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GOVERNANCE ASPECTS OF SPACE SUSTAINABILITY: THE ROLE OF EPISTEMIC ACTORS AS
ENABLERS OF PROGRESS

Abstract

Since the dawn of the space age, outer space activities have played a crucial role in international politics. The early governance mechanisms designed to ensure the peaceful access and use of space enabled some degree of international cooperation leading to a formidable growth of space activities. This can be considered a first progress towards ensuring the long-term sustainability of the space domain. Today, space technologies have become central to the provision of numerous societal needs for security, safety and the well-functioning of the global economy generating an even greater influence over the international system. Considering the enhanced strategic value of space, the dramatic increase of threats especially over the last decade have been raising concerns in the space community and call for an evaluation of the existing governance mechanisms.

The threats to space sustainability are numerous. They derive from the large growth in space traffic increasing collisions risks and radiofrequencies interferences, the ongoing space weather and near-earth objects risks, and the continued proliferation of space debris resulting from accidental but also intentional causes. Existing before, identified as a concern from the late 1970s, it is especially since the 2007 and 2009 orbital break-ups creating very large amounts of long-lived debris and affecting many stakeholders that the space debris threat has been identified as a major threat to space sustainability.

This paper presents the findings of a doctoral research investigating governance progress towards ensuring the long-term sustainability of the space domain. Narrowing the analysis to the space debris threat as a case study for evaluating space sustainability efforts at large, the research focusses on a specific group of actors, and their role in governance progress at national and international levels. Using an international relations framework, namely the epistemic community model, the study looks at the influence of 'knowledge' or epistemic experts in bringing about the main initiatives, which have impacted the space debris problem since the early days of the space age and influenced the emergence of the space sustainability initiative carried out at the United Nations Committee for the Peaceful Uses of Outer Space (COPUOS). The research findings highlight the essential role of these experts in shaping and improving space governance over time towards better space sustainability, as well as the value of the epistemic model itself for overcoming obstacles in international cooperation for issues involving national security interests.