews and military/coast guard systems can be tricky at times, due to the different nature of their goals and interests and to a potential “cultural gap”. Fortunately, in most cases these potential rough edges have been smoothed over the years thanks to the regular interaction within the frame of the national SAR systems, which have been providing support for years in situations where life at sea has been in danger.

SAR systems are used to provide rapid response and continued assistance in situations of diverse degree of risk for life at sea and are potentially good enablers for international cooperation due to the humanitarian nature of their mission, which renders them uncontroversial.

A potential key to crisis prevention and solution at sea could be the strengthening of international links mirroring the already established cooperative status of the national SAR systems, and the use of those structures (mostly operated by military / coast guard forces) as a common path for further trust building and as an access path to bring together other key stakeholders in any crisis exceeding the specific SAR framework.

A key area where cooperation is both fully in place and indispensable is Antarctica. The volume of traffic and the number of tourists in the area are increasing at an exponential rate, and the response capabilities available tend to be limited, if not sparse due to the constraining environmental conditions and the distances involved. With no local population, the risk of a humanitarian crisis is practically negligible but, on the other hand, the risk of a SAR crisis becoming potentially disastrous isn't. Nations that operate Antarctic stations and vessels have established cooperation channels that help minimize such a risk and have, so far, prevented massive losses of life when incidents did happen.

But, if nobody would openly argue the need of cooperation when it comes to the preservation of life at sea, other areas produce much more competitive situations. The exploitation of sea-based natural resources is probably the most critical one in the South American coasts and, at the edge of the EEZs, it's evolving into a quagmire where hundreds of fishing vessels spend months fishing at the verge of controlled areas resupplying and refueling from readily available "mother ships" and transfer their cargo to reefer ships that, in due term, will carry it across the globe without any possible control. IUU fishing is ripe in those regions and the limited capabilities of the coastal nations are unable to confront with packs of up to 300/400 fishing vessels at the peak of the seasons.

International cooperation around this subject is as necessary as for SAR purposes, but quite less achievable, due to the conflicting nature of the interest involved and the number of non-national actors who also are part of the equation. The absence of regulatory frames such as prescribed in the articles 63, 64 and 116 to 119 of UNCLOS precludes the ability of the affected nations to preserve the existing resources and to manage them in a sustainable fashion. This ongoing situation doesn't seem to present a short-term solution and is sustained by the notorious power unbalances between the flag states involved and the coastal nations.

Crises at sea, then, comprise the full spectrum of international attitudes: from total cooperation when it comes to SAR and the protection of human life at sea, to a conflictive lack of dialogue when resource exploitation is involved. It is up to all involved nation states to create cooperation avenues and consensus in order to search for mutually beneficial solutions in the long term.

Technology has the potential to become a huge enabler towards this goal, by providing transparency and accountability, but it's the political leaders who'll eventually determine the future conditions in which these issues will be solved.

The importance of Information and Space in Forest Fire Fighting

Since the launch of the first satellite, Sputnik 1 in 1957, more than 9,000 satellites have been launched for low Earth orbit, making it an increasingly congested place, it is estimated that 2,787 satellites are currently active. These more than 2,700 satellites, a number that is expected to grow exponentially with the project of Elon Musk (CEO of SpaceX) who intends to bring broadband to the entire planet and plans to launch a network of 42,000 satellites, have many and diverse purposes, such as education, technological demonstration, space science, earth science, technological development, maritime research, but also earth observation, space observation, communications, navigation, global/regional positioning and Surveillance.

These are some of the purposes that, together with geographical information systems, which are intended to be increasingly interconnected and supported by information databases, which will allow us, more and more, to develop tools to support Forest Fire Fighting, such as the geolocation of operational assets, weather forecast, prediction of affected areas, communications, surveillance of the theater of operations during and after a fire, observation of released energy and burnt areas (Copernicus), and also to support terrestrial and even aerial navigation (aviation and drones).

These information systems are configured as tools to support the various levels of action associated with the specific case of forest fire fighting, but they can and are used in most situations involving serious accident or calamities.

These informational tools supported by satellite systems assist decision support in operations through the functional integration of different data sources and platforms, the creation of operational tools, the establishment of a Common Operational Picture, Synchronization and Integration of information produced and the sharing of all this information by all levels of decision and in need of knowledge.

We can thus say that this triad: Space, Information and Fighting Rural Fires, results in 3 other products:

- First is the strategic level analysis, achieved through the combination of Earth Observation with the informational records that results in meteorological indicators and predictors, in the prediction of the typology of fires and finally in the probable evolution and the need to issue consequent warnings and alerts;
- Second is the operational analysis, which assists operational staff through timely and correct operational information, simulation of fire behavior and decision support;
- Third product is the post-event evaluation, in which the operational statistics, by accounting for the burnt area and through the reports and lessons identified; recovery phase is initiated and driven.

We can thus affirm that the development of space technologies, combined with robust, fast, reliable and interconnected information systems allow us to act in the fight against forest fires in anticipation, in a timely manner to prevent the loss of lives and the destruction of property.

Atlantic Centre Operational Response to Crises: Potential Uses and Challenges of Scientific Research and Space Technology – Tracking and Responding to Disasters

The use of higher levels of technology, including space-based assets, has been relatively limited in operational response to natural disasters and humanitarian emergencies. There are practical limitations to incorporating these capabilities into a coordinated response; however, there are also potential benefits that can be realized in both improved preparedness and a more effective response to extreme weather events and other potential hazards. These benefits can assist in improving information sharing, developing common situational awareness, and building enhanced assessments, resulting in improved preparedness and a faster and better targeted response. A coordinated response to natural and man-made disasters requires all responding actors – the affected state, responding states (including military assets), international organizations (IOs), national and international non-governmental organizations (NGOs), and the affected population to develop a common operational awareness of the effects of the disaster and to reach consensus on how to prioritize limited response capabilities in a complementary way.

The use of enhanced technology and space-based platforms by humanitarian responders continues to be an information management objective, although the application thus far has been generally uneven and limited in both utility and availability. Communications and basic information sharing, especially when cellular networks have been disrupted, are the two most common uses, especially among international responders. However, there are excellent examples of using satellite technology especially in identifying, tracking, and preparing for potential disasters. The Famine Early Warning Systems Network⁴ (FEWS NET) integrates remote technical sensing with operational reporting to provide early warning and analysis on acute food insecurity around the world. Other organizations integrate geospatial capabilities and other tools to provide early warning and analysis to responders, including the Pacific Disaster Center which manages Disaster AWARE, providing “global risk intelligence, early warning, and the largest collection of global, scientifically verified geospatial data and modeling tools for assessing risk and hazard impacts”⁵.

