

Ukraine - EU: diplomacy of “space” dialogue and aviation security

The importance and formats of cooperation between Ukraine and the EU in the space sphere are disclosed. The main directions and instruments of Ukraine's involvement in the EU's space research initiatives are described, which are aimed at ensuring economic growth and strengthening the EU's security, and also aims to preserve the "space sovereignty" of the European Union and will contribute to the transition to a green and digital economic model. The strategic goals of the further development of the space dialogue between Ukraine and the EU have been defined, which, in particular, will serve to obtain modern technologies to improve the safety of national aviation.

The possibility of a space dialogue between Ukraine and the EU is indirectly provided for by the Association Agreement, in particular, Article 373 of Chapter 8 of Section V ("Economic and industry cooperation"). Space dialogue is a special form of EU cooperation in the space sphere with countries outside the EU. Currently, the EU Space Cooperation Dialogue exists with several countries that have their own developed space industry, in particular with the USA, China, the Republic of South Africa and Japan. Until 2014, the Space Dialogue was also held with the Russian Federation, but it is currently suspended.

A feature of the mentioned format of cooperation is the high political level of representation of the parties, which is a demonstration of mutual readiness to continue cooperation - participation in joint projects, exchange of information on the state of development of space industries and own achievements. Meetings are held once a year with alternating locations. The parties to the "space dialogue" are, as a rule, represented at the level of the relevant Director General of the DG EC, the Director of the European Space Agency (by agreement, in the role of an observer) on the one hand, and the Ministers of the dialogue partner country, who are responsible for scientific and technological cooperation involving experts from both sides.

During the event, the parties make presentations and exchange information on the development of the space sphere: satellite navigation systems, remote sensing of the Earth, the results of participation in research projects, in particular within the framework of the Horizon 2020 program, etc. The main "added value" of conducting space dialogues is the assessment of the current state of cooperation and the level of development of the space industries of the participants, while an important element is confirmation at a high political level of the parties' desire to continue cooperation.

In recent years, Ukraine has made significant progress in implementing agreements with the EU in the space sphere. In 2018, an Agreement was signed between the State space agency of Ukraine and the European Commission on cooperation in the field of data access and data use of Sentinel satellites of the EU

"Copernicus" program, and already in 2020, the Regional Center of the EU "Copernicus" program began work. In 2020, an agreement was concluded on the location of Range and Integrity Monitoring Stations of the EGNOS system (Range and Integrity Monitoring Stations, RIMS) at Kyiv International Airport. Today, cooperation in EU space research initiatives continues. Active negotiations are underway regarding the possibility of Ukraine joining the European framework program "EU Space Program" (2021-2027), the conclusion of a document between Ukraine and the EU on expanding the coverage of the EGNOS system, as one of the five main elements of this program, and ensuring access to the service "Safety of Life".

The European framework program "EU Space Program" (2021-2027) has a budget of 13.5 billion euros and is implemented in cooperation with member states, the European Union Agency for the Space Program, EUSPA (Prague, Czech Republic), the European Space Agency ESA (Paris, France), EUMETSAT and others. The program provides for the possibility of participation of third countries: by decision of the Council of the EU (member states) in certain elements of the program. It may require signing a new agreement or supplementing the existing Association Agreement between Ukraine and the EU. Among countries from outside the EU, only Norway (Galileo, EGNOS, Copernicus, Space situation awareness (SSA) Near Earth Objects (NEO), SSA Space Weather (SWE), Iceland (EGNOS, Copernicus, SSA NEO, SSA SWE) and Switzerland (Galileo, EGNOS) as provided for in their general cooperation framework agreements with the EU. No associated or candidate country has been granted such access, so the accession procedure is not established and its determination will require internal consultations of the EU Council, European Union External Action and European Commission.

The program is aimed at ensuring economic growth and strengthening the security of the EU, and also aims to preserve the "space sovereignty" of the European Union and will contribute to the transition to a green and digital economic model.

Ukraine sent a request to the European Commission regarding the possibility of joining the program and expects consideration of this issue by the working bodies of the Council of the EU during coming months.

The aforementioned EGNOS system, to which Ukraine plans to join, is a civilian regional satellite navigation system under civilian control, consisting of centers and stations on the ground and several transponders installed on geosynchronous satellites, which amplifies and corrects open navigation signals emitted by the system "Galileo" and other GNSS, in particular, for air traffic control and other transport systems.

At present time the Ukrainian government authorities are caring out a number of measures regarding Ukraine's integration into the European space market and Ukraine's participation in all components of the EU's space activities, such as:

- the maintaining a legal framework for cooperation with individual components of the EU Space Program have been initiated and are being formed, as well as: global navigation satellite systems (Galileo, EGNOS) and Earth observation (Copernicus);

- the measures to establish and deepen bilateral cooperation with the EU states and the European Space Agency (ESA) are being studied and worked out, including the negotiation process around implementing practical joint projects and expanding Ukraine's membership in ESA;

- the possibilities and conditions of expanding Ukraine's participation in the EU Space Program throughout the implementation of the EU Multiannual Financial Framework for 2021-2027 are being worked out with the European Commission;

- the assistance is provided to Ukrainian enterprises and institutions regarding their participation in the EU's key funding programme "Horizon-Europe" on space topics.

The issue of Ukraine's involvement in all aspects of the EU's space activities is one of the state's priority tasks. In order to implement it, the following steps must be taken:

- deepening bilateral practical cooperation in the space sphere with the EU states and the ESA;

- promoting the participation of enterprises and institutions in the "Horizon-Europe" programme on space topics;

- ensuring the accession of Ukraine to the ESP or its individual components;

- creating conditions for Ukrainian membership in the ESA.

The High-level dialogue between Ukraine and the EU on cooperation in the outer space sphere would be the most effective mechanism for promoting the implementation of abovementioned steps. The framework of this Dialogue would allow the parties to agree their positions as well as determine joint actions and coordinate own efforts.

Advancing the position regarding Ukraine's integration into European space activities by involving in all its aspects is expedient and desirable at all possible bilateral Ukraine-EU platforms of various levels.

Conclusions: Further development of the space dialogue between Ukraine and the EU, which will, in particular, serve to obtain modern technologies to increase the safety of national aviation, should be focused on the following strategic goals:

- The restoration of Ukraine must take place in a modern way and with the use of the latest technologies. Space systems and services play an important role in this regard.

- Ukraine is interested in developing cooperation with the EU in the space sphere, in particular, joining the EU Space Program and joint use of existing EU space services for environmental monitoring, urban planning, more efficient air transport and modern digital business solutions, etc.

- The aerospace industry of Ukraine in the post-war period can become an important component of the European aerospace sector and is ready to cooperate and modernize in accordance with new needs and conditions.