

Letter from the Executive Board

Firstly, we welcome you to the 2013 edition of SRMMUN. After quite a magnificent legacy, we are here to fill up the shoes of last year's brilliance. So on that note we welcome you the General Assembly-First Committee, Disarmament and International Security Committee. It's one of the most actively simulated councils across MUNs in India, which is why we have chosen it for this year. This is also the committee that provides for brilliant debate on the most controversial factors of power balances in the world today. Trying to keep it relevant to ordinary and broadly covered notions of power equations in the International scenario, we have chosen to discuss this agenda-Weaponization of Outer Space, to encourage a deepened insight into the notion of how militarization of National and International policies of countries affect the delicate power dynamics attributing a greater leverage to the haves than the have nots. The discrimination or the lack of address to this issue has clouded the possible significance of future prospects in a rapidly tensing competition driven world.

Therefore to help you familiarize yourself with the basics of the agenda, we have put forth a somewhat comprehensive outline of all that one might need an introduction to, regarding this agenda. Should you face any problems or roadblocks, feel free to get in touch with any one of us. We hope you enjoy this agenda as much as we thought you would while selecting it. Good Luck. Happy Researching.!

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Introduction

Like any other unaccounted for by man, the outer space remains a sphere natural in origin, open to exploitation and usage by mankind. And like any other natural object, it certainly did not come with claims of equal usage by all entities of creation of mankind. And therefore was subjected to dispute and competition much to the advantage of early explorers and technology developers like USSR and United States of America.

Internationally, for many years, it has been agreed that space should be used for peaceful purposes, and for the benefit of all humankind. It is used not only for commercial services such as communications and for scientific exploration, but for military surveillance, navigational assistance, weather forecasting, help in search and rescue, help in potential natural disaster detection, coordinating efforts on detecting and dealing with issues of space debris and minimizing harmful impacts on Earth, research in sciences, health, etc. While there have been tentative efforts over the years to test whether weaponization of outer space is feasible or practical, most were rejected. But the use of outer space for other purposes has grown.

A certain amount of R&D on space weaponization is inevitable and countries must always prepare for worst case scenarios, but our goal should be to move as rapidly as possible toward a regime to prevent the deployment of weapons in space. That having been said, Article 51 makes it clear that within certain limits, each state has the inherent right of individual or collective self-defense. We have the means to act alone or collectively in space if others begin to weaponize space. The Charter is not, as some conservatives maintain, a treaty trap.

During World War II, railroad stations in the United States were full of posters asking the question "Is this trip necessary?" That's what we all should be asking ourselves as we look at the issue of the militarization of outer space. Augmenting weaponization of outer space will, if implemented further, decrease world security in idealistic terms, destabilize international relations and trigger another arms race of monumental proportions that will cost us all trillions and bring us nothing more than destabilization and insecurity in return.

Without respect for the rule of law and a commitment to the UN Charter and treaty obligations, especially those enshrined in the NPT, we undermine a system which has served us all imperfectly but on the whole very well. If the nuclear weapons states are unwilling to even acknowledge their obligations to work in good faith for the total elimination of nuclear weapons, we can't expect other states to accept new and needed restrictions on the transfer of nuclear technology. Without an effective NPT, the nuclear clock will eventually move closer to midnight. Weaponization of outer space would fatally weaken the NPT.

KEY ISSUES

It is important to draw a clear distinction here between “weaponization” and “militarization.” Space may be deemed as already militarized, in that satellites currently assist ground, sea, and air forces, as well as enhance global communication and surveillance systems with civilian and military applications. Space has been militarized since the first communication satellites were launched into orbit. At the end of 2001 there were approximately 170 military-related satellites in space belonging to the United States, Russia, and various countries around the world. In this context, the military use of satellites is considered to be “non-aggressive” and “non-offensive,” in that while satellites may be used to assist conventional or air-based weapons, they have no destructive capability. This definition leaves much to be desired, leaving several loopholes open to exploitation, and yet, it is no secret that countries have designed their defence systems to do just that - exploit. Many ground-based systems operate with the aid of satellites for navigation and target acquisition. Some systems are also designed to take out space assets, but in both these cases, the technical definition of the term does not cover these weapons and this, as described, are covered by the term “militarization”. Weapons such as ballistic missiles - designed to traverse large distances across continents through space, such as those in service by the US military may also constitute space weapons due their silent ability to take out targets in space, so experts argue.

The militarisation of space is the placement and development of weaponry and military technology in outer space. The early exploration of space in the mid-20th century had, in part, a military motivation, as the United States and the USSR used it as an opportunity to demonstrate ballistic missile technology and other militarisable technologies. Outer space since has been used as an operating location for military spacecraft such as imaging and communications satellites, and some ballistic missiles pass through outer space during their flight. As yet, however, weapons have not been stationed in space, with the exception of small handguns carried by Russian cosmonauts.

While space has become an increasingly important arena for military operations, countries have not yet placed weapons in space or developed weapons which would fire into space. Thus, for the moment, space is non-weaponised. However, this situation may soon change. A number of countries, including Russia, China and the US, are reported to already be developing anti-satellite weapons.

Peaceful use of outer space

Technological developments in space have opened opportunities for many benefits to humanity including global communication systems and geological and meteorological information. The

global reach of space lends itself to the development of international systems thus increasing global cooperation and decreasing nation-state based systems and nationalism. In addition, the communication and verification capabilities offered by space systems make more possible the negotiation of verifiable disarmament treaties. The view of earth itself from outer space presents a perspective of our planet as a unified, interconnected and unique kernel of life, which like a spaceship, should not be fought over or destroyed by the folly of war. Thus, space in the 21st Century offers an opportunity to move towards a world of common security and disarmament rather than one of conflict and more arms races¹.