There are numerous applications for using space technology in disaster preparedness and response. These applications will be increasingly important as the effects of climate change continue to impact people, property and the environment. Tracking major storms has greatly contributed to preparedness efforts and prepositioning assets and personnel to more rapidly respond to disasters. Early warning systems for tsunamis, drought, fire and meteorological events continue to support early action. However, the sensors and technology must be widely and openly available in order to make a difference in

4 <https://fews.net>

5 <https://www.pdc.org/about/>

preparedness. If information can not be openly and transparently shared, it holds little value for the disaster response community. Additionally, the information must have a record of accuracy in order to build enough trust in the data to commit resources to either preparedness or response activities. Trust in the information and in the technology is one of the primary impediments to turning early warning into early action.

While preparedness will always be one of the primary uses for technology, there are also numerous applications for technology – especially satellite and space-based platforms – in responding to disasters and man-made emergencies. Damage assessment is often pointed to as a critical shortfall in responding effectively to disasters. The ability to rapidly pull together a comprehensive and commonly accepted assessment of damage and needs is critical to building common situational awareness, determining requirements, and prioritizing response capacity. Currently, this is most often done by sending numerous teams out to suspected impact locations or by conducting visual overflights, usually by helicopter or by drones, and then piecing the reports together, often without a common assessment methodology or framework.

There are many limitations to this approach. First, it is time consuming at a point early in the response when time is one of the most critical factors and building a common operational picture is urgent. Second, it is often limited to the geographic areas that can be accessed – either because of damage to the infrastructure or the lack of availability of mobility assets (vehicles, helicopters, planes, boats, etc.). Third, there is a distinct lack of trust among responding organizations, especially regarding information. This lack of trust has impacted in several ways – organizations are often reluctant to share all information that they have collected, in fact, there are disincentives for organizations, especially NGOs to share information with others. Assessment data is often used in developing funding proposals and in building advocacy messaging for fund raising by humanitarian organizations. Sharing information could provide rival organizations with an advantage in competing for limited donor funding.

Additionally, the lack of trust often manifests through the reluctance of organizations to commit resources to response projects without putting their own “eyes on” the situation. This often results in numerous assessment teams from different organizations assessing the same locations numerous times. This often leads to frustration – from the affected population, who resent answering the same/similar questions without receiving assistance, and from the affected nation who quickly grow impatient with over-assessment and wish to see the response implemented, as occurred in the 2013 Typhoon Haiyan response in the Philippines. The use of drones to assess damage has also been problematic as most nations have domestic laws in place that either preclude or severely limit the meaningful use of this technology.

Space-based technology can have a very beneficial impact on disaster assessments, especially if that information is shared in an open and transparent manner and is provided in a format that is compatible, easily digestible and understood. In addition to the use of satellite communications, especially during a disruption in the mobile/cellular network in

the affected nation, satellite imagery can effectively portray the effects of disasters in a wide variety of contexts including, but not limited to the following:

- Effects of major storms (hurricanes, typhoons, cyclones) including the effects of storm surge, wind damage, mobility on roads and river systems, and flooding effects and risk.
- Fires, including damage, current operations, and potential areas at risk.
- Seismic damage including collapsed structures, access/mobility restrictions, damage to critical infrastructure.
- Monitoring and predicting slow onset disasters including drought, food insecurity, and famine.
- In conflict scenarios, space-based platforms can support Humanitarian Notification Systems efforts in keeping humanitarian actors and assets safe by assisting in the monitoring and tracking of humanitarian assets, movements, and facilities on both land and sea.

Imagery of all types is critical in supporting preparedness and the pre-positioning of supplies and response personnel; identifying affected areas and levels of damage; effects on mobility and the logistics infrastructure, as well as contributing to damage assessments for critical infrastructure nodes including airports, maritime ports, hospitals, electrical grids, and other capacities that are critical both to disaster responders and reestablishing normalcy in affected societies. These assessments can be instrumental in rapidly determining which response assets, including foreign military assets, will be required; and, as importantly, which assets will not be required. This will help limit the stress of receiving assistance on the affected nation and assist in integrating necessary capabilities into the operational response. Imagery can also assist in identifying population movements and locating populations that may be isolated by flooding, seismic effects, or other restrictions to transport mobility caused by the disaster event, allowing for a more targeted approach to the response.

There are, however, numerous limitations to the use of space-based/satellite technology in support to disasters. First and foremost are issues relating to limitations on the open and transparent dissemination of information products derived from satellites and space platforms. Often, distribution of imagery is limited by security classification or policy, which restricts or prohibits the dissemination of the information to the majority of responders. Unless the information is openly available and can be shared widely, it is of little use to emergency responders. In other cases, imagery or other technology products are limited to specific governments or allied nations. This also creates severe obstacles, especially in building common situational awareness in order to make informed decisions.

In addition to classification and restrictions, technology compatibility is a key consideration. Most humanitarian responders do not have access to technology platforms that can easily share information, as these platforms are often cost prohibitive or under some form of technology restriction. Without the ability to rapidly disseminate and access information, the technology will not provide a useful operational advantage. This is further complicated by the variety of information platforms that are used in a disaster

response. Affected and assisting nations tend to rely on their internal communications systems, humanitarian use a variety of humanitarian web portals (<https://www.humanitarianresponse.info/>, <https://logcluster.org/>, <https://reliefweb.int/>, etc.), and military components predominantly use their own internal systems. Currently, there is no system that integrates information from all platforms.

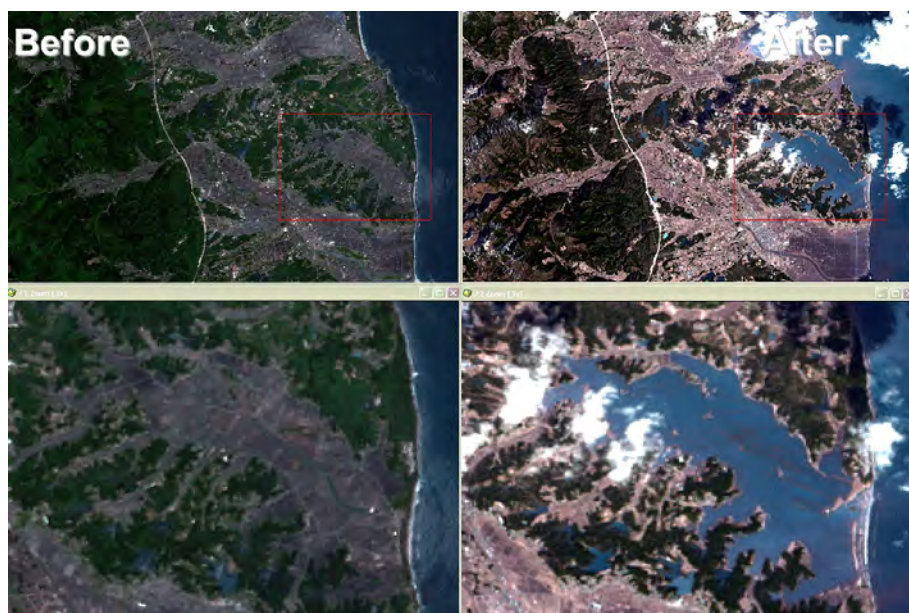
A significant obstacle to integrating space-based technology into disaster response is the required analysis to make sense of the information. For the most part, humanitarian organizations lack the analytical capability to turn imagery into actionable information. Providers of technology and related information products must take this into account and provide analyzed information along with the raw data. There are many operational examples of sharing satellite information without the accompanying analysis, which, in the end, made very little impact on decision making during the response.

