

SPACE ACTIVITY AND SOCIETY (E5)
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GLOBAL CHALLENGES-GLOBAL SOLUTIONS: THE SPACE APPROACH

Abstract

Today Humanity is confronted with a number of challenges having a global nature and thus requiring a search for global solutions. The paper intends to demonstrate how the modern space technologies, already existing as well as ones being developed, can be used to tackle some of the urgent problems having both on-Earth and outer Space origin.

There going to be presented concepts and proposed practical steps on creation and utilization of space solar power stations, anti-asteroid protection of the Earth, removal of in-orbit space waste, nuclear waste removal to space and some others. While first three above-mentioned problems are actively discussed by space community and general public since quite some time, the last approach allowing to forever free the Earth's biosphere from the most harmful part of radioactive waste is less known and may look controversial. The authors argue that viable solutions are possible for each case in the short- to medium-term perspective.

By definition, implementation of any global project requires wide International cooperation. The authors propose their view on how to engage all the major stakeholders – public, space industry, environmentalists, legislators, state and regional public authorities, lawyers (in particular, specialists in the Space Law), venture capitalists, insurance companies etc. – in the projects in question. The unique role that recognized space professional bodies like IAF, IAA, IISL can play to this end, is also substantiated and proposed for discussion.