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APPROVED
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(e-signed)

THE NATIONAL PLAN FOR AVIATION SAFETY 2024 – 2026

Courtesy translation

Issue 1/2024

National plan for aviation safety

2024 – 2026

National plan for aviation safety

2024 – 2026

Legal basis

- Chapter II, Art. 8 of Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91.

- Art. 26 – Development of NPAS from The National Plan for Civil Aviation Safety, approved by Order of the Minister of Transport (OMTI) No. 1359/2022, published in the Official Gazette, Part I, No 813 of 10 August 2022.

National plan for aviation safety

2024 – 2026

Endorsed at the CNSig 01 meeting of 28 March 2024	**(e-signed) Roxana Găitan Secretary of CNSig**

AACR internally approved

Flight Directorate	**(e-signed) Silviu TRENTEA, Director**
Airworthiness Directorate	**(e-signed) Dragoș TRONARU, Director**
Aerodrome Directorate	**(e-signed) Daniel IVAN, Director**
ATM/ANS Department	**(e-signed) Claudia VÎRLAN, Head of Department**
Aeronautical Security Department	**(e-signed) Mirela PRICOPI, Head of Department**
Safety and Compliance Department	**(e-signed) Roxana GĂITAN, Head of Department**

National plan for aviation safety

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CONTENTS

VOLUME I – GENERAL AND SAFETY PERFORMANCE

GENERAL

National plan for aviation safety

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Introduction

The obligation to develop a National Plan for Aviation Safety is laid down both in Ch. II, Art. 8 of Regulation (EU) No 2018/1139[1] (*New Basic Regulation*), and in Art. 26 of NPAS, National Civil Aviation Safety Programme development[2].

The National Plan for Aviation Safety (NPAS) sets safety indicators at national level with the related safety targets and alert thresholds, as well as the actions needed to reduce safety risks.

Level of safety performance to be achieved (LSPA) is defined by identifying, on the basis of the assessment of the relevant safety information, the main safety risks affecting the national civil aviation system.

Essentially, the NPAS groups the entire range of safety actions deemed necessary to be implemented in order to achieve the safety objectives set by the State Safety Programme (SSP).

NPAS contributes to the implementation of the European Plan for Aviation Safety (EPAS) by incorporating the risks and related actions identified at European level with relevance for civil aviation in Romania.

Both the NPAS and revisions to it are developed by the RCAA with the advice of the relevant functional compartments within the RCAA. All stakeholders are consulted and the final form of the document is endorsed by the National Aviation Safety Committee (CNSig) and approved by decision of the Director General of the RCAA.

NPAS is not a static document, it evolves on the basis of EASA recommendations and analyses supported by data collected at national level.

European Plan for Aviation Safety 2024–2026 (EPAS 2024–2026)

The *European Plan for Aviation Safety* (EPAS) is the tool whose fundamental aim is to avoid the occurrence of accidents and serious incidents in the field of civil aviation at European level.

If by 2018 EU Member States had implemented EPAS on a voluntary basis, it became mandatory with the entry into force of Regulation (EU) 2018/1139 (New Basic Regulation). The Regulation requires that risks and related actions, as determined by EPAS, to be included in a document such as a national safety plan. Each Member State is required to analyse and determine the applicable risks and actions, to justify the omission of non applicable ones, and to develop its own Safety Plan.

Starting this year, the application cycle of EPAS (and, consequently, of PNSA has reduced from 5 to 3 years, in order to correlate it more accurately with the ICAO Global Aviation Safety Plan (GASP).

[1] Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91.

[2] OMTI No 1359/2022 approving the National Civil Aviation Safety Programme, published in the Official Gazette, Part I No 792 of 10 August 2022.

- *Structure of EPAS 2024-2026*

EPAS 2024-2026 is divided into three volumes, as follows:

- Volume I – includes introduction, strategy elements and performance measurement;
- Volume II – list of proposed safety actions;
- Volume III – provides a summary of the safety risks affecting the European aviation system in the form of Key Risk Areas (KRAs) and domains, as well as the European Risk Portfolio.

Volume I sets out a number of *Strategic Priorities*. Following the adoption of a new reference period and a three-year review cycle for EPAS Volume I "Strategic Priorities" (2023 - 2025), the EPAS 2024 edition is composed of updates of Volumes II "Actions" and III "Safety Risk Portfolios".

Each of them being structured on 4 levels as follows:

Level 1: Strategic priorities domain

Level 2: Priorities within each domain

Level 3: Objectives associated with level 2 priorities

Level 4: Actions to reach level 3 objectives

Levels 1 and 2 of the safety strategic priorities are presented below:

- Systemic safety and resilience
  - Risk interdependence management
  - Improving safety by improving safety management
  - Human factors management and human performance
  - Civil-military cooperation and coordination
  - Qualified and organised oversight
  - Ensuring a fair working environment
- Competence of personnel
  - Priorities in multiple domains
  - Cabin crew priorities
  - ATCO and ATM/ANS personnel priorities
  - Aircraft maintenance personnel priorities
  - Other personnel priorities
- Operational safety;
  - Safety of CAT and NCC operations
  - Safety of rotorcraft operations
  - Safety of general aviation operations
  - Safety of initial and continuing airwothiness activities
  - Safety of ATM/ANS operations
  - Safety of aerodrome and groundhandling operations

- Safe and sustainable integration of new technologies and concepts;
  - Artificial intelligence;
  - Digitalisation
  - Innovative air services and other mobility and operational concepts
  - Virtual certification – models and simulation
  - ATCO - system-based licensing methods
  - Research and development of SESAR solutions for new ATM/ANS functions
  - Safe integration of EMCO[1] operations
  - Safe integration of new business models
  - New propulsion systems
  - Preparation for safe higher airspace operations

Further details on strategic priorities at levels 3 and 4 can be found in Volume 1 Ch. 3 of EPAS 2023-2025[2].