Better use and integration of technology, especially space-based technology, will become more important, especially with the increased number, scope and scale of extreme weather phenomena. Finding solutions to dissemination, accessibility, and analytical capacity will allow for enhanced situational awareness, more effective assessments, and better decision making. This will lead to more responsive, agile, and ultimately more effective and efficient responses to natural and man-made disasters.

Space Assets to Mitigate Crisis in the Atlantic

The Atlantic International Research Centre (AIR Centre), as an international organization to provide technological and scientific solutions to solve urgent needs in the Atlantic region, is highly interested in the space applications to prevent and mitigate crisis affecting the Atlantic. The Earth Observation from the space has shown in the last years to be a very efficient tool to response to complex emergencies in the ocean.

A very valuable data for disaster monitoring are the satellite images of the affected area, the following examples are just a real demonstration of this: **Tsunami in Japan 2011**: the satellite images were delivered just few hours after the tsunami, providing unique data on the highways and railways available to bring relief to the victims, the critical situation of the Fukushima nuclear power station was also detected form the very first image:

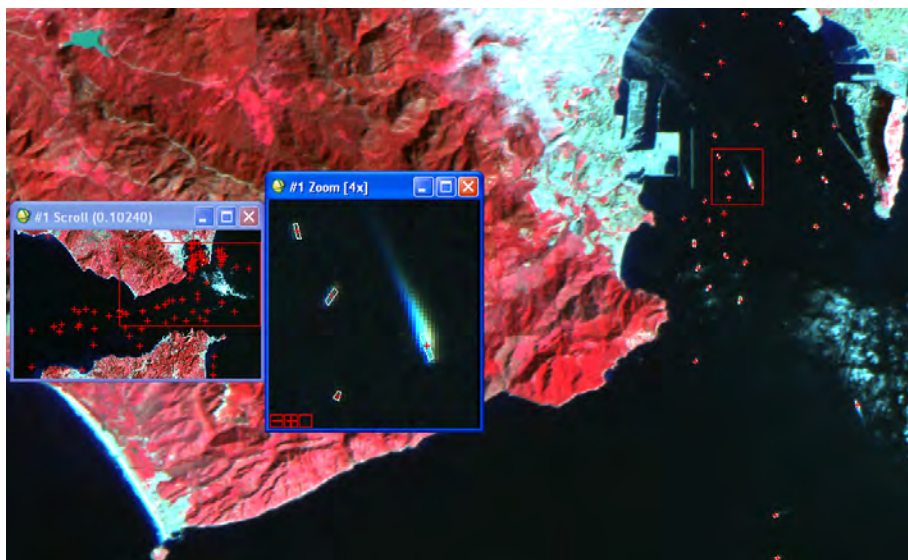




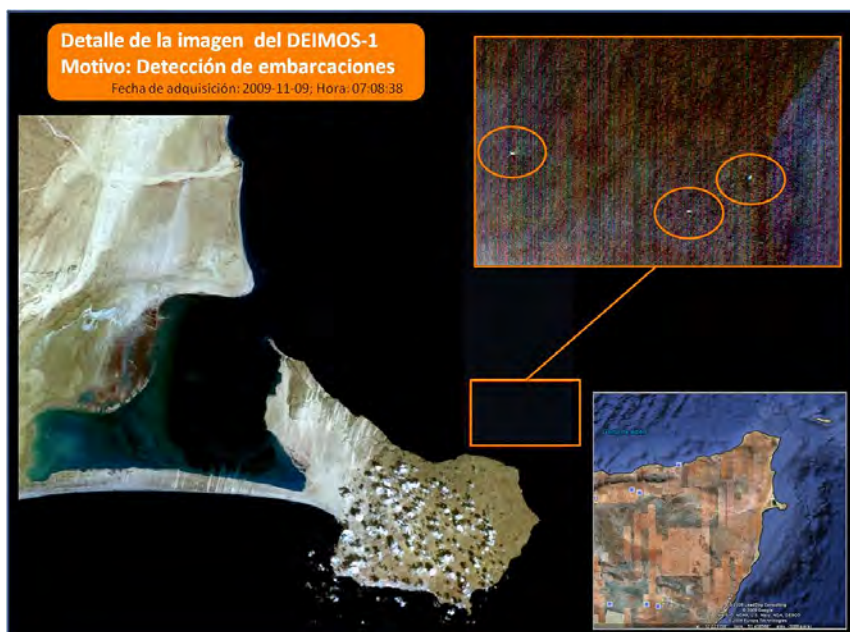
Katrina Flooding in New Orleans: the satellite images of New Orleans were the best way to estimate the size of the disaster and the magnitude of the crisis, at the same time a cartography of all the flooded areas was performed in a few hours to drive the emergency teams to the most affected areas.



Control of Illegal Vessel Traffic: the combination of optical or SAR images with AIS data is a very powerful tool to monitor illegal vessel traffic (illegal immigration, narcotraffic,...), this is an example of traffic monitoring with those tools on Gibraltar area:



