

## Protection of the Sovereign Rights of the Sensed States in the Commercialisation and Privatisation of Remote Sensing Activities

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### ABSTRACT

Remote sensing activities are carried out largely by private individuals (natural and juridical persons); states, the traditional actors in the field, are now only indirectly involved. The purpose of this paper is to reflect on the provisions of the Principles Relating to Remote Sensing of the Earth from Outer Space of 3 December 1986 in the new millennium.

### Introduction

The principle of sovereignty and equality of states is one of the mandatory principles of contemporary international law. It is embodied in Article 2(1) of the UN Charter, in the provisions on multilateral and bilateral treaties and agreements between states. The content of this principle was further elaborated in the provisions of the UN General Assembly Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United

Nations (resolution 2625 (XXV) of 24 October 1970). Pursuant to this principle, all states exercise exclusive sovereignty over the territories under their sovereign jurisdiction.<sup>1</sup> Professor Ian Brownlie correctly points out that "if international law exists, then the dynamics of state sovereignty can be expressed in terms of law, and, as states are equal and have legal personality, sovereignty is in a major aspect a relation to other states (and to organizations of states) defined by law. The principal corollaries of the sovereignty and equality of states are: (1) a jurisdiction, *prima facie* exclusive, over a territory and the permanent population living there; (2) a duty of non-intervention in the area of exclusive jurisdiction of other states; and (3) the dependence of obligations arising from customary law and treaties on the consent of the obligor."<sup>2</sup>

It should be noted that the territory of any state includes its land areas and the territorial waters, as well as the air space above them. These areas are under its sovereign jurisdiction. The principle of sovereignty of states over the air space above their territories was first formulated in the provisions of the Paris Convention for the Regulation of Aerial Navigation of 13 October 1919. The principle of air sovereignty was further consolidated in the provisions of the Chicago Convention on

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International Civil Aviation of 7 December 1944 as follows:

" The contracting States recognize that every State has complete and exclusive sovereignty over the air space above its territory (Article 1). For the purpose of this Convention the territory of a State shall be deemed to be the land areas and territorial waters adjacent thereto under the sovereignty, suzerainty, protection or mandate of such State (Article 2)."

Article 3 further provides that the Convention shall be applicable only to civil aircraft, and shall not be applicable to state aircraft, that is, aircraft used in military, customs and police services. These state aircraft are prohibited to fly over the territory of another state or land thereof without authorization by special agreement or otherwise, and in accordance with the terms thereof. In his comments on the principle of air sovereignty of a state, Professor C. Wilfred Jenks pointed out that "passage through the airspace of another State without its consent, whether deliberate or resulting from miscalculation or misfire, would appear to constitute a violation of the territorial sovereignty of that State within the meaning of the principle stated by the International Court of Justice in the Corfu Channel (Merits) Case that **respect for territorial sovereignty is an essential foundation of international relations**<sup>3</sup>.

The tables at the end of the paper show the legal status of territory in international law.<sup>4</sup>

The launching of the Soviet **SPUTNIK-1** on 1 October 1957 and the US **Explorer-1** on 31 January 1958 established the principle of the freedom of flight of space objects over the air space of sovereign states.

## The 1967 Outer Space Treaty (OST)

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (OST) is the culmination of the indefatigable efforts of the United Nations General Assembly in its law-making progress in a new domain - outer space, pursuant to the provisions of Article 13 of the Charter. It is the Magna Carta of space code and the most important source of the international law of outer space. This was clearly pointed out by Professor Vladimir Kopal in the conclusion of his paper presented for discussion during Session One of the Workshop on Space Law in the Twenty-First Century ((UNISPACE III Technical Forum July 1999) as follows: "The 1967 Outer Space Treaty laid down the foundations of the whole building of international space law."

It contains nine fundamental guiding principles which have been analysed in great detail by many experts in space law. These principles have been further elaborated in the provisions of the other four space treaties and the five declarations of principles adopted by the General Assembly.<sup>5</sup> Before reflecting on the 1986 Principles Relating to Remote Sensing of the Earth from Outer Space, it will be useful for us to take a brief look at some of the provisions of the 1967 OST.

Article I stipulates: "The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind. Outer space, including the Moon and other celestial bodies,

shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of the celestial bodies. There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation."