Global Positioning Systems - The second application of space militarisation currently in use is GPS or Global Positioning System. This satellite navigation system is used for determining one's precise location and providing a highly accurate time reference almost anywhere on Earth or in Earth orbit. It uses an intermediate circular orbit (ICO) satellite constellation of at least 24 satellites. The GPS system was designed by and is controlled by the United States Department of Defense and can be used by anyone, free of charge. The 52nd GPS satellite since the beginning in 1978 was launched November 6, 2004 aboard a Delta II rocket. The primary military purposes are to allow improved command and control of forces through improved location awareness, and to facilitate accurate targeting of smart bombs, cruise missiles, or other munitions. The satellites also carry nuclear detonation detectors, which form a major portion of the United States Nuclear Detonation Detection System. European concern about the level of control over the GPS network and commercial issues has resulted in the planned Galileo positioning system. Russia already operates an independent system called GLONASS (global navigation system), the system operates with 24 satellites that are deployed in 3 orbital planes as opposed to the 4 GPS is deployed in. The Chinese "Beidou" system provides China a similar regional (not global) navigation capability.

Military communication systems -The third current application of militarization of space can be demonstrated by the emerging military doctrine of network-centric warfare. Network-centric warfare relies heavily on the use of high speed communications which allows all soldiers and branches of the military to view the battlefield in real-time. Real-time technology improves the situational awareness of all of the military's assets and commanders in a given theatre. For example, a soldier in the battle zone can access satellite imagery of enemy positions two blocks away, and if necessary e-mail the coordinates to a bomber or weapon platform hovering overhead while the commander, hundreds of miles away, watches as the events unfold on a monitor. This high-speed communication is facilitated by a separate internet created by the military for the military.[citation needed] Communication satellites hold this system together by creating an informational grid over the given theatre of operations. The Department of Defense

¹ <http://www.globenet.free-online.co.uk/>

is currently working to establish a Global Information Grid to connect all military units and branches into a computerized network in order to share information and create a more efficient military.

HIGH ALTITUDE NUCLEAR EXPLOSIONS

Prior to the NTBT, the only nations to detonate nuclear weapons in outer space were the United States and the Soviet Union. In particular, 'HANE' was a sub-space experiment conducted by both nations. High-altitude nuclear explosions (HANE) have historically been nuclear explosions which take place above altitudes of 30 km, still inside the Earth's atmosphere. Such explosions have been tests of nuclear weapons, used to determine the effects of the blast and radiation in the exoatmospheric environment. The highest was at an altitude of 540 km. It was also to determine both feasibility of nuclear weapons as an anti-ballistic missile defence, as well as a means to defeat satellites and manned orbiting vehicles in space. High-altitude nuclear blasts produce significantly different effects.

The Soviets detonated four high-altitude tests in 1961 and three in 1962. During the Cuban Missile Crisis in October 1962, both the US and the USSR detonated several high-altitude nuclear explosions as a form of saber-rattling. The Soviet tests were meant to demonstrate their anti-ballistic missile defences which would supposedly protect their major cities in the event of a nuclear war. The worst effects of a Soviet high-altitude test occurred on 22 October 1962 (during the Cuban missile crisis), in 'Operation K' when a 300 kt missile-warhead detonated near Dzhezkazgan at 290-km altitude. The EMP fused 570 km of overhead telephone line with a measured current of 2,500 A, started a fire that burned down the Karaganda power plant, and shut down 1,000-km of shallow-buried power cables between Aqmola and Almaty.

Another of the consequences of weaponization of space, this problem must be taken into account to avoid future clashes.

Space Warfare

Space Weapons- Space weapons are weapons used in space warfare. They include weapons that can attack space systems in orbit (i.e. anti-satellite weapons), attack targets on the earth from space or disable missiles travelling through space. In the course of the militarisation of space, such weapons were developed mainly by the contesting superpowers during the Cold War, and some remain under development today. Terrestrial-type weapons in space have existed as is known from the USSR and USA cosmonauts carrying small arms. There are

postulations of space warfare that include battles where the targets themselves are in space. Space warfare therefore includes ground-to-space warfare, such as attacking satellites from the Earth, as well as space-to-space warfare, such as satellites attacking satellites.

Space warfare however does not include the use of satellites for espionage, surveillance, or military communications, however useful those activities might be. It does not technically include space-to-ground warfare, where orbital objects attack ground, sea or air targets directly, but the public and media frequently use the term to include any conflict which includes space as a theater of operations, regardless of the intended target. For example, a rapid delivery system in which troops are deployed from orbit might be described as "space warfare," even though the military uses the term as described above.

Only a few incidents of space warfare have occurred in world history, and all were training missions, as opposed to actions against real opposing forces. In the mid-1980s a USAF pilot in an F-15 successfully shot down the P78-1, a communications satellite in a 345-mile (555 km) orbit. In 2007 the People's Republic of China used a missile system to destroy one of its obsolete satellites (see 2007 Chinese anti-satellite missile test), and in 2008 the United States similarly destroyed its malfunctioning satellite USA 193. To date, there have been no human casualties resulting from conflict in space, nor has any ground target been successfully neutralised from orbit.

