

**GOVERNMENT OF INDIA
SPACE
LOK SABHA**

UNSTARRED QUESTION NO:369
ANSWERED ON:23.02.2011
MILITARIZATION OF SPACE
Tewari Shri Manish

Will the Minister of SPACE be pleased to state:

- (a) the details of India's policy on militarization of space or space security;
- (b) whether India feel concerned about the growing capability of China after the ASAT test in 2007 to threaten Indian Civilian Satellites especially in the LEO & GEO orbits;
- (c) the quantum of debris field created by this ASAT Test;
- (d) the number of international treaties/agreements that exist for the peaceful use of outer space;
- (e) whether India is signatory to these treaties/agreements;
- (f) if so, the details thereof;
- (g) the extent to which these arrangements have proved efficacious in promoting the peaceful use of outer space;
- (h) whether the rules of engagement in outer space have been formalised in these countries; and
- (i) If so, the details thereof?

Answer

MINISTER OF STATE IN THE MINISTRIES OF PARLIAMENTARY AFFAIRS, PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND IN PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY):

(a) India, with a strong conviction on the vast potential of the use of outer space for peaceful uses, has been demonstrating it through various space based applications and services for national and societal purposes. India has been actively participating in the formulation of various international treaties on space law in Committees of United Nations. India has been using the space systems for national security purposes, as most other nations are also doing, since such uses are per se not prevented by the UN treaties on space law. However, India strongly oppose to any attempt to place weapons in space or conducting any unconventional weapons tests in space, as it would pose a perennial threat to all space systems regardless of their use for civilian or military purposes. India is carefully watching the international developments and the attempts of few countries to formulate some legal instruments to prevent any arms race in outer space. Suitable steps would be considered / taken at appropriate time, without causing any prejudice to our national interests.

(b) China's ASAT test had posed two dimensions of threat to international space community. One is, its capability to conduct the ASAT test (to kill a satellite in outer space) and other being the creation of debris cloud, as an after effect, in the low earth orbit, above 175 km. This ASAT test was very strongly criticized by many nations, as it created a large number of debris in the low earth orbit region above 175 km, which is mostly used for remote sensing and scientific satellites by the space faring nations, including the International Space Station. The Indian remote sensing satellites are also placed in this region (600 km to 900 km polar orbit). Thus the polluted space environment has been posing a threat not only to Indian satellites but also to the global community.

(c) It was reported by international space surveillance agencies, that China's ASAT test immediately created millions of debris of size 1mm to 1 cm and about 40,000 pieces of size between 1 cm to 10 cm and about 800 pieces of size more than 10 cm, which is more dangerous for normal operation of satellites. These debris collide amongst them and get evolved in multiple numbers. It has been reported that in September, 2010, the U.S. Military's Space Surveillance Network (SSN) has tracked a total of 3,037 pieces of debris from this event, 97% of which have remained in orbit. Scientists estimate more than 32,000 smaller pieces from the event are currently un-tracked. A detailed analysis made in October, 2007, by agencies indicate that only six percent of these debris would re-enter atmosphere by the year 2017 and the major chunk would stay till the next millennium.

(d), (e) & (f) Following table depicts the list of the United Nations international treaties on peaceful uses of outer space and the position of India:

Sl.No.	Treaty / Convention/ Agreement	India's position
--------	--------------------------------	------------------

United Nations Treaties on International Space Law:

1. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Ratified
2. Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space. Acceded
3. Convention on International Liability for Damage Caused by Space Objects. Acceded
4. Convention on Registration of Objects Launched into Outer Space. Acceded
5. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies. Signed

Related International Treaties:

6. Treaty banning Nuclear weapons Tests in the Atmosphere, in Outer Space and under Water. Ratified
7. Convention on the prohibition of Military or any other hostile use of Environmental modification techniques. Ratified

(g) Of the above list, two treaties namely, 'Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies' (under Article-4), and 'Agreement Governing the Activities of States on the Moon and Other Celestial Bodies' (under Article-3) do have specific provisions to stress on use of outer space for peaceful purposes and to prevent the placement of weapons of mass destruction in the orbits around Earth, Moon or weapons of any kind on the surface of celestial bodies including moon. However, due to certain ambiguities in these provisions leading to different interpretations, certain experiments and tests, which do not strictly fall under the purview of peaceful purposes, have been conducted by few space faring nations. Such incidents create a large number of debris in outer space and cause a serious threat to the safety and security of space assets of all countries and also pose a potential threat towards an arms race in outer space.

(h) &(i) Yes, Sir. Few space faring nations such as USA, Russian Federation, United Kingdom, Australia etc., have formulated national space legislations as the rules of engagement in outer space activities. A few other nations have formulated sectoral regulations for guiding specific activities such as launch service or remote sensing data sharing etc. (Indian space programme is guided by the Allocation of Business Rules for Department of Space, along with related legislations and regulations of Government of India and Policies such as Remote Sensing Data Policy, Satcom Policy, Mapping Policy etc.)