
Conference on Disarmament

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Note Verbale dated 29 August 2016 from the Delegation of the United States of America addressed to the Secretary-General of the Conference on Disarmament transmitting the submission of the United States to the Conference on Disarmament: "Implementing the Recommendations of the Report (A/68/189*) of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities to Enhance Stability in Outer Space"

The Delegation of the United States of America to the Conference on Disarmament presents its compliments to Secretary-General of the Conference on Disarmament Michael Moeller and has the honour of transmitting to the Secretariat the attached subject-matter:

Submission of the United States to the Conference on Disarmament: "Implementing the Recommendations of the Report (A/68/189*) of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities to Enhance Stability in Outer Space".

The United States delegation would appreciate the Secretariat's assistance in issuing and circulating this Report as an official document of the Conference on Disarmament.

The Delegation of the United States of America to the Conference on Disarmament avails itself of this opportunity to renew to Secretary-General of the Conference on Disarmament Michael Moeller the assurances of its highest consideration.

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Submission of the United States to the Conference on Disarmament: "Implementing the Recommendations of the Report (A/68/189*) of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities to Enhance Stability in Outer Space"

Introduction

1. The United States is committed to ensuring the long-term sustainability, stability, safety, and security of the outer space environment. Addressing the issues associated with orbital congestion, collision avoidance, and responsible and peaceful behaviour in space is the responsibility of all who are engaged in space activities. In considering options for international cooperation to ensure space security and sustainability, some nations would advocate for new, legally binding arms control agreement with a view to prevent the placement of weapons in outer space and to prevent the use of force against space objects. The United States has commented in detail on the challenges of such an approach.

2. In contrast, the United States is convinced that outer space challenges confronting the international community can be addressed through practical, near-term initiatives. Outer space transparency and confidence-building measures (TCBMs) offer a pragmatic, voluntary approach to addressing near-term concerns for outer space security and sustainability. Accordingly, the United States is pleased to provide its views on how to make practical use of the recommendations contained in the 2013 consensus report of the United Nations Group of Governmental Experts (GGE) on Transparency and Confidence-Building Measures in Outer Space Activities, in the context of the ongoing work of the Conference on Disarmament (CD).

3. The United States welcomes the achievement of landmark consensus by the GGE. The GGE study was a unique opportunity to establish consensus on the importance and priority of voluntary and pragmatic TCBMs seeking to ensure the sustainability and safety of the space environment, as well as to strengthen stability and security in outer space for all nations. The recommendations offered by the GGE study provide an effective starting point for discussions on addressing challenges to space security and sustainability.

4. The United States is pleased that the United Nations General Assembly, in 2013, at its sixty-eighth session, welcomed the note by the Secretary-General transmitting the report of the GGE and encouraged Member States to review and implement, to the greatest extent practicable, the proposed transparency and confidence-building measures contained in the report, through relevant national mechanisms, on a voluntary basis and in a manner consistent with the national interests of Member States. Furthermore, the United Nations General Assembly requested that the Secretary-General circulate the report to all other relevant entities and organizations of the United Nations system (including the Conference on Disarmament) to facilitate the effective implementation of the conclusions and recommendations contained therein, as appropriate.¹

5. The United States is also pleased to note its co-sponsorship, with the Russian Federation and China, of three resolutions (A/RES/68/50, A/RES/69/38, and A/RES/70/53) that were adopted by the United Nations General Assembly in 2013, 2014, and 2015, respectively. These resolutions encouraged Member States to review and implement, to the

¹ Transparency and confidence-building measures in outer space (A/RES/68/50), December 10, 2013.

greatest extent practicable, on a voluntary basis, and through relevant national mechanisms, the proposed TCBMs contained in the GGE report. In particular, Resolution 70/53 encourages Member States to hold regular discussions in the Committee on the Peaceful Uses of Outer Space (UNCOPUOS), the United Nations Disarmament Commission (UNDC), and the Conference on Disarmament on the prospects for their implementation. The United States also notes that the UNDC recently considered adopting an agenda item on outer space TCBMs in response to a proposal that the United States was pleased to co-sponsor with Russia and China. We hope that this new agenda item will be added to the Commission's agenda by the start of its 2017 session. Resolution 70/53 further requested the Secretary-General to submit to the General Assembly at its seventy-second session a report on the coordination of TCBMs in outer space activities in the United Nations system, with an annex containing Member States' submissions of views on TCBMs in outer space activities.

6. In this context, the United States welcomes the opportunity to share its views on: TCBMs identified by the GGE that are relevant to the work of the CD; US implementation of certain TCBMs recommended by the GGE; and considerations for the CD on how to leverage the work of the GGE.