Volume II describes the safety actions.

All actions are divided into domains that broadly respect the strategic priorities described above, respectively:

- Systemic safety and resilience
- Competence of personnel
- Operations – aeroplanes (CAT & NCC and SPO);
- Rotorcraft;
- General aviation;
- Design and production;
- Maintenance and continuing airworthiness management;
- Air traffic management / Air navigation services (ATM/ANS);
- Aerodromes and groundhandling
- Unmanned aircraft systems and VTOL[3] aircraft ;
- New technologies and concepts;
- Environmental protection.

For domains with a large number of actions, these are further grouped in key risk areas.

1 Extended Minimum-Crew Operations

2 https://www.easa.europa.eu/en/downloads/137466/en

3 Vertical Take-off and Landing

Actions under the responsibility of EASA are to be carried out through rulemaking (RMT), safety promotion (SPT), evaluation tasks (EVT) or research/study (RES). and the new type of action introduced in the previous cycle, which includes measures to support new major rulemaking – implementation support task (IST).

Actions/tasks that are the responsibility of Member States (MST), regardless of their type, are simply noted with MST.xxxx. Following the completion of 14 actions in 2023, EPAS Volume II edition 2024 consists of 164 actions, 19 of which are new. Of these 164 actions, EASA, in consultation with its advisory bodies, has strategically suspended or postponed certain actions to help achieve a balanced budget and to ensure a stabilisation of regulatory output for the coming years.

A new MST action type MST.0043 has been introduced. 3 MSTs have been deleted (MST.0029, MST.0030 and MST.0031). These related to the implementation of SESAR solutions and were originally created to ensure alignment with the ATM Master Plan. In order to avoid overlap with new ATM Master Plan editions and to eliminate duplication of reporting obligations through the LSSIP, these MSTs have been removed.

The MST actions contained in EPAS 2023-2025 are listed in Table 1.

The comparative situation of EPAS 2022-2026 actions against those of EPAS 2023-2025 is presented in Table 2.

Strategic priority	Area	MST
Systemic safety and resilience	Risk interdependence management	MST.0040 MST.0042
	Safety management	MST.0001 MST.0002 MST.0003 MST.0026 MST.0028 **MST. 0043**
	Human factors and human performance	MST.0037 MST.0034
	Qualified and organised oversight	MST.0032
Competence of personnel	General	MST.0033
	Flight crew	MST.0036
	Aircraft maintenance personnel	MST.0035
Operational safety	CAT & NCC operations - aeroplanes	MST.0019 MST.0024
	Rotorcraft operations	MST.0015 MST.0041
	General aviation	MST.0025 MST.0027 MST.0038

Table 1 – Strategic priorities of EPAS 2024–2026 and related MST actions

Action	EPAS 2023-2025	EPAS 2024-2026
MST.0001	X	X
MST.0002	X	X
MST.0003	X	X
MST.0004	X by MST.0028	X by MST.0028
MST.0005	X by MST.0028	X by MST.0028
MST.0006	X by MST.0028	X by MST.0028
MST.0007	X by MST.0028	X by MST.0028
MST.0010	X by MST.0028	X by MST.0028
MST.0014	X by MST.0028	X by MST.0028
MST.0015	X	X
MST.0016	X by MST.0028	X by MST.0028
MST.0018	X by MST.0028	X by MST.0028
MST.0019	X	X
MST.0024	X	X
MST.0025	X	X
MST.0026	X	X
MST.0027	X	X
MST.0028	X	X
MST.0029	X	
MST.0030	X	
MST.0031	X	
MST.0032	X	X
MST.0033	X	X
MST.0034	X	X
MST.0035	X	X
MST.0036	X	X
MST.0037	X	X
MST.0038	X	X
MST.0040	X	X
MST.0041	X	X
MST.0042	X	X
MST.0043		X

Table 2 – Comparative EPAS actions

National Plan for Aviation Safety 2024–2026 (PNSA 2024–2026)

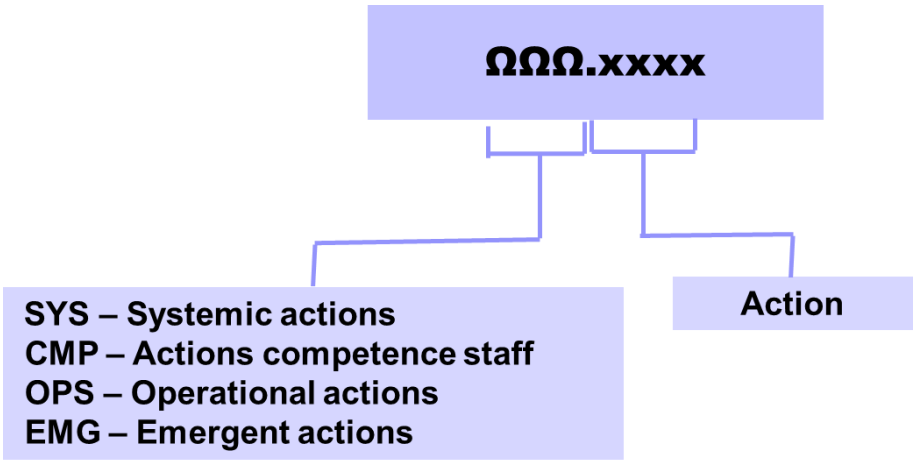
The following information have supported PNSA ellaboration:

- Actions highlighted at European level, through EPAS;
- The Romanian civil aviation risk portfolio, where specific risks at national level are highlighted;
- The outcome of analyses carried out in the working groups set up to support CNSig work;
- The conclusions of the report on how to comply with the ALoSP established by the previous year's NPAS.

