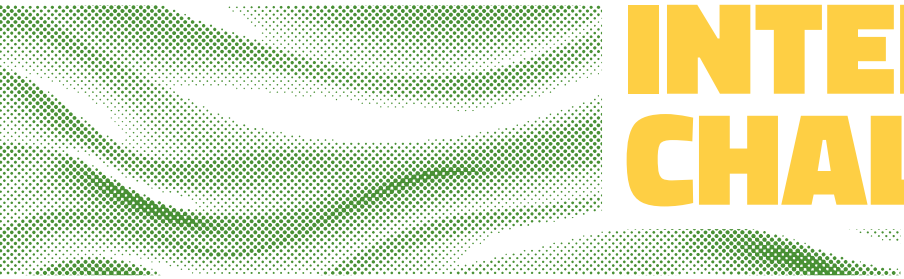
INTELLIGENCE CHALLENGES

2025 EDITION

ABIN



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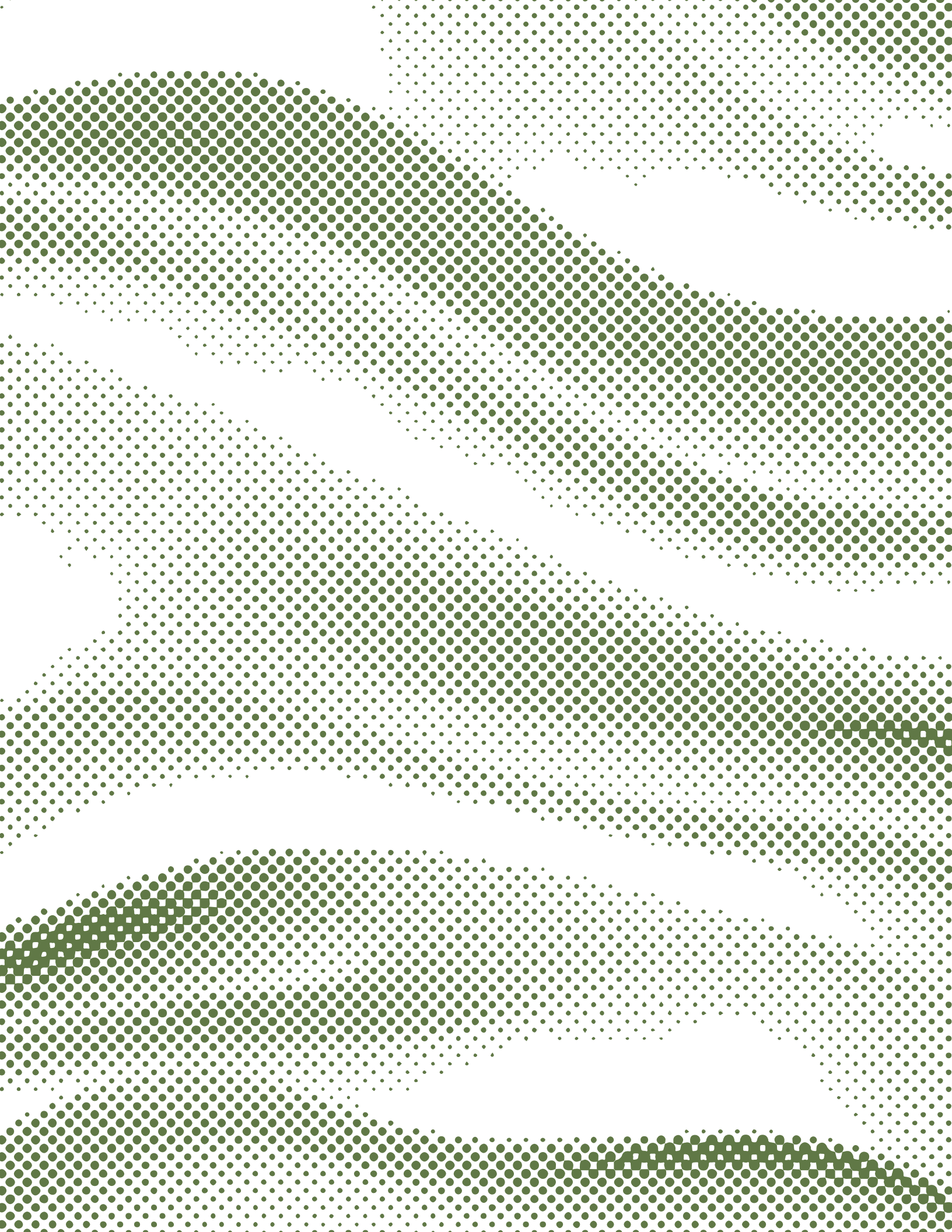

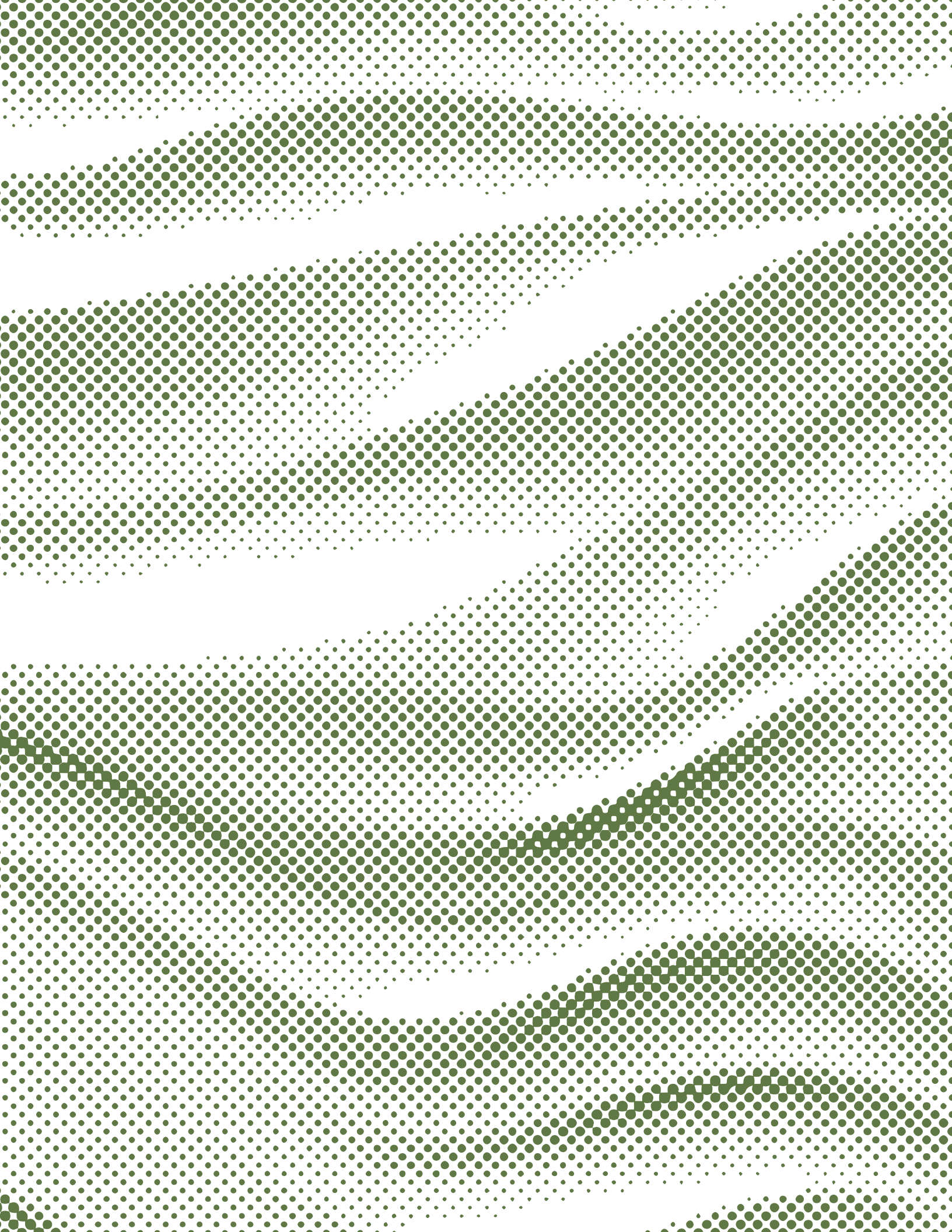

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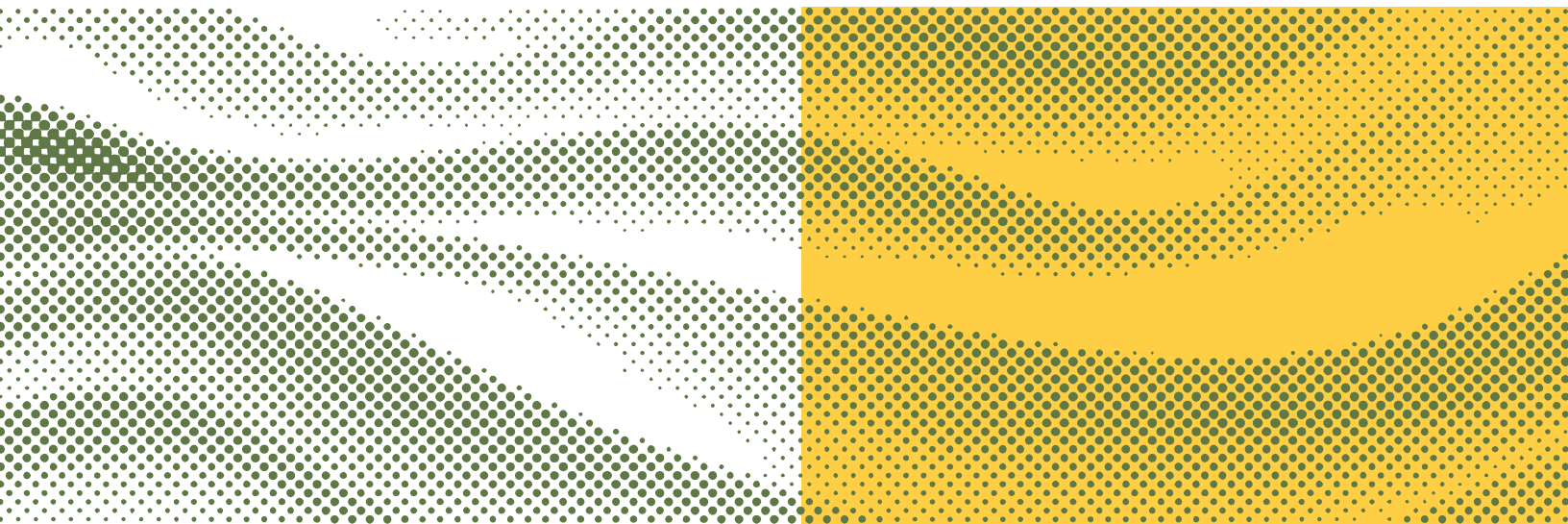
Contents



Presentation

Intelligence Challenges, 2025 Edition, is an analytical public document prepared by the Brazilian Intelligence Agency (ABIN). It is an analytical document, because it mobilizes research and prospective analysis resources. At the same time, it is public, because it integrates a set of active transparency initiatives and a repositioning of ABIN before society and the State.

In 2024, ABIN and the Brazilian Intelligence System (SISBIN) celebrate 25 years since their foundation. The consolidation of a national system and a civil agency specialized in providing knowledge about security threats and vulnerabilities for the Brazilian Government is a permanent challenge. Created under the mark of the Citizen Constitution of 1988, the new Brazilian intelligence has an unbreakable commitment to Brazil's democracy and sovereignty. The strategic orientations for ABIN´s activities are given by the Law, by the National Intelligence Policy (PNI) and by the normative acts, which have been updated, like the decree of reorganization of SISBIN, issued in September, 2023.

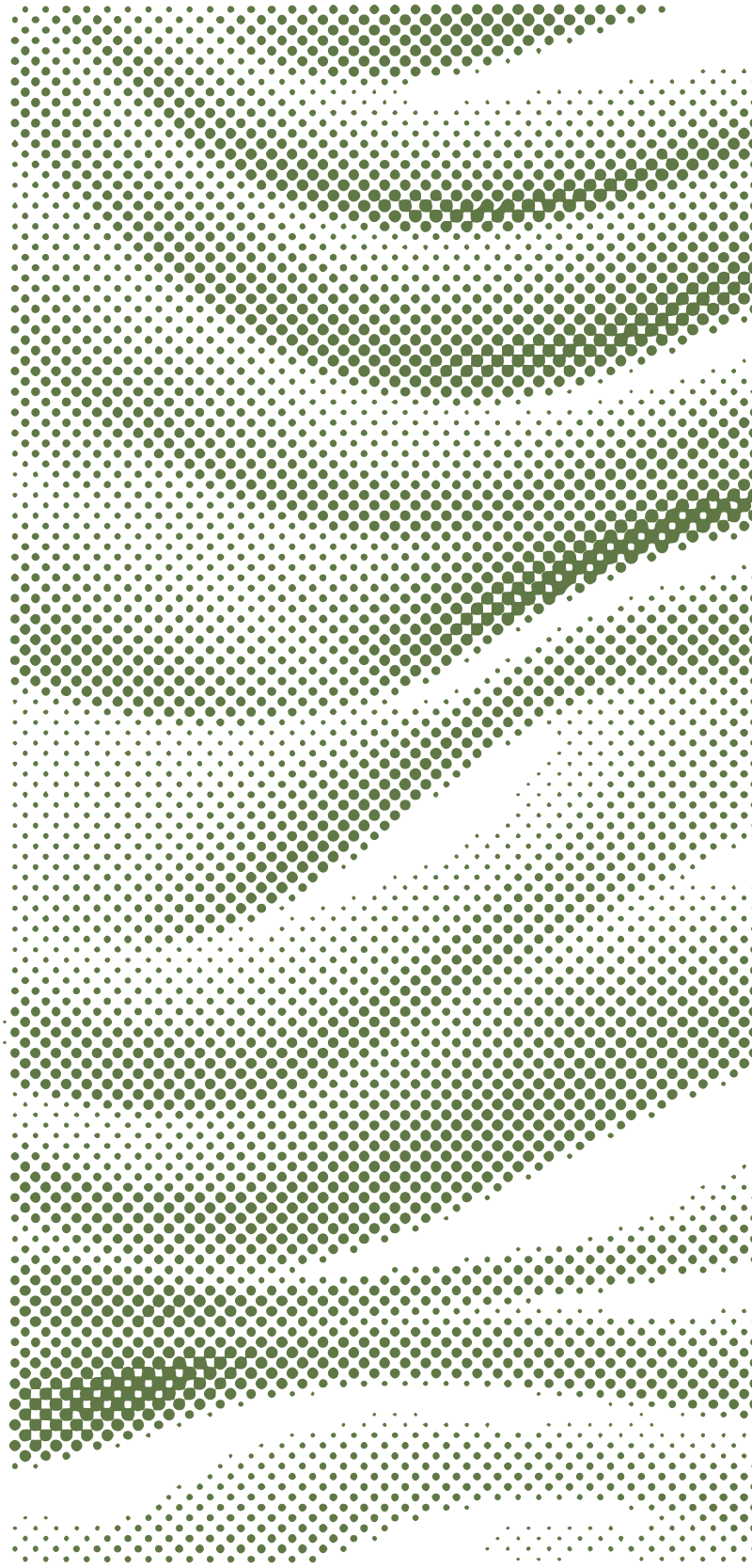
In November 2023, for the first time, the Intelligence Doctrine was published on the official ABIN webpage[1]. The Doctrine sets out definitions, principles, and values and presents the main con-

cepts, pertaining to intelligence, to counterintelligence, to the fundamental analytical procedures of the activity and to the intelligence operations. The publication of a prescriptive document shows the way to reinforce intelligence as an activity of the State, a public service performed in a specialized, professional and methodical manner.

As we publish Intelligence Challenges, ABIN has the goal of suggesting points of attention to the action of intelligence, dialoguing with the Government and society about the importance of strategic intelligence in order to help Brazil face up to the present and future changes and instabilities. This document has benefited enormously from the interaction with dozens of scientists and specialists from universities and governmental agencies, to whom we are extremely indebted. However, the responsibility for the analyses undertaken here is entirely on the Agency.

By promoting the debate upon the direct and indirect factors that affect Brazil´s security, ABIN reiterates its commitment to the construction of a democratic and sovereign society.

Luiz Fernando Corrêa
Director-General
Brazilian Intelligence Agency



Executive Summary

Intelligence Challenges, 2025 Edition, is a document produced by the Brazilian Intelligence Agency, in order to evaluate the security risks for Brazil, in four dimensions: global, international, regional and national.

On the global dimension, the impacts and vulnerabilities will be analyzed, that are originated by the climate changes, the demographic transition and the technological revolution from the second phase of the Digital Era.

On the international dimension, we will discuss the concentration of power, rivalries among the great powers, as well as the aggravation of armed conflicts.

On the regional dimension, the document identifies South America as the strategic surrounding of Brazil, evaluating the security and regional integration challenges.

On the national dimension, the document stresses out five types of risks for the security of people and institutions in Brazil. Namely, the risks for the Democratic Rule of Law, for the cybersecurity, for the resilience of the strategic sectors, besides the risks associated with illicit markets and organized crime, and the risks originated from espionage and foreign interference.

The causal links among the global transitions, the international situation, the situation in South America and the national intelligence challenges are complex. What goes on in the world does affect our country. On the other hand, the manner with which the institutions and society deal with those challenges contributes to the results aggregated on a national, regional, international and global level. It is the responsibility of the Brazilian State to provide the minimal security conditions for the Brazilian women and men, in order to foster development. To do so, specialized knowledge about vulnerabilities, risks and threats, and acting foci of the intelligence agencies must be known.

1. Global Transitions

By 2050, climate change, the global demographic transition and the technologies of the second phase of the Digital Age (especially artificial intelligence, quantum computing and robotics) will continue to radically alter the context of all strategic interactions and structures built by humans. Each year, we need to assess how these changes are developing, and their effects.

Climate

The effects of ongoing climate change on the planet are global and uneven, including melting glaciers, ocean acidification, reduction of biodiversity and the incidence of extreme climatic events. Countries and populations are affected disproportionately in terms of vulnerabilities and capacities for prevention, mitigation and adaptation. In Brazil, the main effects associated with climate change can already be felt, with the accelerated degradation of biomes, recurrence of extreme weather events, vulnerability of densely populated coastal areas, increased risks of food insecurity and forced displacement of urban and rural populations.

Demographics

By 2050, the projected global population will be somewhere between 9.4 and 10.1 billion humans. The median age in the richest countries will be 44.5 years, and 68.4% of the world's people will live in cities. Conflicts associated with migratory flows (forced and voluntary), access to public services (health, education, security, welfare) and the distribution of "life chances" (inequalities and dignity) are unlikely to be resolved solely in an adaptive way, even considering the current technological transition.

Technology

The current technological transition to the Digital Age began in the 1970s, but tends to accelerate between 2020 and 2050, due to the synergy between digital, biological, energetic and material innovations. The digital area, especially because of the exponential increase in computational capacity (quantum and supercomputing), communications (networks and satellites) and learning (artificial intelligence and data), designates precisely the new mode of production and the new mode of production, and the global social formation associated with it. The control over the technologies and their mobilization for the development, the governance of conflicts involving states, companies and social groups, as well as the radical uncertainty about the social and institutional effects (including decision-making processes), matter for Brazil's security.

2. International Situation

The current international order is multipolar, unbalanced and deinstitutionalized. In contrast, the disruptive effects of global transitions demand more cooperation in areas critical to the sustainable development of humankind. Therefore, the future of the international order in the coming decades directly affects Brazil's security.

Competition

The international situation in 2025 will continue to be defined by polarization between the major powers and by the global dispute over resources, markets and influence. The deterioration of international security deprives the world of the cooperation between the United States and China—the two largest economies, and the most powerful states—necessary to solve the major problems arising from global environmental, demographic and technological transitions.

Conflicts

The armed conflicts involving Ukraine and Israel, even if there is no further escalation in 2025, will continue to degrade the confidence in diplomatic solutions to civil conflicts, insurgencies, terrorism, extremism and wars between countries, with catastrophic humanitarian repercussions. Interstate military disputes directly involving regional powers, some with nuclear weapons, add another, even greater, risk to the security of all.

3. South America

Brazil's strategic environment is made up of South America and the South Atlantic. In both spaces, the national interest corresponds to the desires for peace and sustainable development.

Security

On the East-West front (South Atlantic), Brazil's challenge is to develop dissuasive and defensive capacities against threats with low probability and high impact, since 54.8% of the population resides up to 150 km away from the coast, and 23.4% of the country's Gross Domestic Product are generated in the municipalities along the shoreline, being it that 97.6% of petroleum, 83.8% of gas and 83% of Brazil's foreign trade depend upon the sea. On the West front, the other South American countries correspond to around half of the population, of the GDP, and of the territory of the region, besides sheltering 40% of the Amazon biome. More than half of the Brazilian exportations to the region are products and services of greater added value and more technology-intensive.

Integration

It is crucial to reinvigorate regional coordination mechanisms and political dialog, technical cooperation and integration of transport and infrastructure, both physical and digital. Shared risks (climatic, demographic and technological) between the countries in the region, arising from global and geopolitical pressures, as well as the reducing levels of violence and poverty and the preservation of natural resources and strategic assets will only be overcome through regional integration.

4. Brazil: Challenges for Intelligence

In the context of global transitions, and considering the international situation, five main security risks have been selected, which constitute intelligence challenges in 2025: the security of democratic institutions, cybersecurity, the resilience of strategic sectors, illicit markets and organized crime, and espionage and foreign interference.

Security of democratic institutions

In 2025, three factors could aggravate the risk for democratic institutions. The first is disinformation campaigns against electoral processes, which contribute to possible institutional breakdowns in other countries, including in South America, with impacts on the internal dynamics of Brazilian antidemocratic movements. The second is the coordination between antidemocratic groups on an international scale, by means of financing and exchange of repertoires of action. The third are the socio-environmental crises, increasingly extreme and frequent, caused by climate change, requiring rapid and coordinated responses.

Cybersecurity

The growing State and non-State threats against Brazilian cyberspace demand an approach based on the concept of cyber resilience. Resilience involves continuity of operations, data protection, encryption and response to persistent attacks and incidents against public and private users. By 2025, the production of intelligence to support public policies will face the following challenges: the growing sophistication of methods of attack, the use of artificial intelligence by malicious actors and the increase in the attack surface, due to the expansion of public services on digital platforms.

