Machine Translated by Google

MINISTÉRIO DA
DEFESA

2017

MINISTÉRIO DA
DEFESA

CENÁRIO DE DEFESA
2020-2039
Sumário Executivo

SISPED
SISTEMA DE PLANEJAMENTO ESTRATÉGICO DE DEFESA

ASPLAN
ASSESSORIA ESPECIAL DE PLANEJAMENTO

Machine Translated by Google

DEFENSE MINISTRY
SPECIAL PLANNING ADVISORY

Defense Scenario
2020 - 2039
Executive Summary

Brasilia - DF
2017

Machine Translated by Google

Ministry of Defense

Raul Jungmann

Special Planning Advisory Esplanada dos Ministérios, Bl.Q - 6th floor 70049-900 - Brasília - DF (61)3312-9017 -

asplan@defesa.gov.br

B823c

Brazil. Defense Ministry.

Defense Scenarios 2020 – 2039 – executive summary / Ministry of Defense, Special Planning Advice. Brasília: A Assessoria, 2017. 64 p.

1. National Defense 2020 - 2039 - Brazil. I Ministry of Defense. Special Advisory Planning.

CDU: 355.02(81)

Machine Translated by Google

Apresentação

Apresentação

Machine Translated by Google

Machine Translated by Google

Presentation

The Defense Scenario 2020-2039 is intended to contribute to the development of the Ministry of Defense's strategic planning process. It represents an evolution in its management, providing an instrument of analysis, projecting trends, with reflexes for the defense. This instrument, combined with the strategic defense diagnosis, will underlie the drafting of the National Defense Policy and Strategy, the Sectoral Defense Policy and Strategy, the Strategic Defense Plan, as well as similar plans for the Armed Forces.

This publication presents conjunctural and structural aspects that may affect national security and defense, in the various areas analyzed, in addition to their possible evolutions, which will be essential for identifying the capabilities necessary to guarantee the sovereignty and integrity of the Brazilian State. and the actions to be implemented to obtain them.

With this work, the various sectors with an interest in Defense have a set of information updated every four years for decision-making and the conduct of strategic management. This will help define priorities, rationalize resources, coordinate actions and establish synergies that will result in better use of budgetary resources and an increase in administrative and operational efficiency.

ASPLAN, July 2017.

Machine Translated by Google

Machine Translated by Google

Introduction

Purpose To

identify facts and situations, conjunctural and/or structural, related to security and defense in Brazil, whose possible evolutions may impact the constitutional and legal attributions of the Ministry of Defense and the Armed Forces.

Objective

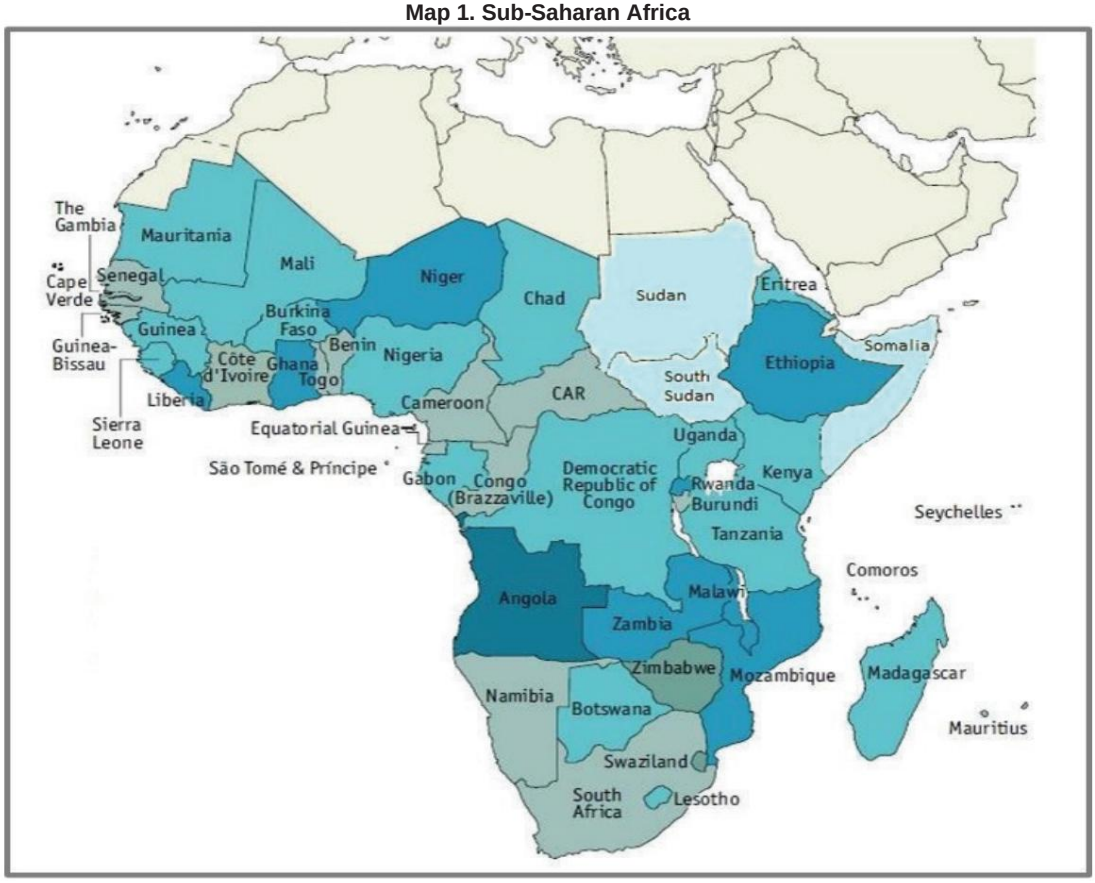
To base the process of planning and strategic management of the Ministry of Defense and the Armed Forces with a view to fulfilling their legal attributions.

Definitions

For the purpose of this document, the definitions below were

adopted: • Sub-Saharan Africa: set of African countries excluding those belonging to North Africa (Western Sahara Region, Morocco, Algeria, Tunisia, Libya and Egypt).

Map 1. Sub-Saharan Africa



Source: Economy Weblog (2017).

• External Environment: is the environment with which the Ministry of Defense interacts, but does not control. It was divided into three areas: National, Regional and Worldwide.

• Internal Environment: refers to the Ministry of Defense and the environment over which it exercises

control. • Scope Ministry of Defense: term adopted only for methodological purposes. It matches the indoor environment.

• Worldwide Scope: refers to the world.

• National scope: refers to Brazil.

Machine Translated by Google

• **Regional Scope:** refers to South America, the South Atlantic, the Antarctic Continent and sub-Saharan Africa. It has no direct relationship with the strategic environment of interest, to be defined in the update of the National Defense Policy and Strategy.

• **National Defense:** set of attitudes, measures and actions of the State, with emphasis on military expression, for the defense of territory, sovereignty and national interests against predominantly external, potential or manifest threats.

• **Dimensions:** are analysis areas. This document considers the Economic, Social, Environmental, Technological, Political and Military dimensions.

• **Future Event (EF):** is an event that may occur as a result of one or more events that carry the future.

• **Future-Bearing Fact (FPF):** is a fact or situation, which has occurred or is occurring, which may impact the problem under study in the future.

• **Implications for Security and Defense (ID):** refer to the possible impacts on national security and defense in case of consummation and interaction of Partial Implications for Security and Defense. They have the character of a general conclusion.

• **Partial Implications for Security and Defense (IP):** refer to the possible impacts for national security and defense in case of consummation of one or more Future Events, considered exclusively within a Scope and a Dimension. They have a partial completion character. • **Ministry of Defense (MD):** refers to the

set composed by the structure of the Ministry itself, which incorporates the Joint Chiefs of Staff of the Armed Forces, the General Secretariat, the Superior School of War, the Brazilian Institute of Defense Studies /Pandiá Calogeras and the Armed Forces Hospital, as well as the three singular forces.

• **National Security:** is the condition that allows the preservation of sovereignty and territorial integrity, the realization of its national interests, free from pressure and threats of any nature, and the guarantee to citizens of the exercise of constitutional rights and duties.

Approach

For the purpose of this work, the following approach was adopted:

• The theme under study is National Security and Defense.

• Only facts or situations were considered (Facts Bearing the Future - FPF) that are related to the theme, within each Dimension, in the time horizon from 2020 to 2039.

• The analyzes were restricted to identifying in such facts or situations their respective trends and possible developments (Future Events – EF), also only those concerning the theme, without making value judgments about the cause and effect relationships.

• Future Events relating to a given Fact Bearing the Future may be diametrically opposed, since they are possibilities for the evolution of a given situation, that is, hypotheses.

• For this purpose, official national and international sources were used, such as independent institutes and specialized press.

• Future Events capable of generating great impact, even if classified as unlikely, were analyzed due to the risks inherent to them.

• The level of detail was restricted to national security and defense, by focusing on the scope of possible actions for the Ministry of Defense as a whole, leaving, however, the specific developments, at the discretion of each Force, when the future preparation of their respective documents.

Machine Translated by Google

document structure

Introduction

In the Introduction section, the purpose and objective of this document are presented, as well as definitions and approach to the theme, aiming at its easier understanding.

Executive Summary

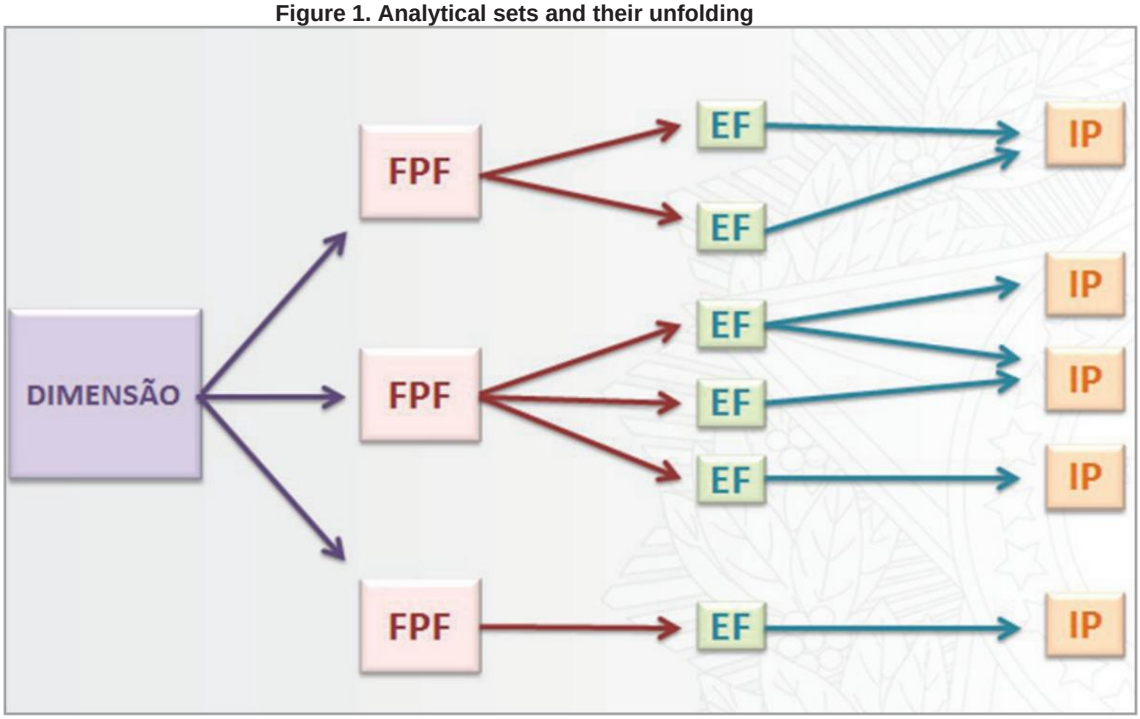
The Executive Summary section is subdivided into four subsections – Global Scope, Regional Scope, National Scope and Ministry of Defense Scope, each subdivided into six dimensions: Economic, Social, Environmental, Technological, Political and Military.

The FPF are presented as subheadings, in brown. The text is structured through the integration of summary sentences related to EF and PI. The last two (EF and IP) are assigned Occurrence Probabilities.

In this document, some data used as FPF are presented in the form of graphs and tables, as an example.

An FPF can generate one or several EFs. An EF can generate one or several IPs, which can also refer to more than one EF.

Figure 1. Analytical sets and their unfolding



Source: Author (2017).

The last two (EF and IP) are assigned Occurrence Probabilities based on research and analysis conducted by the Special Planning Advisory Office (ASPLAN) in specialized open sources, characterized by standardized expressions, expressed throughout the text, in italics and bold, aiming at allow the reader to identify them at the time of reading. Such expressions and the corresponding percentages are shown in Table 1, below.

Machine Translated by Google

Table 1. Occurrence Probability Intervals

Classification	Probability Intervals of Occurrence (%)	Terms used to characterize the range of probabilities of Occurrence
Very likely	91 - 100	Verb in the present tense: will be, will, will continue, will remain, will decrease...
Likely	51 - 90	Likely, probably...
Unlikely	11 - 50	Unlikely, may, could, could, possible, possibly...
Unlikely	1 - 10	Unlikely, improbably...

Source: Author (2017).

Once all the FPF, EF and IP are defined, and considering their effective implementation, the possible Implications for Security and Defense (ID) are formulated, which have the character of final conclusions of the Analysis.

These will identify the infl uences that, both the internal and external environment, and respective interactions, may exert on national security and defense, thus contributing to the definition of the National Defense Policy and the National Defense Strategy.

Implications for Security and Defense

To better support the decision-making process, DIs are classified into three categories: Future Characteristics of Conflicts, Opportunities and Threats. In the first case, the intention is to visualize how future conflicts will be; in the second, what will be the opportunities for obtaining the capabilities necessary for Brazil's security and defense; and, in the third, what are its possible threats.

References

The Reference section is intended to inform the bibliography and reference sources used in the preparation of this Executive Summary.

Machine Translated by Google

Âmbito Mundial

Âmbito mundial

Machine Translated by Google

Machine Translated by Google

Economic Dimension

Globalization It is likely that the process of globalization will continue with an increasing weight of emerging countries, but also suffer resistance of a nationalist and protectionist nature due to issues such as unemployment and deindustrialization and financial volatility, among others. Fluctuations in large economies, such as the 2008 crisis, which began in the US, will affect global economic activity in varying degrees, depending on each country's ability to manage them.

This impact will probably lead to an increase in multilateral and bilateral agreements and international norms of regulation and macroeconomic transparency, aiming at greater stability and mitigation of adverse effects. It could also lead to an increase in multilateral agreements, however, with less chances of success than bilateral agreements, since they require consensus from a greater number of countries.

Multilateral bodies – regional and international – could place themselves at the heart of dispute solutions in the economic dimension, increasing the prevalence of their decisions over unilateral and bilateral ones, in addition to acquiring an imposing character for other nations. Countries that do not submit to these decisions could suffer economic, political and even military sanctions, under the allegation of guaranteeing stability to global supply chains and systems.

Therefore, globalization will increase the importance of the economic dimension in the exercise of national power, which will be strengthened by integration into economic blocs.

world economic growth

Average levels of world growth could remain similar to those seen in recent years, with emerging economies offsetting the lower performances of developed ones.

China could become the largest economy on the planet, and it is likely that emerging countries, especially those belonging to the BRICS group, will increase their power of global influence.

As part of this process, the addition of global actors, with greater surpluses of power and resources to invest in military capabilities, could increase the incidence of conflicts, which would affect the entire international community and attract extraregional nations, by threatening supply chains.

Emerging countries' enrichment and global investments Emerging economies are likely to continue with their high trade balances, accumulating capital and reinvesting it globally, promoting greater global interdependence and cooperation, as well as increasing peaceful conflict resolution, despite possible trade frictions between established powers and emerging.

Development and increased demand for natural resources The development of nations will drive them in the search for natural resources to support them and meet the growing demands of their populations. Oceans, polar regions and continental areas still unexplored will be the object of growing and intensive economic activities. The increase in demand could cause a shortage of these resources, leading countries with excess power to use them to guarantee new sources of supply across borders.

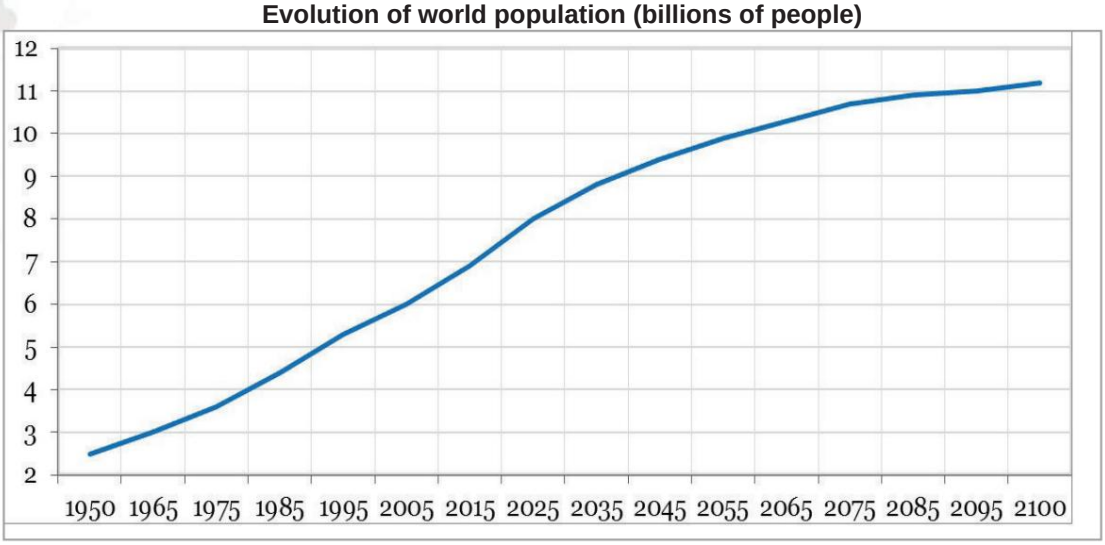
On the other hand, holders of large reserves of natural resources are likely to increase their exports of raw materials and manufactures derived from them, enriching themselves and generating foreign exchange surpluses for investment in other activities, including the defense of their wealth.

