



*Cağaloğlu Anadolu Lisesi  
Model United Nations 2017*

North Atlantic Treaty Organisation  
Study Guide

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## Welcome Letter from the Under-Secretary-General

As the Under Secretary-General of the NATO, I would like to welcome you all to the second edition of Çağaloğlu Anadolu Lisesi Model United Nations Conference.

Since 20<sup>th</sup> century, humankind has been questioning several new problems that come along with the rapid advancement of science and technology. Armament in outer space is a clear conclusion of this evolution. This Study Guide includes the general background of the topic, its current situation in the international area and the basic structure of NATO. It is expected from all of the delegates to be well prepared in order to tackle the crisis situations and the crucial points of the topic. Whenever you are taking an action, please bear in mind the possible outcomes of it.

As my conclusion remarks, I am personally thankful to my Academic Assistant Cihan Giray Özdemir and the Secretariat of CALMUN for their precious efforts during the preparation period of the document.

Although your highly experienced board members will guide you very well during the committee, you shall not to hesitate to ask questions via;

[hevi.gokdemirhg@gmail.com](mailto:hevi.gokdemirhg@gmail.com)

Best Regards,

*Hevi Gökdemir*

*Under Secretary-General of North Atlantic Treaty Organization*

### 1. History of NATO

North Atlantic Treaty Organization is an alliance, found on April 4, 1949. It was briefly had the purpose of defending itself against pre-communist states.

Furthermore, it is the key for United States to maintain its sustainability at the European Region. Fair well, it is quite understandable by considering the budget United States allocates for the military of NATO per year –almost 3/4 of the whole budget of NATO. Nowadays, it is consisted of 28 members; Turkey, United States Canada and very much of the members of European Union.

#### Article 5

*“The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognized by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.”*

Article 5 is one of the key factors of NATO agreement. It highlights;

- *Collective defence means that an attack against one Ally is considered as an attack against all Allies.*
- *The principle of collective defence is enshrined in Article 5 of the Washington Treaty.*
- *NATO invoked Article 5 for the first time in its history after the 9/11 terrorist attacks against the United States.*
- *NATO has taken collective defence measures on several occasions, for instance in response to the situation in Syria and in the wake of the Russia-Ukraine crisis.*
- *NATO has standing forces on active duty that contribute to the Alliance's collective defence efforts on a permanent basis<sup>1</sup>*

As it may be seen clearly with its cornerstones and previous applications, Article 5 serves a particular place for the Alliance. It edges on to all of its members for binding to the Alliance and emphasizes the concept of being a “union”. This might be the perfect reason of applying the “consensus decision making”; for gathering all the Member Nations under one great roof.

1 [http://www.nato.int/cps/en/natohq/topics\\_110496.htm](http://www.nato.int/cps/en/natohq/topics_110496.htm)

## 1. Key Terms and Background

### a. Key Terms

*Satellite: A celestial body which orbits any other celestial body, mainly around a planet, dwarf planet or any other Small Solar System Body.*

*ASAT: Space weapons designed to incapacitate or destroy satellites for strategic military purposes.<sup>2</sup>*

*Res Communis: A certain object or place that is not in the sovereignty of a specific nation. In contrary this term is used for defining the common heritage of the mankind.*

*Consensus: It refers for each member of the group reaching a single decision for their own sake.*

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2 [https://en.wikipedia.org/wiki/Anti-satellite\\_weapon](https://en.wikipedia.org/wiki/Anti-satellite_weapon)

## a. Background

***“The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in the race for space.”***

***35th President of United States, John F. Kennedy  
12 September 1962***

By appreciating the comprehensive structure of the topic “space”, it will be quite understandable to begin with the wise words of John F. Kennedy, which actually explains not only the situation of its own decade, but enlightens the future decades with itself about the importance of leadership in space.

