

CULTURE OF SAFETY IN THE FIELD OF CIVIL AVIATION: ADMINISTRATIVE AND LEGAL ASPECTS

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Purpose: the concept of «culture of safety» in civil aviation is defined and analyzed in the article. **Methods:** dialectal method of cognition general scientific and special methods are used in this article. **Results:** the new types of threats for civil aviation have been analyzed, the types of activities carried out by the authorized body in the field of civil aviation for the improvement of the culture of safety in civil aviation are given. The system-forming components of the culture of safety in the field of civil aviation are determined. **Discussion:** the problems of non-compliance by civil aviation personnel with the norms of aviation legislation, which leads to flight safety and indicates a low level of safety culture in the field of civil aviation; cultural components that affect flight safety management.

Keywords: safety culture; civil aviation; risks; State Aviation Service; flight safety.

Resolution of the problem and its relevance.

Scientific, information and communication, technological and digital innovations change the world. The objective global processes, which are going in the post-industrial era, create new challenges and threats and increase the number of dangers that people face at every turn.

At the second aviation security high-level conference (ICAO), held in Montreal on November 29-30, 2018, new emerging threats to civil aviation were identified. These include: 1) Chemical, biological and radioactive (CBR) substances that are unique challenges. First, most of the current aviation security measures are not specifically aimed at detecting or preventing CBR-attacks. Secondly, although the prohibition on the carriage of certain substances in an aircraft cabin is one option that can be considered but can be not effective, because mass human sacrifices and economical waste can be done by a small quantity of substances. 2) Risks are connected with remotely manned aeronautical systems (RMASs). At present, small PMASs are widely used for commercial and entertainment purposes. The main problem in the civil aviation is un-

available using drones in the air space under the airports; nevertheless it has bad effect for the safety of flies, which can be provided because of unknowing. At the same time the biggest PMASs can allowed to themselves to use the terrorist groups for their goals. 3) The threat of cyber security. In August 2017, ICAO set up a Cybersecurity Secretariat research group (CSRG). The CSRG team develops cyber security rules in a harmonized and coordinated manner to provide global compatibility to support the required levels of flight safety and aviation security [1].

Despite all the threats and risks, aviation transport stays one of the safest kinds of transport in Ukraine and all over the world. High level of security of aviation transport needs constant control and safety, trend analysis and timely taking measures to prevent aviation events and incidents.

By information of International Organization in Civil Aviation, 2017 year became one of the safest years for all the history of international aviation. For last 10 years a number of aviation events, which arise at the world made up in more than

2 times, a number of died made up more than in 10 times that is very optimistic [2].

In order to optimize the efficiency of civil aviation as a system education, every aspect of the security, daily operations, operational decisions and planning should be carefully considered at each level and on an ongoing basis. Security aspects should be integrated into the structure of the organization in terms of coordinated activities, responsibilities, practices, procedures, processes and resources. At the same time, an advanced culture of security must be created.

The European Aviation Safety Group argued that «there may be a good safety culture in the absence of a formal flight safety management system (SMS), but an effective SMS is not possible without a good security culture» [3].

At the 38th Session of the ICAO Assembly, a working paper «Security Culture and the Future of Improving the ICAO Implementation of SMS» was prepared and it was written that «significant improvements in security management and the successful implementation of the State Air Safety Program (GSPP) will depend on the recognition and understanding that the security culture plays a critical role in ensuring flight safety.

The results of the investigation of many aviation events have shown that a low level of safety culture is a causative factor that increases their likelihood and severity of consequences. A proactive approach to the integration of a culture of safety at the organizational level is necessary in order to guarantee the protection of all functions related to the safety of flights, from the behavior and practice that are the forerunners of aviation events. The existence and understanding of a culture of safety is a prerequisite for the successful implementation of SMS» [4].