7. It also should be noted that the United States has considered the recommendations of the GGE report as applicable to the work of UNCOPUOS, particularly the ongoing work of the Scientific and Technical Subcommittee (STSC) Working Group on the Long-Term Sustainability of Outer Space Activities (LTS). The United States submitted its views to UNCOPUOS in October 2014 (A/AC.105/1080). In addition, in 2016, the United States supported the development of thematic priorities within the STSC in anticipation of the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50). These thematic priorities include: (1) global partnership in space exploration and innovation; (2) international framework for space weather services; (3) strengthened space cooperation for global health; (4) international cooperation toward low-emission and resilient societies; (5) enhanced information exchange on space objects and events; and (6) capacity-building for the twenty-first century (A/AC.105/C.1/WGW/2016/L.1). The United States notes that, thematic priorities 5 and 6 are consistent with the GGE report's recommendations.

TCBMs Identified by the GGE of Relevance to the Conference on Disarmament and US Implementation

8. The GGE report acknowledges that outer space TCBMs can augment the safety, sustainability, and security and stability of day-to-day space operations, and can contribute both to the development of mutual understanding and to the strengthening of friendly relations between States and peoples. The United States believes the TCBMs below (taken in relevant part from identified paragraphs of the GGE report) are of most relevance to the work of the CD:

Information exchange on space policies

9. Paragraph 37: "States should publish information on their national space policies and strategies 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."

10. The United States implements this transparency measure by publishing principles, goals, and strategies for its national space activities, such as the 2010 US National Space Policy and the 2013 US National Space Transportation Policy. The United States also

participates in bilateral and multilateral space dialogues with a range of other spacefaring nations, which offer the opportunity to respond to questions regarding both published US Government policy statements and executive branch submissions to the US Congress.

Exchanges of information on major military outer space expenditure and other national security space activities

11. Paragraph 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, paragraph 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."

12. The United States publishes its government expenditures for all Federal space activities, not only military and national security, but also other government expenditures, in the annual Aeronautics and Space Report of the President. In accordance with the National Aeronautics and Space Act of 1958, the annual Aeronautics and Space Report includes a "comprehensive description of the programmed activities and the accomplishments of all agencies of the United States in the field of aeronautics and space activities during the preceding calendar year." More recently, the reports have been prepared on a fiscal-year basis, consistent with the budgetary period now used in programs of the Federal Government. On an annual basis, the leadership of our Federal space activities provides open testimony on our space activities for the upcoming fiscal year.

Information exchange and notifications related to outer space activities

13. Paragraph 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."

14. The United States implements these measures today. The United States adheres to the Convention on Registration of Objects Launched into Outer Space, submitting its information to the United Nations Office of Outer Space Activities (UNOOSA) and making the US registry data available through its usspaceobjectsregistry.state.gov website. The United States also provides registered users of the www.space-track.org website with basic orbital parameters of space objects and provides other spacecraft operators with close approach notifications, on an emergency basis and as requested, regarding potential collision hazards posed by other spacecraft and debris. The United States provides refined conjunction assessments to operators that provide detailed ephemeris data in response to the initial close approach notification.

15. Paragraph 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."

16. The United States implements this measure by providing space weather alerts through the www.swpc.noaa.gov website.

17. In addition to supporting the flight safety of its own human spaceflight missions, the United States also cooperates with China to minimize space object collision hazards to their human spaceflight programs. For example, the United States provides close approach notifications to China for its Shenzhou missions.

Notification of planned spacecraft launches

18. Paragraph 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."

19. The United States provides notifications of planned space launch vehicle launches consistent with its adherence to the Hague Code of Conduct.

Risk reduction notifications

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

21. The United States provides other spacecraft operators with close approach notifications on an emergency basis and as requested regarding potential collision hazards posed by other spacecraft and debris. The United States provides refined conjunction assessments to operators that provide detailed ephemeris data in response to the initial close approach notification regarding potential collision hazards. These refined assessments can help to ensure the efficiency and effectiveness of any evasive maneuvers performed by cooperating spacecraft operators. The United States uses its space situational awareness (SSA) information, including information it receives as part of its international SSA sharing program, to support operating its own spacecraft so as not to pose a spaceflight safety risk to the space objects of other States.

22. Paragraph 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."

23. The United States provides notices to airmen and mariners in areas affected by reentries and has provided notifications of uncontrolled reentries of several US space objects, even when the risk to public safety is assessed as extremely low. Additionally, the US National Aeronautics and Space Administration (NASA) is a member of the Inter-Agency Space Debris Coordination Committee (IADC), which has procedures for notification and monitoring of annual high-risk reentry test campaigns.