After World War II, earth was seen too small to compete, especially when two superpowers were rapidly increasing their powers and control areas. United States and the Soviet Union both had a large budget for the development of technology for military purposes. This had also triggered the way for space research. The milestone of the space race is considered to be USSR, launching *Sputnik*, the very first artificial satellite, on October 4, 1957. It was followed by the launch of *Explorer 1* and the formation of NASA by United States.

By the end of the 1960's, **reconnaissance satellites**, or commonly known as spy satellites, were very popular. They were basically deployed to observe the mechanism and take photos of military equipment of rivals. This led to researches and efforts to develop anti-satellite weapons (ASAT) for both side of the iron curtain.

**ASATs** are programmed to destroy or put any military satellites out of action. Although United States is known to have an intense history of ASATs, the USSR's origins remain unclear.<sup>3</sup> Even though they were mainly popular during the Cold War, their popularity remained after the collapse of the USSR. China, Israel and India are also known to be interested in the development of ASATs.

Although the current international legal instruments concerning outer space do, to some extent, prohibit and restrict the deployment of weapons, use of force as well as military activities in certain parts of space, the related provisions contained in them are seen by some states to be limited in scope and therefore inadequate for preventing weaponisation of outer space. The progress of science and technology could make it necessary to strengthen the existing international legal system.

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3 [https://en.wikipedia.org/wiki/Anti-satellite\\_weapon](https://en.wikipedia.org/wiki/Anti-satellite_weapon)

## 2. *Treaties and Protocols*

Outer space is an exciting and highly important region, which, because of its unique nature, holds the potential for both significant benefits and dangers. The primary goals of space law are to ensure a rational, responsible approach to the exploration and use of outer space for the benefit and in the interests of all humankind.<sup>4</sup>

With progressive development on the field throughout the years, space technology enabled mankind to land on moon, explore other planets and even leave our solar system, which led it to evolve into a complex and wide field. Space technology helped us build an advanced civilization but it also opened a new path to destroy it. Therefore, in order to prevent any possible negative outcomes, The UN took the helm and united countries around the world to write principles and treaties and to form a concept of proper international usage of space.

These documents addressed many questions such as military activities in outer space, preservation of the space and Earth environment, liability for damages caused by space objects, settlement of disputes, protection of national interests, rescue of astronauts, sharing of information about potential dangers in outer space, use of space-related technologies, and international cooperation.<sup>5</sup>

Yet these treaties and principles are not always able to cover all the aspects of space activities. Soon space technology will reach a point where most of the documents will be unable to determine what to do. Which is why this concept of international usage of space should be progressive as space technology is.

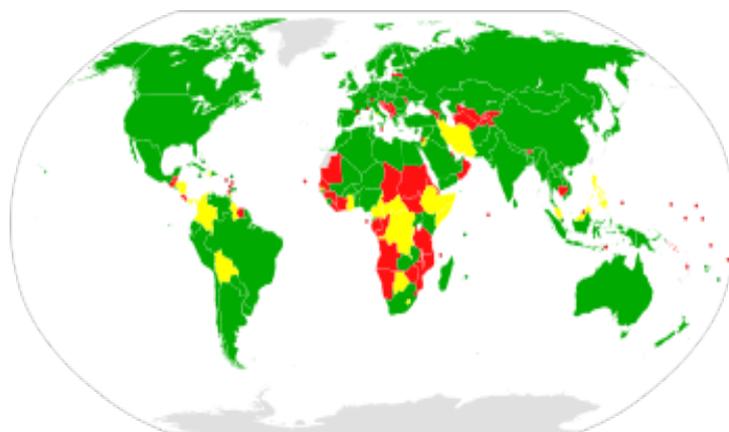
### a. **Outer Space Treaty of 1967**

The Outer Space Treaty represents the basic legal framework of international space law. Among its principles, it bars states party to the treaty from placing weapons of mass destruction in orbit of Earth, installing them on the Moon or any other celestial body or otherwise stationing them in outer space. It exclusively limits the use of the Moon and other celestial

