

Statement of Brazil

**By Carlos Gurgel
Director of Satellites, Applications and Development,
Brazilian Space Agency (ABE)**

Distinguished Ministers, Distinguished Heads of Delegation, Dear Colleagues, ladies and gentlemen,

The Ministry of Defense of Brazil, on behalf of its Minister, His Excellency Mr. Joaquim Silva e Luna, is honored to participate in the 3rd edition of the International Space Forum and to be part of its distinguished audience. It is an excellent opportunity to establishing our understandings of how to exploit the benefits arising from activities in the space area, intending to contributing to the solution of Latin American challenges related to the environment and our societies.

The History is the master of life. Therefore, it is wise to remember that throughout our history, the competitive nature of the human being, always seeking discoveries and innovations, shows that the more technologically advanced a nation is, the higher is the use of existing mechanisms to not only acquire or sustain their sovereignty, but to provide socio-economic benefits that will make their community more prosperous.

Within the space area, all of us here are witness to the emergence of disruptive technologies and revolutionary initiatives in recent years, and indeed space has evolved at a dazzling pace. It is an exciting time to live. We observe space applications becoming tools of our daily lives, private enterprises engaged in a new space race and evolving into self-sustaining economic realities, with scientific discoveries increasingly expanding the boundaries of knowledge.

In this context, before addressing the main topics that will be discussed along this event, we briefly present the ongoing actions in Brazil that aim to strengthen the Brazilian Space Program (pt: PEB), in particular, the Strategic Program of Space Systems (pt: PESE), under the responsibility of this Ministry and which I discuss below.

Regardless of the continental dimension and the economic and social demands of our country, the Brazilian Space Program is still in search of the necessary political prestige, with the purpose of meeting national needs in the integrated use of space.

Since 2008, with the publication of the National Defense Strategy, the Brazilian State has adopted Space as a strategic sector and has stimulated its development in conjunction with other governmental organizations, such as the Brazilian Space Agency. This fact has stimulated cooperative and dual work - civil and military - as a way of integrating technologies and applications that, at the same time, served the needs of all segments of importance for the development of Brazil. In 2012, the Air Force Command created the Commission for the Coordination and Implementation of Space Systems (pt: CCISE) and, in partnership with other entities, developed the Strategic Program of Space Systems.

This Program has great importance to the Ministry of Defense and Brazil. It is designed to provide essential infrastructure for Defense's strategic information systems, in addition to providing various other services relevant to Brazilian society, characterizing an essential and daily need of the Brazilian Nation. In this sense, PESE contributes crucially to the homeland defense, the promotion of peace and acts as a source of products of dual applicability.

In order to further increase the value of our Space Program to Brazilian society, at the beginning of this year, the President of the Republic of Brazil established the Brazilian Space

Program Development Committee (CDPEB), which currently consists of 12 Technical Groups, to define strategic actions that can enhance the results of the PEB.

However, in order to reach these expectations, the PESE, integrated with the PNAE, must not only be consolidated as an enterprise of the entire Ministry of Defense but also of the Brazilian State, given the complementarity of these Programs. The development and achievements in our Space Activities must be seen as a patrimony of Brazil.

Focusing on this event, it is interesting to note how the strategies defined in the PESE align with the main topics that will be discussed at this 3rd International Space Forum.

Space Partnerships

Regarding one of the topics that will be discussed, the issue of international partnerships is paramount for the success of the PESE. The work conducted in Brazil aims to structure the Brazilian space strategy in the capacity to build and consolidate competencies within three perspectives based on modern schools of strategy: mobilize efforts to expand knowledge and master technologies; integrate suppliers and partners for development and production capacity; influence and promote innovation through the provision of support and resources. Therefore, there are three necessary means for the achievement of the goal of mastery of knowledge and technologies for space.

Therefore, it is necessary to establish efficient and profitable international partnerships that contribute to the strategies defined in our Strategic Program. Management of Natural Resources and Prevention of Disasters Concerning space applications for natural resource monitoring and disaster prevention, PESE works as a technology spin-off, driving the deployment of satellite means that can provide support for environmental monitoring and natural resources in the country; support the resolution of problems such as deforestation, desertification, soil degradation, biodiversity reduction, and so on; assist in predicting weather and climate and in monitoring climatic extremes; as well as providing data for predicting occurrences of natural disasters.

According to the COPUOS Declaration addressed to Rio+20, spatial data are fundamental not only to monitor the Earth and its environment but to monitor the State, the exploration and evolution of terrestrial and marine natural resources, soil, subsoil, and submerged areas, as well as the multiple agricultural and pastoral activities, which are generally extremely relevant to national economies.

These initiatives also aim to integrate complex systems, together with information and communication infrastructures, favoring internet programs, data transmission, e-learning, telemedicine, medical and health services, photogrammetry, geodetic references, navigation and satellite positioning, geographical information, compliance with international treaties and agreements, crime prevention and respect for the law.

Education and Capacity Building

We also know that there are no space activities without substantial government support, notably for Science and Education. The spatial area is a difficult and complex technological domain that requires high levels of knowledge, based on excellent education in Science, Technology, Engineering, and Mathematics (STEM).

In exchange, space programs, with their designs and applications, have a unique pulling power appropriate to seduce young people interested in Science. The Brazilian Space Program will promote exceptional results for the Defense and society, making the space area more useful and attractive, capable of involving more students in STEM education.

In order to complement the previous strategies, we are also developing government actions that can encourage strategic partnerships and integration of Research & Development (R&D) institutions with the industrial sector. Our primary goal is to qualify the national industry for the development and manufacture of subsystems and complete systems for the space sector and, thus, to involve national companies in the Brazilian Space Program.

It is necessary to foster the integration between R&D institutions and their industrial partners by jointly carrying out technological development projects that include industry from the design stage. It is also necessary to seek the approval of long-term plans that allow national companies to decide, with less uncertainty, on participation in the Brazilian Space Program. In this sense, the use of Public-Private Partnerships (PPP) as a financing alternative for space projects has proved increasingly efficient in the international scenario.

Mr. Chairman, Distinguished delegates, I thank you all for your kind attention.