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## **Committee on the Peaceful**

### **Uses of Outer Space**

Legal Subcommittee

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Agenda item 9

**Proposals to the Committee on the Peaceful Uses of Outer  
Space for new items to be considered by the Legal  
Subcommittee at its forty-third session**

## **Why is an international convention on remote sensing of the Earth from outer space necessary?**

### **Working paper submitted by Brazil**

#### **A. Satellite remote sensing activities are currently insufficiently regulated from the international point of view.**

1. The only international text in existence on this issue is completely outdated: Principles Relating to Remote Sensing of the Earth from Outer Space (General Assembly resolution 41/65, annex). This resolution has been overtaken by the skyrocketing technological advances in the sector that have occurred over the last 16 years. It does not address the questions raised today by the multiple satellite remote sensing programmes, a large number of which are operated by private companies with strictly commercial objectives. High-resolution images (1 metre and less), until recently used exclusively by the armed forces, are being sold worldwide. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space discussed proposals for over 15 years in order to arrive at the modest terms of the resolution, in which compromise solutions abound and even they are subject to conflicting interpretations.<sup>1</sup>



**B. Satellite remote sensing activities are now indispensable and must be regulated by a broad, compulsory and universally acknowledged instrument.**

2. Resolution 41/65, like all documents of the genre, is of a merely advisory nature and does not impose any obligations on States; nor does it meet the need for broad, secure and effective regulation of a strategic space activity for development by all countries. In cases such as this, nothing can replace an international convention, negotiated and approved under the auspices of the United Nations and open to all States.

**C. Many satellite remote sensing activities are not yet subject to international regulation.**

3. Principle I limits “remote sensing” activities to those carried out “for the purpose of improving natural resources management, land use and the protection of the environment”. Resolution 41/65 does not mention the use of remote sensing for the observation, reconnaissance and monitoring of productive areas (relating to agriculture, cattle, fishing and industry), transportation infrastructure (such as highways, railways, ports and airports) or services (meteorological and tourism), nor for the verification of compliance with international treaties. Although the discussion of military activities is not within the remit of the Legal Subcommittee, which was responsible for the negotiation of resolution 41/65, it is evident that, today, the use of remote sensing is an indispensable instrument of modern warfare and that that crucial question must be adequately discussed and regulated by the international community. None of those activities, of clear economic and strategic relevance, is governed by specific international regulations. This constitutes an unjustifiable legal vacuum, which may cause serious harm to numerous countries, especially least developed countries.

**D. It is necessary to regulate satellite remote sensing activities with the precautions required by an international public service that is essential to the global community.**

4. Principle II states that “remote sensing activities shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic, social or scientific and technological development, and taking into particular consideration the needs of the developing countries”.

5. Principle III states 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 principle IV goes on to state that that treaty “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 and scientific development, and stipulates the principle of freedom of exploration and use of outer space on the basis of equality”.

6. These principles emphasize the relevance of remote sensing activities for all countries. Thus, such activities are also “the province of all mankind” and are entitled to a legal system worthy of such exalted consideration.

**E. The regularity and predictability of the remote sensing services by satellite must be guaranteed.**

7. Some developed countries are in the habit of opposing the drafting of a convention on remote sensing with the argument that resolution 41/65 continues to play a positive role, since it supports two principles that they consider to be priorities:

(a) Unrestricted remote sensing by satellite of any point on Earth, at any time;

(b) The unrestricted sale of sensory data, with the sensed State being conceded merely access to the data concerning its territory “on a non-discriminatory basis and on reasonable cost terms” (principle XII).

8. The guarantee of unrestricted sensing of any point on Earth is, without a doubt, important, but it is far from exhausting the array of questions generated by an activity that is so essential to all countries. The phrase “on a non-discriminatory basis and on reasonable cost terms” is too vague and flexible. This does not formulate a secure and effective norm, nor does it guarantee the sensed States a minimum of essential predictability in the significant commercial transactions of our time and, above all, in the light of the unfailingly rigorous and non-negotiable national security policies of the great world Powers.

