

**How to grow the Brazilian Navy to maintain in conditions to overcome the threats to
national maritime interests in the South Atlantic?**

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Introduction

“Waters are many; endless. And in such a way it is graceful that, wanting to take advantage of it, everything will be given in it, for the sake of the waters it has.”¹

For a Nation to become a Maritime Power, it must have some essential characteristics that help it develop its Naval Force, which means that the ones it already has must be consolidated, and the others must be improved.

Brazil is a huge nation where geography is very generous and has an enormous extension of coastal areas with a large population living close to it. Moreover, it has a couple of large rivers that can internalize the standard navigation and the maritime trade, an enormous Blue Amazon² rich in oil, gas, minerals, and fish, and its position is privileged, outside of any kind of conflict are. Furthermore, Brazil does not have enemies around the whole borders, neither by sea nor by land. In other words, all conditions that enable it to become a Maritime Power, but why is Brazil not one? It happens due to the lack of population knowledge about the treasures that our ocean has, and that must be protected and defended against external threats. Riches can generate enormous benefits to society, mainly jobs and income. There is a lack of a Maritime Mentality to the population, which according to the Strategic Plan of the Navy (SPN) 2019-2039, is the "intangible element that must be implanted in Brazilian Society and strengthened in marine actors" (p. 11). Thus, society does not comprehend the Naval Force's dimension and importance,

¹ Excerpt from the letter sent by Pero Vaz de Caminha to the Kingdom of Portugal when Pedro Alvares Cabral Fleet arrived in Brazil (p. 14).

² https://www.mar.mil.br/hotsites/amazonia_azul/amazonia-azul.html. Access on May 19. Blue Amazon represents a political-strategic concept that covers ocean and riverside spaces in Brazil's destinations, guiding national development and placing Brazil at the forefront of the preservation and sustainable use of seas and rivers. It encompasses the protection of the 5.7 million km² that make up the Brazilian jurisdictional waters.

which does not receive due to treatment by the legal representatives of the population, ceasing to be a priority when compared to other internal issues in the country.

In the ocean, no borders or boundary lines are delimiting how far the Exclusive Economic Zone (EEZ) of each country reaches, so it is necessary to have and maintain a present Naval Force capable of defending and protecting its jurisdictional waters and existing wealth, being exposed to the risk that an international actor will use it illegally.

How big the Brazilian Navy (BN) should be is a strategic decision taken by the country, its leaders, and its population. Thus, it will seek to suggest something reasonable for the growth of the BN, which could be continuous. In this way, thoughts aim to answer the following question, how to grow the BN to maintain in conditions to overcome the threats³ to national maritime interests in the South Atlantic?

The elements⁴ of Alfred T. Mahan and the constituents⁵ of Geoffrey Till can guide us to the essential components for a Nation to become a Sea Power. Their ideas serve as a guide and oblige us to reflect on each one of them, seeking to enhance them within the Brazilian context. Let us write about two characters - people and the government, from Mahan, with Government, Society, and Population, by Till. Both concepts are part of the Maritime Mentality of the population. When it conquers the minds and hearts of a people, it is possible to influence and change the vision of their leaders, so this paper will focus on this concept, believing that this will affect and serve as an appeal in the decision of their representatives. Moreover, it reflects the

³ According to the 2019-2039 Navy Strategic Plan (p.15), threats to "aggression to the environment, terrorism sponsored by extremist groups, aggression perpetrated by States and even the commercial interests of private companies."

⁴ According to Alfred T. Mahan, the six elements of Sea Power are: Geographical position, physical conformation, extent of territory, number of population, character of the people, and character of the government. "Influence of Sea Power" (p. 28-29).

⁵ According to the Geoffrey Till, the main constituents of a Sea Power are: Population, Society, and Government; Maritime Geography; Resources, Technology, Maritime Economy, and Other Domains. "Sea Power – A guide for the Twenty-first Century" (p. 111).

sum of the interests of three vital entities of a Nation, capable of enhancing the development of a Naval Force. Other constituents that will be pondered are Resources and the Maritime Economy, presented here as "Blue Amazon and Blue Economy", and Other Domains.