4 <http://www.unoosa.org/oosa/en/informationfor/faqs.html>

5 <http://www.unoosa.org/oosa/en/informationfor/faqs.html>

bodies to peaceful purposes and expressly prohibits their use for testing weapons of any kind, conducting military maneuvers, or establishing military bases, installations, and fortifications.<sup>6</sup>



Parties
  Signatories
  Non-parties

The first article of the treaty explains the basis of what the treaty covers;

***“The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind. Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies. There shall be freedom of scientific investigation in outer space, including the Moon and other celestial bodies, and States shall facilitate and encourage international cooperation in such investigation.”***

The treaty indicates that every state is equal in every aspect in relation to outer space and all countries are free to explore and use celestial bodies. It states that the space activities should be beneficial for every country and that international cooperation shall be encouraged regarding the advancement of science, technology and exploration.

The second article of the treaty is one of the most discussed and criticized articles:

***“Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”***

<sup>6</sup> [https://en.wikipedia.org/wiki/Outer\\_Space\\_Treaty](https://en.wikipedia.org/wiki/Outer_Space_Treaty)

The treaty is often criticized about its insufficiency in global scale because of the adopted concept *res communis*.

Article IV is the key term about the prohibition of arms in space:

***“States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner. The Moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the Moon and other celestial bodies shall also not be prohibited.”***

It prohibits:

- Placing objects carrying nuclear weapons or any kinds of Weapons of Mass Destruction in orbit around the Earth.
- Installing Weapons of Mass Destruction on celestial bodies or stationing Weapons of Mass Destruction in outer space in any other manner.
- Establishing military bases or installations, testing of any type of weapons, or conducting military exercises on the moon and other celestial bodies.

Other treaty provisions underscore that:

- 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 their own space activities whether it is governmental or non-governmental;
- States shall be liable for damage caused by their space objects;
- States shall avoid harmful contamination of space and celestial bodies.<sup>7</sup>

Like other treaties, the Outer Space Treaty allows for amendments or member withdrawal. Article XV permits countries to propose amendments. An amendment can only enter into force if accepted by a majority of states-parties, and it will only be binding on those countries that approve the amendment. Article XVI states a country's withdrawal from the treaty will take effect a year after it has submitted a written notification of its intentions to the depositary states—the United States, Russia, and the United Kingdom.<sup>8</sup>

<sup>7</sup> <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introouterspacetreaty.html>

<sup>8</sup> <https://www.armscontrol.org/factsheets/outerspace>

### a. Convention on International Liability for Damage Caused by Space Objects

The Convention on International Liability for Damage Caused by Space Objects, also known as the Space Liability Convention, is a treaty from 1972 that expands on the liability rules created in the Outer Space Treaty of 1967. In 1978, the crash of the nuclear-powered Soviet satellite Kosmos 954 in Canadian territory led to the only claim filed under the Convention.<sup>9</sup>

It is elaborated on Article VII of the Outer Space Treaty:

***“A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return.”***

The Liability Convention provides that a launching State shall be absolutely liable to pay compensation for damage caused by its space objects on the surface of the Earth or to aircraft, and liable for damage due to its faults in space. The Convention also provides for procedures for the settlement of claims for damages.<sup>10</sup>

### b. Proposed Prevention of an Arms Race in Space (PAROS) Treaty

The Prevention of an Arms Race in Outer Space (PAROS) is a UN resolution that reaffirms the fundamental principles of the 1967 Outer Space Treaty and advocates for a ban on the weaponisation of space. The PAROS resolution acknowledges the limitations of existing laws related to outer space and recognizes that the Outer Space Treaty “by itself does not guarantee the prevention of an arms race in outer space.”<sup>11</sup>

The resolution urges all state members, especially those with the capability of space technology to prevent a possible arms race in outer space.

