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Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM (8-E9.1)

Author: Ms. Emmanuelle David

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Mr. Adrien Saada

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Dr. Anja Nakarada Pecujlic

EnduroSat AD, Germany

Dr. Xiao-Shan Yap

Utrecht University, Netherlands Antilles

Prof. Danielle Wood

Massachusetts Institute of Technology (MIT), United States

Prof. Jean-Paul Kneib

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Ms. Maruska Strah

Space Sustainability Rating, Switzerland

FOSTERING MULTI-STAKEHOLDER COLLABORATION FOR SPACE SUSTAINABILITY
THROUGH AN INCENTIVE-BASED MECHANISM

Abstract

The proliferation of debris in the space environment, congesting the Low Earth Orbit (LEO), constitutes a major challenge to the safety and sustainability of space missions and operations. Policy makers at national, regional and international level are developing and implementing legal and binding frameworks to address the concerns of space debris. The processes requires increased coordination and collaboration and are likely to take a number of years before entering into force. However, as the sense of urgency calls for immediate innovative, multistakeholder solutions with a global scope - private actors from the space industry can fill in the current void by undertaking initiatives which would foster voluntary and inclusive action for the long term sustainability of space. The Space Sustainability Rating (SSR) presents a compelling example, with the aim of incentivizing space operators to encourage space actors to design implement sustainable space missions and operations while enabling other key stakeholders from the space ecosystem to become part of this collaborative effort.

In particular, the SSR provides a new way to address space debris mitigation through a two-pronged approach: 1. It provides a rating system usable by satellite manufacturers and operators informed by transparent and comprehensive assessment to get a clear picture of where a specific mission stands on sustainability and against best practices. 2. The SSR hosts an action-focused platform where all actors from the space sector can engage with, including throughout the value chain. In other terms, the SSR can serve as an action arm for the implementation of the current and future guidelines for space sustainability.

This article will present how space actors, with a focus on satellite operators, are using the SSR. By showcasing an example of rating process and lessons learned with EnduroSat's Platform-1, it will analyse its effectiveness to incentivize space actors to implement sustainable behaviours and list the benefits they can derive from using the rating system. Furthermore, the experience of satellite operators from the other side will also be described. The potential future developments to strengthen the incentive-based

mechanism of the SSR will be explored, and ultimately how its promotion among stakeholders, and potential spill-over can lead to a wider adoption of the rating system (for operators, stakeholders from the space ecosystem and policymakers).