The principle of freedom of exploration and use of outer space, the moon and other celestial bodies as embodied in the above article should, for better clarification of the role of international law, be read in conjunction with Article III. According to this Article, States Parties are obliged to carry on activities in the new domain in accordance with international law, including the Charter of the United Nations, in the interest of maintaining peace and security and promoting international cooperation and understanding.

It should be noted that the UN Charter is the fundamental and principal source of contemporary international law, including all its branches. Thus, reference to international law and the Charter in the provisions of Article III, is a reaffirmation that all the principles of international law as embodied in other sources of that law, including resolution 2625(XXV) of 24 October 1970 on Declaration of Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the UN Charter are applicable in the new domain. For example, the use of force in whatever manner in outer space, including the moon and other celestial bodies, is absolutely prohibited. Thus, all states carrying on outer space activities must ensure the maintenance

of international peace and security in the new domain - pursuant to the provisions of Article 1 of the UN Charter.

Articles VI, VII and VIII contain binding legal principles regulating questions of international responsibility, liability and jurisdiction of states in the exploration and use of outer space, the moon and other celestial bodies. Article IX embodies legal rules on environmental protection. It should be noted that the 1992 UN Rio Conference on Environment and Development dealt with matters mentioned in the provisions of this Article.

Bearing in mind the provisions of the 1967 OST, I would now like to turn to the topic reflect of the subject matter of my paper in detail.

### **Remote Sensing**

Remote sensing is the name for the technique of measuring information about an object of interest without being in direct contact with it. The technique relies on detecting electromagnetic radiation which is either reflected or emitted by the object. When applied to the earth as seen from orbital altitudes, remote sensing has the potential of yielding information which is of fundamental importance for the effective use and conservation of natural resources and the monitoring of the environment in both the developing and technologically advanced nations of the world. The importance of remote sensing and the role of law in the monitoring of the environment were discussed in detail at the Strasbourg Colloquium which was held by the Council of Europe from 2-4 June 1993.<sup>6</sup>

Furthermore, the **Report of UNISPACE III** pointed out that "Earth observation satellites provide an important and unique source of information for studies of the Earth's systems. There are currently over 45 satellite missions operating and some 70 more missions, carrying over 230 instruments, are planned for operation during the next 15 years by the world's civil space agencies. These satellites provide measurements of many parameters critical to monitoring the Earth's system. Planned missions will provide a significant increase in data and information over that provided by satellites currently in operation. Data from existing and future satellites will be used to address issues of social and economic importance in such areas as land-use management, the management of renewable and non-renewable resources, disaster management, global health and agricultural and fishery management. Thus, an extremely valuable tool is already available and will be greatly improved over the next decade. The elements of the tool, however, require international coordination, clear definition of the problems to which they can be applied and, above all, a much broader awareness on the part of its potential users, in particular, developing countries." It was also pointed out that valued-added services offered by the private sector in converting the satellite images to meaningful information for the user domain is a growing market, with an estimated value of 600 million United States dollars (\$) over the next five years.<sup>7</sup>

At this juncture, it should be noted that remote sensing, in a broader definition, includes weather observation or meteorology.

## **1986 Principles Relating to Sensing of the Earth from Space and the Sovereign Rights of the Sensed States**

It is not my intention to examine all the provisions of the 1986 United Nations Principles on Remote Sensing from Space. I have done so in an earlier publication.<sup>8</sup> Thus, I will only reflect on certain principles. The Principles, 15 in number, were unanimously adopted by the UN General Assembly under resolution 41/65 of 3 December 1986.<sup>9</sup>

Principle I embodies the definitions of the terms relating to remote sensing activities. According to paragraph (a), "remote sensing" means the sensing of the Earth's surface from space by making use of the properties of electromagnetic waves emitted, reflected or diffracted by the sensed objects, for the purpose of improving natural resources management, land use and the protection of the environment.

Principles II and III embody the provisions of Articles I and III of the 1967 Outer Space Treaty (OST). Principle III, for example, stipulates that "remote sensing activities shall be conducted in accordance with international law, including the Charter of the United Nations, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and the relevant instruments of the International Telecommunication Union."

Principle IV is very important and relevant in matters pertaining to the protection of the sovereign rights of the sensed states in the commercialisation and privatisation of remote sensing activities in general. It stipulates:

"Remote sensing activities shall be conducted in accordance with the principles contained in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, which, in particular, provides that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and stipulates the principle of freedom of exploration and use of outer space on the basis of equality. These activities shall be conducted on the basis of respect for the principle of full and permanent sovereignty of all States and peoples over their own wealth and natural resources, with due regard to the rights and interests, in accordance with international law, of other States and entities under their jurisdiction. Such activities shall not be conducted in a manner detrimental to the legitimate rights and interests of the sensed State."