PROBLEM WITH SPACE WEAPONIZATION

To illustrate the problem of space weaponization, the PAROS Working Group describes it as follows:

"The weaponization of space will destroy strategic balance and stability, undermine international and national security, and disrupt existing arms control instruments, in particular those related to nuclear weapons and missiles. These effects will inevitably lead to a new arms race. Space weaponization would seriously disrupt the arms control and disarmament process. The United States' withdrawal from the Anti-Ballistic Missile Treaty in 2001 and the development of US ground- and seabased "missile defences" have already increased tensions with Russia and have led to increased missile proliferation. The deployment of these technologies or the development of space-based technologies will likely cause Russia, as well as the United States (in response to Russia), to make smaller and smaller reductions of their nuclear arsenals and to reject the development of new treaties to regulate nuclear weapons and their delivery systems. China would likely build more warheads to maintain its nuclear deterrent, which could in turn encourage India and then Pakistan to follow suit."

Problems to consider:

- Creates a New Arms Race- Currently there is a broad range of potential space weapons that are being developed and a great variety of technology that can be used in their construction. The concept of a “space weapon” must be defined in order to distinguish from technology used for non-offensive military, commercial or civilian purposes. Space weapons consist of both weapons deployed in space, capable of attacking targets in space, the air, or the ground; and weapons against space objects, which can be launched in space, in air, or on the ground. There are two types of space weapons that can legally exist under international law: kinetic energy weapons and directed energy weapons. Kinetic energy weapons destroy by hitting another object at high speed, and have the potential to carry chemical explosives to assist in attack. Directed energy weapons destroy targets by focusing energy beams at the speed of light.

When considering all the categories of space weapons, the term ‘space’ must also be clarified: a weapon is space-based if it has a stable station past Earth’s orbit, or orbits the Earth more than once. The most common examples in the weaponization debate are space-based anti-satellite weapons (ASATs) as earlier referenced; satellite based systems for ballistic missile defence (BMD), and space-to-earth weapons (STEW). Anti-satellite weapons specifically target enemy satellites, while BMDs can use directed energy, direct impact or conventional explosives to destroy ballistic missiles mid-course. STEWs operate in space but project to strike against land, sea, or air targets. All three categories are a subset of kinetic or directed energy weapons. In addition, another serious possibility is the combination of Weapons of Mass Destruction (WMD) with space-based offenses. Currently, components of all these systems of weapons exist in some form, and are in development for further utility in space.

- Proliferation of space debris. Such debris, resulting from 50 years of space activity, already poses a considerable hazard to spacecraft. This crowding problem could worsen as a large number of space weapons could be deployed in Low Earth Orbit (LEO). The launching and testing of weapons would also increase space debris. Moreover, deploying space-based weapons in the increasingly crowded realm of LEO would leave less room for civilian systems. Those problems would also occur during periods of peace. If a number of satellites were to be destroyed during the course of a war, some scientists warn, they would create so much debris that it would prevent future satellites from being stationed in space and generally limit space access.
- Overcrowding and Unwarranted accidents/collisions-Furthermore, perhaps the greatest danger posed by the weaponization of space is that of war by accident. At any given

time, several thousand satellites and other pieces of equipment -- spent booster stages and the like -- are circling the earth, most of them in LEO. The space immediately above the atmosphere has begun to resemble an expressway at rush hour. It is not uncommon for satellites to miss each other by only a kilometre or two, and satellites crashing into each other may explain some of the mysterious incidents in which space vehicles simply vanish from the skies. Eg. One civilian TV satellite has been lost in space; it never entered its intended orbit, and no signals were heard from it to indicate where it might have gone. Collision with something else in space seems a reasonable explanation of this disappearance.

- Now suppose that kind of mishap befell a military satellite -- in the worst possible situation, during a time of international tension with all players in the space war game braced for attacks on their spacecraft. The culpable fragment might be invisible from the ground; even something as small and light as a paper clip could inflict massive damage on a satellite at high velocity. Unaware of the accident, a less than cautious leader might interpret it as a preconceived attack. It is hardly inconceivable as wars have begun over smaller incidents.

LEGAL ASPECTS

A significant first step was the adoption by the General Assembly in 1963 of the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space.

The years that followed the 1963 Declaration saw the development within the United Nations of five general multilateral treaties, which incorporated and developed concepts included in the Declaration of Legal Principles:

Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (General Assembly resolution 2222 (XXI), annex) adopted on 19 December 1966, opened for signature on 27 January 1967, entered into force on 10 October 1967.

The United Nations (U.N.) Outer Space Treaty provides the basic framework on international space law, saying that space should be reserved for peaceful uses. It came into effect in October 1967. As summarized by the U.N. Office for Outer Space Affairs web site, the treaty includes the following principles:

- the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind;
- outer space shall be free for exploration and use by all States;
- outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means;
- States shall not place nuclear weapons or other weapons of mass destruction in orbit or on celestial bodies or station them in outer space in any other manner;
- the Moon and other celestial bodies shall be used exclusively for peaceful purposes;
- astronauts shall be regarded as the envoys of mankind;
- States shall be responsible for national space activities whether carried out by governmental or non-governmental activities;
- States shall be liable for damage caused by their space objects; and
- States shall avoid harmful contamination of space and celestial bodies.

UNPURSUED FOLLOW Ups to the 1967 treaty

Under Article XV of the Treaty, any State Party to the treaty may propose amendments.

- In 1968, Italy submitted a request to the Twenty Third Session of the UN General Assembly, requesting the inclusion of an additional item in the agenda, namely “the necessity of amending Article IV of the Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies” Concerned by existing fractional orbital bombardment systems (FOBS) the amendment sought to prohibit placing nuclear weapons or any other kinds of weapons of mass destruction “ in complete or partial orbit, around the Earth or around any other celestial body (emphasis in original)”.

