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| **Plenipotentiary Conference (PP-22) Bucharest, 26 September – 14 October 2022** |  |
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| PLENARY MEETING | **Addendum 2 to Document 79-E** |
|  | **4 September 2022** |
|  | **Original: English** |
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| Brazil (Federative Republic of) | |
| REVISION TO RESOLUTION 186 ON | |
| Strengthening the role of ITU with regard to transparency and confidence-building measures in outer space activities | |
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MOD B/79A2/1

RESOLUTION 186 (REV. Bucharest, 2022)

Strengthening the role of ITU with regard to sustainability, transparency and confidence-building measures in outer space activities

The Plenipotentiary Conference of the International Telecommunication Union (Bucharest, 2022),

recalling

*a)* Resolution 68/50, on transparency and confidence-building measures in outer space activities, adopted by the United Nations General Assembly on 5 December 2013, together with the associated Report A/68/189;

*b)* Resolution 3235 (XXIX), which approved the Convention on Registration of Objects Launched into Outer Space, adopted by the United Nations General Assembly on 12 November 1974;

*c)* Guidelines for the long-term sustainability of outer space activities of the committee on the peaceful uses of outer space set by the United Nations Office for Outer Space Affairs (UNOOSA),

noting

Resolution 37 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference, on bridging the digital divide,

considering

*a)* that ITU Member States rely, *inter alia*, on reliable space radiocommunication services, such as the Earth exploration-satellite service, radiocommunication satellite services, the radionavigation-satellite service and the space research service;

*b)* that one of the strategic goals of the ITU Radiocommunication Sector (ITU‑R) is "to ensure interference-free operations of radiocommunication systems by implementing the Radio Regulations and regional agreements, as well as updating these instruments in an efficient and timely manner through the processes of world and regional radiocommunication conferences";

*c)* that the world and regional radiocommunication seminars are an effective way to provide knowledge on the current regulatory framework for international spectrum management, ITU‑R recommendations and best practices regarding the use of spectrum for both terrestrial and space services;

*d)* that the Radiocommunication Bureau is publishing the information received from administrations related to implementation of the due diligence procedure pursuant to Resolution 49 (Rev.WRC-15) of the World Radiocommunication Conference, and the information received from administrations related to the bringing into use of satellite frequency assignments;

*e) that the individual actions taken by each satellite operator are not enough to ensure the safe use of Earth orbits and they are all responsible for keeping the outer space environment safe and sustainable;*

*f) that, besides ITU, there are other organizations under the UN system dealing with aspects related to space activities, such as the Committee on the Peaceful Uses of Outer Space (COPUOS) under the United Nations Office for Outer Space Affairs (UNOOSA);*

*g) that Recommendation ITU-R S.1003-2 on environmental protection of the geostationary-satellite orbit provides guidance about disposal orbits for satellites in the geostationary satellite orbit and comments on the increase in debris due to fragments resulting from increased numbers of satellites and their associated launches;*

*h) that the exchange of accurate ephemeris data of space objects will contribute to the safety and sustainability in the satellite market, not only helping the mitigation of conjunction risks but also as a relevant information for helping the identification of potential radio interference sources*,

taking into account

Articles 15 and 16 of the Radio Regulations,

resolves

1 to encourage the dissemination of information, capacity building and the sharing of best practices in the use and development of radiocommunication satellite networks/systems, with the objectives of, *inter alia*, bridging the digital divide and enhancing the reliability and availability of the above-mentioned satellite networks/systems;

2 to encourage administrations acting as State of Registry of satellite spacecrafts, according to the Resolution 3235 (XXIX) of 1974, to consider adopting measures that will enhance the requirements for their national operators to engage with global and collaborative organizations dedicated to space safety, in order to support global Space Situational Awareness (SSA) through existing industry platforms and databases, including the exchange of accurate ephemeris data of GSO, MEO and LEO satellites;

3 to encourage administrations acting as State of Registry of satellite spacecrafts, according to the Resolution 3235 (XXIX) of 1974, to evaluate and adopt measures to mitigate the potential risks of launching satellites above 400 km altitude without maneuvering capability enough to reduce conjunction and collision risks,

instructs the Secretary-General

to promote and strengthen the cooperation between the ITU, UNOOSA/COPUOS and other organizations directly responsible for ensuring the sustainable use of space, with the aim of facilitating coordination activities related to the sustainable use of outer space,

invites the ITU Council

to consider and review any proposed cooperation agreements on the use of satellite monitoring facilities consistent with the objectives of this resolution, in light of their strategic and financial implications, within the budgetary limitations of the Union,

instructs the Director of the Telecommunication Development Bureau

1 to encourage all Member States to consider these matters in the context of Resolution 37 (Rev. Buenos Aires, 2017);

2 to work with national regulators, including through the Global Symposium of Regulators, encouraging expertise and capacity building in licensing satellite networks/systems, especially for developing countries and small islands, to bridge the digital divide, and to promote sustainable use of outer space;

3 to include annually, in ITU Digital Development Dashboard, reports by Member States on the adoption of policies to support equitable access to spectrum and associated orbits, as well as the adoption of policies to promote the sustainable use of outer space,

instructs the Director of the Radiocommunication Bureau

1 to promote access to information, upon request by administrations concerned, related to satellite-monitoring facilities, in order to address cases of harmful interference in accordance with Article 15 of the Radio Regulations, through cooperation agreements referred to under *invites the ITU Council* above, within the budgetary limitations of the Union, in order to implement the objectives of this resolution;

2 to continue taking action to maintain a database on cases of harmful interference reported in accordance with relevant provisions of the Radio Regulations, in consultation with Member States concerned;