Machine Translated by Google

Social Dimension

Population Growth The world's population will probably reach between 8 and 10 billion, which will increase the demand for natural resources and may generate shortages and, consequently, conflicts.

Evolution of world population (billions of people)



Source: UN (2017).

This growth, mainly in developing countries of the Asian and African continents, due to the high rates as well as the institutional fragility, will probably increase the level of unemployment and underemployment, increasing criminality, including those related to terrorist activities and insurgencies, which could be used pockets of poverty.
On the other hand, a larger population will probably imply greater international influence for emerging countries, since their consumer markets and national production should also increase. This fact could strengthen the defense capabilities of emerging countries, providing them with greater resources and bargaining power.

Disorderly urbanization in developing countries Disorderly urbanization in developing countries will continue to degrade social well-being and increase urban violence, to the point of exceeding the capacity of public security agencies and requiring the action of armed forces, which must be able to to operate in such areas.

Poverty Reduction It is likely that poverty will continue to decline in the coming years, which may reduce the incidence of conflicts around the world, due to the greater satisfaction of human needs. However, it will still remain expressive. In this way, and considering the possibility of scarcity of natural resources, humanitarian crises will continue to occur, in addition to the resulting internal a
Such crises will require greater action by governmental and non-governmental organizations, as well as peacekeeping forces, to preserve lives, promote governance and maintain public order.

Inequalities The feelings of injustice, generated by the regionalized and unequal enrichment promoted by globalization, will probably continue to fuel internal and external conflicts, increasing criminality, acts of insurgency and, eventually, even terrorist actions, as occurs, among others, in the East Average. Therefore, it is likely that the reduction of inequalities between nations will reduce conflicts and the use of force.

Machine Translated by Google

Public security The regions most affected by problems related to public security are Sub-Saharan Africa, South Asia, South America, Middle East and North Africa, Southeast Asia and Central America and the Caribbean.

Given the socioeconomic conditions prevailing there, governments would not be able to adopt definitive solutions, and it is likely that the current situation will continue, or even deteriorate in some of these conditions, due to the influx of criminal organizations, insurgents and terrorists, with the establishment of bases of operations and transnational action.
In this context, it is also likely that there will be an increase in border controls by threatened countries, and there may also be an increase in the need for multinational forces to act to impose peace and/or cooperation in order to train local armed forces and police to combat such organizations. .

Ideologies

Ideological issues related to politics, religion, nationalism, the environment, among others, will continue to generate inter and intra-state tensions and conflicts, which could be leveraged by non-governmental organizations and promote the articulation and association of extremist groups in the practice of violent actions.

Information and social mobilization

The ease of communication between any part of the world – internet, mobile communications – is likely to promote greater awareness and social mobilization, both nationally and internationally, in defense of causes such as the environment, humanitarian catastrophes, human rights and democracy. This will increase the influence of public opinion on governments.
In this context, it is also likely that public opinion will be manipulated by state and non-state agents, including in the great Western democracies, in order to enhance conflicts, in order to make feasible and justify the application of diplomatic, economic and military instruments of greater impact.

Environmental Dimension

Consequences of Global Warming The global warming process is likely to continue. The ensuing environmental degradation could lead to environmental catastrophes and the scarcity of natural resources. The realization of such a situation will require greater humanitarian assistance to poorer regions and/or multinational forces to maintain public order, and may also generate international conflicts of serious proportions.
On the other hand, such seriousness could mobilize governments, societies and companies to establish international norms, by consensus, for environmental preservation, which would avoid conflicts.

health insecurity

The large flows of goods and people around the world could promote pandemics, proliferating human, animal and plant diseases that culminate in humanitarian catastrophes. Neutralizing these will depend on state capacities to develop and produce vaccines, in addition to controlling ports, airports and borders.

Technological Dimension

Space Exploration Human dependence, both civilian and military, on space exploration will continue to grow. Access to images, signals, means of communication and global positioning systems, among others, will increase, as well as the processing of information from data collected and transmitted by satellites, data that support scientific research, in addition to the planning, execution and control of human activities, both for civil and military purposes. These technological facilities will also be used by criminal organizations.

Machine Translated by Google

The transfer of space technologies will continue to be hindered, denied or conditioned, according to the interests of their holders, who will be more interested in selling products and services. Countries with large consumer markets and/or with a surplus of foreign exchange could impose conditions on suppliers, given the prospects of profits and strategic partnerships.
In this way, the development and sovereignty of nations will depend on the mastery of space technology and the occupation of orbits, otherwise, they will be subject to the purchase of services that can be spied on, conditioned and/or interrupted by suppliers.
On the other hand, the development and financing of space projects with civil and military applications will continue to promote synergies and cost reduction.

Saturation of Earth's orbits Space

orbits and communication channels are finite and their occupation takes place by negotiation within the scope of the United Nations Organization – UNO. Due to the saturation of both, there will be increasing restrictions on new countries that intend to launch their own satellites.
Those who do not quickly occupy the orbits of their interest, and with means under their own control, will depend on the purchase of services related to the multiple civil and military applications of the satellites, which may be conditioned and/or interrupted by the suppliers.

Growing application of robotics to human activities The application

of robotics to replace human activities will continue to grow. There will be greater availability of remotely piloted vehicles (aerospace, water and land) and robots, which will be cheaper and have wider applications. They will generate economic and military advantages by substituting labor and reducing risks to security and defense forces.
Analogously to space technologies, development and technological independence will depend on the domain of robotics. Countries that do not have it will depend on those that do.

Communication and information technology

Technological advances will reduce costs and increase the efficiency of communication and information systems, whose access will expand to population segments currently excluded from global interconnections.
States with greater resource constraints could improve their governance indices, as they have better information for government actions, especially in social areas.
As an adverse effect of expanding users and increasing the capacity of communication and information systems, there will be an increase in malicious cyber activities, including cyber attacks promoted by state actors and organizations (covert) or non-state (criminal), whether ideological or not.
There will therefore be a need to increase protection for communications and information systems, however, it is unlikely that global infrastructure will be disrupted by such actions, due to the damage and reactions that they would cause in the international community, causing strong state reactions, regardless of interests and political-ideological strategies.

Increased demand for energy generation The worldwide

preponderance of unsustainable matrices in energy generation could be maintained due to efficiency, costs and time required for their replacement. An increase in demand under these circumstances will continue to degrade the environment and could trigger conflict.

However, this same degradation, combined with the possibility of accidents, could promote attitudes contrary to research and nuclear technological development, in addition to motivating the reduction in the use of thermoelectric energy and redirecting resources to clean and renewable sources such as solar and wind, among others. others.
In case of aggravation of environmental issues and/or advancement in their technological development, nations that develop clean, non-aggressive and sustainable technologies could impose a similar pattern of production and consumption.
There will, therefore, be technological improvement of energy systems, which will reduce generation and consumption costs, and this decrease may be reflected in desalination and irrigation systems, supplying desert areas and making them arable, thus mitigating the possibility of a global shortage of energy. water and food.

Machine Translated by Google

There will probably be adaptation of military logistics systems for the use of sustainable energy, mainly solar energy, as they would have lower logistical costs to remain in operation, being more independent in relation to fuel supply, operators and maintainers, among others.

The use of sustainable energy that is not aggressive to the environment could mitigate conflicts, in view of the environmental, social and economic catastrophes that it would avoid.

Growth of research focused on food production Research focused on food production – agriculture, livestock and fish farming – could expand frontiers of intensive exploration and production focused on sustainable practices, meeting food demands with less consumption of natural resources, which would reduce the incidence conflicts with such motivations.

Investments in research, development and innovation (RD&I)

Due to current capabilities and investment levels in RD&I, countries at the forefront of technology – USA, Russia, Germany, Japan, China, France, United Kingdom, Italy, Sweden, among other developed countries – will remain so.

The US, in turn, due to current levels of technological development and the asymmetry of investments in relation to other countries, will maintain its military superiority.

This technological asymmetry will imply dependency relationships between countries and will continue to function as a deterrent.

However, the gap between the US and other nations and the large sums required for RD&I will encourage cooperation between other emerging and developed countries.

Political Dimension

Global power

Due to the development of emerging countries, an increase in multipolarity is likely, with a shift in the center of global power from West to East, in addition to an increase in rivalries between States and a decline in the relative power of the USA.

There could be greater regional cooperation, aiming at national strengthening, and greater international insertion, intensifying, however, competition between blocs. European countries will seek economic, political and military partnerships with emerging countries, in order to benefit from their development and strengthening.

This same multipolarity could create conditions for the strengthening of multilateralism, to be exercised within the scope of the UN, which would play a more decisive role in establishing principles for ordering relations between member states, with emphasis on law and international institutions.

However, there is also the possibility of weakening that Organization, which would gradually lose power to regional bodies, due to the increase in interstate rivalries.

In this way, the strengthening of multilateralism, as it is based on international law and institutions, will promote the increase in peaceful solutions to conflicts, and it is also unlikely that the increase in rivalries resulting from growing multipolarity will transform into armed conflicts, due to the interconnection global economies.

On the other hand, a more "isolationist" policy by the US, such as its withdrawal from the Trans-Pacific Partnership - TPP, could impact the "world order" in the short and medium term, due to the combination of political variations , economic and even psychosocial, on more prominent global actors such as the European Union, Japan, BRICS and the UN itself.

Democracies need popular support for long-term armed conflicts.

The participation of democratic States in conflicts will continue to be defined and parameterized in the political and social dimensions, through convincing. This will increase the importance of social communication activity and compliance with international standards. In the first case, to reinforce their own ideas and prevent opponents from manipulating the population in their favor. In the second, to avoid national and international condemnation.

Machine Translated by Google

This will require greater involvement of professionals specializing in social communication and international law in crisis and conflict management.

Expansion of democracies With the expansion of democracies, there will be political stability and an increase in mutual trust in regions formed by them. Efforts to increase global norms that promote this type of regime and human rights will likely continue, in addition to the increase in international norms to regulate major global issues, such as environmental preservation, non-proliferation of weapons, exploration of the sea, space and of the cybernetic environment, among others.
Also likely will be the conditioning of aid to needy countries, the exercise of democracy and respect for human rights, as well as the increase of political, economic and/or military sanctions on countries that do not comply with international norms. States with institutional weakness and dependent on external aid to survive and maintain economic and political stability could adapt to western democratic models that provide them with aid or impose sanctions.
Consequently, there could be an increase in peaceful solutions to conflicts, since democracies favor such solutions.

UN role in conflict resolution The growing role of the UN in resolving inter- and intra-state conflicts may also increase the formation of multinational coalitions to impose political, economic and military sanctions, which would increase the demand for contingents from its member countries.
However, such coalitions could be vetoed by the permanent members of the Security Council (SC), with a view to their interests and under the argument of extrapolating the limits of resolutions and escalation of violence against the civilian population.
The application of sanctions will probably be gradual and incremental, starting with the economic and political ones, until reaching the military ones, in order to guarantee political support for the legality of the actions, whether this legality is real or based on the extrapolation of concepts such as the responsibility to protect, eventually prevailing due to the power asymmetry of the western powers.

Common Global Domains

The exploration of common global domains – oceans, airspace, outer space and cybernetic space – will probably be restricted to some countries that already operate in them or that will soon do so, as the possibilities for doing so are limited. Those who do not have such capacity will no longer use and have access to natural resources associated with such domains and will depend on the purchase of services, which may be conditioned and/or interrupted by suppliers.
Military capacity will be directly proportional to said access, and armed forces that are unable to do so will depend on alliances for their effective employment. Under such conditions, there could be conflicts over access and/or use of common global domains.

Conflicting regions

Africa, Asia and the Middle East will continue to present problems of political instability and resulting conflicts, with the possibility of proliferation of weapons of mass destruction (nuclear, radiological, bacteriological and chemical), arms races and fragmentation of States.
In this context, there could be an increase in peacekeeping/enforcement forces; indirect confrontations between great powers, through sponsorship of antagonistic fighting factions; and pre-emptive NATO strikes against alleged weapons-of-mass-destruction plants.
However, direct military confrontation between great powers is unlikely, due to the catastrophic humanitarian consequences and the commercial damage on a global scale that they would cause.

Prioritization of Asia by the US The intention of the US to deepen its relations in the Asia-Pacific, considering the excess power of that country, which can be used in favor of allies; existing alliances; and the increase in global trade and security, all with mutual benefits for the actors in question, could establish an environment of greater cooperation and, gradually, for peaceful solutions of old disputes, such as those involving China and Taiwan, North Korea and South Korea, disputes in the South China Sea, among others.

Machine Translated by Google

However, such initiatives could be understood by China as an attempt to isolate it in the region, threaten its maritime lines of trade and prevent its full development, intensifying rivalries, dividing the region into antagonistic blocs and provoking an arms race. Such mistrust could provoke indirect conflicts between the US and China, through allied states, terrorism and cyberattacks.
However, it is unlikely that such rivalries will escalate to the point of provoking a direct conflict between the two, as this could expand across the region or acquire worldwide proportions. NATO would be involved and probably Russia, given its status as a military power, interests and geographic position. There would be a nuclear risk and the world economy would be drastically affected, possibly causing a catastrophe. This possibility, in turn, could deepen the issues related to the non-proliferation of weapons of mass destruction, resulting in actions to reduce them.
Due to the economic, political and military importance of the USA, China and their respective allies, extraregional countries could join multinational alliances centered on both countries.

Terrorism

NATO will continue to act in a determined and decisive manner against terrorist groups and countries that may support them, directly or indirectly, which could displace terrorist networks to territories they have not yet explored.
There will probably be an increase in initiatives, within the scope of the UN, in favor of the control of weapons of mass destruction, as well as radioactive materials. Pre-emptive attacks could be launched against plants producing them under the allegation of supporting terrorist organizations.
Immigrant communities could be used and/or act covertly in ideological conflicts supporting terrorist organizations, which could promote the proliferation of independent cells due to the ease of coordination, transmission of teachings and dissemination of actions provided by the internet.
Countries that provide direct or indirect support to terrorist organizations will suffer UN/NATO sanctions, which may range from economic and political to even military.
The Islamic State (ISIL/EI) will probably be defeated militarily in northern Iraq and Syria, but will continue to attract supporters willing to form terrorist cells, subordinate or even independent, acting against targets in Europe, the US and allies in the fight against international terrorism.

Military Dimension

Global military capabilities

Depending on the magnitude of the asymmetry in their favor, the US and NATO will maintain their military superiority, with the ability to act globally, even if there are significant budget increases in China and Russia, or if they are allied, and if they disregard traditional allies the former, such as Japan, Australia and South Korea, or even possible agreements with Saudi Arabia and India.
China, maintaining its current rates of increase in defense spending, could, in an isolated comparison between states, become the second military power in the world, expanding not only its control over the South China Sea, but its ability to project power, particularly towards the trade routes of your interest in Asia and Africa.

North Atlantic Treaty Organization (NATO)

The North Atlantic Treaty Organization (NATO) will probably continue to operate in any part of the globe, when deemed necessary by it, but not without first structuring alliances with partners, using its excess power for this purpose. Such interventions could eventually be blocked in the UN Security Council, by vetoes from Russia and/or China, as permanent members.
Due to current capabilities, as well as the respective investments in defense, NATO will maintain the military asymmetry in relation to Russia and China, which could systematically place themselves in opposing camps. Thus, local and regional conflicts would suffer indirect interference from these actors, who would start to support opposing factions.

Machine Translated by Google

Even when considering the hypothesis of an alliance between Russia and China, a confrontation between them and NATO would be unlikely, since the asymmetry of power in favor of the latter is decisive; the conflict would globalize; there would be nuclear escalation with chances of mutual destruction; their economies are interconnected with those of the West and there would be huge trade losses. For the same reasons, that alliance will seek to avoid situations that leave the two powers without diplomatic alternatives that lead them to military solutions.

Opponents as Systems and Actions Against Centers of Gravity Opponents in conflict will continue to be addressed as systems, whose subsystems support their war efforts and have centers of gravity that, once neutralized, lead to the achievement of established military and political objectives to achieve the state end desired by the parties.

In the phases prior to the combats and, also, to prevent them from happening, contenders will combine and coordinate the sources of state power to impose their will. Such sources will be tapped in the form of political and economic sanctions, blockades and propaganda.