Though the amendment proposal was made to the UN General Assembly, the draft resolution stipulates that upon a favorable vote by the UN General Assembly, the later is to submit the issue for further study to the Conference of the Eighteen-Nation Committee on Disarmament (ENDC). The ENDC was to promote the steps necessary for the amendment of the Treaty and submit concrete proposals to the Twenty Fourth Session of the UNGA. The proposal was never submitted to the ENDC.

- A Memorandum suggesting the drafting of a Protocol of the Outer Space Treaty’s provisions was submitted by Italy to the Conference on Disarmament in 1979. This was largely inspired by the series of negotiations held between 1977-1979 between the US and the Soviet Union on limiting ASAT systems. The document suggested a total ban on such military activities as the development and use of earth or space-based systems designed to damage, destroy, or interfere with the operations of other States’ satellites. States Parties to the Protocol would undertake: “to refrain from engaging in, encouraging or authorizing, directly or indirectly, or in any way participating in any measures of military or hostile nature, such as the establishment of military bases, installations and fortifications, the stationing of devices having the same effect, the launching into orbit or beyond of objects carrying weapons of mass destruction or any other types of devices designed for offensive purposes, the conduct of military manoeuvres, as well as the testing of any type of weapons”.
 - This provision would fill the lacunae left by Article IV of the Outer Space Treaty, and extend existing prohibitions on the stationing and testing in Earth orbit or beyond to all weapons.
 - The Memorandum also specified that space systems which contribute to arms control verification and the maintenance of international security should not be banned. Thus the use of reconnaissance, surveillance and communications satellites were not prohibited.
 - The memorandum also supported the development of proposals to establish a basis for the use of technical means of multilateral verification, and the creation

of the International Satellite Monitoring Agency (ISMA) as proposed by France in 1978.

- The Venezuelans had a proposal that first advocated amending Article IV of the Outer Space Treaty by adding the words “or any type of space weapons”. It also proposed the insertion of a new paragraph under which State Parties would undertake not to develop, produce, store or use space weapons. It was also suggested (1) that the ban on the deployment of nuclear weapons or any weapons of mass destruction in space be extended to “...any other kind of weapon that could be conceived for use in space, from space or into space”, and that (2) there be an amendment calling on States “...not to place in orbit around the earth, or deploy in their territories or any other place under their jurisdiction, any kind of space weapons or systems of such weapons.
- The Peruvian delegation suggested a wider ban and advocated the negotiation of an additional Protocol for the purpose of prohibiting the development, production, storage and deployment of ASAT weapon-systems which are not stationed in outer space. On the issue of verification of a total ban on space weapons, the Venezuelan delegation proposed that there be a Protocol setting forth appropriate verification mechanisms to supplement Article IX and XII of the Outer Space Treaty, and on the issue of Earth-based space weapons, it proposed a mechanism that “...could benefit from the techniques and methods applicable to long-range and intermediate-range nuclear forces”.

These proposals clearly differentiated themselves from previous proposals in that they attempt to cover development, production, storage and use of space weapons. They also address different application modes of space weapons: space-to space, space-to-Earth and Earth-to-space. While all of these proposals have found some support within the CD, they have not been further pursued.

IMPLEMENTED FOLLOW UPS TO THE 1967 TREATY

Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (resolution 2345 (XXII), annex)— adopted on 19 December 1967, opened for signature on 22 April 1968, entered into force on 3 December 1968;

Convention on International Liability for Damage Caused by Space Objects(resolution 2777 (XXVI), annex)—adopted on 29 November 1971, opened for signature on 29 March 1972, entered into force on 1 September 1972;

Convention on Registration of Objects Launched into Outer Space (resolution 3235 (XXIX), annex)—adopted on 12 November 1974, opened for signature on 14 January 1975, entered into force on 15 September 1976;

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (resolution 34/68, annex)—adopted on 5 December 1979, opened for signature on 18 December 1979, entered into force on 11 July 1984.

Also known as the Moon Treaty, was meant to be the follow-up to the Outer Space Treaty, but failed to be ratified by any space-faring nation. The Moon Agreement was considered and elaborated by the Legal Subcommittee from 1972 to 1979. The Agreement was adopted by the General Assembly in 1979 in resolution 34/68. It was not until June 1984, however, that the fifth country, Austria, ratified the Agreement, allowing it to enter into force in July 1984. The Agreement reaffirms and the Moon and other celestial bodies should be used exclusively for peaceful purposes, that their environments should not be disrupted, that the United Nations should be informed of the location and purpose of any station established on those bodies. In addition, the Agreement provides that the Moon and its natural resources are the common heritage of mankind and that an international regime should be established to govern the exploitation of such resources *when such exploitation is about to become feasible*.

Presently, the Moon Treaty has been ratified by six countries. Four countries, including France and India, are signatories, and seven countries have acceded to the Moon Treaty, including Australia. *The United States, the Russian Federation (former Soviet Union), and the People's Republic of China have neither signed, acceded, nor ratified the Moon Treaty, which has led to the conclusion that it is a failure from the standpoint of international law.* Even with only six nations ratifying the Moon Treaty, the fact that eleven other nations, including Australia, France, and India, have acceded to or become signatories to the Moon Treaty creates a shadow of customary law that could grow such that non-parties could find themselves overshadowed by the penumbra of the Moon Treaty, especially if those nonparties take no action to refute its legitimacy.

