

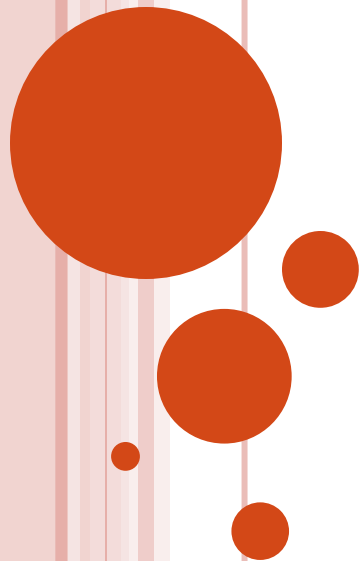
Reacting to Near-Earth Object Impact

Exceptional Circumstances Justifying Non-Compliance with International Law

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INTRODUCTION

- NEO => less predictable and pose much greater harm than falling space debris
- Impossible to control outer space/deep space and to monitor all potential asteroid and comet threats
- ❖ States' right and obligation to protect its territory and its population, but no obligation under international law to assist other States
- ❖ Duty of non-intervention in internal affairs of other States



NEO THREAT – RELEVANT SPACE LAW PROVISIONS

- Article III of the Outer Space Treaty => space activities carried on in accordance with international law
- Article VI of the Outer Space Treaty. States responsibility for national activities which apply also to private entities involving in planetary defense missions
- Article VII of the OST => liability in case of damage



NEO THREAT – RELEVANT SPACE LAW PROVISIONS

- Article IX of the Outer Space Treaty => due regard to the corresponding interests of all other States parties and mutual assistance
- Article X of the Outer Space Treaty => international cooperation and observing the flight of space objects. Relevant also for NEO trajectory?
- Article XI of the Outer Space Treaty => information and data sharing about space objects. Relevant also for NEO trajectory?
- Principle X of the UN Principles on Remote Sensing (1986)



NEO THREAT – INTERNATIONAL LAW

- Application of *'precautionary principle'*
- Principle 18 of Rio Declaration (1992) => notification of any natural disasters
- Article 9 of the International Law Commission (ILC) in its *Articles on the protection of persons in the event of disasters* => “obligation on States to take the necessary and appropriate measures to prevent harm from impending disasters”.



NEO THREAT – VIOLATION OF INTERNATIONAL LAW

- Violation of an international obligation in case of a planetary defense mission => States' international responsibility
- 2001 Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA) and Article 2 (definition of an internationally wrongful act)



REACT TO NEO THREAT – STATES’ RESPONSIBILITY UNDER IL

- Obligation to cease the wrongful conduct and to assure non-reiteration (Art. 29, 30 ARSIWA)
- Make reparation (Art. 31 and 34-37 ARSIWA)



REACT TO NEO THREAT – CIRCUMSTANCES JUSTIFYING NON-COMPLIANCE WITH IL

- Circumstances where the wrongfulness is excluded in the use of a planetary defense method
 - Consent
 - Distress
 - Necessity



REACT TO NEO THREAT – CONSENT (ART.20 ARSIWA)

- Within the limits of the consent and only in relation to the States (maybe all States) that have given their consent
- Third States, which have not consented to the planetary defense mission => wrongfulness not excluded
- A possibility => UN General Assembly/Security Council resolution reflecting broad consent to a specific planetary defense mission (on a case-by-case basis)



REACT TO NEO THREAT – DISTRESS (ART. 24 ARSIWA)

- Lives of persons threatened by the possible impact of a NEO
- Planetary defense method justified if there is “no other reasonable way” of saving lives
- Must not endanger the population and put the territory of other States at risk



REACT TO NEO THREAT – NECESSITY (ART.25 ARSIWA)

- Interest threatened by a grave and imminent peril;
- Objectively and clearly established, not just speculated;
- Action undertaken as the only way to safeguard the interest;
- Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, ICJ. Reports 1997, p. 7, para. 51.



REACT TO NEO THREAT – IN PRACTICE

- Changes in orbit trajectory, rotational dynamics may avoid the potential impact without that other measures are necessary to conduct;
- Technological development (using optical and radio telescope) will also allow to anticipate NEO threat, and to obtain accurate data;
- Acknowledgement of previously unknown facts, or by reconsidering existing facts.



REACT TO NEO THREAT – IN PRACTICE

- Difficulty to undertake a comprehensive evaluation if the specific conditions for invoking circumstances precluding wrongfulness are present;
- As soon as the invoked circumstance of threat ceases to exist, State obliged to return to lawful conduct (Art. 27 Lit. (a) ARSIWA);
- Exception: if a State intentionally alters the course of the object towards the territory of another State to protect its own interests => responsibility under international law.



DISPUTE SETTLEMENT – PEACEFUL MEANS

- Mediation, negotiation;
- Arbitration (Permanent Court of Arbitration – PCA Outer Space Rules);
- Judicial settlement of disputes by the International Court of Justice (Art. 33 UN Charter);
- Security Council or General Assembly (Art. 35 UN Charter) => recommending appropriate procedures.



CONCLUSION

- Any planetary defense action affecting the territory and population under the jurisdiction of another State would be contrary to international law, unless the action is justified by a circumstance precluding wrongfulness or authorized by a resolution of the UN Security Council (with time-limited and under specific circumstances);
- A duty of States under international law to mitigate disasters related to a NEO impact and to inform about a potential NEO impact threat;
- Guidelines/Code of Conduct containing the following relevant principles should be implemented and widely distributed (governments, space agencies, industries): international cooperation (role of the UNGA and UNSC), obligations under international law, duty to inform, exceptions to comply with international law and dispute settlement mechanisms.



A person stands on a dark, silhouetted cliff at night, pointing a bright blue flashlight beam towards the sky. The background is a vast, starry night sky featuring the Milky Way galaxy, which appears as a dense, colorful band of stars stretching across the frame. The overall scene is dark and atmospheric, with the flashlight beam providing a focal point of light.

Thank you!

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