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

Categorization of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space

Note by the Secretariat

I. Introduction

1. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space agreed to include "Review of the international mechanisms for cooperation in the peaceful exploration and use of outer space" in its fifty-first session as an item under a five-year workplan (A/AC.105/1003, para. 179). In accordance with the workplan, exchange of information on the range of existing international space cooperation mechanisms was conducted in the 2013 and 2014 sessions of the Legal Subcommittee. Member States and permanent observers of the Committee provided information prior to, and during, the respective sessions on their international mechanisms used for cooperation in space activities. Special presentations on this agenda item were also made both in 2013 and 2014.

2. The Subcommittee established its Working Group in 2014, under the chairmanship of Setsuko Aoki of Japan, and endorsed the report of the Chair of the Working Group which included a set of questions which could be referred to as appropriate and on a voluntary basis in contributions to the work of the Working Group (A/AC.105/1067, Annex III, para. 10).

* A/AC.105/C.2/L.295.

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3. The Secretariat, in accordance with the workplan and in close consultation with the Chair of the Working Group, has prepared this document categorizing the range of mechanisms for international cooperation. The document has been prepared on the basis of contributions to the work of the Working group and additional research.

4. Information provided by member States and permanent observers of the Committee since 2013 seems to suggest certain tendencies with respect to the basic framework for international cooperation, areas and actors of cooperation, modes of frequently used cooperation mechanisms, and the basic principles of cooperative mechanisms. Note has to be taken that the specific references in the document are illustrative and do not constitute an exhaustive list.

II. Basic Framework for International Cooperation

5. It is widely recognized that tremendous success in the exploration and use of outer space for peaceful purposes has been accomplished as a result of international cooperation which has been an important principle from the very beginning of the space age. The importance of international cooperation has been clearly stipulated in various instruments including those adopted under the framework of the United Nations. As an early example, the General Assembly resolution which established an ad hoc Committee on the Peaceful Uses of Outer Space in 1958 requested it to report to the General Assembly on the "area of international co-operation and programmes in the peaceful uses of outer space which could be appropriately undertaken under the UN auspices" as well as "the future organizational arrangements to facilitate international co-operation in this field" (UNGA Res/1348 (XIII), 1. (b), (c)). Becoming a permanent body in 1959, the Committee has since been promoting, facilitating and encouraging international space cooperation. This is symbolically demonstrated by the title of, e.g., resolution 1472 (XIV) which established the Committee as permanent body, resolution 1721 (XVI) which refers to the registration of space objects, and, above all, the annual resolutions on international cooperation in the peaceful uses of outer space.

6. The Committee on the Peaceful Uses of Outer Space has been encouraging States to act collectively to promote the peaceful exploration and use of outer space through a variety of mechanisms. Part of such mechanisms are found in the United Nations treaties on outer space, the sets of declarations and principles on outer space activities, General Assembly resolutions and other relevant documents relating to the peaceful exploration and use of outer space. Likewise, States and international organizations have initiated various programmes through the conclusion of multilateral and bilateral agreements suitable for the specific programmes concerned, which have further developed the legal basis for space cooperation. Mechanisms employed by States are numerous in number and of wide variety in nature, form and substance.

7. It is often stated that international mechanisms for cooperation are characterized by their diversity and flexibility in form and substance. Some cooperative projects are conducted by a multilateral agreement or a set of agreements among States and they could be either legally binding, legally non-binding, or the combination of both. There are also cases where multilateral

cooperation is carried out within the framework of international intergovernmental organizations, including the United Nations and its specialized agencies, international intergovernmental organizations other than the United Nations, and other types of forums, such as regional and interregional mechanisms for cooperation. Other cases represent bilateral partnerships based on either legally binding or legally non-binding agreements.

8. Among the most important statements on international space cooperation by the General Assembly is that "States are free to determine all aspects of their participation in international cooperation in the exploration and use of outer space on an equitable and mutually acceptable basis" (GA Res 51/122 (1996), "Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries" (Space Benefit Declaration, para. 2). Space cooperation, must, of course, be carried out in accordance with international law including the United Nations treaties on outer space. In non-legally binding instruments, there are also conditions and recommended standards for space collaboration.

III. Areas of Cooperation

9. A wide variety of areas and subjects of cooperation have been reported by member States of the Committee. Criteria used contain the subject matter of space activities, the nature of activities (commercial and non-commercial, civil use and security-related, etc.) and cooperation between spacefaring nations, and the contribution to developing countries. The list below is illustrative and demonstrates the scope of space cooperation recognized by member States.