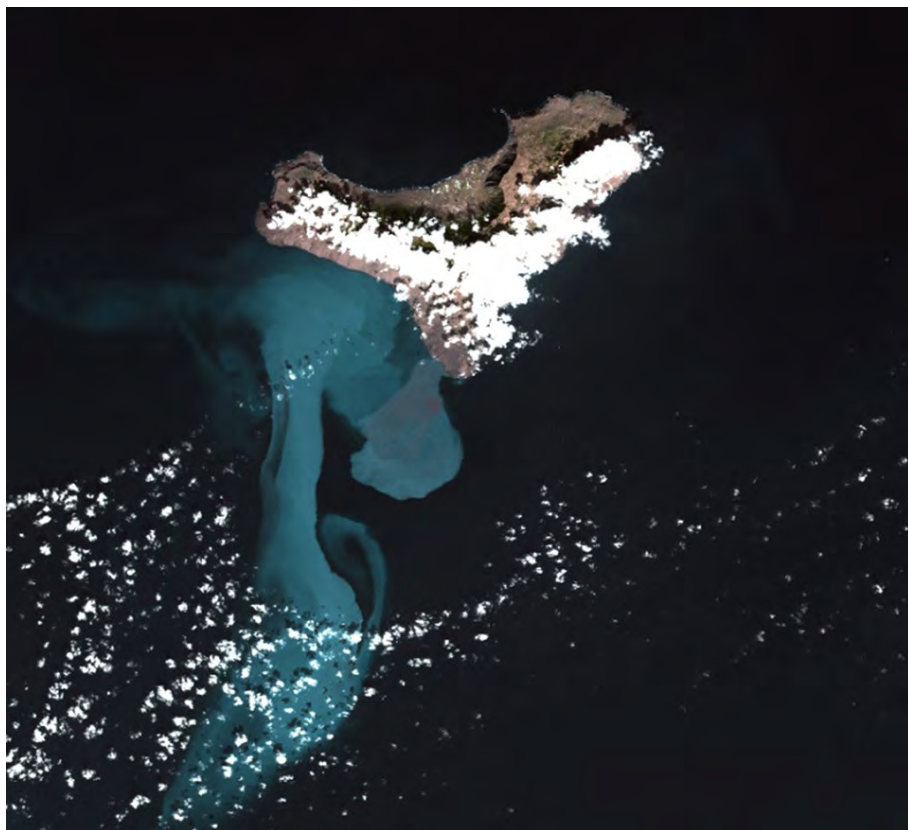
Piracy Control: international piracy is a critical problem in the Indic Ocean, but it is also affecting the Atlantic, mainly in the African coast like Cameroon. The use of satellite imagery to detect its modus operandi, to identify the coast port of operation and the ways the pirates use to get in and out of the coast are extensively analysed by optical and radar satellites, as in the following examples:



Violation of national sovereign limits: the satellite allows an immediate analysis of possible violations of sovereign limits, or detect suspicious operations in international waters; this is an example of China activities in the South China Sea where a complete base was setup on a reef in a few months:



Volcanic eruption in El Hierro (Canary Island): the satellite is the unique observation system on the Atlantic that is able to provide synoptic measurements due to its very large field of view. This is an example of a single satellite image that provides the full size of the effect of a volcanic eruption underwater very close to El Hierro island in the Canaries.



Atlantic Constellation of the AIR Centre

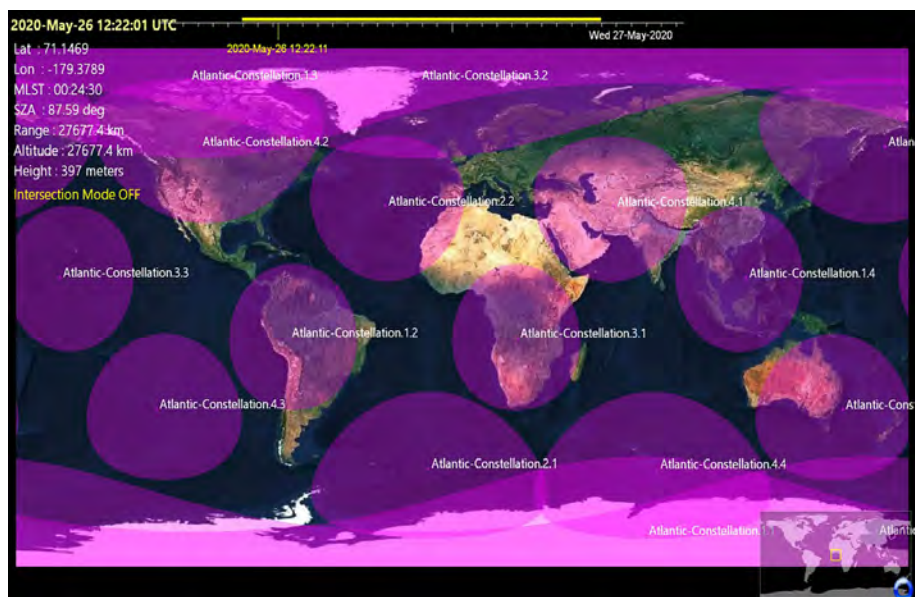
All above are examples of the use of satellites for emergencies on the ocean. There is a large number of very sophisticated satellite systems that can provide unvaluable services for crisis in the Atlantic. However, for some applications (e.g. tsunami detection, illegal fisheries,...) we need a system with a very frequent revisit, for this reason at the AIR Centre we have started an international collaborative project to deploy a constellation of small satellites (the **Atlantic Constellation**) to provide valuable data with an unprecedented revisit time and latency.

Taking into account the priority of needs we have selected the following payload instruments as baseline for the constellation:

- An AIS (or VDES) decoder for vessel monitoring, covering a conical field of view under the satellite, limited by the minimum elevation of the satellite from see surface that is set to 5°
- A Multispectral optical high resolution camera in visible, NIR and TIR bands with a geometric resolution better than 5 m, a swath of 20 km

- A Hyperspectral optical medium resolution camera with a geometric resolution better than 50 m a swath of 100 km
- A GNSS/R sensor able to track all GNSS constellations (GPS, Galileo, GLONASS and Beidou) reflected on the sea surface with angles up to 35°-40°
- An IoT 5G transponder (preferably under the new 5G standard) for communications

The constellation includes 16 satellites, 4 satellites per plane in 4 orbital planes.



This Atlantic Constellation will be able to provide very frequent imagery, with revisit time of 3 hours and latency of less than one hour, plus continuous data of vessel traffic with AIS coverage with gaps of only 15 minutes.

Conclusions

Earth Observation Satellite systems are of paramount importance to predict or mitigate emergencies in the Atlantic. They have been used for crisis like tsunamis, volcanic eruptions, flooding, etc. In addition, they are also a critical tool for response to crisis like piracy, illegal vessel traffic, illegal fisheries, ocean pollution or violation of sovereignty.

In order to improve the capacity of response to those emergencies, the AIR Centre has started the development of a constellation of small satellites (the **Atlantic Constellation**) in international collaboration to provide optical images, vessel traffic data and 5G communications along the Atlantic with unprecedented frequency.

Space Based Technologies and Capabilities of Relevance to Future of Maritime Operations

“The Navy’s interest in space is long... And the Navy’s interest in space is important, because without space contributions it would not be possible to conduct modern naval operations.”⁶

The Past

Maritime nations have relied on their naval forces to carry out the national business on many fronts. The naval forces are unique in that aspect; they secure the seas, are diplomats in a foreign port, and provide the maritime security that is essential to the trade and commerce for most seafaring nations. I am glad to be part of this discussion today, albeit virtually, and I applaud Portugal, a maritime nation from its start, for hosting this forum to discuss our common maritime interests in the Atlantic. It is fitting that Portugal has led this initiative given its rich maritime history and the crucial role that Prince Henry the Navigator and Portugal’s many courageous explorers played during the Golden Age of Discovery in leveraging the seas for trade and exploration. Initially along the coastal regions and later across the open ocean, the early Portuguese voyages depended on accurate observations of the moon, the planets, the sun, and the stars. The importance of Space in the maritime domain continues to this day. Since its beginning, the United States has also understood the crucial importance of space and the US Naval observatory has had the responsibility of providing an updated star catalog to our nation for over 200 years. Now it is mostly developed by space-based astrometric missions, one of the original space-based capabilities for maritime operations.

