



БҰЙРЫҚ

№

Астана қаласы

ПРИКАЗ

№

431 от 04.04.2025

город Астана

ORDER

№

Astana city

**On approval of the Flight Safety Analysis
of the Republic of Kazakhstan for 2024**

In accordance with paragraph 47 of the Flight Safety Program in the field of civil aviation, approved by Decree of the Government of the Republic of Kazakhstan dated March 11, 2016, No. 136, **I ORDER:**

1. Approve the attached “Flight Safety Analysis of the Republic of Kazakhstan for 2024”.
2. Director of the management systems and rulemaking department:
 - 1) Ensure the publication of the Flight Safety Analysis of the Republic of Kazakhstan for 2024 on the Internet resource of the JSC “Aviation Administration of Kazakhstan”;
 - 2) Communicate the Flight Safety Analysis of the Republic of Kazakhstan for 2024 to civil aviation organizations.
3. I reserve control over the execution of this order.
4. This order comes into force from the date of its signing.

Director General



C. Radu

SAFETY REVIEW OF CIVIL AVIATION IN THE REPUBLIC OF KAZAKHSTAN FOR 2024

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ABBREVIATIONS

AAK	Aviation Administration of Kazakhstan JSC
ATO	Aviation training organization
AFTN	Aeronautical Fixed Telecommunication Network (Information network of civil aviation)
UAS	Unmanned aerial system
ACFT	Aircraft
CA RK	Civil aviation of the Republic of Kazakhstan
RSE	The Main Air Traffic Planning Center of the Republican
KazAeroNavigation	State Enterprise «Kazaeronavigation»
MT RK	Ministry of Transport of the Republic of Kazakhstan
RLA	Regulatory legal acts
ICAO	International Civil Aviation Organization
ATS	Air traffic services
HF	Human Factor
ATM	Air traffic management
BIRD	Events related to bird strikes and/or hazards to birds.
MAC	Air proximity, ACAS system alerts, loss of separation, as well as dangerous proximity or collisions between aircraft in flight.
SCF-NP	Failure or malfunction of an aircraft system or component, excluding the powerplant.
SCF-PP	Failure or malfunction of an aircraft system or component - related to the powerplant.
SEC	Criminal acts, actions in the field of aviation security that lead to accidents or incidents.

PREAMBLE

This Safety review of Civil Aviation Aircraft in the Republic of Kazakhstan for 2024 (hereinafter referred to as the Safety Review) has been prepared in accordance with:

The Law of the Republic of Kazakhstan dated July 15, 2010, No. 339-IV «On the Use of Airspace of the Republic of Kazakhstan and Aviation Activities.»

The Decree of the Government of the Republic of Kazakhstan dated March 11, 2016, No. 136 «On the Approval of the Flight Safety Program in Civil Aviation.

The Order of the Minister for Investments and Development of the Republic of Kazakhstan dated August 31, 2017, No. 505 On the Approval of Rules for the Submission of Data and Investigation of Aviation Accidents and Incidents in Civil and Experimental Aviation."

The Order of the Minister for Investments and Development of the Republic of Kazakhstan dated March 20, 2015, No. 307 "On the Approval of Rules for Organizing Flight Operations in Civil Aviation of the Republic of Kazakhstan."

The Safety review has been prepared for the purpose of evaluating flight safety status, developing preventive measures, and implementing the provisions of Annex 19 of ICAO to the Convention on International Civil Aviation and ICAO Doc 9859 "Safety Management Manual."

FOREWORD / EXECUTIVE SUMMARY

Over the course of the last year, Kazakhstan has made significant strides in enhancing aviation safety across both commercial and general aviation sectors. Our efforts have been focused on the implementation of best international practices, strengthening regulatory framework and ensuring the continued professional development of personnel involved in aviation operations.

A notable improvement of accident and serious incident rate in Kazakhstan's commercial air transport operations shall be noted, reflecting the effectiveness of the safety measures that have been instituted. There have been no fatalities in commercial air transport operations for the past 5 years. Serious incident rate has been reduced from 5 to 3 over the period of 2023–2024. Although the incident rate per 100K flights has

increased in 2024 by 10% compared to 2023, the number of flights performed during the same period has increased as well. While these figures are encouraging, we remain vigilant in striving for continuous improvement.

During the years of independence of the Republic of Kazakhstan, there have been no recorded fatal accidents involving foreign airlines carrying out commercial air transport on the territory of Kazakhstan. However, the accident of the Embraer 190 aircraft (flight AHY8243) AZAL on December 25, 2024, became the first accident. Kazakhstan was focused on an objective and comprehensive investigation from the first days of the plane accident. The preliminary report on the AZAL accident was published in full compliance with the Convention on International Civil Aviation. The final accident investigation report is estimated to be published by the end of this year.

Also, we have successfully completed audits focusing on enhancing all areas with a focus on airworthiness, flight operations and safety management systems. The results of these audits have highlighted Kazakhstan's consistent alignment with international safety standards and ICAO's Global Aviation Safety Plan (GASP).

One of our key areas of focus during this period has been on the development of human resources. We have expanded our training program with a particular emphasis on risk management and safety promotion. In addition, we have significantly increased the number of inspectors receiving training in line with EU regulation due to a successful collaboration with EASA and Irish Aviation Authority.

It is important to mention that Kazakhstan continues to be an active participant in international aviation initiatives. Through collaboration with European counterparts and

agencies such as EASA, we have benefitted from knowledge exchange programs and shared expertise, particularly in the areas of safety culture and regulatory oversight.

While we are encouraged by the progress made, we acknowledge the need for ongoing efforts to address challenges in the areas of safety culture and the integration of emerging technologies. We remain committed to addressing these challenges by further refining our safety management systems and ensuring that safety oversight is robust and forward-looking.

Director General

Catalin Radu

1. KAZAKHSTAN AVIATION SAFETY PLAN FOR 2024-2027

Kazakhstan is committed to enhancing aviation safety and to the resourcing of supporting activities. The purpose of this Kazakhstan aviation safety plan (hereinafter - KASP) is to continually reduce fatalities, and the risk of fatalities, through the development and implementation of a national aviation safety strategy.

The KASP is developed in accordance with the International Civil Aviation Organization (ICAO) Global Aviation Safety Plan (GASP, Doc 10004), the EUR Regional Aviation Safety Plan 2023-2025 (EUR RASP), State Safety Program of Kazakhstan (Decree of the Government of the Republic of Kazakhstan dated March 11, 2016 No. 136) and Concepts for the development of transport and logistics potential of the Republic of Kazakhstan until 2030 (Decree of the Government of the Republic of Kazakhstan dated December 30, 2022 No. 1116).

In accordance with the KASP for 2024–2027, five national high-risk categories of occurrences (N-HRCs) in the Kazakhstan context were considered of the utmost priority because of the number of fatalities and risk of fatalities associated with such occurrences. They were identified based on analyses from mandatory reporting systems, accident and incident investigation reports, as well as on the basis of operational safety risks described in the GASP.

- 1) Loss of control in flight (LOC-I);
- 2) Controlled flight into terrain (CFIT);
- 3) Mid-air collision (MAC);
- 4) Runway excursion (RE);
- 5) Runway incursion (RI).).

More detailed information on [KASP](#) can be found on the website of Aviation Administration of Kazakhstan JSC.

2. STATISTICAL SAFETY DATA IN CIVIL AVIATION OF THE REPUBLIC OF KAZAKHSTAN

Civil aviation sees an 8% increase in flights in 2024 compared to 2023 (2023 - 150,209, 2024 - 162,881).

Types of operators / Flights	2023	2024
Commercial aviation (air operation)	113 066	119 222
Aerial works	36 016	42 704
General aviation	1 127	955
Total number of flights	150 209	162 881

General indicators	2023	2024
Absolute safety indicators		
Accidents	3	6
Incidents	63	74
Safety performance*		
N _{ACC}	0.19	0.36
N _{INC}	4.19	4.54

* Rate per 10,000 flights

Commercial aviation (air operation)	2023	2024
Absolute safety indicators		
Accidents	0	1
Incidents	56	62
Safety performance*		
N _{ACC}	0.00	0.83
N _{INC}	4.95	5.20

* Rate per 10,000 flights

Aerial works	2023	2024
Absolute safety indicators		
Accidents	3	5
Incidents	7	10
Safety performance*		
N _{ACC}	0.83	1.17
N _{INC}	1.94	2.34

