

TOWARD A NATIONAL BRAZILIAN CENTER ON SPACE POLICY AND LAW STUDIES

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ABSTRACT

Why should Brazil have a National Center on Space Policy and Law Studies? Are there any institutions in Brazil dedicated to the systematic study of space policy and law issues? How many people specialized in these questions are currently working in Brazilian public and private entities involved in space activities – whether of a governmental, diplomatic, higher learning, research, industrial or commercial nature? If we have in mind the most important projects – present and future – of the Brazilian Space Program as a whole, what should be the basic requirements for specialists in Space Policy and Law questions? How do the Brazilian Space Agency (AEB), the National Institute for Space Research (INPE), the General Command of Aerospace Technology (CTA) and its Institute of Aeronautics and Space (IAE)

–the main Brazilian space institutions – as well as the Ministry of Foreign Affairs, face up to the many political and legal challenges underlying the use of outer space and the preparation of position-papers and documents for a decision making process in such strategic areas? Does this method of work meet the requirements for a more efficient development of Brazilian space activities and for a more effective performance in the framework of space programs on international cooperation and world space markets? If necessary, in what way could a National Brazilian Center on Space Policy and Law Studies be organized and which should be its main objectives, courses and research programs?

The present paper aims at answering these questions with a view to meeting the urgent need of laying down the basis for a Brazilian National Center on Space Policy and Law Studies, as a natural and crucial chapter in the Brazilian space development. This entity is meant to have sound repercussion not only in other countries Latin America but in other developing countries as well.

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INTRODUCTION

The resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”¹, issued on the occasion of the Unispace III², declares the following, as one of the actions that should be taken to strength space activities in the United Nations system: *“to promote the efforts of the Committee on the Peaceful Uses of Outer Space in the development of space law by inviting States to ratify or accede to, and inviting intergovernmental organizations to declare acceptance of, the outer space treaties developed by the Committee and by considering the further development of space law to meet the needs of the international community, taking into particular account the needs of developing countries and countries with economies in transition”*.

Many other documents issued by the United Nations stress the importance of Space Law and the need to foster its knowledge, especially in developing countries.

In November 2004, the United Nations Office for Outer Space Affairs,

together with the Brazilian Association of Air and Space Law (SBDA) and the Government of Brazil, organized a Workshop on Space Law in Rio de Janeiro, Brazil, entitled “Disseminating and developing international and national Space Law: the Latin America and Caribbean perspective”. One of the conclusions of the Workshop was that *“the regional centers for space science and technology education affiliated to the United Nations could play an important role in building capacity in space law. The Workshop recommended that the regional centers in Latin America and the Caribbean include space law in their curricula”*³.

At a regional level, two documents are remarkable: the 2004 Buenos Aires Declaration⁴ and, most recently, the 2007 Montevideo Declaration⁵.

The Buenos Aires Declaration emphasizes that it is urgent to strengthen cooperation in the field of Space Law between Argentina and Brazil, *“following an interdisciplinary approach. In the complex arena of international political decision-making, which surrounds space activities, this specific branch of International Law provides the ‘rules of the game’, adopted by common agreement and within the framework of which all countries should act in the modern world so as to achieve the most favorable conditions for the development of space programs.”* The Declaration encourages the study of Space Law in regional space institutions and universities, in order to create a critical mass in the development of space activities, as a tool for the benefit of all countries, especially developing countries. The Declaration also encourages the need to organize specific courses on Policy and Space Law in Latin

America, taking into particular account subjects of common interest.

The 2007 Montevideo Declaration stresses the need to enhance Space Law in Latin America through its study in graduate and post-graduate courses, as well as in specific courses for governmental and private institutions. The Declaration draws the attention of the Latin American governments to the need of preparing human resources in Space Law in order to give a suitable support to their strategic projects of development and international cooperation in the area of space activities. The Declaration also proposes the establishment of a Regional Center of Space Law which would work in a virtual basis.

Despite these several and important recommendations and suggestions, the Latin America governments have yet to take concrete measures to implement them.

Space law is not yet known by the great majority of legal professionals (lawyers, advisers, judges, professors, etc) in Brazil. The same happens with Brazilian Law Faculties, where Space Law is simply ignored.

This paper main's objective is to provide the Brazilian authorities with an effective tool to change this reality.

CAPACITY BUILDING IN SPACE LAW: A REGIONAL VIEW

In the Latin American and Caribbean regions, Space Law is, so far, almost unknown within the overwhelming majority of the public and even among university students⁶. Most governments in the region do not seem to pay enough attention to Space Law issues, with the result that there are very few specialists and teachers of Space Law in the region.