The Present

It is still pretty amazing that people wonder why the Navy is in the space business. How is it that the US Naval forces and others have always invested in space science and spacecraft technologies from the beginning? The primary reason is that the navy has been a disaggregated and distributed force since its inception and has had the need to communicate from anywhere around the globe and navigate with precision. Additionally, naval forces are always asked to go into areas where they may not have the full picture of what they are going into. This includes the physical picture (the geography, the terrain, the littorals), the electromagnetic picture (the signals in the radio frequency domain), and the environmental picture (the seas, the upper atmosphere weather, the weather of the heliosphere, and their impact on the propagation of radar, and radio waves). These are all dynamic aspects of naval warfare and can change drastically in short periods, and have a large impact on the ability to carry out naval operations and expeditionary

6 National Research Council, Navy’s Needs in Space for Providing Future Capabilities (2005)

warfare. Study after study has noted that space is essential to maritime operations. The primary space-based capabilities that are used for naval warfare can be broken down in the ability to sense and see, communicate that knowledge proactively and with precision to all concerned for decision making, and produce the necessary effects in a precise and timely fashion thru naval platforms or other elements of national power.

Going forward the platforms and technologies that provide these capabilities will change, but the essential needs will be there. Primary amongst them is communications. The majority of the naval communications go through space-based assets. Not only the ships, airplanes, and submarines, but the expeditionary naval forces, the marines, need point-to-point communications, communications amongst mobile units, communications between mobile units and shore facilities, and broadcast communications from shore to ships and submarines. Another core space-based capability is navigation and timing—the deployed forces will always require a space-based system for providing accurate, all-weather, worldwide navigation for naval surface ships, aircraft, and submarines and precise time to synchronize operations, including cryptographic systems for secure communication and delivery of effects.

In addition to communication and navigation, space-based assets also provide maritime situational awareness. Intelligence Surveillance and Reconnaissance systems (though for naval operations, the more important systems are signals reconnaissance/surveillance systems) along with supporting equipment, provide continuous and up-to-date information on naval targets, air targets, and land targets of naval interest. Systems capable of detecting, locating, and processing deliberate and inadvertent electronic emissions from military threats or criminal activities may be used for technical intelligence, strategic warning, and mission planning. These also include potential threats in the electromagnetic domain, electronic warfare, and increasingly cyber warfare. The ability to, detect, isolate, classify, identify, track, and assess incoming missiles and threats is critical. Additionally, we have to get this information directly to Navy tactical users (the Navy was the first, but it was adopted eventually by all the services), e.g., Global Broadcast System (GBS) using direct broadcast technology at high data rates to many users via very small terminals.

Lastly, given the nature of naval operations, there is a need for systems capable of obtaining weather information in support of naval forces “over areas void of meteorological observations.” That means that space research that allows the study of the heliosphere (the sun drives all weather phenomenology on the earth) and better understanding, predicting and forecasting of the sun as it enables better forecasting of the ionosphere, the troposphere, the atmosphere, and the ocean weather. Naval forces benefit from forecasting in all these regimes, but what we have now on most of these regimes is “nowcasting”. Naval forces also want up to date geodetic, geophysical, mapping, ice-reconnaissance, and sea-surface-temperature environmental data.

The Future

“The complexity of the maritime domain, which encompasses the confluence of water, air, land, as well as space and cyberspace, is infinite in its variations. As a result, operations in the maritime domain are inherently challenging.”⁷

It is a fool’s errand to predict the future, but there are technological trends that help guide us to get a somewhat accurate assessment of what to expect. As we look to Space and the recent acknowledgment by NATO that space itself is an operational domain, the majority of the focus, at least in the United States, has shifted to US Space Command and US Space Force. Naval officers have known for a long time that space is an operational and warfighting domain. As the barriers for access to space have gone down, there is a surge in the number of space-based platforms and access to them. The options of providers, vendors, integrators, and launchers have grown exponentially. But just like the automotive industry of the late 1800s, the aviation industry of the early 1900s, and the “dot coms” of the 1990s, not all will succeed, but the industry will grow, and the options for the users will increase.

The number of platforms (and they are all disaggregated, distributed platforms) in all domains are increasing exponentially. There is an exponential growth in undersea, surface, air, and space-based sensors, nodes, and apertures that have almost an infinite amount of data. Additionally, hybrid architectures are emerging and are augmenting dedicated military assets with commercially available data for sale to “all.” The emergence of artificial intelligence (AI) and technologies where these sensors and platforms and machines are continually learning (ML) and refining the data they provide to the user is changing faster than most of us are capable of adapting. There is an increasing need to be able to turn this data into information and eventually use the knowledge for decision making. The driving forces behind these are data analytics and the application of AI/ML technologies. The challenges for the maritime forces will be how to combine this information and get it to a distributed force in relevant timelines and do so securely. There is an emerging need for data fusion and analytics to be done promptly and at scale.

The opening up of the article presents a few additional challenges, since legacy communication systems were designed to give worldwide coverage with as few satellites as possible, and are in geostationary orbits, they provide no coverage in the higher latitudes and lack polar coverage. Huge investments are being made in proliferated Low earth orbit (P-LEO) systems, but most of them are likely not going to be of much use in the near term, for example, ship antennas are not designed for tracking LEO satellites for communications. Most ships tend to have a life of 30-50 years, the P-LEO models are in the 2-5-year technology refresh rate, how does the naval force stay abreast of this technology cycle?

Lastly, from a defense perspective, our adversaries have developed capabilities to target naval platforms. The timelines for detecting, tracking, and identifying these threats

7 Naval Operations Concept: Implementing the Maritime Strategy (2010)

leaves no option other than space-based sensors could that theoretically extend the range at which incoming missiles could be detected and tracked—a critical requirement for hypersonic missile defense. Again AI/ML technologies for autonomous tasking or onboard the platform, mission tasking, and command & control will be critical.