The principle of sovereignty of states and peoples over their own wealth and natural resources is embodied in many international human rights instruments adopted under the aegis of the UN.<sup>10</sup> In paragraph 7 of the UN General Assembly Declaration Granting Independence to Colonial Countries and Peoples of 14 December 1960 (res. 1514 (XV)), all states are obligated to observe faithfully and strictly the provisions of the Charter of the United Nations, the Universal Declaration of Human Rights and the present Declaration on the basis of equality, and non-interference in the internal affairs of all States, and respect for the sovereign rights of all peoples and their territorial integrity.

The UN General Assembly resolution 1803 (XVII) of 14 December 1962, on "Permanent sovereignty over natural resources", embodies 8 principles which are very relevant to the topic present.

It is a well-known fact that high resolution data are of strategic and economic importance to the sensed states. For example, any multinational enterprise in the mining or oil exploration industry can use these data to cheat the state and people in that territory. Paragraph 1 of UNGA resolution 1803 stipulates that the right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interests of their national development and of the well-being of the people of the State concerned. Remote sensing activities are now being carried out by both public and private enterprises. Although Principle XIII provides that "to promote and intensify international cooperation, especially with regard to the needs of the developing countries, a State carrying out remote sensing of the Earth from space shall, upon request, enter into consultations with a State whose territory is sensed in order to make available opportunities for participation and enhance the mutual benefits to be derived therefrom", I think States and their nationals engaged in remote sensing should be obligated to inform the sensed states about what has been discovered about their territory.

Article 17 of the Convention on Biological Diversity requires that Contracting Parties shall facilitate that exchange of information...relevant to the conservation and sustainable use of biological diversity, taking into account the special needs of the developing countries. It should be submitted

that the provisions of this Article should be applicable in respect of the sensed state to obtain information concerning his state.

Paragraph 6 of UNGA resolution 1803 stipulates that "international cooperation for the economic development of the developing countries, whether in the form of public or private capital investments, exchange of goods and services, technical assistance, or exchange of scientific information, shall be such as to further their independent national development and shall be based upon respect for their sovereignty over their natural wealth and resources." It is encouraging to observe that the above UNGA resolutions have been reaffirmed in the provisions of Part I of the **1976 Covenant on Economic, Social and Cultural Rights** (Article 1). It should also be noted that the provisions of the UNGA Declaration on the Establishment of a NIEO (res. 3201 (S-VI) 1974) and Charter of Economic Rights and Duties of States (res. 3281 (XXIX), 1974) consolidate the sovereign rights of states over their wealth and natural resources within their territory. In the UNGA Declaration on the Use of Scientific and Technological Progress in the Interest of Peace and the Benefit of Mankind (res. 3384 (XXX) of 10 November 1975, it is solemnly proclaimed that All States shall promote international cooperation to ensure that the results of scientific and technological development are used in the interests of strengthening international peace and security, freedom and independence, and also for the purpose of the economic and social development of peoples and the realization of human rights and freedoms in accordance with the Charter of the United Nations."

