



**Committee on the Peaceful
Uses of Outer Space
Legal Subcommittee****Report of the Working Group on National Legislation
Relevant to the Peaceful Exploration and Use of Outer
Space on the work conducted under its multi-year workplan****I. Summary of the work conducted by the Working Group
under its multi-year workplan**

1. In accordance with General Assembly resolution 63/90, the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, at its forty-eighth session, in 2009, established a working group on the agenda item entitled “General exchange of information on national legislation relevant to the peaceful exploration and use of outer space”. The Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space was chaired by Irmgard Marboe (Austria).

2. The Working Group conducted its work in accordance with the following multi-year workplan, endorsed by the Committee on the Peaceful Uses of Outer Space at its fiftieth session, in 2007 (A/62/20, para. 219), and amended at its fifty-fourth session, in 2011 (A/66/20, para. 212):

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| 2008 | Request to Member States for national legislation relating to governmental and non-governmental space activities. Presentations by Member States of reports on their national legislation |
| 2009 | Examination, in a working group, of the responses received in order to develop an understanding of the manner in which Member States have regulated governmental and non-governmental space activities |
| 2010 | Working Group continues to examine responses received and begins drafting its report, including conclusions |
| 2011 | Working Group finalizes its report to the Legal Subcommittee |
| 2012 | Extended mandate for the Working Group to finalize its report |



3. In 2009, the Working Group invited Member States to respond to seven main questions that had been prepared by the Chair and were contained in the report of the Chair of the Working Group considered by the Subcommittee at its forty-eighth session, in 2009 (A/AC.105/935, annex III), in addition to a question on the absence of national space legislation. The Working Group also agreed that the Secretariat, in consultation with the Chair, should prepare, for consideration by the Working Group at its next meeting, a paper providing a schematic overview of existing national regulatory frameworks, based on information received from Member States. That schematic overview was contained in conference room paper A/AC.105/C.2/2010/CRP.12.
4. In 2010, the Working Group continued its examination of the responses received from Member States to requests for information on national legislation on space activities, it reviewed the achievements of the previous year and it considered issues such as regulation by States of transfers of ownership of space objects and transfer of authorized space activities to third parties, the participation of private individuals in space flights, treatment in service-provider contracts of issues relating to liability and responsibility for collisions of satellites in outer space. The Working Group discussed the basic structure and methodology of its final report and agreed that the Secretariat, in consultation with the Chair, should prepare a draft report on the work of the Working Group for consideration and finalization by the Working Group in 2011. It also agreed to complete the schematic overview of national regulatory frameworks for space activities using information provided by Member States during the 2010-2011 intersessional period.
5. In 2011, the Working Group conducted a detailed review of the updated schematic overview of national regulatory frameworks for space activities (A/AC.105/C.2/2011/CRP.9) and the draft report (A/AC.105/C.2/2011/CRP.4) by assessing the structure and validity of the overview of national space legislation, conducting a thorough analysis of the draft set of conclusions and determining the process of finalizing the report of the Working Group.
6. At its meeting in 2012, the Working Group had before it a working paper submitted by the Chair of the Working Group, entitled "Revised draft set of conclusions of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space" (A/AC.105/C.2/L.286), as well as the draft report of the Working Group (A/AC.105/C.2/2012/CRP.9). The draft report was subsequently revised (A/AC.105/C.2/2012/CRP.9/Rev.2). On the basis of those documents, the Working Group adopted the present report. The Working Group also had before it a revised schematic overview of national regulatory frameworks for space activities prepared on the basis of updates provided by Member States and with an introductory summary of national regulatory frameworks (A/AC.105/C.2/2012/CRP.8 and Add.1). The Working Group recommended that the schematic overview be regularly updated for consideration by the Subcommittee.
7. Based on its workplan, the Working Group also considered the work carried out previously by the Legal Subcommittee and its working groups under the agenda items "Review of the concept of the 'launching State'" and "Practice of States and international organizations in registering space objects". The Working Group took note of General Assembly resolutions 59/115, on the application of the concept of the "launching State" and 62/101, on recommendations on enhancing the practice of

States and international intergovernmental organizations in registering space objects.