The Moon Treaty specifically closes a loophole in the Outer Space Treaty by *banning any ownership of any extraterrestrial property by any organization or private person, unless that organization is international and governmental.*

The United Nations oversaw the drafting, formulation and adoption of five General Assembly resolutions, including the Declaration of Legal Principles. These are:

Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, adopted on 13 December 1963 (resolution 1962 (XVIII));

Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, adopted on 10 December 1982 (resolution 37/92);

Principles Relating to Remote Sensing of the Earth from Outer Space, adopted on 3 December 1986 (resolution 41/65);

Principles Relevant to the Use of Nuclear Power Sources in Outer Space, adopted on 14 December 1992 (resolution 47/68);

Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries, adopted on 13 December 1996 (resolution 51/122).

Other Relevant Treaties

The Nuclear Test Ban Treaty 1963 (NTBT), or its formal name Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space, and Under Water, was signed in Moscow on August 5, 1963, by the United States, the Soviet Union, and the United Kingdom that banned all tests of nuclear weapons, most notably in outer space except those conducted underground.

Capacity Building under Space Law

The Legal Subcommittee agreed that capacity-building is an important component of treatment of SPACE LAW aspect to be undertaken by nations. It includes training and education in space law which have been considered to be of paramount importance to national, regional and international efforts to further develop the practical aspects of space science and technology and to increase knowledge of the legal framework within which space activities were carried out.

International Response

The United Nations and other countries, regionally or multilaterally have gotten together to form bodies that pertain to specific aspects of space activity monitoring and consensual approach to its use in the context of weaponization. Some of those are.

- United Nations Committee on the Peaceful Uses of Outer Space
- United Nations Office for Outer Space Affairs
- Asia-Pacific Space Cooperation Organization
- Pan-Arab Space Agency
- International Telecommunications Satellite Organization
- Consultative Committee for Space Data Systems
- Committee on Space Research

The Committee on the Peaceful Uses of Outer Space was set up by the General Assembly in 1959 (resolution 1472 (XIV)) to review the scope of international cooperation in peaceful uses of outer space, to devise programmes in this field to be undertaken under United Nations auspices, to encourage continued research and the dissemination of information on outer space matters, and to study legal problems arising from the exploration of outer space.

Number of Member States in the Committee: 74

The Committee has two standing Subcommittees of the whole:

- the Scientific and Technical Subcommittee; and
- the Legal Subcommittee.

The Committee and its two Subcommittees meet annually to consider questions put before them by the General Assembly, reports submitted to them and issues raised by the Member States. The Committee and the Subcommittees, working on the basis of consensus, make recommendations to the General Assembly. Detailed information on the work of the Committee and the Subcommittees are contained in their annual reports.

The United Nations Office for Outer Space Affairs was initially created as a small expert unit within the Secretariat to assist the ad hoc Committee on the Peaceful Uses of Outer Space established by the General Assembly in its resolution 1348 (XIII) of 13 December 1958. It became a unit within the Department of Political and Security Council Affairs in 1962, when the Committee on the Peaceful Uses of Outer Space met for the first time, and was transformed

into the Outer Space Affairs Division of that Department in 1968. In 1992, the Division was transformed into the Office for Outer Space Affairs within the Department for Political Affairs. In 1993, the Office was relocated to the United Nations Office at Vienna.

Mandate

The Office implements the decisions of the General Assembly and of the United Nations Committee on the Peaceful Uses of Outer Space; performs functions of the Secretariat of the United Nations Committee on the Peaceful Uses of Outer Space and its Scientific and Technical and Legal Subcommittees; coordinates the inter-agency cooperation within the United Nations on the use of space technology; implements the United Nations Programme on Space Applications; maintains coordination and cooperation with space agencies and intergovernmental and non-governmental organizations involved in space-related activities. The Office maintains, on behalf of the United Nations Secretary-General, the Register of Objects Launched into Outer Space. From 2007, the Office is also responsible for the implementation of UN-SPIDER Programme ("United Nations Platform for Space-based Information for Disaster Management and Emergency Response") which is a platform which facilitates the use of space-based technologies for disaster management and emergency response.

A FEW COUNTRY POSITIONS

UNITED STATES OF AMERICA

The United States, one of the two early pioneers of space technology, has launched satellites into space for decades. These satellites are either for purely civilian use, purely military use, or have dual purpose. Many satellites aid various operations of the United States Armed Forces including communication, navigation, surveillance, and missile warning, among others, although most . Space systems have been considered as indispensable providers of tactical information to U.S. forces.

The US Space Command, based in Colorado, was established in 1985 to define and aid the military engagements of the United States Armed Forces that include the use of outer space. In 2002, it was merged with the United States Strategic Command, where the space operations are overseen by the Joint Functional Component Command for Space (JFCC Space). Beginning in the Eisenhower Administration and concluded during the Kennedy Administration, the international community, with strong and positive American leadership, concluded the Outer Space Treaty, which calls for using space to promote the common interest of all mankind.

The US Space Command notes that space is the new frontier - that "space is a region with increasing commercial, civil, international and military interests and investments." And that "the threat to these vital systems is also increasing." The response of the US is to plan, research, develop and deploy weapons systems to protect US interests and infrastructure in space.

The effect of this approach will likely be an arms race in outer space as other countries move to protect their interests against possible attack from the US. The alternative approach is to develop multi-laterally negotiated controls on weapons in space through a new space treaty. Such a treaty would:

- Ban the testing, production, deployment or use of weapons in space;
- Ban the testing, production, deployment or use of earth-based weapons which operate into space;
- Require the notification of all planned space activities;
- Establish monitoring and verification procedures;
- Include procedures for resolving conflicts regarding military use of space and enforcement mechanisms for violations of the treaty.