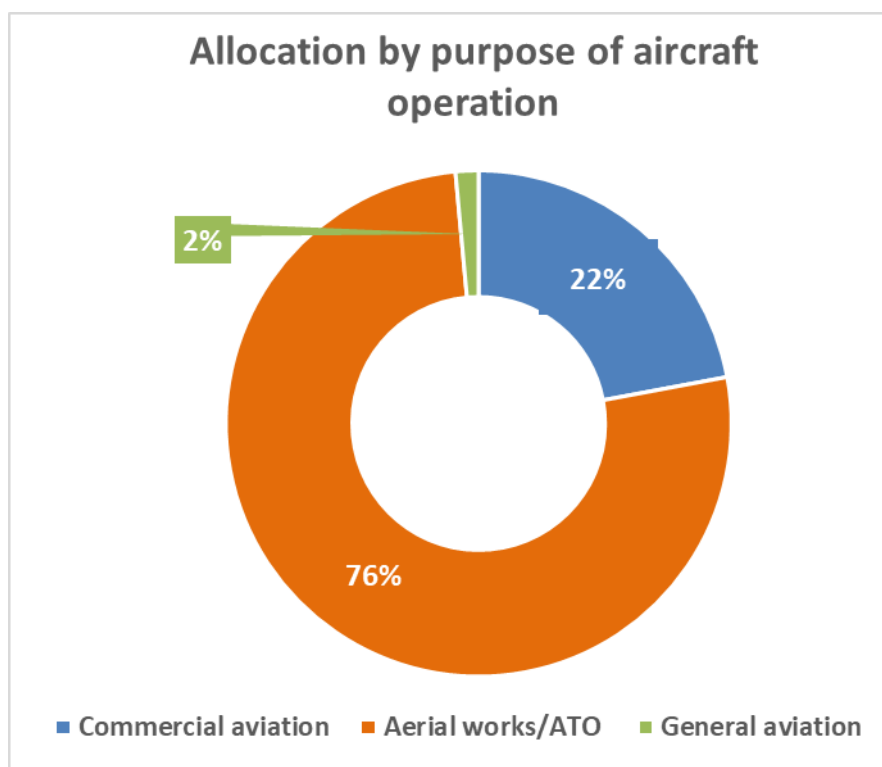
* Rate per 10,000 flights

As can be seen from the information provided, the safety performance in terms of accidents is higher for operators engaged in **aerial works** than for commercial aviation operators engaged in air operation. This statistic indicates a low level of work of operators in identifying hazards. Thus, actions aimed at prevention and mitigation of hazards in such operators require closer attention in the implementation of oversight and control over the state of flight safety.

3. ANALYSIS OF SAFETY INDICATORS

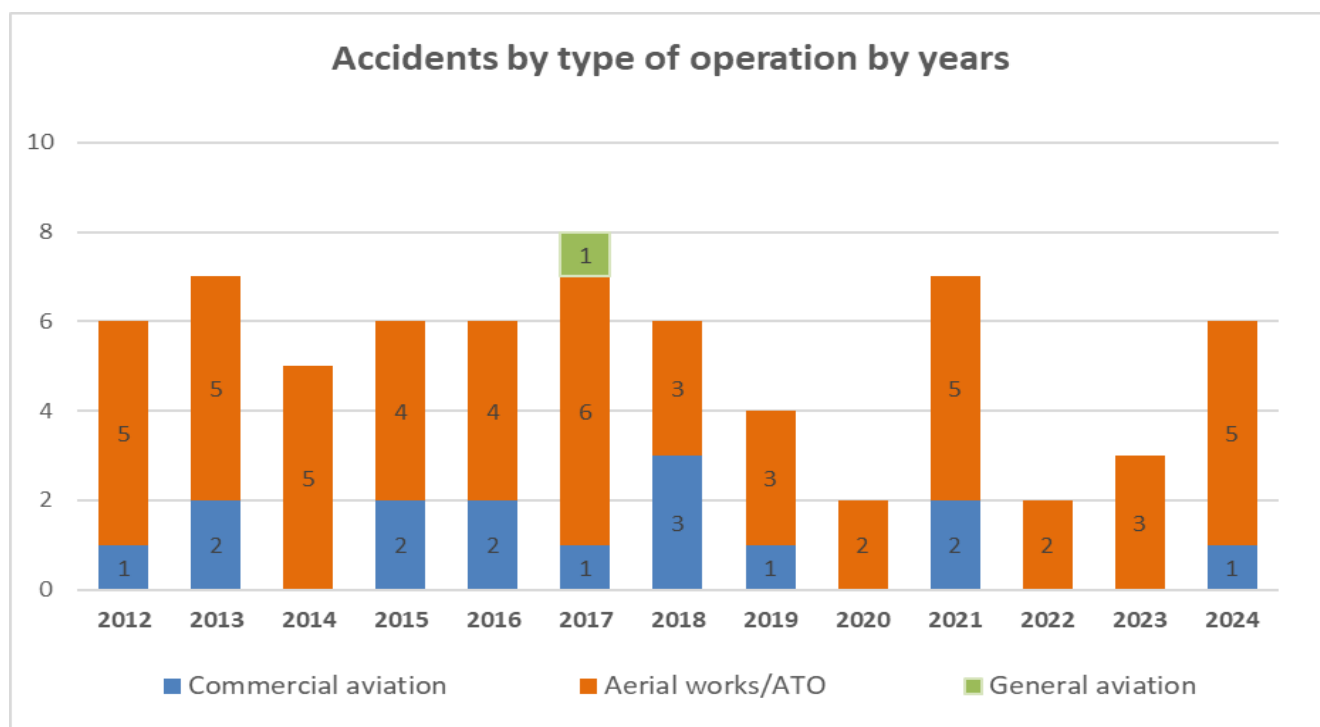
3.1 Accident analysis

Over the past 13 years, 68 accidents have occurred in Kazakhstan, including 26 with fatalities, in which 124 people died, and 42 accidents without fatalities.



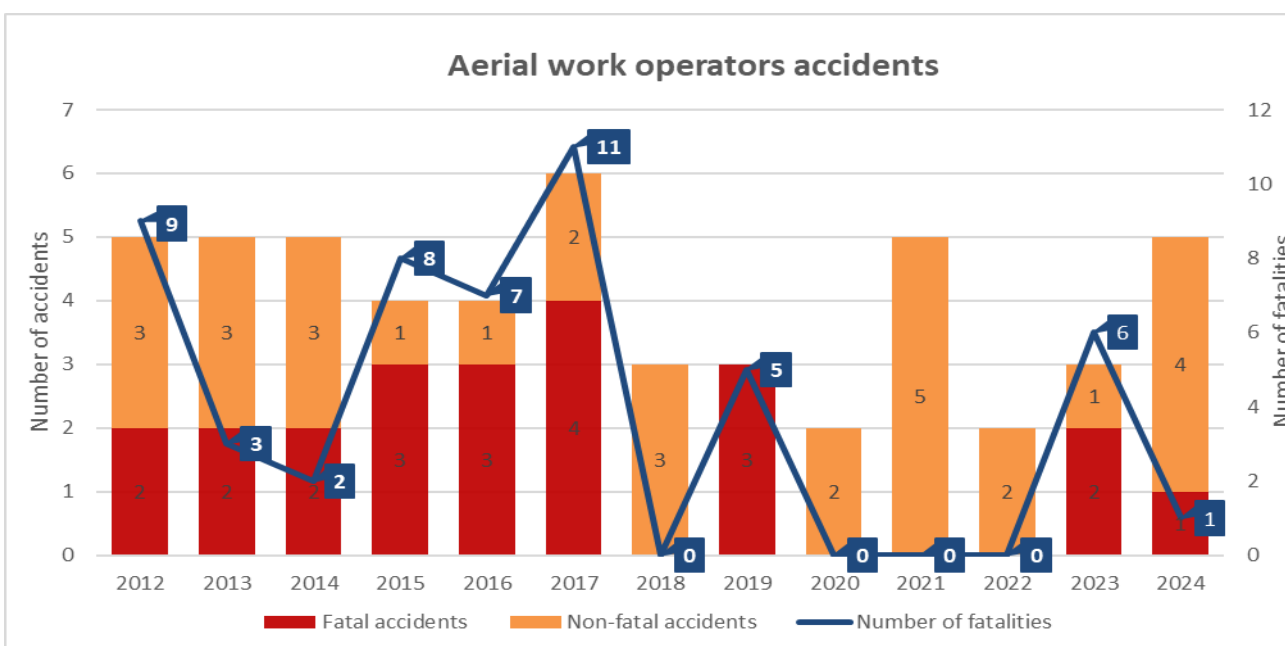
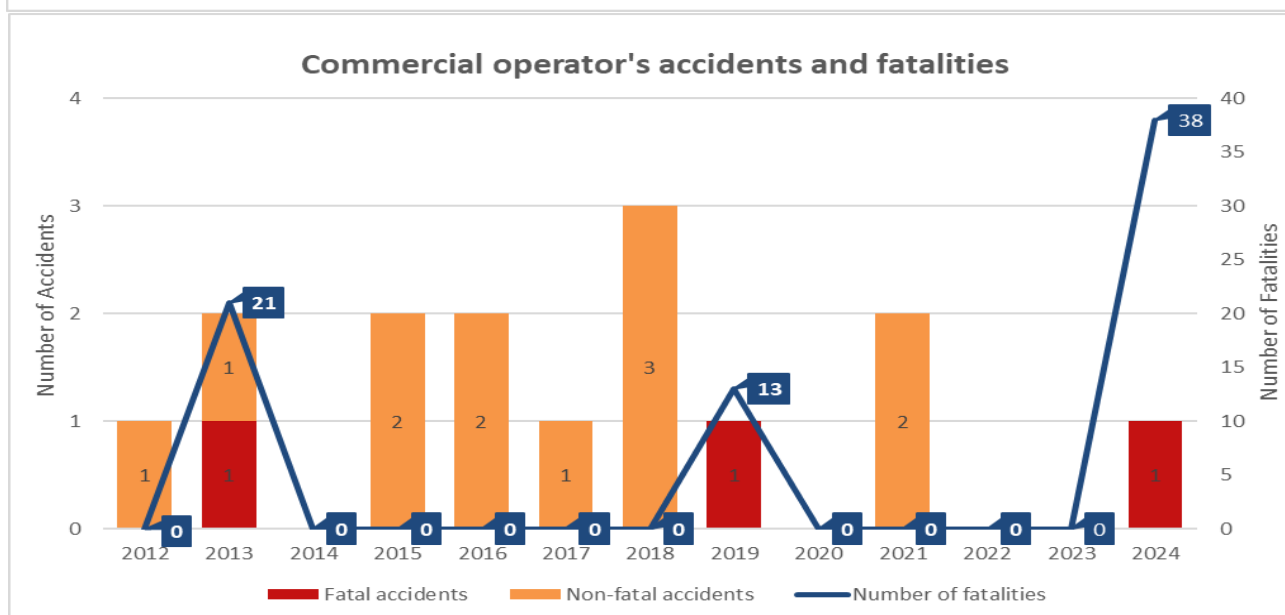
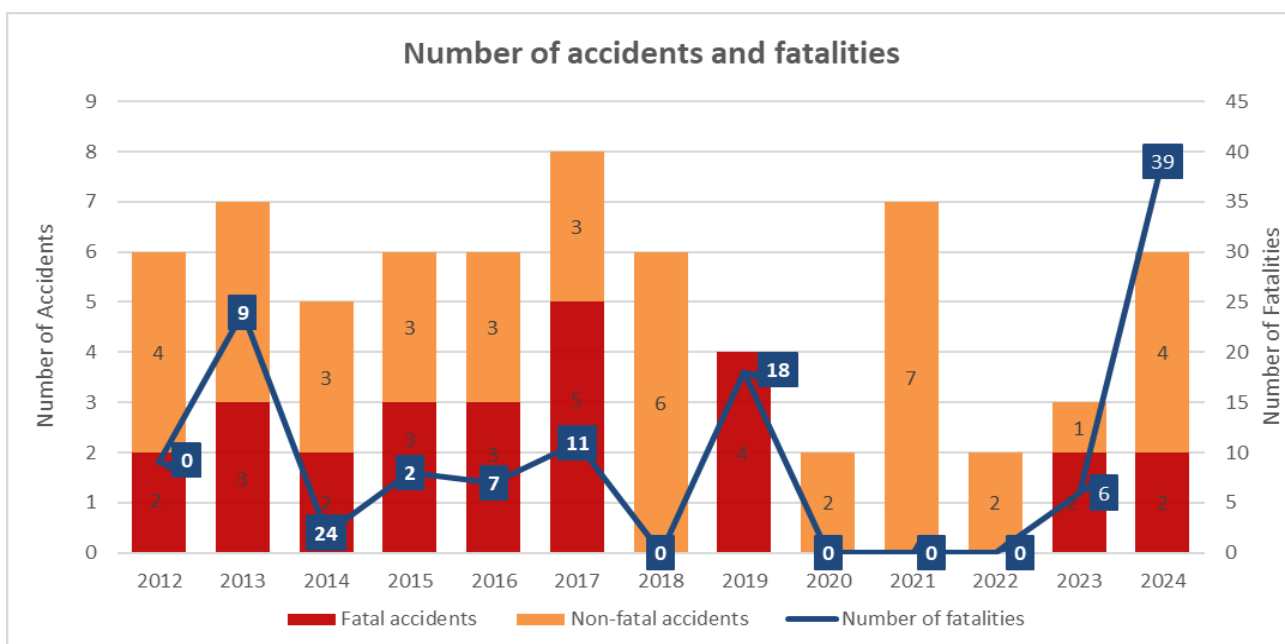
Allocation of accidents by purpose of aircraft operation