Initially, it starts with the importance of developing a Maritime Mentality. Next, the concepts of the Blue Amazon and Blue Economy will be introduced, which favor the understanding of the importance of the Naval Force and its connection with the Brazilian society. Third, it continues to discuss other domains, with emphasis on international cooperation and the shipping industry. Finally, proposals for the development of the BN will be presented, with a brief conclusion.

The definition⁶ of Maritime Power of the BN carries with it the essence of these characteristics, that is, the path to the development of a Sea Power has started, it is time to push machines full forward with all its strength. So, let us start our journey by sailing over the Maritime Mentality.

Maritime Mentality

When the Portuguese discovered Brazil and saw that immensity of lands, they did not imagine how rich it was, not only their lands but mainly their waters. Brazil was discovered by the sea, and by the sea it became independent through the wars that took place from 1821 to 1824⁷, consolidating the BN and the maritime identity of its people.

Brazil has encountered many challenges inherent to a nation in growth and development,

⁶ According to the Navy Strategic Plan 2019-2039 (p. 9), Maritime Power "is the projection of National Power, resulting from the integration of the resources available to the Nation for the use of the sea and inland waters, either as an instrument of political and military action or as a factor of economic and social development, aiming to achieve and maintain national objectives."

⁷ Wars for the Independence of Brazil.

and it resented a consistent defense policy. However, in 2008, the National Defense Strategy (NDS) was promulgated and established the objectives and guidelines for the Brazilian Armed Forces. For the BN, NDS directed to assume actions in the nuclear sector⁸ beyond the basic tasks⁹ of the Naval Power¹⁰. Indeed, BN has been working in the nuclear sector since 1979, aiming "... of mastering the nuclear fuel cycle and developing and building a nuclear power generation plant"¹¹.

The document itself does not develop a Navy. Concrete actions must improve the connection between the population and the Navy to generate dividends for the country. By the way, one of the existing bottlenecks is the lack of a continued budget that achieves the needs of the Navy. One of the reasons may be the fact that Brazil has not declared enemies or border disputes; that is, there are no visible threats in the eyes of the population. Even so, it is necessary to convince and make the population aware of the importance of protecting the wealth that exists in the ocean, and for that, a capable and prepared navy is essential.

As mentioned in the NDS (p. 24), "the natural Brazilian maritime vocation is supported by its extensive coastline and the strategic importance of the South Atlantic." This quote proves that Brazil has some of the essential elements of a Maritime Power, its geographical position and the physical configuration¹² of its extensive coastline. These are factors of strength connected to the development of the country; consequently, it is developing its Navy. However, we need to leverage the Maritime Mentality of the population. For this reason, we need a population that

⁸ <https://www.nti.org/analysis/articles/brazils-new-defense-strategy/> access on May 21.

⁹ According to the Basic Doctrine of the Navy, the basic tasks of Naval Power are to deny the enemy the use of the sea, to control maritime areas, to project power over land, and to contribute to deterrence.

¹⁰ According to the Basic Doctrine of the Navy (p. 1-4), Naval Power is basically "a component of the Military Expression of National Power and an integral part of Maritime Power, capable of acting in the sea, inland waters and in certain limited land areas of interest for operations naval ...".

¹¹ <https://www.marinha.mil.br/ctmsp/programa-nuclear-da-marinha> access on May 19.

¹² Both are elements of Sea Power, according to Mahan (p. 28-29)

deepens and gets involved in themes related to the sea, thus, knowing and developing a more excellent feeling about the importance of Maritime Power, this will enable the Naval Force to become a topic of greater relevance to national interests and common sense. The BN has been developing the Maritime Mentality Program¹³, in addition to other actions, to enable the population to understand better its Naval Force, capabilities, possibilities, and opportunities.

A recurring theme among scholars of Maritime Power in Brazil is that the population, by and large, does not know the existing wealth from the sea and that needs to be protected. Rear Admiral (Ret.) Marcos Lourenço de Almeida¹⁴ has been developing a project that aims to involve and make society aware of issues related to the ocean, passing on information that is unknown to the general public, such as that 95% of our foreign trade is made by the sea. He adds that the benefits to society are gigantic and cites the example of some medicine originating from seafood. Another point to be explored, according to the Admiral, are the old and inconsistent public policies, as they were developed by people who are unaware of the issues under discussion. One more time, Admiral Marcos Almeida pointed out that "we need to think about how to make society recognize the activities developed at sea so that these policies are developed in a timely and effective manner". This work of awareness involves not only the BN; but also, the society organized through its representatives and the government, consistent public policies, and adequate to the population's desires. There is an urgent need for the population to approach the sea, get to know it beyond the beaches, and connect more deeply.