In January 2001 The Commission to Assess United States National Security Space Management and Organisation, chaired by Donald Rumsfeld, now US Secretary of Defense, recommended

that "the US Government should vigorously pursue the capabilities called for in the National Space Policy to ensure that the President will have the option to deploy weapons in space to deter threats to and, if necessary, defend against attack on US interests."

Even before the Commission had been established, the US was conducting research and development in anti-satellite weapons, space based earth-strike weapons, and deployment of support systems. In preparation for the deployment of anti-satellite weapons, for example, the US has deployed a Space Surveillance Network which detects, tracks, identifies and catalogs all space objects in case the US finds it "necessary to disrupt, degrade, deny or destroy enemy space capabilities in future conflicts"

The US Space Command's plans for the development of space-based and space directed weapons are laid out in its 1998 Long Range Plan. The integrated system of surveillance, navigation, communication, and attack capabilities are being developed in order to "protect military and commercial national interests and investment in space," and "to deny others the use of space, if required."²

Faced with the perceived challenges, the US is focusing on the issue of space control, presumably through the deployment of offensive capabilities able to ensure uninterrupted use of their space assets. In addition, there are reports that the Pentagon planned to develop and field a multi-layered shield against incoming missiles that could deliver nuclear, biological, or chemical weapons. This shield, which was first proposed by President Reagan under his "Star Wars" plan, includes space-based interceptors. Such a system could also function as anti-satellite weaponry. It should be stressed that most of these developments came after the 2002 US withdrawal from the Anti-Ballistic Missile (ABM) Treaty.

Under the Obama Administration, the United States has shown significant deviation from the Bush-era policies, having become more receptive to the notion of a ban on space weapons. But the very concept of space weapons is covered under the shroud of ambiguity, so the effectiveness of those policies is still not clear. The combined threat of "rogue" states acquiring the relevant technology and the massive arsenal of American satellites at risk in orbit, gives the United States much to worry about security of its assets in space. The test by China in 2007, where it blew up one of its own satellites using an ASAT, especially raised worries of an arms race in space and the security of space installations. The United States responded by eliminating one of its own satellites in 2008 in what was called a "test" strike.

Militarization Of Space For Economic Superiority

² US Space Command Long Range Plan <http://www.fas.org/spp/military/docops/usspac/lrp/cover.htm>
US Space Surveillance Network http://www.fas.org/spp/military/program/track/spasur_at.htm

The military superiority of past and present nations has been to defend or expand such “national interests.” The militarization of space by the USA, even when there has been an international agreement to use space for peaceful purposes, as mentioned above, begs the question “why?” The US military explicitly says it wants to “control” space to protect its economic interests and establish superiority over the world. Several documents reveal the plans. Take Vision for 2020, a 1996 report of the US Space Command, was set up in 1985 to “help institutionalize the use of space.” and opens with the following: “US Space Command—dominating the space dimension of military operations to protect US interests and investment. Integrating Space Forces into war fighting capabilities across the full spectrum of conflict” A century ago, “Nations built navies to protect and enhance their commercial interests” by ruling the seas, the report notes. Now it is time to rule space.

RUSSIAN FEDERATION

The Soviet Union, along with the United States, were the first nations to explore space, the first nations to declare it a zone of peace, and also the first nations to develop technology combining space and military, secretly. Both nations launched a great number of satellites for reconnaissance purposes, the use of which were later determined legitimate under bi-party agreements. In fact, in the first US-USSR Strategic Arms Limitation Treaty (SALT), signed in 1972, the two sides formally agreed not to attack the other’s “national technical means of verification”, as a recognition of the importance of satellite reconnaissance for maintaining a credible nuclear deterrent and for reducing uncertainty in decision-making based on actual knowledge of what the other side was doing. The Soviet program boomed through the Cold War, outspending the America space budget, and showing immense resolve in embarking on long-term programs. Although after the dissolution of the Soviet Union, there were certain setbacks in terms of cash flow which forced it to fall behind in the Space Race; the Russian space program regained its strength substantially after 2005, when the economy started gaining stability.

Since the 1980s, USSR has been exploring offensive weapons with respect to outer space. The USSR had always shown a deep interest in rocket technology, which it used widely in combat. Alongside, research on installations such as ASAT platforms also continued. Currently it supports its military with communication and early warning satellites. There are also reports that the Russian Federation has been developing weapons that can eliminate targets in space. A priority is also the protection of key locations from space-based attacks, for which measures such as missile defense systems and nuclear rocket systems have been developed. The Russian Federation believes that certain nations, especially the United States would be able to target any object from space by 2030, and hence has sped up efforts to develop and deploy additional

defense installments. Some believe that they are counter measures to the US missile defense shield planned for Europe.

However, the Russian Federation has constantly argued against the deployment of weapons in outer space. In 2004, Russia's permanent representative to the Conference on Disarmament made a statement, noting that Russia pledged not to be the first to deploy any weapons in outer space and that Russia encouraged all space powers to follow its example. The Kremlin has pushed for an agreement banning space weapons but the proposal has constantly been rejected by the United States.

Furthermore, Russia accused the United States of bringing down one of its research satellites, which the Pentagon denied to have played any role in. The Russian statement suggested that the satellite may have fallen victim to Earth-based technical means. Another controversy erupted when the Russian Federation said that their scientific spacecraft destined for Mars may have malfunctioned due to possible damage from an ASAT.

The Russian Federation has constantly advocated for a ban on space weapons, but at the same time stated that the actions of other nations in the opposite would be responded to with strength and might.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

It is alleged that since 2003, North Korea has conducted missile tests. In recent years, their justification for these tests has been the launch of satellites using ballistic missile technology. The world community, especially the West, has observed these events with the concern that North Korea may have been trying to develop long range missiles with satellites being just a pretext.