- **Commercial aviation** operators accounted for **22%** (15 accidents) of the total number of accidents;
- Operators performing **aerial works**, including aviation training organisations - **76%** (52 accidents) of the total number of accidents;
- **General aviation** operators - **2%** (1 accident) of the total number of accidents.

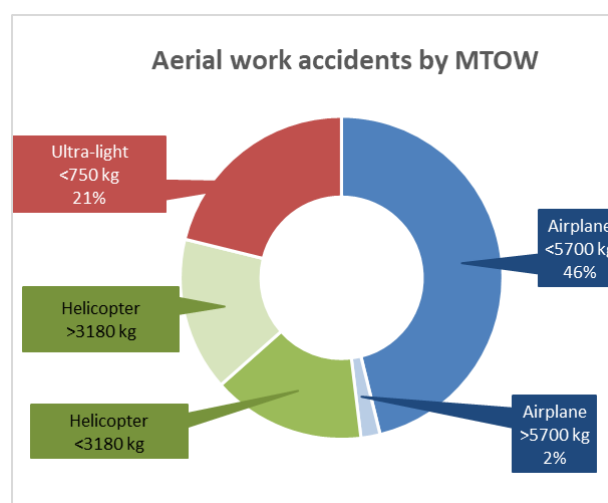
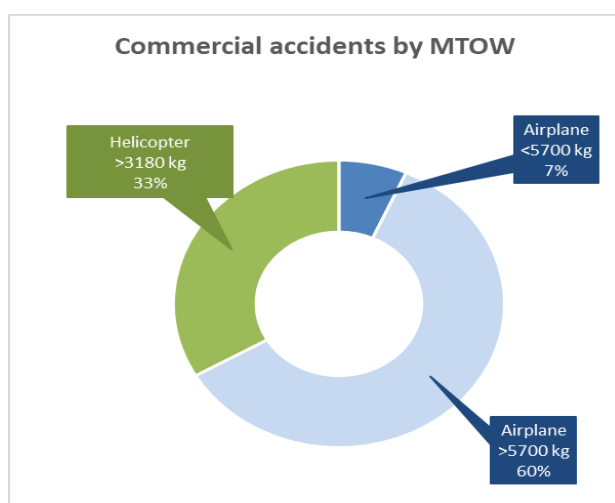
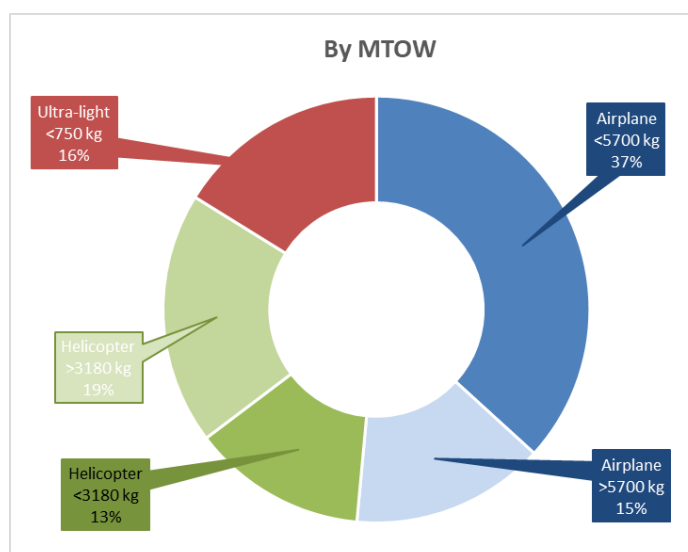


According to the information provided by the Department for investigation of accidents and incidents in transport of the Ministry of Transport of the Republic of Kazakhstan, materials and analyses on safety of operators and civil aviation organizations of the Republic of Kazakhstan, in 2024 in the territory of the Republic of Kazakhstan there were **6** accidents (see Section 3.1.1 of this Analysis), of which two accidents with fatalities in which 39 people died and **74** incidents.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fatal accidents	2	3	2	3	3	5	0	4	0	0	0	2	2
Non-fatal accidents	4	4	3	3	3	3	6	0	2	7	2	1	4
Total number of accidents	6	7	5	6	6	8	6	4	2	7	2	3	6
Number of fatalities	9	24	2	8	7	11	0	18	0	0	0	6	39



Below are the 2024 accidents statistics by maximum certified takeoff weight of aircraft and types of work performed.



Thus, a greater number of accidents occurred with operators performing **aerial work** and training flights of students of aviation training organizations (flight schools). In this regard, civil aviation entities of the Republic of Kazakhstan performing aerial work should pay increased attention to identifying hazards and maintaining risks at an acceptable level, it is recommended to take preventive measures and analyze the effectiveness of measures taken. Aircraft operators performing aerial works are recommended to implement a safety management system in accordance with the Model Instruction on Safety Management for Civil Aircraft Operators in order to improve flight safety. AAK aviation inspectors, when carrying out supervision and control over operators performing aerial work, should pay close attention to activities aimed at improving flight safety and preventing future accidents.

3.1.1. Brief information on aviation accidents in 2024

1. **03.05.2024г.** An-2 aircraft of Navigator LLP, while performing a sanitary flight, after takeoff performed a cabrization (sharp decrease in altitude) and went down on a water body (melt water). There were 2 crew members and 3 service passengers on board. There were no fatalities.

2. **21.06.2024г.** AN-2 aircraft of SAMGAU AGRO LLP made a hard landing near Madeniyet village of Zhalagash district of Kyzylorda region. There were no fatalities.

