

УДК 341.3

## LEGAL ASPECTS OF THE USE OF SPACE TECHNOLOGIES FOR MILITARY PURPOSES

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With the development of the aerospace industry, new opportunities for military activities arise. However, the use of space technology for military purposes is subject to strict legal regulation. International law prohibits the use of outer space for military purposes and establishes that space objects should be used only for peaceful intentions. Nevertheless, in the case of a threat to national security, the right to self-defense allows for the use of force, including space technology.

One of the main international documents regulating the use of outer space for military purposes is the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies of 1967. The treaty establishes that outer space should be used only for peaceful purposes, and space objects should serve the benefit and interests of all countries. States should not place nuclear weapons or other weapons of mass destruction in orbit around the Earth, on the Moon, or on other celestial bodies [1].

However, there are exceptions when the use of space technology for military purposes is allowed. First of all, this concerns the use of space technology to ensure national security and protect its interests. One example of using space technology to ensure security is the Earth observation satellite system. Satellites can provide information about the environment, weather forecasting, as well as detect and track possible threats such as natural disasters, fires, floods, terrorist acts, and others. Space technology is also used to ensure safety during military operations. For example, reconnaissance satellites can be used to obtain information about enemy military activity, while navigation satellites and communication systems allow for control over military objects and coordination of military units. Space technology can also be used to protect state borders. For instance, surveillance satellites can detect and track illegal border crossings, as well as monitor the movement of transport and people at borders. Space technology can also be used to ensure safety in aviation and shipping. Satellite navigation systems can determine the location and movement of vehicles, as well as control the movement of aircraft and ships [2].

The second case when the use of space technology for military purposes is allowed is when fulfilling international obligations to limit armaments and counteract the proliferation of nuclear weapons. Surveillance satellites can detect radiation emissions and monitor the movement of radioactive materials. Space technology is also used to ensure the safety of nuclear power plants. With the help of satellite observation systems, the state of nuclear power plants can be monitored, and possible accidents can be quickly responded to.

One example of a high-tech space vehicle designed for military purposes is the 14F142 "Tundra". Tundra is a spacecraft of the Unified Space System "Kupol" designed to detect launches of intercontinental ballistic missiles. Such vehicles are capable of tracking not only the launches of ballistic missiles from land and water surfaces but also determining the parameters of their ballistic trajectory and probable impact areas. In addition, the onboard combat management system on new vehicles allows for signals to be sent through satellites

about the need for a retaliatory strike against the enemy. The Tundra is placed in a highly elliptical orbit with a maximum height of 35,000 km. Four satellites on duty are located on different orbits at an angle to each other. The orbits are chosen in such a way that the minimum standard composition of the "Kupol" ensures reliable monitoring of the Northern Hemisphere. Accordingly, new satellites will allow for the search for missiles worldwide.

Overall, the use of space technology for military purposes is subject to strict legal regulation. International law prohibits the placement of weapons of mass destruction in orbit around the Earth, on the Moon, or on other celestial bodies, as well as military exercises or weapon testing. However, in the case of a threat to national security, the right to self-defense allows for the use of space technology. In any case, the use of space technology for military purposes must be justified and comply with international norms and principles.

### References

1. Zhukov G.P. , Abashidze A.H. International space law. M.: Yurayt, 2022. 528 p.
2. Fortescue P., Stark D., Swinerd G. Development of spacecraft systems. M.: Alpina Publisher, 2015. 764 p.