**F. A basic international legal system must be formulated for the growing commercialization of satellite remote sensing activities.**

9. It is not sufficient to accept as international customary practice the freedom to sense the entire world and the freedom to sell the products of such sensing, which, in fact, have never been disputed by any country since resolution 41/65 was approved. These customs were recognized by the Workshop on Space Law in the Twenty-first Century, sponsored by the International Space Law Institute and the Office for Outer Space Affairs and held in July 1999 as part of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). However, that recognition did not prevent the Workshop from arriving at the following enlightening conclusion, which gives a good idea of the size of the problem:

“The expanding growth in areas such as commercial remote sensing services, commercial complexity, the effect on international cooperation and scientific and industrial applications of services necessitates consideration of appropriate regulations. National restrictions on access to data are emerging.”<sup>2</sup>

The commercial interest should be respected and even stimulated, but cannot supersede public interest. It should, to the contrary, adjust itself to the public function of remote sensing services. A basic international legal system becomes necessary, in this case, in order to prevent national legislation from being imposed,

in practice, on the entire international community, in an inevitable and non-appealable form of extraterritoriality.

**G. “Appropriate regulations” are needed, guaranteeing not only the right of commerce, but also the right to access.**

10. Precisely in view of this need, the above-mentioned Workshop decided to recommend that the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space should initiate the drafting of a treaty covering remote sensing from outer space on the basis of the Principles Relating to Remote Sensing of the Earth from Outer Space, taking into particular account the expanding growth in commercial remote sensing services and preserving the principle of non-discriminatory access to data.<sup>3</sup> A convention is thus necessary for two principal reasons: (a) the commercialization of remote sensing services; and (b) the preservation of access to the data without discrimination. The reasons become more powerful and convincing every day.

11. When resolution 41/65 was adopted, the commercialization of remote sensing services practically did not exist. It emerged afterwards and underwent an acceleration in the 1990s, with a wide impact on the entire world. A highly complex business, it affects international cooperation, scientific collaboration and industrial development. Thus, the regulation of such activities cannot be restricted to the freedom to sell data. This basic freedom must be detailed, so that it does not become an abuse of right and privilege to the detriment of the legitimate interests of other countries and the international community as a whole. At the same time, the principle of preserving access to the data without discrimination must be detailed, because, as was emphasized at the Workshop, “national restrictions on access to data are emerging”.

12. What type of discrimination are we talking about? It must be defined as concretely as possible, in order to be aware of the actual obstacles existing and to prevent anything that could hinder unrestricted access to data.

**H. Fundamental concepts must be defined in a clear and detailed manner, filling in the significant gaps that exist today.**

13. The first fundamental concept to be defined, from the developing countries’ point of view, may be that provided for in principle IV, according to which remote sensing activities “shall not be conducted in a manner detrimental to the legitimate rights and interests of the sensed State”.

14. Such a principle, for Cheng, sounds like an application of the principle of good neighbourliness, that is, merely as a sign of goodwill with regard to countries subject to sensing.<sup>4</sup> The demonstration of goodwill, it seems, appeared to be necessary, since, as Cheng observed, the sensed State has been given no special treatment at all, except perhaps the very vague safeguard found in principle IV. But even this safeguard, adds the jurist, is subject to auto-interpretation. Cheng concludes:<sup>5</sup>

“In sum, those who are apprehensive that data gathered from outer space by others might work to their detriment or that the data gathered from outer

space might be misused by either the sensing State or by third parties to their detriment can probably find only scant comfort from the United Nations Principles.”

This actually concerns the protection of something not yet duly defined: the rights and interests of sensed States.

15. A convention on remote sensing by satellite would therefore be responsible for delineating, first of all, the rights and duties of sensed States, as well as the rights and duties of States carrying out remote sensing activities. The rights and duties of neither party have as yet been clearly outlined.

16. Further, the international convention should contain basic norms for the protection of intellectual property and patents, principally with regard to analysed satellite sensed data, in order to ensure legitimate rights, without, however, discontinuing or hindering access to data for countries that are in need of such information, especially sensed States. In that work, it would probably be useful to take into account the legal instruments of the World Trade Organization.

## **I. Responsibilities must be established for the use of remote sensing data, especially in relation to sensed States.**

17. It is imperative to define fully the concept of “remote sensing activities”. It is this would permit verification of whether or not a violation of the rights and interests of sensed States had occurred, and, if it had, for the perpetrators thereof to be held responsible.