Resilience of strategic sectors

Intelligence supports public policies to build and maintain the resilience of strategic sectors, by promoting a culture of protecting sensitive knowledge and the systematic assessment of threats and vulnerabilities. In 2025, the priority strategic sectors for intelligence are: energy (including the nuclear sector), oil, gas and biofuels, digital infrastructure, defense, space, transport and food security. In addition to maintaining and improving the National Sensitive Knowledge Protection Program (PNPC) developed by the ABIN, intelligence demands based on risk assessment, and recommendations mitigation actions will increase as a result of the Brazilian presidency and the BRICS and COP30 events.

Illicit markets and transnational organized crime

Illicit markets and transnational crime are problems shared by Brazil and the other South American countries. The operators of drug trafficking, arms and human trafficking, migrant smuggling and environmental crimes, such as illegal gold mining and timber smuggling, take advantage of the weakening of regional governance and of the difficulties of integration, to expand their activities. By 2025, the production of intelligence on these threats will have the challenge of integrating critical current events with the assessment of short- and medium-term trends, using geolocated approaches, with a view to providing strategic approaches, capable of informing public policy decisions based on evidence.

Espionage and foreign interference

The cycle of major political events in Brazil, due to the presidency of the G20 (2024), BRICS and COP 30 (2025), has raised the state of alert about espionage threats and campaigns of foreign interference against Brazil.

The topics discussed in this document are wide-ranging, but the agenda for producing intelligence knowledge is even more diverse. The contents, methods, sources and resources used for the activity of the SISBIN bodies, including ABIN, can and should be audited and controlled through different instruments and instances, as in accordance with the law and administrative procedures, which are public and increasingly refined, according to the demands of citizenship. The prospective and well-based identification of priorities is part of this process.

Sunset on the Rio Negro (AM) | Photo by Fabio Rodrigues Pozzebom (Agência Brasil)

Methodological Note

***Intelligence Challenges* is a document that analyzes international phenomena and their links to the agenda for knowledge production about security risks, threats and vulnerabilities for Brazil.**

The aim of the document is not to produce scenarios, but to evaluate events and trends on different time and geographical scales, which may affect the security of people and institutions in Brazil.

The work was prepared by ABIN analysts, in dialog with external experts. Throughout 2023 and 2024, within the framework of the research and outreach program of the Intelligence School (ESINT), 18 events were held in Brasilia, in which 44 experts were heard. In addition, there were 10 thematic meetings with experts in the five regions of the country, organized by ABIN's state superintendencies. In total, more than 100 experts were heard. They work in public and private educational and research institutions, as well as in agencies.

The topics discussed at these meetings included extreme weather events, food security disinformation and threats to democracies, integration of South America, Artificial Intelligence (AI) and international armed conflicts, among others. Based on the interactions that took place, the topics to be discussed in this document were selected, divided into four levels of analysis (global, international, regional and national). Each chapter corresponds to a level of analysis.

Many relevant topics (ranging from energy transitions to the dynamics of interpersonal violence) could not be addressed, due to various limitations and the need to make choices based on the specialized advisory needs identified throughout 2023 and 2024. At the first three levels of analysis (global, international and regional), the contents discussed were assessed as relevant, but specific techniques were not used to prioritize the problems. Next, ABIN professionals,

linked to the ESINT Intelligence Research Center, conducted a review of specialized technical and scientific production and opted to use data from public sources (see references at the end). The data samples used depended on the availability of public sources. For this reason, for example, in the chapter about South America, either data linked to South America, or to Latin America, or even to Latin America and the Caribbean were used. In the visualizations, we tried to use an accessible palette for people with color perception difficulties.

At the global level (chapter 1), we chose to discuss three interrelated themes, the implications of climate change, the pressures deriving from demographic transition in the world and the impacts of emerging technologies, in the second phase of the Digital Age. Chapter 2 (International Situation) analyzes the characteristics of the contemporary international order (concentration, imbalance and deinstitutionalization of power), as well as the implications of the rivalry between great powers and the armed conflicts in Europe and the Middle East. In chapter 3 (South America), the document starts from the premise that geographical contiguity is a relevant factor for the analysis of Brazil's security challenges, seeking to identify the vulnerabilities in Brazil's strategic environment, formed by the South Atlantic and South America, with an emphasis on the latter. With regard to these first three chapters, it is important to note two observations.

Firstly, we know that the causal links between global transitions, the international situation, the situation in South America, and national intelligence challenges, are complex and require further explanation, which was not possible in this edition. In general, however, it is assumed that what happens in the world affects our country. In turn, the way in which institutions and society deal with these challenges contribute to the aggregate results at the national, regional, international and global levels.

Furthermore, although the the document is primarily concerned with the security risks to people and institutions in Brazil, such risks involve both the identification of direct and existential threats, as well as the analysis of vulnerabilities. This is why we assess the international political situation, especially the deterioration of security conditions, due to the increased geopolitical competition between major powers, and the aggravation of regional armed conflicts in Europe and the Middle East.

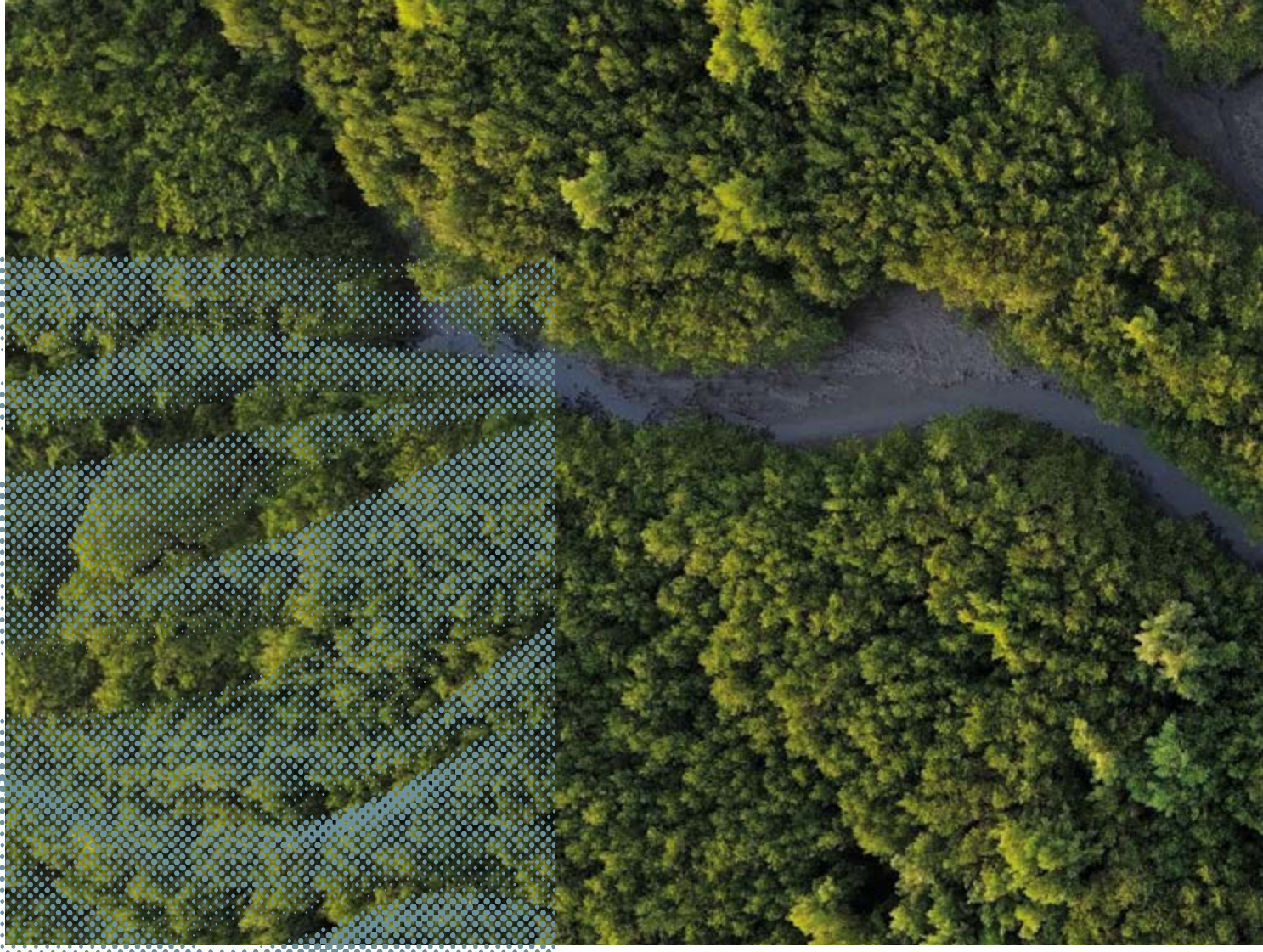
In order to carry out this task, we used aggregated data from public sources, and analysis of situations and events. It should be remembered that some of the parameters to be taken into account are the environmental, population and technological ones when assessing a country's security risks and vulnerabilities. By definition, contexts and structures are not capable of acting, and therefore do not constitute existential threats

to people and institutions. Nevertheless, systemic change impacts people and countries unequally. people and countries. Similarly, even when armed conflicts and geopolitical rivalries do not directly threaten the Brazilian population and Brazilian interests, it is necessary to monitor interactions that can contribute to increasing collective insecurity, and the challenges to the country's international insertion and development. More directly, what happens in South America affects the possibilities and risks for our country, both in intergovernmental terms and structurally.

The intelligence challenges discussed in chapter 4 (national level) derive from the trends observed in previous chapters and the need to the threats listed in the National Intelligence Policy (PNI). Each of the challenges was prepared by an interdisciplinary team of analysts, on the basis of a prospective exercise coordinated by the Intelligence School, using structured analysis techniques.

In this first edition of the document, more than selecting variables and testing explanatory hypotheses, it was decided to systematize preliminary information that will allow for more sophisticated methodological approaches in the future.

View of the sunset at Museu do Amanhã | Photo by Fernando Frazão (Agência Brasil)



Global Transitions 01

Mangrove area restored after environmental disaster at Barão de Mauá Municipal Natural Park, in Rio de Janeiro State, Brazil | Photo by Fernando Frazão (Agência Brasil)

Global transitions are understood to be a set of significant changes that occur on a global scale with great disruptive potential. The transitions affect various aspects of society, culture, the economy, the environment and other spheres and affect them in a simultaneous and correlated way, influencing each other. Although it is possible to identify where, when and how each of these started and understand their evolution over the course of historical processes, predicting their future development is an extremely complex task.

International relations involve different types of actors (national governments, specialized bureaucracies, companies, international organizations, groups and individuals). These actors make choices and act constrained by historic, political, economic and social structures. Both structural constraints and interactions between actors take place in broader environmental, human and technological contexts. Since its emergence, the human species has continuously increased its capacity to alter such contexts. In recent decades, however, this process has reached a point where the increased density of interactions (transportation, communication, energy, information) has led us to characterize the context of international relations as a function of human impact, calling it the Anthropocene or the Digital Age, for example.

The successive interactions between people, organizations and states form structures that constrain strategic decisions. Through mechanisms of cooperation, conflict and securitization, states reproduce and alter international structures and

contribute to influencing the evolution of global transitions.

In recent decades, evidence has accumulated on the causes and effects of climate change, the demographic profile of societies has changed profoundly, and technological innovations have irreversibly transformed various aspects of human life. Just as these changes open up opportunities, they also bring risks to the security of people and of institutions. This chapter will deal with the climate, demographic and technological demographic and technological transitions, under the point of view of Brazil's security.

Digital street clock marks 45 degrees in the neighborhood of Estácio (RJ) Photo by Tomaz Silva | Agência Brasil

Climate

Over the last few millennia, planetary climate patterns have remained mostly stable[2], enabling the development of complex societies and territorialization processes. What we call climate change are changes in the statistical distribution of natural events (climate and weather) on different temporal and spatial scales. The causes of climate change on the planet include geological factors and even variations in solar radiation over long cycles, but concentrated anthropogenic factors are increasingly evident and decisive, including deforestation, pollution, ecosystem degradation and global warming. The rise in global temperature is due to the emission of greenhouse gases into the atmosphere (mainly methane and carbon dioxide). The prospect of climate change continuing and worsening in the coming decades, and of climate change and the extreme events associated with them, represent a threat to human development and contemporary ways of life. Tackling this issue becomes more challenging as conflicts of interest are progressively shown. These include uncertainties about the fair division of responsibilities, which make international coordination difficult and delay the necessary measures.

According to the majority view of the Intergovernmental Panel on Climate Panel on Climate Change (IPCC), representing the scientific community, the climate crisis stems mainly from human factors, especially carbon emissions resulting from environmental destruction and energy transformation of fossil fuels by combustion engines in industrial, transportation and agricultural processes[3]. The progressive accumulation of carbon in the atmosphere, since the beginning of the industrial era, has resulted in an elevation of the planet's average temperatures. Earth's average surface temperatures for 2011-2020 are 1.09°C higher compared to the period of 1850-1900, taken as the pre-industrial era, and the temperature increase over the last 50 years (1970-2020) was the fastest recorded in an equivalent period in the last 2,000 years[4].

> *The average temperatures of the Earth's surface in the 2011-2020 period are 1.09°C higher, compared to the 1850-1900 period*

Alongside this phenomenon, there are others, potentially destructive, such as environmental degradation, destruction of ecosystems and the accumulation of human emissions and waste in the ocean, which interact in unpredictable ways with global warming[5]. The climate crisis is, therefore, the result of a dynamic system in which human action plays a central role, and the relationships between variables can generate consequences that are difficult to predict.

This dynamic nature is compounded by the existence of potential "tipping points", in which the effects of external disturbances lead to a system to evolve autonomously and irreversibly. Various phenomena related to the climate crisis present possible points of no return, such as the degradation of biomes, the weakening of the Gulf Stream, the decrease in oxygen levels in the oceans and the thawing of polar soils (permafrost). The coex-

istence of multiple systems with points of no return can lead to the feedback on the climate crisis, which would only be mitigated with international cooperation and a vast effort to change living standards.

In Brazil, extreme weather events are some of the most damaging and immediate expressions of the climate crisis. Catastrophic events have imposed great material damage to Brazilian society and, more importantly, the irreparable loss of lives. The tragedy in Rio Grande do Sul in 2024 demonstrated once again the disastrous consequences of these events for Brazil: 478 municipalities (96% of the state's municipalities) and 2.4 million people (20% of the state's population) were affected by the event, which killed 183 people, with 27 missing and 806 injured[6]. The climate crisis makes these events more frequent, intense and unpredictable[7]. Cross-cutting governmental work to identify vulnerabilities and plan public investment, in mitigation and adaptation to extreme weather events, is essential for the security of Brazilian society.

The agenda of regulation, prevention, mitigation and adaptation to climate change does not relate exclusively to national states and government entities. Although energy production is a sector that traditionally relies on large state investment[8], tackling the issue effectively requires the engagement of private investments for the energy transition, especially to change the industrial consumption matrix[9]. In the area of public policies, for example, it is recurrent to share the responsibility for investment both by the State and the private sector, as well as in public-private partnerships. Civil society, in turn, is important not only in discussions about consumption patterns and agenda engagement, but also in electoral decisions that foster or constrain advances in the international climate change agendas.

The medium and long-term consequences of the climate crisis, even if they don't necessarily translate into extreme and concentrated events over time, are just as dangerous for the security of the people, as for the institutions in Brazil. The destruction of fauna and flora in native biomes such

President Luiz Inácio Lula da Silva, during a flight over Porto Alegre and Canoas (RS) | Photo by Ricardo Stuckert (PR)

as the Amazon[10], the Cerrado[11] and the Pantanal[12] leads to climate change on the South American continent. Of particular concern is the change in the characteristics of the so-called "flying rivers", which originate in the equatorial Amazon region, and irrigate central Brazil and the Southeast region[13]. This change could increase aridity in these regions and increase the frequency of extreme events related to floods and landslides as well as prolonged droughts, in addition to bringing great damage to the food and energy security and the productivity of the agricultural economic complex.

More than half of Brazil's population is concentrated in territory that extends up to 150 km from the coast[14]. Part of this area is located at low altitude, in an area that concentrates metropolises, industrial centers and strategic assets for national development, such as ports, airports, refineries, nuclear power plants and cultivation areas. For this reason sea level rise is a vulnerability for Brazil, which has an extensive and populated coastline. Coastal erosion puts infrastructure and human settlements at risk, imposing costs on populations and governments[15].

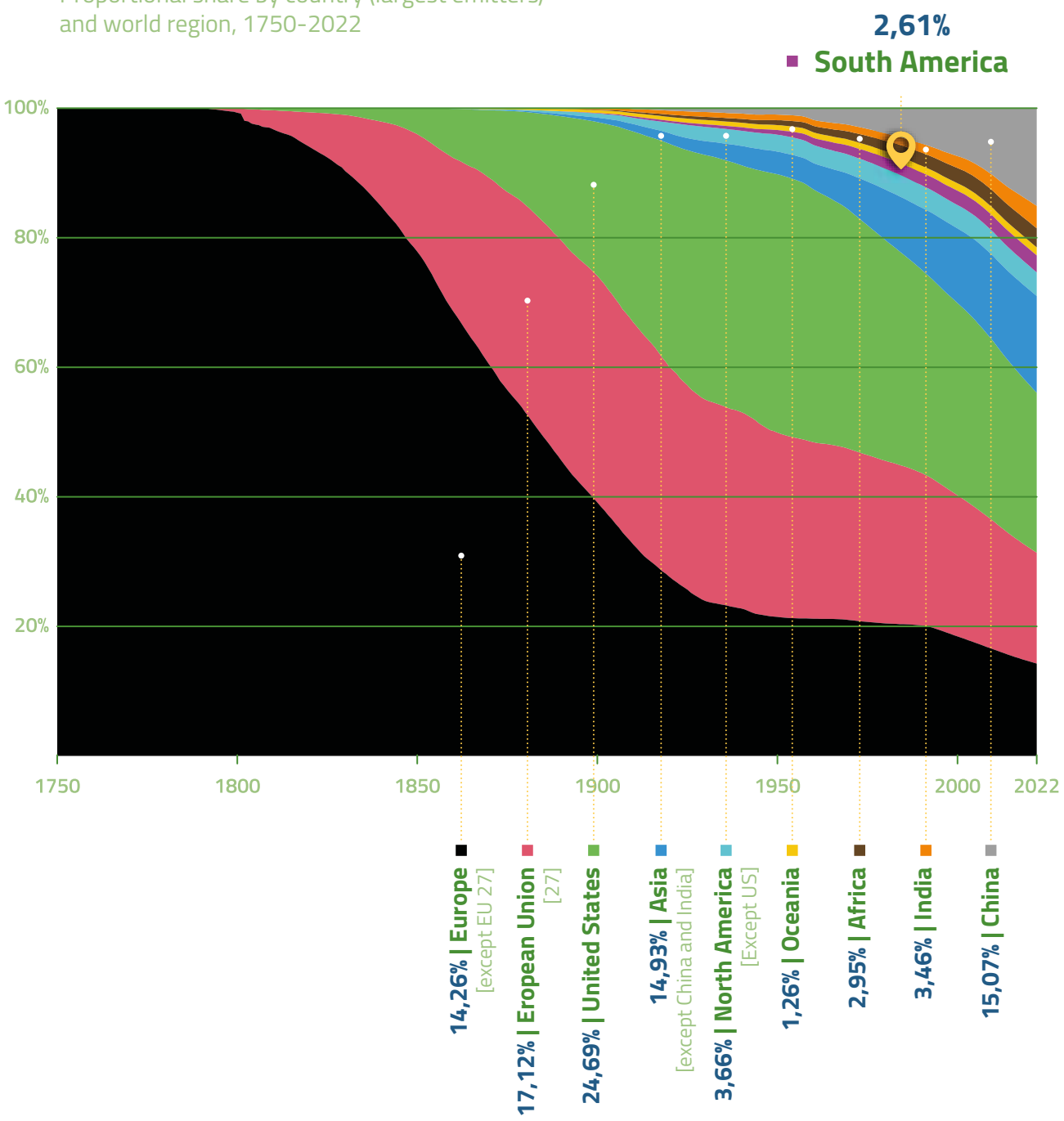
More than half of Brazil's population is concentrated in the strip of the national territory that extends up to 150 km from the coast

One of the most damaging features of the climate crisis is its effect on social inequalities. Extreme events and gradual environmental changes are distributed unequally: the negative consequences of landslides, floods, droughts and food insecurity predominantly affect economically disadvantaged people and geographic areas[16]. In Brazil, these populations are often concentrated in precariously occupied territories on hillsides or riverbanks. In the case of desertification areas, they are concentrated in a region that has been historically disadvantaged in the process of national development, the northeastern hinterland.

The climate crisis exacerbates inequalities not only within countries, but also between them[17]. The historical responsibility for global warming falls mostly on the richer countries, which have developed bolstered by two centuries of intense carbon emissions and which, in general, have the highest rates of accumulated emissions per capita. The most damaging losses in relative terms, however, occur in developing countries, where extreme climate events cause more loss of lives and economic damage.

Cumulative CO^2 emissions

Proportional share by country (largest emitters) and world region, 1750-2022



Source: adapted from Hannah Ritchie and Max Roser, "CO^2 emissions," Our World in Data, June 2020, updated in January 2024 (Global Carbon Project, "Global Carbon Budget" [original data], "Cumulative CO^2 emissions - GCB" [dataset]), https://ourworldindata.org/grapher/emisiones-cumulativas-de-co2región?showSelectionOnlyInTable=1.

Extreme episodes highlight this fact: although catastrophic events, such as hurricanes, typhoons and floods may cause loss of life and property in more developed countries and territories, such as the United States (USA), Japan and Spain, the same events cause even greater relative devastation in nations and territories of less relative development, such as Haiti and the Philippines, which do not have the same capacity for State investment in prevention, mitigation, adaptation and response to crises. The gradual change in climate patterns disproportionately affects developing countries, including the prospect of the disappearance of island nations and the flooding of densely occupied coastal areas, such as the deltas of the Indus, Nile, Niger and Mekong rivers. Globally, the level of the oceans rose by 20 cm between 1901 and 2018. The increased speed was 1.9 mm per year between 1971 and 2006, and doubled to 3.7 mm per year between 2006 and 2018[18].

