37th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
Assuring a Safe, Secure and Sustainable Environment for Space Activities (4)

Author: Ms. Krystal Azelton
Secure World Foundation, United States

Dr. Peter Martinez
Secure World Foundation, United States
Ms. Victoria Samson
Secure World Foundation, United States
Mr. Christopher Johnson
Secure World Foundation, United States
Mr. Ian Christensen
Secure World Foundation, United States
Ms. Emily Kunasek
Secure World Foundation, United States

SPACE SUSTAINABILITY POLICY AND BEST PRACTICES: SECURE WORLD FOUNDATION'S HANDBOOK FOR NEW ACTORS IN SPACE

Abstract

In 2017, Secure Word Foundation released the first edition of the Handbook for New Actors in Space. This guidebook provided nations, established satellite operators, start-ups, universities, and other space actors with a broad overview of the fundamental principles, laws, norms, and best practices for peaceful, safe, and responsible activities in space.

Since then, the space domain continued to see a rapid diversification and increase in the number of actors involved in space activities. The increased availability of space technology and capabilities has both advantages and disadvantages. It has spurred innovation, lower costs, and greater access to capabilities and services available from satellites for all. However, the growth in space activities and the influx of new actors also has the potential to exacerbate many of the current threats to the long-term sustainable use of space, such as on-orbit crowding, radio-frequency interference, the proliferation of space debris, and the chances of an incident in space sparking or escalating geopolitical tensions on Earth.

Access to space now and even more so, in the future, will be affected by these challenges. In light of new developments, Secure World Foundation has researched and published (May 2024) the second edition of the Handbook for New Actors in Space. This new edition focuses on showcasing industry trends, evolving policies, and new challenges to space sustainability. New research areas include the effects of anti-satellite testing on low Earth orbit and global governance attempts to address this threat, expansion of commercial cislunar and lunar activities, and the advancement of non-traditional technologies such as active debris removal and on-orbit servicing.

This paper highlights relevant research into developments in space sustainability considerations such availability of space situational awareness data, developing norms of behavior and best practices, and launch best practices. Specific focus will be paid to how new actors can engage in best practice behaviors for space sustainability as well as other developments in the environment, technology, and policy that can affect future system decisions. Global efforts are underway to address space sustainability challenges including a number of industry working groups for standards and best practices, technical certification initiatives, and changes and expansion of the mandates of international governance institutions such as the United Nations Committee on the peaceful Uses of Outer Space and the International Telecommunications

Union. All space stakeholders have a role to play in these efforts, and this paper will highlight pathways for engagement on these important issues.