3 to continue the efforts to disseminate information and assist ITU Member States in the application of coordination and notification provisions through ITU world and regional radiocommunication seminars, workshops, ITU‑R publications, software and databases;

4 to improve the ease of access to, and transparency of, the information in the Master International Frequency Register published on the ITU website on satellite frequency assignments subject to this resolution;

5 to coordinate activities, if necessary, with the Directors of the Telecommunication Standardization Bureau and the Telecommunication Development Bureau;

6 to monitor the activities and deliverables developed under the cooperation between ITU and further organizations involved in the sustainable use of outer space and report them annually to the ITU-R Radiocommunication Advisory Group and to subsequent World Radiocommunication Conference, for information and developing of actions;

7 to report on the implementation of this resolution as appropriate,

invites Member States and Sector Members

1 to participate in the activities related to the implementation of this resolution, *inter alia*, involvement in ITU radiocommunication seminars, sharing of best practices, and cooperation agreements on the use of satellite monitoring facilities in order to address cases of harmful interference in accordance with Article 15 of the Radio Regulations;

2 to participate of ITU Study Groups in order to develop studies to include measures for environmental protections of Medium and Low Earth Orbits;

3 to promote the sustainable use of outer space as part of Environmental, Social and Governance (ESG) practices by satellite operators, manufacturers and launching services providers.

**Reasons:** It is proposed to modify the Resolution 186 “Strengthening the role of ITU with regard to transparency, confidence-building and measures in outer space activities”, addressing some of the new challenges that can be treated under the clear scope of ITU´s role. It also draws attention to the need of a formal and ongoing cooperation between the ITU and other responsible organizations involved in the sustainable use of space.

Brazil recognizes the secular and fundamental role of ITU as the main international organization that deals, on a global basis, with the management of spectrum and orbit resources for terrestrial and space services. This role has been key for the continuous development of the satellite industry around the world.

As a natural consequence of the various space technology transformations taking place, including those in manufacture, launch, propulsion, payload capabilities and mission extension vehicles for instance, in the last few and upcoming years, the space industry will have to deal with predicted challenges in concrete ways.

Current statistics[[1]](#footnote-1) already indicate that there are now more than 1 million debris items larger than 1cm orbiting around Earth, and this number is growing as more than 20,000 additional satellites are expected to be launched in the next ten years. In the same context as the proliferation of space objects (debris and operational), the increasing complexity of space operations, the emergence of large constellations, and the higher risks of collisions that could even result in catastrophic Kessler syndrome, as well as the increase of harmful interferences and visual interference with astronomy observations may affect the long-term sustainability of outer space activities, offering risks to competition, safety and shared use of space operations. These challenges mainly involve the low earth orbit (LEO) environment. However, they could also affect other orbits and the usage of all orbits by space vehicles and habitable objects such as the International Space Station (ISS) as well which operates near 400 km altitude in LEO. In that sense, the increase of objects operating at higher altitudes without maneuvering capabilities represents higher risks since longer orbital decay periods will be needed for the re-entry into Earth atmosphere, reaching a period of years, or even decades, drifting in the LEO environment.

Industry and governmental efforts in both national[[2]](#footnote-2) and regional[[3]](#footnote-3) levels have been made to mitigate those risks and should be encouraged in every nation responsible for the launch and operation of satellites, or other objects in outer space. However, considering the global effect of the increased use of the shared use of space and the proliferation of spaceport launching facilities evolving to take place from anywhere in the world, these individual efforts may be insufficient in medium and long terms. As stated by the Outer Space Treaty[[4]](#footnote-4), the use of Space shall benefit all the mankind. In this way, Brazil considers that these are global issues, which require global and cooperative initiatives, and can not only be addressed at the national level.

It is known that the UN organizations (ITU and UNOOSA/COPUOS) are dealing with aspects of space sustainability. UNOOSA/COPUOS has continuous discussions on space debris and broad guidelines and sustainability but with no enforced regulations or recommendations. On the other hand, as an example of a very important deliverable already made by ITU in the past, which is still valid as a reference for national regulators is Recommendation ITU-R S.1003 on Environmental protection of the geostationary-satellite orbit, which provides objective guidance for the de-orbit of GSO satellites. Although this instrument materializes the important role of ITU-R on the sustainability on the use of outer space by satellites by preventing orbital debris in the GSO arc, it does not include guidance for medium and especially low earth orbits, which is the space environment with higher concerns nowadays.

It could also be mentioned the existence of coordinated efforts of some nations in IADC (Inter-Agency Debris Mitigation Committee) and Industry initiatives such as the platform of data exchange of Space Data Association (SDA) and the World Economic Forum’s Space Sustainability Rating (SSR) for instance. In that sense, Brazil believes that it is the right moment to establish new actions in this area under ITU´s current mandate as well.

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1. An EU Approach for Space Traffic Management - <https://defence-industry-space.ec.europa.eu/eu-space-policy/eu-space-programme/eu-approach-space-traffic-management_en#:~:text=Promotion%20of%20the%20EU%20STM,overall%20ambition%20for%20global%20cooperation>. [↑](#footnote-ref-1)
2. An EU Approach for Space Traffic Management - <https://defence-industry-space.ec.europa.eu/eu-space-policy/eu-space-programme/eu-approach-space-traffic-management_en#:~:text=Promotion%20of%20the%20EU%20STM,overall%20ambition%20for%20global%20cooperation>. [↑](#footnote-ref-2)
3. FCC Updates Orbital Debris Mitigation Rules for the New Space Age - <https://www.fcc.gov/document/fcc-updates-orbital-debris-mitigation-rules-new-space-age-0>. [↑](#footnote-ref-3)
4. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 1966 - <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html>. [↑](#footnote-ref-4)