3. **22.06.2024г.** The aircraft hung gliders of SAMGAU AGRO LLP while performing aerial-chemical works, crashed in Mugalzhar district near Zharyk village. The pilot was killed.

4. **04.07.2024г.** An-2 aircraft of AVIASILA LLP while performing aerial chemical works encountered engine failure. The pilot made an emergency landing in a rice field. There were no fatalities.

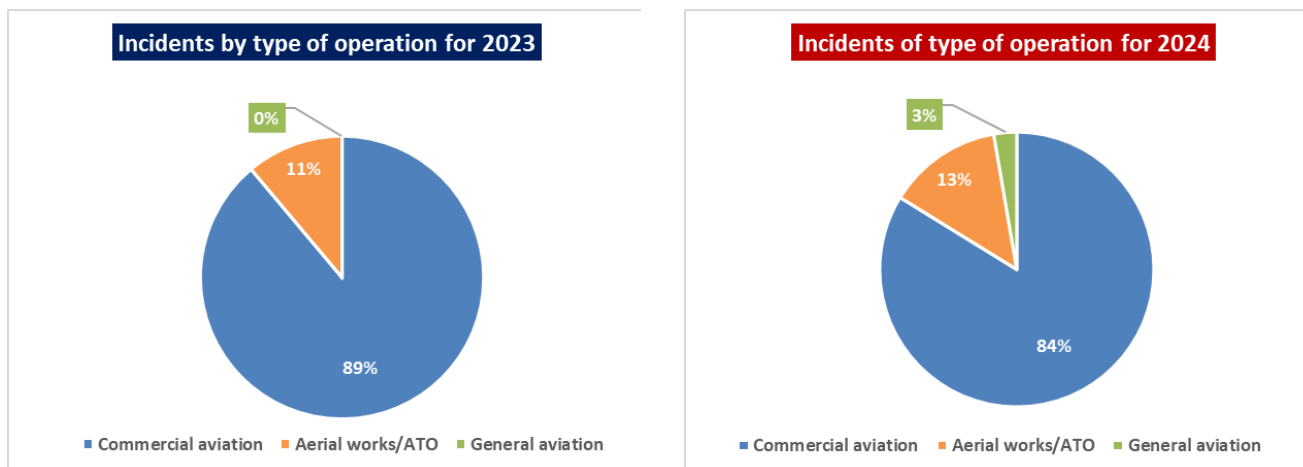
5. **21.07.2024г.** An-2 AN-2 aircraft of BERKUT-AVIA LLP while performing aerial chemical operations at altitude gain hit a power line, as a result of which the aircraft overturned with subsequent fire of the aircraft. The crew was not injured.

6. **25.12.2024г.** Aircraft E-190 Azerbaijan Airlines crashed at a distance of 3 km from Aktau airport. There were 5 crew members and 62 passengers on board, 35 passengers and 3 crew members were killed.

3.2 Serious incident and incident analysis

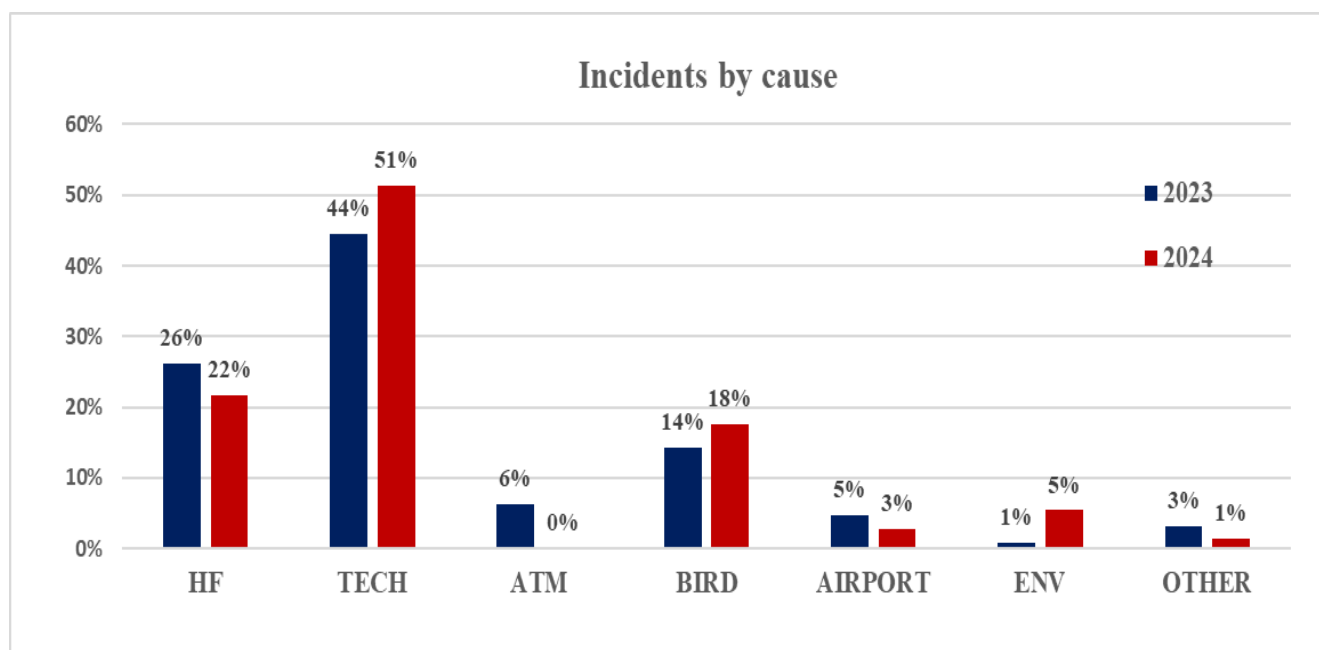
The total number of serious incidents and incidents in 2024 was **74** (of which 3 serious incidents). Compared to 2023, the number increased by 15% (total number **63**, of which 5 serious incidents)

Percentage of incidents in 2024 compared to 2023 based on the type of operations performed:



Distribution of aviation incidents in the civil aviation of the Republic of Kazakhstan by causes:

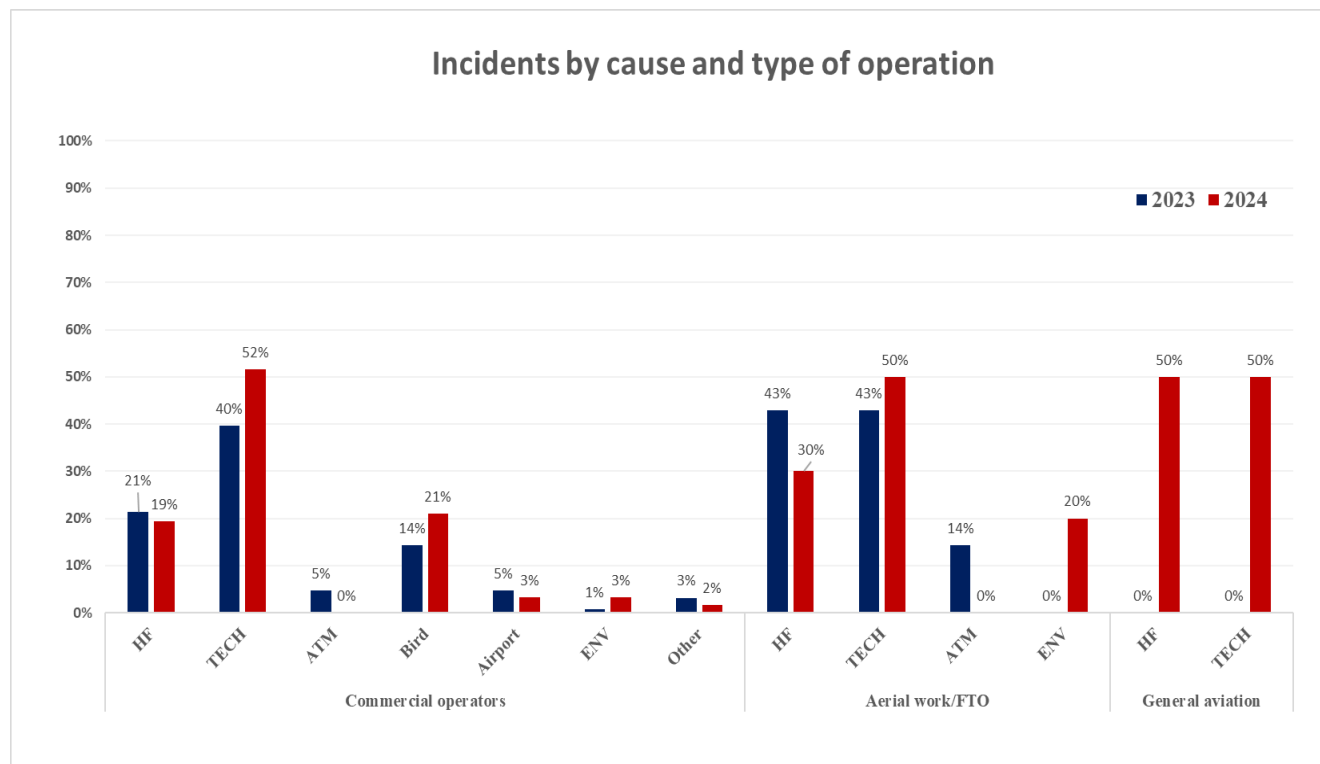
Period	Total	By causes						
		HF	TECH	ATM	BIRD	AIRPORT	ENV	OTHER
2023	63	16.5	28	4	9	3	0.5	2
2024	74	16	38	0	13	2	4	1



From the graph above, it is evident that the highest number of incidents in 2024 occurred due to technical (TECH), human factors (HF), and bird strikes that resulted in aircraft damage.