18. The definition provided by resolution 41/65 is limited: principle I, subparagraph (e), indicates that “the term ‘remote sensing activities’ means the operation of remote sensing space systems, primary data collection and storage stations, and activities in processing, interpreting and disseminating the processed data”. What could cause more harm to sensed States is not the actual operations involving the collection, storage, processing and distribution of the processed data, but the use of the analysed data. It is precisely such use that is not included in the currently existing concept of “remote sensing activities”.

19. Principle XIV confirms this when it attributes international responsibility for remote sensing activities only to “States operating remote sensing satellites”. This principle, strangely enough, as noted by Cheng, commits the imprudent error of limiting to the operations of remote sensing satellites the application of article 6 of the Outer Space Treaty of 1967, which establishes the international responsibility of States for any and all national space activities, both public and private. Thus, through resolution 41/65, responsibility is established only for operations of remote sensing satellites and not for the use of the data obtained through such operations. Who is liable, then, for the use of remote sensing data that has harmed a sensed State? This question does not, as yet, have a specific answer. But it should.

**J. Coherence, harmony and effectiveness should be lent to the principles and norms regarding satellite remote sensing activities, in order to prevent contradictory interpretations.**

20. The principles “often contain provisions which, according to their phraseology, can be interpreted in different ways”, stated H. L. van Traa-Engelman of the University of Utrecht, Netherlands, in 1989. Therefore, in her view, “it would be prudent to consider the established ‘principle’ as a universal code of conduct and, as such, a stage of development in an evolutionary process of international law-making”.<sup>6</sup>

21. A clear example of such uncertainty is found in principle IV, which acknowledges both the freedom of remote sensing, as well as the rights and the interests of sensed States, without indicating how that conciliation may, in fact, be attained. States carrying out remote sensing activities always stress the primacy of the freedom to carry out such activities. Sensed States seek to defend their rights and interests. Each group of countries has its own interpretation of the text. Resolution 41/65, as drafted, allows for both interpretations. What actually ends up prevailing is the view of the stronger side, the one with technological dominance of remote sensing activities.

22. Another example is principle V. According to that principle, States carrying out remote sensing activities shall promote international cooperation in these activities and make available to other States opportunities for participation therein, which includes sensed States. But the principle establishes, at the same time, that such participation shall be based in each case on equitable and mutually acceptable terms. If the conditions for participation of the sensed States must be mutually acceptable, this can mean that cooperation will always be subject to the will of the countries carrying out the remote sensing activities. Thus, the application of the principle that establishes the obligation of the State carrying out remote sensing activities to cooperate with those being sensed depends upon the acceptance of the first State (carrying out remote sensing activities) being obligated to do so. Consequently, the same norm that creates the duty simultaneously contributes to its nullification in practice.

23. A just and equitable convention must ensure an equilibrium between the technological and economic power of States carrying out remote sensing activities and the legitimate rights and interests of sensed States, the weaker party of this unbalanced relationship. This is a difficult, almost impossible task. However, there does not seem to be any other method of attaining the justice and equality that today do not exist.

*Notes*

<sup>1</sup> In response to the modest terms of resolution 41/65 after such a long period of discussion, Bin Cheng, the distinguished jurist and Professor at the University of London, recalled Aesop’s fable of *The Mountain in Labour*, as put so succinctly by Horace (*Ars Poetica*, 1.139): *Parturiunt montes, nascetur ridiculus mus* (The mountains are in labour, a ridiculous mouse will be born) (Bin Cheng, *Studies in International Space Law* (Oxford, Clarendon Press, 1997), p. 597).

<sup>2</sup> *Proceedings of the Workshop on Space Law in the Twenty-first Century Organized by the International Institute on Space Law with the Office for Outer Space Affairs* (United Nations publication, Sales No. E.00.I.5), p. 3.

<sup>3</sup> Ibid.

<sup>4</sup> Cheng, *op. cit.*, p. 590.

<sup>5</sup> Ibid., p. 596.

<sup>6</sup> H. L. van Traa-Engelman, *Commercial Utilization of Outer Space: Law and Practice* (Dordrecht, Netherlands, Martinus Nijhoff Publishers, 1993), p. 245.