Similarly to EPAS 2024-2026, PNSA 2024-2026 is divided into 3 volumes as follows:

Volume I – *General and safety performance*, presents general information about EPAS and PNSA, the way how safety performance is measured at European level and sets the performance targets at national level, i.e. the evolution of the number of accidents and serious incidents recorded in our country, having involved a civil aviation agent subject to the Romanian CAA oversight. These targets are similar to those proposed at European level through EPAS 2024-2026.

Volume II – *Safety actions*, presents the actions taken at national level to increase the safety of air transport, both those taken from EPAS and locally developed. All actions in the PNSA comply with the division into the domains presented in EPAS 2024-2026 (see Table 1). The numbering mode is in accordance with the scheme below:



Actions were grouped as follows:

- SYS – Systemic and resilience domain;
- CMP – Competence of personnel domain;
- OPS – Includes:
  - Flight operations with aeroplanes,
  - Rotorcraft,
  - General aviation,
  - Design and production,

- Maintenance and continuing airworthiness management,
- Air Traffic Management / Air Navigation Services,
- Aerodromes,
- Groundhandling,
- Unmanned aircraft systems

- EMG – Includes new technologies and concepts domaine.

Volume III – *Safety Risk Portfolios,* describes the aviation safety risks at national level.

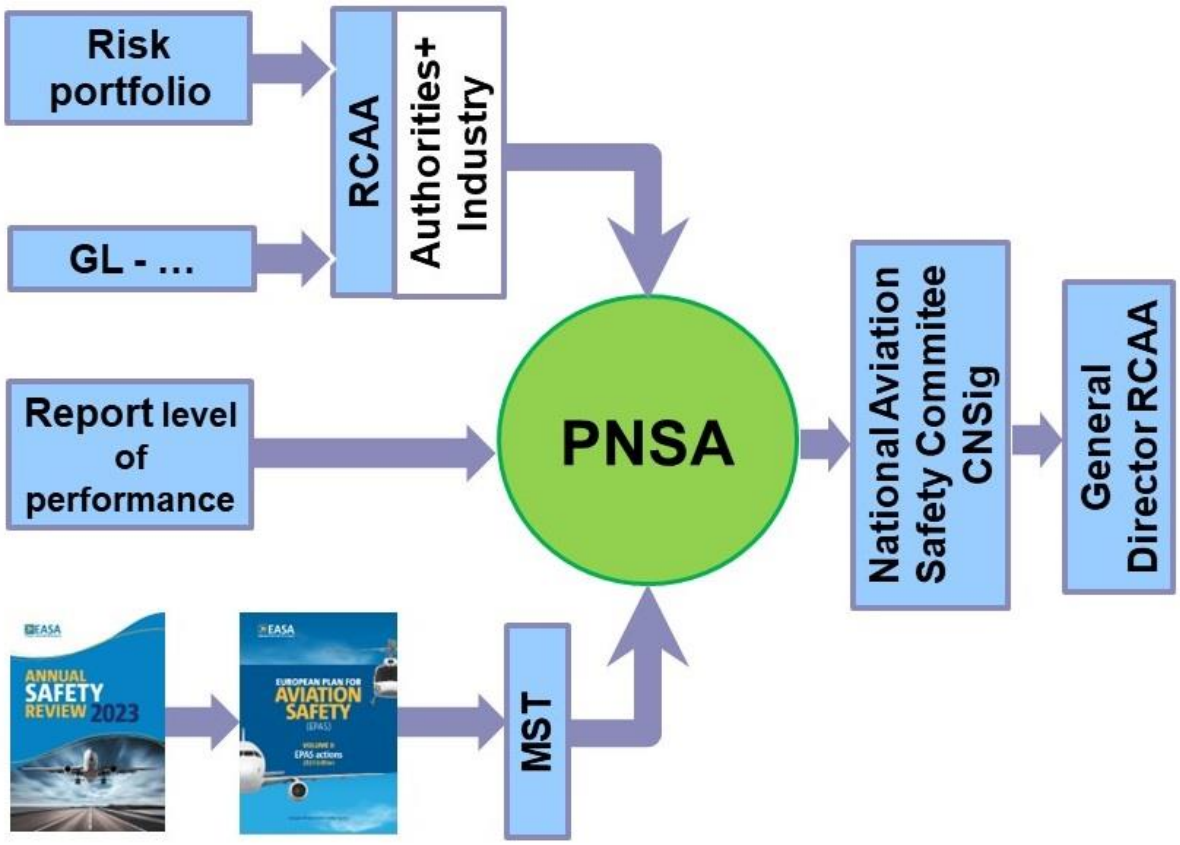
The correlation between the actions contained in PNSA 2024-2026 and those of the Member States covered by EPAS 2024-2026 is presented in Table 3.

