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THE INEQUITABLE IMPACT OF SPACE DEBRIS ON DEVELOPING STATES: THE IMPORTANCE
OF INTERDISCIPLINARY APPROACHES**Abstract**

Space debris currently receives limited regulation under the international space treaties. While the Space Debris Mitigation Guidelines and Guidelines on the Long-term Sustainability of Outer Space provide recommendations for mitigation and prevention, study on necessary regulation from the perspective of developing states is notably absent. One way to overcome this ‘policy failure’ is by complementing legal analysis with other tools. Looking beyond purely legal mechanisms, tools such as policy analysis and systems theory can provide a more cohesive and comprehensive understanding of the inequitable impact of space debris. Given the rapid growth in space debris, in part due to the exponential growth of objects in outer space, understanding this impact is key to prevent the degradation of developing states’ access to benefits from outer space-based assets.

The aim of this presentation is to provide an introduction as to how interdisciplinary approaches can be used to work towards a more equitable space environment, using the inequitable impact of space debris as a case study. This presentation first provides an analysis of how space debris disproportionately impacts developing states. The presentation then argues that the inconsistent interpretation and implementation of current regulation, including the Liability Convention and the Registration Convention, widens the divide between spacefaring and non-spacefaring states. This will include an assessment of interpretation of “costs” in the Liability Convention and how this fails to account for the indirect losses suffered by developing states. Then, this paper describes tools from science and technology policy, including systems approaches and policy analysis, that can be used to highlight the gaps in the existing governance that lead to their inequity, using the inequitable impact of space debris as a case study to exemplify this. The paper reflects on how these guidelines could be utilized to benefit developing states, consequently demonstrating the importance of interdisciplinary approaches in the design of outer space governance instruments and institutions.

Keywords: space debris; outer space treaty; space governance; liability convention; space law; science policy; systems theory; developing nations.