

## Facilitating Multilateral Dialogue on the Development of Norms, Rules and Principles of Responsible Behaviour in Outer Space

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Geopolitical Risks and Implications for International Peace and Security Caused by Harmful or Destructive Acts against Space Systems by States

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- Importance of space for the continued development of our societies means that any interference to satellite functioning can have adverse impact across multiple domains and different geographies.
- The consequences of attacks on space systems will also depend on the kind of counterspace capabilities that are being used.
  - Use of an ASAT missile against a satellite - large scale damage; and extremely escalatory because perpetrator will gain significant advantage, prompting almost an immediate response. So, ASAT use a hugely escalatory a step in a conflict or rather the act could itself become the cause of a major conflict.
  - An ASAT attack on any satellite could be crossing the line because the visual impact of such an attack is significant and if not countered, that could be interpreted as a sign of weakness.
  - Use of electronic and cyber means different in many ways. several important questions come up: when can one determine that an electronic or cyber attack has taken place or what should be the criteria for deciding that these attacks have taken place.
    - Developing consensus among States problematic due to the contested nature of great power relations.
    - Somewhat easier to reach an agreement when an attack leads to physical destruction of space assets or caused fatalities.
  - But a bigger consequence is how during a period of heightened tension, even signal transmissions and radiofrequency disturbances that may occur due to a faulty equipment or equipment malfunctioning, or unintentional error in operations, can and will be treated as an intentional attack.

- What kind of targets also important in understanding the consequences? An attack on early warning satellites could be severely consequential and seen as a step towards escalation. Targeting PNT or communication satellites in the middle of a conflict could also evoke sharp responses.
- On ASATs, besides the direct escalation costs, there are other unintended consequences. For instance, other satellites will be affected. That brings me to the final point about collateral damage.
- One has to consciously think about collateral damage in terms of consequences. While the space competition may be between the top 3 or 4 or even 5 players, collateral damage could mean that you expand the conflict to a much large number of states as well as non-state parties such as industries and private sector who have emerged as an important stakeholder. Collateral damage would draw all the other nations whose satellites have been affected.
  - One can target a satellite of a particular country, but one cannot discriminately target a satellite and you will end up affecting other satellites, their functioning as well and hence it will be indiscriminatory in nature. Assume nation A undertakes such an attack on a satellite of nation B, but there could be nation C, nation D or nation X whose satellites are also going to be damaged and so you are drawing an additional set of countries also into a possible conflict.
  - Also, when a private sector has launched a military payload for country X and what happens that is targeted. Should the private industry hold onto the regulations and restrictions that might be applicable in the case of a state? Or will they take recourse to counterattacks that the state may not be able to restrain? Maybe the responses will come somewhere else – maybe a cyber attack on a power grid or a country’s financial network? So, this also has the potential to expand the conflict into other sectors, not connected to space, because the response is to target a country where it hurts, and hitting one of the vital installations maybe what is considered appropriate.
- So, deterrence is what possibly holds the peace in space in some sense. Deterrence has the effect of halting the negative trend including the use of ASATs against satellites. So, fear of the consequences that if you do it, others will do it as well has in some sense prevented states from using ASAT weapons for instance. But this may not hold true for a number of other less damaging (relatively speaking) counterspace capabilities and the collateral damages as a result.
  - So, one can say that there is a need to emphasize and enhance deterrence by emphasizing the point no country stands to gain and that it is a negative spiral.
  - But deterrence approach brings with it certain negatives too. One of the underlying basis of deterrence is that states’ behaviour will be shrouded in secrecy, leading to lack of information, which will result in growing

insecurities. This is an action-reaction cycle that cannot be avoided should deterrence approach become more prevalent.

- One final consequence I want to highlight is the erosion of norms that have prevailed for decades. Many aspects of space governance are norms as well as rules. And norms are as important as rules. For example, non-testing of ASATs was a norm that resulted for two decades – there was no rule against ASAT testing and violation of that norm has meant that we are facing serious difficulties.
- Norm against interference of each other's satellites is something that is increasingly being violated. Each of these is a slippery slope that is pushing us to dangerous destinations because the efforts to develop new rules, binding or non-binding, is making no progress. So, breaking the prevalent norms has serious consequences for global governance and the long-term sustainability of space.