One solution is to create favorable environments to enhance the knowledge society of the sea, deepen the involvement of the population, and view the sea and its wealth from another

¹³ <https://www.marinha.mil.br/acoes-e-programas> access on May 20.

¹⁴ Interview with Rear Admiral (Ret.) Marcos Lourenço de Almeida, published in <https://www.youtube.com/watch?v=M93gull1hbA> access on May 6.

perspective. In this way, the Navy theme will be better understood and appreciated. Moreover, when the population develops an adequate Maritime Mentality, the shock wave that will reverberate from this feeling will be gigantic. Thus, a people who know its waters, seas, and rivers deeply, is promoting the development of a Naval Force prepared to defend and protect its wealth, which is unknown to a large part of the population.

Blue Amazon and Blue Economy

Brazil has a vast coastline and concentrates a large part of its population on the coast, which creates favorable conditions for its involvement with the sea. The best example is fishing¹⁵, one of the most common work activities on Brazilian beaches, as well as in rivers, and should be valued for the benefits it brings to the population, both as a job and as food. The tradition and culture of the fishing's communities spans generations of families across the country. If it is possible to see fishing boats on the one hand approaching from the beaches with fish and other seafood, it is not possible to see beyond the horizon. In other words, the population does not fully know the existing wealth beyond coastal areas, reaching tens and hundreds of miles from the coast.

Furthermore, Brazil has a large area abundant in minerals, oil, gas, and fish, inserted in the Brazilian EEZ. With an area similar to that of the Legal Amazon (green), this region can be exposed to external interference if there is no Naval Force capable of deterrence and presence. The BN started to nominate this vast marine region, the Blue Amazon, to attract the interest of the society, comparing to the well-known Legal Amazon, equally rich. This area, a place of

¹⁵ According to the FAO report, Brazil is the 13th largest fish producer in the world with fishing in some regions being vital. In the Amazon region, 30% of household income comes from fishing.
<http://www.fao.org/3/I9540ES/i9540es.pdf> access on May 20.

intense marine research needs to be protected by Brazil, by its Navy.

Admiral Marcos Almeida stated that it is reasonable to explore at the continent, where it is possible to look at its riches clearly, unlike the sea, which is distant and often invisible to that with dry feet. And in this aspect, scientific research is one of the high connectors between the society and the Navy, which through various programs¹⁶, have sought to expand its knowledge and develop the technology from marine research. The Blue Amazon is a consistent region for science and for the development of technologies that serve not only the Navy but also society.

From the Blue Amazon, it was possible to visualize more clearly the Blue Economy generated by it. Thus, activities related to the sea and its product generate immense dividends for the society, jobs, income, leisure, and cultural activities that transform entire communities. This connection between marine resources and income generation can leverage the economy of entire cities and make the economy revolve, which is fundamental to generate wealth.

According to the OECD¹⁷, Blue Economy "... is defined as the sum of the economic activities of ocean-based industries (industrial, commercial, scientific and technological research, and government), together with the assets, goods, and services provided by marine ecosystems." It is precisely through this economic integration that we need to bring the sea closer to the population and take advantage of the economic opportunities that arise and explore its possibilities. In Brazil, it is common to treat it as Economic Activities that present direct influence of the sea, including economic activities that do not have the sea as raw material but carried out in its vicinity. In 2015 this meant 18.93% of GDP (Carvalho, 2018).

¹⁶ <https://www.marinha.mil.br/secirm/proantar> access on May 20.

¹⁷ <http://www.oecd.org/innovation/inno/ocean-economy/> access on May 20.