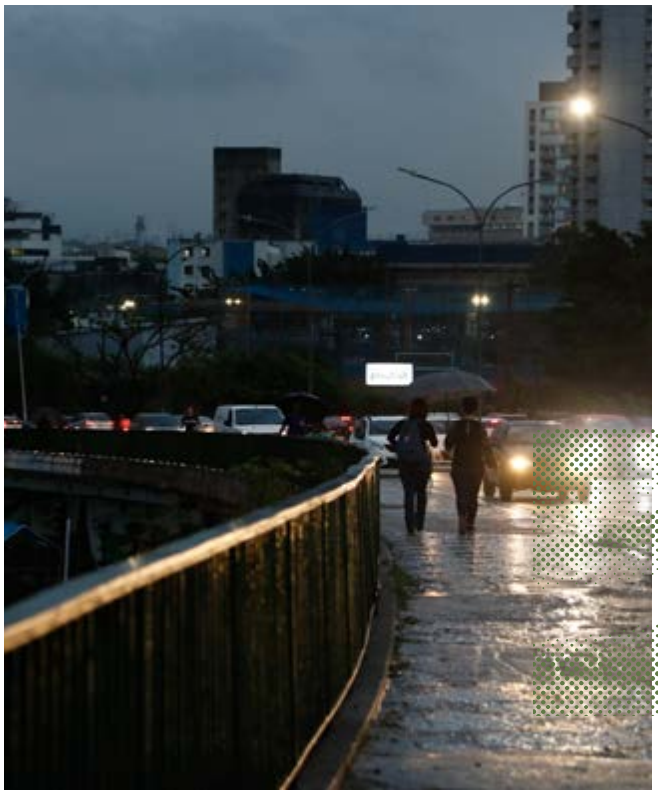
Globally, the level of the oceans rose by 20 cm between 1901 and 2018. The speed of the increase was 1.9 mm per year between 1971 and 2006, and doubled to 3.7 mm per year between 2006 and 2018

In addition, the climate crisis alters the relative distribution of power resources in the international system, albeit in a context of absolute collective losses. Thus, for example, with respect to rising sea levels, while richer countries can invest more resources in mitigation and adaptation, and therefore preserve their power resources, less affluent states do not have the same capacity[19]. In addition to state investments, factors such as availability of income, vulnerability, response capacity, infrastructure, access to finance and reception of migratory groups deepen the existing divides. While developing countries with extensive low-lying coastal areas or threatened by desertification may lose resources and people, with the greatest losses in agricultural production projected for tropical countries as a result of climate change[20], countries with higher latitudes and greater investment capacity can even expand areas of occupation, production and access to resources.

To the problem of mitigating the negative consequences of the climate crisis, one could also add the problem of planning a just ecological transition for people and countries. Especially significant for Brazil's security are the preservation of biomes crucial to the ecological balance in South America and the world, the mitigation of vulnerabilities of the population to extreme weather events, planning to deal with the consequences of rising sea levels in densely populated coastal areas and managing the effects of climate change on food security.

Demographics

Demographic transitions, such as the one Europe experienced between the middle of the 19th century and the mid-twentieth century, are characterized by a reduction in mortality rates and fertility rates. Throughout the 21st century, the world is undergoing a rapid demographic transition on a scale unprecedented in human history, in which the fertility rate is tending to decline from 2.5 (global average) in 2019, to 2.1 children per woman in 2050, receding to below replacement levels in the second half of the century. In the Global South, especially in Africa, the decline in infant mortality and fertility rates is somewhat slower, while in Europe, East Asia and the Americas, it has been faster, to the point where the population of several countries is already declining.



Pompéia Viaduct, São Paulo (SP) | Photo by Fernando Frazão (Agência Brasil)

> *The fertility rate tends to decrease from 2.5 (global average) in 2019 to 2.1 children per woman in 2050, receding to below replacement levels in the second half of the century*

The Industrial Revolution brought about the greatest demographic transformation in human societies since the advent of agriculture. Over the last two centuries, the previously high mortality and birth rates have fallen worldwide, as countries have urbanized and life expectancy increased[21]. As a result of the difference between these rates, the human population showed unprecedented growth, increasing from 2.5 billion to 8.1 billion between 1950 and 2022[22]. The most recent projections point to a global population of around 9.7 billion by 2050, of which 68.4%, or approximately 6.7 billion, will live in urban areas[23]. By 2100, the projected world population is 10.4 billion[24]. At the same time, the demographic transition generated economic expansion, and there has been a decrease of absolute poverty[25]. Today, less than 9% of humanity lives in extreme poverty, in contrast to over 90% in the 19th century[26].

This demographic transition, which began two centuries ago and will continue throughout the current century, occurs in waves, affecting dif-

ferent regions at different times and with different intensity and duration[27]. In a first stage, which lasted from the 19th century to the mid-20th century, the demographic transition reached its peak in Western European societies, in Anglo-Saxon countries, and in Japan. This period coincided with the economic rise of the pioneering capitalist powers, and the resulting population surplus from the demographic explosion in European and Japanese societies led to large-scale migration to the Americas and Oceania, as well as pressures for imperialist expansion in Africa and Asia. This was also the period of the most destructive interstate conflicts in human history to date.

The global population will reach 9.7 billion by 2050, of which 68.4%, or approximately 6.7 billion people, will live in urban areas. By 2100, the projected world population is 10.4 billion.

In the second half of the 20th century, countries in Eastern Europe and the former Soviet Union, East Asia, and Latin America experienced a peak in demographic growth as they industrialized. During this period of demographic and economic expansion, concepts such as "emerging markets", "Newly Industrialized Countries" (a group that includes large expanding markets in the developing world, such as Mexico, Argentina, Turkey, Indonesia, and Brazil) and "Asian Tigers" (South Korea, Taiwan, Hong Kong, and Singapore) emerged, as well as the beginning of the economic expansion of the People's Republic of China.

Brazil, in particular, underwent significant transformations during this period, with substantial growth in population and economy. The country developed its infrastructure and urban network, fueled by rural exodus and industrialization induced by the developmentalist strategy of import substitution. During this period, there was the integration of Brazil through the road mode, the formation of the megacity of the Rio-São Paulo axis, the advancement of the occupation of the Midwest and the Amazon, and the construction of the capital, Brasília. The demographic pressures for the expansion of urban infrastructure and the creation of formal jobs were only partially met, and as a result, significant nuclei of informal housing expanded in Brazilian metropolises.

In the last decades of the 20th century and in the early 21st century, the demographic transition is reaching its peak in a geographical strip that extends from Southeast Asia to the Sahel region of Africa and includes populous countries such as Indonesia, Bangladesh, India - which became the most populous country in the world during this period -, Pakistan, and Egypt. Demographic expansion is often accompanied by population movements, not only from rural to urban areas, but also towards regions of the national territory where centers of economic dynamism are located, resulting in tensions related to the balance of power between ethnic-linguistic or religious groups[28].

Thus, the demographic transition has been accompanied by an increase in sectarian tensions and social dissatisfaction in various societies, such as the Philippines and Myanmar, as well as Middle

Eastern societies that were the scene of the so-called Arab Spring between 2010 and 2012. Among the relevant factors for the wave of protests, the dissatisfaction of the large young portion of the population with the economic, social, and political conditions stands out[29].

There is also, in the current period, a significant increase in population movements beyond national borders. Compared to what occurred during the transatlantic migratory movements of the late 19th and early 20th centuries, there are currently significant restrictions, both institutional, and sociopolitical, to the establishment of immigrants in destination countries - particularly for immigrants motivated by economic causes, from developing countries, and with low education. However, there is no indication of a decrease in these flows. On the contrary, it is reasonable to assume that they will intensify, due to interstate and intrastate conflicts, interaction with climatic and technological factors, the continuation of the demographic transition in the Sahel-Southeast Asia geographic strip, and the advancement of the demographic transition in Sub-Saharan Africa.

Sub-Saharan Africa is the last macro-region in the world to reach the peak of this transition. As a result, according to the projections of the United Nations, the population of the African continent, which was around 800 million in the year 2000, may reach 2.5 billion by the middle of the 21st century[30]. This population growth has been accompanied by concentrated urbanization in national metropolises such as Lagos, Luanda, and Kinshasa, and characterized by the formation of extensive urban areas of irregular occupation. Although African economies such as Botswana, Ethiopia, and Senegal are undergoing intense economic growth, the demographic pressure for urbanization is a significant challenge, which demands the generation of infrastructure and jobs while maintaining

The population of the African continent, which was around 800 million in the year 2000, may reach 2.5 billion by the middle of the 21st century

macroeconomic balance. In the region as a whole, it is projected that, by 2050, 58.1% of the population, or 1.25 billion people, will live in urban areas[31].

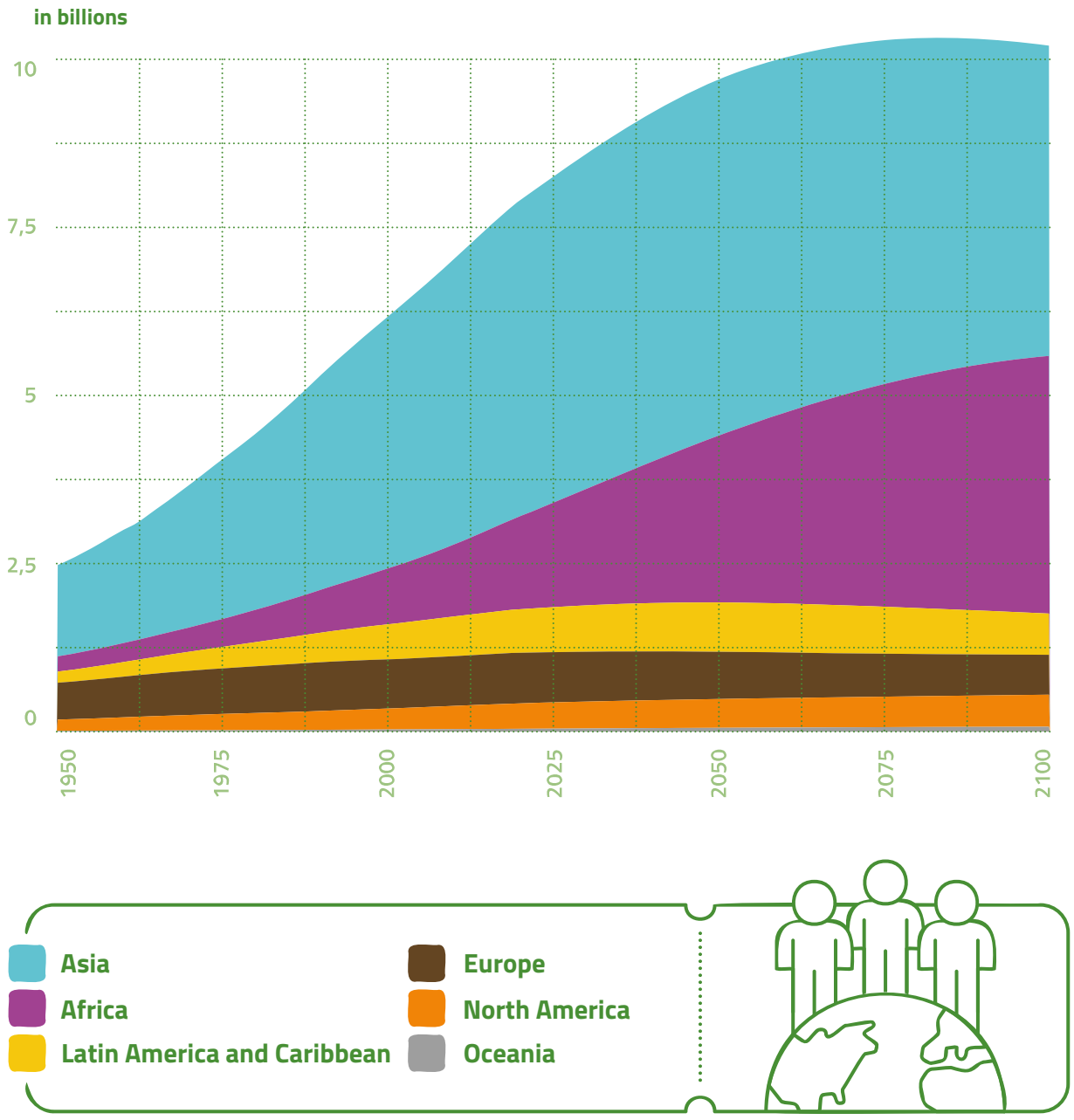
The long demographic transition that began in Western Europe over two hundred years ago, therefore, is expected to be completed in the next century, on the African continent[32]. The ability of the continent's governments to provide quality education, access to health, and job opportunities, prioritizing the reduction of socioeconomic inequalities, will greatly influence the future of the global demographic transition process[33].

The current historical moment also coincides with the conclusion of the demographic transition in various societies, especially concentrated in southern and eastern Europe and eastern Asia. In countries as diverse as Italy[34], Moldova[35], and South Korea[36], birth rates are below the population replacement level, the average age is gradually advancing, and the proportion of people over 60 is at an all-time high. In high-income countries, the projected median age for 2050 is 44.5 years[37]. These countries face the challenge of adapting policies and infrastructure to meet the needs of aging populations, ensuring adequate care and opportunities for participation in society. Nevertheless, the debate about immigration, which can bring opportunities in this context, is hindered by fears and conspiracy narratives, which are instrumentalized in political disputes.

In contrast, some countries maintain a favorable demographic profile, characterized by a rela-

Estimation and projection of world population

By continent, 1950-2100



Source: own elaboration based on data from "World Population Prospects 2024" (Demographic Indicators 1950-2100, medium), Department of Economic and Social Affairs, United Nations, https://population.un.org/wpp/Download/Standard/CSV/.

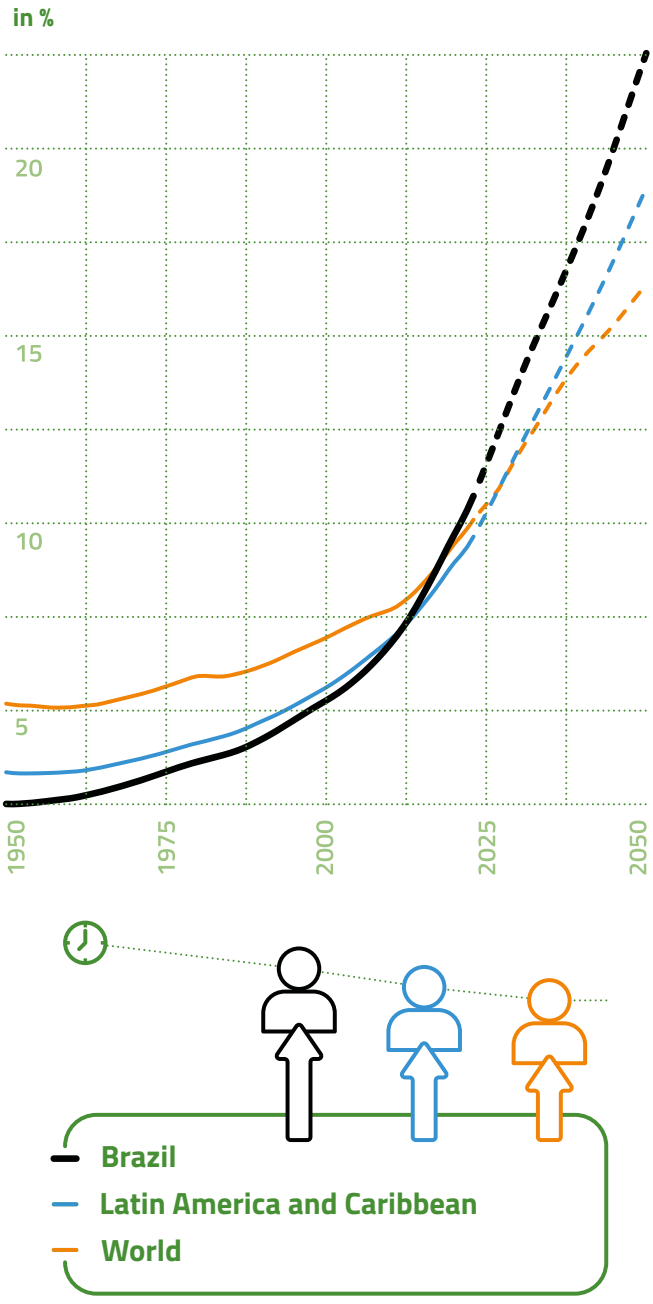
tively stable age pyramid, slow population aging, and steady, though low, demographic growth. Countries such as Australia[38], Canada[39], the United States[40], France[41], and Sweden[42] stand out in this context, having benefited from continuous immigration flows, despite growing domestic opposition in some cases. How these countries manage migration issues will be decisive in securing an advantageous position in the international system.

Brazil faces significant demographic challenges. In the coming years, the window of opportunity represented by the demographic bonus (the period during which the ratio between people of working age and people of dependent age—children and the elderly—is greater than one) will be closed to the country. Brazil's birth rate is already below replacement level, while the population over 65 years old represents a growing share of Brazilians. According to the 2022 census, the aging rate of the Brazilian population (number of people aged 65 or older per 100 children aged 0-14) increased from 30.7 in 2010 to 55.2 in 2022[43]. During the same period, the percentage of the Brazilian population aged 65 or older surpassed that in Latin America and the Caribbean (in 2012) and the global percentage (in 2018), and tends to increase this difference until 2050[44].

The demographic transition affects inequalities and causes distributive dilemmas. Brazil faces increasing fiscal pressures on social security and public healthcare systems. The demand for long-term care and support networks for the elderly is expanding, requiring the expansion of

Percentage of population

Ages 65 and older, 1950-2100



Source: own elaboration based on data from "World Population Prospects 2024," Department of Economic and Social Affairs, United Nations, https://population.un.org/dataportal/

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Vaccination at the UBS in Cambuci (SP) | Photo by Paulo Pinto (Agência Brasil)

specialized services. At the same time, the productive dynamics present unfavorable factors, as it is based on the atomization of workers and family units, with a high level of informality, and combines with urbanization, which contributes to eroding traditional family and community support networks. This dynamic is strongly conditioned by technological innovations, with implications for job offerings, worker qualification, productivity, and economic competitiveness, in addition to the potential to widen social injustices by increasing the concentration of income and wealth.

The dynamics related to the demographic transition, therefore, affects the structure of national societies, challenging states to provide security and well-being to the populations. Furthermore, it impacts the configuration of relations between states, as population characteristics are intimately related to state capacities. For Brazil, the current stage of the demographic transition raises crucial questions related to wealth distribution, public service provision, and the labor market. From a global perspective, phenomena associated with the demographic transition process with more direct implications for Brazil's security include migratory flows, the illegal circulation of goods and people, the development of new markets and poles of economic dynamism, and changes in the international distribution of power.

Students from schools in the Federal District interact with exhibits at the 20th National Science and Technology Week (SNCT) | Photo by Marcelo Camargo (Agência Brasil)

Technology

Technical development over the past centuries has followed a cyclical pattern: innovations related to a technological matrix lead to an increase in economic productivity and are subsequently replaced by a new pattern, in a succession of transitions. Thus, the model of the First Industrial Revolution, centered on the development of semi-durable consumer goods from steam machinery, light industry, and the development of railways, gave way to the paradigm of the combustion engine, electricity, heavy Fordist industry, the development of air and land transportation means, and advancements in analog communication media, such as telephone and television. Since the final decades of the 20th century, we have been undergoing a transition to a new global formation that can be called the Digital Era, which began with the advent of the transistor and the miniaturization it made possible, profoundly altering relationships between states, institutions, and individuals[45].

> *Since the final decades of the 20th century, we have been undergoing a transition to a new global formation that can be called the Digital Era*

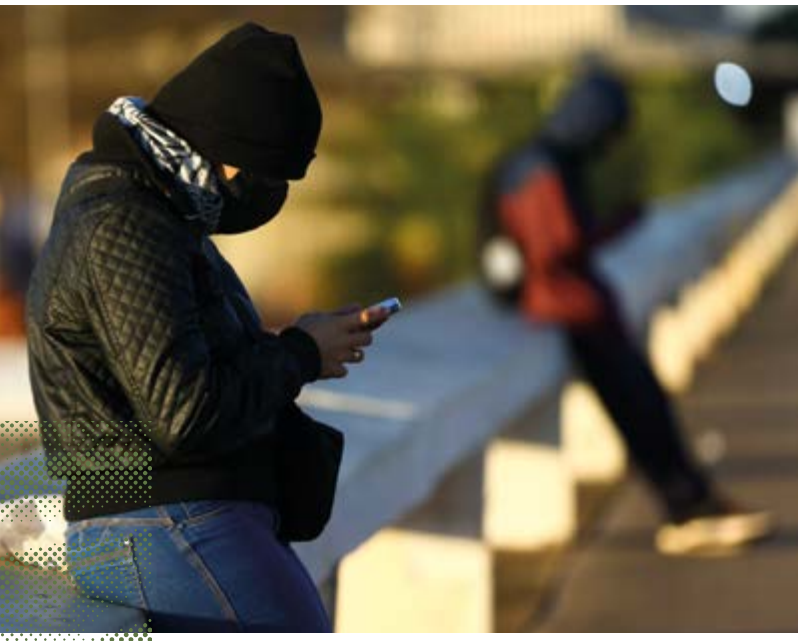
Technological transitions are characterized by integrated and exponential flows of innovations that revolutionize productive forces and the ways of producing, circulating, and consuming assets, goods, and services. Technological transitions impact the density of interactions (energy, transportation, and communication), organizational forms, and social relationships.

Initially known as an "information revolution", the transition to the Digital Age resulted from scientific and technological innovations that radically transformed the productive forces over the past decades. This revolutionary character stems from the exponential nature of technical advances in information processing capacity. The expansion of processing capacity enables new technologies, and the accumulation of innovations allows combinations between them, leading to more innovations. Thus, creating a common protocol to interconnect digital servers, for example, allowed the formation of the global computer network, which, after decades of expansion, enabled the accumulation of large databases. Processing these bases is fundamental to developing the computational model of neural networks, whose progress, in turn, led to the advent of generative artificial intelligence.