North Korea withdrew from the NPT in 2003 and declared itself to be a nuclear weapon state. This sudden turn of events brought the North Korean under international scrutiny. In December 2012, despite appeals from many nations including China and Russia, the country launched a missile which it claimed later, had successfully placed a satellite in space, drawing condemnation from the United States and other Western nations.

Subsequently, North Korea has boasted of its missile's massive range, causing discomfort among nations and raising pre-existing concerns about the security of space assets, should North Korea develop the relevant ASAT technology as well. Because of its constant disregard for appeals made by the international community and violations of UN resolutions, the UN has even discussed placing sanctions on the North Korean space agency.

ISLAMIC REPUBLIC OF IRAN

In the first decade of the 21st century, Iran has made great strides to establish an autonomous space program, using the Shahab missile as the foundation of its launcher program. Iran shows every sign of having effectively mastered the missile technology necessary to continue its space program. Its first satellite was launched with aid from Russia in 2005. While Iran has been a strong advocate of its non-military intentions regarding its space program, the lack of transparency has resulted in criticism and suspicions of a covert military angle to it. After establishing itself into space, Iran has offered assistance to any willing country in the Muslim world.

Apart from the suspicion of possession of nuclear weapons by Iran, the alleged collaboration with North Korea on nuclear and missile technology and launch sites has been subject of much criticism. Iran has reportedly been spending a major chunk of its defense budget to develop ICBM technology. Iran has been on bad terms with the West for decades and the possibility of it developing means to deliver lethal payloads in space is observed as a grave threat to existing space assets. Iran has reportedly stated that they would want to possess similar capabilities to observe situations all over the world, like the United States has been doing for ages.

ISLAMIC REPUBLIC OF PAKISTAN

Pakistan is the third Asian nation to put a rocket in space. It is reported that like many other nations, Pakistan also shrouds improvements in its ballistic missile and nuclear programs within the context of a public civilian space program. Pakistan relies heavily on dual use technologies, and for this very reason its civilian space program is often linked to its military strategic plans.

The space program, established in 1961, was administered by Space Research Council (SRC), Executive Committee of Space Research Council (ECSRC), and the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO). To fulfill its ambitions beyond the atmosphere, Pakistan has sought Chinese technology at a steady rate, and has often been described as “China’s Israel” because of the dependency relationship.

Pakistan has constantly been upgrading its missile arsenal, testing new technology from time to time, the most recent test being in December 2012. Also, its strength in nuclear arms, as a deterrent to India’s military technology, acts as a threat for the region. The two nations have accused each other of spying and engaging in electronic warfare for years, and the lack of confidence between the nations poses a grave risk in the area.

Pakistan is said to have been working closely with China since 1990 to ensure space security and protect its satellites and at the same time develop methods to deny the enemy access to its space assets. China launched Pakistan’s communication satellite in 2011 from its Xichang Satellite Launch Center. While Pakistan has remained highly secretive and limited about its space program, the country has focused on developing stealth missiles and technologies to

avoid detection. The India-Pakistan rivalry that was once limited to land, sea and air, have clearly entered the domain of space.

PEOPLE'S REPUBLIC OF CHINA

China entered the Space Race late, but has become an aggressive player in the fourth frontier. In 2003, it became the third nation (after United States and Soviet Union) to independently launch a person into orbit. Primarily comprised of state-owned programs, the Chinese have made significant development in ballistic missile technology, and have set high standards for themselves in exploration and research.

Even though China has constantly opposed the use of space for military purposes, many believe it is a possible adversary of the United States in the future. Experts say that China's space activities are driven by the People's Liberation Army. When in 2007, China blew up one of its aging satellites with a medium-range ballistic missile; it caused mild panic amongst the Western nations. Not only was it a display of Chinese power in the arena, but also risked an environmental catastrophe due to the large amount of space debris created. It was seen as though China was flexing its muscles for an imminent arms race. It is clear that the Chinese leaders see the development of military space capabilities as being of pivotal importance. But what concerned world leaders more was that China did not inform anyone prior to the launch. This lack of openness is certainly a worry. Moreover, China has wanted a global treaty to ban weapons in space, and thus this act caused the Chinese government to be bombed with allegations of hypocrisy and mistrust. Even if the Chinese are genuinely pursuing such a global ban, this lack of transparency has slaughtered international confidence in the idea.

Also, the mistrust between the United States and China over each other's technological capabilities instigates both of them equally to take aggressive steps further. The People's Republic has been increasing its missile arsenal steadily. Another method being explored by the People's Republic is the installation of interceptors at high-earth orbit, designed to destroy objects by ramming them at high speeds. The West is also concerned about the growing capability of the Chinese in electronic warfare giving them the power to jam communication signals and disrupt satellite functioning. Many believe that the real goal of the Chinese is to deny or degrade the space assets of potential adversaries. The ability, combined with the possession of nuclear weapons is a significant threat.

China Proposal

The most recent proposal for a new agreement on preventing an arms race in outer space was made by the delegate of China to the Conference on Disarmament. China has proposed the establishment of an ad hoc committee in the Conference on Disarmament to negotiate a treaty prohibiting the weaponization of outer space. Other countries, including Pakistan, have

supported the proposal, noting that there are plans for space weaponisation, including elements of Ballistic Missile Defense programs, and that prevention of an arms race in outer space through an agreed treaty would be preferable to trying to pull back such developments after they occurred. The CD, which functions by consensus, has been unable to move forward on China's proposal because of the opposition of some countries, primarily the US which claims that there is not an arms race in outer space and thus there is no need for such negotiations. The primary goal is to prevent the weaponization of outer space by banning the testing, deployment and use of weapons, weapon systems and components in outer space. Countries with the greatest space capabilities would bear a special responsibility for preventing the weaponization of an arms race in outer space and ensuring that space be used for peaceful purposes.