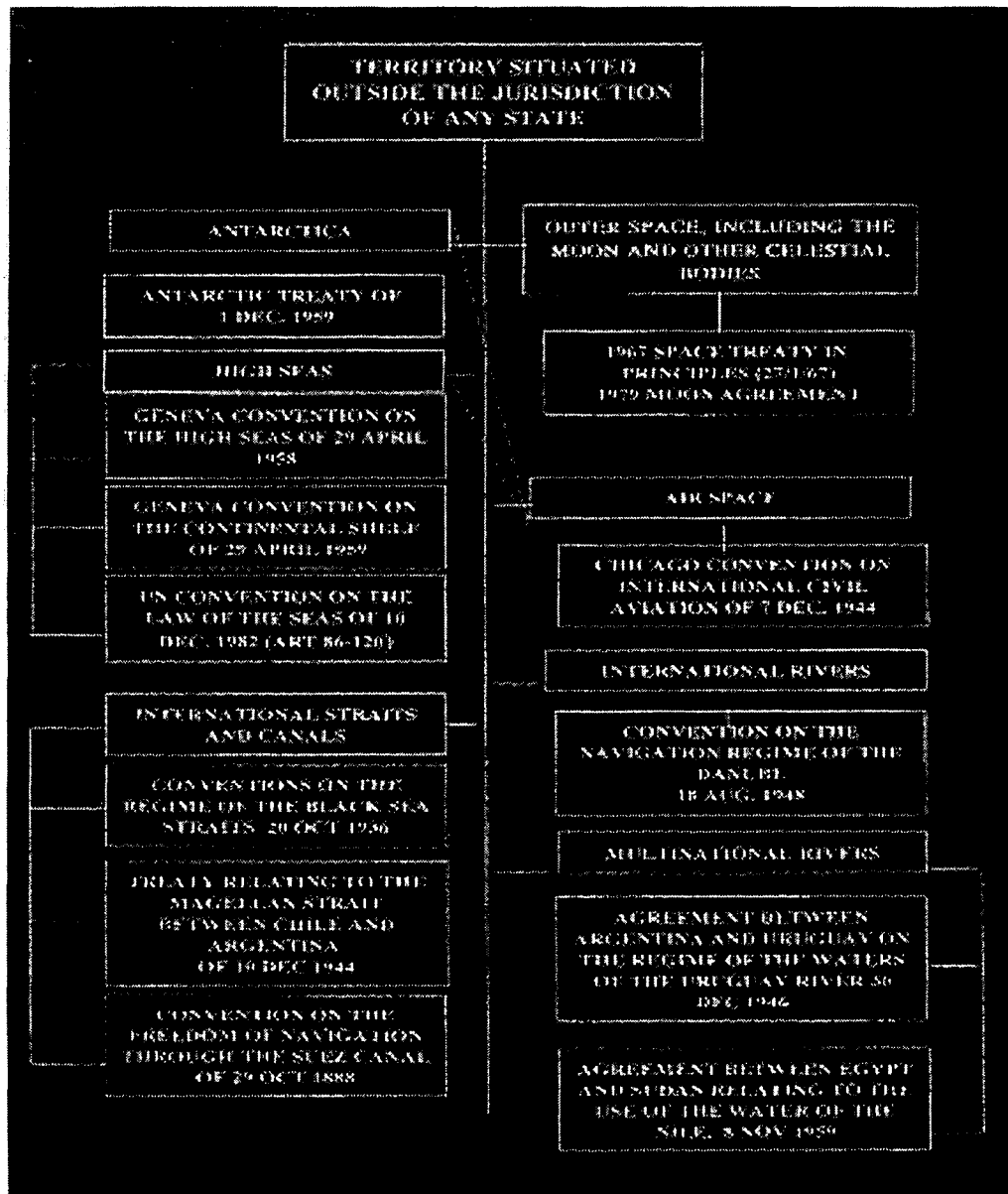
## Concluding Remarks

In this new millennium space science and technology will be the main tools for managing the resources and environment. This will require more transparency between the states and the private enterprises carrying out remote sensing activities on the one hand, and the sensed states on the other.

