

## **PROPOSAL BY SWITZERLAND**

### **Concerning the newly established Working-group on the Long-term sustainability of outer space activities**

At its 62<sup>nd</sup> session in June 2019, COPUOS decided to establish a Working-group under the agenda item on the long-term sustainability of outer space activities of the Scientific and Technical Subcommittee (see A/74/20, §§ 165-167). According to §166, the bureau of the newly established Working-group is to be elected at the beginning of the 57<sup>th</sup> session of the Scientific and Technical Subcommittee of COPUOS on the basis of nominations to be submitted to and circulated by the Secretariat during the intersessional period. At the 57th session, the Working-group should agree on its own terms of reference, methods of work and dedicated five-year workplan (cf §167).

Switzerland is convinced that the Working-group should be led by an international expert having both the scientific and the diplomatic expertise on the substance. This double expertise was held by the Chair of the first Working-group on the long-term sustainability of outer space activities and proved to be essential to bring the work forward in many sensitive situations and finally to success. According to these criteria, Switzerland has identified an expert, Prof. Dr Thomas Schildknecht, who is an ideal candidate to lead the newly established Working-group with a politically balanced, policy-informed and evidence-based approach. His curriculum is enclosed in Annex A.

Given the short time available during the 57<sup>th</sup> session for the Working-group to accomplish its mandate as given by COPUOS (cf §167 of A/74/20), Switzerland is submitting enclosed, for the consideration of other Member States, draft proposals for terms of reference, methods of work and workplan, with a view to support discussions. This should be seen as a spontaneous initiative to help support an efficient start of the work of the Working-group given that no Bureau has been elected yet and that the schedule will be tight and the mandate ambitious during the 57<sup>th</sup> session. These proposals are contained in a Non-paper enclosed in Annex B.

#### **Overview of the Swiss engagement on this topic at COPUOS**

Switzerland has engaged substantially and politically in the work of COPUOS on the long-term sustainability since its very beginning. In June 2014, Switzerland proposed a draft guideline on *new measures to manage the space debris population on the long-term* (revised version as D.2 in Annex II of A/74/20). With a view to make progress on UNISPACE+50's Thematic Priority 3 – *Enhanced information exchange on space objects and events*, Switzerland proposed in June 2017 the establishment of a new working-group under the chairmanship of Prof. Dr Thomas Schildknecht (cf A/A.105/2017/CRP.27<sup>1</sup>). In June 2018, at a time the Working-group on the long-term sustainability of outer space activities was concluding its mandate without final agreement, Switzerland proposed a way out by taking a double decision: adopting the 21 finalized guidelines and, at the same time, establishing a new Working-group to pursue the work (cf Non-paper by Switzerland<sup>2</sup>).

Convinced of the necessity to continue working at working-group level within COPUOS in order to address upcoming challenges to the long-term sustainability of outer space activities and to facilitate the implementation of the 21 adopted guidelines on the long-term sustainability of outer space activities, Switzerland held several initiatives in 2019. At the 56<sup>th</sup> session of the Scientific and Technical Subcommittee, Switzerland proposed to organise a brainstorming session on the day prior to the 62<sup>nd</sup> session of COPUOS in Vienna (see A/AC.105/1202, §263). In preparation for that meeting, Switzerland

<sup>1</sup>[http://www.unoosa.org/res/oosadoc/data/documents/2017/aac\\_1052017crp/aac\\_1052017crp\\_27\\_0\\_html/AC1052017CRP27E.pdf](http://www.unoosa.org/res/oosadoc/data/documents/2017/aac_1052017crp/aac_1052017crp_27_0_html/AC1052017CRP27E.pdf)

<sup>2</sup>[http://www.unoosa.org/documents/pdf/copuos/stsc/LTS/Switzerland\\_Non-paper\\_COPUOS61\\_20180626.pdf](http://www.unoosa.org/documents/pdf/copuos/stsc/LTS/Switzerland_Non-paper_COPUOS61_20180626.pdf)

held informal consultations on the margins of the 58<sup>th</sup> session of the Legal Subcommittee and proposed several topics for possible further work on the long-term sustainability (see Discussion Paper<sup>3</sup>). As noted by the Scientific and Technical Subcommittee, Switzerland held a full-day meeting on further work on the long-term sustainability of outer space activities on 11 June 2019. This meeting contributed to the successful adoption of the 21 guidelines by COPUOS. The programme and the presentations held at this meeting are available on OOSA website<sup>4</sup> as well as a Chair's summary<sup>5</sup>. Furthermore, together with Finland, Switzerland co-organised a workshop at European level on the implementation of the 21 adopted guidelines on the long-term sustainability of outer space activities. This workshop took place on 11 November 2019 in Paris.