Furthermore, it calls on the Conference on Disarmament to establish an ad hoc committee to identify and examine issues of PAROS Treaty. The ad

9 [https://en.wikipedia.org/wiki/Space\\_Liability\\_Convention](https://en.wikipedia.org/wiki/Space_Liability_Convention)

10 <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/introliability-convention.html>

11 [https://fas.org/programs/ssp/nukes/ArmsControl\\_NEW/nonproliferation/NFZ/NP-NFZ-PAROS.html](https://fas.org/programs/ssp/nukes/ArmsControl_NEW/nonproliferation/NFZ/NP-NFZ-PAROS.html)

hoc committee on PAROS was established in 1985. The United States, with the support of Western States, opposed the treaty and the committee was dissolved in 1994. The United States, being the only country to vote against the resolution, argues that PAROS is unnecessary because there is no arms race in outer space at this time.

In 2008, China and Russia submitted a draft treaty to the Conference on Disarmament entitled "Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects" (PPWT).<sup>12</sup> The PPWT consolidates the significance of a weapon-free outer space and proposes the creation of an additional protocol for verification of compliance with the treaty.

On 4<sup>th</sup> of December 2014, the UN passed a Russian draft resolution on banning arms race in outer space was adopted during the assembly's 69th session with 126 votes in favor and 4 votes against. Georgia, Israel, Ukraine and the US were the four countries that opposed the draft resolution.<sup>13</sup>

A PAROS treaty would complement and reaffirm the importance of the 1967 Outer Space Treaty, which aims to preserve space for peaceful uses by prohibiting the use of space weapons, the development of space-weapon technology, and technology related to "missile defense." The treaty would prevent any nation from gaining a military advantage in outer space.<sup>14</sup>

### **3. Nuclear Weapons**

A nuclear weapon is an explosive device that derives its destructive force from nuclear reactions, either fission or a combination of fission and fusion.

Nuclear weapons are highly devastating and are considered weapons of mass destruction. Their use and stockpile have been a great matter of discussion and a major focus of the UN and the humanity since their invention.

Because of their immense and advanced military power, the control and the governance of nuclear weapons has been a key issue for as long as they have existed.

#### **1. Nuclear Arms Race**

The nuclear arms race was a competition for supremacy in nuclear warfare between the United States, the Soviet Union, and their respective allies during the Cold War. During this period, in addition to the American and Soviet nuclear stockpiles, other countries developed nuclear weapons, though none engaged in

12 [https://fas.org/programs/ssp/nukes/ArmsControl\\_NEW/nonproliferation/NFZ/NP-NFZ-PAROS.html](https://fas.org/programs/ssp/nukes/ArmsControl_NEW/nonproliferation/NFZ/NP-NFZ-PAROS.html)

13 <http://www.nti.org/learn/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/>

14 <http://www.nti.org/learn/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/>

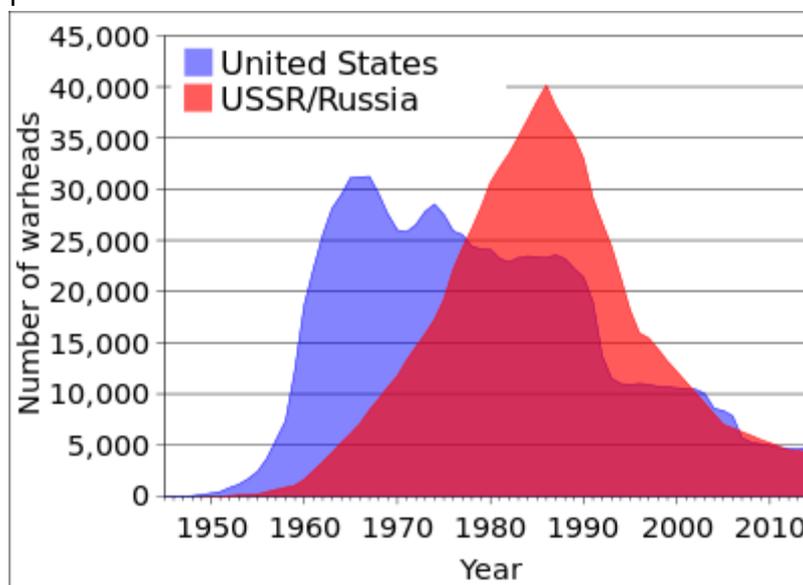
warhead production on nearly the same scale as the two superpowers.