The term "weapon systems" would encompass space technologies such as boosters, satellites and their components, and Earth-based control and tracking systems. Clearly, attempts to prohibit these latter technologies would meet with much resistance, and is not a realistic goal. Building in CBMs to enhance mutual trust is also likely to gain support. *Vis-à-vis* all of these proposals for new agreements, the US continues to say that a broad regime of regulation already exists and this regime is quite effective and sufficiently rigorous.

REPUBLIC OF INDIA

The Indian space program developed late, but is quickly catching up with competing nations. Led by ISRO, DRDO and the Air Force, India has sent a large number of communication and information gathering satellites in space. Its space policy emphasizes on the need to protect its space assets using ground based installations, and the protocol to be followed in case of an attack. India's primary opposition in the region is the People's Republic, which has developed capability to shoot down satellites. India is against the deployment of weapons in space, but it is reported that India is conceptualizing its own space weapon platforms, as a counter measure to the development of other powers in the field.

Moreover, India is a non-party to the Nuclear Non-Proliferation Treaty and the Proliferation Security Initiative, and has displayed immense resolve to develop long-range missiles. India is also developing a robust ballistic missile defense system as a counter strategy. The DRDO has said that in the long term, it is necessary to have capability but stressed that the Indian program would be purely defensive in nature.

India has been receiving aid from the United States, Israel and France in terms of information and technology sharing. Especially after 2001, the relationship with United States has significantly improved, causing the relaxation of export control laws, which resulted in opening up new avenues of trade in dual-use technology and equipment.

OTHER COUNTRIES

Canada maintained a firm position on the prevention of an arms race in outer space and it strongly opposes the weaponization of space. France has played an active part in the work of the Conference on Disarmament and came out strongly in favor of the peaceful uses of outer space. In June 2001, the President of France noted that the non-weaponization of space was an essential element which has been maintained this far and should continue. Any other scenario would lead to a new arms race which would be disastrous for everyone. Sweden also constantly expresses its concerns vis-à-vis the risks of an arms race in space

It is interesting to note that, within the United Nations, the most recent Resolution adopted by the General Assembly on 17 December 2004 on the Prevention of an Arms Race in Outer Space was adopted with no votes against (only 4 States abstained, among which the United States and Israel). This shows a change in position by the US, which in previous years voted against virtually the same text, which "calls upon all States, in particular those with major space capabilities, to contribute actively to the objective of the peaceful uses of outer space and of the prevention of an arms race in outer space and to refrain from actions contrary to that objective and to the relevant existing treaties in the interest of maintaining international peace and security and promoting international cooperation".

It should however be mentioned that several countries expressed their support for, or at least an interest in cooperation with, the US missile defense program, such as the United Kingdom, Israel, Japan, Australia, and India.

Also, one should note that Canada announced that it will not participate in the US missile defense program but it will continue its participation in the North American Aerospace Defense Command (NORAD). Other nations express their open disapproval towards the controversial program. Such are Russia, China and Germany, whose leaders repeatedly expressed their concerns that US plans for a national missile defense system may lead to a new international arms race.

Conclusion

A few of the Questions to Consider

- Would States Parties to any treaty would commit themselves not to test, deploy or use weapons, weapons systems or components of weapons systems in outer space?
- A broader and more crystallized definition of provision for permissible activities needed? Greater distinction between apparent non-military usage of civilian technology in space?
- Broader and renewed comprehensive definitions of terms such as “outer space”, “space weapons”, “weapon systems” and “components of weapon systems” ?
- Development of negotiated Verification mechanisms-mutually agreed upon?

Useful Links

<http://www.space.com/10756-united-states-china-space-missiles.html>

<http://www.dtic.mil/dtic/tr/fulltext/u2/a449545.pdf> - for US policy in the space

http://www.gs institute.org/bsg/docs/05_09_07_Grey_space.pdf Weaponization of outer space- for an unbiased perspective

<http://nuclearfiles.org/menu/key-issues/space-weapons/basics/introduction-weaponization-space.htm>

<http://www.globalissues.org/article/69/militarization-and-weaponization-of-outer-space>

<http://www.oosa.unvienna.org/oosa/en/SpaceLaw/index.html>

http://www.oosa.unvienna.org/pdf/reports/ac105/AC105_1003E.pdf - Legal Subcommittee Report on its fifty-first session, held in Vienna from 19 to 30 March 2012

<http://www.oosa.unvienna.org/oosa/SpaceLaw/treaties.html>

<http://www.oosa.unvienna.org/oosa/en/SpaceLaw/national/state-index.html>

http://www.oosa.unvienna.org/pdf/reports/ac105/AC105_1008Add1E.pdf - International cooperation in the peaceful uses of outer space: activities of Member States, Report 2012

http://www.oosa.unvienna.org/pdf/limited/c2/AC105_C2_L224E.pdf - Review of existing national space legislation illustrating how States are implementing, as appropriate, their responsibilities to authorize and provide continuing supervision of non-governmental entities in outer space

http://www.oosa.unvienna.org/pdf/gadocs/A_67_20E.pdf Report of the Committee on the Peaceful Uses of Outer Space 2012

http://www.oosa.unvienna.org/pdf/limited/l/AC105_L284E.pdf Draft Report COUPUS 2012