Item No.	PNSA action	Domain/ Action	EPAS action
SYSTEMIC AND RESILIENCE			
Risk interdependence			
1	SYS.0011	Mechanism for coordinating safety and security occurrence reporting systems	MST.0040
2	SYS.0013	Assessment of safety culture at air operators	MST.0042
Safety management			
3	SYS.0001	SSP development and monitoring	MST.0001
4	SYS.0002	Safety management system (SMS) promotion	MST.0002
5	SYS.0003	SMS assessment	MST.0026
6	SYS.0004	PNSA development and monitoring	MST.0028
7	SYS.0014	Improving data quality in event reporting	MST.0043
Human factors and human performance			
		General	
7	SYS.0006	Promoting common understanding and supervision of human factors	MST.0037
8	SYS.0007	Individual flight time specification schemes	MST.0034
		Qualified and organised oversight	
9	SYS.0012	Improving the oversight capabilities of competent authorities	MST.0032
COMPETENCE OF PERSONNEL			
General			
10	CMP.0001	Language proficiency requirements (LPR) feedback	MST.0033
Flight crew			
11	CMP.0002	Setting training objectives for 'Weather Information' in the PPL/LAPL syllabus	MST.0036
		Maintenance staff	
12	CMP.0003	Oversight capabilities – prevention, detection și reduction of fraud risk in Part-147	MST.0035
FLIGHT OPERATIONS WITH AEROPLANES (CAT AND NCC)			
Safety			
13	OPS.0001	Mitigate the risk of *Aircraft upset in flight (LOC-I) occurrences*	
14	OPS.0002	Mitigate the risk of RE occurrences	MST.0028
15	OPS.0003	Mitigate the risk of RI occurrences	MST.0028
16	OPS.0004	Increasing the importance of local runway safety teams (LRST)	
17	OPS.0005	Mitigate the risk of *wildlife strike* occurrences	
18	OPS.0006	Mitigate the risk of FOD on movement surfaces	
19	OPS.0007	Mitigate the risk of mid-air collision (MAC) occurrences	MST.0028

28	OPS.0016	A better understanding of the management structure of air operators	MST.0019
20	OPS.0008	Mitigate the risk of ”Loss of separation between civil and military aircraft” occurrences	MST.0024
22	OPS.0010	Safety of ground operations	
23	OPS.0011	Mitigate the risk of Controlled flight into terrain (CFIT)” occurrences	
24	OPS.0012	Mitigate the risk of ”Fire, smoke, and fumes” occurrences (*Aircraft environment*)	
25	OPS.0013	Mitigate the risk of SCF-NP –depressurization occurrences	
26	OPS.0014	Mitigate the risk of SCF-PP occurrences	
ROTORCRAFT OPERATIONS			
Safety			
29	OPS.0017	Increase safety of rotorcraft operations	MST.0028
30	OPS.0018	Promoting safety actions in rotorcraft operations	MST.0015
Efficiency / proportionality			
32	OPS.0026	AOC approvals harmonisations in rotorcraft operations – procedures and documentation	MST.0041
GENERAL AVIATION OPERATIONS			
Safety			
33	OPS.0020	Increase safety of general aviation operations	MST.0028
34	OPS.0021	Improving safety information dissemination	MST.0025
35	OPS.0022	Developing Just Culture in general aviation	MST.0027
36	OPS.0023	Airspace complexity and traffic congestion	MST.0038
UNMANNED AIRCRAFT SYSTEMS (DRONES)			
38	OPS.0025	Mitigate the risks associated with civil UAS (drone) operations	

Table 3 – Correlation between PNSA and EPAS actions

The following shall be specified for each action:
- Description of the safety problem;
- Status (action in progress, new or closed);
- Reference documents;
- The performance indicator;
- Method of measurement;
- Performance target;
- Measures necessary to achieve the proposed target.



Annual report on the degree of LSPA achievement

In accordance with the SSP, Art. 54, para. 6), "the degree of LSPA fulfilment is established through an annual report drawn up by RCAA". For this purpose, RCAA collects the information provided both internally and by the organisations involved. The periodicity of that process is presented in the following diagram:

National plan for aviation safety

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Abbreviations used in this document are as follows:

RCAA	**-**	Romanian Civil Aeronautical Authority
AMTO	**-**	Approved maintenance trainin organisation
ADR	**-**	Aerodromes
AIAS	**-**	Civil Aviation Safety Investigation and Analysis Authority -SIAA
ANS	**-**	Air navigation services
AR	**-**	Aeroclub of Romania
ATM	**-**	Air traffic management
ATO	**-**	Approved training organisation
AZLR	**-**	Free Flight Association of Romania
BAS	**-**	Safety Analysis Office (RCAA)
BIS	**-**	Best Intervention Strategy
CAMO	**-**	Continuing airworthiness management organization
CAT	**-**	Commercial air transport
CES	**-**	Safety Assessment Committee
CTS	**-**	SafetyTechnical Committee
DCP	**-**	Personnel Certification Directorate (RCAA)
DOA	**-**	Air Operations Directorate (RCAA)
DN	**-**	Airworthiness Directorate (RCAA)
DSA	**-**	Aeronautical Security Directorate (RCAA)
EASA	**-**	European Union Aviation Safety Agency
EPAS	**-**	European Plan for Aviation Safety
GASP	**-**	Global Aviation Safety Plan
GH	**-**	Groundhandling
GL-AD	**-**	Working Group - Aerodromes
GL-CAT	**-**	Working Group - CAT
GL-LAGA	**-**	Working Group – Specialised Operations &General Aviation
ICAO	**-**	International Civil Aviation Organization
KRA	**-**	Key Risk Area
LAGA	**-**	Aerial work and general aviation
LAPL	**-**	Light Aircraft Pilot Licence
LSPA	**-**	Level of safety performance to be achieved
MC	**-**	Compliance monitoring (RCAA)
MTI	**-**	Ministry of Transport and Infrastructure
NCC	**-**	Non-commercial air operations with complex motor-powered aircraft
NCO	**-**	Non-commercial air operations with other-than complex motor-powered aircraft
PNSA	**-**	National Plan for Aviation Safety
SSP	**-**	State Safety Programme
PPL	**-**	Private Pilot Licence
SA	**-**	Aerodrome Department (RCAA)
SATMANS	**-**	ATM/ANS Department (RCAA)
SEI	**-**	Safety Enhancement Initiative
SESAR	**-**	Single European Sky ATM Research
SGL-FDM	**-**	Working subgroup - FDM
SGL-HE	**-**	Working subgroup - rotorcraft
SMS	**-**	Safety management system
SPI	**-**	Safety performance indicator
SPO	**-**	Specialised operations
TMA	**-**	Terminal maneuvering area
USOAP	**-**	Universal Safety Oversight Audit Programme