Regarding the teaching of Space Law, there are no independent courses on Space Law at the major universities and faculties of the region. There is hardly any mention of Space Law in the university websites of the region and most of the National Space Agencies of the region have no programmes focusing on the formation of specialists in Space Law. As a consequence, the Ministries of Foreign Affairs face difficulties when looking for Space Law specialists.

At the moment, Argentina is the best place to study Space Law in Latin American and Caribbean region. The National Institute of Air and Space Law (Instituto Nacional de Derecho Aeronáutico y Espacial – INDAE) has a postgraduate level course – a kind of Master's degree – leading to an Air and Space Law Diploma. The Faculty of Law of the University of Buenos Aires offers courses on Space Law at the undergraduate level leading to the first law degree. These courses are, however, optional.

In Brazil, the Brazilian Association of Air and Space Law (SBDA)⁷ – a non-governmental entity – is the only institution with annual courses (basic and more advanced but short and unofficial) on Air and Space Law since the 70 's. SBDA has a regular Group of Studies on Space Law, in charge of the elaboration of legal texts and proposals for the Brazilian Space Agency. SBDA also publishes the “Brazilian Review on Air and Space Law” containing various articles on Space Law by Brazilian and foreign authors, as well as documents relating to this area.

An “Introductory Course of Space Law” (eight hours) and lectures on the matter are organised during the Annual Meeting of the Brazilian Society for the Advancement of Science (SBPC), which

takes place in different Brazilian universities.

There are no Brazilian governmental institutions devoted to Space Policy and Law studies. In Brazil, some very general and brief information on Space Law is given during lectures at the undergraduate level on International Public Law - usually within the chapter relating to Territories - but only in a small number of Law Faculties (there are more than 1000 law faculties in Brazil alone).

SPACE ACTIVITIES IN BRAZIL

Article 22 X of the Brazilian Federal Constitution, states that only the Union can regulate air and space navigation.

Brazil was one of the first developing countries to institutionalize space activities through the establishment of government organizations in the early 1960s.

The Organizing Group of the National Commission for Space Activities (GOCNAE) was created in 1961. Later, in 1971 GOCNAE became the National Institute for Space Research (INPE), an organ subordinated to the Ministry of Science and Technology.

In 1966 the Ministry of Aeronautics created the Executive Group for Space Project Activities and Studies (GETEP) which, in 1969, gave rise to the Institute of Space Activities (IAE), currently subordinated to the Ministry of Defense, through its General Command of Aeronautics.

INPE is in charge of studying and developing space applications, notably in the areas of remote sensing, meteorology, and space technology, with special emphasis on satellites and ground systems. The IAE, however, has concentrated mainly on the development of sounding rockets and launch vehicles.

The Brazilian Space Agency (AEB)⁸, a civilian public organism subordinated to the Brazilian Ministry of Science and Technology, was created in 1994, by Law # 8.854, of 10/Feb/1994, with the main objective of coordinating the development of space activities of national interest. AEB is in charge of elaborating and coordinating the National Policy for the Development of Space Activities (PNDAE), whose general objective is to further enable the country to solve national problems and benefit Brazilian society through the legal use of space activities.

However, the teaching of Space Law and Space Policy, as well as the need of developing human resources in these areas, is not within the scope of activities of Brazilian institutions that carry out space activities.

A BRAZILIAN CENTER ON SPACE POLICY AND LAW STUDIES: WHY, HOW AND WHERE?

Due to the lack of a Brazilian institution especially devoted to the study of Space Law and space policy, the establishment of a National Center could give the legal and sound support to the Brazilian space institutions that carry out, directly or indirectly, space activities, namely, the AEB, INPE, IAE, as well as the Ministries of Defense, Foreign Affairs, and Science and Technology.

The proposed Center would be a public research institution, with the necessary academical autonomy, that could be part of the Brazilian system of space activities.

The proposed Center's main objectives are the following:

a) To create a critical mass in the development of space activities in Brazil, taking into account worldwide legal and political implications;

b) To act as consultant for Brazilian space institutions, especially to the AEB.

c) To cooperate with the space sector of the Brazilian Ministry of Foreign Affairs, in order to give support to the Brazilian Delegation at the sessions of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) and its Scientific-Technical and Legal Subcommittees;

d) To study, discuss, and draft a Brazilian National Space legislation;

e) To establish close cooperation with the United Nations Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (Cretealc), especially with a view to organise, at different regional universities, a regular course on Space Law on an annual basis, similar to the two-week course carried out by the European Centre of Space Law⁹;

f) To establish agreements and memoranda of understanding with national and foreign institutions, especially in Latin America;

g) To promote national and international courses and events regarding Space Policy and Space Law.

h) To contact Brazilian universities in order to foster the teaching and knowledge of Space Law.

i) To select and prepare a student team to attend the International Institute of Space Law Moot Court competition.

