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**Committee on the Peaceful  
Uses of Outer Space**  
**Sixtieth session**  
Vienna, 7-16 June 2017  
Item 5 of the provisional agenda  
**Ways and means of maintaining outer space for  
peaceful purposes**

**Views of States members of the Committee on the Peaceful  
Uses of Outer Space on transparency and confidence-  
building measures in outer space activities**

**Note by the Secretariat**

1. At its fifty-ninth session, the Committee on the Peaceful Uses of Outer Space agreed that States members of the Committee should be invited to submit their views on transparency and confidence-building measures in outer space activities, on the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities ([A/68/189](#)) and on document [A/AC.105/1116](#) to the sixtieth session of the Committee, in 2017, and that those matters should be addressed under the item on ways and means of maintaining outer space for peaceful purposes (see [A/71/20](#), para. 272).
2. In a note verbale dated 26 January 2017, the Secretary-General invited States members of the Committee to submit their reports by 25 March 2017. The present note was prepared by the Secretariat based on the replies received to that invitation.
3. The present document contains a reply received from Japan.



## Japan

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### Introduction

In accordance with the agreement made by the Committee on the Peaceful Uses of Outer Space at its fifty-ninth session (A/71/20, paras. 271 and 272), Japan submits this paper as Japan's view on transparency and confidence-building measures in outer space activities.

Today, the use of outer space contributes to various aspects of everyday life and the importance of space activities are ever increasing. Outer space is being used by more and more actors, not only by governments, but also by non-governmental organizations and private sector entities. On the other hand, legally binding rules relating to outer space activities have not been established since the United Nations space treaties were developed in the 1970s. Faced with the emerging challenges which were not fully considered 40 years ago, such as orbital congestion, space debris, and anti-satellite activities, the transparency and confidence-building measures in outer space activities contained in the recommendations of the Report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (A/68/189, 29 July 2013) can complement the existing space treaties and contribute to the rule of law in outer space.

Japan believes that these measures are important for ensuring the safety, stability and sustainability of the outer space environment and spoke out about the importance of these measures in the G7 Joint Communiqué of Foreign Ministers and the Statement on Non-proliferation and Disarmament which were issued in Hiroshima, Japan in April 2016. In the statement, we reaffirm our commitment and call on all States to review and implement, to the extent practicable, the proposed transparency and confidence-building measures, such as information exchange on space policies and strategies, information exchange and notifications related to outer space activities in a timely manner and an effective consultation mechanism.

In accordance with the statement, Japan introduces the national status of implementation of the measures in this paper.

### Implementation status

**37. States should publish information on their national space policies and strategies, including those relating to security. States should also publish information on their major outer space research and space applications programmes in order to build a climate of trust and confidence between States worldwide on military and non-military matters. This should be carried out in line with existing multilateral commitments. States may provide any additional information reflecting their relevant defence policy, military strategies and doctrines.**

Japan has published the "Basic Space Plan", which provides basic policy and concrete measures relating to the development and use of outer space in Japan. Its implementation schedule is revised and also published every year. In addition, respective ministries or agencies publish white papers and reports of their policies and activities, which also include ones in the field of space.

**38. Consistent with existing political commitments for national reporting on major military expenditure and guidelines and recommendations for objective information on military matters to all Member States, Governments should use existing mechanisms to report on their military space expenditure as well as other national security space activities (General Assembly resolution 66/20, para. 1, and A/66/89 and Corr.1-3, annex II). They may supplement such reports with explanatory remarks regarding submitted data to explain or**

clarify the figures provided in the reports, such as total national security space expenditure as a share of gross domestic product and major changes from previous reports.

Japan reports on and publishes its space budget, including for national security, every year.

**39. Exchanges of information on the basic orbital parameters of outer space objects may assist in increasing the accuracy of the tracking of space objects. Specific measures could include:**

**(a) Exchange of information on the orbital elements of space objects and the provision, to the extent practicable, of notifications of potential orbital conjunctions involving spacecraft to affected government and private sector spacecraft operators;**

**(b) Provision of registration information to the United Nations as soon as practicable, in accordance with the Convention on Registration of Objects Launched into Outer Space (1975) and General Assembly resolution 62/101, entitled “Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects”;**

**(c) Provision of public access to national registries of space objects. Such notifications, through bilateral, regional and multilateral mechanisms, can provide transparency regarding specific space activities. Shared awareness of spaceflight activity may foster global spaceflight safety and contribute to avoidance of mishaps, misperceptions and mistrust.**

Japan adheres to the Convention on Registration of Objects Launched into Outer Space and submits registration information to the United Nations Office for Outer Space Affairs as soon as practicable.