Brazil is the 15th largest oil reserve¹⁸ in the world with "proven oil reserves of 12.8 billion barrels (0.8% of world total)". In addition to the dividends received for the oil produced, these reserves have allowed the country to develop cutting edge technologies in its exploration. Also, the submarine mineral reserves in Blue Amazon are still little explored, being the focus is on "mapping, until 2030, the submarine territory on a topographic scale that allows the commercial extraction of its mineral goods"¹⁹, when it will have a better picture of the real economic potential. It is also worth mentioning the region known as the Elevation of the Rio Grande²⁰, which has "high economic, mineral and energy potential, which gives it strategic relevance". With all these reserves and wealth existing under the sea, there is an urgent need to maintain a Naval Force capable of protecting them from possible threats. It is always good to remember that the increase in the number of pirate attacks²¹ on the other side of the South Atlantic is noticeable.

According to Agência Brasil²², the Maritime Economy "earns 2 trillion reais a year, equivalent to 19% of Brazil's GDP"²³. In other words, a fifth of all the country's wealth is concentrated in the sea or activities associated with it, including the maritime trade. This example validates the close relationship between both and calls us to move on to develop a robust Maritime Power to protect them while they are sailing overseas carrying on our goods,

¹⁸ <https://www.usatoday.com/story/money/2019/05/22/largest-oil-reserves-in-world-15-countries-that-control-the-worlds-oil/39497945/> access on May 20.

¹⁹ <http://www.cprm.gov.br/publique/Redes-Institucionais/Rede-de-Bibliotecas---Rede-Ametista/Recursos-Minerais-do-Fundo-do-Mar-2560.html> access on May 20.

²⁰ <https://www.defesa.tv.br/a-importancia-da-elevacao-do-rio-grande-para-o-brasil/> access on May 20.

²¹ <https://www.dw.com/en/who-will-help-solve-africas-piracy-problem-in-the-gulf-of-guinea/a-52367209> access on May 20.

²² <https://agenciabrasil.ebc.com.br/economia/noticia/2019-06/economia-maritima-rende-r-2-trilhoes-para-o-brasil-por-ano> access on May 20.

²³ They include "oil and gas production, the country's 235 ports, sea transport, the shipping industry, mineral extraction, as well as tourism, fishing, popular festivals linked to the sea, and marine cuisine."

foods, and many other products. The key is to connect the sea with the population, through the existing resources in the Blue Amazon.

Other Domains – International Cooperation and Shipping Industry

The other domains which can contribute to the development of the BN will be emphasized only two, the International Cooperation and the Shipping Industry.

A kind of International Cooperation is the participation of the BN, since 2011, in the FTM-UNIFIL²⁴. In this time, it is possible to highlight the benefits to the BN, such as improving our capacity in carrying out joint operations with other navies, training our Naval Force in the use of real Maritime Area Control, interacting with other navies and their crews in maritime security operations, assessing the level of training of our crews in real operations, and testing the logistical support of BN over long distances²⁵. During this period, the operational use of the Naval Forces has compelled the BN to maintain escort ships in excellent operating conditions as well as their crews prepared to be employed. Furthermore, this type of naval involvement reflects in Brazilian society, which observes its Navy doing a beautiful job in favor of world peace.

However, we must improve our cooperation with the countries of our strategic surroundings of the South Atlantic, mainly Argentina and South Africa, not only by joint operations but through exchanges and training of personnel, and why not increasing the military-naval trade between these countries. Countries worth mentioning are India, in which we are

²⁴ Command of the Maritime Task Force of the United Nations Interim Force in Lebanon (FTM-UNIFIL). <https://www.defesa.gov.br/relacoes-internacionais/missoes-de-paz/o-brasil-na-unifil-libano> access on May 20.

²⁵ The distance from Rio de Janeiro to Beirut is around 5,641 nautical miles.

already involved in Operation IBSAMAR²⁶, and of course, the U.S., a valuable partner with which Brazil has become a non-NATO²⁷ ally.

The other domain is the shipping industry. Over the years, the BN managed to develop a Navy capable enough to maintain the South Atlantic regional stability, mainly when the aircraft carriers Minas Gerais and São Paulo existed, in addition to their escort ships. Indeed, it obtained several capacities, such as the construction of submarines (Tupi) and Corvettes (Jaceguai and Barroso), stimulating the development of the shipping industry, as well as generating jobs for the population, which directly impacts over the people's view of the Navy and generates society's involvement with activities related to the sea. Nevertheless, the lack of continued resources and adequate state planning has not been possible to remain up to date concerning naval means over the years.

