



# General Assembly

Distr.: General  
27 January 2016

Original: English

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## Committee on the Peaceful

## Uses of Outer Space

### Legal Subcommittee

### Fifty-fifth session

Vienna, 4-15 April 2016

Item 15 of the provisional agenda\*

### Review of international mechanisms for cooperation in the peaceful exploration and use of outer space

## Review of international mechanisms for cooperation in the peaceful exploration and use of outer space

### Note by the Secretariat

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\* A/AC.105/C.2/L.297.



## **I. Introduction**

1. At the fifty-fourth session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, held in 2015, the Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space agreed that States members of the Committee and international intergovernmental and non-governmental organizations having permanent observer status with the Committee should again be invited by the secretariat to provide examples and information on the mechanisms for international cooperation they utilized for space cooperation, in order to develop an understanding of the range of collaborative mechanisms employed by States and international organizations, and the circumstances in which certain classes of mechanisms were favoured by States over other mechanisms (A/AC.105/1090, para. 206 and annex III, para. 9 (a-c)). The Committee, at its fifty-eighth session, in 2015, endorsed that decision of the Working Group (A/70/20, para. 261).

2. The present note has been prepared by the secretariat on the basis of replies received by 27 January 2016 from Belgium, Poland, Thailand, Turkey and the World Meteorological Organization (WMO).

## **II. Replies received from States members of the Committee on the Peaceful Uses of Outer Space**

### **Belgium**

[Original: English]

[5 January 2016]

Belgium welcomes the discussion under a dedicated item of the agenda of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space on international mechanisms for cooperation in the peaceful exploration and use of outer space. To that end, the delegation of Belgium would like to share its experience in this respect.

Belgium's cooperative framework dedicated to outer space activities consists of several types of instruments at different institutional levels. The following review will focus on operational cooperation, covering programmatic aspects (research and development, validation, test and operational phases), but not instruments with legal or regulatory purposes, such as the five United Nations treaties on outer space or the General Assembly resolutions on outer space.

#### **Cooperation: levels and mechanisms**

Belgium's first level of cooperation is regional multilateral cooperation. At that level, Belgium is party to several agreements, most of which qualify as treaties in accordance with the 1969 Vienna Convention on the Law of Treaties, including:

- European Union treaties (as revised by the Treaty of Lisbon)
- Convention for the Establishment of a European Space Agency

- Convention for the Establishment of a European Organisation for the Exploitation of Meteorological Satellites
- Convention Establishing a European Organisation for Astronomical Research in the Southern Hemisphere.

The Convention for the Establishment of a European Space Agency is complemented by a Security Agreement (for the exchange and protection of classified information) and by an intergovernmental declaration on the exploitation phase of European launchers.

A second level of cooperation for Belgium is international multilateral cooperation. That involves international treaties, such as the Intergovernmental Agreement for the International Space Station (to which all States members of the Convention collectively form one single party).

A third level of cooperation is international bilateral cooperation. At that level, Belgium has concluded various types of instruments, from treaties to memorandums of understanding. It must be noted that nowadays the solution of non-binding arrangements dedicated to a certain type of project or even to specified existing projects or missions is preferred to cooperation treaties or intergovernmental agreements. That is true even in relation to States with which Belgium has concluded framework cooperation treaties. Non-binding arrangements, such as memorandums or letters of intent, are flexible enough and serve as reference for executive institutions and project managers. Such instruments do not provide for exchange of funds, but allow the exchange of personnel and expertise. In some cases, government funding may be agreed between the parties, but as a direct support to research and development carried out by the Belgian industrial partner(s) involved in the project or mission.

A fourth level of cooperation is cooperation between the Belgian federal states and the regional authorities in Belgium. That cooperation allows joint efforts in the respective fields of competence and in other areas connected to space research and applications, such as education, academic research, industrial development, environment, mobility, etc. That form of cooperation mechanism is not necessarily reserved to federal States such as Belgium. It may also concern unitary States, which seek to develop industrial or technological capacities already existing in some parts of their territory in association with the competent local authorities.

