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**Committee on the Peaceful
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Long-term sustainability of outer space activities

Workplan of expert group B: space debris, space operations and tools to support collaborative space situational awareness

Working paper submitted by expert group B

I. Introduction

1. At the forty-ninth session of the Scientific and Technical Subcommittee, the Working Group on the Long-term Sustainability of Outer Space Activities agreed that the expert groups established by the Working Group should prepare draft working documents on the basis of their work and that those working documents should be made available, in the six official languages of the United Nations, for comments by member States and permanent observers of the Committee on the Peaceful Uses of Outer Space, preferably on the margins of and/or during the fifty-fifth and fifty-sixth sessions of the Committee (A/AC.105/1001, annex IV, paras. 16 and 17).

II. Objective and outputs

2. In accordance with the terms of reference and methods of work of the Working Group on the Long-term Sustainability of Outer Space Activities (A/66/20, annex II), expert group B will develop a consolidated set of current practices and operating procedures, technical standards and policies to strengthen measures to mitigate orbital debris; to promote safe and responsible operations in space; and to improve the collection and sharing of information for space object collision avoidance, debris monitoring and general situational awareness. Using inputs provided by States members of the Committee, United Nations intergovernmental



bodies, relevant intergovernmental organizations and other international organizations and bodies, as listed in section V of the terms of reference and methods of work of the Working Group, as well as inputs from national non-governmental organizations and private sector actors provided through relevant States members of the Committee, the expert group will provide the Working Group with a set of voluntary best-practice guidelines focused on practical and prudent measures that could be implemented in a timely manner by States, either individually or collectively, and by governmental and private sector spacecraft and launch vehicle operators and manufacturers.

3. If, during the examination of topics within the scope of the expert group, new issues are raised that have not previously been addressed by the Scientific and Technical Subcommittee, the expert group may decide to bring such issues to the attention of the Working Group as areas for further consideration by the Subcommittee.

III. Method of work

4. The expert group will meet preferably on the margins of and/or during the sessions of the Scientific and Technical Subcommittee and the Committee and at other times to be agreed in advance, preferably at the session of the Scientific and Technical Subcommittee. The expert group will likewise use opportunities provided by intersessional coordination events, such as meetings, teleconferences, electronic exchanges of information, including through the dedicated web page established by the Working Group, and workshops, in accordance with the terms of reference and methods of work of the Working Group and as agreed by the Working Group at the forty-ninth session of the Scientific and Technical Subcommittee in February 2012 (A/AC.105/1001, annex IV, para. 16).

5. The expert group will agree on the appropriate status, reliability and relevance of the information to be provided to support the deliberations of the Working Group, which will consider inputs received and make any necessary decisions regarding those inputs. The expert group also will consult with other expert groups on cross-cutting issues, including gaps between expert group findings and recommendations on best-practice guidelines, and the relevant findings and recommendations of other expert groups.

IV. Preliminary outline of areas of work

6. The expert group has considered the broad outline of topics in the terms of reference and methods of work of the Working Group (A/66/20, annex II, para. 14) and has preliminarily identified the following areas for detailed consideration:

- (a) Space debris:
 - (i) Measurements, monitoring and characterization of the space debris population;
 - (ii) Measures to reduce the creation and proliferation of space debris;
 - (iii) Technical developments and possibilities regarding space debris removal;

- (iv) Controlled and uncontrolled re-entry notifications regarding substantial space objects, and notifications of the re-entry of space objects with hazardous substances on board;
- (b) Space operations:
 - (i) Conjunction assessment and collision avoidance processes and procedures;
 - (ii) Pre-launch and manoeuvre notifications (supporting launch collision avoidance and on-orbit collision avoidance for functional space objects);
 - (iii) Common standards, practices and guidelines;
- (c) Tools to support collaborative space situational awareness:
 - (i) Directories of spacecraft operators, space operations and space situational awareness organizations, and contact information;
 - (ii) Collection, sharing and dissemination of orbital data on functional and non-functional space objects;
 - (iii) Storage and exchange of descriptive information on the operational status and characteristics of functional and non-functional space objects, as they pertain to the long-term sustainability of space activities;
 - (iv) Information-sharing procedures, ensuring information consistency and information transfer reliability.

7. Additional topics may be considered by the expert group in response to contributions of States members of the Committee, United Nations intergovernmental bodies, relevant intergovernmental organizations and other international organizations and bodies, as listed in section V of the terms of reference and methods of work of the Working Group, as well as of national non-governmental organizations and private sector actors through the relevant States members of the Committee.

V. Preliminary schedule of work

8. The expert group intends to carry out its work in accordance with the following indicative workplan:

- 2012 Review of information provided by States, intergovernmental organizations and other entities as inputs to its work, including on the best-practice guidelines. Completion and agreement on the outline of the report of the expert group. Conduct consultations on cross-cutting issues with other expert groups, as appropriate. Continue development and review of draft inputs for the report of the expert group.
- 2013 Review of expert group activities under the auspices of the workshop on long-term sustainability organized in conjunction with the fiftieth session of the Scientific and Technical Subcommittee. Continue development of the draft report and recommended best-practice guidelines. Invite comments on the draft report and recommended best-practice guidelines from member States and permanent observers of the Committee. Conduct

consultations on cross-cutting issues with other expert groups, as appropriate, and coordinate with other expert groups in order to incorporate additional information to finalize the draft report and guidelines for the expert group's input to the draft report of the Working Group by October 2013, for consideration by the Working Group at its meetings during the fifty-first session of the Scientific and Technical Subcommittee, in 2014.

2014 Additional work as required to support preparation of the report of the Working Group, to be submitted to the Scientific and Technical Subcommittee.