Distribution of Aviation Incidents by Types of Civil Aircraft Operations:

Period	Commercial Aviation	Aerial work / ATO (Aviation Training Organization)	General Aviation
2023	56	7	0
2024	62	10	2

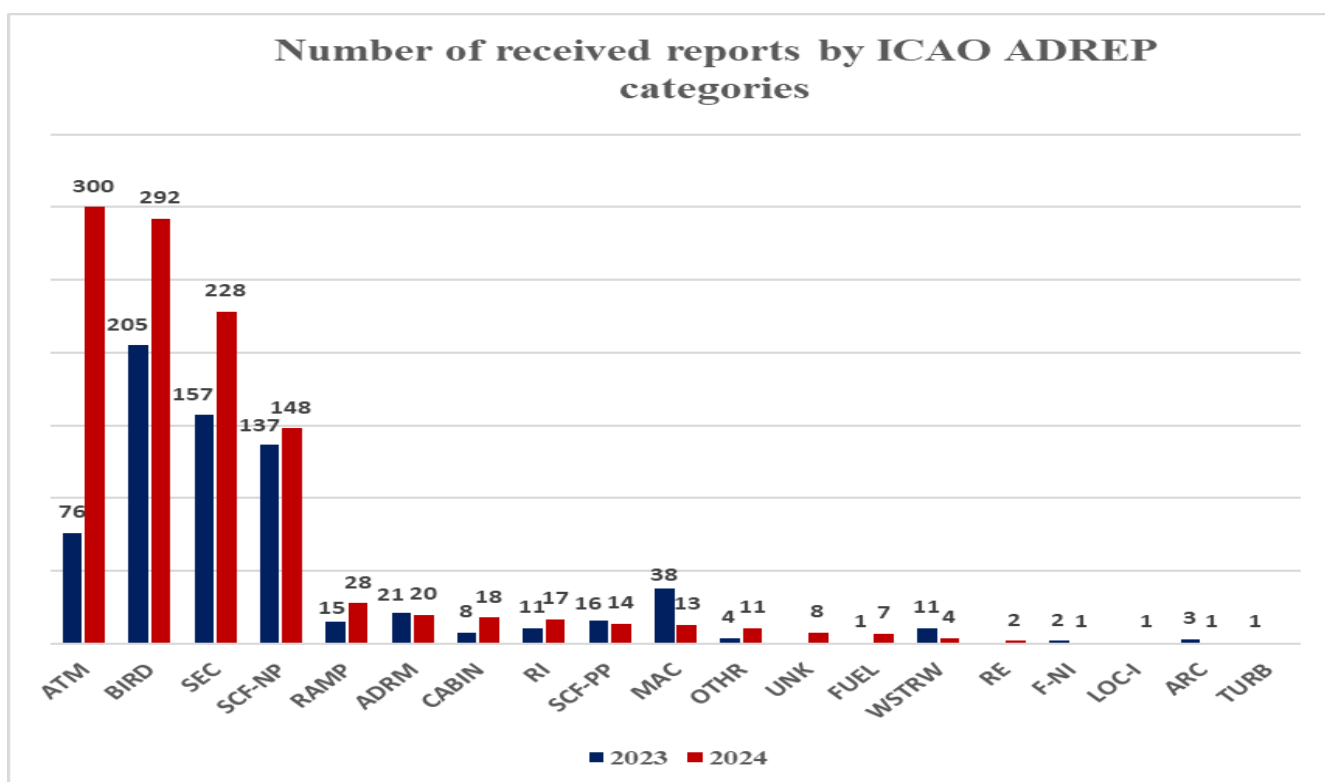


4. SAFETY REPORTING SYSTEM ANALYSIS

In 2024, the Operational Center of the Aviation Administration of Kazakhstan (AAK) received and registered 1,114 reports of aviation occurrences in the Access Database. The reports were submitted by civil aviation organizations in accordance with the notification scheme, through SMS messages, incoming radiograms via the AFTN channel of the Operational Center, as well as via email messages and reports from AAK divisions.

In 2023, a total of 706 aviation occurrence reports were registered and entered the AAK database.

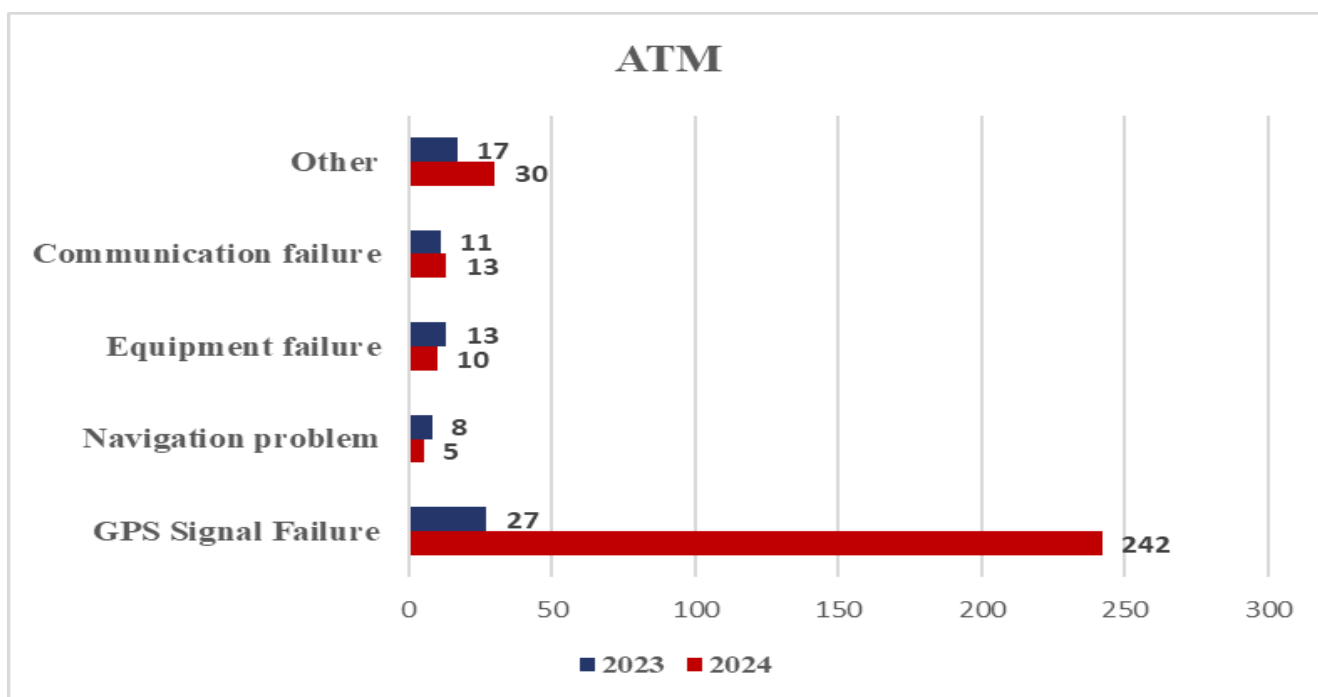
The Operational Center registers all reports of aviation occurrences and forwards the information to the heads of relevant AAK departments and subject matter experts for further analysis and risk categorization.



The following categories have been selected for further analysis:

