



**ISTANBUL  
SECURITY  
CONFERENCE**

# **SPACE ECOSYSTEM AND SECURITY WORKSHOP - 1**

**“New Economy and Security  
Architecture of Space”**



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## CONCEPT PAPER (DRAFT)

# SPACE ECOSYSTEM AND SECURITY WORKSHOP - 1

## “New Economy and Security Architecture of Space”

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The launch of the first artificial satellite Sputnik 1 on 17 October 1957 is evaluable the beginning of the space race in a way, an important area of the Cold War. The unexpected success of the Soviet Union during those times led to great concerns in the US and the Western world and also paved the way for great circle to understand of the military significance of space.

Immediately after launch of the Sputnik 1, the US has declared a national mobilization with all its military and civilian means to avoid falling back in this race. In the early 1960s, first the Soviets and then the US sending people into space, this prognosticate to a very rapid progress in the space race. In 1969, the US sent human to the Moon and this is also accepted as a giant leap for mankind.

In addition to scientific and civilian practices of space, the main efforts in the early years were based on military practices. The two superpowers of that time have set their sights on intensely benefiting from the military advantages of space. Satellites provide military superiorities that can't be obtained from the earth with regard to support for exploration, intelligence, communication and navigation as the highest observation point. They can pass through every point of the Earth at altitudes varying to purpose between 400 km and 40.000 km. When it is considered as a different usage category besides the known usage areas such as observation and communication; the armament of space; has a potential to create a separate destructive power which is difficult to contemplate.

The potential to reach at a fearful rate of the opportunities provided by the space in military terms led to the commencement of negotiations and works for the purpose of legalizing the space activities in the UN in 1959, particularly in the US and Soviet initiatives. In 1967, Outer Space Treaty (OST) was signed. The OST has been approved by almost every state in the world, including all the capable states in space. The OST, which is the fundamental document of space law and which reveals the right of every state to go into space and to take advantage of space; it prohibits the placing of weapons of mass destruction when it is based on the principle of using space for peaceful purposes. However, the use of weapons other than nuclear, biological, chemical and radiological is not prohibited. In fact, it is known that open and secret researches are carried out on the space-specific weapon types that are not even weapons of mass destruction.





Military competition in space did not come to an end with the collapse of the Soviet Union in the 1990s. Today, China joined after the US and Russia, which are the front line countries in military space. However, it is known that the European Union, Japan and some other countries have a set of superior technological capabilities, although not for military purposes.

Nowadays, space is widely used in many scientific, civil and commercial areas. It can even be said that we are dependent on satellites. Observation satellites provide us with up-to-date information on agriculture, environment, forest, urbanism etc., in addition to the daily meteorological data, it also provides warnings about climate progress by allowing to examine the meteorological data as well as poles and oceans. By means of the communication satellites, tens of millions of home can receive live news, sports and concert broadcasts from all over the world. Intercontinental banking and trade are provided with a certain amount of satellites. Navigation satellites allow us to find a way not only in cities, but also all over the world, in deserts, in seas, everywhere. There is intense economic competition in all of these areas and the annual turnover of the space sector is over 300 billion dollars.

In recent years, a few new subjects have been entered into the space economy. One of them is space tourism and the other is asteroid mining. The presence of precious metals in asteroids and other celestial bodies has led to the emergence of companies that are considering the operating and profit from these bodies. However, given the difficulties, costs and durations of developing the essential technologies, these initiatives are not progressing on a positive path for now. However, there are also ongoing legal discussions. In addition, there are also ongoing legal discussions. On the one hand, there are those who say that "the celestial bodies are the common property of mankind", on the other hand, those with this ability say that "commercial activity on the celestial bodies is not prohibited."

Many states, which have understand the importance of space in economic and military fields, continue to work according to their own opportunities and capabilities. Currently, China, US and Russia are able to neutralize competing satellites by developing a proven satellite defense capability. It is known that other states are interested in space weapons and do research at least on the theoretical level. Lastly, in 2018, US President Trump announced the decision to establish space forces as a branch of the armed forces. Space forces will take place as a sixth force in the United States besides land, naval, air, coast guard and marine forces.

Also, in the civil field, there is a paradigm shift in space technologies. In addition to the large space projects and large satellites of the great states; relatively small states, small firms and even universities are producing and commissioning small satellites. Several kilograms of satellites are be mentioned, not anymore tons of satellites. With regard to satellite budgets, not a few hundred million dollars, a few million dollars, even far below million dollar is spoken about.





The number of small satellites to be launched into the space over the next few years is stated in thousands, and small satellite missile firms are emerging to launch only small satellites. This downsizing in progress raises new possibilities to enter the space technology for many medium-sized states such as Turkey. It is obvious that the downsizing in satellites is also likely to lead to new developments in the area of security.

## **Main Theme**

**New Economy and Security Architecture of Space**

## **Sub Themes**

**Space Tourism and Colonization**

**Outcomes of the Downsizing in the Commercial Space**

**Space Traffic and Regime**

**Military Space**