Due to the systemic and multidimensional characteristics of the centers of gravity, their defenses must be integrated and also systemic, identifying sensitive points and areas and structuring systems that combine aerospace defense (air and anti-aircraft), land and sea, as well as communications systems and information.

Given the lack of centers of gravity in very poor countries with institutional fragility, such as in South Asia and the Horn of Africa, among other regions, the approaches will require different strategies, combining military operations and psychosocial actions, aiming to conquer the population through the break of political, ethnic, national and religious resistance.

The planning of military operations, both defensive and offensive, conventional or not, will continue to be based on its own systemic analyzes and those of the opponents, considering all dimensions – economic, social, environmental, technological, political and military – in order to identify centers of gravity, whose neutralization and defense lead to established military and political objectives to achieve the desired end state.

Technological warfare

Military asymmetry is directly proportional to technological asymmetry. This will ensure US and NATO military hegemony, keeping them able to act globally.

Countries unable to develop technologies that increase their military power, due to the high costs and necessary knowledge, will probably seek to form and/or expand alliances to obtain such capabilities, since the armed forces will continue to depend on advanced technology for effective use.

Technological asymmetry will encourage military solutions to conflicts, as it ensures success in the use of force, with lower costs and casualties, lower political risks and greater impunity for aggressors.

Power Projection in US / NATO / EU-Led Coalitions Due to the synergy achieved, the increase in power generated and the resulting successes, the US and NATO countries will continue to employ their armed forces in multinational coalitions, in any part of the world, whenever they deem necessary and militarily practicable.

This asymmetry of force, similarly to the technological issue, will encourage military solutions to conflicts, as it guarantees success in the use of force, with lower costs and casualties, lower political risks and greater impunity for the aggressors.

Diffusion of technologies and weapons development The greater accessibility to technologies allows greater development and commercialization of weapons, which will probably reduce the technological gap between the war systems of emerging and developed powers.

Command, control and intelligence activities depend on satellites, so it is likely that anti-satellite systems will be developed, with the first ones starting to configure targets in future conflicts.

Changes in the balance of forces, as well as arms races, could occur in regions that have a higher level of political instability and insecurity, mainly in the Middle East and Asia, leading to the development and acquisition of ballistic missiles and weapons of mass destruction (nuclear , radiological, bacteriological and chemical).

Machine Translated by Google

Criminal organizations and insurgents could acquire and use such weapons. They will also increase the use of improvised explosive devices, due to the ease of developing them from products available on the market for other purposes.
In this context, conventional and/or irregular armed forces from poor and/or emerging countries, as well as criminal and insurgent organizations, will acquire more lethal weapons, which may cause greater material damage and casualties to forces and populations of relatively more powerful

Remotely Controlled Artifacts Increased

availability and reduced costs allow greater access to remotely controlled artifacts for use in land, sea, air and space environments. This will increase its use for military and police purposes, aiming at increasing efficiency and reducing risks, the same happening on the part of criminal organizations, insurgents and terrorists.
The replacement of human beings by such devices saves the lives of those who use them, and their multiple and growing applications will add extensive value to military superiority, as has been happening in conflicts involving NATO and Israel since 1991.
As it ensures success in the use of force, with lower costs and casualties, lower political risks and greater impunity for aggressors, the use of remotely controlled devices will encourage military solutions to conflicts.

Updates to Military Employment Doctrines Satellites

and ballistic missiles travel through outer space. Command, control, communications and intelligence (C3I) activities rely on satellites. At the operational and tactical levels of military operations, platforms, manned or unmanned, for intelligence, surveillance, target acquisition and reconnaissance (IVA2R or ISTAR) data collection will be of increasing importance. Consequently, it is likely that there will be combats in this environment, and, for this purpose, specific military doctrines have been developed.
With military operations centered on networks and, as such, dependent on communication and information systems, there will be an increase in cyber warfare. The need to guarantee the use of the information domain and prevent the opponent from doing so (Information Superiority) will increase. Cyberattacks will also be used against national infrastructure – government, economic and military – that support the war effort. As they are non-lethal weapons, they may advantageously replace missiles, bombs and cannons in specific situations, since they do not endanger the combatants themselves and the opposing civilian population.
Both emerging and developed countries will modernize their forces in order to equip them or improve their space systems (satellites and anti-satellite weapons), air defense (radars, aircraft, air-to-air and air-to-surface missiles, anti-aircraft defenses), missiles surface-to-surface (ballistic and cruise), stealth and/or remotely piloted vehicles and artifacts (air, land and naval), submarines, fast surface vessels, in addition to their computer networks, making them safer and capable of performing cyber attacks. Everything aimed at projecting power and defending against such projection.
In such a context, the use of armed forces will depend on superiority in the space, air and cybernetic domains, since, without it, air, naval and land operations will be seriously impaired, as well as the corresponding exercise of command, control, communications and intelligence (C3I).
As a result of technological advances, the employment doctrines of the armed forces will shift towards employing smaller numbers with greater capabilities, focused on quick, punctual operations and preventing collateral damage. The fighters will be equipped with state-of-the-art technologies; they will have the capacity to operate complex systems; they will train themselves to use the maximum of their physical and mental capacities; they will be able to perform all types of mission; they will have high decision-making capacity; they will be quickly mobilized and commanded and controlled in real time.

Asymmetrical/Hybrid Conflicts

Conventional conflicts arising from power projection/invasion are likely to transition into asymmetrical/hybrid conflicts against the victors.

Irregular fighters and criminal organizations will mainly operate in densely populated areas. They provide anonymity, logistical facilities, and the possibility of collateral damage to innocent civilians, which would pit the local population against regular forces.

Machine Translated by Google

The facilities for acquiring equipment and transmitting information in a veiled and universal way, through the use of mobile communication systems and the Internet will continue to be the basic instruments of propaganda and coordination of actions around the world.
Weaker states could increase their ability to resist asymmetric threats, using the latest technological facilities to publicize their causes (propaganda), in addition to carrying out terrorist actions and cyber attacks.
Due to instability in regions such as the Middle East, Horn of Africa and South Asia, as well as the transition from conventional to asymmetric/hybrid conflicts, the latter will probably increase, mainly in urban areas.
Asymmetric/hybrid conflicts will require forces specialized in urban combat, with high mobility and flexibility, connected in a network, capable of operating around the clock, equipped with weapons, ammunition, vehicles, robots and other artifacts specifically designed for use in this environment.

The effectiveness of intelligence and social communication activities will depend on the intense monitoring and use of the internet and mobile communications, as they are the main tools for coordinating actions and propaganda by insurgent organizations.
Intelligence activities will require greater agility and precision in the production of information, given the mobility and mischaracterization of opponents, as well as the need for greater knowledge in defining military objectives, to avoid collateral damage to the civilian population.
Social communication, psychological operations, cyber defense and electronic warfare (Op Info) activities will require intense coordination with intelligence and civil affairs with greater agility and precision in the production of information, given the mobility and mischaracterization of opponents, as well as the need greater knowledge in defining military objectives to avoid collateral damage to the civilian population and build an effective relationship with these co

Machine Translated by Google

Âmbito Regional

Âmbito Regional

Machine Translated by Google

Machine Translated by Google

Economic Dimension

Abundance of natural resources South America and sub-Saharan Africa have an abundance of natural resources in an environment of economic and population growth around the world. This growth will increase the demand for such resources, opening up trade opportunities that will likely transform both regions into major world suppliers of food, raw materials and products derived from them.

This increase in demand, however, could generate pressures on world consumption and, although unlikely, due to the harmony of political and commercial relations of the countries in the region with the rest of the world, nations with excess power could seek such resources in waters South American and African jurisdictions, through legal questioning of these jurisdictions and/or in a coercive manner.

In case of high world shortages, multilateral organizations could impose international control over the exploitation and distribution of such resources. This, however, would be unlikely, given the political and commercial relations of the international community and the democratic principles defended by it, which, although not always practiced, depend on conflicting state interests, making it very difficult to reach the necessary consensus for a solution of such magnitude. .

Consequently, the commercialization of natural resources available "in natura" or industrially processed, in an environment of growing world demand, will probably promote the enrichment and development of the region, increasing its integration and international insertion and, consequently, its economic power.

However, the possibility of scarcity of these resources will require greater defense capacity, considering the effective monitoring and control of jurisdictional waters, airspace and territory, in addition to the possibility of imposing economic and political sanctions, embargoes and exclusion zones.

The same scarcity of natural resources, if related to West Africa (Gulf of Guinea), would probably demand Brazil's participation in the fight against piracy due to its economic interests in the area, particularly regarding the supply of Nigerian oil. Add to this the fact that the nations of the Gulf of Guinea region do not have the means to face maritime piracy.

Regional economic growth Due to favorable conditions related to natural resources, internal market (in the case of South America), external investments, GDP size, trade flows and increased cooperation through economic blocs and bilateral agreements, continuity is likely of regional economic growth, resulting in an improvement in the socioeconomic conditions of the South American population.

In sub-Saharan Africa, however, despite the current pace of growth and the prospects for its continuation, it is likely that part of the population will continue to live in extreme poverty and starvation, due to low productivity and institutional fragility, added to high levels of corruption.

The exploitation of natural reserves and the growth potential of the African market, in turn, could increase competition between foreign companies and generate rivalries between their countries of origin.

Therefore, economic growth and the consequent enrichment of South America will increase its regional integration and international insertion and, consequently, its economic power, which will probably eliminate the occurrence of inter and intrastate armed conflicts in the subcontinent.

With regard to sub-Saharan Africa, the improvement of economic conditions will not be enough to attenuate the tensions generated by poverty and hunger, which will give continuity to the constant inter and intra-state conflicts.

Unlikely, however, would be armed conflicts between extra-regional powers over African markets. The global interdependence of economies, both developed and emerging, would dampen the rivalries arising from the increased competition between foreign companies operating there.

Increase of economic blocs The formation of economic blocs will promote cooperation and induce synergies between the economies of its members, which will be strengthened. However, this could lead to the emergence of rivalries between regional blocs, in the sense of channeling investments and expanding markets.

Machine Translated by Google

Integration into regional blocs, therefore, will increase the economic power of member countries, a fact capable of stirring up spirits and rescuing old disagreements. However, in South America, it is unlikely that they will turn into armed conflicts, due to the commercial damage that would result and the level of existing relations, both in the regional and international context. In sub-Saharan Africa, however, the high levels of poverty and institutional fragility could allow economic disputes to transition to warlike solutions.

Economic instability in South America

Regulatory instabilities generated by crises could cause problems for Brazilian companies operating or that will operate in economically unstable countries, making unfeasible or interrupting multinational defense projects, whether due to lack of financial resources or changes in the conduct of economies.
In Venezuela, the current (2017) economic deterioration is likely to continue and deepen political and social instability, causing massive immigration to Roraima, with the ensuing humanitarian crisis.

Social Dimension

Poverty and inequality in South America Due to the levels of poverty and inequality still prevailing, it is likely that social tensions will continue in several countries of the Region.
Although improbable, due to the constant improvement of economic and human development indicators – HDI, institutional rupture could occur in countries that slow down or reverse such trends.
In such circumstances, although unlikely, these internal social instabilities could be exported to neighboring countries, in the form of migrations caused by scarcity and unemployment or by xenophobia against foreign workers and businessmen.

Poverty and inequality in sub-Saharan Africa Even with high economic growth, levels of poverty and inequality will probably remain at high levels, with numerous incidences of armed conflicts and humanitarian crises, which will give continuity to foreign participation, per UN resolutions and mandates , to stabilize troubled regions.

Transnational Organized Crime and Public Safety The Stabilization of Cocaine Users in North America and Europe; the incremental bias in Africa, Asia and Latin America; the greater repression of drug trafficking in Colombia, with the consequent displacement of coca plantations, refining laboratories and trafficking routes from that country to its neighbors; the size of the world cocaine market; the current potential of local consumer markets and their possibilities for growth; the increasing efficiency of traffic networks; the social inequalities and institutional fragility of most countries in the region will probably encourage the increase of transnational organized crime in South America and sub-Saharan Africa, due to the profit opportunities arising from the sale of drugs and related crimes, such as arms trafficking and of people.
In this context, countries that are unable to prevent the growth of transnational criminal organizations will have their socio-political-economic conditions degraded by the spread of violence and corruption promoted by those organizations.
States with institutional weakness, especially in sub-Saharan Africa, will probably be controlled by criminal organizations, due to their high power of corruption and to promote antagonisms and internal violence. Civil wars and UN interventions through stabilization forces are also likely.
Due to the determined action of the USA and Europe against terrorism, after the attacks of 9/11/2001, state support and hosting of terrorist organizations became very risky, even if disguised. Coalitions under UN and/or NATO sponsorship, in addition to isolated US actions, may attack or invade the hosts/sponsors. As a result, it is likely that funding for terrorist activities will increase through drug trafficking.

Machine Translated by Google

The power of criminal organizations, in many cases, will surpass the capacity of public security agencies in South America and Africa, requiring the intervention of armed forces.
On the other hand, the effectiveness in combating transnational organized crime will depend on the eradication of misery and poverty, which make their victims cooptable by criminal organizations. These remunerate those who provide them with services well above current standards, allowing the satisfaction of extreme needs not met by the respective States.
Such a condition compensates for the risk of legal sanctions and makes available, in itself, large contingents of people willing to run it due to lack of options.
Therefore, the power and "modus operandi" of transnational criminal organizations will require an integrated multilateral approach so that they can be effectively fought and defeated.

Environmental Dimension

Effects of regional economic development Due to the demands for economic and social development in the region, it is likely that this will occur to the detriment of sustainability, maintaining or accelerating the process of environmental degradation.
Due to the possibility of future environmental catastrophes, productive degradation and international boycotts, there will probably be pressure from political parties, business sectors and non-governmental organizations on rulers, in the sense that effective measures are adopted for environmental protection and sustainability; or even political and economic sanctions by international organizations on countries that do not establish proper control.
It is also likely that products whose production chains affect environmental sustainability will be the object of an international boycott promoted both by international organizations and by governmental and non-governmental organizations.
On the other hand, the possibility of environmental catastrophes and international measures to ensure environmental preservation will probably increase the carbon credit market and the resulting profits, benefiting the Region.
In this way, internal and external political and economic pressures, allied to wild regions, great distances, demographic gaps, insufficient infrastructure and resources, among others, in addition to the possibility of profits from the sale of carbon credits, could lead governments to make use of its armed forces to curb aggression and guarantee the protection of the environment, both in sub-Saharan Africa and in South America.
However, effective environmental control will depend on the ability to monitor and control territory, airspace and jurisdictional waters. Therefore, there will be a need to increase quantitative and qualitative capacities to identify illicit acts, prevent them and repress them.

Effects of climate change

Environmental disasters such as those resulting from droughts, floods and windstorms could cause political and social instability, due to hunger, human displacement and the disruption of economic activities that may result. In such circumstances, armed forces could be called upon to support the Civil Defense and ensure law and order, given the exhaustion of the capabilities of public security agencies.

Health insecurity The flows of people and goods could promote the rapid proliferation of human and animal diseases, as well as agricultural pests, leading to uncontrolled mortality and/or hunger, causing sociopolitical instability inversely proportional to each State's capacity for governance.
The voluntary dissemination of diseases, mainly those related to animals and plants that are part of the food chain, although unlikely, could be used in commercial disputes, terrorist actions and interstate conflicts, without this being perceived as biological warfare.
In cases of a pandemic, the capabilities of bodies dedicated to health issues, as well as border, port and airport control, will likely be exhausted, requiring emergency action by the armed forces.

Machine Translated by Google

Technological Dimension

Regional technological development Due to the scarcity of financial resources and the time required for development, and latent social and infrastructure demands, the countries of the region will probably remain dependent on the supply of products and services contracted from countries at the technological forefront. However, depending on regional economic growth, a favorable environment for investments in technology could be created and/or increased with a view to meeting the potential regional consumer market.
However, the current regional technological gap will not be overcome, requiring the importation of security and defense systems, which will restrict the increase in dissuasive capabilities, insofar as it limits actions to guarantee its own security and defense.

Domain of agricultural technologies Despite being a large or potential agricultural producer and exporter, the region could remain dependent on multinationals if it does not develop and/or assimilate technologies in this area. However, due to its agricultural vocation, the region could attract investments for the development of advanced technologies, making it self-sufficient and exporting them.
Therefore, technological dependence in the agricultural sector could compromise food security in the region, while its dominance, in a world of growing consumption and the possibility of scarcity, could increase the economic power of its holders and be used as an instrument of negotiation and partnerships.

Political Dimension

Increased cooperation and regional integration The increase of cooperation and regional integration could promote greater dialogue and multilateral participation in the solution of intra and interstate conflicts, inducing them to the peaceful path to the detriment of the armed, strengthening the countries of the region before nations extraregional. Multilateral organizations such as the Union of South American Nations – UNASUR and the South Atlantic Peace and Cooperation Zone – ZOPACAS have democracy and respect for human rights as their basic principles. Respect for these principles could be used to condition the access and permanence of its members.
In this way, regional cooperation and integration could give greater cohesion and political power to the demands of their countries in the international context, according to the position regarding the resumption of discussions on the Malvinas/Falklands, South Georgias and South Sandwich Islands, between Argentina and UK.

