26th SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
Assuring a Safe, Secure and Sustainable Space Environment for Space Activities (4)

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COMMON HORIZONS: ASSURING SPACE SUSTAINABILITY IN THE SERVICE OF ACHIEVING SUSTAINABILITY ON EARTH

Abstract

Many of the nearly one thousand satellites in orbit about Earth currently provide tangible social, scientific, and economic benefits to billions of individuals throughout the globe. From satellite position, navigation and timing to weather forecasting, from treaty verification to the management of Earth's resources, international dependence on the benefits derived from systems in outer space has steadily expanded and will continue to grow.

Yet the continued enjoyment of the benefits of the use of outer space is anything but guaranteed. The space environment is threatened by, among other things, increasing amounts of orbital debris and the effects of space weather.

Even as the sustainability of outer space is threatened, space systems are becoming ever more critical in the effort to ensure long term sustainability for humankind on Earth. A sustainable space environment is therefore crucial to humankind's ability to assure a sustainable Earth environment. As a result, space sustainability has become a major focus of interest among the space-faring nations of the world.

This paper presents the results of a study conducted by a team of 37 students from 11 countries focused on examining the use of space systems to support the sustainability of Earth and the issues surrounding the sustainability of space activities into the future.

The project team considered sustainability and outer space technologies from the perspective of the developing space countries of the 'Global South', defined as the countries south of the Tropic of Cancer. How can these emerging countries, each of which has different needs and resources, make effective use of their developing space capabilities to further their own sustainable future? This paper presents and elaborates on the recommendations from the project team to the countries of the Global South.