### **Cooperation: legal or policy instruments**

The current family of instruments used, at various levels (as already indicated above), by Belgium to develop its cooperation in the field of space research and applications may be organized into two categories:

- Category 1: instruments subject to parliamentary approval (treaties)
- Category 2: instruments not subject to parliamentary approval (intergovernmental or administrative agreements).

The distinction is relevant with regard to the policy adopted by the State: either to envisage large cooperation with one or more States or intergovernmental organizations, to be implemented by several projects in various sub-areas of space

research and applications, or to adopt a more case-by-case approach, oriented to specific projects. The policy may vary according to the partner State.

Category 1 instruments allow for a general framework to be established, ruling several aspects of cooperation, such as sub-areas that are included or excluded, export control, intellectual property, exchange of funds, protection of classified information and activities on the territory of the other party. National executive entities or institutions are designated for the purposes of implementing the agreement, notably through subsidiary agreements (Category 2), to be concluded at governmental or administrative level. Category 1 instruments are not suitable to serve as the legal basis of a dedicated project, considering that space projects need enough flexibility to respond to their evolution in terms of specifications, schedule or funding.

Category 2 instruments do not allow a sufficient level of commitment to solve all legal or institutional issues related to general space cooperation. They usually refer to existing national laws under which the project(s) need(s) to be carried out. Unlike Category 1 instruments, they cannot establish derogatory provisions with regard to national law or regulation. Most of the time, they cannot, as such, impose obligations, either on the State or its citizens. On the other hand, they can be easily adapted in order to reflect the evolving needs of the project(s). Category 2 instruments may apply to specific projects or missions, or remain at a very general level. In the latter case, they serve as a cooperative policy framework between the States parties.

### **“Building blocks” of cooperative instruments**

A typical scheme for a framework of cooperative instruments (either of Category 1 or Category 2) in Belgium is based on the following provisions, which may constitute building blocks on which a typical instrument architecture is based:

#### **I. Identification of the parties**

This section should allow a clear and precise identification of the legal entities which are parties to the agreement, be it the State itself or an independent agency. That identification is not always obvious, since the reference to the parties is often limited to the denomination of the body, the institute or the organization without mentioning its legal status.

As a general comment on this type of instrument, Category 1 agreements should be organized in such a way as to leave enough flexibility by delegating to the governmental or project authority the management of modalities at the technical level.

#### **II. Preamble**

The preamble usually refers to existing instruments commonly recognized by the parties as a basis or background for their cooperation. It also sets out the main respective and joint purposes of the parties.

**III. Object and scope**

The object and scope define the (abstract) limits within which the parties intend to carry out their cooperation. For instance, it may be the exploration and use of outer space for peaceful purposes, or, more narrowly, the use of satellite data for forest monitoring.

**IV. Fields of cooperation**

Within the scope as defined, the parties identify a certain number of sub-areas in which cooperative projects are already considered or likely to happen in the future. The list may not be exhaustive; however, it usually contains a provision that additions to the list must be jointly agreed by the parties or by their executive entities.

**V. Forms of cooperation**

For the purpose of cooperation, the parties may provide for several mechanisms, such as exchange of personnel (including visa facilities where applicable and travel arrangements), exchange of expertise, joint meetings or symposiums, academic or professional traineeships or internships, delivery of items and exchange of funds (including modalities).

**VI. Intellectual property**

The parties establish the basic principles applicable to intellectual property used for the purpose of their cooperation (background property) and resulting from that cooperation (foreground property). Usually, background property is protected from any form of appropriation that may arise from their use, while foreground property is shared between the parties or their respective entities, according to the modalities to be provided for in subsidiary agreements.

**VII. Points of contact**

The parties designate their respective points of contact for the implementation of the agreement. The point of contact may be at the level of the signatories or at the level of the executive entities.