10. The areas of cooperation reported include, inter alia:

(a) Earth science, space science, basic space research, scientific experiments;

(b) Space exploration, exploration into the deep space, human space exploration;

(c) Space application;

(d) Earth observation, remote sensing;

(e) Data exchanges and their terrestrial application;

(f) Telecommunication;

(g) Satellite navigation;

(h) Space debris mitigation;

(i) Commercial cooperation;

(j) Launches of foreign payloads on a contractual basis;

(k) Export and import of satellites, rocket engines and other space equipment as well as ground-based facilities;

(l) Arms control and transparency and confidence-building measures in outer space activities; and

(m) Assistance to developing countries to obtain space assets including supplying satellites and launch services, constructing ground facilities and providing personnel training.

IV. Actors and Fora of Cooperation

11. It is noteworthy that the United Nations, including the Committee on the Peaceful Uses of Outer Space, often feature as a platform of international cooperation and also an independent actor participating in international cooperative programmes. That actors and platforms can be categorized interchangeably may suggest the critical importance of the Unite Nations as a mechanism for cooperation.

12. In addition to States and international intergovernmental and non-governmental organizations which are recognized essential actors in cooperative mechanisms, increased importance of commercial and private actors have been noticed in cooperative programmes.

13. Space actors such as private companies, non-profit organizations, private universities and research laboratories are involved in various programmes, covering launch and in-orbit delivery of satellites, satellite-based data distribution, space applications, and experiments and exploration of space both in unmanned and manned programmes.

V. Modes of International Cooperation

14. International agreements can be seen as major and effective mechanisms for international space cooperation. While party autonomy and independence concerning choice of modes for cooperation play an important role, there is also a call to keep in mind consensus, special need of developing countries, and fair and equitable terms, conditions and basis for all parties involved in space cooperation.

15. Multilateral cooperation agreements include international agreements such as binding international treaties, implementing agreements, memorandums of understanding and exchange of letters. To be qualified as international agreement in substance, basic elements are to be met (international/agreement/between subjects of international law/in written form/governed by international law). Also non-binding multilateral agreements exist, which includes General Assembly resolutions. The legal and contractual capacity of intergovernmental organizations is widely accepted.

16. Types of cooperative agreements include:

(a) Multilateral agreements;

(b) Bilateral agreements; and

(c) Regional mechanisms.

17. Various forms of international agreements in the field of space cooperation include:

(a) Government-to-Government framework agreements;

(b) Intergovernmental agreements;

(c) Agency-to-Agency memorandum of understanding;

(d) Implementing arrangements;

(e) Letters of agreement; and

(f) Letters of intent.

18. Multilateral coordination mechanisms or common forums on space issues of common interests include, inter alia:

(a) Inter-Agency Space Debris Coordination Committee (IADC);

(b) Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (International Charter on Space and Major Disasters);

(c) International Space Exploration Forum (ISEF);

(d) Group on Earth Observation (GEO);

(e) Committee on Earth Observation Satellites (CEOS); and

(f) International Committee on Global Navigation Satellite Systems (ICG).

VI. Regional Accent in Cooperation Mechanisms

19. Regional mechanisms can be a contribution to economic globalization in the long run. Other bilateral instruments such as Memorandums of Understanding (MOU) and Letters of Intent (LOI) were historically not intended to generate legally binding obligations, but were generally intended to cover exploratory talks between two parties, either on general cooperation or specific projects.

20. The European Space Agency (ESA) is a long-standing intergovernmental agency founded by a convention. A more recent regional and interregional cooperation and coordination mechanism in the space field is the Asia-Pacific Space Cooperation Organization (APSCO), which like ESA, is founded by a convention.

21. The Asia-Pacific Regional Space Agency Forum (APRSAF) is a partnership for cooperation among governmental and non-governmental actors. The African Leadership Conference on Space Science and Technology for Sustainable Development (ALC) and the Space Conference of the Americas are intergovernmental platforms that can be used as initiator for more specific cooperation and coordination at various levels.

22. The Regional Centres for Space Science and Technology Education, affiliated to the United Nations, are training and education institutions governed by intergovernmental agreements and arrangements with connection to the Office for Outer Space Affairs of the Secretariat and to the Committee on the Peaceful Uses of Outer Space.

23. Attention has to be paid to the tendency that regional and geographical aspects have influenced the intensity of cooperative mechanisms.