Political instability in Sub-Saharan Africa Political and social instability will continue in Sub-Saharan Africa, due to the serious problems that have historically plagued the Region.
The increase in cooperation could also lead to an increase in the demand from African countries for aid of all kinds: health, education, public security, defense, civil construction, agriculture, among others. This could increase the contingent of Brazilian people, goods and companies in the re
Due to political instability, this increase in Brazilian people and goods will require an increase in the capacity of the Brazilian armed forces to protect them in the event of conflicts.
Greater cooperation, in turn, could be accompanied by greater demand for the participation of Brazilian forces integrating UN missions in Africa, as well as for the formation and training of local personnel, which would favor the involvement of Brazilian forces and military in conflicts where were acting.

Social and political instability in Bolivia Due to underlying tensions, Bolivia will remain politically and socially unstable. In the event of political crises, the Brazilians who work there could be the target of hostilities and the expropriation of their properties – private and corporate – as has already been happening on a localized and sporadic basis. Local leaders could promote xenophobia for political dividends.

Machine Translated by Google

Due to this instability, cocaine production and institutional weakness, transnational criminal organizations could influence public administration in Bolivia.
A possible growth in criminal activities in Bolivia could result in an increase in transnational crimes in Brazil, both because of its status as a large consumer market and because of its better transport infrastructure with the US and Europe.
In case of deterioration of the political and social situation, there could be hostilities against Brazilians, whose protection possibly exceeds the capacity of the Bolivian authorities, requiring the support of the Brazilian Armed Forces to protect them.
The possibility of growth of transnational criminal activities in Brazilian territory, starting from Bolivia, could require greater and more frequent participation of the Armed Forces in border control.

Political instability in Colombia

Ideological antagonisms, the alleged Venezuelan support for the communist guerrillas – the FARC laid down its arms, but the National Liberation Army did not – as well as the precarious political and economic situation in Venezuela, will probably continue the friction between the two countries. However, an armed conflict between the two would be unlikely, considering the current level of regional cooperation, which would lead to UNASUR/OAS action to avoid it.
With the demobilization of the FARC, due to the peace agreement being implemented, the protection provided by them to drug trafficking will be extinguished, probably causing the transfer of laboratories and armed remnants to neighboring countries. Therefore, there will be a need for greater surveillance and control of the Colombian borders, both due to the possibility of clandestine operations by drug traffickers in neighboring territories, as well as the possible transfe

Political instability in Ecuador There is

likely to be continuity of institutional normality in Ecuador as long as its economic situation remains healthy. If it deteriorates, it will be possible for the political instability of previous years to return, obeying historical characteristics, without, however, affecting Brazil's security and defense.

Political and social instability in Paraguay Latent

tensions in Paraguay will keep it politically and socially unstable, and institutional weakness may lead to the infl uence of criminal organizations in the country's public administration.
In case of crisis, the Brazilians who work there could be the target of hostilities and expropriations – private and companies – as has already been happening in a localized and sporadic way. Local leaders could promote xenophobia for political dividends.
In a similar situation, Paraguayan authorities could have their capacity to act exceeded, requiring the support of the Armed Forces to protect Brazilians and guarantee the operation of the Itaipu hydroelectric plant.
A possible growth in criminal activities in Paraguay could result in an increase in transnational crimes in Brazil, both because of its status as a large consumer market and because of its better transport infrastructure with the US and Europe. This would require greater and more frequent participation by the Armed Forces in border control.

Political instability in Peru Due to

institutional fragility, transnational criminal organizations could influence spheres of public administration in Peru.
A possible growth in criminal activities in that country could result in an increase in transnational crimes in Brazil, both because of its status as a large consumer market and because of its better transport infrastructure with the US and Europe. This would require greater and more frequent participation by the Armed Forces in border control.

Political stability in Uruguay, Chile and Argentina Uruguay,

Chile and Argentina are likely to remain at their current political and social stability, and any deterioration affecting Brazil's security and defense is unlikely.

Machine Translated by Google

Political and social instability in Venezuela The strong antagonisms and ideological convictions dividing the Venezuelan population, added to the very serious economic situation, possibly lead the country to a political and social upheaval, with the removal of the president and the outbreak of a civil war. In this case, a successful performance by UNASUR would be unlikely.

In the imminence of civil war or to interrupt it, a peacekeeping force/observers could be created, as occurred in the case of the Ecuador/Peru conflict in 1995. with or without civil war, there could be extraregional interference, mainly by the US, with implications for Brazil.

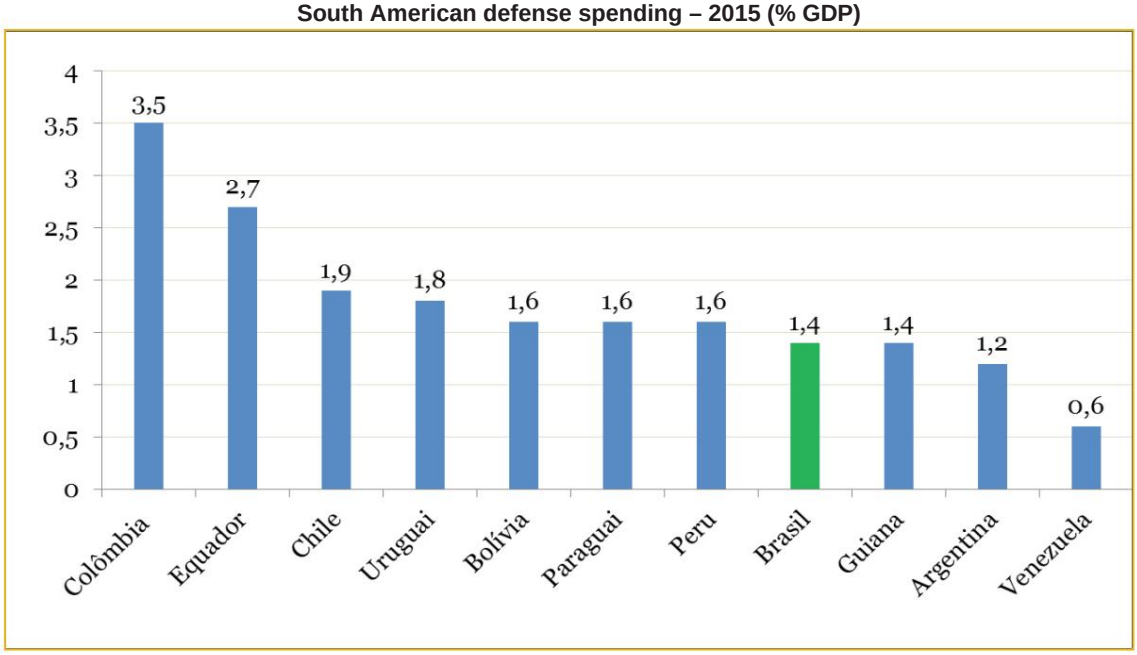
Historical interstate frictions in South America Due to the level of cooperation established between the countries of the region, as well as the commitments assumed by them within the scope of the Common Market of the South – MERCOSUR, UNASUR and Organization of American States – OAS, it is likely that disputes be resolved through negotiation.

Given the lower probability of interstate conflicts in the region, as well as greater South American cooperation and integration, mainly promoted within the scope of UNASUR/MERCOSUR, there could be initiatives to promote a reduction in the number of armed forces in the region.

Military Dimension

Regional military spending It is likely that the level of defense spending in the region will remain stable, with occasional changes, as a result of meeting repressed demands.

South American defense spending – 2015 (% GDP)



Source: SIPRI (2017).

Due to the current level of South American cooperation, the relative size of Brazil's GDP and the history of defense spending in the region, neighboring budgets will not match or exceed Brazil's.

Machine Translated by Google

Military contingents in South America Budgetary constraints, technological improvements and greater cooperation, with the consequent possibility of a decrease in armed conflicts, will probably limit the expansion of personnel in the South American Armed Forces.
As a result, it may be necessary to adapt the training models of human resources in the South American armed forces to this new reality. This will provide greater trust and encourage cooperation in all activities carried out by them.

Chilean military asymmetry

Chile will probably maintain its military superiority over neighboring countries, seeking to dissuade them, however, the use of the military instrument is unlikely, since, in all current territorial disputes, it is in possession of the disputed areas. As it has greater military capacity than its neighbors, unilateral war actions by the latter to retake the claimed areas are unlikely, especially in the case of Bolivia, in view of the significant asymmetry of power.

Venezuelan military asymmetry

Although unlikely, Venezuela, taking into account the asymmetry of power guaranteed by the military means acquired at the beginning of this century, could use them to dissuade / threaten neighbors, mainly Colombia, given the latent tensions between the two the countries. This would likely provoke US intervention.

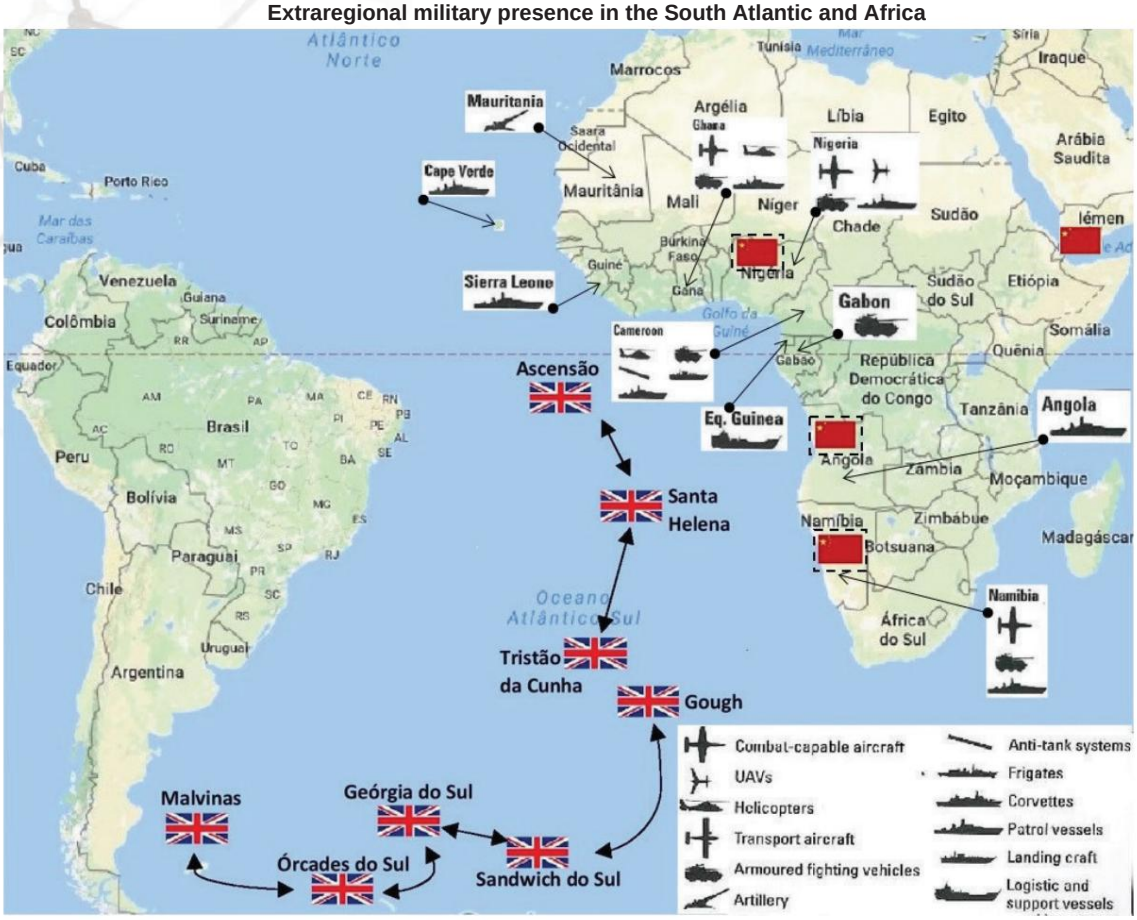
Capacities of the Colombian Armed Forces The future mission of the Colombian Armed Forces will maintain as a priority the guarantee of the sovereignty and independence of the Republic of Colombia, defending its territorial integrity and legal order. Military capabilities aimed at the war against drug trafficking and left-wing guerrillas will be reassessed.
However, despite Colombia's low capacity for conventional warfare, its links with the US, especially with regard to the fight against drug trafficking, would probably mean that external threats to the former, although unlikely, would be responded to by the latter.

South American military cooperation The levels of cooperation between the region's armed forces will favor the diplomatic solution to all the still latent disputes which, if attenuated or extinguished, will increase the joint defense capacity of regional interests and, consequently, of extraregional deterrence.

Extraregional military presence in the South Atlantic Due to its air-naval power and territorial proximity, in addition to military installations on islands such as Malvinas/Falklands and Ascenção, NATO will remain capable of controlling the South Atlantic against any threat and projecting power over to South America and Africa. Its military asymmetry in relation to any other country or alliances that may form will not be overcome or diminished to the point of compromising such capacity.
A possible long-term Chinese military expansion in Africa, particularly on the Atlantic coast, could trigger a US/NATO reaction, with an increase in military means in the South Atlantic.

Machine Translated by Google

Extraregional military presence in the South Atlantic and Africa



Source: The Military Balance 2016, p. 21

The presence of armed forces from NATO member countries in the South Atlantic (bases/means/troops), as well as the expectation of setting up Chinese military bases in African countries on the Atlantic coast, will demand a careful evaluation from Brazil. Maritime Communication Lines – LCM converging to the Gulf of Guinea and the existence of oil exporting countries in the aforementioned region, of interest to Brazil, figure as important factors to be evaluated. The current Brazilian presence on the African continent, through naval missions and Aditances, would facilitate the initial approach with the countries of interest.

Machine Translated by Google

Âmbito Nacional

Âmbito Nacional

Machine Translated by Google

Machine Translated by Google

Economic Dimension

Abundance of natural resources

Economic and population growth all over the world, but mainly in Asia, will probably increase the demand for natural resources, promoting development through trade in food, raw materials and industrialized products derived from them, whose commercialization will contribute to the enrichment and development of Brazil, increasing its integration and international insertion, as well as, and consequently, its economic power.

This growth, however, could generate pressures on world consumption. As a result, although unlikely, due to the country's political and commercial relations with the rest of the world, military powers could seek such resources in Brazilian jurisdictional waters, coercively and/or through legal questioning of these jurisdictions.

Still on the coercive line, in case of high world scarcity, multilateral organizations could impose international control over the exploitation and distribution of such resources. This is, however, unlikely, due to the political and commercial relations of the international community and the democratic principles defended by it, which, although not always practiced, depend on conflicting state interests, making it very difficult to reach the necessary consensus for a solution of such magnitude. .

Therefore, in view of the scarcity of natural resources worldwide, there will be a need to increase Brazil's defensive capacity, considering the effective monitoring and control of jurisdictional waters, airspace and territory.

Size of the Brazilian economy

The dimensions of the Brazilian economy, as well as its potential for expansion, will probably continue to increase partnerships and investments on a global basis – transnationalization of involved, creating greater interdependence and coincidence of interests between the parties or companies –, which will play a conciliatory role.

However, in politically unstable regions where there are Brazilian companies, such as Africa, it could become necessary to carry out actions for the emergency withdrawal of national citizens as a security measure, due to the eventual confl agration of local conflicts that threaten the integrity of the same.

On the other hand, Brazilian development will collide with the interests of other nations, mainly developed and/or emerging ones, generating disputes that will affect national development. However, it would be unlikely that they would lead to armed conflicts, due to the greater coincidence of commercial interests and the option for a solution within the scope of international organizations.

Brazilian economic growth

Due to the “bottlenecks”, Brazilian economic growth could remain at the average of the period 1995 - 2015, since the solutions currently adopted and/or to be adopted by the Federal Government may take time to produce effects. However, if there is success, in the sense of eliminating “bottlenecks”, it is likely that Brazil will rise to a level of sustained, more vigorous and stable growth. However, due to the still prevailing levels of poverty and inequality, the resources resulting from this growth will probably be applied in improving the social conditions of the population.

Thus, if there are no significant increments in economic development, there would not be any in relation to the defense budget either. Considering, then, the Brazilian budget history, it is likely that resources for the defense sector will increase only in proportion to GDP.

On the other hand, if Brazil achieves higher and more stable growth rates, the defense budget could be frozen in absolute terms, prioritizing the social dimension.

On the other hand, the increase in the volume of Brazilian foreign trade will result in an increase in maritime traffic on existing Maritime Communication Lines – LCM or even the emergence of new ones. This will require compatible naval power. Ensuring the safety of the Maritime Communication Lines in the North and South Atlantic regions will require the existence of a Naval Power that has such capacity. It will also demand that the Country intensifies its Maritime Situational Awareness.

Machine Translated by Google

Population, infrastructure and economic activities concentrated in the Southeast

Due to population concentration and economic activities – agriculture, transport, industries, oil exploration and generation and distribution of energy –, the Southeast will continue to be the great Brazilian economic center.
In the event of a conventional external conflict involving Brazil or terrorist activities, the transport, electricity, communications and oil systems located in this region will be priority targets for lethal and non-lethal attacks, since they constitute centers of gravity that, if they enter collapsing, will lead the country to the same destination. On the other hand, if preserved such systems will support the war effort.