During the World War II, United States of America started a military research project and developed both their and the world's first nuclear weapon with the support of United Kingdom and Canada. This research and development project was called the Manhattan Project. Even though they were military allies, the Soviet Union was not informed officially of the Manhattan Project. However, it was later discovered that the Soviet Union was aware of the program from the start through their espionage operations. They were well informed of the project, the technical details and the detailed design of this era changing weapon.

The first time nuclear weapons were used was in the final stage of World War II. Two nuclear weapons were dropped to the Japanese cities Hiroshima and Nagasaki in August 1945.

### 1. Cold War

Following the years after World War II, The United States extended their knowledge on nuclear weapons technology and raw materials. Oblivious to the works of the Soviet Union behind the scenes, United States carried on their experiments and tests. The first Soviet nuclear bomb was detonated in August 1949, far before the predictions of the experts from the United States. For years, both governments made huge investments and spent massive amounts on this technology in order to extend their arsenal by increasing the quantity of their nuclear weapons.



Breaking point of the race was the introduction of intercontinental ballistic missiles. When Sputnik Satellite reached the orbit, the Soviet Union proved the world that they had missiles that can reach anywhere on the world.

### b. High-Altitude Nuclear Explosion

High-altitude nuclear explosions are the result of nuclear weapons testing.

Several such tests were performed at high altitudes by the United States and the Soviet Union between 1958 and 1962.

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.<sup>15</sup>

### **1. India and Pakistan**

Since 1970s India and Pakistan have been in a nuclear weapons arms race. The two South Asian nations engaged in this technological race after the "peaceful nuclear explosion test" of India in 1974. In the following years, both nations developed new technologies and conducted new experiments. However, the world fears that this dispute between two states might turn into a second cold war.

### **b. DPRK**

North Korea has been actively developing nuclear technology since 1950s. The nuclear program of the North Korea can be traced back to about 1962, when North Korea committed itself to what it called "all-fortressization", which was the beginning of the hyper-militarized North Korea of today.<sup>16</sup> Since 2003, North Korea is not a part of the Treaty on the Non-Proliferation of Nuclear Weapons. In 2009, North Korea declared that it had developed a nuclear weapon and possessed a small stockpile of simple nuclear weapons. The following years, North Korea conducted numerous nuclear tests which caused a great concern throughout the World.

On March 6, 2017, North Korea launched four ballistic missiles from the Tongchang-ri region towards the Sea of Japan. The launch was condemned by the United Nations as well as South Korea.<sup>17</sup>

### ***Mutual Assured Destruction Doctrine***

Tackling the question of "disarmament" and not mentioning the doctrines of disarmament would make it incomplete for sure. One of the much known doctrines in that regard is "Mutual Assured Doctrine."

It emerged in the mid 60's and is based upon the size of the countries' respective nuclear arsenals and their unwillingness to destroy civilization. MAD was unique at the time. Never before had two warring nations held the potential to erase humanity with the entry of a few computer codes and the turn of matching keys. Ironically, it was this powerful potential that guaranteed the world's safety:

<sup>15</sup> [https://en.wikipedia.org/wiki/High-altitude\\_nuclear\\_explosion](https://en.wikipedia.org/wiki/High-altitude_nuclear_explosion)

<sup>16</sup> <http://www.globalsecurity.org/wmd/world/dprk/nuke.htm>

<sup>17</sup> <http://www.bbc.com/news/world-asia-39175704>

Nuclear capability was a deterrent against nuclear war.

