



PLANETARY PROTECTION: SCIENCE & TECHNOLOGY

NEWS: *What is planetary protection?*

WHAT'S IN THE NEWS ?

Planetary Protection and Tianwen-3 Mars Mission: CHINA

- **Planetary Protection:** Aims to prevent biological contamination of Earth and other celestial bodies during space missions.
- **Outer Space Treaty (1967):** Article IX mandates avoiding harmful contamination during space exploration.
- **Tianwen-3 Mission:** China's Mars sample-return mission, advanced to 2028, aligns with planetary protection principles.
- **Sterilisation:** Spacecraft are sterilised (e.g., high-temperature baking) to minimise microbial contamination, ensuring scientific integrity and ecosystem protection.
- **Purpose:** Protects extraterrestrial environments and prevents introducing extraterrestrial life to Earth.

Outer Space Treaty	Registration Convention	Moon Treaty	Artemis Accords
Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies	Convention on Registration of Objects Launched into Outer Space	Agreement Governing the Activities of States on the Moon and Other Celestial Bodies	Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes
1967	1976	1979	2020
<ul style="list-style-type: none">❖ Space should be:<ul style="list-style-type: none">• Accessible to all countries• Free from national claims of ownership• Explored guided by principles of cooperation and mutual assistance❖ States are liable for non-governmental entities and their activities in space	<ul style="list-style-type: none">❖ Builds upon Article VIII of the Outer Space Treaty, which calls for space objects and its component parts to be returned to the state if such objects are found beyond the limits of the State of registry❖ Parties to the convention are required to establish and maintain national registries on their space objects and to provide this information to the Secretary-General of the United Nations Office for Outer Space Affairs (UNOOSA)	<ul style="list-style-type: none">❖ States that the Moon and its natural resources are the common heritage of mankind❖ Puts forward the formation of an international regime to govern the exploitation of such resources as resource exploitation becomes feasible❖ Rejected by the US, citing the Moon Treaty as an "attempt at constraining free enterprise"	<ul style="list-style-type: none">❖ Principles for cooperation between the US and other Artemis program participants grounded in the Outer Space Treaty❖ Signed by Australia, India, the Netherlands, Romania, Saudi Arabia, and France, which are all also signatories/parties to the Moon Treaty❖ Affirms individual states' right to engage space with the private sector

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