24. Paragraph 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."

25. The United States participates in the annual IADC re-entry test campaigns of uncontrolled re-entries of space objects. Recent examples of IADC re-entry test campaigns include the cooperative monitoring of uncontrolled re-entries of the US Upper Atmosphere Research Satellite and German ROSAT satellites in 2011, the Russian Phobos-Grunt spacecraft in 2012, and the European Space Agency's (ESA's) Gravity Field and Steady-State Ocean Circulation Explorer (GOCE) satellite in 2013.

26. The United States also has provided information to affected States as well as the broader international community regarding a malfunctioning US satellite (USA-193) in January 2008 and the collision of the Cosmos 2251 and Iridium 33 satellites in February 2009.

27. Paragraph 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 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'."

28. The United States implemented this measure when it provided diplomatic notifications of plans to engage the USA-193 satellite in February 2008. The United States also provided pre- and post-engagement briefings on debris mitigation measures associated with USA-193. US activities in this engagement were consistent with IADC and the Committee's Space Debris Mitigation Guidelines regarding intentional destruction.

Contact and visits to space launch sites

29. Paragraphs 46 and 47: "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. 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 [including space launch sites, flight command and control centres, and other operations facilities of outer space infrastructure]. Such visits could include space situational awareness centres."

30. In accordance with US technology transfer law and regulations and multilateral commitments, the United States regularly welcomes visits by international observers to NASA and the National Oceanic and Atmospheric Administration (NOAA) human spaceflight and robotic spacecraft operations centers. The United States has also invited military and civilian government experts to visit Department of Defense (DoD) spacecraft operations and the US Strategic Command's Joint Space Operations Center as part of military-to-military cooperation activities.

International cooperation

31. Paragraphs 49 and 51: "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 ... 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."

32. The United States is currently implementing this measure through a wide-range of bilateral and multilateral mechanisms employed to enhance international cooperation. For NOAA, international collaboration is critical to meeting its mission. NOAA partners bilaterally with its counterparts around the world on both space-based Earth observation data sharing and on joint satellite missions, and multilaterally through the Group on Earth Observations (GEO) and the Committee on Earth Observation Satellites (CEOS), the Coordination Group for Meteorological Satellites (CGMS), among other *fora*.

33. Paragraph 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."

34. The United States is currently implementing this measure by underpinning the work being done within the GEO and the CEOS, including running the GEONET cast Americas and playing a significant role in the CEOS Working Group on Capacity-Building and Data Democracy.

35. Paragraph 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."

36. One of the most useful sets of principles for sustainable development on Earth is the Principles Relating to the Remote Sensing of the Earth. These Principles introduced the concept of non-discriminatory data availability that has enabled the use of timely and high-quality space-derived geospatial data for sustainable development in application areas such as agriculture, deforestation assessment, disaster monitoring, drought relief, and land management in order to yield significant societal benefits. Dozens of countries now operate Earth observation satellites and cooperate in maximizing the use of information from these spacecraft to aid in the sustainable development of all countries. Under such organizations as CEOS and GEO, satellite data are becoming widely disseminated to user groups in governments, academic institutions and non-governmental bodies around the globe. Work on the critical issue of disaster warning and response has likewise been accelerated through efforts such as the United Nations Platform for Space-Based Information for Disaster Management and Emergency Response program (UN-SPIDER) and the International Charter on Space and Major Disasters.

37. Global open data access policies provide access to geospatial data either free of charge or at a nominal cost. For example, the US Geological Survey provides the international community, free of charge, with electronic access to all Landsat scenes held in the US Geological Survey-managed national archive of global scenes dating back to Landsat-1, launched in 1972. Additionally, all of NASA's satellite Earth observation data and derived information products continue to be discoverable, accessible, and available to all at no cost through the NASA Earth Observing System Data and Information System. Likewise, NOAA has provided all of the data from its missions in near-real-time to the international community for decades, as well as providing geostationary satellite coverage over South and Central America for short-term weather forecasting and severe storm

monitoring. NOAA also leads several capacity building activities, including training meteorologists from South and Central America to use satellite data, hosting satellite user conferences, and leading virtual and in-person workshops in Africa, under the auspices of the CEOS Working Group for Capacity Building and Data Democracy. Several other ongoing or planned satellite missions have or will have similar data distribution policies. The principle of open and non-discriminatory data availability has promoted transparency and confidence-building among nations and is of vital importance to the sustainable development on Earth.

Consultative mechanisms

38. Paragraphs 57 and 58: "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.

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."