The exponential growth of processing capacity, the disruption caused by technical innovations, the disruption caused by technical innovations and the increasing possibility of combining technologies create uncertainties that hinder the formulation of estimates regarding medium- and long-term technical development. Therefore, the reliability of predictive models for technological progress decays particularly rapidly as the evaluation period increases[46]. However, the continuity of current trends allows us to consider their implications for people, states, and the international system in the near future.

Over the past two decades, the internet has enabled direct communication between users through interactive content creation tools—the so-called Web 2.0, whose most visible element is social media. On one hand, these tools allowed users to connect based on common interests and opinions, leading to new intellectual, professional, and support network possibilities. On the other hand, decentralized media content creation has become a challenge to State regulation worldwide, as public and private organizations' resources are limited in the face of the multiplicity of information generated on the internet.

The popularity and exposure of digital content correlate with their ability to generate reactions from other users. These are potentiated by mobilizing feelings and emotions, particularly indignation[47]. This characteristic leads to political polarization in democracies and is potentiated by the formation of "bubbles" of interaction, through which users connected by common interests mutually reaffirm their respective identities, using negative partisanship—i.e., rejection of the external group. Thus, the proliferation of hate speech and fake news on social media has given rise to and potentiated concrete threats to democracy, although, due to the novelty of the phenomenon, there are still divergences regarding the real scope of its impacts[48].



Creating a local and national ecosystem for technological innovation requires state action to assume, finance, and coordinate the risks inherent to technological development and specialized workforce formation and attraction

Photo by Marcelo Camargo (Agência Brasil)

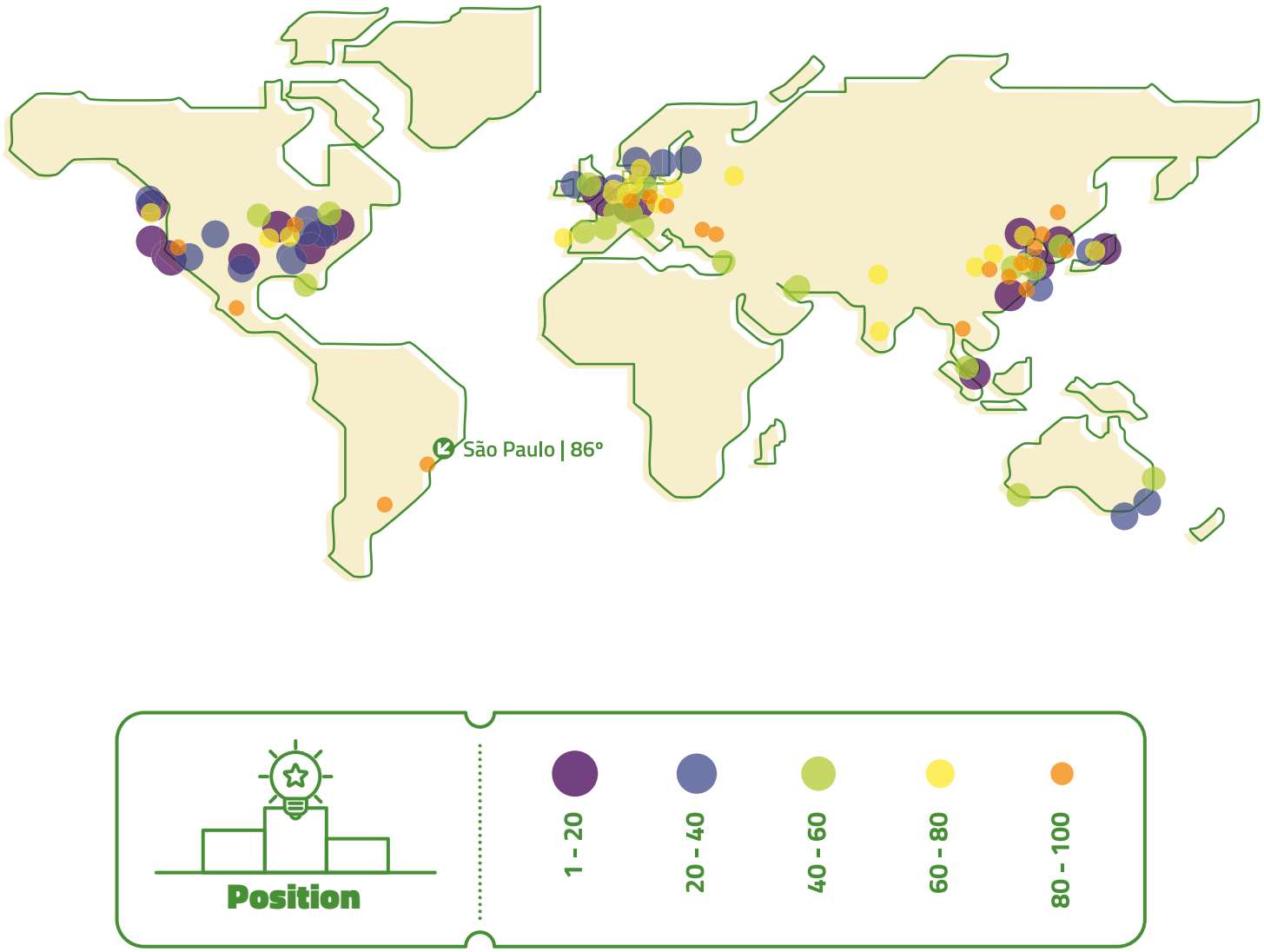
The large volume of decentralized data generated and stored by social media highlights the relevance of companies controlling these networks. In the current technological paradigm, information is an extremely valuable asset and a central power resource. Massive processing of large volumes of information has become indispensable for developing new technologies, trade, and cultural and political conformation of societies, including control of public opinion.

Some of the largest data extractors and database holders currently are the big information technology oligopolies (the companies known as Big Tech). These companies operate globally and hold agenda power, persuasion power, and interference power—including over governmental decisions and legislative processes[49]. On one hand, their ability to influence the global power system implies challenges to international governance and digital sovereignty of national communities. On the other hand, the centrality of digital assets to the functioning of contemporary societies, combined with the opacity of digital operations, makes unclear the boundaries separating the interests of these companies and the interests of the states in which they are headquartered.

The interstate competition for technological supremacy is likely to continue shaping international relations over the next decades. Creating a local and national ecosystem for technological innovation requires state action to assume, finance, and coordinate the risks inherent to technological development and specialized workforce formation and attraction[50]. The US was a precursor in this effort, and the use of military contracts and funding for academic research was fundamental to the development of Silicon Valley, the world's first and largest digital innovation hub. This pioneering resulted in dominance over the high-tech industry: out of the world's top ten high-tech companies by revenue, six are headquartered in the US[51]. Additionally, the US still possesses other global innovation centers, such as those established in Boston and New York[52].

Global innovation hubs

2023



Source: own elaboration based on data from the Center for Industrial Development and Environmental Governance (CIDEG), Global Innovation Hubs Index 2023 (CIDEG, Tsinghua University; Nature Research Intelligence, 2024): 10-12, https://www.nature.com/articles/d42473-023-00420-1.

Despite US leadership, other countries have managed to develop national systems of technological innovation and position themselves as central actors: India has consolidated its leadership in the provision of digital services and has partnerships with Russia for the mutual development of defense industries[53]; South Korea and Japan are home to major high-tech hardware manufacturers[54]; Taipei is the headquarters of the world's largest integrated circuit company[55]; China has developed its own Silicon Valley version in the Beijing-Tianjin (Jing-Jin-Ji) megalopolis, the Shanghai metropolitan area, and the Pearl River Delta, by concentrating complete innovation ecosystems, with human capital training and improvement centers, venture capital financing, and hardware and software supplier chains, in regions logistically integrated into the country's interior and abroad[56].

In Brazil, there are advanced sectors that combine innovation and production, such as the aerospace chain. The country has relevant assets that can enable the deepening of its economy's digital transformation[57], with an innovation ecosystem that connects research centers and human capital training. Brazil is home to one of the few innovation hubs located in the Global South. However, the high cost of capital and the recent period of low economic growth have hindered further development of the country's high-tech sector[58].

Digital transformation enables efficiency gains for states and convenience for people[59]. However, for these benefits to be sustainable, digital transformation processes must be based on strategic decisions that consider risks to sovereignty and population security.

Cell phone antennas | Photo by Marcelo Camargo (Agência Brasil)

Technologies like the fifth generation of mobile internet (5G) enable a range of new applications for industry, agribusiness, and services. Similarly, Blockchain can enhance the provision of public services, particularly those related to the registration of citizens' and companies' rights and duties. Personalized medicine has the potential to significantly increase human quality of life and the efficiency of investments in public health systems, by providing customized solutions and diagnoses based on the collection of large databases about individual physical conditions. Autonomous vehicles are expected to optimize the use of public transportation assets and make available a significant stock of capital currently immobilized in individual car ownership. Energy generation technologies from renewable sources like solar, tidal, and wind power can lead to a significant decrease in carbon emissions. However, all these advances rely on the collection, processing, storage, and use of sensitive data, whether personal or aggregated, which confer enormous power to their holders.

New technologies also present potential dual-use for direct military purposes. Ongoing armed conflicts have demonstrated the warfare potential of drones, which can reduce the exposure of offensive forces and disable the tactical advantage of armored combat vehicles, leading to a return to wars of attrition and trench warfare. The employment of drones enables the execution of aerial attacks at significantly lower costs and with greater impact and precision compared to traditional logistical means. Cyberattacks have also challenged traditional state relations logic by allowing covert offensive actions with plausible denial of authorship and challenging the principles of non-interference and inviolability of civilian targets.

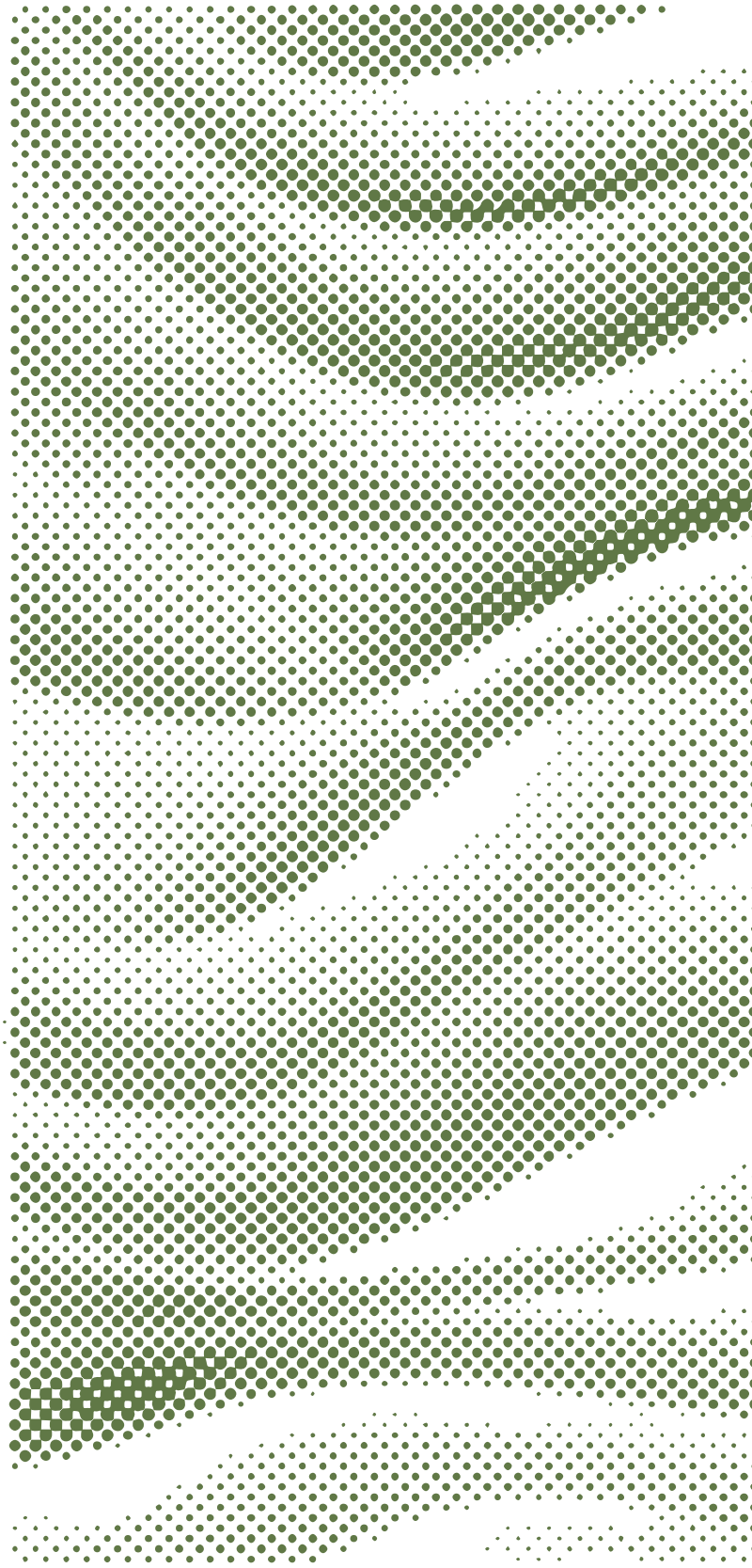
Technological innovations that can be used by parastatal groups to the detriment of national states also point to significant challenges. The dark web is widely used for crimes such as personal data sales, sexual exploitation of children and adolescents, and human, drug, and illegal arms trafficking. Synthetic biology may bring benefits by reducing medication and vaccine production costs; however, it can also be exploited for the development of biological weapons. 3D printers have the potential to transform manufacturing by miniaturizing the productive process of consumer goods and geographically approximating it to the end-consumer, yet the same technology has the potential to enable the widespread production of arms. The capacity of states to regulate technologies, solutions, and markets is slow, compared to the speed of technological innovation, bringing uncertainty and instability to economic, political, and social processes.

The development of AI has sparked debates about the potential threat this technology poses to humanity. On one hand, AI can dramatically increase economic productivity, by automating or assisting intellectual processes such as accounting, medical diagnosis, tracking legislative innovations, and compliance control of public policy execution and private institution administration. On the other hand, this unprecedented automation may lead to the obsolescence of part of the trained workforce under the current technological-institutional paradigm, imposing the challenge of managing national economies in which unemployment ceases to be a minor social ailment to potentially become the rule in the labor market. For example, it is projected that approximately 40% of jobs in emerging countries will be affected by the spread of AI[60], contributing to the deepening of wealth concentration. Additionally,

there are also ethical questionings about the risks of ceding control over various aspects of intimate and societal life to automated systems capable of making relevant decisions without conscious ponderations of empathy and critical thinking[61].

The threats and opportunities of the current technological transition are intimately related to the distribution of power in the international system. In the face of climate and demographic transitions, it is in the technological transition that the need for state action becomes most evident to avoid direct submission to other states through digital age technologies. Technological dominance is essential for economic development, including the technology industry. Digital sovereignty strategies by governments, as well as by civil society organizations, will be decisive in conquering and preserving sovereignty against digital service companies, which monopolize the extraction of value in the form of data from populations around the globe. This is a particularly important issue for Brazil, which has one of the most connected populations to digital platforms. With the development of artificial intelligence, the implications of technology and data concentration are varied and include influence of companies and governments over public opinion, interference with decision-making processes, and the use of artificial intelligence for military purposes.

The threats and opportunities of the current technological transition are intimately related to the distribution of power in the international system



International Situation 02

Control room of Angra 1 at the Almirante Álvaro Alberto Nuclear Power Plant (CNAAA), in Angra dos Reis (RJ) | Photo by Tomaz Silva (Agência Brasil)

An international order is shaped by various actors interacting with each other, the way capabilities (power) are distributed among them, and the set of formal and informal institutions that structure these interactions. The international situation in 2025 is characterized by the great diversity of actors. After all, there are almost two hundred countries, thousands of international organizations, millions of companies and billions of individuals. However, it is also marked by profound inequality among them. A few states concentrate most of the military means and the capacity for coercion and deterrence (the ability to impose limits on the behavior of others).

Currently, only four major powers possess a combination of second-strike nuclear capabilities, space command, and conventional forces capable of deterring another major power (the United States, Russia, China, and, still in the process of consolidation, India). A few companies and individuals concentrate the majority of assets and control the most important value chains. In turn, the formal institutions (such as the United Nations) and informal ones (like nuclear balance) that maintained the previous international order are now hollowed out and in crisis.

The international situation in the second quarter of the 21st century is characterized by the existence of multiple poles of power. These

poles consist of the major powers from the Cold War era and countries that, over the past few decades, have converted their demographic potential into industrial, commercial, financial, scientific, technological, and military development, thereby creating the conditions for autonomous integration into the international order.

The emergence of new great powers, shaping the current multipolar order, has prompted various interpretations linked to different ideological, sociocultural, and epistemological perspectives. Some analyses emphasize the dilution of the material and symbolic power of Western powers, while others highlight the strengthening of emerging powers. There are those based on large civilizational and cultural units, and still others focusing on the dichotomy between democratic and autocratic regimes.

Regardless of interpretation, there is currently no country that is absolutely hegemonic from an economic, scientific, technological, and military standpoint. On the one hand, the resulting configuration is unstable, as the existence of multiple poles with relevant state capacities encourages the employment of these capabilities to gain advantages over other actors in the international system. On the other hand, the existence of multiple poles of power provides new opportunities for development, cooperation, and mediation for Brazil.

The intensification of international rivalries and conflicts does not benefit Brazil's pursuit of achieving its fundamental peaceful and democratic objectives established in the Federal Constitution. However, understanding the turbulent dynamics of the current era is a necessary condition to guide intelligence operations in defense of people's and institutions' security.

Competition

The international system is currently characterized by imbalanced and deinstitutionalized multipolarity. Few states form global centers of power, yet there is no equilibrium in the distribution of capabilities, and both formal and informal institutions are weakened in their ability to foster cooperation among these power centers.

Since the 2008–2009 financial crisis, a political transition has been underway (solidified from 2017 onwards), during which the United States

President Luiz Inácio Lula da Silva, during the Opening of the General Debate of the 79th Session of the United Nations General Assembly (UNGA) | Photo by Ricardo Stuckert (PR)

adopted military and economic containment policies against China and Russia. Both countries responded by strengthening their alliance and, each with its own characteristics, countered the military challenge posed by the U.S. and its NATO and Asian allies. India, on the verge of acquiring the technological and military capabilities that currently define the status of a great power in the international system, seeks to maintain maneuvering space in the face of pressures for political alignment.

The U.S. remains the world's leading military and economic power. The country holds the largest Gross Domestic Product in nominal terms[62], the second-largest in purchasing power parity[63], is home to the largest technology companies, controls the global reserve currency, and possesses the capability to project power anywhere on the globe. Despite this dominance, other countries have regained or developed capabilities to challenge U.S. supremacy in various areas, joining or consolidating their position among the world's great powers.

After centuries of relative decline in its ability to assert and defend its sovereignty, China has risen in the last decades of the 20th century. The country has achieved vigorous development and holds the world's largest GDP in purchasing power parity (and the second-largest in nominal terms)[64]. It has invested heavily in physical and human capital and is competing for global leadership in industrial production, scientific research, and intensive application of high technology. It has converted economic prosperity into military capability, establishing means of power projection.

Following the dissolution of the Soviet Union (USSR) and the Warsaw Pact, Russia underwent a tumultuous transition to capitalism and reforms of its state model. In recent decades, the country has restored state capacities and maintained its status as a nuclear power. Moscow has demonstrated resilience to economic sanctions[65] and invested in modernizing its military power, regaining global influence.

India is the world's most populous state[66] and one of the largest economies[67]. The country has gradually overcome the adverse legacy of colonialism, related to significant socioeconomic challenges and regional stability issues, and has maintained high economic growth rates in recent decades[68]. At the same time, it has developed superior scientific and technological capabilities, including in space and nuclear domains, as well as conventional, kinetic, and cyber military forces, sufficient to position it among the great powers[69].

The European Union (EU) has succeeded in integrating large markets into an economic and monetary union and expanding into the center and east of the continent, incorporating nations from the former Warsaw Pact and former USSR republics. After seven decades of asserting integration as a political reality in Europe, pan-European identity has strengthened, so that even forces that contest the current integration models are articulating at the continental level. Despite economic, financial, and technological power, the bloc maintains strategic dependence on the U.S. in the defense field. This link is most significantly expressed in the North Atlantic Treaty Organization (NATO), whose eastward expansion, concurrent with EU enlargement, is perceived by Russia as a security threat. Furthermore, the EU faces challenges regarding the alignment of interests among its 27 member states. Due to its lack of a national state structure and the absence of unity in its power projection, the EU is a *sui generis* actor in the international system.

