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## **Organization of flight safety in the air transportation system**

The air transportation sector plays an important role in the world economic activity and is part of the rapidly developing sectors of the world economy. A key element of civil aviation is to guarantee safe, secure, efficient and environmentally sound conditions at all levels. This article discusses the basics of flight safety and the factors that affect its security.

Increasing role of civil aviation in international passenger and cargo transportation, growth of intensity of the traffic on international airlines and the rapid development of aviation technology requires special attention to issues of international legal guarantee of the safety of international civil aviation.

The challenge of ensuring the safety of civil aviation is divided into two independent, albeit interrelated issues. First, it is the use of appropriate measures and the establishment of rules to ensure the technical and reliable operation of aircraft as a kind of "safety". Secondly, this includes specific legal issues in dealing with acts of unlawful human intervention in the activities of civil aviation threatening its security.

The problem of ensuring the reliability of the work of the aircraft industry has become particularly relevant. According to ICAO statistics, about 20-30% of all aviation incidents are due to aviation failures and malfunctions. This indicator may deviate from the indicated values, depending on the type of aircraft, its plaque and operating time, the level of personnel training, and so on.

Low reliability of aviation equipment laid down in the design and production as well as insufficient study of safety incidents during design - all this is hard to compensate even with the high-quality maintenance of aviation equipment, preparation of crews for action in the event of flight failures, as well as the creation of the most perfect system of organization and flight management.

The development of general aviation and unmanned aerial vehicles also has issues that need to be resolved. But for today the aviation market of Ukraine begins its revival after a period of decline of activity over the last several years. As of the beginning of 2018, 66 intergovernmental agreements which regulate air services with the countries of the world are in force in Ukraine. Agreements with fully liberalized aviation connections constitute 33.4% (US, UAE, Spain, Italy, Greece, Poland, etc.). The agreements, according to which the restrictions regarding the number of Ukrainian carriers were lifted up to 77.3%. It is also reported that about three dozen of domestic airlines operate in the passenger and cargo air transportation market of Ukraine, 19 of which deal with passenger transport. Therefore, the six leading airline companies: Ukraine International Airlines, Azur Air Ukraine, Wind Rose, Yaneir, Bravo and Atlasland Ukraine, carry out 95% of total passenger transportation.

Regular flights between Ukraine and the other foreign countries from all over the world are carried out by 10 domestic airline in 42 countries of the world

and 28 foreign airlines in 27 countries of the world. Regular domestic passenger traffic between Ukrainian cities is performed by five domestic airlines.

Cargo transportation and mail transportation are performed by 18 domestic airlines; most of the transportation are charter flights in foreign countries within the framework of the UN humanitarian and peacekeeping programs, as well as in accordance with contracts and agreements with other customers.

Currently, Ukraine operates and serves commercial flights of domestic and foreign airlines of 19 airports and airfields. Passenger traffic through Ukraine's airports contains about 13 million people. Seven leading airports - Boryspil, Kiev (Zhulyany), Odesa, Lviv, Kharkiv, Dnipropetrovsk and Zaporizhzhya serve about 98% of total passenger and postal traffics.

It should be noted that Ukrainian airports suffered under the influence of prolonged economic disorder and irresponsibility. In particular, for nowadays we have:

- imperfection of normative-legal regulation of their activity;
- lack of a comprehensive legislative package that takes into account the technological features of airports.

In addition, there is a significant depreciation of all the infrastructure's elements of the most airports in Ukraine, and inconsistency with their requirements for modern airlines; insecurity with modern navigation and light-signaling equipment, ground equipment and ground handling equipment and aviation security with the provision of international ICAO standards and IATA recommendations.

The main ICAO's objective is to ensure the safety, orderly development of international civil aviation around the world and other aspects of the organization and coordination of international cooperation regarding all issues with civil aviation, including international transport. In accordance with ICAO rules, international airspace is divided into flight information areas - airspace, the boundaries of which are established taking into account the capabilities of navigation and air traffic control. One of the functions of the ICAO is the assignment of four-letter individual codes to the world's airports - identifiers used to transmit aeronautical and meteorological information by airports, flight-plans, designation of civilian aerodromes on radionavigation maps, and so on.

In addition, Ukrainian airports are losing European competition because of such distressing facts as the low availability of air transport infrastructure for persons with disabilities and people with reduced mobility; small volumes of air transportation through regional airports of Ukraine. All these issues has essentially been limited their investment attractiveness, made impossible the international commercial lending; lack of financial resources from communal owners for high-quality modernization or construction of terminals and airfields and the other projects in the sector.

Some experts see the following actions for solutions to these problems: delays caused by the customs, immigration and quarantine services, and other formalities are the most serious obstacle to the free and unhindered movement of passengers and goods across international borders. This problem is due to the speed of air travel.

For example, if formalities happen before and after the six-hour flight across the ocean and take one hour, this means that the time of the passenger's stay on the

road increases by one third, while the same formalities for a five-day by sea or ocean travel take only about two percent of the time.

As a matter of fact, for nearly a quarter of a century ICAO is trying to convince negotiating countries to reduce such bureaucratic procedures.

International Standards on Facilitation Simplifications, which set the maximum time required by countries to implement these procedures, have been adopted. In addition, in order to reduce procedural formalities, ICAO is making efforts to provide the buildings of the terminal with the necessary facilities and services to assist passengers, handling their baggage and cargo.

### **Conclusion**

The main and most important criteria that determines the activities of the CA is the level of air traffic safety (flight safety and aviation safety). In the field of provision of aviation safety ICAO is the main international body of the CA, which defines the strategic actions of the entire world aviation community in this area of activity. By defining aviation safety as one of the top-priority areas of its Strategic Action Plan, ICAO forms international air law in the field of provision of aviation safety through:

- analysis of the level of provision of the CA of the international CA and informing the member countries;
- Improvement of accepted ICAO documents of international air law in the field of provision of aviation safety (conventions, standards and recommended practice).

The provision of a non-fail operation of aviation equipment in civil aviation enterprises is based on the engineering and technical composition of the aviation-technical base (ATB), which is obliged to constantly maintain the airworthiness of operated aircrafts - to prevent and eliminate the failures and malfunctions of aviation equipment. To ensure the trouble-free operation of all systems, devices and equipment in flight - an important direction in improving safety and regularity of flights.

We also want to emphasize that the role of the human factor in ensuring the safety of flights is enormous. This is due to the fact that in aviation, all processes for the organization, provision and execution of flights are carried out by people - aeronautical specialists of various profiles. They carry out many operations on technical maintenance, loading and refueling, maintenance of aerodromes and their equipment in operational readiness, aircraft piloting, air traffic control, and so on. And this problem should not be forgotten either.

Under the auspices of ICAO, "standards" and "recommendations" are being developed, united in the Annexes to the Convention of 1944. Thanks to the cooperation of the countries, the ICAO has been able to achieve significant simplification of customs, immigration and sanitary rules related to civil aviation; developed a system of meteorological service, flight control, communication, radio beacons and radio beacons, as well as other means of ensuring flight safety.

The ICAO bodies are composed of the Assembly, the Council, the Air Navigation Commission, the functional committees (air transport, legal, financial, illegal interference in civil aviation, etc.), the Secretariat headed by the Secretary General. The headquarters of ICAO is located in Montreal, Canada. The organization also has offices in six regions of the world.

## References

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