SAFETY PERFORMANCE

Safety performance at European level

In accordance with Article 6 of the *New Basic Regulation*, EPAS shall specify the level of safety performance at European Union level, which the Member States and the Commission together with EASA aim to achieve. The level of safety performance should be determined on the basis of the Safety Performance Indicators (SPIs) of the EPAS, accompanied, where appropriate, by associated safety targets, but also taking into account the safety related indicators and targets set out in the ATM Performance Scheme.

The principles for establishing EPAS SPIs and associated targets are based on two components:

1. Monitoring the negative consequences of civil aviation activities (accidents, serious incidents and injuries);

2. Monitoring the enablers from the point of view of the systems and processes necessary to maintain safety management at the level of states and organisations.

In view of the above, the SPI established by EPAS 2024-2026 are as follows:

1. *Monitoring consequences*

The main entries of consequence-based indicators are:

- Number of fatal accidents;
- Number of fatalities; and
- Number of non fatal accidents and serious incidents

EASA divided SPI into two levels:

- Level 1 SPI, which monitors all domains from the point of view of safety performance. It measures the number of accidents with fatalities and the number of fatalities in the previous year compared with the average of the previous decade;
- Level 2 SPI, which covers the main risk areas by domain. These are found in the Annual Risk Portfolio developed annually by EASA as part of the risk management system.

2. *Monitoring systems and processes*

   a. *Member states oversight capabilities*

   Monitoring is based on the EASA Standardisation rating (as an alternative to the ICAO USOAP Effective Implementation (EI) indicator), currently used for prioritisation of Standardisation Inspections. The Standardisation rating considers elements related to size, nature and complexity of the State authorities and functions, the number and type of open findings, as well as the State's reaction in relation to findings closure, once the final reports have been sent.

   b. *Member States' progress with SSP implementation*

The objectives established in this respect is that states efficiently achieve the implementation of the SSP, according to the complexity of their aviation system, by 2025 (unlike ICAO, which extended this period until 2028).

Since 2022, SSP implementation is monitored by EASA, as part of the evaluation of the implementation of Art. 7 and 8 of the Basic Regulation during EASA

standardisation inspections (extension of SYS standardisation domain).The correlated indicators for EPAS are SYS SSP assessment levels which should reach a minimum present and effective level until 2025. The main EASA findings on SSP assesments will be discussed at the regular SM TeB meetings.

c. Effective implementation of SMS in civil aviation organisations

In order to monitor the effective implementation of SMS by organisations, it will be necessary to develop a common SMS evaluation methodology as well as a method for scoring the evaluation results. Such an assessment and scoring methodology is currently only available in the ATM/ANS domain, as part of the ATM Performance Scheme.

For the above reasons, in this EPAS edition no indicator or target are established for SMS implementation. However, the following will be monitored:

- To what extent Member States use the monitoring tool developed by EASA (or a similar one);
- The status of compliance with the SMS requirements of the European Regulations, which will be assessed on the basis of the information provided by the competent authorities;

d. Alignment with the ATM Performance Scheme

The related information is extracted from the *European Central Repository* (ECR).

Safety performance at national level

ACCIDENTS

Description
The definition laid down in Regulation (EU) No 996/2010[1] shall apply.

Objective
Increasing the safety of civil air transport.

Performance indicator

- The number of fatal accidents in 2024;
- The number of accident fatalities in 2024;
- Total number of accidents in 2024.

Measurement

- The number of fatal accidents is monitored, as well as the number of fatalities resulting from accidents involving a Romanian civil aeronautical agent, differentiated by type of operation according to the *Air Safety Report* 2023, published by EASA[2].
- For operations:
  - with aircraft of Annex I to the Regulation (UE) nr. 2018/1139;
  - with parachutes,

  The total number of accidents involving Romanian civil aeronautical agents, Romanian registered aircraft or pilots licensed in Romania shall be monitored.

Performance target

- The number of accidents resulting in fatalities and number of fatalities following accidents involving Romanian civil aeronautical agents in 2024 shall not exceed the averages for the last 10 years (2014-2023), i.e.:

[1] Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35).
[2] Operations: with aeroplanes (CAT operators, NCC business, SPO, NCO), helicopters (C, SPO, NCO), balloons, sailplanes, contribution of aerodrome infrastructure and ground handling, ATM/ANS infrastructure contribution; the definitions in Regulation (EU) No 965/2012 shall apply.

Domain	Fatal accidents 2014-2023 average	Fatalities 2014-2023 average	Total accidents 2014-2023 average
Aeroplanes			
CAT+NCC	0,1	0,2	0,2
SPO	0,1	0,1	0,5
NCO	0,8	1,9	3,6
Helicopters			
TOTAL	0,1	0,1	0,8
CAT	0,0	0,0	0,0
SPO	0,0	0,0	0,2
NCO	0,1	0,1	0,6
Balloons			
n/a	0,0	0,0	0,0
Sailplanes			
n/a	0,2	0,2	0,7
ULM			
n/a	0,9	1,2	3,3
AUN			
n/a	0,6	0,6	1,6
Parachutes			
n/a	0,5	0,5	0,8
ADR and Groundhandling			
n/a	0,0	0,0	0,3
ATM / ANS			
n/a	0,0	0,0	0,0

- For operations with aircraft of Annex I to Regulation (EU) No 2018/1139.

