



Mains Practice Question

Q. Discuss the ethical dilemmas associated with space exploration and commercialization. How can governments and international organizations promote responsible space activities while considering the potential impact on celestial bodies and extraterrestrial life? (150 words)

28 Sep, 2023 GS Paper 4 Theoretical Questions

Approach

- Begin with a brief introduction that provides context for the question.
- Discuss the ethical dilemmas associated with space exploration and commercialization.
- Discuss how governments and international organizations can address these ethical dilemmas and promote responsible space activities.
- You can conclude your answer with a pragmatic approach.

Introduction

Space exploration and commercialization have rapidly evolved in recent years, presenting a myriad of ethical dilemmas. These dilemmas arise from the potential consequences of human activities in space on celestial bodies and potential extraterrestrial life.

Body

Some of the ethical dilemmas associated with space exploration and commercialization are:

- **Preservation vs. Utilization:** Balancing the preservation of celestial bodies' unique environmental and cultural heritage against their potential utilization for scientific and economic purposes.
 - Some scientists have argued that the Moon has a unique geological and cultural heritage that should be preserved.
- **Equity vs. Exploitation:** Striking a balance between ensuring equitable access to space resources for current and future generations and preventing their exploitation by powerful entities.
 - Some critics have questioned the fairness and sustainability of the commercial exploitation of space resources, such as water and minerals, by private companies or wealthy nations.
- **Cooperation vs. Conflict:** Navigating the tension between international cooperation in space activities and the potential for conflicts, weaponization, or security threats in the domain of outer space.
 - Some analysts have warned about the risks of weaponization, militarization, or terrorism in space, which could undermine the existing legal and political frameworks for space governance.

To address these ethical dilemmas, governments and international organizations can promote responsible space activities by:

- **Developing and implementing clear and consistent ethical principles, norms, and guidelines** for space exploration and commercialization, based on the values of human dignity, justice, solidarity, sustainability, and stewardship.

- These principles should reflect the common interests and responsibilities of the international community, as well as the specific needs and aspirations of different stakeholders, both on Earth and in space.
- **Enhancing and enforcing the existing legal and institutional frameworks** for space governance, such as the UN treaties and resolutions on outer space, the Committee on the Peaceful Uses of Outer Space, and the International Space Station.
 - These frameworks should ensure the compliance and accountability of space actors, the prevention and resolution of disputes, and the protection and promotion of the rights and interests of all parties involved.
- **Fostering and supporting the scientific and public engagement** and education on space exploration and commercialization, such as the World Space Forum, the International Day of Human Space Flight, and the International Asteroid Day.
 - These initiatives aim to raise awareness about the pros and cons of space activities, the ethical and social issues they raise, and how to involve diverse groups in space endeavors.

Conclusion

Space exploration and commercialization offer tremendous opportunities for scientific advancement and economic growth but must be conducted with a strong ethical framework to minimize harm and maximize the benefits for all stakeholders, both on Earth and in space.

PDF Reference URL: <https://www.drishtiias.com/mains-practice-question/question-7966/pnt>