The revenues for enabling the Center's activities could come from both the public (Government budget) and private sector (from those attending the courses and events).

The best place for establishing the Center is the city of São José dos Campos¹⁰, in São Paulo State¹¹, for the following reasons:

a) Its strategic geographical location, between the two largest

Brazilian cities, São Paulo (100 km distance) and Rio de Janeiro (500 km);

b) Its good infrastructure, such as airport, public transportation, hotels, hospitals, etc.

c) The Brazilian Association of Aerospace Industries (AIAB) and the major part of the Brazilian space industries (Embraer, Avibras, Cenic, Equatorial, Fibraforte, Leg, Mectron, Neuron, Orbital, among others) are located in São José dos Campos.

d) INPE and IAE, the executors of the Brazilian Space Program are located in São José dos Campos.

e) The General Command of Aerospace Technology (CTA), subordinated to the Ministry of Defense, is located in São José dos Campos.

Hence, indubitably, the largest audience to attend the Center is found in São José dos Campos.

There are two public institutions located in São José dos Campos that carry out academic activities, namely, INPE and ITA (Technological Institute of Aeronautics). INPE has post-graduate courses, at the Master and PhD levels, in Scientific Computation, Atmospheric and Space Sciences, Meteorology, Remote Sensing, and Space Technology. ITA has graduate and post-graduate courses, at the Master and PhD levels, in Electronics, Electrics, Mechanics, and Aeronautics Engineering.

The Center could be established in INPE or ITA using their current available infrastructure, including the lecturers. It is important to mention that the Office of the United Nations Regional Centre for Space Science and Technology Education for Latin America and Caribbean (Cretealc) had been located at INPE, in São José dos Campos, since its foundation, and just few months ago it moved to a unit of INPE in the southern region of Brazil.

There is still another reason for establishing the Center in São José dos Campos, which is the the City's Technological Park, an institution subordinated to the City Hall and the São Paulo State Government, that could also give support to the activities of the Center.

THE SPACE POLICY AND LAW STUDIES PROGRAM

According to the Brazilian educational system, a "lato sensu" post-graduate course should take at least 360 hours/classes. Such classes would be distributed in 8 Units along 12 or 18 months. The authors of this paper have prepared, with the effective and indispensable collaboration of the experts referred in the abstract, the following draft of the Center's Program of Space Policy and Law Studies:

UNIT 1. SPACE PROGRAM AND LAW: OVERVIEW

Unit 1A. World Space Activities Nowadays

To introduce the course, the lecturers will give to the students an overview of current space activities around the world, especially those carried out by the United States, European countries, China, India, Russian Federation, Argentina, among others.

Unit 1B. Brazilian Space Programs and Policies

- 1) The Brazilian Space Activities Program (PNAE);
- 2) The China-Brazil Earth Resources Satellite (CBERS) Program;

- 3) The Brazilian Policy for Distributing CBERS Data;
- 4) The Treaty between Brazil and Ukraine regarding the utilization of Alcantara Launching Center and the establishment of the bi-national company, Alcantara-Cyclone Space;
- 5) Brazil's Participation in the International Space Station Program (ISS): history, evolution and current status.
- 6) Brazil's International Cooperation on Space Activities with other countries and institutions.

Unit 1C. Introduction to Space Law

- 1) History of Space Law and its basic concepts;
- 2) Parties to the Space Treaties;
- 3) Sources of Space Law;
- 4) Space Law Making Process:
 - i. International: The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS).
 - ii. National: How Space Law is created in Brazil.

UNIT 2. AGENDA ITEMS OF COPUOS AND ITS SCIENTIFIC -TECHNICAL SUBCOMMITTEE AND LEGAL SUBCOMMITTEE.

In this Unit the items which are under consideration at COPUOS and its Scientific and Technical Subcommittee and Legal Subcommittee will be studied and discussed, such as, space debris, the use of nuclear power sources in outer space, definition and delimitation of outer space, etc. Current issues of space activities, such as, weaponisation of outer space, exploitation of the Moon, space tourism, among others, will be presented. This Unit would also consider the stalemate at COPUOS as well as the

difficulties for including new items on its Agenda.

UNIT 3. THE UNITED NATIONS TREATIES, PRINCIPLES, AND GENERAL ASSEMBLY RESOLUTIONS ON SPACE LAW

Each of the five United Nations Treaties on Space Law will be studied and analyzed, as well as the United Nations Principles and General Assembly Resolutions related to Space Law.