Because the U.S. and the USSR both had enough nuclear missiles to clear each other from the map, neither side could strike first. A first strike guaranteed a retaliatory counterstrike from the other side. So launching an attack would be tantamount to suicide -- the first striking nation could be certain that its people would be annihilated, too.<sup>18</sup>

In matter of fact this doctrine was known very well during Cold War Era for the tension of nuclear weapons. However, nowadays it is still mentioned for the same reason by considering the tensions between India and Pakistan or among the US& Russian Federation& North Korea.

#### **4. Major Actors**

##### **a. International Mechanisms**

###### ***International Space Station ISS***

International Space Station is a habitable artificial satellite that is orbiting the Earth in low Earth Orbit. It is the largest man-made body in space.

The ISS serves as a microgravity and space environment research laboratory in which crew members conduct experiments in biology, human biology, physics, astronomy, meteorology, and other fields.<sup>19</sup>

An international partnership of space agencies provides and operates the elements of the ISS. The principals are the space agencies of the United States, Russia, Europe, Japan, and Canada. The ISS has been the most politically complex space exploration program ever undertaken. The International Space Station Program brings together international flight crews, multiple launch vehicles, globally distributed launch, operations, training, engineering, and development facilities; communications networks, and the international

###### ***International Space Exploration Coordination Group (ISECG)***

"The ISECG is a voluntary, non-binding international coordination mechanism through which individual agencies may exchange information regarding interests, objectives, and plans in space exploration with the goal of strengthening both individual exploration programs as well as the collective effort.

ISECG was established in response to "The Global Exploration Strategy: The Framework for Coordination," developed by fourteen space agencies and released in May 2007. This GES Framework Document articulated a shared vision

18 <http://people.howstuffworks.com/mutual-assured-destruction1.htm>

19 <https://web.archive.org/web/20071208091537/http://pdlprod3.hosc.msfc.nasa.gov/B-gettingonboard/index.html>

of coordinated human and robotic space exploration focused on Solar System destinations where humans may one day live and work.

These are the member agencies; ASI (Italy), CNES (France), CNSA (China), CSA (Canada), CSIRO (Australia), DLR (Germany), ESA (European Space Agency), ISRO (India), JAXA (Japan), KARI (Republic of Korea), NASA (United States of America), NSAU (Ukraine), Roscosmos (Russia), UKSA (United Kingdom)."<sup>20</sup>

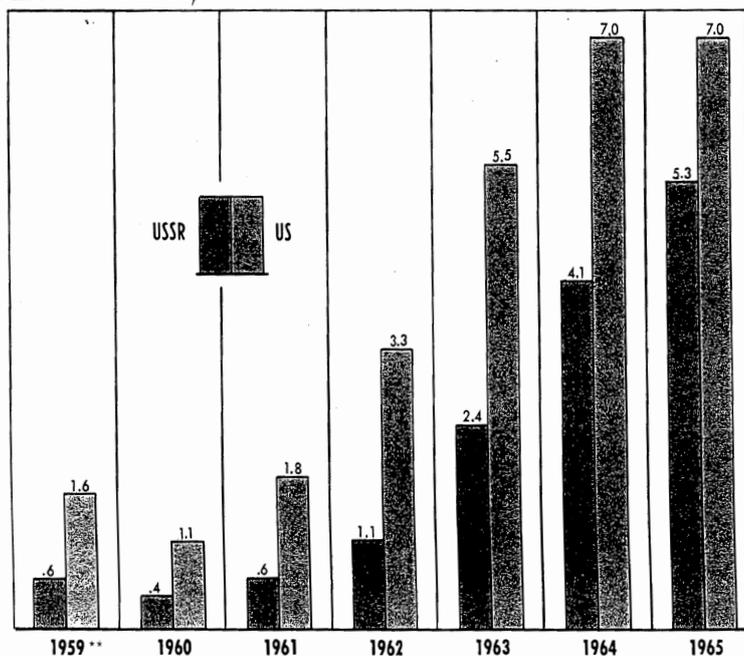
**a. Space Agencies**

To tackle the subject as a whole, it is quite important to be fully aware of space agencies and their capabilities. Intelligence agencies of states always keep up their research on other states' actions regarding budgets and funding on military, throughout their very own history. As an inherit result, delegates are expected to be extra conscious and informed with their space agencies before taking any action