39. Without prejudice to article IX of the Outer Space Treaty, the United States conducts timely and routine consultations through bilateral and multilateral space security dialogues, military-to-military space cooperation *fora*, and other exchanges. These dialogues and exchanges are not only helpful for exchanging information about national space policies, strategies, and programs, but are also important for clarifying potentially ambiguous situations. The United States participates in multilateral *fora* including the Conference on Disarmament, UNCOPUOS, the Disarmament Commission, and the International Telecommunication Union where opportunities exist to discuss the development and implementation of long-term sustainability guidelines, TCBMs, and the prevention or minimization of potential risks of physical damage or harmful interference.

Outreach

40. Paragraph 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."

41. The United States routinely provides expert-level participation in United Nations-sponsored space applications, science, and technology workshops, as well as bilateral and regional space workshops. This includes sponsorship of three Association of Southeast

Asian Nations (ASEAN) Regional Forum meetings on space security in November 2012, October 2014, and November/December 2015, and sponsorship of annual United Nations Institute for Disarmament Research workshops (UNIDIR) on space security.

42. Paragraph 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."

The United States routinely publishes information on its outer space activities through public websites, presentations at conferences and workshops, and public diplomacy.

43. Paragraph 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."

44. The United States actively seeks inputs from private sector stakeholders on long-term sustainability issues through Federal advisory committees as well as the direct participation of private sector advisors to its UNCOPUOS delegations.

Coordination

45. Paragraph 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."

46. The United States is currently implementing this measure by pursuing a range of diplomatic and scientific exchanges in bilateral and multilateral space cooperation and space security dialogues. The United States also supports space situational awareness (SSA) information sharing for spaceflight safety and stability of outer space activities.

47. Paragraph 65: "The Group agreed that, for the purpose of strengthening coordination in outer space activities, States, international organizations and private sector actors conducting space programmes should establish focal points for coordination."

48. The United States is currently implementing this measure by establishing a directory of operations centers and other designated points of contact to ensure timely delivery of orbital close approach notifications. The US Strategic Command's Joint Space Operations Center has sought to obtain and maintain a roster of contact information for the full range of satellite operations centers. To help obtain this information, the United States has used its bilateral and multilateral diplomatic dialogues on space cooperation.

49. Paragraph 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, [the International Telecommunication Union] ITU, [the World Meteorological Organization] 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."

50. The United States is an active participant and supporter of the work of these space-related activities of the United Nations system including the CD, UNCOPUOS, ITU, WMO, as well as the UNIDIR.

Other Conclusions and Recommendations

51. Paragraph 68: "The Group of Governmental Experts recommends that States and international organizations, on a voluntary basis and without prejudice to the implementation of obligations deriving from existing legal commitments, consider and implement the transparency and confidence-building measures described in the present report."

52. The United States has actively supported this recommendation through its co-sponsorship, with the Russian Federation and China, of Resolutions 68/50, 69/38, and 70/53, all three of which were endorsed by the full United Nations General Assembly (UNGA). These resolutions urge relevant entities and organizations of the United Nations system, including the Conference on Disarmament, to assist in effectively implementing the conclusions and recommendations of the GGE report as appropriate.

53. Paragraph 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."

54. Today, space systems and their supporting infrastructure face a range of natural hazards and as well as a growing array of man-made threats that can deny, degrade, deceive, disrupt, or destroy outer space assets. Irresponsible acts against outer space systems would have implications beyond the space environment, disrupting worldwide services upon which civil, commercial, and national security space sectors depend. Given the increasing threat — through irresponsible acts, whether intentional or unintentional — to the long-term sustainability, stability, safety, and security of outer space operations, a non-legally binding multilateral code of conduct focused on the use of voluntary and pragmatic transparency and confidence-building measures could help prevent mishaps, misperceptions, and mistrust in outer space. Such a multilateral code of conduct should enhance national security and maintain the inherent right of individual and collective self-defense, a fundamental part of international law.

55. Paragraph 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."

56. The United States notes the efforts of the international community, and particularly UNCOPUOS and its Legal Subcommittee (LSC), to work through consensus to develop space law in a manner that builds upon the international legal framework for outer space activities and promotes space exploration. The United States actively participates in the LSC and complies with the legal obligations of the primary Outer Space Treaties — 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 Outer Space Treaty), the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the Rescue and Return Agreement), the Convention on International Liability for Damage Caused by Space Objects (the Liability Convention), and the Convention on Registration of Objects Launched into Outer Space (the Registration Convention). Additionally, the United States has supported UNCOPUOS and its subcommittees in drafting non-legally binding principles and guidelines such as the Principles Relating to the Remote Sensing of the Earth, Principles Relevant to the Use of Nuclear Power Sources in Outer Space, and the United Nations Space Debris Mitigation

Guidelines. The United States adheres to the "four core" space treaties, the ITU Constitution, Convention, and associated Regulations, the WMO Convention, and the Limited Test Ban Treaty.