Atlantic Centre Policy Brief nº 5

A vision for the Atlantic Centre: Building up resilience and cooperative security for a more secure ocean for all

Nuno Lemos Pires⁸, Bruno Cardoso Reis⁹, Licínia Simão¹⁰

Available at https://www.defesa.gov.pt/pt/pdefesa/ac/pub/Documents/Atlantic-Centre_PB_05.pdf

The Atlantic Centre (AC) is grounded on a whole-of-the-Atlantic approach with the aim of benefiting every single country bordering the Atlantic. North to South, East to West, from South Africa to Canada, from Norway to Argentina. Those living alongside the coastlines of the Atlantic have always been affected by what happens in this vast ocean. Problems can easily travel thousands of kilometres across the sea, from air pollution to plastic waste, from illegal drugs to weapons.

Ever since the Atlantic was fully mapped and emerged centuries ago as the key component in the first global network of trade and communication, communities across of the Atlantic have become increasingly connected for good or ill. Today, we share many similar languages, values, concerns, threats, challenges, but also opportunities. These threats and the opportunities to cooperate in addressing them are the most important dimensions for the AC. The overall mission of the AC is to carry out research on these threats and problems, to develop shared solutions, to encourage dialogue and to develop defence capacity building to enhance security in the common space of the Atlantic.

We are not naïve. We are aware that not all is well in the Atlantic. We realize there are major differences between Atlantic states in terms of their relative level of wealth, military capabilities or threat perception. However, Atlantic states are by definition very much affected, in their security and prosperity, by whatever affects the Atlantic Ocean. All kinds of environmental damage affecting sea life and fisheries provide very good examples in this regard. So is climate change and related extreme weather events, to which our Atlantic coastlines remain vulnerable. Last, but not least, piracy, maritime terrorism as well as organized crime engaged in illegal trafficking of people, weapons and narcotics are further examples of how maritime security today is more than ever affected by transnational threats that do not respect any borders. The differences between us should not hold us back from working together on shared problems and shared solutions.

In order to achieve that main goal and aiming to become an International Organisation open to all Atlantic states, the AC activities are structured around three main tiers.

8 Defence Policy Deputy Director, Brigadier-general of the Portuguese Army, Professor at the Military Academy and Interim-coordinator of the Atlantic Centre.

9 Deputy Director at the Centre for International Studies, Iscte-University Institute of Lisbon and advisor to the Portuguese MoD.

10 Professor at the School of Economics and Researcher at the Centre for Social Studies, University of Coimbra, and advisor to the Portuguese MoD.

The first tier is the “think tank” level. We aim to foster seminars, workshops, international conferences and to develop policy papers, research projects, and strategic documents that can shape more integrated security policies¹¹. The AC aims to become a platform for reflect about our common Atlantic space, dedicated to the production and dissemination of knowledge and to support the development of public policies that improve maritime security broadly understood across the Atlantic. The AC aims to change perceptions in the way problems are addressed, and solutions are identified: “from us to them” to “from us to us”.

The second tier is a platform for dialogue between countries and regional organisations as well as non-governmental institutions, discussing security issues among each other, sharing best practices, identifying common challenges and key-shared priorities for cooperative action. There is no limit to the topics on the table, from border disputes, to threats to fisheries and other natural resources like oil and gas, to other criminal activities at sea. This tier aims to promote open and frank discussions around questions that can divide us inasmuch as they can unite us. Hopefully this will allow to dispel misperceptions, but also to identify shared concerns and cooperative responses.

The third tier comprises the most operational manifestation of the AC, dealing with defence capacity building. At this tier, the infrastructure being built in Terceira Island (Azores) will be capable to train ship crews, coast guards, air, sea and land personal dealing with security issues, from land to sea and in international waters (including surveillance and maritime domain awareness). Dealing with the five domains of operations (land-sea-air-space-cyber) and their impact in the security of the Atlantic will provide opportunities to learn, train and exchange best practices and doctrines. Different partner countries can supply a broad range of training opportunities: from internal law specialisation to on-the-job training in coastal ships, ports security activities, surveillance, maritime domain awareness, and even maintaining and sustaining vessels and equipment. As soon as public health and travel restrictions due to the COVID-19 pandemic allow for, the AC will organise its first training course in Terceira Island (Azores), to deal with security issues in the Gulf of Guinea, hopefully in the Spring of 2021. Others will follow in line with the priorities for cooperation agreed upon between the partner countries. In the meantime, we have proceeded with our activities by means of the second AC Seminar, on 16 October 2020, organized around an issue made tragically topical by the pandemic: “Multidimensional responses to complex emergencies in the Atlantic”¹².

The AC aims to play a new role in promoting security and defence in the Atlantic that is complementary to that of other actors, actively eschewing unnecessary duplication of structures and resources. Our vision for the AC is one of action supplementing and maximising what is already being done bilaterally and multilaterally, with the purpose of achieving a multiplier effect.

The final aim of establishing the AC as an International Organisation comes as an expression of the ambition to have a Centre of equal partners for equal partners, with

11 See, for instance, the publication from our first international seminar: https://www.idn.gov.pt/pt/publicacoes/idncadernos/Documents/Texto%20integral/idncadernos_38.pdf

12 See detailed program in: <https://www.defesa.gov.pt/pt/pdefesa/ac/events/II-Seminar-AC/>

no privileged geographies. The distinction that will matter most will be the willingness to join and to contribute to the building of resilience across the Atlantic through a holistic approach to cooperative security. Nations that choose to be active participants of the Centre will benefit from the solid institutional framework of an International Organisation. The main infrastructure for the AC is already under construction¹³ in Terceira Island (Azores), with work expected to be concluded during 2021, and will be complemented by a permanent Office in Lisbon.

Portugal as a facilitator of Atlantic security dialogue and cooperation

The main guiding document of Portuguese defence strategy, the Strategic Concept of National Defence, clearly states “the national interests [are] derived from Portugal’s status as a European and Atlantic democracy”¹⁴. It is a fact that Portugal helped map and make the Atlantic Ocean as we know it. In addition, the Atlantic has had a central role in Portuguese foreign and defence policy throughout history; this is an experience Portugal shares with many other Atlantic states. Today, Portugal is not only a continental Western European state with a very significant Atlantic coastline. Portugal is defined in geostrategic terms by a triangle with poles in its European territory and the archipelagos of the Azores and Madeira, including the vast maritime areas in between these three poles at the centre of the Atlantic Ocean.

The Portuguese Strategic Concept of National Defence cited above lists the following priorities in terms of Portugal’s national interests: “to affirm its presence in the world, [and] consolidate its insertion in a network of alliances”, in particular “NATO, the EU and the Community of Portuguese Speaking Countries (CPLP)”. Another priority is to promote the welfare of sizeable Portuguese migrant communities living in Atlantic countries from the USA to Venezuela, from Brazil to Angola, by engaging in friendly relations with host countries. The Portuguese National Strategic Concept is also very clear that the country is obliged by its Constitution to “contribute to the promotion of international peace and security” via the UN system.