**VIII. Joint committee**

The parties may establish a joint committee, which may be entrusted with the periodic review of their cooperation, with scientific guidance and/or with the authority to pursue consultation between parties in case of difficulties arising in the application, the interpretation or the implementation of the agreement.

When it comes to specific cooperative instruments (either of Category 1 or Category 2), those involving Belgium are usually based on the following building blocks:

**I. Identification of the parties**

(Same remarks as above)

## **II. Preamble**

(Same remarks as above)

## **III. Object and scope**

The specific project or mission is identified as carried out in cooperation between the parties or their respective entities. Usually, the technical details of the project or mission are presented in an annex (if they are subject to the agreement) or in an appendix (if they are not subject to the agreement, e.g. because the project is defined by one party only).

## **IV. Responsibilities of the parties**

The responsibilities of each party are identified in terms of deliveries, funding, authority, expertise, etc.

## **V. Calendar**

The project or mission is subject to a schedule of reference by which the parties must abide. The schedule may, however, be appropriately adapted in order to take into account delays or modifications. The schedule may be contained in a dedicated annex to be updated by the parties or by their executive entities in a flexible manner.

## **VI. Financial provisions**

In the case of a financial contribution from (one of) the parties to the project or mission, a specific provision is usually included to fix the modalities of payments.

## **VII. Intellectual property**

Detailed provisions must be included to define the respective rights of the parties and of their executive entities, as well as of possible subcontractors or third parties, with regard to both background and foreground property.

## **VIII. Liabilities**

Various sources of liabilities must be considered, including:

- Contractual liability in case of non-delivery or delayed delivery
- Liability for physical or material damage, other than contractual failure, caused to the other party or its executive entity
- Liability for damage caused to third parties.

The latter liability may include arrangements for the liability incurred according to the 1972 Convention on International Liability for Damage Caused by Space Objects in the case of an operational mission.

## **IX. Points of contact**

(Same remarks as above)

Although Category 1 agreements for this type of instrument may not be excluded, they are not recommended, owing to the procedures they would be subject to, combined with the level of technical detail they would be dealing with.

The delegation of Belgium submits the present document to the Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space as a possible starting point for discussion on the topic. The idea of identifying building blocks for legal instruments has been successfully developed in the past, notably by the University of Cologne and the German Aerospace Agency in the joint “Project 2001+”, which concerned national space legislation. Identifying building blocks, either common to most space cooperation instruments in the world, or specific to some regions, to some States or to some types of projects or areas of activities, may help emerging spacefaring nations in concluding such instruments.

## Poland

[Original: English]  
[2 January 2016]

Since 2012, Poland has been a member of the European Space Agency. That organization is currently composed of 22 countries. The Director-General is the Chief Executive Officer and legal representative of the Agency. Member States are represented on several committees and programme boards dealing with all topics connected with space issues. The Agency, together with its members, carries out a large number of optional and mandatory programmes.

Polish membership of the Agency indicates a clear need to decide upon priorities and adapt national activities to new challenges that the country is now facing: how to retain and further develop scientific capabilities and at the same time pursue more market-oriented activities and foster the space industry and the commercial sector.

In order to improve the competitiveness of the domestic space sector, Poland is working on maintaining and developing space technology, first by making use of its existing industrial potential, but also by encouraging and stimulating the development of new industrial capacities appropriate to market requirements. The Polish delegation to the Agency is trying to build bilateral cooperation with international partners, first from Europe, and implement industrial objectives aimed at maximizing efficiency and quality.

It is worth underlining that for Poland one of its priorities is the space situational awareness with regard to the space debris issue. In that respect, the Agency is a reliable partner for Poland, helping with activities concerning space debris mitigation.