Launch ceremony of the Tonelero submarine at the Madeira Island Submarine Base in Itaguaí (RJ) | Photo by Ricardo Stuckert (PR)

Patrol Vessel Macaé P70, Naval Peacekeeping Operations Center | Photo by Fernando Frazão (Agência Brasil)

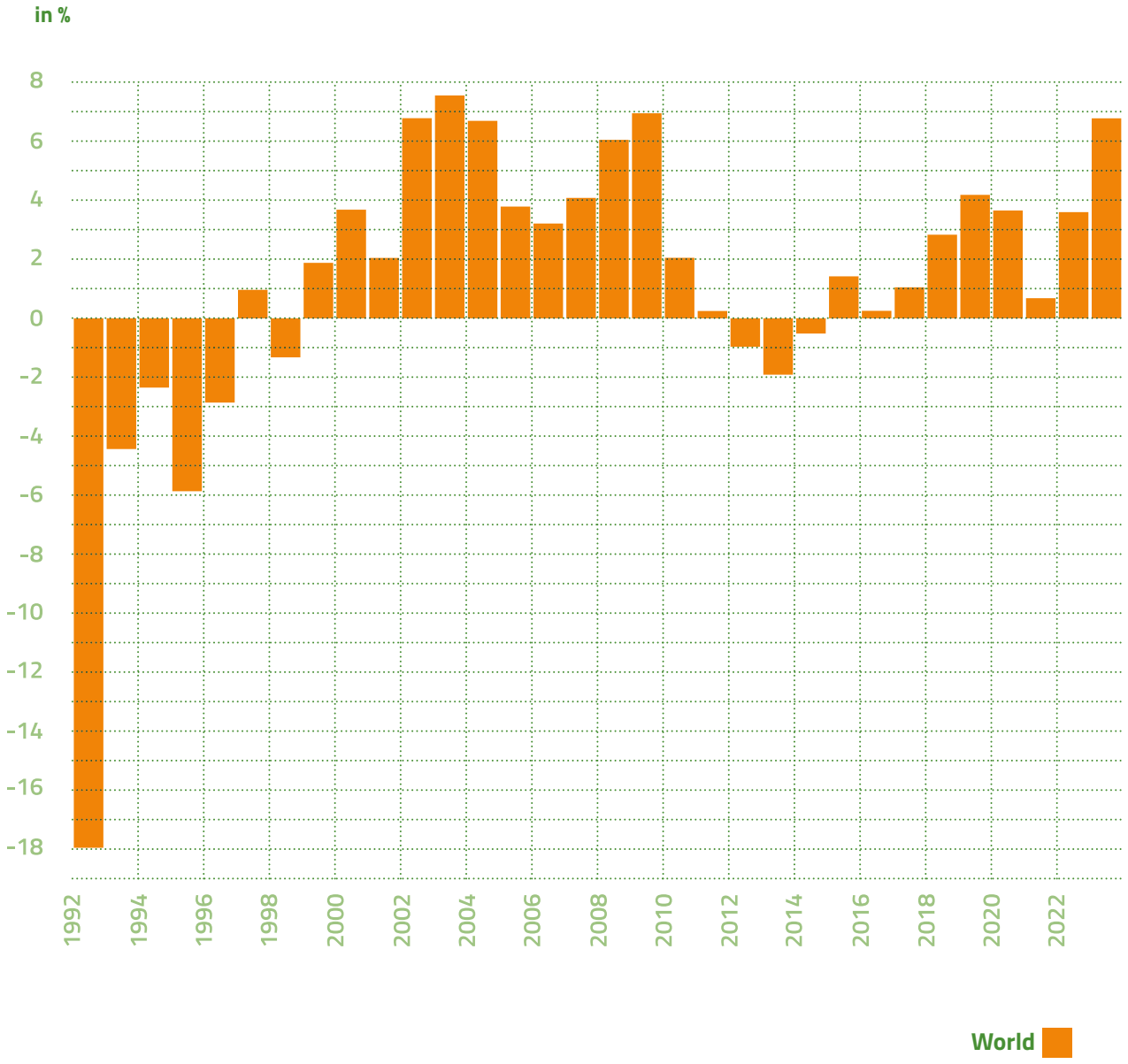
An indicator of the intensifying great power rivalry is the increase in military spending in recent years. In 2023, global military expenditures rose by 6.8% compared to the previous year[70], registering increases across all continents and reaching the highest value in the historical data series, which began in 1988. The five countries with the highest absolute military spending, accounting for approximately 60% of total global spending in 2023, were the United States (37% of the global total), China (12%), Russia (4.5%), India (3.4%), and Saudi Arabia (3.1%)[71]. Combined, the U.S. and China accounted for about half of the expenditures, standing out from other countries. In 2023, Brazil increased its military spending by 3.1%, reaching US$22.9 billion—0.94% of the global total—but dropped from 16th to 18th place among the countries with the highest spending in the sector[72]. Nevertheless, Brazil's expenditures represent about 44% of the total for Latin American and Caribbean countries (excluding Cuba, Suriname, and Venezuela)[73].

Another indicator of the increasing international insecurity is the dismantling of important pillars of the architecture of bilateral and multilateral agreements that regulated relations among nuclear powers. Despite the maintenance of regional restrictions, such as the treaty prohibiting nuclear weapons in Latin America and the Caribbean (1968), or even the entry into force, in 2021, of a treaty banning the existence of nuclear weapons (TPNW), countries possessing nuclear weapons (the United States, Russia, China, the United Kingdom, France, India, Pakistan, Israel, and North Korea) have adopted more aggressive postures in terms of doctrine and potential employment scenarios or have actively sought to modernize and/or expand strategic and tactical arsenals.

Since the United States withdrew from the Anti-Ballistic Missile (ABM) Treaty in December 2001, the dynamics of interactions between Moscow and Washington have already led to the collapse of a significant part of the formal architecture of nuclear security guarantees. To mention two more recent examples, in 2019 the United States and Russia withdrew from the Intermediate-Range Nuclear Forces (INF) Treaty, and in 2023, Moscow suspended its participation in the New START Treaty, in effect since 2011, which limits the number of operational warheads and strategic missile launchers of both countries. In 2023, according to data from the Stockholm International Peace Research Institute (SIPRI), the nine nuclear-armed countries combined possessed 12,512 nuclear warheads, of which 3,844 were in operational readiness[74].

Difference in total military spending worldwide

Compared to the previous year



Source: own elaboration based on data from the "SIPRI Military Expenditure Database," Stockholm International Peace Research Institute, milex.sipri.org/sipri.

> *The five countries with the highest absolute military expenditures, accounting for approximately 60% of total global spending in 2023, were the United States (37%), China (12%), Russia (4.5%), India (3.4%), and Saudi Arabia (3.1%)*

It is important to note that not all countries that possess nuclear weapons have the deterrent capability to survive a first nuclear strike and retaliate with a second strike against the potential aggressor. Only the United States, Russia, and China have credible deterrent capabilities, although there is ongoing debate about India's current situation regarding submarine, land-based, and air-launched platforms. Among the major nuclear powers, China is the only one that maintains as official policy never to be the first to use nuclear weapons, which are considered strategic deterrent tools[75]. Regardless, an important informal institution that has maintained peace among major powers since the 1970s was the nuclear balance between the United States and the Soviet Union. The dual collapse—both formal and informal—of that balance is the clearest source of international insecurity today.

Military expenditures and the increasing nuclear insecurity illustrate the growing polarization of the international system between the two main powers, the United States and China. These two states seek to align others with their interests in order to shape the international distribution of power through instruments that include the establishment of blocs and multilateral institutions, strengthening alliances, and the application of sanctions and trade and financial barriers. This polarization deepens the consequences of instability.

The strategic competition between the U.S. and China has become more open and intense, encompassing the global contest for access to natural resources and markets, as well as influence. Examples of this are the competing investment initiatives led by China and the U.S., through which they support and finance the participation of their companies and investors in infrastructure projects in developing countries. In 2013, China launched the Belt and Road Initiative (BRI), which in 10 years included over 140 countries through cooperation instruments and invested more than US$1 trillion[76]. In 2021, the U.S. launched the Build Back Better World (B3W), relaunched in 2022 in partnership with G7 countries as the Partnership for Global Infrastructure and Investment (PGII), announcing the availability of US$600 billion for investments by 2027[77].

The U.S. and China have also sought to assert their geostrategic interests more assertively, delineating divergent positions that establish focal points of tension in locations such as Hong Kong, Taiwan, and the South China Sea. Protests in Hong Kong in 2019 and 2020 received support from U.S. authorities, which was considered by the Chinese government as undue interference in domestic affairs[78]. In Taiwan, the election in January 2024 of a president who openly advocated for independence from China was followed in May by a naval exercise around the island[79]. The antagonism, however, has been contained within the framework of strategic competition and localized tensions, in specific issues and actions.

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Inauguration ceremony of the Gripen fighter aircraft production line at Embraer, Gavião Peixoto (SP) | Photo by Ricardo Stuckert (PR)

Conflicts

In addition to the strategic competition among major powers, the international situation is also characterized by the escalation of armed conflicts, including the direct or indirect involvement of one or more major powers. The war that began in Syria in 2011, for instance, saw indirect participation from both the U.S. and Russia. From 2014 onward, tensions in Ukraine involving these same powers escalated, and in 2022, the current armed conflict was triggered by Russia's invasion of Ukrainian territory. The continued military occupation of Palestinian territory by Israel, with U.S. support, intensified following attacks by Hamas and other groups against Israel in October 2023, leading to a punitive war in Gaza that has since involved other countries in the region.

Contemporary armed conflicts are challenging to classify, both in terms of the link between deaths and other casualties with combat and regarding the involvement of states and organized groups. In the case of the war in Ukraine, civilian and military casualty figures are heavily censored by the governments of Kyiv and Moscow, forming part of the propaganda from both sides and their allies. Regarding the war in Gaza, according to an estimate by the United Nations Office for the Coordination of Humanitarian Affairs, more than half of the identified Palestinian casualties were women and children[80]. With approximately 66% of buildings in the Gaza Strip destroyed since the onset of the war[81], it is estimated that thousands of

bodies remain buried under rubble[82], and indirect deaths (from hunger and disease) are believed to be three to fifteen times higher than those caused by weapons[83].

In addition to Ukraine (including clashes on Russian territory) and Gaza (which also encompasses Israeli military operations in the West Bank, Syria, Lebanon, and Iran), there are armed conflicts of varying intensity in Sudan, Nigeria, the Democratic Republic of the Congo, Iraq, Pakistan, Ethiopia, Haiti, Turkey, India, and Myanmar. It is worth noting that countries with high rates of homicide and interpersonal violence—such as Brazil, Mexico, Honduras, and South Africa—were not included, even though their annual death tolls sometimes surpass those of countries at war[84].

In Ukraine, European NATO members with significant military capabilities have become more directly involved in the conflict, deepening the polarization of the international system. At the same time, the strengthening of ties between Russia and Latin American countries such as Cuba[85], Nicaragua[86], and Venezuela[87] poses a challenge to U.S. interests in the Western Hemisphere.

The conflict that erupted in the Middle East following the attacks on Israeli civilians and Tel Aviv's response in Gaza has highlighted the weaknesses of current multilateral conflict resolution mechanisms and the need for their reform. Despite violations of International Humanitarian Law during the war and calls for a ceasefire from civil society in Western capitals, civilian suffering in Gaza has persisted. Efforts to halt the violence have been obstructed by the use of vetoes in the United Nations Security Council—particularly by the U.S., but also by Russia and China. In light of political deadlock, judicial mechanisms have been sought, as illustrated by the case brought by South Africa against Israel at the International Court of Justice[88].

The continued escalation of the conflict—now involving Lebanon, Syria, and Iran—has eroded the conditions under which, until recently, there was even the prospect of normalizing relations between Israel and countries such as the United Arab Emirates, Bahrain, and Saudi Arabia. The conflict has also confronted international institutions with renewed moral and legal dilemmas,

Brazilians who were in Lebanon disembark at the Air Base in Guarulhos (SP) during Operation "Cedars Roots" | Photo by Paulo Pinto (Agencia Brasil)

as seen in reports of human rights violations and breaches of international law[89].

In recent years, internal and regional instabilities in Sub-Saharan Africa have led to a new wave of institutional breakdowns, intrastate conflicts—such as those in Ethiopia, Mali, and Sudan—and militarized interstate disputes, particularly in the Great Lakes region, involving states like the Democratic Republic of the Congo, Rwanda, and Burundi. In some cases, the interests of influential powers in these African regions, notably Russia and France, have been at stake, engaging in indirect confrontations. In other instances, countries and regimes in the region have sought rapprochement with external powers as a guarantee of stability, exemplified by the cession of parts of Djibouti's territory for the establishment of military bases (including those of the U.S.[90] and China[91]) and a proposed agreement through which Rwanda would accept individuals seeking asylum in the United Kingdom[92].

Civil or internal conflicts, where foreign powers support opposing sides—as was the case in Syria—have increased over the past decade and, more acutely, since 2021. Between 2021 and 2023, there were 13 such conflicts worldwide, compared to 7 in the entire 2000s and 22 in the 2010s[93]. Interstate conflicts have also become more frequent in recent years. Since 2020, at least one territorial dispute between countries has escalated into armed confrontation each year. Between 2021 and 2023, there were eight violent interstate conflicts, the same number as in the entire 2000s[94]. This has been reflected in high lethality, with 2022 being the year with the most violent deaths from conflicts since the Rwandan genocide in 1994[95].

Current geopolitical tensions extend beyond the kinetic dimension and reverberate in cyberspace. In recent years, states have expanded the use of information and communication technologies in military operations, increasing the risk of deploying these resources in interstate conflicts[96]. The phenomenon becomes even more complex due to the common association of these offensive capabilities with intelligence service structures, as cyberspace—ubiquitous, distributed, and decentralized—provides ideal conditions for cyber espionage and sabotage operations that are difficult to attribute. Despite this, nation-states employ public attributions of responsibility for cyberattacks as a deterrent tool, which, in turn, have led to rhetorical escalation with implications for cybersecurity.

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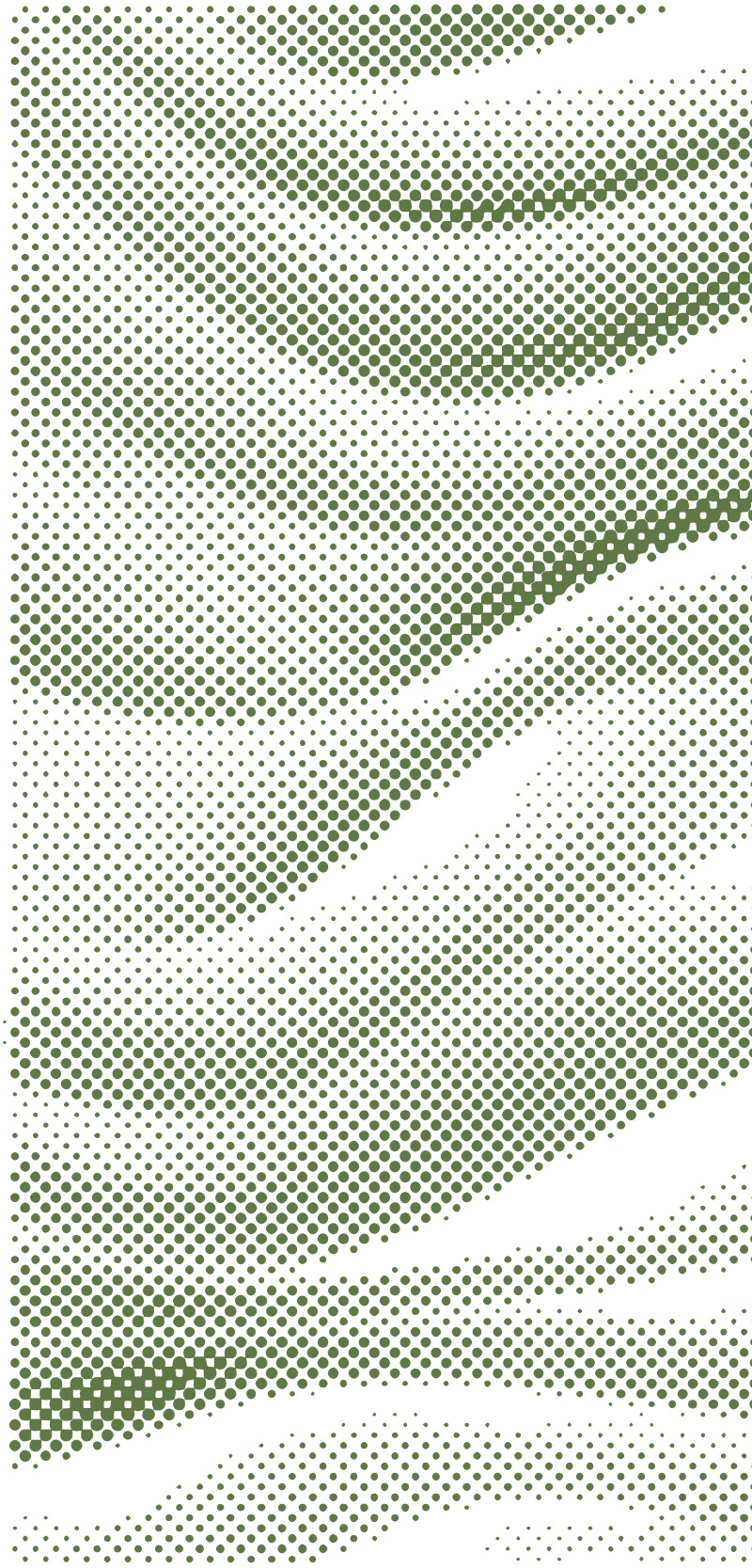
The current situation challenges the institutional structures of the international system. The use of military force by major powers and regional powers has intensified, accompanied by rhetoric that normalizes war as a conceivable means to resolve problems, defend interests, and achieve objectives. The effectiveness of diplomacy and international organizations has been limited, as evidenced by the outbreak of new territorial invasions despite mediation efforts by international bodies and countries like Brazil. Moreover, the intensification of competition and the involvement of major powers in armed conflicts make it more difficult to pursue peaceful strategies and balance among poles of power, characteristics of Brazil's international engagement.

Rapid changes and uncertainties brought about by global transitions impose structural constraints on state action. In addition to the need to adapt to present changes and plan in the face of uncertainties about the future, the high disruptive potential of ongoing changes in the climatic, demographic, and technological realms challenges international cooperation in seeking solutions. This is especially true given the growing strategic competition among powers and the severity of armed conflicts worldwide.



South America 03

Aerial view of the P-71 platform vessel, stationed in the Itapu field in the pre-salt layer of the Santos Basin, 200 km off the coast of Rio de Janeiro | Photo: Tânia Rêgo (Agência Brasil)

Brazil's strategic surroundings comprise South America and the South Atlantic. In these regions, there are no countries that can be considered hostile to Brazil, but the presence of major extraregional powers is evident through political, military, territorial, commercial, and financial interests.

Brazil is a regional power with mid-level capabilities. In military terms, it faces limitations in projecting power across conventional, space, and nuclear domains. In the latter, specifically, the country is developing a nuclear-powered submarine program. Under its Constitution and international treaties, Brazil allows nuclear activities strictly for peaceful purposes. Like Brazil, other countries in its strategic surroundings do not individually possess decisive deterrent capabilities against the actions of major powers. For this reason, in both South America and the South Atlantic, Brazil's national interest aligns with the shared aspirations for peace and sustainable development in the region.

International cooperation is essential for humanity to address the risks and vulnerabilities of global transitions. However, the current multipolar, unbalanced, and deinstitutionalized configuration of the international order has created additional challenges to such cooperation. In this context of asymmetry and potential conflicts of interest with major powers, the importance of strong relations with the Global South[97], especially Brazil's South American neighbors, becomes increasingly clear.

Brazil shares historical ties, similar characteristics, and an inseparable destiny with South

American countries. There is also a set of regional mechanisms for coordination and political dialogue that can serve as the foundation for building structural convergences, enabling long-term joint action beyond political shifts and institutional instability. These include the Southern Common Market (Mercosur), the Union of South American Nations (Unasur), and, encompassing Latin America and the Caribbean, the Community of Latin American and Caribbean States (CELAC). This chapter will address security challenges and current prospects for South American integration.

Security

Current geopolitical tensions are primarily concentrated in Eurasia and its surrounding regions. However, major powers also hold specific interests in South America and seek to shape circumstances and control resources to gain competitive advantages.

These interests can be broadly grouped into two interconnected categories—political and economic—though separated here for analytical clarity. Political interests manifest through interference in domestic affairs, power projection, the securitization of social and political issues, the extraterritorial expansion of legal jurisdiction, and the establishment of military presence. Economic interests involve controlling natural resources—including energy and food production—and expanding commercial and financial positions, such as influencing trade routes and acquiring strategic national or state-owned assets.

On the political front, the primary risks stem from the actions of major powers aimed at aligning countries in the region with their own interests, thereby drawing them into their spheres of influence. Common methods include interference in domestic affairs and in intraregional relations. In this regard, existing conflicts—both current and historically embedded within South American societies marked by deep social inequalities—represent significant vulnerabilities. Additional vulnerabilities arise from the erosion of mutual trust among citizens and between citizens and public institutions.

From a political standpoint, the involvement of extraregional powers may also lead to the undesired securitization of political and social issues. External actors often pressure South America's security agenda by broadening the scope of topics such as terrorism, drug trafficking, organized crime, corruption, and immigration. This creates openings for influence and external interference in regional and domestic matters. Such influence may take the form of agreements, technical cooperation, sway over public officials, or lawfare—the misuse of legal mechanisms to bypass or undermine legal constraints—ultimately harming national sovereignty.

The securitization of certain issues is also frequently used as a justification for the presence of extraregional military forces or security agencies—either temporarily or, in more extreme cases, through the establishment of foreign military bases. Deterring the establishment of such military presences contributes to the security and defense of both Brazil and other countries in the region. Brazil plays a significant role and can act decisively in promoting security across South America, as well as Latin America and the Caribbean, grounded in the vision of these territories as a region of peace and cooperation—built on dialogue, respect for the diversity of peoples, and adherence to the principles of sovereignty and non-interference in internal affairs[98].

South America's interactions with major powers also have significant economic dimensions.

With a population of 430 million and a GDP exceeding US$4 trillion, the region holds substantial weight in both global demand and supply of goods and services, with the United States and China dominating trade relations. In 2009, China overtook the U.S. to become Brazil's main trading partner—a position it also holds in trade relations with Argentina, Bolivia, Chile, Paraguay, Peru, and Uruguay. Around 30% of Brazil's exports are directed to China, compared to about 11% destined for the U.S[99].

Beyond trade, there is extensive investment in infrastructure—logistical, electrical, and in other strategic sectors. In 2022, the stock of foreign direct investment (FDI) in Latin America and the Caribbean stood at US$2.85 trillion, primarily originating from the U.S. and European Union countries. In terms of annual investment flow, these countries together accounted for 55% of direct investment in 2022, while China contributed around 12%[100]. The main sectors for new investments, regardless of origin, were services and hydrocarbons. In the area of mergers and acquisitions, the communications and mining sectors stood out in recent years[101]. The economic presence of these major powers can both foster development and create dependencies that affect the sovereignty of South American nations and hinder regional economic integration.

South America is a major producer of commodities, including food—particularly in Brazil—and holds significant reserves of natural resources such as fertile land, strategic minerals for the new energy and production paradigm, water, biodiversity, and the world's largest tropical forest, the Amazon. These assets, if properly leveraged, can provide a competitive advantage and, in some cases, become the focus of interest from other countries.