Analysis of research and publications on the problem. In this area worked Bielyi P.M., Bychkov A.S., Buhaiev B.N., Bezzubov D.O., Volkov M.M., Kasyniuk V.I., Kozachok I.Y., Kotov A.I., Kurynov B.A., Milashevych A.V., Ostroumov M.M., Razvadovskyi V.Y., Ryzhyi V.I., Starkov V.G. and others.

But attempts to give her scientific definition virtually not done. The problem of aviation safety was also raised in the scientific and technical literature (V.P. Babak, V.O. Maksimov, V.P. Kharchenko

and others), but mainly the technical aspects of the problem were considered. The provision of cyber security in transport should highlight the work of Y.A. Lakhna, and the study of information security management of the air transport complex was carried out in the works of A.V. Mishchenko.

As for the formation of the category of security in the transport sector from the point of view of administrative law, researchers such as I.P. Golosnichenko, E.V. Dodin, V.O. Zarosilo, R.A. Kalyuzhny, S.V. Kivalov, T.O. Kolomoets, V.K. Kolpakov, A.T. Komzyuk, S.F. Konstantinov, V.V. Konoplev, O.V. Kopan, B.A. Kormich, M.V. Kornienko, A.V. Kuzmenko, V.I. Kurilov, M.N. Kurko, V.A. Lipkan, A.A. Martynenko, A.A. Muzika-Stefanchuk, V.I. Olefir, A.I. Ostapenko, V.P. Petkov, A.M. Podolyaka, T.O. Protsenko, L.A. Savchenko, I.M. Sopilko, A. Starodubtsev, A.I. Stakhov, M. Tyshchenko, V.K. Shkarupa. However, for today, the question of researching the culture of safety in the field of civil aviation remains relevant.

Goal: study of statistical data on aviation safety and determination of administrative-legal aspects of a culture of safety in the field of civil aviation and factors influencing its formation.

Presenting main material. The aerospace industry is one of the best examples of the dangers of human life, its sources and factors. Aviation safety is a complex feature of the aviation transport system, which is to perform its functions without causing damages (or with minimal damage) to the system itself or to the population in whose interests it develops [5].

If there is no security without danger, then there can be no danger without security. At the same time, in their unity, they are identical: dangerous for one object is safe for another, and vice versa. That is, security can be regarded as a denial of danger, and vice versa, a danger - as a denial of security. But for humans, unlike animals, the danger is not direct, but acquires a security-mediated definition.

Thus, security can be understood as the lack of danger inherent in the existence of an object. Since security is based on the recognition of the absence of danger in general, but of a certain danger, it is always specific and substantive in its content and

orientation. In particular, as soon as a person has an idea of a particular danger, it has the opportunity to receive an adequate idea of their safety.

For human society safety has an subjective meaning. Particularly it happens when a lot of different imagines about danger «are mixed».

United Nations Charter defined one of the main tasks of creating and activity of this organization to unite all pains of international group to keep safety. At the same time participating countries of Organization for Security and Cooperation in Europe (CSCE) dutied to hold at any actions, which can make the situation worst.

So, a safety is an international relationship, which depends from the level of country legal relationship.

It allows saying, that safety can be examined like a neutral characteristic of social system, which depends from a lot of factors and describe one or another status. In view of that getting beloved for social system status define her main goal and a way, conditions being by influenced by other factors.

At the conference of General Assembly UN, 4 of June 2012 was directed general interpretation of meaning «safety of meaning», which says the next [7]: a law of people to live in freedom and dignity, free of poverty and hopelessness; the concept of human security differs from responsibility for protection and its implementation; the concept of human security does not imply the use of force or the threat of its use or coercive measures. Human security does not replace the security of states; human security is based on national responsibility; Governments retain their primary role in ensuring survival, livelihoods and dignity of citizens of their countries. The role of the international community is to complement the actions of Governments and provide them with the necessary support at their request in order to strengthen their capacity to respond to existing and emerging threats. To ensure human security, it is necessary to expand cooperation and partnership between governments, international and regional organizations and civil society; human security must be ensured with full respect for the purposes and principles enshrined in the Charter of the United Nations, including full respect for the sovereignty of States, territorial integ-

rity and non-interference in matters which, in essence, relate to the internal jurisdiction of States.