Defense Industrial Base - BID

The current demands of the Armed Forces, the technological gap and the economic, political and military ties between the largest buyers and suppliers of defense systems will probably keep the Brazilian industry with the capabilities that currently exist, with sectoral advances, without, however, being able to open new ones. markets that allow it to finance itself and develop towards self-sufficiency. Its sales will remain dependent on foreign component suppliers and the Armed Forces dependent on them.

Social Dimension

Poverty, inequalities, insufficient public services

Due to the still prevailing levels of poverty and inequality, as well as the precariousness of public services, it is likely that social tensions will continue, as well as the violent actions of pressure groups (social movements) in the various regions of the country.
Despite the latent tensions, it is unlikely that there will be an institutional rupture due to political and social tensions, due to the constant improvement in economic indicators and the HDI, as well as the Brazilian institutional maturity.

Although unlikely, political and social instabilities could generate urban and/or rural violence whose intensity could go beyond the control capacity of public security agencies, to the point of requiring the intervention of the Armed Forces.

Dissatisfactions of firefighters, military police and civil police

The persistence of wage and labor demands by police and firefighters will likely lead to new stoppages, which, depending on the magnitude, could require the activation of the Armed Forces to assume their duties.
In case of police strikes and exacerbation of demonstrations, there could be a need for intervention by the Armed Forces to contain them, with the possibility, albeit low, of confrontation between the parties.

Transnational organized crime and public safety

The increase in worldwide cocaine consumption in Europe; the transfer of plantations, laboratories and trafficking routes from Colombia to neighboring countries and Africa;
Brazil's social problems and its potential consumer market will increase criminal activity in the national territory, deteriorating public safety, which will also depend on the improvement of social condition
With the growing size of the Brazilian drug market, the already high profits of criminal organizations tend to grow, which will increase their power and push them to control drug trafficking in South American countries, with the consequent disputes between drug factions. . Another consequence will be the increase in violence against rivals, public agents, authorities in general and their families.

The power and “modus operandi” of transnational criminal organizations will require an integrated multilateral approach so that they can be effectively combated.
Due to the probable increase in the activities of these organizations and the deterioration of public security, it is also likely that the Armed Forces will increase their participation in actions to guarantee law and order.

Machine Translated by Google

indigenous issues

The tensions arising from the demarcation of indigenous lands, the exploration of gold mines, as well as large-scale works (hydroelectric plants, mining) could generate armed conflicts that exceed the capabilities of state and municipal public security agencies.
If armed conflicts and bloodshed occur, there will be international pressure for the end of hostilities and punishment of the culprits, with consequent deterioration of the country's image.
Although improbable, some ethnicities, mainly those across borders, could claim or use the argument of persecution, violence and lack of assistance, among others, to request autonomy or internationalization of their reserves, based on the concepts contained in the United Nations Declaration on Human Rights. of Indigenous Peoples, with the support of international organizations.
Political and economic pressures, internal and external, allied to wild regions, great distances, demographic voids and poor infrastructure, in addition to the depletion of the capacity of local public security agencies to avoid conflicts, could increase the involvement of the Armed Forces in indigenous issues . Depending on the magnitude of the situation, constant surveillance and protection of reserves could also be necessary.

Environmental Dimension

Effects of economic development

Due to demands for economic and social development, this could be at the expense of sustainability, maintaining or accelerating the process of environmental degradation.

Due to the possibility of environmental catastrophes, productive degradation and international boycotts, it is likely that there will be pressure from political parties, business sectors and non-governmental organizations on governments, in the sense that effective measures are adopted for environmental protection and sustainability.

For similar reasons, it is also likely that there will be political and economic sanctions by international organizations on countries that do not establish proper environmental control.
In such a context, there will probably be an increase in the carbon credit market and the resulting profits, benefiting the country.
It is also likely that products whose production chains affect environmental sustainability will be the object of an international boycott promoted both by international organizations and by governmental and non-governmental organizations.

Internal and external political and economic pressures, allied to wild regions, great distances, demographic voids and deficient infrastructure, among others, in addition to the possibility of profits from the sale of carbon credits, could lead to the constant and intense participation of the Armed to contain attacks and protect the environment.
Effective environmental control, in turn, will depend on the ability to monitor and control territory, airspace and jurisdictional waters. Therefore, there will be a need to increase quantitative and qualitative capacities to identify illicit acts, prevent them and repress them.

Effects of climate change

Environmental disasters such as those resulting from droughts, floods and windstorms could cause political and social instability due to hunger, human displacement and the disruption of economic activities that could result.
In these cases, the Armed Forces will be called upon to support the Civil Defense and, when necessary, guarantee law and order, due to the exhaustion of the capacities of public bodies.

Health insecurity due to the movement of people and goods

The intensification of the flow of people and goods could promote the rapid proliferation of human diseases, animals and agricultural pests, leading to uncontrolled death and hunger, causing political and social instability.
The voluntary dissemination of diseases, mainly those related to animals and plants that are part of the food chain, although unlikely, could be covertly used in commercial disputes, terrorist actions and interstate conflicts (biological warfare).

Machine Translated by Google

Sanitary control on access to countries must be adequate to pandemic threats. The entry points will depend on the type and origin of the threats, being mostly seasonal, which provides lower levels of surveillance. International cooperation in controlling pandemics will be crucial.
In cases of a pandemic, the capabilities of bodies dedicated to health issues, as well as border, port and airport control, will be exhausted, requiring emergency action by the Armed Forces.

Technological Dimension Brazilian capabilities for exploring outer space

Access to images, means of communication and global positioning – updated and from any part of the globe – will be increased, as well as the processing of information from them, facilitating, constantly and progressively, the planning, execution and control of human activities, both for civil and military purposes.

Due to the historical and current stage of development of its space activities, Brazil will remain dependent on contracting foreign services, and it is likely that the acceleration of government investments and initiatives, such as the company created to work on the integration of the Geostationary Defense and Communications Satellite system (SGDC), among others, gradually reduce external dependence.
However, due to the increase in the number of countries launching satellites and the demand for communication services, certain types of orbits and frequency bands will likely and soon be saturated.

As a result of the increase in scientific research and the greater availability of data produced for this purpose by spatial means, there will be an increase in agricultural productivity. For the same reasons, knowledge about the environment, as well as possibilities for preventing and predicting natural disasters, will be expanded.
Therefore, while not mastering space technology, nor having orbital positions, satellites and communications frequencies of its own to meet its needs, Brazil will depend on the purchase of services that may be interrupted by suppliers according to their interests, imposing unfavorable conditions for the development and national sovereignty.
On the other hand, given the multiple applications of satellites and systems embedded in them, the development and financing of space projects with civil and military applications will continue to be viable and desirable, promoting synergies and cost reduction.

Brazilian capabilities in the nuclear sector

The current stage of development of the Brazilian nuclear sector, as well as the projects in progress, will make it possible to advance in proprietary technologies, without, however, reaching the capabilities of more advanced countries.
Modern war, in turn, requires systems with great range, autonomy and consumers of large amounts of energy, which, if dependent on fossil fuels, demand heavy structures and logistical chains. Therefore, the initiative now conducted by the Brazilian Navy in favor of mastering nuclear power generation and propulsion will provide greater operational capabilities and independence to the Brazilian Armed Forces.

Outdated and vulnerable communications and information systems

The current stage of development of communication and information technologies, as well as the projects in progress, will allow advances, however, they will not reach the stage of more advanced countries, due to the amount of necessary investments. However, such technologies and equipment have multidisciplinary applications, which could allow the increase of civil-military partnerships in their development and use, generating synergies and cost reduction.
With regard to military applications, modern combat requires full monitoring of the battlefield, as well as interconnected operation of forces, which depends on communication and information systems that do not exist at present. The measures adopted by the Federal Government, including Cyber Defense, will probably be insufficient for the acquisition of such capacity, which is conditioned to the development of even more ambitious programs and projects.

Machine Translated by Google

Vanguard in agricultural technology Given

the favorable environmental conditions for agriculture, the world trend of increasing food consumption and the technological capacity in this sector, the consolidation of Brazil as an exporter of agricultural technologies is likely.

From a quantitative perspective, natural conditions and technological capacity will probably increase food production in Brazil. Thus, the agricultural sector will strengthen its economic power and its international insertion.

Research, development and innovation (RD&I)

The current stage of Brazilian technological development, as well as the projects in progress, will allow for advances, but will not reduce the gap relative to the more advanced countries, due to the volume of necessary investments. However, the fact that technologies have multidisciplinary applications could allow the increase of civil-military partnerships in their development and application.

Classification of South American countries in terms of RD&I.

Position	Country	Punctuation
63rd	Chile	3.38
79th	Colombia	3.26
81st	Argentina	3.24
83rd	Uruguay	3.22
100º	Brazil	3.10
107th	Ecuador	3.00
119th	Peru	2.82
128th	Venezuela	2.62
132nd	Paraguay	2.54
135th	Bolivia	2.46

Source: World Economic Forum (2017).

Classification of the BRICS in terms of RD&I.

Position	Country	Punctuation
29th	India	4.05
30th	China	4.04
35th	South Africa	3.85
56th	Russia	3.40
100º	Brazil	3.10

Source: World Economic Forum (2017).

Brazilian technologies will probably remain below military needs, since modern warfare requires state-of-the-art satellites, computers, networks, composite materials, lasers, guidance systems, sensors, explosives, among others. The measures adopted by the Federal Government to stimulate RD&I will probably be insufficient to raise the levels of Brazilian technology in order to satisfy the development needs of the national defense industry, not only to serve the Brazilian Armed Forces, but also to its insertion in the international market. In the latter case, programs and projects require more advanced technologies compatible with specific requirements and protocols, especially with regard to network operation (data link systems), as this is a precondition for the use of modern armed forces.

Machine Translated by Google

Political Dimension

Brazilian political-institutional instability

Due to the political-institutional situation, a significant portion of the population could revolt against the political class and demand changes, generating violence, which would probably place the Armed Forces in the political scene by virtue of Art. 142 of the Federal Constitution (guarantee of constitutional powers).

Terrorism

The increase in the repression of terrorism at global levels could shift it to regions that are still immune, as is the case of Brazil. Initially, to obtain safer and/or homizio bases of operations, which could evolve to local action.
The expansion of the infl uence of criminal organizations based in Brazil in transnational drug trafficking could lead to an increase in the capacity of such groups to confront state/federal security forces, or even in neighboring countries, enabling the emergence of tactics of intimidation of the population and governments at different levels of administration.
The facilities for locomotion, communications, as well as improvisation and the acquisition of weapons make the fight against international terrorism difficult and expensive. The USA and Europe, for example, consider it to be their greatest threats, act in coordination and have specialized structures to combat it. Therefore, it is unlikely that Brazil will acquire effective capabilities to combat terrorism if it acts alone.

Absence of interstate frictions involving Brazil

Despite the lack of interstate frictions involving Brazil, its economic growth could collide with the interests of developed and/or other emerging countries and vice versa. The environment and the search for resources, derived from world economic growth or serious intrastate instabilities in the Brazilian strategic environment, could generate political-strategic crises with the potential to escalate to the level of confrontation or even armed conflict or, even, would possibly require Brazil's role in intrastate conflicts, prioritizing our strategic environment.
However, it is likely that, due to the Brazilian political and economic dimension – the 9th largest economy in the world in 2016, as well as the condition of its democracy and its operations with international organizations, the conflicts that arise will be resolved in the diplomatic sphere, a since other instruments of power, such as the economic and/or military, would lead all those involved to unacceptable losses for their respective populations.
Still considering the economic and political dimension, as well as the quality of regional relations, if Brazil becomes involved in conflicts with other nation(s), this possibly happens with those of equal or greater size than its own. In this way, such involvement could not remain restricted to two contenders, as the interconnections of the global economy will affect practically the entire international community.

Conflicts between developed and/or emerging nations will probably take place within international organizations and, in transition to warlike solutions, would occur through alliances, as has happened since the Gulf War (1991).

International disarmament treaties and forums

The possibility of an increase in the proliferation of missiles and weapons of mass destruction could lead to an increase in the influence of the Missile Technologies Control Regime (RCTM), made up of the most powerful nations in the world and the largest marketers of rockets, missiles and non-military aerial vehicles. crews, which could impose, even through the intermediary of the UN, restrictions on the respective commercialization.
By abdicating the development and use of weapons of mass destruction, Brazil will not have the respective dissuasive power, especially in the event that the opponent has such capacity.

Machine Translated by Google

Âmbito Ministério da Defesa

Âmbito Ministério da Defesa

Machine Translated by Google

Machine Translated by Google

Political Dimension

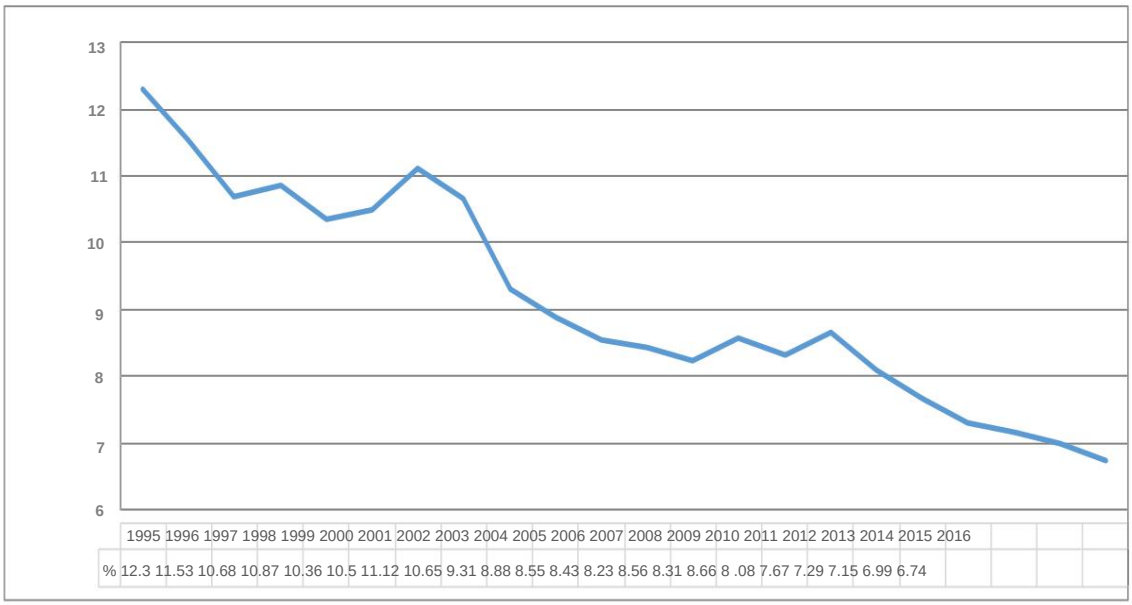
Legal attributions of the Armed Forces Due to subsidiary attributions, as well as the Armed Forces' logistical capacity and flexibility, which allow them to respond to requests quickly and efficiently, it is likely that there will be an increase in demands for their participation in activities of a social nature and /or related to public safety However, an excess of demand for such activities could compromise the external defense capacity, if it causes a reduction in training for operational employment, due to insufficient human, material and financial resources.

International cooperation of the Armed Forces The cooperation promoted by the Armed Forces will increase mutual trust and the search for joint solutions to common problems. Consequently, it will contribute to the improvement of Brazilian relations with neighboring countries and other continents, in addition to promoting South Americ This cooperation will play a dissuasive role, not through alliances or arms races, but through the "disarmament of spirits", which will privilege peaceful solutions to conflicts.
On the other hand, due to the imbalance in Brazil's economic and military dimensions, when compared to countries in the region, it is likely that there will be an increase in demands, mainly African and South American, for greater military cooperation, which, due to budgetary constraints , could require cuts in training and training programs, reducing the operational capacity of the Brazilian Armed Forces.

Economic Dimension

Budget evolution of the Ministry of Defense As a result of the New Fiscal Regime within the scope of the Fiscal and Social Security Budgets of the Union, which would freeze expenditures until 2037, the budgetary insufficiency, long characterized, would possibly continue for at least another twenty years , impacting operational capacity recovery and modernization projects.

MD's primary expenditure x Union's primary expenditure (%)



Source: Ministry of Defense (2016).

The demands repressed for decades, as well as the budget constraints imposed by the New Regime, will increase obsolescence and make it impossible to configure the current Armed Forces in terms of medium-sized military power. As a result of budget constraints, the Armed Forces will need to prioritize activities and capabilities.

Machine Translated by Google

Technological Dimension

Technological centers and military schools

Due to the training of such institutions, there could be a greater insertion of projects of interest to the Ministry of Defense in government programs of other ministries, as well as an increase in partnerships with private companies.

Probably, the insufficiency of budgetary resources for RD&I destined directly to the Ministry of Defense and the Armed Forces will remain in the period.

Due to budget limitations and, consequently, also specialized human resources, including evasion, military centers and schools dedicated to RD&I will not be able to meet all the demands of the Armed Forces.

Environmental Dimension

Civil projects aimed at sustainable energy

Current technologies aimed at sustainable energy production, such as wind and solar, could be used in logistical systems in order to lower costs and expand capabilities by reducing the effort required to support military operations.

The adoption of sustainable energy systems will reduce the maintenance costs of military organizations, mainly those located in the Amazon and that depend on fuel transported by boats and aircraft to power their generators.