South America has a population of 430 million people and a GDP of over US$4 trillion

Approximately 30% of Brazil's exports are destined for China, compared to around 11% for the United States

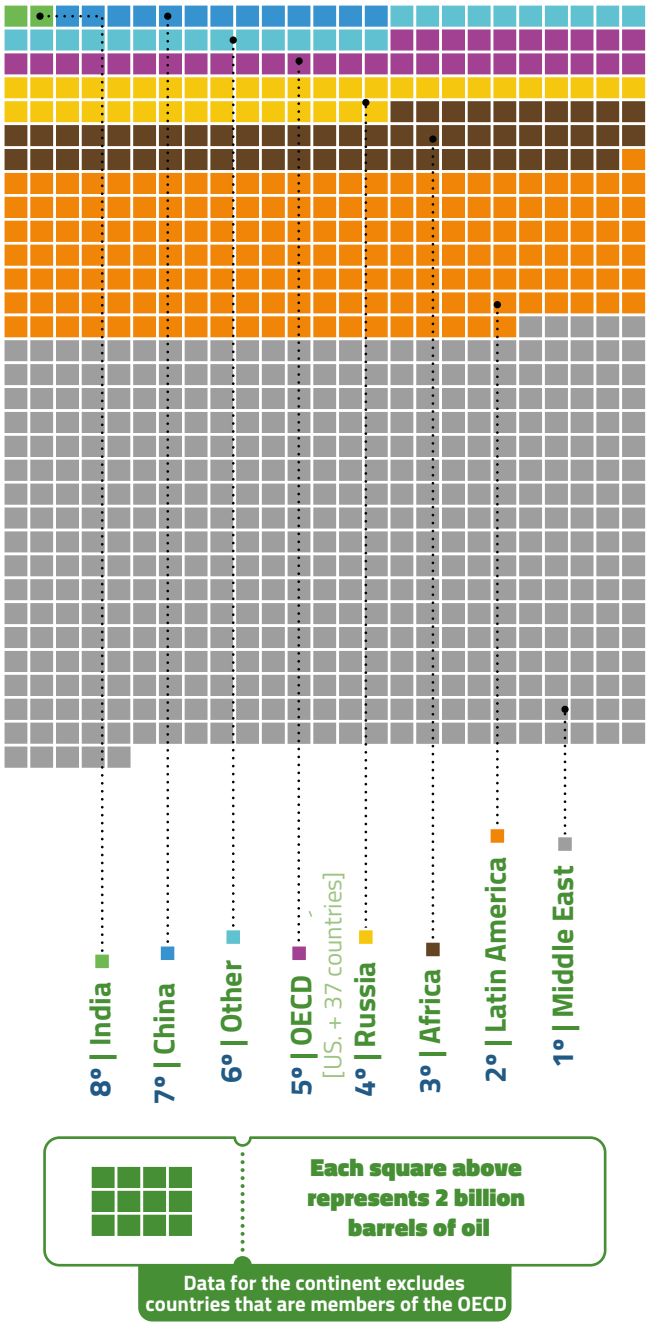
In 2022, the stock of foreign direct investment in Latin America and the Caribbean reached US$2.85 trillion, with the U.S. and European Union countries as the main sources. In terms of annual investment flow, these countries together accounted for 55% of direct investment that year, compared to 12% from China

In 2023, proven oil reserves in Latin America and the Caribbean increased from 342.27 billion to 343.62 billion barrels, accounting for approximately 21.9% of global reserves. Venezuela holds the largest share, with 303.01 billion barrels, or 19.3% of the global total102. Between 2022 and 2023, Brazil increased its proven oil reserves by 6.98%, reaching 15.894 billion barrels, with an annual extraction of 1.242 billion barrels[103].

Global lithium reserves are estimated at around 105 million metric tons, with Bolivia holding the largest known reserve in the world at 23 million tons, followed by Argentina (22 million) and Chile (11 million)[104]. Additionally, Brazil possesses the largest quantity of rare earth elements in South America and ranks among the top five globally, with approximately 21 million metric tons[105].

Proven crude oil reserves

By country or region, 2023



Source: own elaboration with data from "World proven crude oil reserves," Annual Statistical Bulletin 2024, Organization of the Petroleum Exporting Countries (OPEC), https://publications.opec.org/asb/chapter/show/123/2113/2118.

President Luiz Inácio Lula da Silva during the river pilgrimage of the Círio de Nazaré, at the Icoaraci Pier in Belém, Pará | Photo: Ricardo Stuckert (PR)

Critical areas to biodiversity and environmental balance —and which serve as shared reserves of strategic resources such as water— are of immense importance to South American countries. The Amazon Basin is the world's largest hydrographic basin, holding vast quantities of freshwater. The Amazon River is the world's largest river by water volume, with an average discharge exceeding 200,000 m^3/s[106]. The Guarani Aquifer—shared by Brazil, Argentina, Paraguay, and Uruguay—and the Amazon aquifer system together form one of the planet's most significant underground water reserves[107]. A large portion of these resources lies within the Brazilian Amazon, which accounts for about 60% of Brazil's territory. Therefore, preserving the region is essential not only for global biodiversity and climate regulation, but also for security, given its geostrategic importance.

Despite the absence of active interstate tensions or open conflicts, South America is increasingly entangled in the strategic competition among major powers, driven by specific political and economic interests.

Port of Pecém, Caucaia (CE) | Photo by Ricardo Stuckert (PR)

Integration

54.8% of Brazil's population lives within 150 km of the coast

Both in South America and the South Atlantic, Brazil's national interest aligns with the shared aspirations for peace and sustainable development among the countries in these two regions.

Along the east-northeast front, which faces the Atlantic Ocean, 54.8% of the population lives within 150 km of the coastline, and 23.4% of the country's Gross Domestic Product is generated by coastal municipalities[108]. Moreover, 97.6% of Brazil's oil and 83.8% of its natural gas are extracted from offshore fields[109]. Additionally, 83% of Brazil's foreign trade (total value of imports and exports) is conducted via maritime routes[110]. The cooperation ties and structural convergences between Brazil and the countries in the South Atlantic zone, however, also require renewed efforts to be consolidated.

On the western front, Brazil shares 16,900 kilometers of land borders with 10 neighboring nations[111], across 588 municipalities. Roughly half of South America's population, GDP, and territory belong to Brazil. Around 60% of the Amazon biome lies within Brazilian territory, and the biome as a whole covers 40% of South America's total area. Within this shared space, economic, political,

Border region between the municipalities of Tabatinga (Brazil) and Leticia (Colombia) | Photo by Marcelo Camargo (Agência Brasil)

social, and cultural relations play a vital role, enshrined in Brazil's constitutional objective of pursuing Latin American integration, and reinforced through concrete initiatives like Mercosur, Unasur, and CELAC.

In Brazil's immediate South American surroundings, there are shared interests in developing the continent's physical and logistical infrastructure to promote intraregional trade. Currently, important initiatives are underway, such as the Roadmap for South American Integration[112], established following a presidential summit in Brasília in 2023[113], and the National Border Policy, instituted in 2024[114]. With proper coordination among public policies that affect this shared space, it is possible to improve governance and develop regional infrastructure—issues that engage the interests and commitments of a range of actors, including national, subnational, and private stakeholders—with the potential to build structural convergence even amid political changes and disagreements.

From 2000 to 2020, high and medium-high technology products consistently accounted for over 40% of Brazil's exports to South America

In this context, Brazil holds a qualitative advantage in trade with countries across the continent. From 2000 to 2020, high and medium-high

technology products consistently made up more than 40% of Brazil's exports to South America, whereas exports to the rest of the world remained below that level over the same period[115]. In Latin America and the Caribbean more broadly, intraregional trade is generally intensive in manufactured goods[116]. Moreover, the South American market is more accessible to small businesses, creating a favorable environment for the internationalization of Brazilian companies[117]. Developing regional infrastructure could help maximize these advantages, especially in a context where intraregional trade remains low—one of the lowest in the world—at around 15% of total trade[118]. As of 2024, Brazil's exports to South America stand at roughly 10%[119].

In addition to physical integration, the need for regional digital integration is becoming increasingly important in the context of global transitions. This includes deepening digitalization policies, particularly in sectors with significant economic weight for countries in the region—such as agriculture, mining, and manufacturing[120]—as well as developing productive capacities for the high-tech industry. It also involves regulatory and governance policies concerning the production, storage, use, and flow of data[121]. More broadly, within the framework of digital transformation, Latin America and the Caribbean have considerable room to improve key indicators, such as high-speed connectivity, the economic weight of the digital ecosystem (including high-tech services and products), and public policy in the digital domain[122].

Other shared interests strengthen the foundations for deeper political and social integration across the continent and for adopting joint positions within the international community. Among these are the pursuit of a just ecological transition that does not penalize developing countries—those that have contributed proportionally less to the anthropogenic factors driving the climate crisis; the need to reform multilateral institutions and organizations to reflect a multipolar context, given the region's shared lack of power projection to independently influence global policies; support for the self-determination of peoples, peace, and the sovereign development of the continent's nations—most of which have no interest in rising global belligerence; the fight against transnational crime; the effort to overcome social challenges such as income and gender inequality; and the protection of Indigenous communities, among others. Several of these issues were addressed in the agreement reached by South American presidents during their meeting in May 2023, resulting in the "Brasília Consensus"[123].

However, regional governance—carried out by organizations such as Mercosur and Unasur—has been weakened in recent years due to factors such as political fragmentation and a lack of consensus among countries regarding the goals of these institutions. One of the negative consequences has been the lack of coordination on critical issues related to security and development.

A particularly stark example was the region's response to the COVID-19 pandemic. In Latin America and the Caribbean, the health and socioeconomic impacts were among the most severe in the world[124]. Structural inequalities were a key factor behind the region's poor performance, but the costs associated with disintegration and extreme political polarization during that period were also significant[125].

The rise of anti-vaccination rhetoric was a specific consequence of polarization. In Brazil's case, the country has long maintained a broad and inclusive vaccination program. However, in the midst of the pandemic, in 2021, it recorded the lowest vaccination coverage in 20 years[126]. Today, challenges persist in reaching immunization

targets, and there is a risk of the resurgence of previously controlled diseases—most concerning among them are those affecting children[127].

The lack of regional coordination also heightens the risks associated with interstate disputes. Conflicts such as the ongoing dispute between Venezuela and Guyana over the Essequibo region, if militarized or escalated into open conflict, could have immediate consequences for Brazil due to its extensive shared border with both countries. Any potential escalation of hostilities would not only threaten territorial security and the safety of the population but also call into question Brazil's role in maintaining regional stability and deterring extraregional military presence.

Even without an escalation into conflict, the deepening of Venezuela's domestic crisis in recent years has brought socio-economic, political, and logistical challenges at the regional level. It is estimated that over 7.7 million Venezuelans have left the country since 2015, with 6.6 million migrating to Latin American and Caribbean countries. Colombia has received 2.8 million of them[128]. In Brazil, 568,000 Venezuelans had entered the country as of June 2024[129].

Despite the challenges, incoming migration flows are a driver of development for host countries, contributing to the expansion of the labor force, the exchange of knowledge, new investments, and opportunities for cooperation[130]. Migration also offers a chance to counter demographic trends such as population aging, to attract and retain talent, to enrich the country's cultural fabric, and to strengthen friendly political and economic ties with neighboring nations.

In Colombia, despite the peace agreement signed in 2016 between the government and the Revolutionary Armed Forces of Colombia—People's Army (FARC-EP), intrastate conflict persists in areas controlled by other armed groups or dissidents. This situation spills over Colombia's borders and affects the region's security dynamics, including parts of the Brazilian Amazon.

Violence involving both state and non-state actors remains a serious issue for South American countries, hindering integration efforts. In Brazil, violence poses a major threat to individuals and institutions alike. In 2023, there were 37,639 recorded intentional homicides, 6,381 violent deaths resulting from police interventions, and 1,443 femicides[131]. These figures represent more deaths than some interstate conflicts—for example, the Syrian War, which averaged 30,200 military and civilian deaths annually between 2011 and 2022[132].

In 2023, there were 37,639 recorded intentional homicides, 6,381 violent deaths resulting from police interventions, and 1,443 femicides. These figures represent more deaths than some interstate conflicts—for example, the Syrian War, which averaged 30,200 military and civilian deaths annually between 2011 and 2022

Internal violence is fueled by the dynamics of organized crime and illicit markets, which are increasingly unconstrained by national borders. Criminal organizations such as the Primeiro Comando da Capital (PCC) and Comando Vermelho (CV) are the main groups involved in drug trafficking in Brazil. The PCC operates an extensive drug and arms trafficking network both domestically and internationally, with connections in countries like Paraguay, Bolivia, and Colombia[133]. Illicit markets are also exploited by militia groups, which have penetrated public institutions through involvement in security forces and by exerting political influence over authorities and institutions. Inequality, social vulnerability, and institutional weakness facilitate the recruitment of new members by these groups and enable them to impose unjust and illegitimate parallel power structures over populations and territories.

Socio-environmental conflicts—such as those involving disputes over Indigenous lands and mining areas, most of which are illegal—are also sources of tension and reflect shared causes and risks across countries in the region. Between 2016 and 2022, there was a sharp increase in the number of illegal mining sites operating in the Brazilian Amazon. It is estimated that 78% of the area currently exploited within Indigenous Territories was occupied during that six-year period[134].

In the Yanomami Indigenous Territory alone, the number of illegal miners in recent years was estimated at 20,000[135]. Following the establishment of a Government Coordination Office in the state of Roraima in February 2024 to oversee the removal of intruders from the Yanomami Territory, illegal activity dropped significantly, and the cost of operating mining sites rose[136]. After these government actions, geointelligence alerts for areas affected by illegal mining fell by 73% compared to the figures recorded in 2023[137].

Terra Livre [Free Land] Campsite | Photo by Valter Campanato (Agência Brasil)

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Environmental crimes in the Amazon are often linked to other illegal activities and frequently rely on transnational logistical infrastructure. Efforts to combat these crimes in the Brazilian Amazon can have a positive impact on actions taken by neighboring countries that share the Amazon biome, representing another potential area for regional cooperation.

Domestic institutional instability has also posed challenges to cooperation and integration. Several countries in the region have experienced contested elections, with political and social divisions aggravated by party fragmentation and tensions among constitutional branches of government. In this context, public trust in elected leaders and governance structures has remained limited[138].

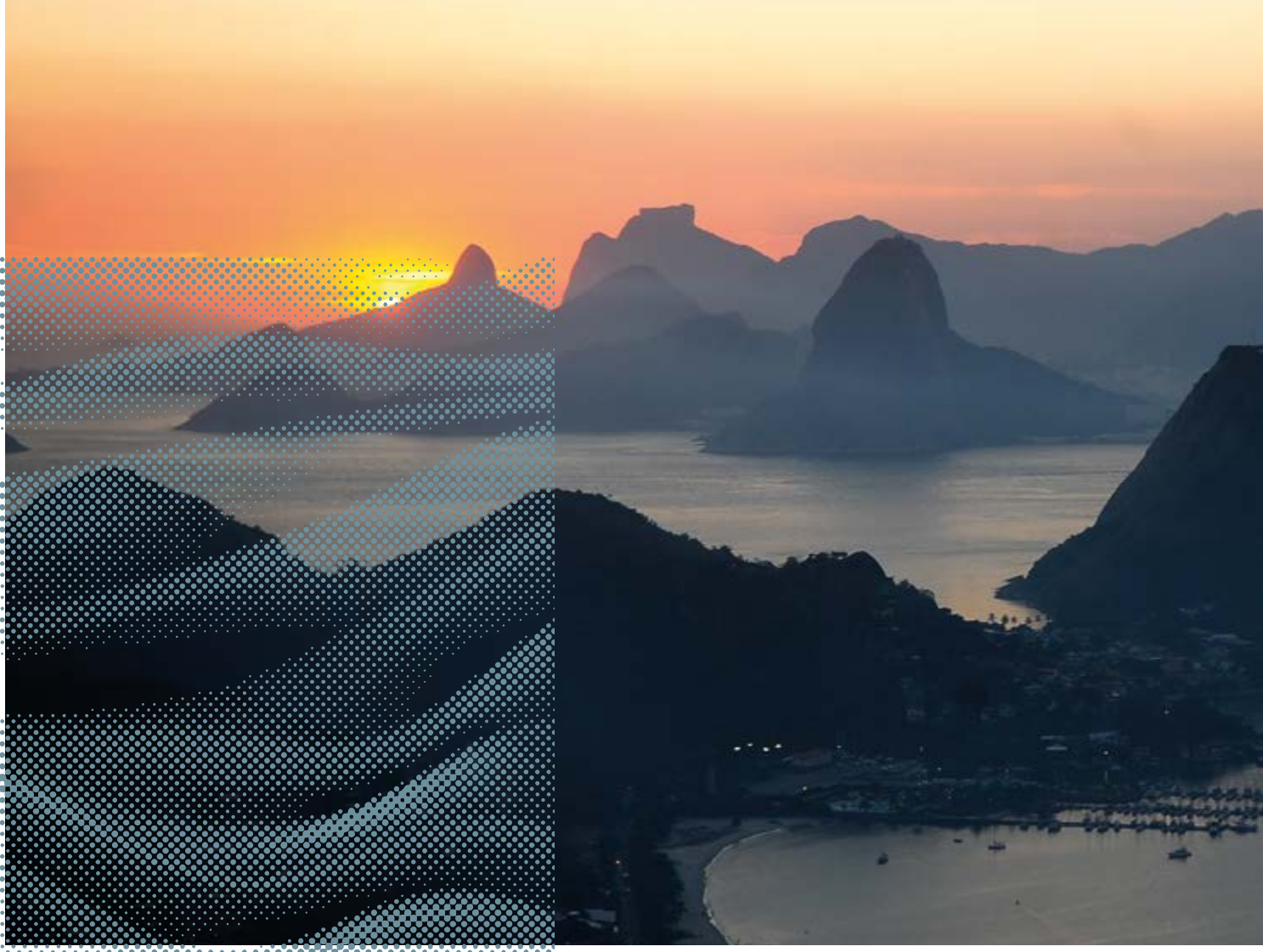
Exhibition "8/1: Democracy and Restoration," showcasing the restoration process of artworks vandalized during the anti-democratic acts of January 8, 2023 | Photo by Valter Campanato (Agência Brasil)

However, in Brazil's case, democracy has shown resilience in recent years despite various challenges. Key factors have included efforts to combat disinformation, dialogue between political parties, the independence of the judiciary, trust in the electoral system and election processes, and institutional actions to ensure a peaceful transition of power[139]. Thanks to this resilience, Brazil's standing in comparative indicators that assess the performance of democratic institutions has been improving[140]. From a regional stability perspective, the strengthening of Brazil's institutional framework may have a positive influence on the domestic situations of other countries in the region.

Although average income across the continent declined gradually between 2014 and 2020[141], Latin America is set to enter its fourth consecutive year of economic growth in 2025, with regional per capita income rising by more than 30% compared to 2020[142].

The expansion of economic prosperity—particularly following a period of hardship—is another key factor contributing to political stability. Among the shared risks faced by countries in the region are, besides those stemming from global transitions, the risks associated with geopolitical pressures in relations with major powers. These are compounded by political, social, and economic vulnerabilities. Overcoming these challenges depends on advancing regional integration.

> *Latin America is set to enter its fourth consecutive year of economic growth in 2025, with regional per capita income rising by more than 30% compared to 2020*



Brazil: Challenges for Intelligence

04

Rio de Janeiro seen from Parque da Cidade, in Niterói | Photo by Tomaz Silva (Agência Brasil)

ABIN has two primary missions: Coordinate and facilitate an integration between Brazilian Intelligence System's agencies and to advise the President and its ministers. Relying on the Federal Constitution, Law 9.883/1999, Decree 11.693/2023, the National Intelligence Policy (PNI), and the presidential directives, ABIN establishes facts and topics for monitoring. Therefore, to offer well-founded recommendations, it is key to delineate strategies and priorities that align with legal frameworks and identified security threats.

Given the current context of global shifts and the international and regional landscape, five key challenges have been identified as priorities for 2025. Addressing these challenges will require an assessment of potential threats and vulnerabilities. Hence, the analysis and suggested risk mitigation will be shared with the appropriate authorities. While these occurrences are not direct outcomes of international dynamics, they are influenced by them and impact citizens' lives and governmental capacities within the nation.

Moreover, the five key challenges have been identified and selected throughout 2024. For each of these challenges, the document provides a definition, context, and key points that deserve attention. To address these challenges demand ongoing, systematic efforts to identify threats and vulnerabilities. The goal is to supply relevant authorities with opportune information and to critically assess options for reducing risks.

Security of democratic institutions

Democratic institutions' security is a foundational principle that emerges from the Federal Constitution. Therefore, security involves identifying, monitoring, and analyzing threats to constitutional principles, the democratic rule of law, and the normal operation of its institutions.

In recent years, Brazil has faced increased political conflict alongside a faster spread of disinformation. The rise of violent and antidemocratic actions poses a challenge to conflict mediation through democratic and institutional means. Moreover, extremist groups disseminate messages that encourage intolerance and incite violence.

Far from affecting only Brazil, this phenomenon happens transnationally. On top of that, the spreading of extremist, intolerant, and divisive narratives increases worldwide.This is followed by technological advancements such as digital platforms and algorithms that maximize polarization, and additionally influenced campaigns encouraged, coordinated, and organized by actors interested in undermining the trust between citizens and the institutions.

As consequences, there are social breachures that strengthen inequalities inherent to the Digital Age. Social media platforms and messaging applications have connected producers and consumers, enabling the rapid spread of information and the creation of fragmented content. Not only these platforms enabled an increase of perspectives and information sources, but also the technological transformation has expanded the power of business conglomerates that collect and process user data. Then, data has become a valuable asset, due to its enabling of automated monitoring of users' (individuals) activities, to the creation of intricate profiles and algorithms, and to the personalization of content distribution.

Along these lines, conglomerates in the dig-

ital technology sector rapidly gain significant economic power and influence. Thus the risks to sovereignty and democratic institutions intensify when their technological capabilities are used to pursue clear political goals beyond business interests.

The blending of intensifying competition for attention and recommendation algorithms leads to a form of users' segmentation into isolated groups. Furthermore, it fosters an environment where people primarily encounter content confirming their beliefs and point of view, and then are shielded from the opposing ones. Consequently, the individual's ability to make well-reasoned judgments on complex matters is compromised. This segmented and yet immediate information landscape—dominated by oligopolies opposed to state regulation—further facilitates the spreading of disinformation, fake news, and conspiracy theories.

This dynamic directly impacts public policy execution by compromising the communication between the government and its citizens, demanding efforts to identify and to oppose false information that fosters confusion among citizens, regarding their government actions. At the same time, groups with hostile and extremist violent motivation, as well as opposing States, seek to find an opportunity to influence the public debate, social segments, and to weaken the existing trust in democratic institutions.