**40. In accordance with the Outer Space Treaty, States should immediately inform other States or the Secretary-General of the United Nations of any phenomena they discover in outer space, including on the Moon and other celestial bodies, which could constitute a danger to the life or health of astronauts or to human spaceflight activity. States should also consider providing, on a voluntary basis, timely information to other governmental and non-governmental spacecraft operators of natural phenomena that may cause potentially harmful interference to spacecraft engaged in the peaceful exploration and use of outer space.**

The National Institute of Information and Communications Technology (NICT) of Japan provides space weather information through the website “NICT Space Weather Information Center” (<http://swc.nict.go.jp/contents/index.php>).

**41. States should provide pre-launch notifications of space vehicle launches and the mission of launch vehicles. The Group noted that the Hague Code of Conduct against Ballistic Missile Proliferation provides an example of such a notification.**

Japan provides pre-launch notifications of space vehicle launches in accordance with the Hague Code of Conduct against Ballistic Missile Proliferation.

**42. States should notify, in a timely manner and to the greatest extent practicable, potentially affected States of scheduled manoeuvres that may result in risk to the flight safety of the space objects of other States.**

When operating spacecraft, Japan performs conjunction assessments and considers the flight safety of other States’ space objects. In addition, when Japan’s spacecraft come close to the spacecraft of other States, Japan coordinates with their operators in order to avoid collisions to the extent practicable.

**43. States should support the development and implementation of measures to exchange information with and notify, in a timely manner and to the greatest**

**extent practicable, all States that may be affected, the Secretary-General of the United Nations and relevant international organizations of predicted high-risk re-entry events in which the re-entering space object or residual material from the re-entering space object potentially could cause significant damage or radioactive contamination.**

Japan provides information on re-entry of the space object to relevant international agencies that can provide notices to airmen and mariners to the extent practicable.

**44. States should, in a timely manner and to the greatest extent practicable, notify all other potentially affected States of events linked to natural and man-made threats to the flight safety of space objects. These may include risks caused by the malfunctioning of space objects or loss of control that could result in a significantly increased probability of a high-risk re-entry event or a collision between space objects.**

Japan publishes information on its outer space activities including on the events mentioned in this measure. For example, when the X-ray Astronomy Satellite ASTRO-H (Hitomi) malfunctioned last year, its operator, the Japan Aerospace Exploration Agency (JAXA), shared this information through press conferences. Japan also briefed the 59th session of the Committee on the latest developments of Hitomi.

**45. Intentional destruction of any on-orbit spacecraft and launch vehicle orbital stages or other harmful activities that generate long-lived debris should be avoided. When intentional break-ups are determined to be necessary, States should inform other potentially affected States of their plans, including measures that will be taken to ensure that intentional destruction is conducted at sufficiently low altitudes to limit the orbital lifetime of resulting fragments. All actions should be carried out in A/68/189 in conformity with the Space Debris Mitigation Guidelines of the United Nations as endorsed by the General Assembly in its resolution 62/217, entitled “International cooperation in the peaceful uses of outer space”.**

Japan has never intentionally destroyed a space object and has no intentions of doing so in the future.

**46. Voluntary familiarization visits can provide opportunities to improve international understanding of a State’s processes and procedures for space activities, including dual-use and military activities, and can provide context for the development and implementation of notifications and consultations.**

**47. Taking note of article X of the Outer Space Treaty, as well as other multilateral commitments, States are encouraged to consider, on a voluntary basis, expert visits to space facilities. Such visits could include space situational awareness centres.**

Japan accepts observers including experts from all over the world to visit space facilities in Japan, such as the JAXA Tanegashima Space Center and the JAXA Uchinoura Space Center, to the extent practicable in accordance with national regulations.

**48. Demonstrations of rockets and other space-related technologies could be carried out on a voluntary basis and in line with existing multilateral commitments and national export control regulations.**

Japan conducts all space activities in accordance with relevant multilateral commitments and national regulations.

**49. International cooperation in the peaceful uses of outer space provides a basis for all States to develop and strengthen their capacity to undertake and/or derive benefits from space activities. International cooperation on scientific and technical projects between both spacefaring and non-spacefaring nations can contribute to confidence-building.**

50. While there are a number of States that have acquired significant space-related capabilities, many non-spacefaring States have a strong desire to participate directly in outer space activities and to share in space technology.

51. As noted in the study on the application of confidence-building measures in outer space (A/48/305 and Corr.1), the disparity in the space capabilities of States, the inability of most States to participate in space activities without the assistance of others, uncertainty concerning sufficient transfer of space technologies between States and the inability of many States to acquire significant space-based information are factors contributing to a lack of confidence among States. International cooperation is an important vehicle for promoting the right of each nation to achieve its legitimate objectives of benefiting from space technology for its own development and welfare.

52. The Group further noted that each State is free to determine the nature of its participation in international space cooperation on an equitable and mutually acceptable basis with regard to the legitimate rights and interests of parties' concerns, for example, appropriate technology safeguard arrangements, multilateral commitments and relevant standards and practices.