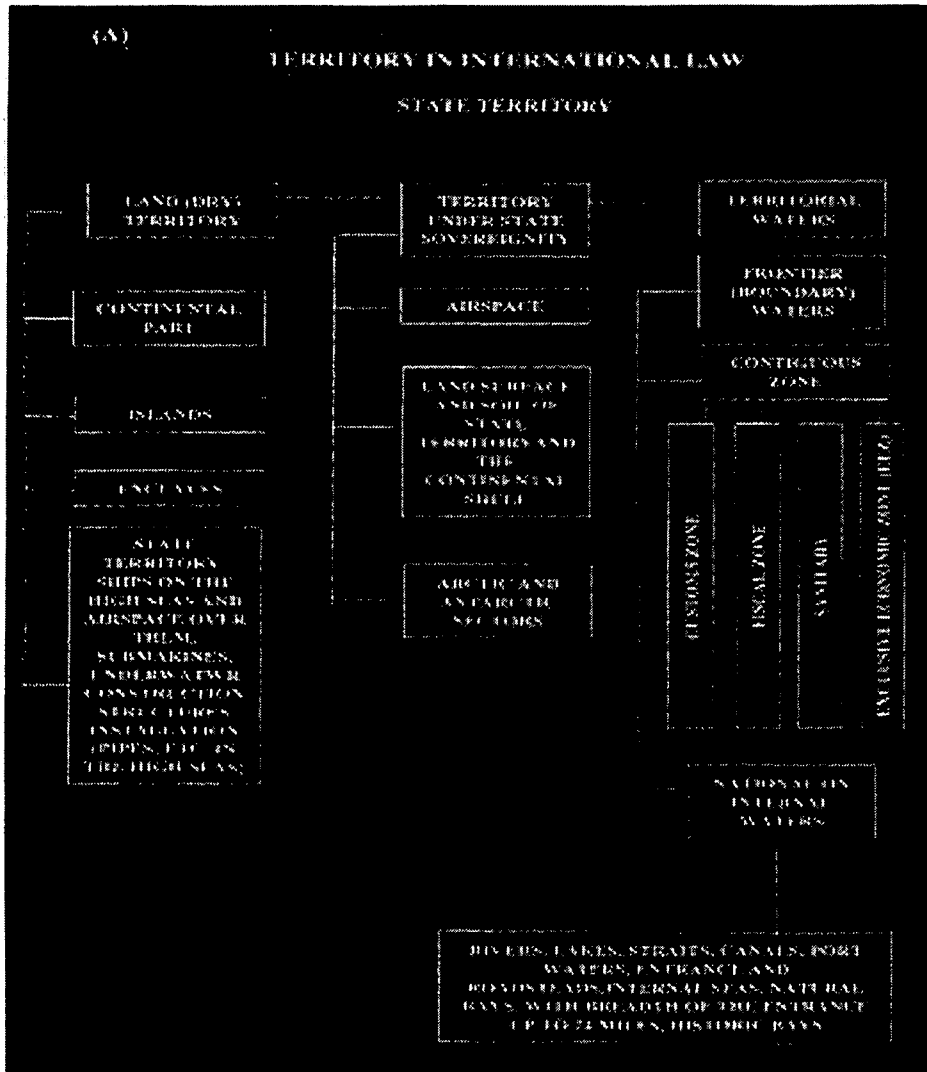
The 1986 UN Principles on Remote Sensing of the Earth from Outer Space were adopted when only few states and their nationals were actively engaged in that area of space exploitation and use. Since the 1990's, the number of active participants in this area of outer space activities has been growing,<sup>11</sup> and however, this calls for the conclusion of a treaty on remote sensing. Furthermore, considering that the participation of the private sector in remote sensing activities is regulated by the national laws of each sovereign state, there will be a need to embark on the process of unifying or harmonising those laws. This will create uniformity in the legal rules and principles among actors in remote sensing activities. The UNCTRAL and WTO should be given the mandate to embark on this project. It should be remembered that the use of outer space as the province of mankind requires that all legal instruments adopted for the regulation of the activities of either states or private nationals in that domain must be in accordance with the spirit of the 1967 Treaty and the UN Charter.

Finally, it should be remembered that the moral and ethical principles that are regulating human relations between peoples here on earth should be applicable in all outer space activities.

**Table 1**



**Table 2**





## ENDNOTES

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<sup>1</sup> For more detail, see, Andem, Maurice N., **International Legal Problems in the Peaceful Exploration and Use of Outer Space (1992)**, pp.69-72; Broms, Bengt, **United Nations (1990)**, pp.53-55.

<sup>2</sup> Brownlie, Ian, **Principles of Public International Law**, Third Edition (1979), p. 287.

<sup>3</sup> Space Law, 1965, pp. 232-233

<sup>4</sup> See pp. 11-12

<sup>5</sup> For more details, see, **UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE**, United Nations, NY (2000).

<sup>6</sup> For more details, see, **DROIT T L DETECTION ET ENVIRONNEMENT**, sous la direction de SIMONE COURTEIX, SIDES (1994).

<sup>7</sup> See, **Report of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space**, Vienna, 19-30 July 1999, para. 31, pp. 23-24.

<sup>8</sup> For more details, see, Andem, Maurice N. (1992), op. cit., pp.342-403.

<sup>9</sup> For the text, see, **UNITED NATIONS TREATIES AND PRINCIPLES ON OUTER SPACE**, UNITED NATIONS, NEW YORK (2000), pp. 44-47.

<sup>10</sup> For details, see, **Human Rights: A Compilation of International Instruments**, United Nations, New York (1988); Ploman, Edward W., **International Law Governing Communications and Information**, Frances Pinter (Publishers) Ltd., London (1982).

<sup>11</sup> See, for example, **Space Commercialization: Satellite Technology**, edited by Shahrokhi, Jasentuliyana, N. and Tarabzouni, N., AIAA, Inc., Washington, D. C. (1990).