24. As reported by one European member State of the Committee, the 1st pillar is the European cooperation at national level as well as at the European level through ESA and EU, and the 2nd pillar is international cooperation outside Europe. Another European member State mentions its space activities taking place primarily through participation in European programmes, especially those of ESA.

25. Likewise, examples of cooperative agreements of a Latin American member State of the Committee show that about half of its agreements are with regional partners and the rest with major spacefaring nations and an international organization. As reported by one African member State, the African Leadership Conference and the African Resources and Environmental Management Satellite Constellation Initiative are among regional cooperative mechanisms used.

26. Further, regional intergovernmental space organizations such as ESA and APSCO as well as other regional coordination mechanisms such as the Space Conference of Americas and APRSAF play an important role in facilitating and promoting regional space programmes.

27. It is found from the information by member States of the Committee that regional mechanisms often pave the way for wider international cooperation in terms of programmes and/or membership rather than hindering cooperation with States of other regions. For example, as reported, ESA is a valuable platform through which more effective cooperation is enabled with major spacefaring nations, developing countries, other international and regional organizations and coordination mechanisms. APRSAF also allows non Asia-Pacific space agencies and governmental bodies to be participants due, in part, to its flexible coordination requirements as a forum and not an intergovernmental organization with international personality.

VII. Bilateral Cooperation Mechanisms

28. Some member States of the Committee report that they employ a set of international instruments for bilateral space projects. Most notably, such instruments are consisted of Framework Agreements, binding under international law, to govern general legal principles as well as terms and conditions for future cooperation in a broad range of area of cooperation, and Implementing Agreements (or Implementing Arrangements) to provide for specific mission details.

29. Framework Agreements have been concluded even without an immediate specific cooperative project. Resolving in advance all of the legal issues that often arise in negotiating an agreement for space cooperation allows for more rapid conclusions of Implementing Agreements/Arrangements for such missions, and saves significant time and resources, thereby allowing space agencies to focus on performing their underlying scientific and technical missions more efficiently and effectively.

30. A Framework Agreement is often signed by the two Governments, but there are also cases where two national space agencies are the signatories thereof.

31. Whenever specific cooperative activities or missions are contemplated by space agencies, such activities are captured into an Implementing Agreement/Arrangement dealing with responsibilities of each Party specific to the cooperative activity or mission.

32. In many bilateral space missions without a Framework Agreement, the Implementing Agreement/Arrangement is concluded as a freestanding agreement, and contains hardware and operational allocation of responsibilities of each Party as well as key legal provisions which are also found in the Framework Agreement. Accordingly, as reported by one member State of the Committee, a natural sequence is a series of bilateral mission-specific Implementing Agreements/Arrangements between two countries that would develop into two kinds of instruments, or a Framework Agreement and an Implementing Agreement/Arrangement.

33. Key provisions in Framework Agreements cover, inter alia:

(a) The application of the United Nations treaties on outer space, and principles of international law;

(b) Best effort clauses;

(c) Jurisdiction clauses;

(d) Financial arrangements or no exchange of funds;

(e) Exchange of personnel;

(f) Exchange and transfer of goods and technical data; customs clearance of space commodities; data policy provision. A provision on exchange of technical data and goods often provides that the parties are only obliged to transfer those goods and technical data necessary to fulfil their respective responsibilities under the agreement and that all activities under the agreement will be carried out in accordance with each Party's national laws and regulations pertaining to export control;

(g) Provisions which pursue international responsibility and liability;

(h) Cross-waiver of liability, which establishes that each party assumes its own risks in relation to the activity and that, subject to a few exceptions, neither party will make a legal claim against the other for any damage or loss that may arise from the activity;

(i) Protection of intellectual property rights;

(j) Cooperation accession procedure (membership);

(k) Peaceful settlement of dispute, which provides a mechanism to resolve issues starting at the technical level and then raising the issue to more senior levels of management; and

(l) Concluding provisions on termination.

34. Types of bilateral agreements include:

(a) The existence of bilateral agreements provides evidence on the common perspective shared by the two States regarding peaceful uses of outer space and strong interests in the development of space-related technology;

(b) Bilateral agreements for certain space activities;

(c) Bilateral agreements for a specific space project; and

(d) Bilateral agreements as contractual documents for commercial services.

