

SPACE DEBRIS SYMPOSIUM (A6)
Mitigation and Standards (4)

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ENVIRONMENTAL IMPACT ASSESSMENT AS A TOOL FOR SPACE DEBRIS MITIGATION

Abstract

This paper studies the current role and the future potential of Environmental Impact Assessment (EIA) as a tool for space debris mitigation. EIA is a procedure for evaluating the likely impact of a proposed activity on the environment. Such procedures seem particularly suitable for the space sector, where it is extremely difficult to amend any environmental adversities once they have been created. Even predicting such adversities can be difficult.

Despite its success in many other fields, EIA is not a well-established tool in the international law of outer space, because the UN space treaties were drafted at a time when environmental considerations were not central. The situation is somewhat better at the domestic level: the national legislation of certain spacefaring countries and the regulations of national space agencies at least prescribe that states should provide some kind of information assessing the possible environmental consequences of their proposed space activities.

One additional relevant type of norms, albeit non-binding, are those embodied in soft-law instruments created by certain international forums. Within international law, these are the most advanced norms relating to environmental assessment in space activities. They are mostly concerned with the problem of space debris. Above all, the IADC Space Debris Mitigation Guidelines recommend that “[i]n order to manage the implementation of space debris mitigation measures [- - -] a feasible Space Debris Mitigation Plan be established and documented for each program and project” (Part 4). This Mitigation Plan should include 1) “management plan addressing space debris mitigation activities”; 2) “plan for the assessment and mitigation of risks related to space debris, including applicable standards”; 3) “measures minimising the hazard related to malfunctions that have a potential for generating space debris”; 4) “plan for disposal of the space system at end of mission”; 5) “[j]ustification of choice and selection when several possibilities exist”; and 6) “[c]ompliance matrix addressing the recommendations of these Guidelines”. Although not called “environmental impact assessment”, the Mitigation Plan in essence works much like an EIA.

The space sector needs better debris mitigation and hence the use of improved EIA systems, among other mechanisms. There are several possibilities to amend the current deficiencies in impact assessments caused by lack of data, time and resources (even will, in some cases). Furthermore, the next “step” would be Strategic Environmental Assessment, to supplement project-level EIAs already on policy-level planning.