

Секция «Актуальные проблемы управления аэрокосмической отраслью»

The Sustainable Use of Outer Space

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According to the Outer Space Treaty, the use of outer space shall be carried out for the benefit and in the interests of all mankind [3]. In this regard, sustainability matters for establishing safety, security and peace of outer space allowing to use it for socioeconomic benefit. However, the ability to sustainably get these benefits from outer space is threatened by challenges as space debris, radio frequency interference, accidents and irresponsible actions of space actors [5].

On January 1, 2016, the 2030 Agenda for Sustainable Development came into force. It includes 17 Sustainable Development Goals (SDGs) to support economic growth, improve social inclusion, and advance environmental protection. All countries agreed take action for achievement of the goals, even though the Agenda is not legally binding. It should be noted, that the SDGs emphasize on data acquisition: states agreed to “promote transparent and accountable scaling-up of appropriate public-private cooperation to exploit the contribution to be made by a wide range of data, including earth observation and geo-spatial information” [6]. Hence, space technologies have been viewed as a key to the achievement of SDGs. Earth observation data can advance efforts to combat hunger (SDG2) by optimized agriculture and livestock management and better emergency responses in regions affected by disasters that affect agricultural output. Space-derived information is used for ensuring good health and well-being under SDG3 by identification of environmental, climatic and other factors that have a negative effect on public health. Space-related research stimulates qualitative and affordable education with the use of tele-learning (SDG4), helps in water pollution monitoring (SDG6) and contributes to a better understanding of solar energy which can be used as a source of clean energy (SDG7). Development of space sector requires more people to be engaged in space careers (SDG8) by boosting innovations and industrialization (SDG9) that in its turn can potentially reduce poverty (SDG1) and inequalities (SDG5, SDG10). Space data is also used for land use planning; navigation systems help in traffic management (SDG11). Such data provides assistance in supply management and logistics management in production (SDG12). Monitoring helps in understanding climate change (SDG13), sustainable use of oceans, seas and marine resources (SDG14) and terrestrial ecosystems (SDG15). Thus, space sector leads to the development of new institutional links (SDG16) via governmental and non-governmental actors’ engagement in space activities that together form a global partnership (SDG17), essential for the achievement of the 2030 Agenda targets [2, 4].

Bearing in mind the threats to the sustainability of space, the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS) established the Working Group on the Long-Term Sustainability of Outer Space Activities. During its mandate (2010-2018), Guidelines for the Long-term Sustainability of Outer Space Activities (GLTSOSA) was developed [5]. GLTSOSA provides both international and national measures for ensuring sustainability of outer space activities.

In order for GLTSOSA to be implemented by all countries, states and intergovernmental organizations (IGOs) should facilitate international cooperation involving public, private and

academic sectors. Those having experience in sustainable space activities should share this experience with countries with emerging space programmers. States and IGOs should support capacity-building initiatives and raise general public awareness on the societal benefits of space activities including awareness about regulations that are applicable to space activities. At the national level, states should take measures regarding their legislation, policy, and national space activities. States should adopt, revise and amend, as necessary, domestic regulatory frameworks for outer space activities considering not only existing space projects but also the potential development of their national space sector. As for national space activities, states bear international responsibility for it, and should ensure that entities under their jurisdiction and/or control comply with relevant national and international regulatory frameworks in this regard. Every entity should be encouraged by the state to establish technical competencies required for secure space activities and assess all risks to long-term sustainability [1].

Even though GLTSOSA is not legally binding under international law [1], it can have a legal character if states choose to incorporate the guidelines in their national laws.

To conclude, space infrastructures are used to resolve the major challenges of our time. Therefore, effective governance of outer space is needed, and it can be established with a solid basis of sustainability. The sustainable use of outer space is achieved by international and national regulation adapted to dynamically evolving space technologies. Every state and entity is capable to exercise its right to outer space activities basing on legislation and policies which will take into account internationally recognized measures for promoting sustainability of outer space activities.

Источники и литература

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