8. The Working Group, under its multi-year workplan, had before it the following documents:

(a) Note by the Secretariat entitled “Information on national legislation relevant to the peaceful exploration and use of outer space”, containing replies from the Czech Republic, Germany, Morocco, Nicaragua, Turkey and Ukraine (A/AC.105/912);

(b) Note by the Secretariat entitled “Information on national legislation relevant to the peaceful exploration and use of outer space”, containing replies from China, the Czech Republic, Germany, Mongolia, the Republic of Korea and Turkey (A/AC.105/932);

(c) Note by the Secretariat entitled “Information on national legislation relevant to the peaceful exploration and use of outer space”, containing replies from Austria, the Czech Republic, Estonia, Germany, Iraq, Japan, Serbia, Spain, Thailand and the United Kingdom of Great Britain and Northern Ireland (A/AC.105/957 and Add.1);

(d) Report on the United Nations/Thailand Workshop on Space Law on the theme “Activities of States in outer space in the light of new developments: meeting international responsibilities and establishing national legal and policy frameworks”, held in Bangkok from 16 to 19 November 2010 (A/AC.105/989).

9. The Working Group had before it the following conference room papers containing information received from Member States:

(a) Conference room paper containing information received from the United States of America on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2008/CRP.9);

(b) Conference room paper containing information received from Brazil, Colombia, Germany and the Netherlands on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2008/CRP.14);

(c) Conference room paper containing information received from Poland and Saudi Arabia on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2009/CRP.9);

(d) Conference room paper containing information received from South Africa on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2009/CRP.13);

(e) Conference room paper containing information received from the Republic of Korea on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2009/CRP.14);

(f) Conference room paper containing a reply from Mexico on national legislation and practice relating to the definition and delimitation of outer space (A/AC.105/C.2/2009/CRP.15);

(g) Conference room paper containing information received from Japan on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2009/CRP.17);

(h) Conference room paper containing information received from France on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2009/CRP.18);

(i) Conference room paper containing information received from the Netherlands on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2010/CRP.11);

(j) Conference room paper containing information received from Tunisia on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2010/CRP.14);

(k) Conference room paper containing information received from Italy and Ukraine on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2011/CRP.7);

(l) Conference room paper containing information received from El Salvador on national legislation relevant to the peaceful exploration and use of outer space (A/AC.105/C.2/2011/CRP.13).

10. In order to facilitate the work of the Working Group, the following documents were also made available:

(a) Report of the Secretariat entitled “Review of the concept of the ‘launching State’”, containing a synthesis of State practice in applying the concept of the “launching State”, covering the definition of “space activities”; jurisdiction over space activities; the safety of space activities; liability, including third-party insurance and financial responsibility requirements; indemnification procedures; and the registration of launches (A/AC.105/768);

(b) Note by the Secretariat entitled “Review of existing national space legislation illustrating how States are implementing, as appropriate, their responsibilities to authorize and provide continuing supervision of non-governmental entities in outer space”, containing a review of the national space legislation of Argentina, Australia, Japan, the Russian Federation, South Africa, Sweden, Ukraine, the United Kingdom and the United States (A/AC.105/C.2/L.224).

II. Findings of the Working Group

11. The Working Group noted the importance of the responsibility of States to ensure the use of outer space for peaceful purposes. It recalled the obligations contained in the United Nations treaties on outer space to exchange information on the nature, conduct, locations and results of space activities, in particular by establishing national registries and submitting registration data to the Secretary-General. The Working Group also referred to the common understanding that States should consider acceding to and implementing the United Nations treaties on outer space.

12. The Working Group also noted that national regulatory frameworks represented different legal systems with either unified acts or a combination of national legal instruments, ranging from administrative regulations to decrees and laws; that States had adapted their national legal frameworks according to their specific needs and practical considerations; and that national legal requirements depended to a high degree on the range of space activities conducted and the level of involvement of the private sector.

13. The Working Group further noted that national regulatory frameworks generally covered the following main areas: national jurisdiction for regulating the space activities of governmental and non-governmental entities; procedures for authorizing and licensing national space activities; liability and indemnification procedures; registration of objects launched into outer space and establishment of national registries; and regulatory frameworks for national space agencies or other national entities mandated to carry out and supervise space activities.

