

**PDC2019
Washington, DC, USA**

☒ **Key International and Political Developments**

The role of Large Technical Systems in establishing global planetary defense regime

Nikola Schmidt⁽¹⁾

⁽¹⁾*Institute of Political Studies, Faculty of Social Sciences, Charles University,
+420 777 550 333, nikola.schmidt@gmail.com*

Keywords: *Large Technical Systems, national security policy, global security regime, laser.*

ABSTRACT

Planetary defense endeavor is an inherently global security issue as it threatens humankind or the whole biosphere regardless the political borders. However, the current international system consisting of national states put us into a delicate situation, in which a global security issue needs to be to some extent governed by nation states or at least many activities governed by international organizations are executed by nation states. Nor other global actors, neither international organizations have the advantage to possess legitimacy, collect taxes or make bold impactful decisions as states do, especially in security matters. Nation states might be the initiator but are at the same time perceived as the part of a problem in establishing lasting global security regimes. They tend to deviate from norms, free-ride the opportunities or change political direction upon their local elections that all threaten long-term policy solutions for planetary defense. Large Technical Systems (LTS) require specific and diverse expertise, long-term focus and massive budgetary support and as such can prevent nation states from political defections and secure their long-term participation.

A detailed structure of our policy approach will unveil how various layers of planetary defense endeavor (observation, technology development, technology deployment and operation, triggering deflection method and post-impact recovery) can be linked with development of a particular international LTS for decades (asteroid laser deflection) and at the same time be a solid political basis for more short-term applications in e.g. kinetic impactors already now (laser-induced breakdown spectroscopy in flyby missions). LTS can help to establish a cooperative security regime on sensitive dual-use technologies if it is perceived as a sequence of possible technology applications on the road from today applications to more future applications requiring long-term research.

The paper is divided into a theoretical and a policy part. In the former theoretical part, the paper shows how the current International Relations theory and Science and Technology Studies perceive role of LTS in global politics. Based on the presented dynamics, the latter policy part will show how we decided to apply this theoretical approach on the development of the national planetary defense strategy

in the Czech Republic that has potential to stimulate broader international collaboration and later an establishment of international planetary defense regime.