57. The United States also supports the LSC's efforts with regard to its two standing agenda items that are intended to reinforce national governance for space sustainability. One of these agenda items invites States to exchange information on national legislation, emphasizing the importance of appropriate means of ensuring that outer space is used for peaceful purposes and that the State's obligations under international law are implemented. The other item invites States to exchange information on national mechanisms relating to space debris mitigation measures. This exchange of information is important because it allows countries to gain lessons learned from their neighbours and partners, and potentially implement similar mechanisms and processes.

58. Paragraph 72: "The Group of Governmental Experts recommends that the General Assembly decide how to further advance transparency and confidence-building measures and provide for their universal consideration and support, including by referring the above recommendations to the Committee on the Peaceful Uses of Outer Space, the United Nations Disarmament Commission and the Conference on Disarmament for consideration, as appropriate. The First and Fourth Committees of the General Assembly may also decide to hold a joint ad hoc meeting to address possible challenges to space security and sustainability."

59. The United States has sought to support this recommendation through its co-sponsorship, with the Russian Federation and China, of Resolutions 68/50, 69/38, and 70/53, all three of which were endorsed by the full United Nations General Assembly (UNGA). To date, the GGE report's recommendations have been considered by UNCOPUOS and the Conference on Disarmament, and the United States urges consideration of these recommendations by the United Nations Disarmament Commission as well. The United States was also pleased to be able to participate in the joint ad hoc meeting of the First and Fourth Committees, held on October 22, 2015.

60. Paragraph 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 General Assembly. Member States should also consider, where appropriate, taking measures to implement other internationally recognized space-related principles."

61. The United States has incorporated the United Nations General Assembly Principles on Remote Sensing and Space Nuclear Power Sources into domestic practice. Additionally, US domestic policy and regulations for space debris mitigation implement the Space Debris Mitigation Guidelines through the US Government Orbital Debris Mitigation Standard Practices as well as regulations of the Federal Communications Commission, the Federal Aviation Administration, and the Department of Commerce.

UNISPACE+50

62. In a number of areas, the international community has made progress since the consensus GGE report was issued in 2013. In preparation for the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50), the Steering Committee has identified a number of thematic priorities (A/AC.105/C.1/WGW/2016/L.1). The United States notes that at least two of these – enhanced information exchange on space objects and events and capacity-building for the twenty-first century – are consistent with the recommendations of the GGE report and urges

further consideration of these and the other UNISPACE+50 thematic priorities by Member States.

Considerations for Leveraging the Work of the GGE Going Forward

63. The guidelines that are being developed in the UNCOPUOS STSC LTS Working Group will help inform discussions on space TCBMs in United Nations entities and other relevant international organizations. The United States urges the completion of the long-term sustainability guidelines in 2016. In addition, the United States urges further consideration of the thematic priorities for the UNISPACE+50 anniversary, particularly those that are consistent with the TCBMs recommended by the GGE report.

64. The United States was pleased to participate in the joint ad hoc meeting of the First and Fourth Committees, held in October 2015. This meeting served as an opportunity to consider cross-United Nations coordination for the promotion and effective implementation of TCBMs, within existing resources, involving various entities of the United Nations Secretariat, such as the United Nations Office of Outer Space Affairs (UNOOSA) and the United Nations Office of Disarmament Affairs and other institutions involved in outer space activities (such as UNIDIR).

65. The United States also believes the United Nations Office of Disarmament Affairs (UNODA) should continue to play an active role in discussions of space TCBMs within this interagency mechanism, with UNODA providing expertise and support for implementation of TCBMs recommended by the GGE that are beyond the current mandates of UNOOSA, WMO, ITU, and other elements of the United Nations system (e.g., exchanges of information on major military outer space expenditures and other national security space activities). These implementation efforts also can be supplemented by outreach efforts by UNOOSA, UNODA, and UNIDIR. These outreach efforts can leverage UNIDIR's extensive experience in addressing the full range of space security and sustainability issues.

66. In addition to the specific measures described above, the GGE recommends that as specific unilateral, bilateral, regional, and multilateral TCBMs are agreed to, States should regularly review the implementation of such measures and discuss additional ones that may be necessary (A/68/189, paragraph 70). The United States believes the CD could be used for this purpose.