14. The Working Group considered the nine issues presented below, together with their corresponding findings.

Reasons for States to enact national space legislation or the reasons for the absence of such legislation

15. In considering the reasons for States to enact national space legislation, the Working Group noted that common grounds for national legislation were the need to fulfil obligations under treaties to which a State had become a party, the need to achieve consistency and predictability in the conduct of space activities under the jurisdiction of the State and the need to provide a practical regulatory system for private sector involvement. The need for improved national coordination and the integration of a wider range of national activities had also provided incentives for regulatory frameworks at the national level.

16. The Working Group noted that in some cases it was difficult to draw a precise line to distinguish governmental activities from non-governmental activities and that that could be a reason for States not to enact national space legislation, despite their involvement in space activities that could entail international responsibility and international liability. The Working Group also noted, however, that some States saw a need to regulate space activities of a governmental or public character in order to establish a reliable and organized legal framework for national space activities.

17. The Working Group further noted that several States did not regard themselves as spacefaring nations and that for that reason they had thus far not considered enacting national space legislation. It was observed, however, that the increasing number of private actors carrying out space activities could lead to involvement by such States as well. Furthermore, States taking part in the space activities of international organizations needed to take into account the international legal framework of space activities. Even if it was up to each State to determine how to assume its international responsibility for national space activities, certain regulations at the national level could be in the interest of the State itself.

Scope of space activities targeted by national regulatory frameworks

18. The Working Group noted a broad variety of activities targeted by national regulatory frameworks, such as the launching of objects into outer space, the operation of a launch or re-entry site, the operation and guidance of space objects, in some cases the design and manufacturing of spacecraft, the application of space science and technology such as that used for Earth observation and telecommunications, and exploration activities and research.

19. The Working Group also noted the differences in how States regulated national space activities to reflect the differences between performing launch operations or mainly operating space objects in outer space. The Working Group further noted the difficulty in defining the term “operation” when used in connection with space objects. In view of the complex nature of space activities, the Working Group observed the existence of multiple licences, whereby the operator of a space object often needed authorization and a licence from more than one State.

Scope of national jurisdiction over space activities

20. The Working Group noted that most national regulatory regimes required authorization to be obtained for space activities carried out from the national territory. Most regimes also required authorization to be obtained for certain launches outside the national territory in which nationals were involved, such as citizens and non-governmental entities established or incorporated under the laws of the State in question. States considered that to be an important means of ensuring that space activities were in compliance with the relevant standards and rules, wherever those activities took place, including on the high seas. Coordination between the States or actors involved would avoid duplication, for example in terms of the registration of objects launched into outer space, and unnecessary burdens for operators of space objects. The Working Group noted that, with a view to balancing public and private interests, in some cases a more complex jurisdictional system was applied in order to regulate private sector involvement.

Competence of national authorities in the authorization, registration and supervision of space activities

21. The Working Group noted that, in most States, there were different national authorities involved in the authorization, registration and supervision of space activities, ranging from space agencies and other similar authorities to ministerial-level authorities, in some cases involving different governmental entities for different activities requiring a licence. It was noted that in some cases separate procedures existed for the licensing of operators conducting space activities and for the authorization of specific projects and programmes. The Working Group noted that there was a broad variety of means of registering space objects with a national registry, including through a Government ministry or through a space agency or similar authority.

22. With respect to the establishment of a national register, the Working Group noted that some States had more than one register and that some States were currently reorganizing their national registries. The Working Group also noted that in many cases an authority different from the one responsible for keeping the national registry was in charge of transmitting the relevant information to the Secretary-General.

Conditions to be fulfilled for registration and authorization

23. The Working Group noted that ensuring the safety of space activities was an important policy underpinning most national space laws, in particular laws governing the launch of objects into outer space. Most launch-licensing regimes included measures to ensure that the launch did not create a significant risk of personal injury, environmental damage or damage to property. Conditions concerning safety and technological standards were also closely linked to States' concerns about meeting space debris mitigation requirements. In many States, independent external experts were involved in the process of evaluating the safety of space activities. Space debris mitigation measures developed at the national or international levels also played an important role in national authorization procedures. Other conditions related to the professional and financial qualifications of the applicant. In addition, national security and foreign policy interests were usually involved in authorization and licensing procedures.