Military logistic systems could benefit from government programs and/or establish partnerships with private companies, in order to develop sustainable energy generation systems, systems that could have civil applications.

Social Dimension

Image of the Armed Forces before Brazilian society

Due to the actions related to subsidiary attributions and initiatives developed by the Armed Forces, which occur, as a rule, in situations of calamity and support to the unassisted, or in the extrapolation of the capacities of public bodies, as in the In the case of the occupation of slums in Rio de Janeiro, it is likely that the favorable image in society will be maintained, being able to gather support for budget increases aimed at modernizing the Forces.

On the other hand, their performance in public security actions, such as the occupation of favelas, if prolonged, could expose them to the risk of eventual involvement of the military in criminal activities or actions that compromise the institutional image, which could affect the necessary modernization programs.

A similar effect could have the reduction of activities that lend high visibility to the Armed Forces before society (such as GLO and subsidiary attributions), could reduce its credibility and affect the necessary modernization programs.

Salary status of the military

Salaries paid in other agencies and companies will probably continue to infl uence attraction and evasion in the military career, mainly in segments whose formation is more expensive and tal

Additionally, a significant change in the military's social protection system, combined with low salaries, could generate dissatisfaction in the Armed Forces, especially in the lower ranks, whose salaries are lower.

Maintaining the current salary gaps, evasion could reach levels that harm the operational capacity of the Forces, in addition to increasing spending on training and specializations to compensate for reserve/dismissal requests.

Machine Translated by Google

Military Dimension

Location of Brazilian centers of gravity

Any conventional military actions against Brazil, although improbable, and regardless of the geographic area or reason for the dispute, will aim at their centers of gravity concentrated in the southeast and south regions, as well as in the DF, as a strategy to submit the Brazilia

Attacks against these centers, although unlikely, will come from the air, sea and cyber dimension, launched by countries with sufficient power projection capacity and technologies to interfere (cyber warfare) in banking and communications systems, mainly.

For the effective control of airspace and jurisdictional waters, it will be necessary to acquire monitoring systems consistent with this need.

The effectiveness of any action to control airspace, territory and jurisdictional waters will depend on the command, control and intelligence systems of the Armed Forces, which must have the highest degree of protection against cyber attacks and espionage.

If there is no defense capacity to oppose exclusion zones, air, naval and cyber attacks, Brazil will collapse if attacked.

The new dimensions of Cyber Defense will require the Defense Sector to develop and keep its technological capabilities up to date, through the exchange of Armed Forces personnel with Federal Administration Entities and Scientific and Technological Institutions – ICT.

amazon

In the event of greater effectiveness in combating drug trafficking by neighboring governments, drug refining laboratories could migrate to Brazilian territory. And in the event of greater effectiveness in the fight against drug trafficking by the Colombian and US governments on drug trafficking routes in Central America and the Caribbean, they will probably increase in Brazilian territory. On the other hand, there could be international demands for indigenous autonomy and the internationalization of environmental protection areas in the Amazon, encouraged by foreign organizations.

Source: Greenpeace (2017).

Machine Translated by Google

The tensions resulting from the demarcation of indigenous lands or the absence of them, the exploitation of goldmines, as well as large-scale works (hydroelectric plants, construction of transmission lines, mining, road paving, etc.) could generate conflicts that exceed the capabilities of state and municipal public security agencies.
The geographic characteristics, as well as the current and potential problems of the Amazon, will require greater action by the Armed Forces, both in guaranteeing law and order and integrity and territorial defense.

For the effective control of the region, it will be necessary to acquire monitoring systems and means for control consistent with the regional geographic characteristics.
Attempts to internationalize the Amazon or parts of it, although unlikely due to the quality of Brazil's international insertion, if they occur, will not be through military occupation of the region, but through possible embargoes and exclusion zones.

Transnational Organized Crime and Public Security Social

and public security conditions will require the support of the Armed Forces to public security agencies, especially in urban areas, which could expose them to the risk of military involvement with criminal organizations.
Due to budget constraints, resources could be prioritized for subsidiary assignments to the detriment of actions in favor of external defense.

Equipment obsolescence and insufficiency Due to

budgetary perspectives, it is likely that the current situation of the Armed Forces will continue, with only occasional improvements, as in the case of submarines, aircraft, armored vehicles and information systems, which are exclusively sufficient to reduce the technological gap relating to medium-sized military powers.
The limitation of equipment will continue to condition the operational capacity, causing negative reÿ ects in the training of the Forces and in the attraction, retention and motivation of its human resources. The obsolescence of equipment probably acts as a disincentive to attracting and retaining a military career.
And, probably, the resources needed to train the Armed Forces to control the airspace, territory and Brazilian Jurisdictional Waters will not be made available.

Machine Translated by Google

Implicações para a segurança e Defesa

Implicações para a segurança e Defesa

Machine Translated by Google

Machine Translated by Google

Future Characteristics of Conflicts

ID 01 – Propensity to use the military instrument Although

conflict solutions require democracies to use diplomatic and economic instruments before applying military power, this last option, for holders of high technology and coalition members, becomes -will be increasingly acceptable, as it guarantees success in the use of force, with lower costs and casualties, reduced political risks and greater impunity for aggressors.

ID 02 – Indirect confrontations between great powers The

global economic interconnections and interdependencies and the nuclear arsenals of the great powers will probably prevent any direct confrontation between them, but this may occur indirectly, through the sponsorship of antagonistic groups, in unstable regions where they maintain inte

ID 03 – Multinational coalitions, projection of power and neutralization of centers of gravity The application

of the military instrument will basically take place in the form of coalitions, projecting aerospace and naval power over centers of gravity, concomitantly with the isolation of the opponent through zones of gravity. exclusion. Occupations will be avoided due to high material and human costs.

ID 04 – Preponderance of the air, space and information domains The air,

space and information domains will play a decisive role in the definition of armed conflicts. Fighting will expand into outer space; whether applications for remotely piloted aircraft and missiles will expand; cyber warfare will intensify. Land, sea and air forces will operate interconnected in a network (data link), with full view – day and night – of the battle space. The actions will be fast, punctual and lethal, and the lines of contact will tend to disappear. The combatants will be equipped with state-of-the-art technologies and will have high fl exibility in the execution of missions, which will be commanded and controlled in real time.

ID 05 – Increase in asymmetric/hybrid conflicts Due to power

asymmetries, insurgent groups, terrorist and/or criminal organizations will tend to continue conventional conflicts through irregular warfare, or go directly to it, mainly in urban environments , where they mix with the population, ensuring anonymity and "human shields"; ensure logistics through the use of civil infrastructure; access communications systems via mobile devices and the internet; and decrease the effectiveness of more advanced technologies.

ID 06 – Determining Infl uence of the Internet and Social Networks

Current means of communication allow for the monitoring of conflicts without depending on news agencies and government spokespersons. They also allow for the rapid mobilization of demonstrations on a worldwide scale. Democracies, which are dependent on public opinion, will be increasingly at its mercy to engage and remain in armed conflict.

ID 07 – Information and social mobilization

The ease of dissemination and access to information could be used to clarify and raise awareness, both national and international public opinion, on issues such as environmental and indigenous issues, among others, with the aim of opposing the positions contrary to national interests that, once strengthened, could promote international support for external sanctions against

Machine Translated by Google

Opportunities

ID 08 – Economic Growth, Cooperation and Multilateralism Economic

growth, international cooperation, mainly in regional terms, and the promotion of multilateralism could increase Brazil's relative power in the world context, allowing it greater infl uence in global decisions and, therefore, , to reduce the possibility of warlike solutions to controversies. Diplomatic and economic instruments, therefore, could increase national power and, consequently, Brazil's dissuasive capacity.

ID 09 – Increase in world demand for natural resources The possibility

of an increase in world demand for natural resources could expand and open markets for South American and African countries, accelerating regional economic development and making available greater resources to be applied in security and defense, whether in the form of extra regional acquisitions of equipment, or investing in own technologies and industries.

ID 10 – Peace operations

Peace operations will allow Brazil to strengthen cooperation ties and create a favorable image through the Armed Forces, thus contributing to national foreign policy.

ID 11 – Regional cooperation

Increased regional cooperation will increase mutual trust and promote joint defense projects aimed at, among others, the development of common strategies, technological and industrial capabilities, territorial and environmental monitoring, as well as combating crime transnational organization.

ID 12 – National development projects National

development projects, especially those linked to the technological area, could be used to serve the Armed Forces without major impacts on their budgets, while meeting the greater needs of Brazilian society and improving the image of military institutions.

ID 13 – Partnerships with developed countries in advanced technology projects The Brazilian

economic dimension could provide the country with better technological cooperation conditions with more advanced nations, which, in turn, would allow the reduction of the gap of the Brazilian Armed Forces in this area, providing them greater dissuasive capacity.

ID 14 – Exchanges and exercises with NATO/European Union countries – EU The

constant involvement of NATO countries and, to a lesser extent, the EU, in conflicts/activities around the globe provides them with high expertise on the use of armed forces in the most varied environments. The doctrinal standards, organizational structures and command and control processes adopted by UN forces in peacekeeping missions, like those of the EU itself, are analogous to those of NATO. Therefore, participation in exercises, courses and exchanges promoted by its members will allow the training of Brazilian military personnel in the most advanced in terms of employment in the armed forces, in addition to knowledge about the “modus ope

Machine Translated by Google

Threats

ID 15 – Technological dependence The

pace of Brazilian technological development will not be enough to eliminate external dependence in areas of fundamental importance for the defense industry, with an impact on the Armed Forces' ability to oppose medium-sized powers in eventual conflicts. itos.

ID 16 – World scarcity of natural resources Brazil has

a large reserve of natural resources, resources whose scarcity on a global level could lead to conflicts in which it would be possible to prevail the use of force or its support to impose political and economic sanctions .

ID 17 – Manipulation of public opinion The ease

of disclosure and access to information could be used to manipulate both national and international public opinion on issues such as environmental and indigenous issues, among others, with the aim of denigrating Brazil's image and justify international sanctions that threaten its sovereignty and require a military response.

ID 18 - Terrorism

Although the conditions that normally attract or encourage terrorism do not exist in Brazil, this activity is of an unstable nature, which will require that the Armed Forces remain able to act in a coordinated manner with national and international organizations, in prevention (intelligence) and in combating it.

ID 19 – Transnational Organized Crime The

increase in transnational organized crime will demand greater participation by the Armed Forces in territorial, maritime, river and aerospace control, as well as in supporting public security agencies, mainly in the Amazon.

ID 20 – Social tensions in Brazil Issues

of public security or of a different nature (agrarian, indigenous, environmental) could be strengthened and generate conflicts that go beyond the capacity of public security agencies to act, requiring the use of the Armed Forces to guarantee the law and order.

ID 21 - Hostilities against Brazilian citizens and goods abroad

Political and social instability in countries where there are Brazilian citizens and companies carrying out economic activities, whether permanent or temporary, could make them the target of reprisals and expropriations, requiring the intervention of the Armed Forces in order to protect them.

ID 22 – Insufficient operational capacity of the Armed Forces The situation of

obsolescence and the insufficiency of equipment of the Armed Forces could not be overcome with the current budgetary levels, thus compromising its ability to defend the Nation and autonomy to safeguard its interests in the face of to threats from medium-sized military powers.

ID 23 – Insecurity of information systems The

technological gap and external dependence on information and communication systems will keep Brazil vulnerable to unwanted access and blockage of information flows, capable of exposing or paralyzing governments and organizations. In the military field, such dependence could make any type of operation unfeasible due to the impossibility of carrying out command, control and intelligence activities.

ID 24 – Natural catastrophes and pandemics

Possible climate change and other causes, anthropic or not, would probably generate natural catastrophes with consequent interruptions in economic activities, scarcity of natural resources and population displacements. The high circulation of people and goods around the world, or even deliberate actions, could cause pandemics, affecting human beings and animal and agricultural production. Both climate change and pandemics would cause political, economic and social instabilities, demanding support from the Armed Forces in humanitarian aid missions, including abroad, as well as in the guarantee of law and order and control of ports, airports and borders.

Machine Translated by Google

ID 25 – Frictions and tensions in South America

Despite the prevailing cooperation environment in South America, internal political, social and economic issues in several countries, as well as old frictions between some of them, could be potentiated and generate requests for the participation of contingents of the Brazilian Armed Forces for the stabilization of conflicts, due to the political and economic role that Brazil plays in the Region.

ID 26 – Militarization of the South Atlantic

South America, sub-Saharan Africa and the South Atlantic, due to the natural resources they possess, both in continental portions and in jurisdictional waters, including continental platforms (oil, fish, etc.), progressively attract companies foreign exchanges and flows of goods. In a situation of scarcity of such resources, there could be disputes between powers in order to guarante Inter- and intra-state conflicts in Africa could also attract extra-regional powers. As a consequence, there could be militarization of the South Atlantic, with reflexes, including, for the priority Maritime Communication Lines.

Machine Translated by Google

Referências

Referências

Machine Translated by Google

Machine Translated by Google

REFERENCES

2016 Global R&D Funding Forecast. Available at: <https://www.google.com.br/search?q=2016+-Global+R%26D+Funding+Forecast&oq=2016+Global+R%26D+Funding+Forecast&aqs=chrome..69i57j69i60 .831j0j7&sourceid=chrome&ie=UTF-8>. Accessed on: 21 Mar. 2017.

ABEGAS. Available at: <http://www.abegas.org.br>. Accessed on: May 18, 2017.

ADMIRAL, Jonathan W. Greenert, USN and General NORTON, A. Schwartz, USAF. 2012. Air-Sea Battle. Pro moting Stability in an Era of Uncertainty. Available at: <http://www.the-american-interest.com/article.cfm?piece=1212>. Accessed on: May 25, 2017.

AFRICA Center For Strategic Studies. 2015. Combating piracy in the Gulf of Guinea. Available at: <http://africacenter.org/wp-content/uploads/2016/06/ASB30PT-O-Combate-%C3%80-Pirataria-No--Golfo-Da-Guin%C3%A9.pdf> . Accessed on 13 Feb. 2017.

AGÊNCIA Lusa, 2017. Offi cial: USA Inform Withdrawal of Transpacific Association Agreement. Available at: <http://expresso.sapo.pt/internacional>. Accessed on: 31 Jan. 2017.

National Civil Aviation Agency (ANAC). 2017. Available at: <http://www.anac.gov.br/assuntos/ data-e-estatisticas/dados-do-anuario-do-transporte-aereo>. Accessed on: May 12, 2017.

National Agency for Petroleum, Natural Gas and Biofuels (ANP). Bulletin of Oil and Natural Gas Production 2015. Available at: <http://www.anp.gov.br>. Accessed on: 11 Apr. 2017.

National Land Transport Agency (ANTT). 2013. Evolution of Rail Transport. Available at: <http://www.antt.gov.br/index.php/content/view/15884/Evolucao_do_Transporte_Ferrovia rio.html>. Accessed on: 11 Apr. 2017.

ANTAQ. Waterway Statistical Yearbook 2016. Available at: <http://portal.antaq.gov.br/index. php/2017/02/23/antaq-apresenta-anuario-estatistico-aquaviario-2016/>.<http://www.antaq.gov.br/anuario/>. Accessed on: May 22, 2017.

Brazilian ASSOCIATION of Piped Gas Distribution Companies (ABEGAS). Available at: <http://www.abegas.org.br/Site/?page_id=842>. Accessed on: May 18, 2017.

World Bank. 2017. World Bank Data. Even though poverty in Africa has been reduced, the number of poor has increased. Available at: <http://www.worldbank.org/pt/region/afr/publication/poverty--rising-africa-poverty-report> Accessed on: 22 May 2017.

World Bank. 2017. World Bank Data. Available at: <http://info.worldbank.org/governance/wgi/index.aspx#home>. Accessed on: 20 Mar. 2017.

National Bank for Economic and Social Development (BNDES). 2015. Brazilian Petrochemical Industry: Current Situation and Prospects. Available at: <http://www.bndes.gov.br/SiteBNDES/export/sites/ default/bndes_pt/Galerias/Arquivos/conhecimento/bnset/set2105.pdf>. Accessed on: 11 Apr. 2017.

BRABO, Marcos Ferreira et al. Current Scenario of Fish Production in the World, in Brazil and in the State of Pará: Emphasis on Aquaculture. In: Acta of Fisheries and Aquatic Resources. 1st. ed. 2016. p. 50-58. v. 1. Available at: <https://seer.ufs.br/index.php/ActaFish/article/view/5457>. Accessed on: 19 Apr. 2017.

BRAZIL Businessreview. 2014. Why the electronic payment system in Brazil is one of the safest in the world. Available at: <http://www.businessreviewbrasil.com.br/money_matters/por-que-o- -sistema-de-pagamento-eletronico-no-brasil-e-um-dos-mais-seguros-do-mundo >. Accessed on: 11 Apr. 2017.

_____. BACEN. Balance of Payments historical series - 6th edition of the Balance of Payments Manual ments and International Investment Position (BPM6). Available at: <http://www.bcb.gov.br/htms/infecon/Seriehist_bpm6.asp>. Accessed on: May 27, 2017.

Machine Translated by Google

_____. BACEN. I.51 - Gross Domestic Product and average growth rates. Available at: <http://www.bcb.gov.br/pec/Indeco/Port/indeco.asp>. Accessed on: 18 May. 2017.