  There is a decreasing trend in the number of accidents compared to the average over the last 5 years.

SERIOUS INCIDENTS

Description
The definition laid down in Regulation (EU) No 996/2010[1] shall apply.

Obiectiv
Increasing the safety of civil air transport.

Performance indicator

- Number of serious incidents in 2024;

Measurement

- The total number of serious incidents, involving Romanian civil aeronautical agents, differentiated by type of operation according to the *Air Safety Report* 2023, published by EASA[2] shall be monitored;

- For operations;
  - LAGA;
  - with parachutes,

  the total number of serious incidents involving a Romanian civil aeronautical agent, an aircraft registered in Romania or a pilot licensed in Romania shall be monitored.

Performance target

- The total number of serious incidents involving Romanian civil aeronautical agents in 2023 shall not exceed the average over the last 10 years (2014-2023), as presented below:

[1] Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35).
[2] Operations: with aeroplanes (CAT operators, NCC business, SPO, NCO), helicopters (C, SPO, NCO), balloons, sailplanes, contribution of aerodrome infrastructure and ground handling, ATM/ANS infrastructure contribution; the definitions in Regulation (EU) No 965/2012 shall apply.

Domain	Serious incidents 2013-2022 average
Aeroplanes	
CAT+NCC	2,3
SPO	0,0
NCO	1,1
Helicopters	
TOTAL	0,1
CAT	0,0
SPO	0,1
NCO	0,0
Balloons	
n/a	0,0
Sailplanes	
n/a	0,3
ULM	
n/a	0,8
ULAC	
n/a	0,0
Parachutes	
n/a	0,0
ADR and Groundhandling	
n/a	0,8
ATM / ANS	
n/a	0,0

VOLUME II – SAFETY ACTIONS

SYSTEMIC SAFETY AND RESILIENCE DOMAIN

Action area: Risk interdependencies

SYS.0011	**Safety and security reporting coordination mechanism**	**MST.0040**
Description	Without prejudice to the obligations stemming from Regulation (EU) No 376/2014, this action aims to create an appropriate coordination mechanism between safety and security reporting systems in order to allow for an integrated approach to the management of risks.	
Status	Ongoing (2022)	
ICAO/EASA references	n/a	
SPI	n/a	
Measurement	n/a	
Target	n/a	
MEASURES		**Responsibility**
1. Development of a functional coordination mechanism for safety and security occurrence reporting systems managed by the RCAA		SSC/SSA

SYS.0013	Assessment of safety culture at CAT[1] air operators	MST.0042
Description	A strong safety and reporting culture is an essential enabler of an efficient management system. The purpose of this action is to improve the capacity of member states to assess the safety culture of CAT air operators. In order to support the national competent authorities, EASA will develop in 2024 guidance materials and practical tools to measure the safety culture of air operators. In this first phase, feedback from Member States and industry will be sought. Starting from 2024, the task for Member States will be to include in their oversight programmes the assessment of safety culture of air operators with the support of EASA guidance materials and tools.	
Status	**Ongoing (2023)**	
ICAO/EASA references	• EASA Article 89 Report Edition 2021 - *Interdependencies between socio-economic factors and civil aviation safety* • *Regulation (EU) No 376/2014* • SMICG Industry Safety Culture Evaluation Tool and Guidance	
SPI	n/a	
Measurement	n/a	
Target	n/a	
MEASURES		**Responsibility**
1. Experimental application of actual materials and tools and of those to be made available by EASA for the assessment of safety culture of a CAT air operator.		DZ-SOA/SSC

1 Commercial Air Transport

Action area: Safety management

SYS.0001	**Development and monitoring of the State Safety Programme (SSP)**	**MST.0001**
Description	In particular, the following aspects shall be pursued in the development and monitoring of the SSP: - Ensuring the effective implementation of the requirements for competent authorities (AR.X) and managing deficiencies found in the oversight activity; - Ensuring cooperation between the State authorities responsible for civil aviation safety; - Ensuring the competence of inspectors to provide risk- and performance-based supervision oversight; - Ensuring that risk and performance-based oversight policies and procedures are in place, including a description of how SMS is continuously accepted and monitored; - Identification of possibilities to improve civilian-military coordination in order to achieve the objectives of the SSP, where relevant for national safety management activities; - Ensuring the existence of policies and procedures on data collection, analysis, exchange and protection in accordance with Regulation (EU) No 376/2014; - Establishing a process for the identification of SPI at state level; - Ensuring the dissemination of documents relating to PNSA (including by making them available to other Member States and EASA); - Establishing the processes for regular revision of the PNSA and monitoring its effectiveness.	
Status	Ongoing (2017)	
ICAO/ EASA References	n/a	
SPI	Degree of implementation of the actions contained in the document “Comparative analysis against ICAO requirements for the implementation of PNSA” (*GAP Analysis*), current edition.	
Measurement	The degree of implementation posted on the ICAO secure website shall be monitored.	
Target	Implementation of the actions contained in the GAP Analysis as reflected in the associated plans	

MEASURES	Responsibility
1. GAP Analysis update and submittal for approval	SSC (with the support of specialised compartments)
2. Completion of PQ SSP *(Protocol Questions for SSP Implementation)*	SSC (with the support of specialised compartments)