As for the definition of «aviation safety», it is defined in the Air Code of Ukraine and is a status of area in civil aviation, where the risk of causing damage to people or property is reduced to an acceptable level. As a result of the continuous process of determining the level of danger and managing it and is maintained or reduced further in the areas of flight safety, aviation security, environmental protection, economic security and information security [8].

A slightly different term «aviation safety» is provided by the legislator in the Statute of the State Aviation Supervisor in the State Aviation Service of Ukraine and defines as the complex property of the aviation transport system to perform its functions without causing damages (or with minimal damage) to the system or the population in the interests which she develops [9].

Security of civil aviation wears international character and designating from founding International Civil Aviation Origination (ICAO) and admission Chicago Convention in 1944. According to clause 37 every country must work for software maximum able level of identical rules, standards, procedures and organizations, which applies tow-eled vehicles.

A result of hard work ICAO is creating standards and recommended practice ICAO. Improving flight safety in global system of transport is fundamental and the most important one purpose (ICAO). So, adopted in 2014, annex 19 «Flight safety management» is directional for creation the same country systems for management of safety of flies based at new principles and ambushes.

A culture of safety – is connection of values, standards, ethic ambushes and norms needed at such situations. All of them necessary to keep self-discipline in order to get safety. At the same time, culture of safety characteristic of the thoughts and actions of all employees at each level of the organizational structure [10].

The security culture should become the internal need of the subject of security activities. The general psychological attitude to security, forms self-criticism and self-examination, eliminates complacency and leniency, as well as contributes to the

development of a sense of personal responsibility and overall self-regulation in matters of security. Only under such conditions, the security operator becomes part of (a) security culture.

The security culture of aviation can be described like a number of habits, which are inherent for a civil aviation staff, like a general using worker process for keeping aviation safety. Successful safety aviation culture encourages good practice, destroys operational barriers and facilitates the exchange of information. Reliable safety culture of civil aviation also carries contribution to the prevention of acts of unlawful interference.

Every participant of the system has to understand his role in this system and also special demands and duties, which everyone has. General realizing factors of risks in aviation safety, assessing of risks and management by factors of risk in combination with educational preparation will show us a real weak spots. This can be achieved only with the help of continuous and structured training, which confirms and recognizes individual roles and responsibilities. The regulatory development of a proper culture of aviation security is also important.

Creating a safety culture begins from the process of employment workers. Effective interview allows employers hiring employees with the right position and beliefs, as well as assessing the attitude of the candidate to the organization's culture and security culture as a whole.

Man is the most flexible, adapted and valuable element of the security system. Security activities include continuous interaction between the staff - a person as an element of the system - and various inanimate processes or objects. Any inconsistency between them can lead to a human error, and when it comes to aviation safety, making mistakes is not allowed, as there is a real possibility that a single error will lead to numerous human casualties.

Analysis of causes of violations of order air place in Ukraine, which were investigated by National Bureau of Air Accidents Investigation of Ukraine in 2018, shows that the biggest part of violations were made because of not following laws in performance of flights and using air space.

Systemic conscious violation of aviation law can show for an ineffective system of enforcement

measures. In accordance with annex 19 to Chicago conference law enforcement measures belong to a Critical element 8 (Solving problems of safe fights). According to annex 127 of Air Code of Ukraine, sanctions for offense of using air space, use only for subjects of aviation activity.