_____. National Congress. Federal Senate. 2010. Final Report of the CPI "das ONGs". Available at: <http://www2.senado.leg.br/mwg-internal/de5fs23hu73ds/progress?id=O0k9S9mm55>. Accessed on: 11 Apr. 2017.

_____. Law 12,804, of April 24, 2013. Provides for the remuneration of the military of the Federal District and the Careers of Police Delegate of the Federal District and Civil Police of the Federal District and amends Laws 11,134, of July 15, 2005, 10,486, of July 4, 2002, and 11,361, of October 19, 2006. Available at: <http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2013/Lei/L12804.htm>.
Accessed on: 11 Apr. 2017.

_____. Complementary Law No. 97, of June 9, 1999. Provides for the general rules for the organization organization, preparation and employment of the Armed Forces. Available at: <http://www.planalto.gov.br/ccivil_03/leis/lcp/Lcp97.htm>. Accessed on: 17 Apr. 2017.

BRAZIL. Law No. 13,317, of July 20, 2016. Amends provisions of Law No. 11,416, of December 15, 2006, which provides for the Careers of Civil Servants of the Union's Judiciary Branch, and makes other provisions. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2016/lei/L13317.htm>.
Accessed on May 31, 2017.

BRAZIL. Law No. 13,327, of July 29, 2016. Changes the remuneration of public servants; establishes an option for new rules for incorporating performance bonuses into retirements and pensions; changes the requirements for access to public office; restructure positions and careers; provides for attorney fees for the loss of suit in cases to which the Federal Government, its municipalities and foundations are a party; and takes other measures. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2016/lei/L13327.htm>. Accessed on: May 31, 2017.

BRAZIL_____. Ministry of Agriculture, Livestock and Supply. 2012. Brazil leads the world in agricultural and livestock productivity. Available at: <http://www.agricultura.gov.br/noticias/brasil-lidera-produtivi dade-agropecuaria-mundial>. Accessed on: May 26, 2017.

_____. _____. 2017. AGRIBUSINESS PROJECTIONS: Brazil 2015/16 to 2025/26 Long-Term Projections. 2016. Brasília - DF: [sn], 2016. p. 138v. 1. Available at: <http://www.agricultura.gov.br/mwg- -internal/de5fs23hu73ds/progress?id=GXBe9_Y8PFd1zGjYVkP5MpNNSix1QlBG7vKf7JVrABM,>. Accessed on: 19 Apr. 2017.

_____. Ministry of Science, Technology and Innovation. 2013. Available at: <http://www.aeb.gov.br>.
Accessed on: 11 Apr. 2017.

_____. Defense Ministry. Air Force Command. Available at: <http://www.fab.mil.br/noticias/mostra/30025/SAT%C3%89LITE%20BRASILEIRO%20-%20Sat%C3%A9lite%20brasileiro%20ser%-C3%A1%20used%20para%20include%C3%A3o%20digital%20e%20defesa>. Accessed on: 20 May. 2017.

_____. _____. Air Force Command. Institute of Aeronautics and Space (IAE). 2013. Available at: <http://www.iae.cta.br>. Accessed on: 11 Apr. 2017.

_____. _____. Navy Command. 2013. Submarine Development Program (PROSUB).
Available at: <http://www.mar.mil.br/menu_v/ccsm/temas_relevantes/prosub-completo.pdf>. Accessed only on: 22 Mar. 2017.

_____. Navy Command. 2013. Navy Nuclear Program. Available at: <http://www.mar.mil.br/pnm/pnm.htm>. Accessed on: May 20, 2017.

_____. Available at: <http://www.defesa.gov.br/noticias/17732-exercito-brasileiro-recebe- -nove-viaturas-antimisseis-astros>. Accessed on: 22 Mar. 2017.

Machine Translated by Google

_____. Available at: http://www.defesa.gov.br/arquivos/orcamento_fi nancas/execucao_or camentaria/consolidado_2000_a_2017_v_ascom_jul_17.pdf. Accessed on May 31, 2017.

_____. National Defense White Paper, 2012. Available at: <http://www.defesa.gov.br/arquivos/2012/mes07/lbdn.pdf>. Accessed on: 22 Mar. 2017.

_____. Budget for 2015: R$81.9 billion; payroll: BRL 61.5 billion. Available at: <http://www.defesa.gov.br/arquivos/orcamento_fi nancas/execucao_orcamentaria_2000_2016.pdf.>. Accessed on: 29 Mar. 2017.

_____. Ministry of Industry, Foreign Trade and Services (MDIC). 2017. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/estatisticas-de-comercio-exterior/series-historicas>. Accessed on: May 29, 2017.

_____. Ministry of Communications. 2013. Actions and Programs. Available at: <http://www.mc.gov.br/acoes-e-programas>. Accessed on: 11 Apr. 2017.

_____. Ministry of Foreign Affairs. Available at: <http://www.itamaraty.gov.br>. Access at: 22 Mar. 2017.

_____. _____. 2011. Ministerial Meeting of the G4 countries (Germany, Brazil, India and Japan) - Joint Statement to the Press. Available at: <http://www.itamaraty.gov.br/sala-de-imprensa/notas-a-im-press/reuniao-ministerial-dos-paises-do-g4-alemanha-brasil-india-e-japao -joint-declaration-to-the-press-1>. Accessed on: 22 Apr. 2017.

_____. Ministry of Mines and Energy. 2017. Brazilian Energy Review. Available at: <http:// www.mme.gov.br/mme/galerias/arquivos/publicacoes/BEN/3_-_Resenha_Energetica/1_-_Resenha_ Energetica.pdf>. Accessed on: 11 Apr. 2017.

_____. _____. National Mining Plan 2030 (PNM – 2030). P. 178 1v.: il. Attachments. 2nd printing, revised). Available at: <http://www.mme.gov.br/web/guest/secretarias/geologia-mineracao-e-transformacao-mineral/plano-nacional-de-mineracao-2030/pnm-2030>. Accessed on: 19 Apr. 2017.

_____. Ministry of Planning, Budget and Management. Available at: <http://www.planejamento. gov.br/assuntos/planeja/plano-plurianual/projeto-de-lei/anexo-iii.pdf/@@download/ fi le/Annex III.pdf >. Accessed on: 10 Aug. 2017.

_____. Planalto Palace. 2013. Forças no Esporte program expands assistance to young people in border regions. Available at: <http://www2.planalto.gov.br/imprensa/noticias-de-governo/progra ma-forcas-no-esporte-amplia-atendimento-de-jovens-nas-regioes-de-fronteira>. Accessed on: 17 Apr. 2017.

ECLAC. 2017. Available at: <http://www.cepal.org/>. Accessed on: 27 Mar. 2017.

European Commission. 2013. Timber Regulation. Obligations and scope. Available at: <http://ec.euro pa.eu/environment/forests/timber_regulation.htm>. Accessed on: 22 Mar. 2017.

National Nuclear Energy Commission (CNEN). 2013. Actions and Programs. Available at: <http://www.cnen.gov.br/acnen/inf-acoeseprogramas.asp>. Accessed on: May 20, 2017.

MAIL. Number of deaths in Brazilian prisons reaches 134 in 2017. Available at: <http://www.correio24horas.com.br/detalhe/brasil/noticia/numero-de-mortos-em-presidios-brasileiros-che ga-a-134-em-2017/?cHash=f9072cd60180fa310a2d75fd83f1cfc1>. Accessed on: 30 May. 2017.

COSTA, Wanderley Messias da. 2007. Brazil and South America: geopolitical scenarios and the challenges of integration. Available at: <http://confins.revues.org>. Accessed on: 22 Mar. 2017.

ECODEVELOPMENT. 2011. After a tragedy in Japan, Germany announces the closure of nuclear power plants by 2022. Available at: <http://www.ecodesenvolvimento.org.br/posts/2011/maio/apos-tra gedia-no-japao-alemanha- announce-closing>. Accessed on: 28 Feb. 2017.

Machine Translated by Google

ECOSTEGUY, Peter. 2011. International Security – Brazilian Perspectives. The new African architecture of peace and security: implications for multilateralism and Brazil's relations with Africa. P. 523.

EHRLICH, Paul R. and LIU, Jianguo. 2002. Some Roots of Terrorism.Population and EnvironmentVol. 24, No. 2, November. Available from: <http://csis.msu.edu/sites/csis.msu.edu/fi les/Ehrlich%20%20Liu%202002. pdf>. Accessed on: 28 Aug. 2016.

EMPRESA Brasileira de Comunicação (EBC). 2013. Director of BNDES defends priority for competitiveness and productivity. Available at: <http://www.ebc.com.br/noticias/economia/2013/05/diretor- -do-bndes-defende-prioridade-do-pais-para-competittividade-e>. Accessed on: 12 Apr. 2017.

_____. 2013. Rector of ITA defends investment in innovation for the country to grow with quality. dis available at: <http://agenciabrasil.ebc.com.br/noticia/2013-05-14/reitor-do-ita-defende-investimento--em-inovacao-para-pais-crescer-com-qualidade>.

Brazilian Agricultural Research Corporation (EMBRAPA). 2013. Available at: <http://www.embrapa.br/>. Accessed on: 12 Apr. 2017.

STATE. PCC swaps debts for execution of police officers and gives 1 day to pay. Available at: <http://sao-paulo.estadao.com.br/noticias/geral,pcc-troca-dividas-por-execucao-de-policiais-e-da- -prazo-de-1-dia-para -pay,960833>. Accessed on: 30 May. 2017.

USA. 1949. The North Atlantic Treaty. Article 5. Available at: <http://www.nato.int/cps/en/natoli ve/offi cial_texts_17120.htm>. Accessed on: May 25, 2017.

_____. Business Insider. 2015. Here's how the US Military spends its Billions. Available at: <http://www.businessinsider.com/how-the-us-military-spends-its-billions-2015-8>. Accessed on: 01 Feb. 2017.

_____. Congress. Public Law 99-433-oct. 1, 1986. Goldwater-Nichols Department of Defense Reorganization Act of 1986. Available at: <https://acquisition.navy.mil/rda/content/download/5326/24165/version/2/fi le/goldwater-nichols +dod+reorganization+act+of+1986.pdf>. Accessed on: May 29, 2017.

_____. Department of Defense. 2011. US Marine Corps Web Site.The Air Sea Battle Concept Summary. Available at: <http://www.marines.mil/unit/hqmc/Pages/TheAir-Sea Battle concept summary.aspx>. Accessed on: 25 Apr. 2017.

_____. _____. 2012. Joint Chiefs of Staff Joint Vision 2020. America´s Military: Preparing for Tomorrow. Available from: <http://www.defense.gov/releases/release.aspx?releaseid=2469>. Accessed on: 22 Feb. 2017.

_____. _____. 2012. Joint Operational Access Concept. Available at: <http://www.google.com/search?hl=en&q=Joint+Operations+Acces+Concept>. Accessed on: May 29, 2017.

_____. _____. 2012. Sustaining US Global Leadership: Priorities for 21st Century Defense. Available at: <http://www.defense.gov/news/Defense_Strategic_Guidance.pdf>. Accessed on: May 25, 2017.

_____. _____. 2015. National Security Strategy. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy.pdf>. Accessed on: May 23, 2017.

_____. Rand Corporation. 2012. Asymmetric Warfare. Available at: <http://www.rand.org/topics/asymmetric-warfare.html>. Accessed on: May 25, 2017.

EURASIA Review, 2016. China's naval base in Pakistan revealed: China's new global game – analysis. Available at: <http://www.eurasiareview.com/07122016-chinas-naval-base-in-pakistan-revealed--chinas-new-global-game-analysis/>. Accessed on: 12 Mar. 2017.

EUROCORPS. 2017. A force for the European Union and NATO. Available at: <http://www.eurocorps.org/>. Accessed on 22 Feb. 2017.

EVANS, Alex. 2016. World Bank Development Report: Resource Scarcity, Climate Change and the Risk of Violent Confl ict. World Bank. Available at: <http://www.worldbank.org>. Accessed on: 28 Aug. 2016.

Machine Translated by Google

EXAM. 2013. Scientists say that Europe needs transgenics. Available at: <http://exame. Abril.com.br/ meio-ambiente-e-energia/noticias/cientistas-afi rmam-que-europa-needs-to-transgenics--2>. Accessed on: 22 Mar. 2017.

British ARMY. 2016. Ex Griffin Strike 16: British and French troops conduct live battle scenarios. Available from: < http://www.army.mod.uk/news/28545.aspx>. Accessed on 21 Feb. 2017.

FAO. 2015. Global Forest Resources Assessment 2015 How are the world's forests changing?. 2nd. ed. Rome: [sn], 2015. 54 pv 1. P. 26-28. Available at: <http://www.fao.org/mwg-internal/ de5fs23hu73ds/pro gress?id=hr7v7Ke1gi4Lbd32F3iJMBy-On18lSKc240n5cpjbME,>. Accessed on: May 23, 2017.

FEDERATION of American Scientists (FAS). 2013. F-16 Fighting Falcon. Available at: <http://www. fas.org/man/dod-101/sys/ac/f-16.htm>. Accessed on: 22 Mar. 2017.

_____. 2013. Rest of World Military Aircraft. Available from: <http://www.fas.org/man/dod-101/sys/ ac/row/index.html>. Accessed on: 22 Mar. 2017.

FINANCIAL Times and The Economist; Glamurama. 2017. Available at: <http://glamurama.uol.com.br/ in vasao-total-os-ataques-ciberneticos-mais-polemicos-dos-ultimos-tempos/>. Accessed on: May 26, 2017.

Newspaper. 2017. Available at: <http://www1.folha.uol.com.br/mercado/2016/01/ 1726880-ataque-de-hackers-derruba-rede-de-energia-da-ucrania.shtml>. Accessed on: May 26, 2017.

Newspaper. 2017. Peruvian sect dominates coca planting areas on the border with Brazil, says PF. Available at: <http://www1.folha.uol.com.br/cotidiano/2017/03/1865769-seita-peruana-domina- -areas-de-plantio-de-coca-na-fronteira-com-brasil -diz-pf.shtml>. Accessed on: 25 Mar.2017.

World Economic Forum. The Global Competitiveness Report 2016–2017. Available at: <http:// www3.weforum.org/docs/GCR2016-2017/05FullReport/ TheGlobalCompetitivenessReport2016-2017_FINAL.pdf>. Accessed on: 29 May. 2017.

FREDERICK S. Pardee Center For International Futures / Google Public Data. 2016. Available at: <http://www.ifs.du.edu/ifs/frm_Report.aspx>. Accessed on: 21 Mar. 2017.

FREEDOM House. 2016. Available at: <https://freedomhouse.org/sites/default/fi les/FH_FITW_Re port_2016.pdf>. Accessed on: 21 Mar. 2017.

FOUNDATION Dom Cabral. FDC Ranking of Brazilian multinationals 2016. Available at: <https:// www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/ Ranking_FDC_Multinacionais_Brasileiras_2016.pdf>. Accessed on: May 27, 2017.

International Monetary FUND (IMF). DataMapper. Available from: <http://www.imf.org/external/da tamapper/NGDP_RPCH@WEO/ WEOWORLD/MAE/OEMDC FMI>. Accessed on: May 25, 2017.

_____. World Economic Outlook. 2017. Available at: < http://www.imf.org/mwg-internal/de 5fs23hu73ds/progress?id=kiO2-BUoX-ppk2JsoVzXJj8BGJFakYkM3NVP29E6H4U>. Accessed on: 19 Apr. 2017.

G1. 2016. Islamic State loses 12% of its territory in Syria and Iraq in 2016. Available at: <http:// g1.globo.com/mundo/noticia/2016/07/estado-islamico-perde-12-de- your-territory-in-syria-and-iraq-in-2016.html>. Accessed on: 30 Jan. 2017.

G1. 2017. UN Security Council condemns North Korean missile tests. Available at: <http:// g1.globo.com/mundo/noticia/onu-pede-que-coreia-do-norte-pare-com-seus-testes-de-mis seis.ghtml>. Accessed on: May 23, 2017.

G1. 2017. Cyber attack has already reached 300 thousand computers in the world. Available at: <http://g1. globo.com/jornal-nacional/noticia/2017/05/ataque-cibernetico-ja-achieved-300-thousand-computers-in-the-world.html> Accessed on: May 26, 2017.

Machine Translated by Google

G1. 2017. Interview with several economists. Available at: <http://g1.globo.com/economia/noti cia/2014/08/entenda-queis-sao-os-entraves-ao-crescimento-da-economia-brasileira.html>. Accessed on: 18 May. 2017.

G1. Air Force Agency. Available at: <http://redeglobo.globo.com/globoecologia/noticia/2013/05/forca-aerea-brasileira-adota-energia-solar-em-base-na-amazonia.html>. Accessed on: 10 Apr. 2017.

GLOBAL SATELLITE INDUSTRY. Available from: http://www.reportlinker.com/market-report/Aerospace--And-Defence/95827/Satellite?utm_source=adwords4&utm_medium=cpc&utm_campaign=Aerospace_&_Defense&utm_adgroup=Satellite_Customer&gclid=COnApIC6htQCFQqAkQod3Q0HCQ>. Accessed only on: 23 May. 2017.