National plan for aviation safety

2024 – 2026

SYS.0002	**Promoting the safety management system (SMS)**	**MST.0002**
Description	The action consists in encouraging the implementation of safety promotion materials developed by the European Safety Promotion Network, SMICG[1] and other relevant sources of information on the subject of safety management.	
Status	Ongoing (2017)	
ICAO/ EASA References	Existing SMICG documents: • Safety Manager's Role In SMS & brochure • 2022 Industry Day on 'SMS and resilience' • 2023 Industry Day on 'Benefits and challenges of SMS assessments' • Change Management at the State Level & brochure • SMS Factsheet for Design, Manufacturing, and Production Organizations (brochure) • SSP Factsheet: Planning and Conducting Surveillance Based on Risk Profiling and Performance Monitoring • Risk-Based and Performance-Based Oversight Guidance • Safety Oversight Following the Implementation of SMS • SSP Assessment tool - 2nd Edition, revision 1 (June 2023) SMICG documents in work: • SSP and SMS Interfaces • Tool and Guidance for Evaluating Inspector SMS Competency • Guidance for Implementing or Improving Voluntary Reporting at State Leve Existing EASA documents: • 2023 EASA safety week: recordings and material • SIB 2023-05 'Risks Emerging During Summer 2023' • Updated EASA Management System assessment tool including Part-CAMO, Part-145 and Part 21	
SPI	Actions to promote SMS (SMS guidance materials, guidelines and safety bulletins specific to the risk areas identified at national level, etc.).	
Measurement	Number of SMS promotion actions.	
Target	Carrying out at least a constant number of actions to promote SMS.	

MEASURES	**Responsibility**
1. Posting on the RCAA website the safety promotion documents developed by the European Safety Promotion Network, SMICG and EASA working groups.	SSC
2. Promotion of the documents referred to in item 1 through meetings with civil aeronautical agents, workshops, circulars, etc	DN/ DZ-SOA/ DZ-SCP/ DA/ SATMANS

[1] Safety Management International Collaboration Group

SYS.0013	**Develop an ongoing dialogue with Romanian air operators on Flight Data Monitoring (FDM) programmes**	**MST.0003**
Description	Many safety indicators used to monitor industry-wide safety performance are based on information from FDM programmes. FDM is a proactive way of using safety information from operations, in addition to that provided by Air Safety Reports, to highlight safety trends and eliminate risk factors. The action consists of maintaining an ongoing dialogue with operators on FDM programmes, with the aim of promoting good FDM practices. Air operators involved in CAT operations with aeroplanes and helicopters as well as offshore operations with helicopters are considered.	
Status	Ongoing (2017)	
References	n/a	
SPI	n/a	
Measurement	n/a	
Target	n/a	

MEASURES	**Responsibility**
1. Raising industry awareness on the activity of the European Forum of FDM Operators (EOFDM).	DZ-SOA
2. Organise at least one meeting (possibly virtual) to promote FDM best practices with FDM operators.	DZ-SOA

SYS.0003	SMS assessment	MST.0026
Description	EASA shall encourage the use of the SMS assessment tool by the competent authorities in support of risk- and performance-based oversight. Reporting to EASA on how to use the instrument is also encouraged, with a view to improving it. The tool is used for the assessment of SMS of the following organisations: - CAT and NCC operators - CAMO - ATO - AeMC - Aerodromes - Part 145 maintenance - Design - Production	
Status	Ongoing (2018)	
ICAO/ EASA References	• EASA Management System assessment tool • EASA BIS 'Safety Management' • GASP SEI-5 (industry) Improvement of industry compliance with applicable SMS requirements	
SPI	Number of civil aviation organisations whose SMS has been assessed by the RCAA using the assessment tool developed by EASA in the applicable areas.	
Measurement	Of the total number of civil aviation organisations required to implement an SMS in the applicable areas, the percentage of civil aviation organisations in the applicable areas, whose SMS has been assessed by the RCAA using the assessment tool developed by EASA.	
Target	Use of the SMS evaluation tool by the RCAA when evaluating the SMS of all civil aviation organisations for which the implementation of an SMS is mandatory in the applicable areas.	

MEASURES	Responsibility
3. Update, as the case may be, of the SMS assessment tool developed by EASA.	SSC
4. Use of the SMS evaluation tool by the RCAA when evaluating the SMS of all civil aviation organisations for which the implementation of an SMS is mandatory in the applicable areas.	DN/DZ-SOA/ DZ-SCP/DA

SYS.0004	**Development and monitoring of the National Plan for Aviation Safety (PNSA)**	**MST.0028**

Description	Member States are required to develop and regularly update a National Plan for Aviation Safety (NPAS). Through this plan, the Member State shall identify the main risks to civil aviation safety at national level and establishes the actions necessary to reduce them. In this process, States will take into account the risks identified at European level by the European Safety Plan (EPAS) and, where appropriate, establish actions to reduce them. At the same time, the NPAS will specify how to measure the effectiveness of these actions. Member States will have to justify their decision not to place the risks identified by EPAS in the NPAS.
	
	In the EPAS current edition, the Key Risk Areas (KRA) identified are the following:
	- For CAT and NCC operations with aeroplanes: MAC, RE, RI and LOC-I.
	- For helicopter operations:
	  ○ CAT: MAC, obstacle collision, GCOL, LOC-I.
	  ○ SPO: LOC-I, obstacle collision, GCOL, MAC.
	  ○ NCO: LOC-I, obstacle collision, GCOL, MAC.
	- For general aviation operations:
	  ○ SPO: LOC-I, GCOL, MAC, obstacle collision.
	  ○ NCO: LOC-I, GCOL, MAC, obstacle collision
	  ○ Sailplanes: LOC-I, GCOL, obstacle collision.
	  ○ Balloons: LOC-I, obstacle collision, balloon landing,
	
	PNSA shall:
	• describe how it is developed and imposed, including the way in which the bodies involved cooperate (unless it is described in the SSP);
	• include objectives, indicators, targets;
	• reflect actions in EPAS that have been taken over;
	• identify risks at national level, in addition to those identified by EPAS;
	• ensure how NPAS is made public internally, to other States and to EASA.	