Hence, three elements can escalate this situation by 2025: disinformation campaigns targeting the electoral process; coordinated efforts among antidemocratic groups worldwide to advance violent agendas; and increasingly severe and frequent socio-environmental crises linked to climate change.

Disinformation campaigns against the electoral process

The electoral process, a crucial component of the peaceful power transition, is frequently targeted by the spread of misinformation, fake news, and conspiracy theories. This is a worldwide phenomenon fueled by new technologies. Deliberate actions can misshape the perception of reality and undermine voters' ability to vote consciously and freely, thereby jeopardising the manifestation of the popular will.

While misinformation may not directly affect voter turnout, it influences voters' perception and attitude toward the legitimacy of any electoral process, with long-term consequences for participation. When it comes to disinformation, many of its strategies are developed in advance through coordinated efforts between the initiators and the content dissemination channels. Besides, specialized companies hired by political agents monitor activity on social media platforms and other online spaces even between election periods, to stay informed about trends, perceptions, and attitudes of multiple groups. These actions allow them to develop and test potentially disruptive narratives, which can be launched and amplified at strategic moments to maximize reach and impact.

Disinformation often targets the electoral processes and institutions themselves. Representatives of international organizations and electoral observation missions may also become targets of disinformation. Deliberate campaigns disseminate doubt on the security of the vote collection and counting systems, compromising society's acceptance of the results. Additionally, the spreading of fake news linked to conspiracy theories twist the fairness inherent to the elections' dispute between candidates, damaging marginalizing groups

already facing structural inequalities and violence based on ethnicity, race, or gender. Then, disinformation fuels smear campaigns and diminishes the space for public policy debate.

International antidemocratic coordination

Antidemocratic groups have been coordinating in regional and global forums. Although there is no homogeneity among the actors, there is a convergence of activists, ideologues, strategists, political leaders, and businesspeople, including those from the tech sector, who come together to discuss and share tactics for manipulating information, propaganda, and hate speech with the aim of destabilizing political systems and influencing elections. Social media and widely used platforms around the world share characteristics that can be exploited in this regard. Hence, transnational coordination has facilitated the exchange of new action repertoires and the sharing of tested tactics that enhance the sophistication and effectiveness of these actions. Furthermore, movements that challenge democracy and the basic societal consensus for coexistence are organizing and influencing each other in waves of world mobilization. The coordinated questioning of COVID-19 pandemic response measures exemplifies this type of movement.

This coordination strengthened the bonds between extremist groups, establishing national networks with links to activists in South America and other nations. At their peak, these movements even promoted mobilizations demanding antidemocratic institutional breaks. The insurrection attempt on January 8, 2023, involving attacks on government buildings in Brasília, resulted from a culmination of mobilization structures that had been established earlier. These structures played a key role during the tense 2022 electoral process by facilitating the movement that contested the election results. Consequently, the emergence of new waves of international antidemocratic mobilization became a concern for 2025, especially in light of the 2026 elections.

Socio-environmental crises

Worldwide and within Brazil's context, natural disasters, environmental imbalance, and competition for limited resources have uneven impacts on populations. In times of crisis, the institutions and society's response capacity is pushed to its limits, often failing to immediately meet the needs and expectations of the people. Such situations trigger new conflicts and deepen existing ones.

Recurring crises contribute to narratives that compromise public trust in institutions, as recent examples demonstrate. The critical climate events in Rio Grande do Sul, that took place between April and May 2025, marked by human tragedy, social division, and material devastation, prompted questions regarding government actions, and fostered discourses opposed to democratic institutions. The typically slow process of economic reconstruction and reorganization extends the impact of the crisis, thereby, prolonging the receptiveness to these narratives.

Taking into consideration the recent history and perspectives on the evolution of climate change, socio-environmental crises are likely to catalyze the resurgence of antidemocratic discourses in Brazil in the coming years.

Cybersecurity

Cybersecurity is a set of actions at ensuring that information systems can withstand events in cyberspace capable of compromising the availability, integrity, confidentiality, and authenticity of the data stored, processed, or transmitted, as well as the services these systems offer or make accessible.

Moreover, cybersecurity is a decisive factor for Brazil's digital transformation and sovereignty. The world technological shift, among the escalation of conflicts involving major powers, has highlighted the connection between cybersecurity and geopolitics. In this context, Brazil has been a target of cyberattacks from domestic and international domains.

The evolving nature of cyber threats has prompted a shift in the approach to security. The focus has moved from prevention to the recognition that such attacks are inevitable. In the coming years, the trend is toward adopting a cyber resilience model—defined as the Brazilian government's ability to ensure the continuity of critical operations and protect sensitive data in the face of ongoing and varied attacks.

Resilience, therefore, must also focus on safeguarding sensitive information, which depends on advanced cryptographic techniques implemented at the state level. State-level encryption prevents unauthorized access and data breaches, while strengthening a country's ability to withstand cyberattacks. Implementing robust cryptographic protocols that can resist emerging quantum technologies is key to national cyber resilience. Thence, enabling the state to protect its informational assets even against sophisticated attacks.

By adopting a comprehensive approach to cyber resilience, Brazilian institutions not only shield themselves from the impact of immediate threats but also build the capacity to progressively adapt to an ever-evolving cyber threat scenario.

One of the key aspects of cybersecurity is its cross-cutting nature. Ransomware attacks—to hijack data and demand for a ransom—, leaks of sensitive data, cyber espionage operations, and cyberattacks on critical infrastructure are threats that demand integrated state action and advisory support grounded from the specific perspective of cyber intelligence, with close attention to the possibility of state-sponsored actions and their geopolitical implications.

The growing sophistication of attack methods, the use of artificial intelligence by malicious actors, and the expansion of public services on digital platforms—which fuels the attack surface—will represent additional challenges to Brazil's cybersecurity in the coming years.

State cyber actors

Cyber operations sponsored by nation-states to pursue strategic, economic, or political goals, tend to be technically sophisticated, and their traces are difficult to track.

State-sponsored groups with significant intrusion, persistence, and data exfiltration capabilities, known as Advanced Persistent Threats (APTs), have become increasingly frequent in recent years. Such groups operate in Brazil, primarily with espionage as their focus. Foreign APTs also exploit Brazilian computing infrastructure to launch attacks on third parties, aiming to mask malicious indicators through the use of legitimate infrastructure.

State-sponsored cyberattacks are also marked by the exploitation of unknown and unpatched cybersecurity flaws, known as "zero-day vulnerabilities". The strategic importance of these vulnerabilities for offensive cyber capabilities has led governments to develop mechanisms for vulnerability control and management. These controls enable states to retain certain flaws for use in intelligence, national defense, or public security missions. However, this approach is not without risks and ethical dilemmas. Retaining cyber vulnerabilities creates a security paradox: while enhancing a state's offensive capabilities, it simultaneously exposes its citizens and infrastructure to potential threats.

Likewise, the existence of illegal and informal markets for the sale of zero-day vulnerabilities is a growing concern, with these flaws being resold to both state actors and cybercriminals. Such phenomena heighten geopolitical tensions and contribute to an ecosystem where vulnerabilities become valuable commodities, encouraging their discovery and hoarding rather than responsible disclosure and remediation.

The exploitation of unknown vulnerabilities exemplifies the technical sophistication that defines state cyber actors. In addition to this, other complex tactics, techniques, and procedures make it even more difficult to attribute cyberattacks to their true perpetrators. Further complicating attribution is the possibility of malicious actors deliberately planting false flags to frame other groups —a phenomenon known as false-flag operations.

The inherent complexities of attributing cyberattacks to states—combined with the politicized use of attribution by some governments —represent a major obstacle to defining norms for responsible state behavior in cyberspace. Despite the fact that technical evidence suggests state involvement in an attack, geopolitical considerations can hinder official attribution. Hence, governments may deny their role and dismiss accusations as baseless or politically driven. This challenge is further compounded by the lack of international consensus on what types of cyberattacks constitute a breach of sovereignty.

For instance, the cyber dimension has gained

prominence in international conflicts such as those between Russia and Ukraine and between Israel and Palestine. However, contrary to expectations of a single, devastating "digital Pearl Harbor," cyber conflict tends to manifest as a constant, low-intensity struggle between nations through ongoing, covert campaigns. This approach enables state actors to carry out cyber operations that sustain continuous tension in cyberspace without triggering a conventional military response.

Nevertheless, Brazil must be prepared to defend itself against persistent, low-intensity cyberattacks. This requires strengthening its cyber resilience by making critical and governmental infrastructure more robust and resistant to such attacks; enhancing detection and response capabilities through continuous monitoring and rapid reaction to identify and mitigate threats in real time; and increasing both national and international cooperation by building partnerships to share cyber intelligence and best practices in cybersecurity.

Non-state cyber actors

Cybercriminal activities significantly influence the cybersecurity landscape, with ransomware operators and hacktivist groups being prominent examples of non-state actors involved.

Ransomware attacks commonly combine data encryption with ransom demands. Many attacks also include the theft of sensitive information, with threats to publicly expose or leak it, directly notify clients and regulators, and launch denial-of-service (DDoS) attacks. These tactics increase pressure on victims to pay the ransom —even if they have proper backups.

The ransomware ecosystem has since evolved into a segmented and specialized market. This transformation reflects a growing professionalization and division of labor among cybercriminals, making attacks more efficient and harder to resist. The Ransomware-as-a-Service (RaaS) model has lowered the barrier to entry, enabling attackers with limited technical skills to carry out sophisticated operations. RaaS platforms employ malware developers, provide infrastructure to host and distribute attacks, and support negotiation and payment systems between attackers and victims. Additionally, the attack vector can be purchased from initial access brokers who specialize in compromising corporate networks and selling entry points to third parties.

When it comes to Brazil, the country faces a significant number of ransomware attacks, owing to its extensive digital infrastructure and large population of online users. Worldwide, Brazil consistently appears in the top ten for the number of victims listed on RaaS platforms. Within the Americas, it frequently holds the second-highest position, after the United States. Despite this prominent ranking, ransomware attacks are underreported, making it difficult to assess the true scope of the issue. Many organizations and individuals choose not to report incidents to authorities or the public. Fear of reputational damage plays a key role, as disclosure may erode the trust of clients, partners, and society at large—leading to financial and market losses. Additionally, legal repercussions are a concern, particularly in a regulatory environment that strongly emphasizes personal data protection.

In comparison, many internationally active cybersecurity firms publish reports that amplify the perception of these attacks for commercial purposes. While such reporting can inform clients and the public, it also distorts the perceived level of threat. Together, these dynamics com-

plicate efforts to understand the true scale of the problem and can result in the misallocation of resources and efforts to combat ransomware actors.

Another category of non-state actors comprises ideologically motivated cyber actors, commonly referred to as hacktivists. In 2025, hacktivism is expected to continue evolving as a form of digital protest, posing challenges for both government and private organizations in the country. Hacktivist groups tend to target high-profile entities such as government institutions, large corporations, or public figures in order to maximize the visibility of their actions. The most commonly used techniques include distributed denial-of-service (DDoS) attacks, website defacements, and the leaking of sensitive information.

Hacktivist attacks are generally less sophisticated than other types of cyber threats and tend to have lower-impact consequences. Often, the primary goal of hacktivists is to mobilize public opinion or gain prominence within the technical community. For this reason, hacktivists often adopt a strategy of amplifying the perceived impact of their attacks: by exaggerating the scope and damage of their campaigns, they seek to attract greater media and public attention to their causes. Exaggerated claims of success can foster a sense of vulnerability and insecurity among targets and the public, even when the actual impact is limited. Moreover, these inflated narratives can inspire sympathizers and potential new members to join the cause. As a result of this strategy, hacktivist groups may appear more sophisticated and dangerous than they truly are, leading to an over-allocation of resources and responses to their actions.

Some groups traditionally linked to hacktivism are shifting toward illicit activities driven by explicit financial motives. Frustration over the limited tangible impact of hacktivist actions—combined with the high market value of their technical skills when applied in criminal settings—are key factors behind this transition.

In 2025, cyber threats from non-state actors will remain a challenge. Ransomware actors are expected to become even more specialized, with each component refining its specific area of operation and becoming more scalable, resilient, and innovative. Hacktivist actors, in turn, are likely to amplify their actions by taking advantage of major international events scheduled for 2025, such as the 30th United Nations Climate Change Conference (COP30) and the BRICS summits.

Impacts of artificial intelligence on cybersecurity

The quick advancement of artificial intelligence technologies is, in turn, changing the cyber threat landscape, providing new tools and capabilities for both state and non-state actors. AI allows attackers, for instance, to customize their tactics on a previously unimaginable scale. Phishing and social engineering attacks become more convincing and harder to detect, as they leverage language models to generate malicious content that is both persuasive and personalized—without the common spelling errors often found in such attacks. AI can also enable the automation of attacks, from target identification to impact calibration. By 2025, this could result in a significant increase in the volume and speed of cyberattacks that previously required meticulous planning and hours of prior research. In this context, AI can reduce the attackers' dwell time—that is, the average time between initial network access and the achievement of the attackers' goal. Therefore, AI use may

reduce the barrier to entry for cybercrime, allowing individuals or groups with limited resources and technical knowledge to carry out attacks that once demanded advanced programming skills and deep knowledge of security systems.

However, AI also brings opportunities to the field of cybersecurity by enhancing research, monitoring, investigation, and incident response capabilities. AI can process large volumes of log data, network traffic, and user behavior in real time—faster than human analysts. AI can also identify anomalies and suspicious patterns that would likely go unnoticed through manual analysis. Additionally, as new types of attacks are detected and analyzed, AI systems can update detection and response models, continuously improving their effectiveness. This is particularly valuable in the rapidly evolving threat landscape, where new attack tactics and techniques emerge regularly.

AI, therefore, presents a significant duality, offering advantages for both attackers and defenders. By 2025, the main challenge in this evolving scenario will be to harness technological innovations more effectively than opposing actors.

Resilience of strategic sectors

Strategic sectors are complexes of activities essential to everyday life and the regular functioning of society. They attract a significant portion of the federal budget and both public and private investments; contribute to securing and enhancing the competitive advantage of local production; play a crucial role in national sovereignty and security; are potentially vulnerable to disruptions; and serve as hubs for concentrated research, development, and innovation efforts.

Resilience is the ability to anticipate, withstand, recover from, and adapt to disruptive incidents. It entails not only protection, but also the capacity to maintain essential operations and swiftly restore full functionality after an incident.

The international landscape of multipolar competition is marked by the use of coercive strategies even in the economic domain, including currency markets and disputes over payment systems. Territorial and geopolitical disputes, internal conflicts, and criminal organizations also impact global logistics, leading to longer transport routes and increased transportation costs. At the same time, these changes enable the reorganization of supply chains, benefiting countries that are politically stable, geographically closer, or politically aligned with the major hubs of the global economy.

The role of the State in preventing, managing, and responding to increasingly frequent crises is indispensable, yet insufficient. This became evident with the acceleration of technological innovation cycles, increasingly sophisticated cyber threats, the solidification of climate change scenarios, migration flows triggered by regional conflicts, and the COVID-19 pandemic and its impacts. The State must be capable of coordinating with economic and social actors to protect sectors deemed strategic or critical: energy and energy transition, PEGANBIO (oil, gas, and biofuels), digi-

tal infrastructure, defense, space, transportation, and food security. The variety of strategic sectors makes the landscape of threats and vulnerabilities —whether human-made or natural —broad and diverse. Each sector is subject to specific regulatory frameworks, control regimes, international norms and standards, and exhibits varying levels of maturity. These sectors often overlap with sets of critical infrastructures, which are frequently interdependent.

ABIN has contributed to building and strengthening a protection culture in public and private organizations of strategic interest through its National Program for the Protection of Sensitive Knowledge (PNPC). During the cycle of major sporting events that began with the 2007 Pan American Games and culminated with the 2016 Olympic Games, Brazil developed incident response protocols based on assessments of risks stemming from threats and vulnerabilities. These protocols are also applied to smaller-scale but highly sensitive operations, such as the transportation of nuclear material and criminal organization leaders, as well as international political events, including ministerial meetings and the G20 summit during Brazil's presidency of the group.

While risk-based management is essentially a defensive activity, strategic efforts to build resilience open up exploratory opportunities in which intelligence plays a significant role. Contingency and crisis management plans become indispensable and depend on accurately perceiving threats and their potential developments. Building resilience gives strategic sectors the opportunity to reflect on broader systemic variables and to prioritize operational continuity over marginal gains in efficiency.

Promoting the culture of protection

All strategic efforts benefit from the existence of a protection culture. Promoting this culture is one of the ongoing challenges outlined in the National Intelligence Strategy, along with the development of joint protocols for protecting sensitive knowledge. The concept of security awareness is still not widely used in Brazil. The protection culture encompasses a set of shared attitudes and practices designed to mitigate and prevent specific risks.

In 2025, actions under the National Program for the Protection of Sensitive Knowledge (PNPC), promoted by ABIN, are expected to continue. The program aims to raise awareness among strategic public and private institutions about the need to foster a culture of protecting sensitive knowledge and safeguarding national sovereignty.

Promoting the culture of strategic resilience

The concept of strategic resilience goes beyond simply restoring pre-crisis operational characteristics. It includes a predictive effort to ensure that reconstruction takes into account forward-looking scenarios that may anticipate future crises.

A crisis response model that integrates the State, society, and the productive sector must enable the exchange of information regarding current and future perceptions of opportunities and threats. Accurate information is essential for effective planning and decision-making, and this presents an opportunity for intelligence to become part of the daily routine of managers, both within and outside the government structure.

Illicit markets and transnational organized crime

Illict markets encompass a wide range of criminal offenses, including drug, arms, and human trafficking; illegal trade in natural goods such as timber and gold; and smuggling of merchandise. These markets may operate within the territorial boundaries of one or more sovereign states, with or without the use of violence by their operators.

Transnational organized crime is embodied in criminal organizations that run illicit markets across borders and are primarily driven by financial gain. This increases the level of sophistication, continuity, and rationality of their operations, as well as the potential for harm. These activities often involve displays of force and the use of violence by their operators.

Therefore, Illicit markets and transnational crimes are shared challenges for Brazil and other South American countries. Actors involved in drug, arms, and human trafficking, migrant smuggling, and environmental crimes such as illegal gold mining and timber smuggling, take advantage of weakened regional governance and challenges in commercial integration to expand their operations, disregarding the borders of their home states.

The commercial disengagement seen in the region has not been mirrored by a proportional slowdown in illicit market activity and transnational crime in Brazil and South America. On the contrary, recent years have witnessed an expansion in the flows of these markets and in the transnational reach of organized criminal groups, which have become increasingly interconnected and diffuse, posing significant risks to the security of society and the Brazilian state and its neighbors. Transnational criminal organizations take advantage of state weaknesses and institutional gaps to meet their goals. This exploitation generates risks for the population, especially for socioeconomically and environmentally vulnera-

ble groups like residents of low-income areas and Indigenous peoples.

Worldwide, increasing tensions and declining trust among countries have fueled transnational criminal networks operating in Brazil and across other continents. As conflicts rise, so do migration flows and the demand for weapons—many of which are diverted into criminal environments—and precious metals such as gold, often sourced from illegal mining areas. The decline of trust, in turn, facilitates the operations of drug and arms trafficking networks, precisely due to the weakening of cooperation between state intelligence and law enforcement agencies.

Brazilian and South American criminal organizations have exploited internal instability and institutional and democratic vulnerabilities in various countries to infiltrate state structures—either through the corruption of public officials or by attempting to elect direct representatives in elections. This undermines the safety of individuals and institutions, both through violence and through the infiltration of criminals into official structures.

Simultaneously, there are significant gaps in state policies—both in terms of institutional frameworks and methods—that hinder effective action against illicit markets and their actors. This combination of factors creates an ecosystem conducive to the operations of criminal groups in Brazil, which are largely responsible for the spread of violence throughout the country, in both urban and rural settings.

Brazil's institutional framework faces direct challenges from major criminal groups that exploit state vulnerabilities. Once a group feels legitimized in a given territory—within a context of hybrid governance alongside state institutions—the likelihood of confrontations with public agents increases. This occurs both in urban settings, involving drug trafficking and militia groups, and in rural areas, particularly in regions of illegal gold mining, such as the Yanomami Indigenous Land (TIY), where clashes with prospectors and other agents of the illegal mining economy have been recurrent.

In this regard, there is also pressure from external actors for Brazil and other South American countries to address transnational crimes according to foreign interests. The automatic adoption by some states or institutions of these actors' methods results in limitations on national sovereignty and hinders the development of tailored, more effective solutions to mitigate the negative impacts of transnational organized crime.

Analyzing and anticipating scenarios, addressing threats, and identifying opportunities in an environment of growing tension and criminal proliferation are crucial tasks for 2025, with a focus on combating drug and arms trafficking; migrant smuggling and human trafficking; and environmental crimes.

Narcotics and arms trafficking

Brazil's geographic position, simultaneously a destination and transit point for the main illicit flows in South America, exacerbates the challenges posed by transnational organized crime. In terms of drug trafficking, Brazil shares borders with major drug-producing countries—most notably Peru and Colombia in the cocaine market, and Paraguay with regard to marijuana. In addition to being a drug consumer market—the second-largest global consumer of cocaine—Brazil also serves as a key transit point for narcotics en route to other continents, such as Europe, Africa, and Asia.

Criminal organizations operating in Brazilian territory are in a state of constant conflict over

control of corridors and logistical infrastructure for the import and export of drugs, as well as for territorial dominance, especially in large urban centers where drugs are sold at retail. This situation drives the international arms trade into Brazil, a critical factor behind the country's high levels of violence. These levels are largely correlated with territorial disputes among criminal groups, particularly the rivalry between the prison-based gangs Primeiro Comando da Capital (PCC) and Comando Vermelho (CV), whose zones of influence span all regions of Brazil.

The international expansion of Brazilian drug trafficking groups—an ongoing process that intensified in the second half of the 2010s—has strengthened their military and financial power by facilitating access to suppliers and buyers of narcotics and weapons. The PCC, the criminal group with the widest presence across Brazilian states, now operates in over 20 countries, with an estimated 2,000 members abroad. Outside Brazil, the organization's main operational bases are located in Bolivia and Paraguay, where drugs are purchased and logistics for trafficking are planned.

