

Navigating the cluttered frontier

SPACE may be the final frontier, but navigating it responsibly requires a clear map, especially when there are no borders in space.

Enter the United Nations' space treaties, international agreements that govern everything from peaceful exploration to debris mitigation.

While Malaysia has signed two treaties related to space, it remains outside several key treaties, potentially hampering its future dealings with the space industry.

With so many countries having sent vessels and satellites into space, signing international agreements to not only deal with space exploration but also with the liabilities, such as space debris, has become even more important now.

The UN Outer Space Treaty 1967 is the foundation of international space laws and since its adoption, member states have collectively developed several conventions, agreements, principles and guidelines to regulate space activities, says Science, Technology and Innovation Minister Chang Lih Kang.

As a member of the UN Committee on the Peaceful Uses of Outer Space, Malaysia has signed the Treaty on Principle Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies 1967 and the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space 1968.

Chang notes that while Malaysia has signed those two treaties, they have yet to be ratified.

"The government is working to ratify the treaties with the cooperation of all stakeholders, especially the Malaysian Space Agency, the Space Authority Division and the Foreign Affairs Ministry."

The other three space treaties which Malaysia has not signed are the Convention on International Liability for Damage Caused by Space Objects 1972, Convention on Registration of Objects Launched into Outer Space 1975, and the Agreement Governing the Activities of

States on the Moon and Other Celestial Bodies 1979.

These three treaties are expected to be signed and ratified by Malaysia by 2030, Chang says.

Malaysia is also taking a proactive approach to dealing with space debris.

In 2022, debris from a Chinese satellite entered Malaysian airspace and fell into the Sulu Sea, sparking debate on how countries should handle space debris, whether their own or from other countries.

Aerospace engineering expert from Universiti Putra Malaysia Prof Renuganth Varatharajoo says space debris is a threat to the world and as such, Malaysia's National Space Policy should be extended to cover this issue for the nation as there is currently no stipulated law or compensation available in case of an event in the country.

Chang says Putrajaya has already gazetted the Malaysian Space Board Act 2020 in January 2022, which also includes aspects of handling liabilities from space exploration and use.

To further bolster the Act, the Malaysia Space Board and the Space Regulatory Division were established.

The board is meant to enforce and regulate the country's space sector activities and ensure they are in line with rules and guidelines agreed upon at the international level.

The Space Regulatory Division will collaborate with the international community to ensure that countries that launch rockets or satellites into space take responsibility in the event of any incident caused by those items in this country, Chang says.

"Malaysia is currently in the process of enacting the Malaysian Space Board Regulations to enable the Act to be fully enforced by 2024.

"Through the implementation of this Act, Malaysia will be able to fulfil its international obligations and ratify or accede to the relevant international space treaties and instruments that would ensure the spaceworthiness of all objects launched into space from Malaysia and the launching facilities."



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