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Assuring the Long-Term Sustainability of Outer Space Activities (4)

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ASSURING THE SUSTAINABILITY OF SPACE ACTIVITIES

Abstract

It has become ever more evident in the past decade that the growth of new space systems in orbit and the continued creation of orbital debris will quickly make activities in Earth orbit unsustainable. Yet, as many commentators have noted, the world community increasingly depends on space systems to support everyday life. From the GPS unit that we use to guide our way through a maze of urban streets to our daily weather forecasts, from natural resource management to disaster mitigation and response, we depend deeply on the products of space activities, whether we are aware of it or not. Every day, new applications linked to Earth orbiting satellites add to our dependence on space systems.

Finding cost-effective ways to sustain space activities will become ever more essential as outer space, especially in the critical sun-synchronous and geosynchronous orbits, becomes more congested with working satellites and especially with orbital debris. Because outer space activities serve the needs of the military and intelligence, civil, and commercial communities, each with their own requirements and creating the various international agreements necessary to reaching and maintaining sustainability will not be easy.

This paper explores several of the international efforts to develop agreements that would lead to or support the sustainability of space activities and examines the benefits and drawbacks of each approach. In particular, it reviews progress within the UN Committee on the Peaceful Uses of Outer Space (COPUOS), the European Union's proposal for an international Code of Conduct for Outer Space Activities, and the efforts of several States to establish or expand space situational awareness programs.