FIGURE 1

US AND ESTIMATED SOVIET CIVIL AND MILITARY SPACE PROGRAMS: FUNDING REQUIREMENTS, FY 1959-1965\*

(BILLION US DOLLARS)



\* The US figures include the funding requirements of the National Aeronautics and Space Administration, the Department of Defense, the Atomic Energy Commission, the National Science Foundation, and the Weather Bureau for space-related activities. The figures for the Soviet program conceptually include the same activities as those of the various US governmental organizations mentioned above.

\*\* Including funding requirements prior to FY 1959.

53320 3-66 CIA

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**Comparison of Budgets and Funding of USSR and US**

20 <https://www.nasa.gov/content/just-released-updates-to-the-global-exploration-roadmap>

Proceeding with the current status, here is a list of states, holding title of the most profuce with their budgets on their space agencies.

<b>Agency/State</b>	<b>Budget ( Millions in USD)</b>
NASA (USA)	19,300
Roscosmos (Russia)	5,600
ESA (Europe)	5,510
CNES (France)	2,500
JAXA (Japan)	2,460
DLR (Germany)	2,000
ASI (Italy)	1,800
CNSA (China)	1,780
ISRO (India)	1,400
CSA (Canada)	488.7
UKSA (UK)	414
KARI (South Korea)	366
ASA (Algeria)	360
SSAU (Ukraine)	250
CoNAE (Argentina)	180
ISA and ISRC (Iran)	139
INTA (Spain)	135
NSO (Netherlands)	110
SNSB (Sweden)	100
SUPARCO (Pakistan)	82
SANSA (South Africa)	11.8
SSO (Switzerland)	10
AEM (Mexico)	8.34

**i. NASA**

Famous with its advanced technology and space explorations; carries the world's fascination with space deep inside space. NASA can operate manned lunar explorations, space stations, manned space flight, extraterrestrial probes, and satellites and has launching capacity.

*"When NASA opened for business on October 1, 1958, it accelerated the work already started on human and robotic space flight. NASA's first high profile program was Project Mercury, an effort to learn if humans could survive in space. This was followed by Project Gemini, which used spacecraft built for two astronauts to perfect the capabilities needed for the national objective of a human trip to the Moon by the end of the 1960s. Project Apollo achieved that objective in July 1969 with the Apollo 11 mission and expanded on it with five more successful lunar landing missions through 1972. After the Skylab and Apollo-Soyuz Test Projects of the mid-1970s, NASA's human spaceflight efforts again resumed in 1981, with the Space Shuttle program that continued for thirty years. The Shuttle was not only a breakthrough technology, but was essential to our next major step in space, the construction of the International Space Station."*

**i. ROSCOSMOS**

After the separation of the USSR, multi-centered space program of Russians were gathered under one roof; ROSCOSMOS. A decade after its foundation, ROSCOSMOS was also affected by the growth Russian economy. In the first years of the millennium, ROSCOSMOS' budget was expanded to 900 million USD. It is now known to be growing its budget -in a scale between %5 and %10- per year.

**ii. China National Space Administration (CNSA)**

CNSA is the national space agency of People's Republic of China. It is not part of ISS and has a station on its own. The China National Space Administration stated that their long-term goals are:

- Improve their standing in the world of space science
  - Establish a crewed space station
  - Crewed missions to the moon
  - Establish a crewed lunar base
  - Unmanned mission to Mars
- Exploit Earth-Moon space for industrial development. The goal would be the construction of space-based solar power satellites that would beam energy back to Earth<sup>21</sup>

21 [https://en.wikipedia.org/wiki/Chinese\\_space\\_program#cite\\_note-0-1](https://en.wikipedia.org/wiki/Chinese_space_program#cite_note-0-1)

**iii. European Space Agency**

Commonly known as ESA is an international organization consisted of 22 European States, aims to cooperation for peaceful space exploration and its research. Its activities are observing earth, providing navigation, launching human spaceflights etc. It currently has a joint mission with NASA called "Cassini" that orbits around Saturn.

