

Second French contribution to the Working Group on Legal Aspects of Space Resource Activities November 2024

Introduction

France considers, as it has recalled in recent years in statements to the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS), that governance of space resource activities must be subject to an international and multilateral approach. As such, it considers COPUOS to be the appropriate forum to reflect on this governance framework.

France recalls that it has supported the creation of a working group on space resources ever since the proposal by Greece and Belgium at the 58th session of the COPUOS Legal Subcommittee. This is a subject where the legal issues have an intrinsically international dimension that transcends the individual interests of States and private operators and concerns the international community as a whole.

In 2022, France made an initial contribution (Doc. A/AC.105/C.2/2023/CRP.12) to propose points relating to the scope of the Working Group and the nature of the information it will need to collect in its work, to the applicability and the application of the existing legal framework to space resources, and to the drafting of recommended basic principles.

In 2024, the Chair and Vice-Chair of the Working Group invited the COPUOS States and permanent observers to provide contributions on elements for initial draft recommended principles for space resource activities by March 2025 (Doc. OOSA/2024/43 CU 2024/221). In response, building on its existing commitment to this important subject, France wishes to make a second contribution to the Working Group.

This contribution and its content have been drawn up on the basis of and in line with those provided in the 2022 French contribution. The proposed points come in particular from 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 (Outer Space Treaty) and are inspired by legal instruments concerning other international spaces, such as the sea and the Antarctic.

Proposed points and principles:

The proposals herein aim to provide the Working Group with food for thought. They may be discussed, amended or supplemented by France.

1. Purpose of space resource activities

States should conduct activities involving extraction and utilization of space resources for scientific research purposes and in support of the exploration of outer space and celestial bodies.

Explanations:

In its initial contribution, France proposed considering the utilization of space resources based not on the type of activity (drilling, processing, etc.) but rather on its purpose. Such an approach would initially focus on activities with public interest aims, such as science and exploration and activities conducted in support thereof, as well as on short- and medium-term needs. Activities involving extraction and utilization of space resources are already being carried out for scientific purposes (such as missions bringing back samples). As regards envisaged future activities involving space resources, these primarily involve supporting scientific missions and space exploration (such as processing of lunar regolith to build shelters, and the recovery of water). Such an approach would also be compatible with the Outer Space Treaty while focusing on near and real needs.

Here, we propose to refer to extraction and utilization to cover all types of resource activity without necessarily listing them, which would run the risk of lacking exhaustiveness. These two terms notably cover the following activities: drilling, collection, extraction, processing, consumption, exploitation and transport of space resources.

2. Peaceful utilization and compliance with international law

Space resource extraction and utilization activities should be conducted solely for peaceful purposes and in accordance with international law, including the Outer Space Treaty.

Explanations:

As France underlined in its initial contribution to the Working Group, it is essential that space resource activities, like any activity conducted in space, be conducted in accordance with the principles in the Outer Space Treaty.

On the principle of solely peaceful use: The various instruments of international space law establish the principle of peaceful use of outer space. Article IV of the Outer Space Treaty stipulates that the States Parties shall use the Moon and other celestial bodies solely for peaceful purposes. This principle is restated in Article 3.1 of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement). This principle aims to limit activities with not totally peaceful purposes and does not therefore prohibit the use of military equipment and personnel for peaceful purposes (Article IV of the Outer Space Treaty and Article 3.3 of the Moon Agreement). In practice, some astronauts have a military background. Similarly, the equipment used during exploration missions contains dual-use technologies.

On the principle of compliance of space activities with international law: This principle was enshrined for the first time in 1963 in the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space. It was then reiterated in the Outer Space Treaty (Article III) and the Moon Agreement (Article 2). The aim is that States should respect the other conventional and non-conventional rules of international law in the course of their activities, in addition to the treaties applicable to outer space. That includes, for example, the Charter of the United Nations, the law of the International Telecommunication Union and international environmental law.

3. Interests of all countries and present and future generations

States should conduct their resource extraction and utilization activities in the interests of all countries, irrespective of economic or scientific development, and those of all current and future generations.

In their space activities, States should take care to extract and use space resources reasonably and taking due account of the rights and interests of other States.

Explanations:

Article 1 of the Outer Space Treaty stipulates that *"The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind."* The first paragraph of this part of the contribution recalls this principle of the use of outer space in the interests of all countries and recognizes its applicability to the specific case of the extraction and use of space resources. The reference to the interests of present and future generations is inspired by Article 4.1 of the Moon Agreement. As mentioned in its initial contribution, France is convinced of the relevance of applying this principle to space resource activities. In extracting and using space resources, including as regards consumable resources, States should take into consideration the interests of present and future generations in order to guarantee them lasting access to and use of these resources.