Nowadays, BN is renovating its fleet, with the construction of four conventional Scorpène Class submarines and a submarine with nuclear propulsion²⁸. Besides, four Tamandaré Class Corvettes²⁹ will begin to be built in a national shipyard in 2021, with the first unit expected to be ready in 2025. This moment is another BN development cycle aimed at a Sea Power strong enough to defend national interests and maintain their regional power status.

The industry, together with the universities and the government form the triple helix³⁰, which generates the power to enhance projects, including creating the environment conducive to

²⁶ <https://www.naval.com.br/blog/2020/03/26/brasil-africa-do-sul-e-india-mantem-planos-de-exercicio-naval-apesar-do-covid-19/> access on May 17.

²⁷ <https://apnews.com/569758ff78f94677897e71b595e6c48b> access on May 20.

²⁸ <https://www.marinha.mil.br/prosub/finalidade-submarino-conv> access on May 20.

²⁹ <https://www.marinha.mil.br/programa-classe-tamandare> access on May 20.

³⁰ <https://www.igi-global.com/dictionary/smart-cities-and-the-internet/40797> access on May 20.

technological development. In this environment are the maritime clusters³¹, which can contribute to the debate, exchange of knowledge, and develop solutions and technologies associated with the Sea Power.

In light of the above, the decision to build warships in the country has several nuances, but the key aspects are to have continued resources and prioritize which or what types of means built in the country. A reliable Sea Power cannot depend entirely on ships purchased or manufactured from abroad. It is necessary to have an adequate number of ships manufactured in the country, to ensure its logistical support and avoid material supply interruptions.

Proposals and Conclusion

The situation of South Atlantic has been relatively quiet for Brazil, and in the last 150 years, only the Malvinas/Falklands Conflict, in 1982, affected this strategic maritime environment. It is a fact that threats from illegal fishing, issues related to the environment, and the possibility of piracy have maintained BN in constant readiness and concern. Thus, BN considers deterrence as "characterized by the maintenance of a modern, balanced and levelheaded Naval Force, capable of contributing to discourage any military aggression"³². Hence, it is necessary to have a strong Naval Force able to defend and protect the Blue Amazon and overcome the threats to national maritime interests in the South Atlantic.

It is reasonable to believe that it is possible to go ahead with these ideas, not entirely new, but that can be improved. The central aspect of being enhanced is the Maritime Mentality of the

³¹ According to Viederyte, Rasa (p. 625). "The Maritime Cluster is a functional entity in which the various industries, such as shipping, marine industries and port operations, are in close interaction with one another not only directly but also through their company networks. Through these networks, the large companies in the maritime cluster extend their influence to the whole country."

³² Basic Doctrine of the Navy (p. 1-3).

population that can carry on all other. It is an excellent opportunity to improve BN programs and other ideas from society, including topics related to scientific research. When people connect with the things of the sea, known better what the ocean can bring to society, and understood the possibilities from the Blue Economy, it will be possible to change the oversight about the Navy. Of course, it is necessary an adequate budget, but when the government looks inside the enormous benefits of having a qualified Naval Force, it will be clear how reasonable it is.

Brazil has an immense population living close to the sea, which can watch the beautiful view and small boats arriving with fish. Nonetheless, they must look over the horizon and realize how much treasures have under the sea. Moreover, it is compulsory to develop consistent public policies about the existing resources, like that of minerals. These policies can be delivered from favorable environments where competent people can discuss it, like the maritime cluster and triple helix ecosystem.

Finally, improving international cooperation and developing the shipping industry can help to develop the country's economy and to grow the BN powerful for its national interests, including with capacity to protect the maritime trade. The actual renovation of the fleet can be the right step of beginning this growing.

In conclusion, developing a robust Naval Force, Brazil can consolidate its power position over the South Atlantic, and it will have a trustworthy condition to protect the Blue Amazon, as a Sea Power. The absence of declared enemies, or of other actors that could unduly threaten national sovereignty, should not be used as a determining factor in order not to have a Naval Force adequately equipped and prepared to defend Brazilian jurisdictional waters and their existing wealth. In regions unprotected by adequate naval strength, the threat to their sovereignty is real.

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