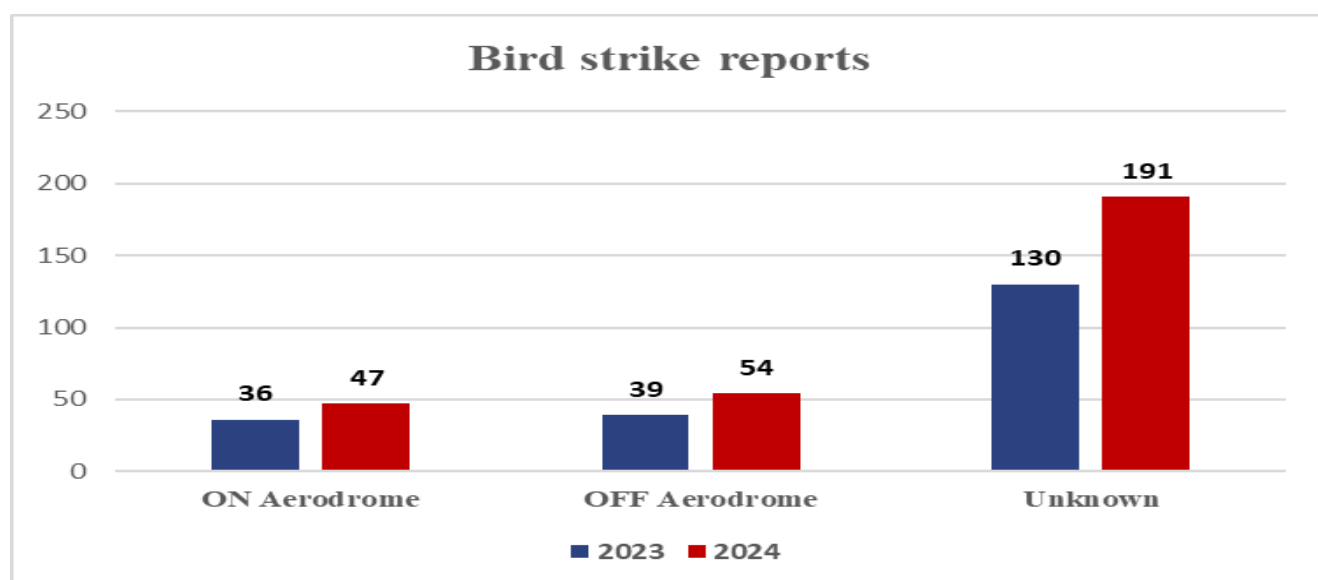
- **ATM (Air traffic management or communication, navigation, or surveillance)** – Occurrences involving Air traffic management, service issues.
- **BIRD (Occurrences involving collisions / near collisions with birds)** – Occurrences involving collisions / near collisions with birds.
- **SEC (Criminal/Security acts which result in accidents or incidents)** – While security related acts can lead to accidents as defined as by ICAO Annex 13, they are not considered accidents by some organizations.
- **SCF-NP (System/component failure or malfunction [non-powerplant])** – Failure or malfunction of an aircraft system or component - other than the powerplant.

The analysis of events in the ATM category showed the following statistics:

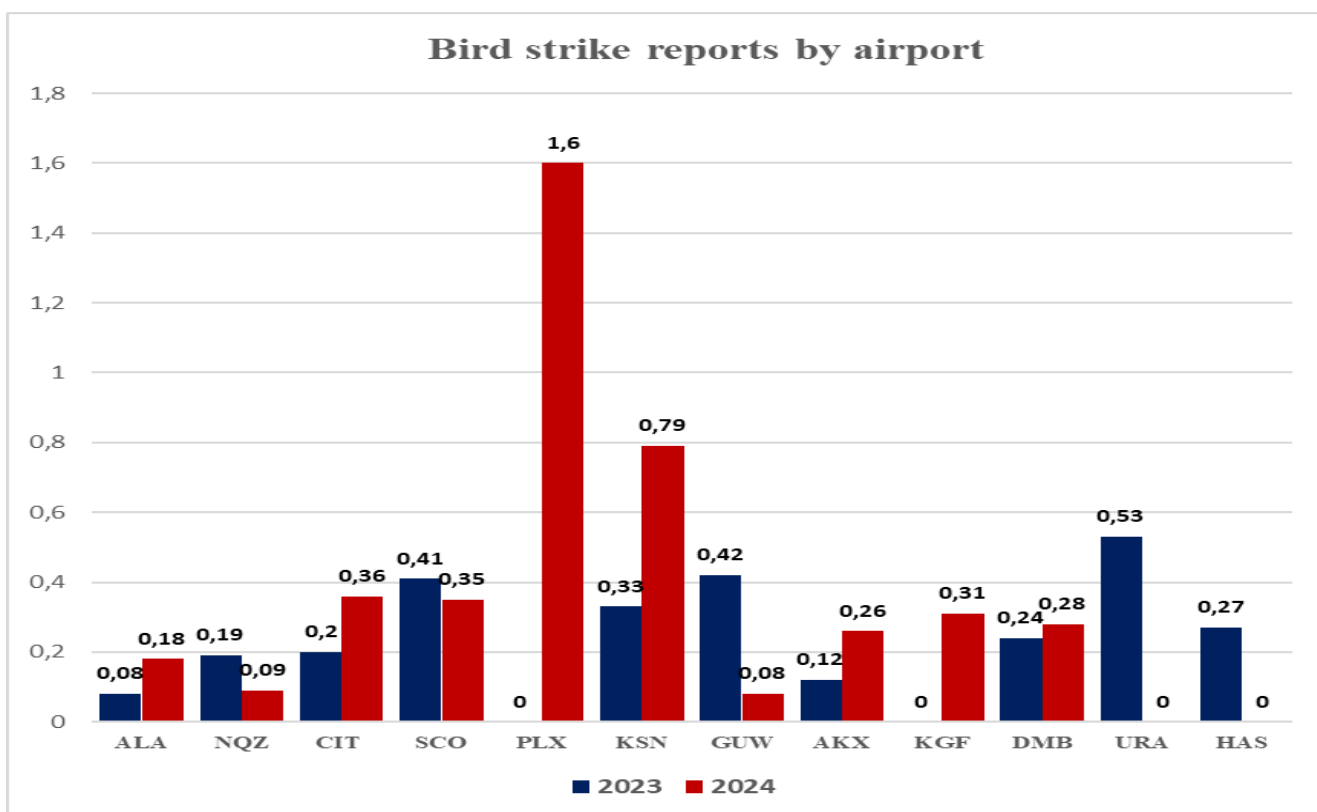


To mitigate the consequences of GPS/GNSS malfunctions, the Aviation Administration of Kazakhstan has issued flight safety information GNSS 2024-0001 (Revision 01 dated 17.02.2025), which has been sent to operators and ATC/ANS organizations.

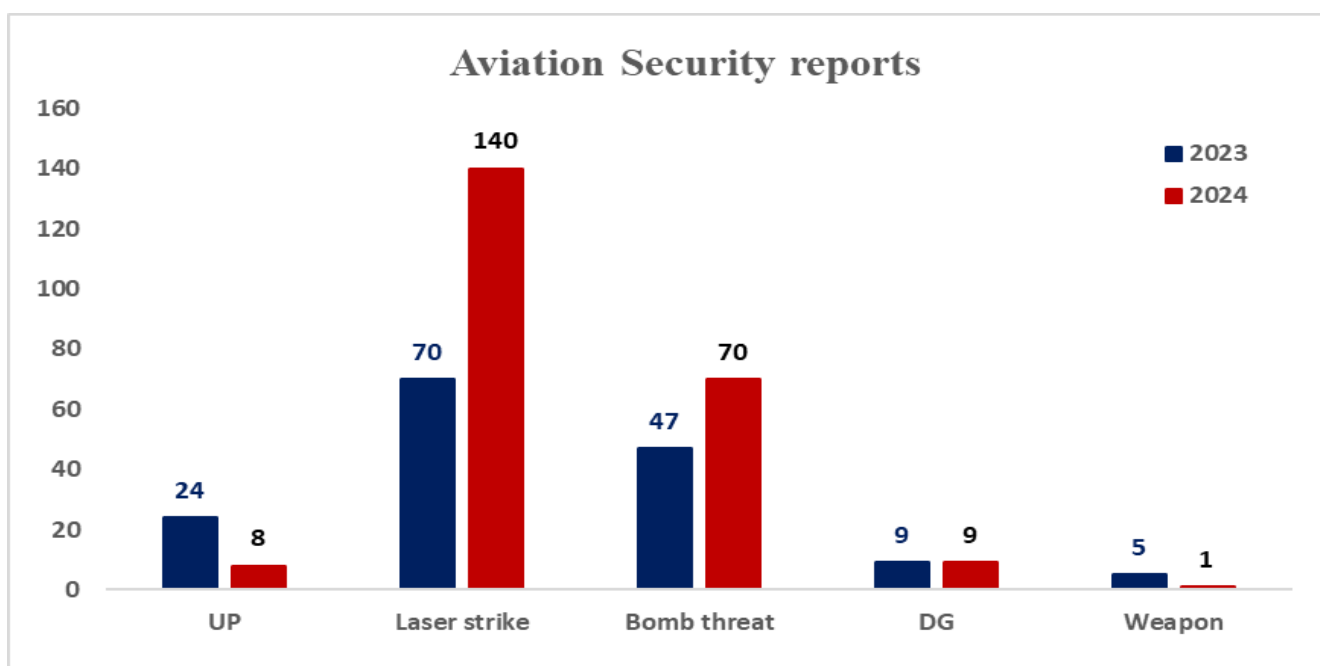
The next category that was analyzed is related to BIRD category messages. This category was divided into three groups based on the location of the collision: at the aerodrome, outside the aerodrome, and unknown. In 2024, a total of 292 bird strike reports were received, of which 2 reports were about bird strikes outside the Republic of Kazakhstan.