In this Unit, regional documents related to Space Law, specifically the Buenos Aires Declaration and the Montevideo Declaration would also be studied.

UNIT 4. TELECOMMUNICATIONS

- 1) The role of International Telecommunication Union – ITU;
- 2) The ITU Regulations, in particular the Radio Regulations (ITU-RR);
- 3) The equitable access to the geostationary orbit;
- 4) The problem of satellite interference.

UNIT 5. REMOTE SENSING

- 1) The United Nations Principles on Remote Sensing;
- 2) Application of Remote Sensing to Sustainable Development;
- 3) The Status and Characteristics of Main Satellites devoted to Remote Sensing: Landsat, SPOT, ISRO, IKONOS, CBERS, among others;
- 4) Problems faced by Developing Countries in the Use of Remote Sensing Techniques: right of access to remote sensing data, difficulty in accessing appropriate data, lack of infrastructure and of experts, high cost of satellite images, etc.

UNIT 6. GLOBAL NAVIGATION SATELLITE SYSTEMS

This Unit would deal with the legal framework, applications, and commercial effects of the main global positioning systems, such as, the USA's GPS, Galileo, GLONASS, and Spider.

UNIT 7. BRAZILIAN SPACE INSTITUTIONS

- 1) The Brazilian Space Agency (AEB): history, evolution, and current problems;
- 2) The Brazilian General Command of Aerospace Technology (CTA), its Institute of Aeronautics and Space (IAE) and its Department of Research and Development (DEPED);
- 3) The National Institute for Space Research (INPE);
- 4) Private Institutions: The Brazilian Association of Aerospace Industries (AIAB); the Brazilian Aerospace Association; and the Brazilian Association of Air and Space Law (SBDA).

UNIT 8. THE BRAZILIAN LEGAL FRAMEWORK ON Space Law

- 1) The Directive AEB#27, of 20/Jun/2001, regarding licensing to carry out space activities in Brazil;
- 2) The Directive AEB#5, of 21/Feb/2002, regarding the authorization for launching space objects from the Brazilian territory.

This Unit would include examples of foreign national legislation on Space Law, with a view to consider the need to develop a national, comprehensive Brazilian legislation on Space Law.

CONCLUSION

The purpose of this paper is to introduce the proposal of establishing a National Brazilian Center on Space Policy and Law Studies, of introducing it to the international community, particularly to the members of the International Institute of Space Law. If the project is well received by the international community, the authors intend to take it to the Brazilian public space institutions in order for them to consider the possibility of implementing it.

It is important to stress that the Center would be a partner and not a competitor of Crectalc. Due to the growth of space activities in Brazil, they deserve their own Center to deal with national/international political and legal issues. However, the Center will support Crectalc in the development of space policy and law studies in the Latin American and Caribbean regions.

References:

¹ Approved by the UN General Assembly Resolution # 54/68, of 06/Dec/1999.

² Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held at Vienna, 19 - 30 July 1999.

³ Proceedings of the United Nations/Brazil Workshop on Space Law – Recommendation # 9, p. 189.

⁴ This Declaration was issued on the occasion of the I Meeting “Science, Technology and Society”, organized by the Argentinean Association for the Advancement of Science (AAPC) and the Brazilian Society for the Advancement of Science (SBPC), held at Buenos Aires, Argentina, 1 - 4 November 2004.

⁵ This Declaration was issued on the occasion of III Meeting “Science, Technology and Society”, organized by the Uruguayan Society for the Advancement of Science (SUPCYT), the Brazilian Society for the Advancement of Science (SBPC), the Argentinean Association for the Advancement of Science (AAPC) and Argentinean Association “Ciencia Hoy”, held at Montevideo, Uruguay, 20 - 22 June 2007.

⁶ The European Center of Space Law (ECSL) and the International Institute of Space Law (IISL) organized a Symposium on Capacity Building on Space Law, held at Vienna, Austria, from 26 to 27 March 2007, on the occasion of the 46th Session of the COPUOS Legal Subcommittee. The co-author of this paper, José Monserrat Filho, was invited to make a presentation entitled “The Need for Teaching Institutions in the Latin American and Caribbean Region: Specific Features and Initiatives”. Data presented in this topic are obtained from the referred presentation.

⁷ www.sbda.org.br

⁸ www.aeb.gov.br

⁹ The proposal of this regular course was first expressed in the 2004 Buenos Aires Declaration.

¹⁰ For Brazilian standards, São José dos Campos is a medium-size city with over 600.000 inhabitants.

¹¹ Economically speaking, São Paulo is the most developed State of Brazil.