Compliance and monitoring

24. The Working Group noted that most States applied procedures for the supervision and monitoring of licensed space activities, either through a system of in situ inspections or a more general reporting requirement for the fulfilment of obligations under a licence. Most national regulatory regimes operated with a set of administrative measures for minor violations and a sanctions regime, including penal sanctions in some cases, for more serious offences.

Regulations concerning liability

25. The Working Group noted that the Convention on International Liability for Damage Caused by Space Objects contained a liability regime with no ceiling. However, several States had established ways of seeking recourse from operators, which was achieved in most cases by introducing a national liability regime for space operations, if necessary, in addition to general tort law or environmental liability. The Working Group noted the existence of a broad range of solutions for liability obligations and indemnification procedures, as well as insurance requirements.

26. Often, general liability and insurance requirements were laid down in laws complemented by a secondary level of regulations that went into greater detail. The Working Group noted the various approaches taken by States to regulate the indemnification of liability incurred by a State, in cases where a State had included defined ceilings for the limitation of liability of space object operators in its national

legislation. The Working Group observed that it was in the interest of all States engaging in space activities to protect themselves against international liability. For that reason, national requirements to that effect should be an incentive for States to establish relevant national regulatory regimes.

Regulation by States of transfers of ownership of space objects and of transfers of authorized space activities to third parties

27. The Working Group considered in particular the issues of transfer of ownership and control of space objects in orbit and of transfer of licences for space activities. Of concern to the Working Group was the effect of changes in the operation of space objects on international law, rather than the private or commercial law aspects of such changes. The issue of change in status of ownership or control of a space object was closely linked to the jurisdiction of the States concerned, in particular where non-governmental actors were involved.

The participation of private individuals in space flights and the treatment in service-provider contracts of issues of liability and responsibility for collisions of satellites in outer space

28. The Working Group noted that some States had national regulations governing the activities of private individuals in space flights. The Working Group also noted that some States were preparing regulations concerning liability issues in service-provider contracts, in particular in connection with global positioning and navigation services.

III. Conclusions

29. The Working Group emphasized the importance of appropriate means of ensuring that outer space was used for peaceful purposes and that the obligations under international law and those specifically contained in the United Nations treaties on outer space were implemented.

30. The Working Group observed that, in view of the increasing participation of private actors in space activities, appropriate action at the national level was needed, in particular by authorizing and supervising non-governmental space activities.

31. The Working Group took note of the need to maintain the sustainable use of outer space, in particular by mitigating space debris, and to ensure the safety of space activities and minimize the potential harm to the Earth and space environment.

32. The Working Group recalled the obligations contained in the United Nations treaties on outer space to provide information, to the greatest extent feasible and practicable, on the nature, conduct, locations and results of space activities, in particular through registration.

33. The Working Group noted that the need for consistency and transparency with regard to the authorization and supervision of space activities and the need for a

practical regulatory system for private sector involvement provided further incentives for enacting regulatory frameworks at the national level. It also noted that some States also included national space activities of a governmental or public character within that framework.

34. The Working Group recognized the different approaches taken by States in dealing with various aspects of national space activities, namely by means of unified acts or a combination of national legal instruments, and noted that States had adapted their national legal frameworks according to their specific needs and practical considerations and that national legal requirements depended to a high degree on the range of space activities conducted and the level of involvement of the private sector.

35. The Working Group agreed that the following elements, as reflected in the annex to the present report, could be considered by States when enacting regulatory frameworks for national space activities, as appropriate, taking into account the specific needs of the State concerned:

Scope of application

1. The scope of space activities targeted by national regulatory frameworks may include, as appropriate, the launching of objects into and their return from outer space, the operation of a launch or re-entry site and the operation and control of space objects in orbit. Other issues to be considered may include the design and manufacturing of spacecraft, the application of space science and technology, and exploration activities and research.
2. The scope of application should take into account the role of a State as a launching State and as a responsible State under the United Nations treaties on outer space and should determine national jurisdiction over space activities carried out from the national territory of a State and space activities carried out elsewhere in which its nationals, whether natural or juridical persons, are involved, provided, however, that if another State is exercising jurisdiction with respect to such activities, the State should consider forbearing from duplicative requirements and avoid unnecessary burdens for operators of space objects.