#### **ANNEX A – Curriculum Vitae of Prof. Dr Thomas Schildknecht**

Prof. Dr Thomas Schildknecht is a leading expert on space debris, space safety and space sustainability. Under his leadership for more than 25 years, his research group has acquired a World-class expertise in the observation and the characterization of space debris. He is the Director of the Swiss Optical Ground Station and Geodynamics Observatory Zimmerwald and the Vice-Director of the Astronomical Institute of the University of Berne (AIUB), Switzerland. At both national and global level, he has served and continues to serve in numerous technical and policy-making committees gaining policy and diplomatic experience adding up to his scientific and technical expertise.

In 2014, Thomas Schildknecht was appointed as Chair of the European Space Agency (ESA) Space Safety Advisory Group advising the ESA Director responsible for the Space Safety Programme. He has also been a long-standing member of the ESA delegation in the Inter-Agency Space Debris Coordination Committee (IADC), where he led the Working-group on measurements and coordinated several Action items over years. In this capacity, he participated for instance in the multilateral negotiations of the IADC Space Debris Mitigation Guidelines which served as a basis for the Space Debris Mitigation Guidelines adopted in 2007 by COPUOS and the UN General Assembly.

For many years, he has contributed to bilateral and multilateral deliberations in fora like the US-Russian space surveillance workshops, the first Indo-US panel on Space Situational Awareness (SSA), Space Weather and Space Debris, the SSA Policy Fora at the Advanced Maui Optical and Space Surveillance Technologies (AMOS) Conference, and many others. He has also been working together with several national SSA centers within and outside Europe.

Since 2010, Thomas Schildknecht has been a member of the Swiss delegation to COPUOS where he has substantially contributed to the work of the Working-group on long-term sustainability of outer space activities of the Scientific and Technical Subcommittee of COPUOS and to the successful adoption of the 21 guidelines in 2019.

Prof. Dr Thomas Schildknecht is a full member of the International Academy of Astronautics (IAA), the President of the Swiss National Committee of the International Astronomical Union (IAU) and an outgoing member of the American Astronautical Society (AAS) Space Surveillance Committee. He also serves in the board of several international associations. At national level, he is member of several national associations and committees, including the Committee on Space Research of the Swiss Academy of Sciences. Moreover, he has recently been elected Member of the Federal Commission for Space Affairs, which is advising the Federal Council, the Executive of the Swiss government.

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<sup>3</sup> <http://www.unoosa.org/documents/pdf/copuos/lsc/2019/LSC-2019-NP03E.pdf>

<sup>4</sup> [http://www.unoosa.org/oosa/events/data/2019/meeting\\_on\\_possible\\_further\\_work\\_on\\_the\\_long-term\\_sustainability\\_of\\_outer\\_space\\_activities.html](http://www.unoosa.org/oosa/events/data/2019/meeting_on_possible_further_work_on_the_long-term_sustainability_of_outer_space_activities.html)

<sup>5</sup> [http://www.unoosa.org/res/oosadoc/data/documents/2019/aac\\_1052019crp/aac\\_1052019crp\\_16\\_0\\_html/AC105\\_2019\\_CRP16E.pdf](http://www.unoosa.org/res/oosadoc/data/documents/2019/aac_1052019crp/aac_1052019crp_16_0_html/AC105_2019_CRP16E.pdf)