**iv. UK Space Agency**

With a fairly large budget for space programming, UKSA is the agency of United Kingdom's space activities. It coordinates U.K. civil space activity, supports academic research, nurtures the U.K. space industry, raises domestic and international awareness of U.K. space activities, works to increase understanding of space science and its practical benefits and inspires the next generation of U.K. scientists and engineers. The U.K. Space Leadership Council provides the UKSA with strategic guidance as it coordinates and promotes U.K. civil space activity in the academic, industrial, scientific and educational arenas.<sup>22</sup>

**v. Indian Space Research Organization**

Formed in 1969, Indian Space Research Organization (ISRO) is the space agency of Indian Government. Its headquarters is in the city of Bengaluru. The main and primary objective of the organization is to develop and research space technologies for the benefit of India and the World. Its vision is to: "Harness space technology for national development, while pursuing space science research and planetary exploration."

Vikram Sarabhai who considered as the father of the Indian Space Program as ISRO was driven from his vision said in 1969:

***"There are some who question the relevance of space activities in a developing nation. To us, there is no ambiguity of purpose. We do not have the fantasy of competing with the economically advanced nations in the exploration of the Moon or the planets or manned space-flight. But we are convinced that if we are to play a meaningful role nationally,***

[http://www.chinadaily.com.cn/china/2016-04/29/content\\_24957196.htm](http://www.chinadaily.com.cn/china/2016-04/29/content_24957196.htm)

22 <https://www.spacefoundation.org/programs/public-policy-and-government-affairs/introduction-space/global-space-programs>

***and in the community of nations, we must be second to none in the application of advanced technologies to the real problems of man and society.”***

**vi. *Iranian Space Agency (ISA)***

ISA is the space agency of the Iranian Government. It was established in 2004 by the Parliament of Iran. ISA is mandated to research and develop space technologies and support space activities under the leadership of a Supreme Council of Space chaired by the President of Iran.

The primary objective of the Agency is to expand space applications by launching and using national research satellites while aiming for the peaceful uses of outer space.

**Questions to Consider:**

1. What is the current state of your country's space satellites, if they exist?
2. How advanced is your country's space program?
3. What is your country's position on the weaponisation of space?
4. Does your country wish to reduce or ban the use of weapons in space?
5. What are the positions of your country's allies on the issue of space weaponisation?
6. What steps has your nation taken to reduce/increase its space weapon technology?
7. Which treaties has your country been involved in with respect to space rights?
8. Does your country actively seek treaties to reduce or ban weapons in space?

**6. Further Readings**

- <http://www.thespacereview.com/article/381/1>
- <http://www.thespacereview.com/article/960/1>
- <http://www.thespacereview.com/article/1954/1>
- <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>
- <http://iislweb.org/>
- <http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/status/index.html>
- <http://www.nuclearfiles.org/>
- <http://www.atomcentral.com/the-cold-war.aspx>
- <http://thediplomat.com/2017/01/how-china-is-weaponizing-outer-space/>
- [http://www.ucsusa.org/sites/default/files/legacy/assets/documents/nwgs/a-history-of-ASAT-programs\\_lo-res.pdf](http://www.ucsusa.org/sites/default/files/legacy/assets/documents/nwgs/a-history-of-ASAT-programs_lo-res.pdf)
- <http://www.reachingcriticalwill.org/images/documents/Resources/Factsheets/outerspace.pdf>
- International Law and Outer Space Activities; Ogunbanwo, Oguniola O.