Authorization and licensing

3. Space activities should require authorization by a competent national authority. States might employ separate procedures for the licensing of operators conducting space activities and for the authorization of specific projects and programmes.
4. The conditions for authorization should be consistent with the international obligations and commitments of States, in particular under the United Nations treaties on outer space and other relevant instruments, and may pay due regard to the national security and foreign policy interests of States.
5. The authorities and procedures, as well as the conditions, for granting, modifying, suspending and revoking the authorization should be set out clearly to establish a predictable and reliable regulatory framework.

Safety

6. The conditions for authorization should help to verify that space activities are carried out in a safe manner and minimize risks to persons, the environment or property and that those activities do not lead to harmful interference with other space activities. Such conditions could also relate to the technological qualifications of the applicant.
7. The conditions for authorization could include safety and technical standards that are in line with space debris mitigation guidelines, in particular the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space.

Continuing supervision of activities of non-governmental entities

8. Appropriate procedures should ensure continuing supervision and monitoring of authorized space activities by applying, for example, a system of in situ inspections or a more general reporting requirement. Enforcement mechanisms could include administrative measures or a sanctions regime, as appropriate.

Registration

9. A national registry of objects launched into outer space should be maintained by an appropriate national authority. Operators should be requested to submit information to that authority to enable the State to submit the relevant information to the Secretary-General in accordance with international instruments, including the Convention on Registration of Objects Launched into Outer Space and General Assembly resolutions 1721 (XVI) B and 62/101.
10. Operators of space objects could also be requested to submit information on any change in the main characteristics of space objects, in particular of those which have become non-functional.

Liability and insurance

11. States could consider ways of seeking recourse from operators if their international liability has become engaged. In order to ensure appropriate coverage for damage claims, States could introduce insurance requirements and indemnification procedures, as appropriate.

Transfer of ownership or control of space objects in orbit

12. Continuing supervision of non-governmental space activities should be ensured in the event of a transfer of ownership or control of a space object in orbit. National regulations may provide for authorization requirements or obligations for the submission of information on the change in status of the operation of a space object.

Annex

National space legislation: regulative categories — set of elements for consideration by States in enacting national space legislation

<i>Regulative category</i>	<i>Examples of corresponding United Nations treaties and principles on outer space, related General Assembly resolutions and other guidelines</i>	<i>Elements</i>
Scope of application	Partly, article VI 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 ^a	Activities (<i>ratione materiae</i>); jurisdiction (<i>ratione loci/personae</i>)
Authorization and licensing	Article VI of the Outer Space Treaty; General Assembly resolution 59/115	Licensing procedure; change of status (modification, suspension or revocation) of licence; conditions for granting licences; connection to other relative categories (registration, liability, safety)
Safety	Article IX of the Outer Space Treaty; Principles Relevant to the Use of Nuclear Power Sources in Outer Space; ^b Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space ^c	Avoidance of harmful interference with activities in the peaceful exploration and use of outer space, as stipulated in article IX of the Outer Space Treaty; design and technical requirements, safety assessments and risk analysis; responses to emergency situations
Continuing supervision of activities of non-governmental entities	Article VI of the Outer Space Treaty	Mechanisms for the supervising role and competencies of supervising authorities (during normal operation and in case of incidents)
Registration	Articles VIII and XI of the Outer Space Treaty; articles II and IV of the Convention on Registration of Objects Launched into Outer Space; ^d General Assembly resolutions 1721 (XVI) B and 62/101	Establishment of appropriate registry at the national level; obligation to submit information to the competent authority; submission of data to the Secretary-General
Liability and insurance	Articles VI and VII of the Outer Space Treaty; articles II and III of the Convention on International Liability for Damage Caused by Space Objects ^e	Obligation of insurance and financial responsibility; amount of insurance coverage (minimum requirements); State indemnification
Transfer of ownership or control of space objects in orbit	Articles VI, VII and VIII of the Outer Space Treaty; Convention on Registration of Objects Launched into Outer Space; Convention on International Liability for Damage Caused by Space Objects; General Assembly resolution 62/101	Adequate requirements for the transfer of satellites

^a United Nations, *Treaty Series*, vol. 610, No. 8843.

^b General Assembly resolution 47/68.

^c *Official Records of the General Assembly, Sixty-second Session, Supplement No. 20* (A/62/20), annex.

^d United Nations, *Treaty Series*, vol. 1023, No. 15020.

^e *Ibid.*, vol. 961, No. 13810.