Membership of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) is also of importance to Poland. EUMETSAT is an intergovernmental organization founded in 1986. Its purpose is to supply weather- and climate-related satellite data, images and products, 24 hours a day, 365 days a year, to the national meteorological services of its member and

cooperating States in Europe and to other users worldwide. Currently, there are 30 member States and 1 cooperating State.

EUMETSAT continues to grow. The Ministry of the Environment is responsible for cooperation with EUMETSAT.

## **Thailand**

[Original: English]  
[15 January 2016]

Thailand employs various international mechanisms for cooperation in the peaceful exploration and use of outer space as follows:

### **Subcommittee on Space Technology and Applications**

The Ministry of Science and Technology, on behalf of Thailand, cooperates with its counterparts in the Association of Southeast Asian Nations (ASEAN), through the ASEAN framework namely:

- ASEAN Ministerial Meeting on Science and Technology
- ASEAN Committee on Science and Technology.

The Subcommittee is a mechanism under the ASEAN Committee on Science and Technology, which holds an annual meeting in order to consider different forms of cooperation. The cooperation of the Subcommittee is driven by resolutions.

### **Asia-Pacific Space Cooperation Organization**

The Asia-Pacific Space Cooperation Organization is an international organization situated in Beijing. It was founded in 2008. Thailand is represented by the Ministry of Information and Communication Technology.

### **Asia-Pacific Regional Space Agency Forum**

The Asia-Pacific Regional Space Agency Forum is a forum of space agencies in the Asia-Pacific region, initiated by the Japan Aerospace Exploration Agency. The forum imposes no rules or regulations and participation is voluntary. Neither the number of participants nor the forms of participation are limited. Participants benefit from having an opportunity to meet and discuss with executives of the space agencies in the Asia-Pacific region.

### **International Astronautical Federation**

The International Astronautical Federation was founded in 1951 by a group of scientists who were interested in space research, in order to build an international forum on space knowledge between East and West. The Geo-Informatics and Space Technology Development Agency has been a member of the Federation on behalf of Thailand since 2010.



### **Committee on Space Research**

The Committee on Space Research was set up by the International Council of Scientific Unions (now the International Council for Science) in 1958, with the purpose of creating a scientific community for the utilization of satellites and space exploration and for the exchange of information on the basis of mutual cooperation. Thailand has been a member of the Committee since 1959.

### **Group on Earth Observations**

The Group on Earth Observations is an ad hoc group consisting of 97 member countries, the European Commission and 87 international organizations. Thailand was one of its founding members. The Group focuses on using satellite technology to solve problems, such as natural disasters, environmental degradation and global warming.

### **Turkey**

[Original: English]  
[27 January 2016]

Turkey accords the utmost importance to international cooperation in the peaceful exploration and use of outer space. In order to contribute to the progressive development of international cooperation in that area, Turkey has entered into several bilateral cooperation agreements with States and international organizations, including the following: an agreement between the Government of Turkey and the European Space Agency concerning cooperation in the exploration and use of outer space for peaceful purposes, an agreement between the Turkish General Staff of the Republic of Turkey and the Department of Defense of the United States of America for defence space cooperation, the Convention of the Asia-Pacific Space Cooperation Organization, an agreement between the Government of Ukraine and the Government of the Republic of Turkey on cooperation in the field of research and use of space and an agreement relating to the International Telecommunications Satellite Organization.

## **III. Replies received from permanent observers of the Committee on the Peaceful Uses of Outer Space**

### **World Meteorological Organization**

[Original: English]  
[9 December 2015]

The space-based observation system supporting WMO programmes is the result of long-standing and effective cooperation between WMO member States which are satellite operators, including operational and research and development agencies, under the joint auspices of the WMO Space Programme and the Coordination Group for Meteorological Satellites. It pursues technical coordination to ensure interoperability, contingency planning and the operational continuity of observations in support of weather, climate and environment monitoring within the

programmes of WMO and the Intergovernmental Oceanographic Commission. Another useful forum for cooperation among space agencies is provided by the Committee on Earth Observation Satellites.

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