At the same time, the increase in international drug flows has attracted criminal actors from other continents to Brazil. Italian mafias, Balkan groups, and Mexican cartels travel to Brazil to negotiate drug shipments directly destined for export. Brazilian traffickers also travel to Africa and Europe, particularly to Portuguese-speaking countries such as Portugal, Cape Verde, Angola, and Mozambique, to negotiate directly with recipients, eliminating intermediaries.

Another serious threat posed by criminal organizations involved in drug and arms trafficking is their ability to exploit state fragility for their own benefit. In Rio de Janeiro, for example, militias emerged and expanded with the direct participation of public security agents. As these groups spread to other areas, they became involved in a variety of illicit activities, including drug trafficking. Their coercive collection of payments for services from residents in their areas of control violates the fundamental rights of affected populations. Moreover, they directly interfere in electoral processes, financing political candidates and carrying out assassinations of political opponents and criminal rivals.

Key tasks for 2025 include monitoring the main drug trafficking routes passing through Brazil, investigating new transportation modes and routes; mapping criminal networks—particularly leadership figures and high-impact actors; and tracking the relationships between transnational criminal networks and the ways in which they exploit state vulnerabilities.

Human trafficking and migrant smuggling

Brazil is a country of origin, transit, and destination for various migration flows. It stands out especially as a transit country for migrants from Asia and Africa en route to Europe and, most notably, the United States of America. Brazil is increasingly becoming a significant point of entry into the Americas for migrants from outside the continent, as evidenced by the rising trend in migration flows through the country.

Part of these migration flows is operated by criminal networks that endanger the lives, safety, and dignity of individuals. These networks grow stronger with the rising demand for their illicit services and the consolidation of their routes. Migrants typically enter Brazil through the Northern region or international airports and, with the help of criminal migration networks, usually leave the country irregularly—i.e., without registration—via land border crossings, mainly in the North,

continuing on toward North America.

Migrant smuggling is sometimes closely linked to human trafficking, as migrants may be forced to transport drugs across territories controlled by drug traffickers, among other forms of exploitation of vulnerable persons, such as forced labor along specific segments of the route.

Estimates indicate that international migration flows will continue to increase significantly in 2025. This rise fuels a dynamic market for actors who provide services related to migrant smuggling and human trafficking. Brazil has become a site of operation for these actors due to the country's role as a transit hub for flows that cross routes such as the Darién jungle between Colombia and Panama, and the northern border of Mexico.

Environmental crimes

Environmental crimes comprise a broad chain of illicit economic activities. Their main perpetrators are organizations and criminal groups specialized in illegal gold and precious mineral extraction, illegal logging, land grabbing, irregular cattle ranching, illegal fishing, and wildlife trafficking. Although such offenses occur throughout the national territory, these practices gain greater visibility and scale in the Amazon region, as they threaten Brazil's natural assets of global interest, as well as the security and ways of life of Indigenous peoples.

The Amazon region is globally perceived as a central element in strategies to curb climate change. Therefore, in addition to compromising the control and sustainability of the exploitation of strategic natural resources, the actions of criminal groups involved in environmental crimes undermine international confidence in Brazil's ability to ensure the preservation of the Amazon biome.

The expansion of organized crime into activities related to illegal mining is particularly concerning. Illegal mining predominantly affects protected areas inhabited by Indigenous peoples. The uncontrolled economic exploitation and growing presence of criminal agents threaten the integrity and traditional lifestyles of Indigenous communities. These situations mostly occur in the country's most remote areas, where the State has historically maintained an insufficient presence. Moreover, the operations of criminal organizations in illegal mining have demonstrated high resilience and a significant capacity to infiltrate State institutions.

The capabilities of Brazilian security and regulatory agencies remain limited in the face of the inherent challenges of monitoring such a vast and complex region as the Amazon. Criminal actors are deeply embedded in local contexts and employ coercive tactics, often possessing advanced communication tools and weaponry. Meanwhile, State agents face difficulties in maintaining a continuous presence in these territories, which hampers the consolidation and continuity of enforcement and intelligence activities.

Containing these illicit practices, ensuring environmental preservation, and protecting local populations and Indigenous peoples are critical challenges for Brazil in 2025, the year in which COP30 will be hosted in the Amazon region. Key intelligence tasks include interinstitutional and international collaboration to obtain and process information on the criminal supply chains and operational methods, aiming to identify key individuals and structures for disruption. In this regard, support for the removal of invaders from Indigenous Lands has been a successful example of continuous intelligence efforts to guide the fight against criminal markets and reduce the risk of confrontation, while also safeguarding Indigenous populations

Espionage and foreign interference

Espionage is an activity aimed at the unauthorized acquisition of sensitive, confidential, or classified data, information, or knowledge to benefit states, groups of countries, organizations, factions, interest groups, companies, or even individuals. It is, therefore, a deliberate effort to access information through covert means and the use of specialized techniques.

Foreign interference refers to actions sponsored by foreign actors seeking to illegitimately influence national decision-making processes and public policies. It is a form of power projection on the international stage, often covert, which can vary in its level of directness and use of violence. Such actions include hostile propaganda, disinformation, recruitment of agents of influence, covert support for groups and entities, manipulation through legal means (lawfare), and sabotage.

Espionage and foreign interference have historically been instruments used by the most powerful states in international relations. As these actions are largely covert, the perpetrators can often deny involvement. This makes it crucial to develop counterintelligence capabilities. Counterintelligence is the branch of intelligence focused on preventing, detecting, identifying, assessing, obstructing, and neutralizing acts of espionage and foreign interference.

Intelligence services from other countries—particularly those with greater resources—carry out espionage and interference operations abroad. These are generally directed against nations considered adversaries or competitors, but they may also target allies and non-aligned regional powers. One of the primary challenges in identifying foreign interference is distinguishing between legitimate propaganda, cultural influence, or technical cooperation, and actual espionage or influence operations.

A clear red flag is the attempt to recruit public servants or employees from strategic sectors in Brazil. Espionage and foreign interference may involve techniques such as relationship-building for recruitment, surveillance, social engineering, coercion (financial, sexual, moral, or legal), information manipulation and disinformation, the use of front companies, and "false flag" operations. Intelligence professionals operating abroad may try to shield their actions under diplomatic, consular, or journalistic cover, making prosecution more difficult. Disinformation campaigns are most intense during critical events or natural disasters, though lower-intensity, persistent campaigns are also common.

Brazil also faces the risk of being used as a platform for obtaining false documents and creating credible fake identities to later carry out espionage operations both domestically and abroad. The use of digital bots to scrape sensitive system data, in order to identify details and comparative advantages in Brazilian production chains or to access public databases, also constitutes espionage or foreign interference—even if the responsible groups try to mask their ties to the sponsoring country. For this reason, counterespionage and counter-interference activities are vital—both tactically and as part of a broader strategic capacity to identify threats and mitigate risks.

Producing intelligence on international espionage activities targeting Brazil—and assessing these phenomena in the context of intensifying strategic competition among major powers, growing armed conflicts, and global instability—is a top priority for ABIN. Likewise, evaluating and mitigating the risks associated with foreign-sponsored interference is a strategic focus.

In 2025, Brazil will host the 30th United Nations Climate Change Conference (COP30) and will hold the presidencies of both BRICS and Mercosur. Foreign interference operations often exploit highly visible events and symbols to more effectively disseminate targeted messages. These events will gather authorities and experts whose knowledge is of interest to adversarial intelligence services seeking access to protected or restricted information.

Due to its vast forest areas, strategic natural resources, and highly competitive production in the global agricultural goods market, Brazil has historically been a target of espionage and foreign interference in these areas. Adversarial agents may attempt to gain unauthorized access to Brazil's native fauna and flora, traditional knowledge, and government databases related to the management and preservation of natural resources.

Instrumentation of citizens and Brazilian private organizations by foreign services

Foreign intelligence services are interested in recruiting Brazilian citizens in strategic positions—those with direct access to classified information or proximity to individuals who can later be steered toward sensitive roles or responsibilities. Public agencies, the agribusiness sector, state-owned companies, and high-tech industries require careful attention to prevent and neutralize recruitment attempts. In addition to traditional tactics, such as offering financial rewards, these efforts often include payments for reports, travel opportunities abroad, or even offers of employment or academic study.

Espionage to obtain sensitive data and personal information from Brazilians

In Brazil, former civilian and military public servants are priority targets for private companies acting as intermediaries in strategic sectors, particularly security and defense. The activities of such actors pose a risk of favoring foreign governments, especially where deficiencies exist in procurement protocols of certain public institutions. Foreign groups have shown increasing interest in deploying—or expanding the use of—bots to extract sensitive data from Brazilian control systems that assess information sensitivity inadequately. The data gathered is cross-referenced to identify details and comparative advantages within national production chains. This information is also combined with false, incomplete, or misleading data to spread narratives that conflict with Brazilian interests or harm the reputation of economic sectors within the country.

In all such espionage and foreign influence activities, it is crucial from a counterintelligence perspective to identify the authorship, intent, and benefits obtained by foreign agents. This ensures that Brazil's international cooperation efforts are not compromised, while also safeguarding the security and sovereignty of national decision-making processes.

Conclusion

This document has addressed the security risks facing Brazil across different spatial and temporal dimensions. First, it examined national vulnerabilities in the context of climate change, demographic transition, and technological change toward the second phase of the Digital Era. While the cumulative and complex effects of these global transformations are expected to become more evident by 2050, we can already discern their impact through contemporary events that challenge our country and its institutions.

The second dimension analyzed in the document concerns the pressures arising from the concentration of power and wealth in a handful of countries and corporations, which coincides with increasing conflict among these actors and the diminishing effectiveness and legitimacy of international institutions. This international context is further complicated in South America—the third dimension examined—due to rising political instability, difficulties in achieving consensus, the weakening of regional integration institutions and initiatives, and the high levels of insecurity and underdevelopment affecting both populations and the region as a whole.

The fourth security dimension discussed pertains to the national demands these risks impose on the production of intelligence in specific areas considered critical for 2025. There are significant

threats and vulnerabilities regarding the protection of the Democratic Rule of Law, cyberspace, the resilience of strategic sectors, control over illicit markets and organized crime, as well as the prevention and counteraction of espionage and foreign interference.

The complexity of these challenges calls for cooperation among the agencies that make up the Brazilian Intelligence System. As the system's coordinating and facilitating body, ABIN is responsible for proposing initiatives and projects that enhance state capabilities and democratic oversight in the intelligence field. The scope of these challenges, both spatial and temporal, also requires dialogue with experts outside the intelligence community and the continuous development of forward-looking analytical capabilities.

Global transitions and the evolution of the international order will shape the world in the decades to come. However, the future also depends on human agency—especially on how the two major powers and other international actors engage in dynamics of cooperation, conflict, and securitization. For Brazil, peace, cooperation, multilateralism, and respect for the sovereignty of peoples are more beneficial than any automatic alignment with a given power bloc. In line with the Federal Constitution, our country will continue to pursue regional integration and a sustainable, innovative, and just society

ABIN

ABIN is an agency of the Presidency of the Republic, operating under the Chief of Staff, and is responsible for providing the President and cabinet ministers with strategic, timely, and reliable information and analyses to support decision-making within the Federal Government.

As the coordinating body of the Brazilian Intelligence System (SISBIN), ABIN's mission is to ensure that the Executive Branch has access to knowledge concerning the security of the State and society, encompassing matters such as national defense, foreign relations, internal security, socio economic development, and scientific-technological advancement.

To fulfill this institutional mission, intelligence professionals at ABIN produce strategic knowledge by analyzing facts, events, or situations that reveal potential opportunities and threats. These may relate to the protection of national borders, the security of critical infrastructure, counterespionage, terrorism, the proliferation of weapons of mass destruction, policies involving other coun-

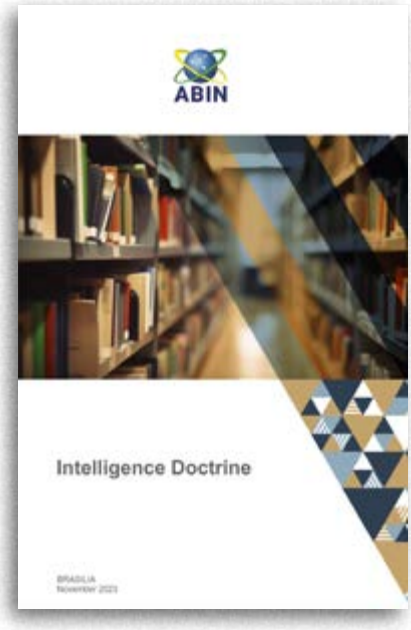
tries or regions, information and communication security, environmental protection, and the safeguarding of sensitive knowledge developed by public or private entities, among other periodically updated topics.

In addition to intelligence production, ABIN provides services to the Brazilian State and society, including state-level encryption, intelligence training for professionals, and security consulting through the National Program for the Protection of Sensitive Knowledge.

ABIN is a permanent State institution, nonpartisan and apolitical, with nationwide operations and international representations. Its intelligence activities are carried out with full respect for individual rights and freedoms, loyalty to institutions, and adherence to ethical principles aligned with the interests and security of the Brazilian State. Its foundational values include the preservation of national sovereignty, the defense of the Democratic Rule of Law, and the dignity of the human person.

ABIN recruits its professionals through public competitive examinations. Passing this examination is a mandatory requirement for entering the Intelligence career tracks. The admission process includes, among other stages, a knowledge assessment, a background check, and successful completion of the Intelligence Training Course.

Publications



Intelligence Doctrine

The current Intelligence Doctrine was published in November 2023 and is the first that ABIN has made available to the general public. It is translated into Spanish and English. The Doctrine defines and explains ABIN's current understanding of intelligence activities and how they should be practiced by the Agency in Brazil, based on the Federal Constitution and legislation. It records conceptual understandings that provide a common prescriptive basis for action.

https://www.gov.br/abin/pt-br/centrais-de-conteudo/doutrina

Brazilian Journal of Intelligence

The Brazilian Journal of Intelligence (RBI) is a scientific journal dedicated to advancing knowledge about the concepts, processes, practices, relationships, structures, and organizations related to intelligence. Published since 2005 by ABIN, RBI is an open-access journal that welcomes contributions from researchers with diverse backgrounds and perspectives, including those in Spanish, based on scientific rigor and intellectual honesty.

https://rbi.abin.gov.br

National Sensitive Knowledge Protection Program

The National Sensitive Knowledge Protection Program (PNPC) is a security consultancy focused on preventing espionage, sabotage, and information leaks.
Since 1997, it has sought to promote the protection of sensitive knowledge in national institutions, both public and private. The PNPC works to raise awareness, identify threats and vulnerabilities in protection systems, and provide recommendations to reduce the risk of incidents. The PNPC publishes a series of best practice guides, available on the program's website.

https://www.gov.br/abin/pt-br/institucional/acoes-e-programas/PNPC

If your institution holds sensitive knowledge and needs to increase its level of protection, please contact us at pnpc@abin.gov.br.

To report suspected cases of espionage or sabotage in your institution, send an email to reporte@abin.gov.br.

Notes

For the preparation of notes and references, the style of the Chicago Manual of Style (notes and bibliography), 17th edition, was adopted. The content of the notes was kept in Portuguese.

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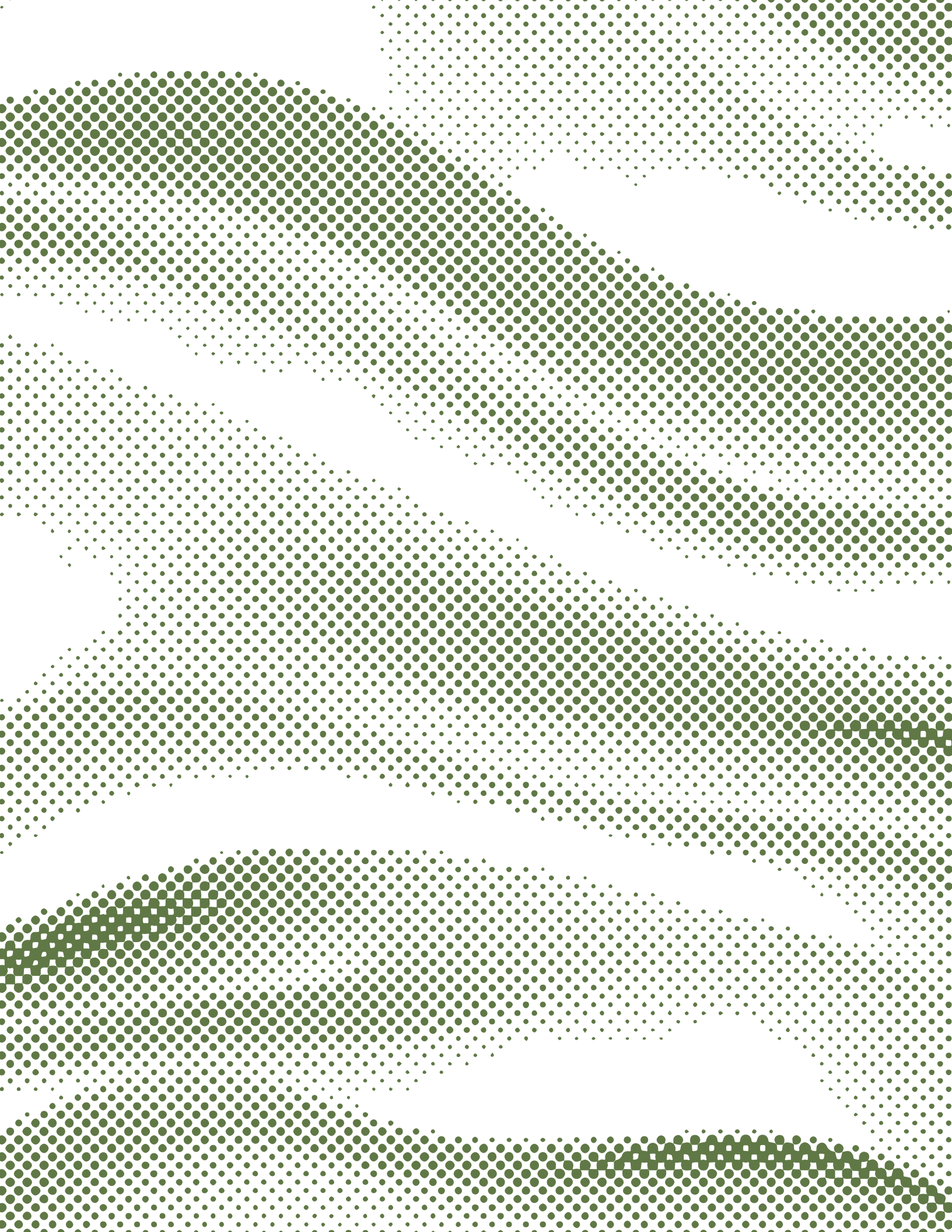

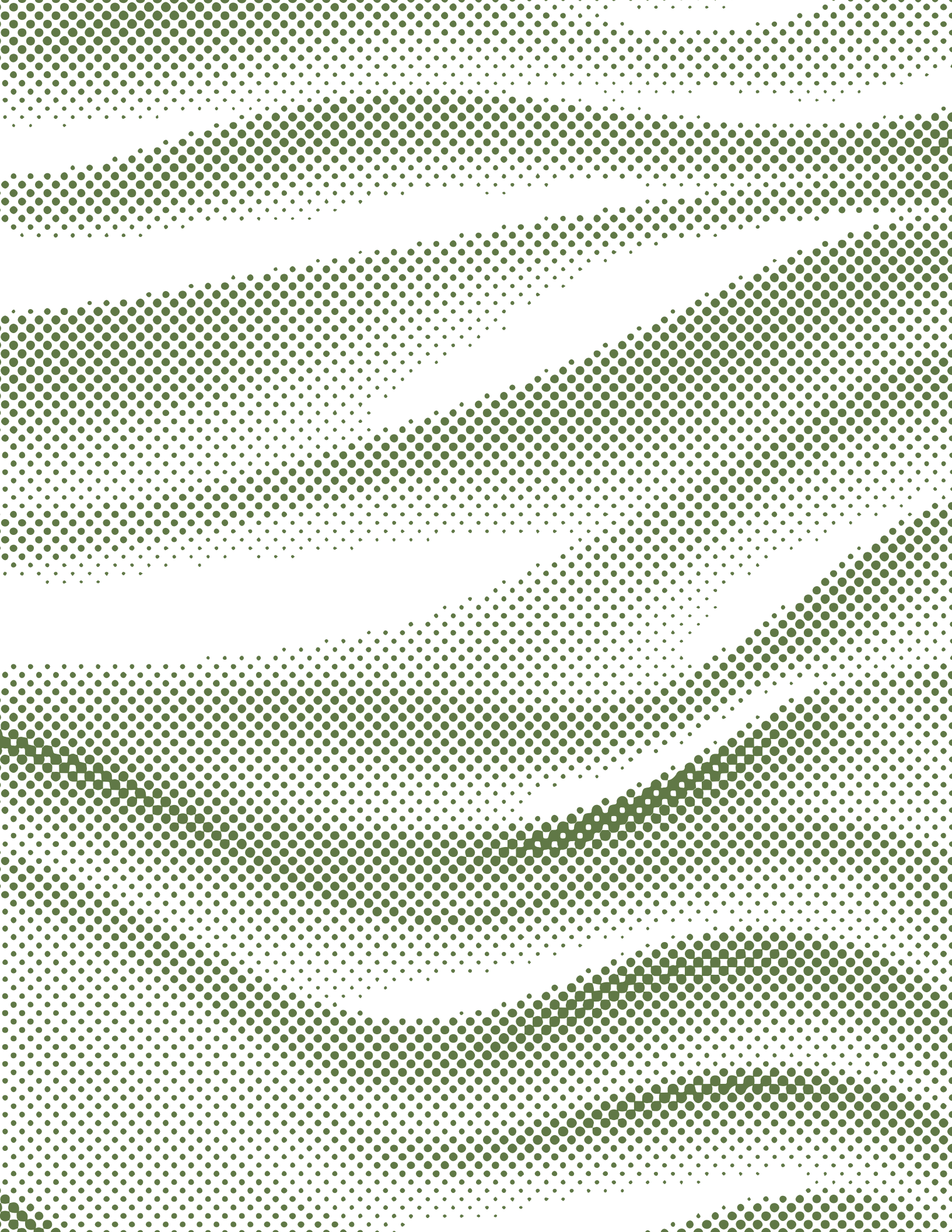

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