GREENPEACE. 2012. Overboard nuclear waste. Available at: <http://www.greenpeace.org/inter national/en/campaigns/nuclear/waste>. Accessed on: 28 Feb. 2017.

GREENPEACE. Available at: <http://www.greenpeace.org/brasil/pt/O-que-fazemos/Amazonia/>. Accessed on: 07 Apr. 2017.

HANCOCK, Tom. 2012. As wages rise, China prepares for rise of the robots. Available at: <http://www.smartplanet.com/blog/global-observer/as-wages-rise-china-prepares-for-rise-of-the-robots/5027>. Accessed on: 22 Mar. 2017.

HYPESCIENCE. NASA launches massive new library of images. Available from: <http://hypescience. com/new-library-images-nasa/>. Accessed on: 21 jun. 2017.

International Chamber of Commerce (ICC). 2017. Available at: <https://icc-ccs.org/piracy-reporting- -centre/live-piracy-map>. Accessed on: May 31, 2017.

International Institute for Strategic Studies (IISS). 2016. The Military Balance.

Brazilian Institute of Geography and Statistics (IBGE). 2017. Available at: <http://www.ibge.gov.br/ apps/populacao/projecao/index.html>. Accessed on: 24 Mar. 2017.

Brazilian Institute of Public Opinion and Statistics (IBOPE). Available at: <http://www.ibope.com. br/pt-br/noticias/PublishingImages/2015/July/1.jpg>. Accessed on 23 Mar. 2017.

Stockholm International Peace Research Institute (SIPRI). 2017. Available at: <http://www. sipri.org/research/armaments/milex>. Accessed on 29 Apr. 2017.

IPEA. 2008. What is it? Legal Amazon. Available at: <http://www.ipea.gov.br/desafi os/index.php?option=com_content&id=2154:catid=28&Itemid=23>. Accessed on: 17 Apr. 2017.

JAPAN. Defense Ministry. 2013. Defense of Japan 2011. Available at: <http://www.mod.go.jp/e/publ/w_paper/2011.html>. Accessed on: 26 Feb. 2017.

KOF SWISS ECONOMIC INSTITUTE. Available at: <https://www.kof.ethz.ch/en/>. Accessed on: 23 Mar. 2017.

MCKINSEY Global Institute. 2016. Resource Revolution: Meeting the World's Energy, Materials, Food and Water Needs. Available from: <http://www.mckinsey.com/Features/Resource_revolution.aspx>. Accessed on: 28 Aug. 2016.

French Ministry of Defense. 2017. Available at: <http://www.defense.gouv.fr/english/content/download/190842/2105555/fi le/00_intro_Strategic Horizons_EN.pdf>. Accessed on: 22 Mar. 2017.

MISSILE Technology Control Regime (MTCR). Available at: <http://mtcr.info/mtcr-guidelines/>. Accessed only on: 21 May. 2017.

United Nations of Brazil (ONUBR): 40% of internal conflicts in the last 60 years are linked to the exploitation of natural resources. Available at: <https://nacoesunidas.org/onu-40-de-confl itos-inter nos-nos-ultimos-60-anos-tem-vinculo-com-exploracao-dos-recursos-naturais/>. Accessed on: May 29, 2017.

Machine Translated by Google

NASA. 2017. Available at: <https://alteracoesclimaticas.wordpress.com/tag/media-mensal-da-temperatura-de-superfi cie-global/>. Accessed on: 07 Apr. 2017.

NASA. 2017. Available at: <https://www.nasa.gov/gistemp/graphs_v3/ >. Accessed on: 07 Apr. 2017.

O GLOBO, 2016. Argentina sinks a Chinese boat that was fishing illegally. Available at: <http:// oglo bo.globo.com/mundo/argentina-afunda-barco-chines-que-pescava-illegalmente-18883497>. Accessed on 13 Mar. 2017.

OESP. 2016. Cocaine consumption in Brazil is 4 times the world average, says UN. Available at: <http://noticias.uol.com.br/ultimas-noticias/agencia-estado/2015/06/26/consumo-de-cocaina-no-brasil-e-4-vezes-superior-a -media-mundial.htm>. Accessed on: 14 Mar. 2017.

UN. Security advice. Available at: < http://www.un.org/en/sc/>. Accessed on: 28 Jun. 2017.

UN. United Nations Conference on Sustainable Development. The Future We Want. 2012. Available at: <http://www.rio20.gov.br/documentos/documentos-da-conferencia/o-futuro--que-queremos/>. Accessed on: 22 Mar. 2017.

UN. United Nations Declaration on the Rights of Indigenous Peoples. 2008. Available at: <http:// www.un.org/esa/socdev/unpfii/documents/DRIPS_pt.pdf>. Accessed on: 11 Apr. 2017.

UN. FAO. The State of World Fisheries International Aquaculture 2006. Available at: <http://www. fao.org/docrep/009/a0699e/a0699e00.HTM>. Accessed on: 03 Feb. 2017.

UN. IPCC. Climate Change 2007: Synthesis Report. Available from: <http://www.ipcc.ch/mwg-internal/de5fs23hu73ds/progress?id=ndSmR1V1RG>. Accessed on: May 29, 2017.

UN. IPCC. Climate Change 2014: Impacts, adaptation and vulnerabilities. Summary for police Makers. Available from: <http://www.ipcc.ch/report/ar5/wg2/. Accessed on: 29 Apr. 2017.

UN. IPCC. Summary for Policymakers. 2013. Available at: <http://www.climatechange2013.org/mw g-internal/de5fs23hu73ds/progress?id=Zuo+WBuRfr>. Accessed on 11 Apr. 2017.

UN. Peacekeeping operations. 2012. Available at: <http://www.un.org/en/peacekeeping/operations/ >. Accessed on: May 25, 2017.

UN. UNDP. Africa Human Development Report 2012: Towards a Food Secure Future. 2012. Available at: <http://www.undp.org/content/undp/en/home/librarypage/hdr/africa-human-development-re port-2012/>. Accessed on: 11 Apr. 2017.

UN. UNDP. Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World. 2013. ISBN 978-92-1-126340-4. Available at <http://www.pnud.org.br/mwg-internal/ de5fs23hu73ds/progress?id=9V/jU+vRGZ>. Accessed on: 15 Mar. 2017.

UN. UNDP. Report 2015. Available at: <http://hdr.undp.org/mwg-internal/de5fs23hu73ds/pro gress? id=NB6nDrt96Lw_LZgwd3GcuTBnU_Iv5Xhij_KXFtNc3JY,>. Accessed on: 20 Mar. 2017.

UN. UNODA. Brazil. Disarmament Treaties Database. 2013. Available at: <http://disarmament. un.org/treaties/s/brazil>. Accessed on 07 Apr. 2017.

UN. UNODA. Missiles. 2013. Available at: <http://www.un.org/disarmament/WMD/Missiles/>. Accessed only on: 12 Aug. 2013.

UN. UNODC. Drug trafficking. 2012. Available at: <http://www.unodc.org/unodc/en/drug-traffi-cking/ index.html>. Accessed on: 22 Mar. 2017.

UN. UNODC. Promoting health, security and justice 2010 Report. Available at: <http://www.unodc. org/mwg-internal/de5fs23hu73ds/progress?id=ZR2P0S0lbA>. Accessed on: 24 Mar. 2017.

UN. UNODC. World Drug Report 2013. Available at: <https://www.unodc.org/lpo-brazil/pt/drogas/ reporto-mundial-sobre-drogas.html>. Accessed on: 22 Mar. 2017.

Machine Translated by Google

UN. UNODC. World Drug Report 2014. Available at: <https://www.unodc.org/mwg-internal/de 5fs23hu73ds/progress?id=_gJ3QHHlxB4JH91tKQuBgNIGgfU8EcKyerrFiCjywVY,>. Accessed on: May 29, 2017.

UN. UNODC. World Drug Report 2016. Available at: <https://www.unodc.org/wdr2016/interactive-map.html>. Accessed on: 10 Jul. 2017.

UN. UNOOSA. Available at: <http://www.oosa.unvienna.org/oosa/COPUOS/copuos.html>. Accessed on: 28 Mar. 2017.

ORGANIZATION of American States (OAS). Available at: <http://www.oas.org/pt/sobre/ who_somos.asp>. Accessed on: 27 Mar. 2017.

International Labor Organization (ILO). Convention No. 169 on Indigenous and Tribal Peoples and Resolution concerning ILO action. Available at: <http://www.oitbrasil.org.br/node/292>. Accessed on: 11 Apr. 2017.

World Trade Organization (WTO). Available at: <https://www.wto.org/english/news_e/pres17_e/ pr791_e.htm. >Accessed on: May 22, 2017.

NATO. 1999. Operation Allied Force - 23 March - 10 June 1999. Available at: <http://www.nato.int/ kosovo/all-frce.htm>. Accessed on: May 25, 2017.

NATO. 2004. Operation Enduring Freedom. Available at: <http://www.nato.int/terrorism/factsheet. htm>. Accessed on: May 25, 2012.

NATO. 2005. Operation Deliberate Force: Ten years on. Available at: <http://www.nato.int/docu/ up date/2005/08-august/e0830a.htm>. Accessed on: May 25, 2017.

NATO. 2012. Deterrence and Defense Posture Review. Available at: <http://www.nato.int/cps/en/ na tolive/offi cial_texts_87597.htm>. Accessed on: 22 Mar. 2017.

NATO. 2012. International Security Assistance Force. Available at: <http://www.isaf.nato.int/ mission. html>. Accessed on: May 25, 2017.

PANETTA, Leon. 2012. The US Rebalance Towards the Asia-Pacific. Singapore 2012. The 11th IISS Asia Security Summit. First Plenary Session – Shangrila Dialogue. Available at: <http:// www.iiss.org/conferences/the-shangri-la-dialogue/shangri-la-dialogue-2012/speeches/fi rst-plenary-session/leon-pa netta/>. Accessed on: May 25, 2017.

PETROBRAS. 2017. Available at: <http://noticias.band.uol.com.br/economia/noticia/100000638894/ understand-o-que-ea-camada-pre-sal.html>. Accessed on: 07 Apr. 2017.

Naval POWER. 2014. China plans to build 18 overseas naval bases, including in Namibia. Available at: <http://www.naval.com.br/blog/2014/11/23/china-planeja-construir-18-bases-navais-no-exte rior-inclusive-na-namibia/>. Accessed on: 06 Mar. 2017.

POPULAR Mechanics. The Inside Story of the SWORDS Armed Robot "Pullout" in Iraq: Update. Available from: <http://www.popularmechanics.com/technology/gadgets/a2804/4258963/>. Accessed on: May 25, 2017.

PORTAL Brazil. The main objective of the Citizen Soldier project is to help soldiers who are about to leave the Armed Forces to find a job. Available at: <http://www.brasil.gov.br/sobre/educacao/ ensino-tecnico/bolsa-formacao/soldado-cidadao>. Accessed on: 28 Aug.2017.

PORTAL Brazil. Productivity in agriculture grows with sustainable technologies. Available at: <http://www.brasil.gov.br/ciencia-e-tecnologia/2015/11/produtividade-na-agropecuaria-cresce-com- -tecnologias-sustentaveis >. Accessed on: 26 Sept. 2017.

PRAVDA.ru. 2012. China has territorial claims to nearly 20 countries. Available at: <http:// english.pravda.ru/world/asia/17-07-2012/121658-china_territorial_claims-0/>. Accessed on: May 26, 2017.

Machine Translated by Google

UK. Defense Ministry. 2010. Global Strategic Trends – Out to 2040. Fourth Edition. Available from: <https://www.gov.uk/government/uploads/system/uploads/attachment_data/fi le/33717/ GST4_v9_Feb10.pdf>. Accessed on: May 25, 2017.

_____. _____. 2012. Strategic Trends Programme. Future Character of Confl ict. Available at: <http:// www.mod.uk/mwginternal/de5fs23hu73ds/progress?id=P/K9nCTSKT>. Accessed on: 29 Mar. 2017.

RESDAL. 2016. Comparative Atlas of Defense in Latin America and the Caribbean - 2016 Edition. Available at: < http://www.resdal.org/atlas-2016.html >. Accessed on: 22 Mar. 2017.

REUTERS. 2017. Germany sends armored vehicles to Lithuania for a NATO mission. Available at: <http:// www.defesanet.com.br/otan/noticia/24665/Alemanha-envia-Blindados-a-Lituania-para-missao-da-O TAN/ >. Accessed on: 31 January 2017.

Veja magazine. Available at: <http://veja.abril.com.br/blog/impavido-colosso/brasil-eo-nono-pais- -com-a-pior-velocidade-de-internet/> Accessed on: 23 mar. 2017.

SIPRI. 2017. Available at: <https://www.sipri.org/databases/milex>. Accessed on: 21 Mar. 2017.

SPAWAR.. Robotics. Available from: <http://www.public.navy.mil/spawar/Pacific/Robotics/Pages/ default.aspx>. Accessed on: 28 Mar. 2017.

SPUTINIK Brazil. 2016: China wants to follow the example of the US and deploy military troops around the world. Available at: <https://br.sputniknews.com/asia_oceania/201608246129868-china-eua-terao-bases- -no-djibouti/>. Accessed on: 11 Mar. 2017.

STRATFOR Worldview. 2017. Venezuela: where drugs and diplomacy meet. Available at: <https:// www.stratfor.com/analysis/venezuela-where-drugs-and-diplomacy-meet> Accessed on: May 19, 2017.

TAKAHASI, Raysa Kie. Chinese action in Angola. Available at: <https://pucminasconjuntura.wor dpress.com/2012/07/24/a-acao-chinesa-em-angola/>. Accessed on: 22 Mar. 2017.

TECHNOMUNDO. Available at: <http://www.tecmundo.com.br/internet/51663-internet-como-estao- -as-velocidades-nos-princicipais-paises-infografi co-.htm>. Accessed on: 23 Mar. 2017.

EARTH. 2009. Meatpacking plants and Greenpeace sign an agreement against deforestation. Available at: <http://noticias.terra.com.br/brasil/frigorificos-e-greenpeace-assinam-acordo-contra-desmatamento,-605c4999eed4b310VgnCLD200000bbcceb0aRCRD.html>. Accessed on: 11 Apr. 2017.

THE Economist. 2012. China's military rise. The dragon's new teeth. A rare look inside the world's biggest military expansion. Available at: <http://www.economist.com/node/21552193>. Accessed on: May 25, 2017.

TRANSPETRO. 2017. Available at: <http://www.transpetro.com.br/pt_br/areas-de-negocios/termi nais-e-oleodutos.html>. Accessed on: May 18, 2017.

UNASUR. 2012. Declaración Del Consejo De Jefas Y Jefes De Estado Y De Gobierno De Unasur Sobre La Cuestión De Las Islas Malvinas. Available at: <http://www.unasursg.org>. Accessed on: 22 Mar. 2017.

UNASUR. 2014. UNASUR and the leadership role in the dialogue table in Venezuela. Available at: <http:// www.unasursg.org>. Accessed on: 22 Mar. 2017.

UNION of South American Nations (UNASUR). Suramerican Defense Council. Available at: <http:// www.unasursg.org>. Accessed on: 22 Mar. 2017.

UOL. Available at: <http://ecoviagem.uol.com.br/noticias/ambiente/nosso-planeta/primeiro-sateli te-brasileiro-completa-19-anos-em-operacao-15485.asp>. Accessed on: 10 Apr. 2017.

UOL. Prisons in Paraguay point to an international link between the PCC and drug trafficking in RS. Available at: <https://noticias.uol.com.br/cotidiano/ultimas-noticias/2017/01/25/prisoes-no-paraguai-apontam-e lo-internacional-entre-pcc-e-narcotrafi co- do-rs.htm>. Accessed: 30 May. 2017.

Machine Translated by Google

VALOR Econômico 2016. Beef 'Rebanho Xingu' arrives at retail in the country. Available at: <http:// www. valor.com.br/agro/4576625/carne-rebanho-xingu-chega-ao-varejo-do-pais>. Accessed on: May 25, 2017.

Economic value. 2012. Japan gives up on nuclear power plant and shakes energy market. Available at: <http://www.valor.com.br/opiniao/2838444/japao-desiste-de-usina-nuclear-e-agita-mercado-de-energia>. Accessed on: 05 Mar. 2017.

Economic value. 2014. JBS, Marfrig and Minerva attest to compliance with agreement in the Amazon. Available at: <http://www.valor.com.br/agro/3503808/jbs-marfrig-e-minerva-atestam-cumprimento-de- -acordo-na-amazonia>. Accessed on: 22 Mar. 2017.

Economic value. 2016. McDonald's buys beef from the Amazon again - but sustainably. Available at: <http://www.valor.com.br/agro/4675957/mcdonalds-volta-comprar-carne-bovina-da--amazonia-mas-sustentavel>. Accessed on: May 25, 2017.

Economic value. 2016. Certified cotton production breaks record. Available at: <http://www.va lor.com.br/agro/4745533/producao-certifi cada-de-algodao-bate-recorde>. Accessed on: May 25, 2017.

Economic value. 2017. Brazilian soybean farmers sign memorandum for sustainable production. Available at: <http://www.valor.com.br/agro/4843286/sojicultores-brasileiros-assinam-memorando-para-producao-sustentavel>. Accessed on: May 25, 2017.