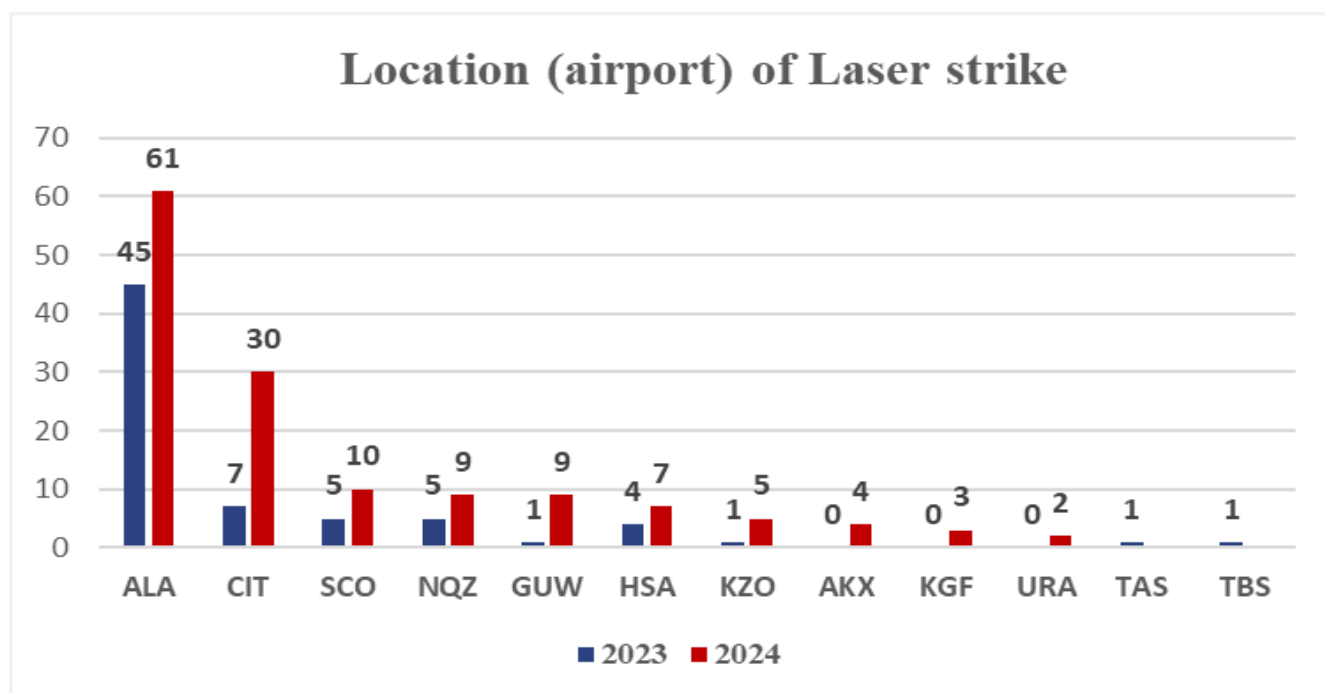
The information was also analyzed based on the airport where the collision occurred, and below are the coefficients for each airport. The coefficients were calculated using the ratio of bird strike reports per 1,000 take-offs and landings.



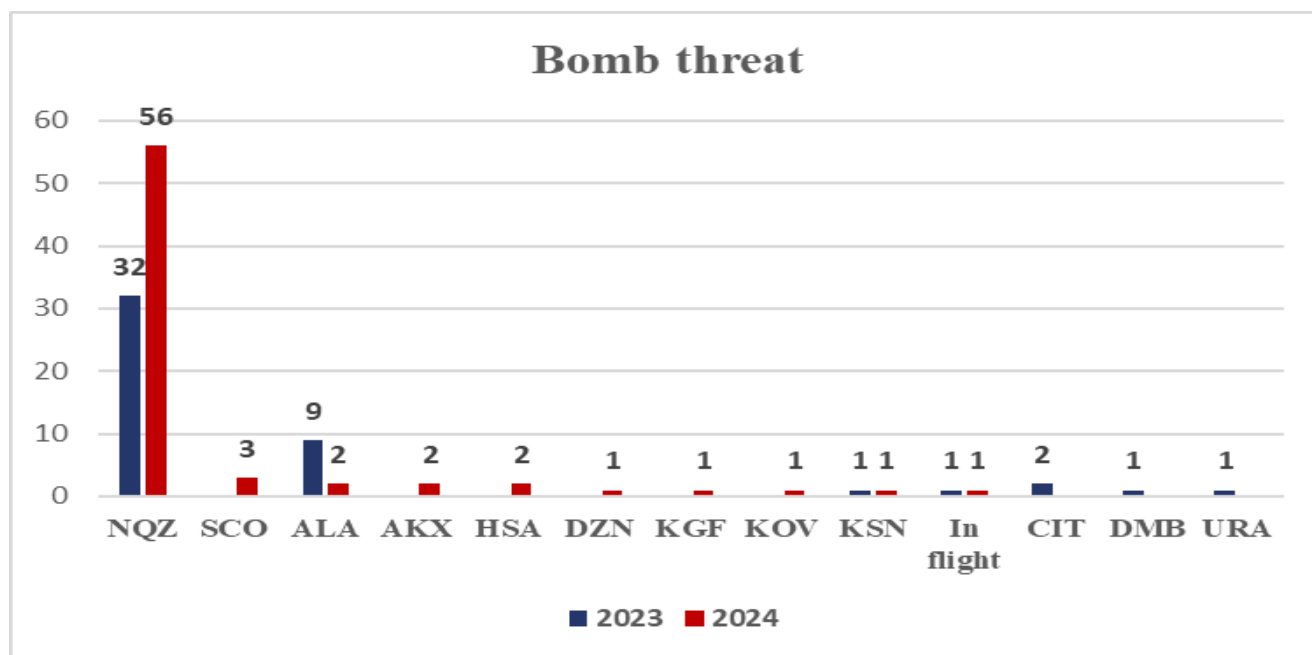
The analysis of events in the AVIATION SECURITY (SEC) category showed the following statistics:



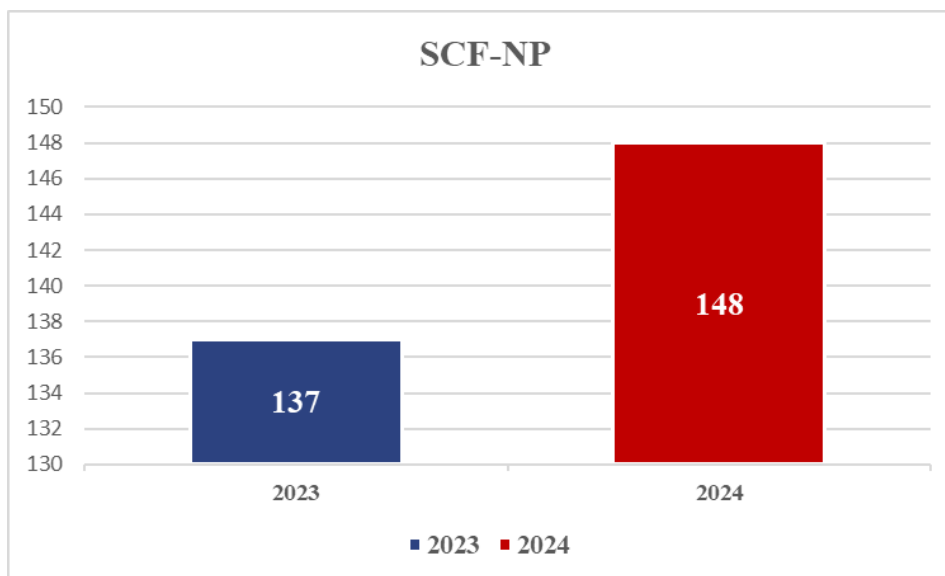
The number of reports related to laser incidents involving aircraft has increased. In 2024, a total of 140 reports were received, which is twice as many compared to 2023. Additionally, information about the location (nearest airport) where laser attacks most frequently occurred was analyzed:



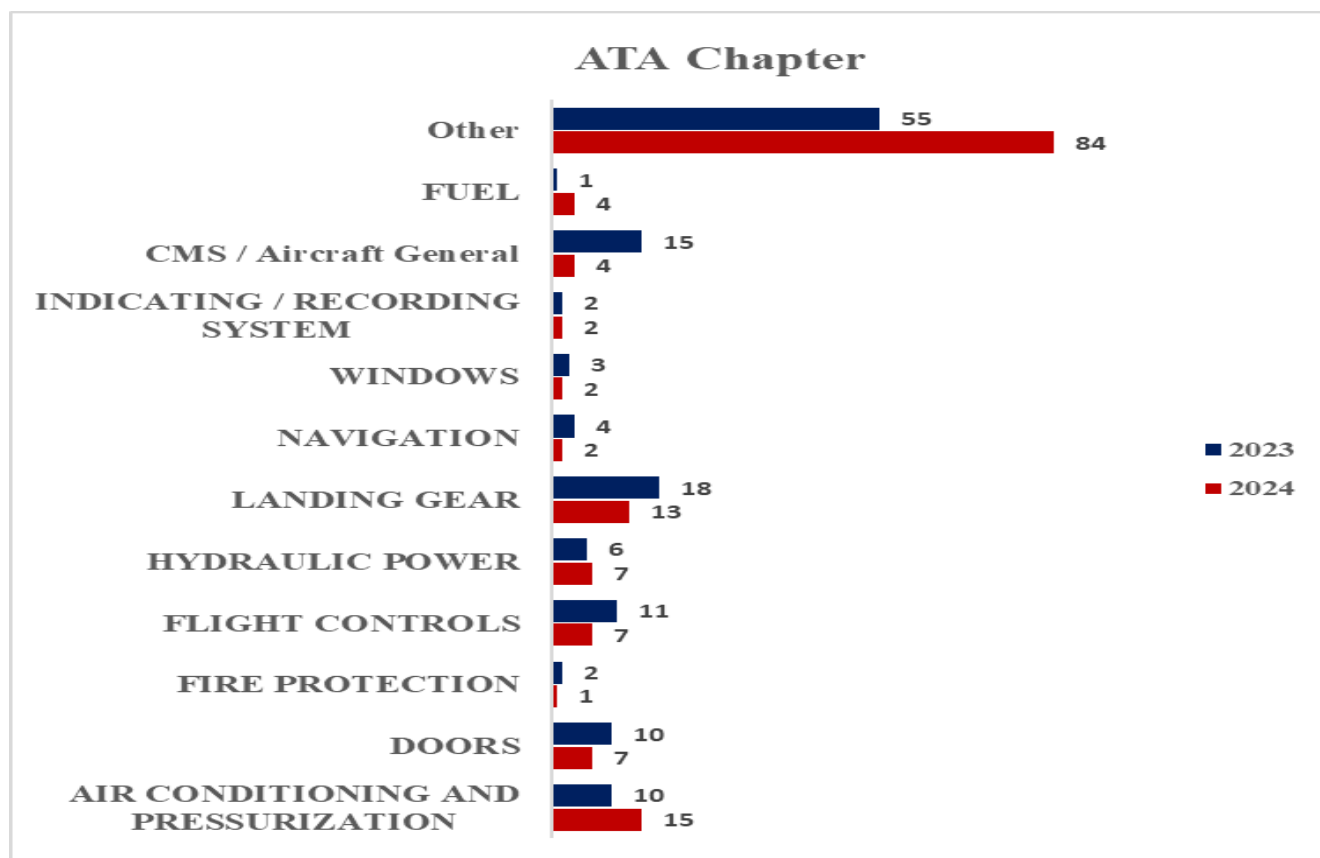
Additionally, information about the location (nearest airport) where reports of bomb threats were most frequently received was analyzed.