53. The Group agreed that the Outer Space Treaty should be regarded as a basis for the furthering of international cooperation in outer space activities and, in accordance with article I of the Treaty, that the exploration and use of outer space "shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind".

54. The Group took note of the 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 (General Assembly resolution 51/122, annex) and specifically noted that the Declaration should form a basis for the development of international cooperation in outer space activities. Paragraphs 3 and 5 of the Declaration are of particular relevance.

55. Bilateral, regional and multilateral capacity-building programmes on space science and technologies can contribute to developing the space skills and knowledge of educators and scientists in developing countries throughout the world. Such programmes should build capacity through a focus on theory, research, applications, field exercises and pilot projects in order to advance social and economic development in their target States and regions. The Group noted that there are many regional and multilateral capacity-building programmes already in place. In particular, the United Nations Programme on Space Applications is a well-established capacity-building programme that would benefit from wider support from spacefaring countries. Other international organizations such as the United Nations Educational, Scientific and Cultural Organization, WMO and ITU contribute specific capacity-building programmes in their respective areas of competence. Capacity-building programmes are also available, in various formats, at the bilateral level. Such programmes are often associated with a specific cooperation agreement.

56. Adoption of an open satellite data-collection and dissemination policy for sustainable economic and social development would be consistent with General Assembly resolution 41/65, entitled "Principles relating to remote sensing of the Earth from outer space". In promoting data dissemination policies, States could also consider establishing programmes aimed at training and educating users in developing countries to receive and interpret relevant satellite-based data and to make such data available, useful and accessible to domestic and international end users. The Group noted that some States already disseminate free remote sensing data for the promotion of economic and social development. The Group also noted that the United Nations Conference on Sustainable Development,

held in Rio de Janeiro, Brazil, in 2012, recognized the important role that space science and technology play in promoting sustainable development (see General Assembly resolution 66/288, annex).

Japan is actively participating in various international space cooperation programmes. With regard to cooperation relating to sustainable development, Japan plays a leading role in the Group on Earth Observations (GEO) and promotes the Global Earth Observation System of Systems (GEOSS), which can contribute to tackling global issues such as natural disasters, climate change, biodiversity, food security, agriculture and so on.

Japan also promotes international cooperation under the regional framework of the Asia-Pacific Regional Space Agency Forum (APRSAF), which is a unique forum in the region for enhancing space activities and gaining the socioeconomic benefits of space technologies and their applications.

In addition to these multilateral cooperation efforts, Japan is also part of various cooperation programmes that contribute to capacity-building in the field of space. For example, “KiboCUBE” is a United Nations-Japan collaborative programme, which offers developing countries the opportunity to deploy CubeSats from the Japanese experimental module “Kibo” of the International Space Station. Japan believes this programme can contribute to developing space skills and knowledge in developing countries.

In this context, Japan’s relevant ministries and agencies passed the “Basic strategy of capacity building for developing countries in the space field” last December. Japan will continue to contribute to capacity-building in the field of space.

**57. Timely and routine consultations through bilateral and multilateral diplomatic exchanges and other government-to-government mechanisms, including bilateral, military-to-military, scientific and other channels, can contribute to preventing mishaps, misperceptions and mistrust. They may also be useful in:**

- (a) Clarifying information regarding the exploration and use of space, including for national security purposes;
- (b) Clarifying information provided on space research and space applications programmes;
- (c) Clarifying ambiguous situations;
- (d) Discussing the implementation of agreed transparency and confidence-building measures in outer space activities;
- (e) Discussing the modalities and appropriate international mechanisms for addressing practical aspects of outer space uses;
- (f) Preventing or minimizing potential risks of physical damage or harmful interference.

**58. States are encouraged to consider using existing consultative mechanisms, for example, those provided for in article IX of the Outer Space Treaty and in the relevant provisions of the ITU Constitution and Radio Regulations.**

Japan has signed various government-to-government consultation frameworks on space issues with other countries. Additionally, Japan actively participates in multilateral fora such as the Committee, International Telecommunication Union, the Conference on Disarmament and so on.

**60. Outreach measures can improve understanding between States as well as regional, multilateral, non-governmental and private sector cooperation. This can help to promote the security of all States by fostering mutual trust through the implementation of political and diplomatic outreach measures relating to outer space activities. Specific measures may include States’ participation in thematic workshops and conferences on space security issues.**

Japan hosted the second ASEAN Regional Forum (ARF) space security workshop in Tokyo in 2014 as well as other workshops and conferences on space issues, such as the “International symposium on ensuring stable use of outer space”. Apart from that, Japan also participates actively in workshops and conferences held in foreign countries.