The second paragraph represents a component of the principle of using resources in the interests of all countries. This enshrines the principle of extracting and using space resources reasonably. Although its scope may be interpreted to different extents, it implies that extraction and use of resources should not exceed what is truly necessary to fulfil the goals of the activity involving the resources. Moreover, in their space resource activities, States should take due account of the rights and interests of other States. This point recognizes the applicability of the *due regard* principle to activities in outer space, which is devoid of national sovereignty, all states being free and equal in conducting their activities. As such, and to ensure the safety of space activities and peace, each

State should take into consideration the rights and interests of the other States if they want other States to take theirs into account in conducting their own activities. This is a norm of responsible behaviour. The principle of *due regard* is mentioned in Article IX of the Outer Space Treaty and in many other international conventions, including those on the law of the sea and environmental law.

4. Non-appropriation

Space resource extraction and use must not constitute national appropriation as referred to in Article II of the Outer Space Treaty.

The placement of personnel, space vehicles, equipment, facilities, stations and installations on or below the surface of the Moon or any other celestial body, including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or the subsurface of said Moon or celestial body.

Explanations:

Outer space resource extraction and use should comply with the commitments made by all States, including the 1963 Declaration adopted by consensus under the auspices of the United Nations General Assembly and the Outer Space Treaty, which has been widely ratified. These two texts establish the principle of non-appropriation of outer space, the Moon and other celestial bodies. The first paragraph of this point recalls this, mentioning that space resource extraction and use cannot constitute national appropriation.

The second paragraph is inspired by Article 11.3 of the Moon Agreement. It aims to clarify the scope of the non-appropriation principle, applying it to various forms of occupation of the Moon and other celestial bodies. This point helps exclude any de facto national appropriation resulting from the protracted presence of facilities on an area of a celestial body, thus guaranteeing the effective and lasting application of the principle of free access to all areas of celestial bodies.

5. Authorization and continuing supervision

In accordance with Article VI of the Outer Space Treaty, all activities relating to space resource extraction and use should require authorization and continuing supervision by the appropriate State. When activities of this nature are carried on by an international organization, responsibility for compliance with this principle should be borne both by the international organization and by the States that are part thereof.

Explanations:

This point seeks to confirm the applicability to space resource extraction and use activities of Article VI of the Outer Space Treaty, which requires authorization and continuing supervision by each State of space activities carried on by its non-governmental entities.

By establishing a national authorization and supervision regime for space resource extraction and use activities, States could require their nationals to comply with certain requirements in these activities, including the protection of property, persons, the environment and public health.

6. Environmental protection

When conducting space resource activities, States shall take measures to prevent the disruption of the existing balance of the environment, whether by introducing adverse changes in that environment, by its harmful contamination through the introduction of extra-environmental matter or otherwise. States should also take measures to avoid harmfully affecting the environment of the

Earth through the introduction of matter from outer space. States should also take into account any generally accepted international standards established in this regard.

Explanations:

This point draws largely on the Moon Agreement, which builds on Article IX of the Outer Space Treaty. It aims to prevent any contamination, including chemical, biological, radiological or nuclear contamination, either of the Moon or other celestial bodies caused by importing extra-environmental matter ("forward contamination"), on the one hand, or of Earth caused by importing extra-terrestrial matter ("backward contamination"). This two-fold risk, both for the environment of Earth and outer space and for the reliability of scientific results, has been identified by States since the beginning of space exploration. In this respect, this point refers to compliance with established and widely accepted international standards in this regard so as to guide States in the implementation of this principle. This wording, which draws on the provisions of the UN Convention on the Law of the Sea, also makes accepted standards developed by technical organizations applicable. Concerning prevention of any contamination in the course of space activities, States may draw on the work of the Committee on Space Research (COSPAR), created under the auspices of the International Science Council (ISC). COSPAR adopted the COSPAR Policy on Planetary Protection in 2002 and has updated it several times since. This Policy establishes appropriate rules for various types of mission, guaranteeing protection of Earth and celestial bodies. France's technical regulations require all its space operators to comply with these principles. The reference to generally accepted international standards also encompasses other standards, including for management of biological and health risks.

7. Exchange of information

Any State planning to conduct space resource extraction or use activities should inform the Secretary-General of the United Nations as well as the public and the international scientific community, to the greatest extent feasible and practicable, of the conduct of such activities. As such, it should notify the Secretary-General of the United Nations, before such activities begin, of:

- Identification of the entity [*or entities*] carrying on the activity;
- Identification of the site envisaged for the conduct of the activity/Determination of the area of interest;
- Type and quantity of resources involved;
- Purposes of the activity;
- Description of operations;
- Envisaged activity start and end dates;
- Expected outcomes (scientific, technical, financial, etc.) for both the entity carrying on the activity and all countries;
- Environmental impacts, with measures envisaged to preserve the integrity of the environment of places of collection and processing of resources (extraction method, site rehabilitation and restoration, etc.).