VIII. Multilateral Cooperation Mechanisms

A. The Example of the International Space Station

35. Some member States of the Committee report on cooperation within the framework of the International Space States (ISS) Intergovernmental Agreement. The International Space Station (ISS) Programme has employed the most elaborated and detailed mechanisms and is, without any doubt, the most technologically challenging, and politically and operationally complex space exploration programme ever undertaken. The ISS cooperation is governed by a three-tier legal framework:

(a) 1998 Intergovernmental Agreement on Space Station Cooperation (ISS/IGA) signed by each Partner: USA, Russia, Canada, Japan, and participating Member States of ESA;

(b) 1998 Memorandum of Understanding (MOU) between NASA and ESA, Russian Space Agency (Roscosmos) and Canadian Space Agency (CSA), respectively, as well as NASA and the Government of Japan; and

(c) Various Implementing Arrangements concluded between NASA and another Cooperating Agency, when the need arises.

36. In addition, different categories of formal arrangements or programme-related instruments, either legally binding on the parties or affecting in some way their interests, have been concluded.

37. The ISS/IGA as the Framework Agreement contains, inter alia, the following provisions:

(a) Application of four of the United Nations treaties on outer space;

(b) Each Partner bears cost of fulfilling its respective responsibilities;

(c) Cross-waiver of liability;

(d) Jurisdiction and control over the elements a Partner registers and of its personnel;

(e) Customs and immigration;

(f) Exchange of data and goods as well as treatment of data and goods in transition;

(g) Intellectual property;

(h) Criminal jurisdiction; and

(i) Consultations.

38. A legal framework for commercial use of the ISS is also set forth in the ISS/IGA and in various documents agreed upon as appropriate among Partners.

B. Examples of Legally Binding Mechanisms for Multilateral Cooperation

39. Including the ISS/IGA, multilateral endeavours which require long-lasting commitment and large cost, thus needing the clear allocation of responsibilities of participating States, tend to be conducted through legally binding agreements with or without accompanying legally non-binding instruments.

40. A legally binding agreement used for a multilateral project may be negotiated among participating States at the time of starting the project. Also, a multilateral project may be conducted through a network of bilateral binding agreements most notably through Framework Agreements. One example would be the Mars Science Laboratory (MSL) Mission. Operational instruments of this mission contains five bilateral agreements of two types with the United States being the hub: First type is the Framework Agreements concluded between US-Canada and US-France. Second type is the bilateral cooperative agreements binding under international law which are agreed upon between the United States and Germany, Russia and Spain, respectively. This example may also demonstrate the pivotal role of Framework Agreements in both bilateral and multilateral cooperative mechanisms.

C. Examples of Legally Non-binding Mechanisms for Multilateral Cooperation

41. The characteristics of cooperative mechanisms for multilateral projects seem, in part, to lie in the fact that legal nature of the instruments is less important than the substantive contents of mission and continued commitment of members, participants and contributors.

42. The importance of multilateral coordination mechanism such as Group on Earth Observation (GEO), International Charter on Space and Major Disasters, International Space Exploration Coordination Group (ISECG), and Committee on Earth Observation Satellites (CEOS) is not lessened by the fact that such mechanism are not constructed by legally binding multilateral agreements. Their value would be assessed by the accomplishment of the mission originally aimed at and in the longer term, and by the degree of well-being and safety of the international society as a whole.

43. It could be mentioning, as reported by some member States of the Committee, that some of the multilateral coordination mechanisms are assessed as having been arisen based on and/or stimulated by the resolution of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) entitled “The Space Millennium: Vienna Declaration on Space and Human Development”. This reiterates the importance of the United Nations in international cooperation in space activities.

44. Due to the increasing number of spacefaring nations and diversifying interests in space activities, non-binding space-related multilateral agreements are increasing

in the last three decades. The advantages of legally non-binding agreements are commonly to facilitate the drafting of new rules for reference and guidance; persuasive in reality; parties have a moral obligation not to violate these rules; and help the development of customary rules in the space field.

45. Some space projects employ the combination of a Framework Agreement and an Implementing Agreement, including Memorandums of Understanding (MOU), such as the ISS/IGA, as indicated above. In other cases a separate Implementing Agreement is concluded which in its form is independent from the main agreement, such as the Convention on the Transfer and Use of Data of Remote Sensing of the Earth from Outer Space of 1978. This convention was adopted independently but within the framework of the Agreement on Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes (INTERCOSMOS) in 1976.

46. A Framework Agreement, bilateral or multilateral, is often used for resolving in advance fundamental legal issues in any future projects so that an Implementing Agreement or Arrangement can be concluded in a more rapid and smooth fashion. If partners focus on elaborating a specific cooperative project within an already agreed legal framework, it could facilitate and deepen the project concerned.