**61. Spacefaring States should inform the Secretary-General, the general public and the international scientific community of the character, conduct, locations and results of outer space activities, in accordance with the Outer Space Treaty.**

Japan publishes information on its outer space activities through press releases, websites, presentations at conferences, workshops and so on.

**62. The Group noted the important intellectual contribution of international organizations and non-governmental organizations to facilitating outreach activities. Such activities provide an opportunity for all States and other relevant stakeholders to develop constructive dialogue. Within the United Nations system, the work of the Office for Outer Space Affairs, the Office for Disarmament Affairs and the United Nations Institute for Disarmament Research are of particular note. States should actively encourage all stakeholders, including academia and non-governmental organizations, to actively participate in raising public awareness about outer space policies and activities.**

JAXA supports the front lines of education through educator training programmes, and the development of learning material that leverages the results achieved in various space programmes. JAXA also participates in a range of education-related international conferences, as well as activities organized by international organizations.

**63. States are encouraged, including through their space agencies or other authorized entities, existing mechanisms and international organizations, to promote the coordination of their space policies and space programmes in order to enhance the safety and predictability of the uses of space. In support of that goal, they may also conclude bilateral, regional or multilateral arrangements, consistent with multilateral commitments.**

Japan introduces and coordinates space policies and programmes through various mechanisms, including the consultation frameworks and the multilateral fora mentioned in the implementation status under paragraphs 57-58.

**67. States should seek to participate, to the maximum extent possible, in the outer space-related activities of intergovernmental entities of the United Nations system, such as the Conference on Disarmament, ITU, WMO, the Commission on Sustainable Development and any of their successor bodies. States conducting space activities should actively participate, as members or observers, in activities of the Committee on the Peaceful Uses of Outer Space.**

Japan actively participates in the outer space-related discussions and activities of the United Nations system, including the Committee, Conference on Disarmament, International Telecommunication Union, World Meteorological Organization, and so on.

**69. The Group endorses efforts to pursue political commitments, for example, in the form of unilateral declarations, bilateral commitments or a multilateral code of conduct, to encourage responsible actions in, and the peaceful use of, outer space. The Group concludes that voluntary political measures can form the basis for consideration of concepts and proposals for legally binding obligations.**

In the Joint Communiqué of G7 Foreign Ministers’ Meeting in Hiroshima, Japan in April 2016, we committed to enhancing the long-term safety, security, sustainability and stability of the space environment, to increasing transparency in space activities, and to strengthening norms of responsible behaviour for all outer space activities.



**70. The Group encourages States to review and implement the proposed transparency and confidence-building measures through relevant national mechanisms on a voluntary basis. Transparency and confidence-building measures should be implemented to the greatest extent practicable and in a manner that is consistent with States' national interests. As specific unilateral, bilateral, regional and multilateral transparency and confidence-building measures are agreed to, States should regularly review the implementation of the measures and discuss potential additional ones that may be necessary, including those necessitated owing to advances in the development of space technologies and in their application.**

Japan acknowledges the importance of reviewing the implementation of these measures and submits this document to this end.

**71. In order to build confidence and trust among States, the Group recommends universal participation in, implementation of and full adherence to the existing legal framework relating to outer space activities, to which they are parties, or subscribe, which includes: the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space; the Convention on International Liability for Damage Caused by Space Objects; the Convention on Registration of Objects Launched into Outer Space; the Constitution and the Convention of the International Telecommunication Union and its Radio Regulations, as amended; the Convention of the World Meteorological Organization, as amended; the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water; and the Comprehensive Nuclear-Test-Ban Treaty. States that have not yet become parties to the international treaties governing the use of outer space should consider ratifying or acceding to those treaties.**

Japan ratifies and adheres to all the treaties listed in this measure.

**73. The Group further recommends that Member States take measures to implement, to the greatest extent practicable, principles and guidelines endorsed on the basis of consensus by the Committee on the Peaceful Uses of Outer Space and the General Assembly. Member States should also consider, where appropriate, taking measures to implement other internationally recognized space-related principles.**

With regard to the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, JAXA established the "JAXA space debris mitigation standard", in accordance with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space and the ISO 24113 "Space Debris Mitigation Requirements", and conducts its activities in accordance with this standard.

In addition, Japan is now setting up a proper mechanism that covers the private sector's space activities. In consequence, Japan established the "Act concerning launch and control of satellites" in November 2016. This act specifies that license applicants for satellite operations shall meet required criteria that prevent them from increasing space debris by taking appropriate measures: to ensure the proper structure of satellites that prevent the diffusion of any equipment and component to the outer space; to prevent collision with other satellites; and to dispose satellites under proper conditions.

### **Conclusion**

These transparency and confidence-building measures in outer space activities play a great role in complementing the space treaties and ensuring safety, stability, and sustainability of the outer space environment. Japan affirms its commitment and calls on all Member States to review and implement these measures.