The next category that was analyzed is related to SCF-NP category messages.



According to the above statistics, in 2024, the number of reports on failures or malfunctions of aircraft systems or components, excluding the powerplant (SCF-NP), amounted to 148 reports. Events in the SCF-NP category were analyzed in accordance with the ATA Chapters classification of the Air Transport Association for use in aircraft fault reports:



5. RESULTS OF THE IMPLEMENTATION OF THE CONTINUOUS MONITORING PROGRAM

In 2024, the Aviation Administration of Kazakhstan (AAK), in order to enhance flight safety and assess risks, conducted inspections of General Aviation (GA) entities in accordance with the Safety Oversight Program for 2025.

Conducted inspections (inspections / certifications)	2024
Flight operations	197
Airworthiness	455
Air navigation	37
Aviation medicine	43
Aerodromes and ground handling	93
Licensing	39
Aviation security	92
Unmanned aviation systems	5
Total:	961

Issued authorization documents	2024
Flight operations	15
Certificate of Airworthiness (C of A)	152
Certificate of the State registration of civil aircraft (C of R)	133
Certificate of Aircraft Maintenance Organization (AMO)	27
Air Navigation	2
Medical Services	1
Aerodromes and ground handling services	16
Certification of approved aviation training organization	24
Issuance of certificates of aviation personnel	370
Aviation security	5
Unmanned aircraft systems (issued certificates of remote pilots/UAS operators)	357
Unmanned aircraft systems related permits (issued permits)	108
Total:	1210

6. SAFA INSPECTIONS RESULTS

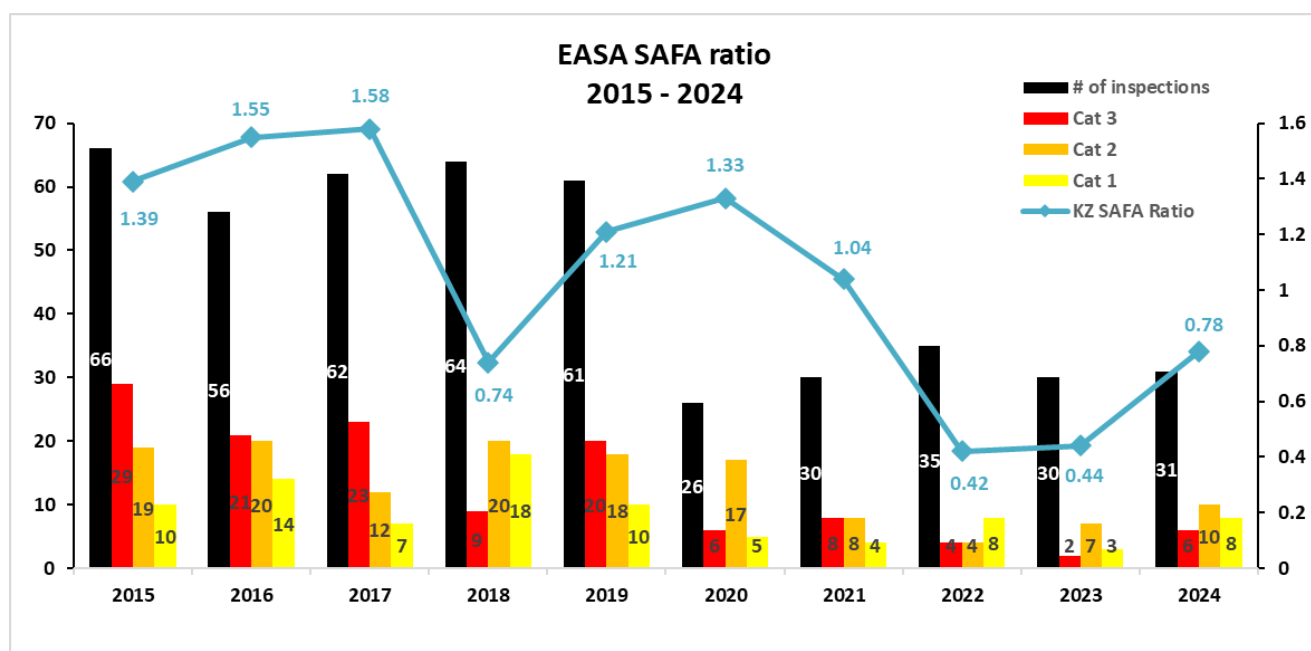
In 2024, Kazakhstan's aircraft underwent 31 SAFA (Safety Assessment of Foreign Aircraft) inspections conducted by auditors from the European Union.

5 Kazakhstani airlines were inspected, and the following findings were identified:

- 6 observations of category 3;
- 10 observations of category 2;
- 8 observations of category 1.

The Kazakhstani operators provided responses to the received observations, along with supporting evidence for their correction and prevention of recurrence in the future.

For the purpose of assessing flight safety in the fleet of aircraft, the SAFA inspection program developed a safety coefficient. The value of this coefficient for Kazakhstani aircraft, based on the results for 2024, was 0.78.



7. REGULATIONS IMPROVEMENT

In accordance with subparagraph 3) of paragraph 2 of Article 16-9 of the Law of the Republic of Kazakhstan 'On the Use of Airspace of the Republic of Kazakhstan and Aviation Activities' dated July 15, 2010, No. 339-IV (hereinafter referred to as the Law), work is being continuously carried out by the Aviation Administration of Kazakhstan (AAK) on the development of draft regulatory legal acts (hereinafter referred to as RLAs) in the field of civil aviation in order to bring them into compliance with the standards and recommended practices of ICAO.

By the order of the General Director of AAK dated January 9, 2024, No.-06/152, the Plan for the development of draft subordinate RLAs for AAK in 2024 (hereinafter referred to as the Plan) was approved. The Plan included 39 draft subordinate RLAs in the field of civil aviation. In 2024, AAK developed and sent 39 draft subordinate RLAs to the Civil Aviation Committee, of which 27 RLAs were adopted.

Additionally, legislative proposals were developed and sent to the Ministry of Transport for the new Consultative Document on Regulatory Policy to the draft Law of the Republic of Kazakhstan 'On Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on the Reform of the Transport Sector,' which will include amendments to the Law and other legislative acts to further implement ICAO standards and recommended practices.

Proposals were also developed for the Law and the Code of the Republic of Kazakhstan on Administrative Infractions in order to implement the recommendations from the report on the results of the Technical Assessment of Flight Safety by the Federal Aviation Administration (FAA) of the United States.

Furthermore, a draft Law 'On the Ratification of the Protocol Amending Article 50(a) of the Convention on International Civil Aviation and the Protocol Amending Article 56 of the Convention on International Civil Aviation' was developed and sent for coordination. This protocol pertains to increasing the number of members of the ICAO Council from 36 to 40 and the membership of the Air Navigation Commission from 19 to 21 members. A package of documents related to this draft Law was also prepared.

Moreover, a comprehensive legal monitoring of the legislation on the use of airspace and aviation activities was conducted in accordance with the order of the Minister of Justice 'On Certain Organizational Issues of Legal Monitoring' dated January 22, 2024, and the letter dated November 22, 2023, No. 1-2-8-/9043-I (pilot project). A corresponding analytical report was prepared by AAK based on the results of the legal monitoring.



**AVIATION
ADMINISTRATION
OF KAZAKHSTAN**

www.caa.gov.kz

safety@caa.gov.kz