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THE SUSTAINABLE USE OF THE ORBIT RESOURCE:  
PROTECTED REGIONS AND ZONING OF EARTH ORBITS FROM THE PERSPECTIVE OF  
PUBLIC INTERNATIONAL LAW

**Abstract**

In light of increasing physical congestion of the most highly used Earth orbits it has been identified that efforts "to tackle the problem of space debris fall into three major categories: debris mitigation, active debris removal, and space traffic management" [1]. From the perspective of public international law this triad raises the question of how these categories relate to each other and how they can be further elaborated or integrated. In order to approach this question, the paper takes a "spatial viewpoint" as baseline. Starting point is the circumstance that Earth orbits are, in general, referred to as limited natural resource. Not only is this basic assumption reflected in Art. 44 of the Constitution of the International Telecommunication Union, but also, for example, in the non-binding IADC space debris mitigation guidelines, which refer to GEO and LEO as "protected regions". Further, the 2006 IAA Cosmic Study on Space Traffic Management suggests a "zoning" approach to manage key Earth orbits. The paper attempts to better understand these "spatial notions" and investigates if and how they are interlinked. For this, the paper researches first the general understanding of "natural resources" in public international law and how this understanding can be transferred to the orbit resource. Second, according to the Outer Space Treaty, the so-called Magna Charta of space law, outer space is the "province of all mankind". This evokes the question how concepts, such as "protected regions" and "zoning of orbits", can be aligned to this fundamental principle. Third, for comparative purposes, the paper will look into the international law of the sea and maritime law. These two separate, yet interconnected fields of law provide an engaging benchmark in terms of informing international space law regarding spatial concepts. For instance, according to the UN Convention on the Law of the Sea, the so-called constitution of the oceans, the sea is subdivided into different maritime "zones". Further, the International Convention for the Prevention of Marine Pollution from Ships, which was adopted by the International Maritime Organisation, knows "special areas" and "particular sensitive areas". Against this backdrop, the paper pursues the aim to contribute to greater regulatory oversight towards the sustainable use of the orbit resource.

[1] Tanja Masson-Zwaan, "The International Framework for Space Activities" in: Handbook for New Space Actors in Space/Secure World Foundation, 2017, p. 35.