After the analysis NBAAIU gave recommendations in State Aviation Service of Ukraine like a central body in the field of civil aviation: initiate appropriate changes to the legislation of Ukraine regarding adequate response to deliberate (intentional) violations of the order of the use of airspace by general aviation pilots; development of measures to prevent the occurrence of events belonging to the categories of high risk of occurrence of aviation events (CFIT, RE), to develop measures to enhance the safety culture among the subjects of aviation activity and to avoid cases of concealing facts of aviation events and incidents.

For an ever-increasing safety level at all levels of the aviation transport system, a comprehensive security culture is required.

Understanding the components of the culture and the interaction between them is important for managing flight safety. The three most influential components of culture are organizational, professional and national culture.

Organizational culture refers to the characteristics and concepts of flight safety, formed between members interacting in one aviation organization. The organization is one of the main determinants of the behavior of individuals in the process of management or production activities that provide air traffic or overseeing them. Organizational culture denotes the limits of acceptable management and production activities in the workplace, setting standards and restrictions.

Professional culture differentiates the characteristics of specific professional groups (pilots' behavior compared with the behavior of dispatchers, the behavior of employees of the State Aviation Service or maintenance engineers). As a result of selection of personnel, education and training, experience of practical work, influence from the colleagues, workers tend to assimilate the system of values and develop the nature of behavior inherent in their colleagues or predecessors.

National culture plays a major role in defining the nature and enforcement activities of the central body in the field of civil aviation, including the relationship between its staff and industry professionals, as well as the degree of security of information relating to aviation safety.

Continuous improvement of the effectiveness of security is possible if security becomes one of the main values in the organization's coordinates, a priority at the national and sectorial levels. The elements of a culture of safety include the regulatory body (State Aviation Service of Ukraine), design organizations, and the operating organization - they define the policy on security at the state level. The correctness of their work depends on the success of the entire industry, as well as the probability of outbound events.

In any organization, which gives any services, productizes of system and factors of risks are connected. As production growth can increase the risk factors for flight safety, if not provided with the necessary resources or not implemented measures that increase the possibility of processes. The organization should identify production and security challenges by striking a balance between productivity and risk factors for flight safety. For suppliers of products and services, the main means of protection are technology, training, internal rules and procedures. For the state, the basic means of protection are similar, that is, the training of employees, the proper use of technology, effective supervision, as well as the provision of internal rules and procedures.

The security area is the area in which the organization provides a balance between the desired level of performance and security through the control system of risk factors for flight safety. The need to establish a balance between production and protection becomes a clear and recognized requirement from the point of view of suppliers of products and services. Such a balance can also be applied to state management, the development of state programs and flight safety rules, taking into account the requirements of the balance of resources necessary for the state to perform protective functions, including certification and supervision.

Legislative, normative and regulatory framework is the basis of the entire industry; of course,

these are elements of the culture of security. The role of the national industry database cannot be estimated.

An adequate level of legal knowledge and skills in civil aviation subjects of national and international legislation and regulatory documents of ICAO will ensure a culture of safety in the field of civil aviation. Therefore, the legal culture serves as a component of the security culture in the field of civil aviation.

The factor of legal training of civil aviation workers is of particular importance and urgent today. One of the generalized components of international flights is knowledge of the norms of international air law [12].

To form a developed culture of safety, the latter should become an integral part of the management plan of the organization and should lead to the necessary corporate changes. It is necessary to develop security objectives with a clear indication of the areas of responsibility. Objectives should be simple, measurable, achievable, realistic and implemented, and must fit into pre-set deadlines.

Security measures in civil aviation should be consistent with the level of risk posed by threats and the need to take additional measures promptly in all cases where these risks increase as a result of changes in hazardous factors. Therefore, the State Aviation Service of Ukraine should ensure that the results of assessments of threats to civil aviation in general and airports in particular are provided on a regular basis.

In addition, we will note the values of databases as a feedback element on the experience of exploitation - using information from databases, projects, technical documentation, and regulatory documents are amended to ensure security, increase security.