Portugal is and has, indeed, been very intrinsically committed to the principles of the UN Charter, as well as to cooperative security. This also means a strong commitment to various regional or inter-regional multilateral organisations, namely the EU and NATO with partners in Europe and North America, but also a growing attention to the Community of Portuguese Speaking Countries and the Ibero-American Community with partners in the Americas and Africa.

Portugal has sought to make an active contribution to the security of global commons, and to engage in defence capacity building and other forms of cooperation with partners, in particular in Africa. It has also been strongly committed to inter-regional security dialogue namely in the context of the EU-African Union partnership.

13 Watch the video in: <https://www.defesa.gov.pt/pt/pdefesa/ac/about/Paginas/default.aspx>

14 Available here: https://www.defesa.gov.pt/pt/comunicacao/documentos/Lists/PDEFINTER_DocumentoLookupList/20_Strategic-Concept-of-National-Defence.pdf

The USA and Guinea-Bissau, both countries with which Portugal has historically strong and friendly relations, are very different in their level of prosperity or their threat perceptions. Portugal is a Western state but with deep cultural and historic connections with the Americas and with Africa. Portugal is not a great power, but it is a country but with a global vocation. It is, therefore, no difficult for Portugal, a country firmly rooted in Europe but with strong connections to Africa and the Americas, to understand that there are important differences between different Atlantic states. This makes the work of facilitating dialogue and cooperation across the Atlantic, if not simple, then at least less complicated.

Portugal strongly believes that in a fast-changing world, resulting in several new challenges and transnational risks and threats that are increasingly prominent, it is vital for all states bordering the Atlantic to find ways to engage constructively with each other. The Atlantic Centre aims to reflect both this reality and this aim. One of the central goals of the AC is, precisely, to become a forum for a regular exchange of views regarding the main security challenges in the Atlantic Ocean. This means that Portugal, as its founding host, is well aware that there is no perfect or automatic alignment of threat perceptions or defence and security priorities between the many different Atlantic states. This is only to be expected. However, this fact makes it even more imperative to engage in a regular security dialogue among as many Atlantic states as possible that will help dispel misconceptions, identify areas of common interest and possibilities of effective cooperation.

Portugal started the AC as a joint venture open to all Atlantic states willing to join and to play an active and constructive role in setting its agenda. This was the spirit behind the first international seminar that took place in Lisbon, in November 2019. We asked: Do we need an Atlantic Centre? The response from experts and senior officials alike was for the most part a positive one.

Given our “whole-of-the-Atlantic approach” the ideal vision for the Centre would be to help bind all 66 Atlantic countries. Again, we are not naïve. We are currently working with more than 15 “like-minded” Atlantic nations on a Memorandum of Understanding¹⁵ (MoU) that we hope will be signed by these and possibly other Atlantic nations during a ceremony in Terceira Island (Azores) in the Spring of 2021, which we hope will coincide with the first training course on maritime security. It would be utopian to start with 66, but the door remains open to all the Atlantic States willing to commit and cooperate.

We also aim to invite all relevant and willing regional security organisations from the Americas, Africa and Europe to participate and contribute. In order to do this, we will ask again for the active involvement of states with different perspectives from different regions of the Atlantic. In that spirit, coinciding with the Portuguese presidency of the European Union during the second semester of 2021, Portugal will use the inaugural event of the AC to make visible to other EU member states and EU institutions the vital importance of maritime security in the Atlantic as well as the role the AC can play in this regard.

15 Join the works in: <https://www.defesa.gov.pt/pt/pdefesa/ac>

Bringing different needs and visions together for a more secure Atlantic for all

Throughout this first year, the many interactions between the Portuguese Ministry of Defence and a wide range of Atlantic partners have evidenced a significant overlap in the security assessment across the Atlantic. There is a growing understanding that cooperative solutions are required, if a more effective response is to be found.

The most significant challenges currently being faced in the Atlantic include, as mentioned, the toxic combination of transnational criminal activities, radicalisation and terrorism, great power competition and resource depletion.

Communities throughout Africa are being devastated by drought but also by intensive fishing, making survival through traditional activities, like herding or fishing, impossible. This creates additional incentives for piracy, for involvement in drug trafficking and other illicit and criminal activities, as well as for radicalisation and violence. Addressing the human impacts of insecurity and developing community-based strategies to increase resilience would provide a significant contribution to stability in Africa and for the Atlantic as a whole.

Uncertainty and insecurity are also on the rise at sea, due to the well-known problem of piracy in the Gulf of Guinea, which affects trade routes between Africa and Europe as well as the Americas. However, growing competition between Atlantic and non-Atlantic powers, expected to further increase with the opening up of the Arctic route, is also taking a toll in maritime dynamics. Transparency and confidence building measures will therefore be critical to avoid incidents and to establish procedures and mechanisms of consultation that will ensure the security of information of natural resources and of people, both at sea and alongside the coastline.

Technological developments will determine to a large extent the capabilities available to monitor the Atlantic and to keep it safe. Therefore, technological novelties and the output that result from them should be made available to countries across the Atlantic. This is not just a matter of equity but of pragmatism, the Atlantic Ocean is too big for any one power, no matter how advanced or powerful, to effectively secure alone.

The AC alone will not be able to address such a complex set of security challenges. Nevertheless, we are convinced that efforts aimed at sustaining truly cooperative security, based on a joint agenda and the result of shared discussion and research, are urgently needed, especially in the maritime security domain. Building capacity to address the issues that are relevant for each Atlantic partner, can be an important contribution to keeping the Atlantic as an area of peace and security, in itself an indispensable precondition for investment, trade, development and prosperity.

Portugal is fortunate to share a number of *fora* with many Atlantic countries. The large majority, like Portugal, are not great powers and understand how valuable peace, stability and cooperation can become in a very turbulent world. If a significant number of Atlantic states join the Atlantic Centre, it can gradually become an important voice in addressing the most pressing shared security concerns that affect the whole of the region.

This is the vision that has animated our initial efforts and that has gradually brought others on board as well. The AC is on the move. It started as a Portuguese initiative, but it very much aims to become a fully-fledge partnership of like-minded states across the whole of the Atlantic. As with any good partnership, it will be what its partners want it to be, but we believe it is in our reach and that together we truly can build OUR Atlantic Centre.

Joint Opinion Piece, by Augusto Santos Silva, Minister of Foreign Affairs, and João Gomes Cravinho, Minister of National Defence (in Portuguese)

Pensar, dialogar e capacitar: a missão do Centro do Atlântico

Jornal *Público*, 17 de outubro de 2020, disponível em <https://www.publico.pt/2020/10/17/opiniao/noticia/pensar-dialogar-capacitar-missao-centro-atlantico-1935564>

O Atlantic Centre, que está a nascer nos Açores, vai ser um instrumento de afirmação de Portugal, promovendo a segurança cooperativa no conjunto do Atlântico, desde a África do Sul ao Canadá e desde a Argentina à Noruega.