States should inform the Secretary General of the United Nations of any significant change to this information.

On receiving the said information, the Secretary-General of the United Nations should be prepared to disseminate it immediately and effectively.

Explanations:

This point resumes the principle of information sharing in Article XI of the Outer Space Treaty and adapts it to space resource activities. In this respect, States should inform the Secretary-General of the United Nations as well as the public and the international scientific community of the conduct of space resource extraction and use activities.

It also proposes that each State should provide, prior to any activity, certain information required to ensure transparency, both as regards the safety of activities for all States and entities present on the celestial body in question and so that the international community can monitor activities conducted

on celestial bodies. This information would enable each State to ensure resource activities are conducted in the interest and to the benefit of all countries, that resource extraction and use are reasonable in light of the purposes of the mission, and that the State or private entity involved adopts responsible behaviour, while checking the compatibility of the declared activities with its own current or future activities.

France also proposes that States conducting or supervising such activities should inform the Secretary General of the United Nations of any significant change to this information, whether such changes are voluntary or involuntary, for example if required by an unexpected event. Such an obligation to notify changes to the conditions of space operations is also enshrined in French space operation regulations.

8. Coordination/consultation mechanism

Any State that has reason to believe that a space resource extraction or use activity planned by it or its nationals would cause potentially harmful interference with activities of other States should undertake appropriate international consultations before proceeding with such activity.

Any State that has reason to believe that a space resource extraction or use activity planned by another State would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including the Moon and other celestial bodies, should be able to request consultation concerning the activity.

The consultations referred to in the above paragraphs should be open to any States that so request.

Each State participating in such consultations should seek a mutually acceptable resolution of any controversy and shall bear in mind the rights and interests of all States. As such, States should take care to prioritize scientific research.

Explanations:

These points, and particularly the first two paragraphs, resume and adapt the obligations under Article IX of the Outer Space Treaty, establishing an international consultation mechanism if a State, or its nationals, might cause interference with the activities of other States, or if a State, or its nationals, believe they may suffer interference due to the activities of other States. These points seem central when it comes to transparent, reasonable and safe use of space resources. Space resource activities could be conducted by various actors of various nationalities, sometimes in proximity to one another. The principles of prior notice and consultation help ensure a degree of coordination of future space resources.

The third paragraph is inspired by the Moon Agreement and enables any State that so requests to take part in consultations. This point aims to enhance the transparency of space resource activities.

The fourth paragraph establishes an aim for consultations. Insofar as an obligation to consult does not constitute an obligation to agree, and in the absence of any genuine dispute settlement mechanism, States should seek a mutually acceptable solution with due regard for the rights and interests of all States. This point is also inspired by the Moon Agreement (Article 15). Such a priority would help ensure the chosen solution truly addresses the rights and interests of all States, insofar as research activities directly benefit all States.

9. Benefit-sharing for scientific purposes

States should conduct their resource extraction and utilization activities for the benefit of all countries, irrespective of economic or scientific development.

States should disseminate and publish, for the public and the international scientific community, through appropriate channels and as soon as possible, the scientific results of their space resource extraction and use activities.

States should have regard to the desirability of making a portion of the space resources obtained during their activities available to other interested States and the international scientific community for scientific investigation.

Explanations:

In return for the right to extract and use space resources, States should conduct their resource extraction and utilization activities for the benefit of all countries, irrespective of economic or scientific development. As such, two principles are proposed for sharing of benefits from resource extraction and use.

Firstly, States should disseminate and publish, for the public and the international scientific community, as soon as possible, the scientific results of their space resource extraction and use activities. Scientific research is the only activity which, when conducted by one party has a direct benefit on all, so long as results are published and disseminated. The principle of sharing scientific results is mentioned in Article XI of the Outer Space Treaty and in many other international conventions, including those on the law of the sea and the Antarctic.

This obligation to publish and disseminate scientific results should apply to both basic research and applied research, carried out by States and by non-governmental entities under their supervision.

At the same time, States should also make a portion of the space resources obtained during their activities available to other interested States and the international scientific community for scientific investigation. The wording of this principle is inspired by the Moon Agreement and aligned with state practice in this area: the various rocks brought back from the Moon and other celestial bodies are regularly subject to loan agreements for scientific investigation. The conditions for making these resources available are not developed here and are left to the discretion of the States concerned.