At the international level, the key elements of a culture of security are activities of international organizations:

Consequently, in view of the theory of administrative law, a culture of safety in the field of civil aviation is possible in the presence of such system-forming components: 1) existence of the system of civil aviation personnel, which is an integral feature of the safety of aviation; 2) implementation of state civil aviation safety management; 3) administrative and legal norms regulating relations in the field of

safety in the field of civil aviation; 4) implementation of administrative and legal measures to ensure the protection, safety and security of passengers, crew members, aviation personnel, aircraft, airport facilities and radio navigation facilities, regardless of their ownership and subordination; 5) the activities of the State Aviation Service of Ukraine, aimed at carrying out state control and safety oversight; organization of the development of a regulatory framework for regulation of civil aviation activities; certification and registration of objects and subjects of civil aviation and licensing of their activities; implementation of measures to ensure environmental and information security in the field of civil aviation; 6) investigation of aviation events and incidents with civil aircraft of Ukraine and foreign civil aircraft, facts of violations of the procedure for using Ukraine's airspace, carried out by the National Bureau of Investigation of Aviation Events and Incidents with Civil Aircraft.

Conclusion. The study of the administrative-legal aspect of a culture of safety in the field of civil aviation is essential, since: it reveals the depth of relevance of a particular problem; allows to create scientifically grounded modern, effective model of the existence of an integrated civil aviation safety culture system; determine the existence of legal regulation from the level of national standards to the introduction of norms of world practice, which has been implemented already for quite a long time in the international space of civil aviation of other states.

Promoting an aviation safety culture will help create an effective and safe civil aviation system. Managers should create an effective recruitment process that ensures that recruits have the required qualifications to fulfill their role and responsibilities in providing aviation safety based on the appropriate level of skills, education and training.

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КУЛЬТУРА БЕЗПЕКИ В СФЕРІ ЦИВІЛЬНОЇ АВІАЦІЇ: АДМІНІСТРАТИВНО-ПРАВОВИЙ АСПЕКТ

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Мета: у статті визначено поняття «культура безпеки» в цивільній авіації та проаналізовані адміністративно-правові аспекти, що впливають на формування культури безпеки цивільної авіації в Україні. **Методи дослідження:** у роботі використано діалектичний метод пізнання, загальнонаукові та спеціальні методи. **Результати:** проаналізовані нові види загроз для цивільної авіації, наведені види заходів, що здійснюються уповноваженим органом у галузі цивільної авіації для покращення культури безпеки в цивільній авіації. Визначено системоутворюючі компоненти культури безпеки в сфері цивільної авіації: 1) існування системи персоналу цивільної авіації, де інтегруючою ознакою виступає безпека авіації; 2) здійснення державного управління безпекою цивільної авіації; 3) адміністративно-правові норми, що регулюють відносини щодо забезпечення безпеки у сфері цивільної авіації; 4) здійснення адміністративно-правових заходів із забезпечення захисту, охорони та безпеки пасажирів; 5) діяльність Державної авіаційної служби України, що спрямована на здійснення державного контролю та нагляду за безпекою польотів; організацію розроблення нормативно-правової бази для регулювання діяльності у галузі цивільної авіації; сертифікацію та реєстрацію об'єктів і суб'єктів цивільної авіації та ліцензування їх діяльності; здійснення заходів щодо забезпечення екологічної, інформаційної безпеки у галузі цивільної авіації; б) проведення розслідування авіаційних подій та інцидентів з цивільними повітряними суднами України та іноземними Національним бюро з розслідування авіаційних подій та інцидентів з цивільними повітряними суднами. **Обговорення:** проблем недотримання персоналом цивільної авіації норм авіаційного законодавства, що призводить до безпеки польотів та свідчить про низький рівень культури безпеки в сфері цивільної авіації; компонентів культури, що впливають на управління безпекою польотів.

Ключові слова: культура безпеки; цивільна авіація; ризики; Державна авіаційна служба; безпека польотів.