A pandemia que vivemos levou ao adiamento de algumas das iniciativas de formação e treino do Centro, mas reforçou decisivamente a consciência da necessidade de um diálogo político forte com os parceiros de todas as partes do Atlântico.

O seminário inaugural do Centro, em 2019, mobilizou participantes de mais de 30 Estados atlânticos e organizações multilaterais, com grande sucesso e entusiasmo. Ontem, teve lugar o segundo seminário do Atlantic Centre, no Instituto da Defesa Nacional e através de plataformas digitais, em torno do tema das “respostas multidimensionais para emergências complexas” nesta casa comum que é o Atlântico. Para além do diagnóstico e partilha de boas práticas, a discussão passou pelas soluções tecnológicas, como a tecnologia espacial, que permitem a monitorização deste vasto espaço oceânico, assim como a partilha de informação para o exercício responsável da soberania, elemento primordial para a segurança regional.

Sabemos todos que temos de pensar em conjunto os múltiplos desafios em torno do Atlântico. Eles exigem respostas mais integradas, multidimensionais e, acima de tudo, cooperativas. Contudo, a necessidade não produz por si só o mecanismo. O Atlantic Centre é uma iniciativa portuguesa, mas a ambição é maior: pretende vir a ser uma organização de excelência internacional, de segurança cooperativa e de reforço da capacidade de defesa no Atlântico. Trata-se de uma iniciativa que é não só oportuna como urgente.

O valor geoestratégico central dos territórios portugueses no Atlântico (Continente e Regiões Autónomas) pode ser sublinhado e valorizado através de iniciativas concretas. À semelhança de outras novas abordagens, como uma futura Constelação de Satélites, o Atlantic Centre reforça a capacidade e a credibilidade de Portugal na segurança e defesa do vasto espaço atlântico sobre o qual tem responsabilidades.

Ambicionamos, legitimamente, ver a extensão da nossa Plataforma Continental reconhecida pelas Nações Unidas. Mas temos consciência que ela representa uma responsabilidade acrescida por uma mais eficaz monitorização das atividades ilegais e criminosas que atravessam o oceano e alimentam a instabilidade no entorno geográfico do Atlântico.

Portugal pode e deve ser facilitador e mobilizador de vontades em torno de problemas partilhados e que ameaçam a segurança e o desenvolvimento de todos os Estados

atlânticos. O Atlantic Centre será gerador de diálogos políticos profícuos, preenchendo uma lacuna da governança internacional; e será palco de formação prática e operacional, correspondendo às necessidades de cada um dos Estados parceiros.

Por exemplo: uma das características da realidade atual é a pirataria marítima ao largo do Golfo da Guiné, por onde circula uma parte substancial do comércio entre a Europa e África. Nesta região, em 2019, verificaram-se 90% dos raptos e assaltos por piratas no mundo, sendo, por isso uma das principais preocupações de segurança partilhadas pelo Estados atlânticos.

Aliás, a segurança marítima é uma das prioridades da Presidência Portuguesa da EU (PPUE) durante o primeiro semestre de 2021. Portugal contribuirá para ajudar a Europa a reconhecer o seu lugar no mundo a partir da imensa porta para o resto do globo que é aberta pelo Atlântico. Para perceber a sua importância basta recordar que 80% do comércio externo e até 40% do comércio interno da União Europeia tem lugar por via marítima, e que grande parte dele transita pelo Atlântico.

O Atlantic Centre conjuga também com o empenho nacional no reforço da parceria europeia com África, a qual será igualmente uma das prioridades da PPUE. Um olhar sobre o Atlântico, que ignorasse as dinâmicas de insegurança que atravessam o continente africano e se ligam com a Europa e as Américas, seria sempre uma visão limitada. O Atlantic Centre tem a ambição de abordar os temas na sua amplitude.

Se a este cenário dinâmico acrescentarmos as pressões crescentes que decorrem das alterações climáticas, as novas vulnerabilidades que a digitalização das nossas sociedades acarreta ou a competição geopolítica que leva à presença no Atlântico de potências não-atlânticas, então, a probabilidade de enfrentarmos emergências complexas num futuro próximo é efetivamente muito alta.

Tendo a sua sede operacional na Base das Lajes, na Ilha Terceira, nos Açores, as atividades do Atlantic Centre estão estruturadas em três eixos centrais: um centro de reflexão estratégica e operacional, que irá produzir e compilar doutrina e identificar lições, promovendo uma cultura de segurança comum aos países atlânticos; uma plataforma de diálogo político, ligando os países do Atlântico sul e norte em torno de ameaças comuns e soluções cooperativas; e um centro de formação e capacitação no domínio da defesa, dedicado à edificação cooperativa de capacidades.

Ao longo deste último ano, as atividades do Centro, em cada um destes eixos, progrediram. E a nossa expectativa é que até ao próximo mês de maio possamos oficializar este interesse com a assinatura do acordo que constituirá a base de ação multinacional do Centro do Atlântico, e com a apresentação formal do Centro, nos Açores, durante a Presidência Portuguesa da União Europeia.

Manter o Atlântico como um espaço de paz, diálogo e cooperação, é um objetivo ambicioso, mas urgente e vital para os nossos interesses. Portugal é um país atlântico pela sua história, e também o deve ser por uma visão de futuro. A renovação desta vocação passa por investir em explorar melhor, de forma sustentável, o seu vasto território no Atlântico, e as suas grandes possibilidades económicas, como aliás refere a visão estratégica proposta pelo professor Costa Silva. Mas, para o podermos fazer, teremos de

ser capazes de conhecer e proteger os recursos que aí se encontram, e num espaço tão fluído como o Oceano Atlântico a segurança cooperativa é, sempre que possível, a opção mais eficiente.

Portugal poderá gerar o diálogo produtivo e consequente neste espaço, reunindo países de norte a sul e de leste a oeste do Atlântico, reduzindo desconfianças e identificando ameaças e respostas partilhadas. É isso que queremos fazer com a criação do Atlantic Centre.

ATLANTIC CENTRE

A publicação deste IDN Cadernos, dedicado ao 2.º Seminário do Atlantic Centre, visa tornar públicos os contributos recolhidos durante este evento que reuniu, em Lisboa, cerca de duas dezenas de peritos em questões atlânticas. O objetivo residuiu em consolidar a relevância do Atlantic Centre enquanto plataforma de cooperação nas diferentes dimensões da segurança na região, aproveitando a ocasião para refletir e debater desenvolvimentos internacionais recentes, bem como os interesses prementes dos países que compõem o Atlântico e das organizações multilaterais que operam nele.