## **ANNEX B – Non-paper by Switzerland on the long-term sustainability of outer space activities**

### **TERMS OF REFERENCE (draft as proposed by Switzerland)**

1. The work of the Working-group shall be grounded in the understanding that the exploration and use of outer space should be conducted in a way so as to ensure the long-term sustainability of outer space activities<sup>6</sup>. The Working-group will examine the long-term sustainability of outer space activities with a holistic approach<sup>7</sup> and in the wider context of sustainable development on Earth, including the contribution to the goals of the United Nations Agenda 2030 for sustainable development, taking into account the concerns and interests of all countries, in particular those of developing countries, and consistent with the peaceful uses of outer space<sup>8</sup>.
2. In doing so, the Working-group will take into consideration previous work done by the Committee and its sub-committees, in particular the 21 adopted guidelines on the long-term sustainability of outer space activities as contained in Annex II (Chapters I and II) of document A/74/20 adopted by the Committee on its 62<sup>nd</sup> session in June 2019. The Working-group will<sup>9</sup>:
  - a) Identify and study challenges to the long-term sustainability of outer space activities and consider possible new guidelines for the long-term sustainability of outer space activities;
  - b) Share experiences and lessons learned from the voluntary implementation of the 21 adopted guidelines on the long-term sustainability of outer space activities;
  - c) Raise awareness and build capacity, in particular among emerging space nations and developing countries.
3. The Working-Group will take as its legal framework the existing United Nations treaties and principles governing the activities of States in the exploration and use of outer space, in particular 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 (the “Outer Space Treaty”), which was adopted by the General Assembly in its resolution 2222 (XXI), opened for signature on 27 January 1967 and entered into force on 10 October 1967.<sup>10</sup>

### **METHODS OF WORK (draft as proposed by Switzerland)**

1. The Working-group will meet during the sessions of the Scientific and Technical Subcommittee. The meetings of the Working-group will be supported by interpretation services in all six official languages of the United Nations.
2. The Working-group may request to be granted the possibility to meet during the sessions of the Committee and its Legal Subcommittee. It may also decide to hold side events during the sessions of the Committee and its Legal Subcommittee with a view to building awareness and promoting the legal consideration of the issues studied by the Working-group.
3. The Working-group will also use intersessional opportunities to advance exchanges at meetings and through electronic means, as feasible and agreed.
4. Member States are encouraged to consider inviting experts with scientific, policy-making and legal background in their delegations, including from the academic and the private sectors. In this regard, it is understood that the inputs from national non-governmental organisations and private sector entities will be obtained through the relevant States members of the Committee<sup>11</sup>.
5. International intergovernmental organisations holding the status of permanent observer to the Committee will be invited to take part in the work of the Working-group.

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<sup>6</sup> Based on §7, Annex II, A/74/20.

<sup>7</sup> Inspired by §3, Annex II, A/74/20.

<sup>8</sup> Based on §9, Annex II, A/66/20.

<sup>9</sup> Based on §167, A/74/20.

<sup>10</sup> Based on §10, Annex II, A/66/20.

<sup>11</sup> Based on §17, Annex II, A/66/20.

## **WORKPLAN 2020-2024 (draft as proposed by Switzerland)**

### **2020**

- Agree on the work-plan, methods of work and terms of reference of the Working-group. Invite States members of the Committee, and international organisations having permanent observer status to the Committee, to provide information and views on:
- a) Challenges to the long-term sustainability of outer space activities;
  - b) The voluntary implementation of the 21 adopted guidelines on the long-term sustainability of outer space activities;
  - c) Ways and means to enhance awareness raising and capacity building.

### **2021**

- a) Hold exchanges of views and identify challenges to the long-term sustainability of outer space activities;
- b) Share experiences, practices and lessons learned from the voluntary implementation of the 21 adopted guidelines;
- c) Hold exchanges of views and identify ways and means to enhance awareness raising and capacity building.

### **2022**

- a) Study challenges to the long-term sustainability of outer space activities and begin drafting findings and recommendations with a view to provide solutions for enhancing the long-term sustainability of outer space activities. Such solutions could include, inter alia, revised or new guidelines, recommendations, enhanced cooperation and enhanced information exchange;
- b) Review issues related to the practical implementation of the 21 adopted guidelines and begin drafting findings and recommendations regarding the practical implementation of the 21 adopted guidelines, including inter alia international cooperation in this respect;
- c) Begin drafting findings and recommendations with a view to enhancing awareness raising and capability building.

### **2023**

Review and consolidate draft findings and recommendations, as well as possible revised and new guidelines, on the long-term sustainability of outer space activities, regarding in particular:

- a) Challenges to the long-term sustainability of outer space activities, including inter alia possible revised and new guidelines;
- b) The implementation of the 21 adopted guidelines on the long-term sustainability of outer space activities;
- c) Enhancing awareness raising and capacity building.

### **2024**

Finalize findings and recommendations, possible revised and new guidelines, on the long-term sustainability of outer space activities.

Finalize the final report of the Working-group, including inter alia recommendations for further work.

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