Status	Ongoing (2017)	
ICAO/ EASA References	• ICAO Annex 19 and GASP 2020-2024 Goal 3 ‘Implement effective State Safety Programmes’	

	• GASP SEI-11 (States) — Strategic collaboration with key aviation stakeholders to enhance safety in a coordinated manner • GASP SEI-17 (States) — Establishment of safety risk management at the national level (step 1) • GASP SEI-18 (States) — Establishment of safety risk management at the national level (step 2) • GASP SEI-19(States) — Acquisition of resources to increase the proactive use of risk modelling capabilities • GASP SEI-20 (States) — Strategic collaboration with key aviation stakeholders to support the proactive use of risk modelling capabilities • GASP SEI-21 (States) — Advancement of safety risk management at the national level
SPI	n/a
Measurement	n/a
Target	n/a

MEASURES	**Responsibility**
1. Development, at least annually, of a National Plan for Aviation Safety.	SSC/ CNSig
2. Creation of a collaboration platform at AACR level for the exchange of information between technical structures (for AIR, OPS, ADR, ATM/ANS, PEL, Safety)	SSC/DZ/DN/ DA/SATMANS

SYS.0014	**Improving data quality in event reporting**	**MST.0043**
Description	The aim of the action is to support Member States and EASA in taking decisions to improve aviation safety. The action is to promote by Member States the benefits of appropriate quality of occurrence report data. To this end, workshops or similar actions will be organised with industry and general aviation to improve the understanding of the information needed by the competent authorities for the analysis of reports.	
Status	**New action**	
ICAO/ EASA References	• Regulation (EU) No 376/2014 • ECCAIRS Coding Guidance (Chapter 2)	
SPI	n/a	
Measurement	n/a	
Target	n/a	
MEASURES		**Responsibility**
1. Promote guidance documents or/and benefits regarding the quality of data contained in event reports within the industry.		SIAA / RCAA SSC/DZ/DN/ DA/SATMANS

Action area: Human factors and human performance

SYS.0006	Foster a common understanding and oversight of human factors	MST.0037
Description	The action includes a number of activities which will be performed by EASA with the support of the Human Factor Collaborative Analysis Group (HF CAG), in terms of development of: • guidance materials and tools for the competency assessment of regulatory staff before and after training; • guidance materials to ensure the appropriate level of competence for human factors trainers; • promotion material to be provided as guidance materials to Member States and encourage implementation. These guidance materials and tools will be provided to the competent authorities of the Member States in order to organise the implementation of the legal framework on competence, to plan and conduct the training for the respective regulatory staff.	
Status	Ongoing (2020)	
ICAO/ EASA References	• ICAO Doc 10151 - Human Performance (HP) Manual for Regulators - First Edition (Advance unedited) • ICAO Safety Management Manual (ICAO 9859) • EASA BIS 'Human Factors competence for regulatory staff'	
SPI	RCAA staff involved in supervisory activity to be provided with appropriate human factor training.	
Measurement	Number of RCAA staff involved in the oversight activity who have completed appropriate human factor training.	
Target	All staff involved in supervisory activity to have at least one training course in human factors.	

MEASURES	Responsibility
1. Human factors training courses shall be included in the annual training plan for RCAA staff. 2. Implementation, after adoption by EASA, of guidance materials and competency assessment tools for staff involved in oversight activity.	DN/ DZ-SOA/ DZ-SCP/DA SATMANS DN/DZ-SOA/ DZ-SCP/DA/ SATMANS

SYS.0007	**Flight time specification diagrames**	**MST.0034**
Description	This action aims to ensures that the national competent authorities possess the required competence to assess and approve the individual operators' flight time specification diagrams, in particular the fatigue risk management. In this regard, the competent authority should focus on the verification of effective implementation of processes established to meet the requirements for operators responsibilities and to ensure an adequate fatigue risk management, which should be verified when assessing operators' management systems.	
Status	Ongoing (2020)	
ICAO/ EASA References	n/a	
SPI	n.a	
Measurement	n.a.	
Target	n.a.	

MEASURES	**Responsibility**
1. RCAA shall ensure that the inspectors involved in flight operations oversight have the required competencies to assess and approve individual flight time specification diagrams.	DZ-SOA/ DZ-SCP

Action area: Qualified and organised oversight

SYS.0012	Improving oversight capabilities of competent authorities	MST.0032
Description	The purpose of this action is to ensure a strong oversight system across the EU where each competent authority has the capacity to fulfil its oversight responsibilities, with particular emphasis on safety risk management, information exchange and cooperation with other competent authorities. The aim is to implement SMS in all organisations and ensure adequate personnel in all competent authorities to discharge their safety oversight responsibilities. The action is based on three components: a) Ensuring adequate personnel in the competent authorities; b) Uniform application of authority requirements (ARx), contained in the regulations specific to different domains; c) Increase capabilities of competent authorities to assess SMS in all organisations; particular attention will be paid to the safety culture, the governance structure of the organisation, the interaction between the risk identification process, its assessment and monitoring, the use of information resulting from non-compliances and safety information.	
Status	Ongoing (2020)	
ICAO/EASA References	• EASA Aviation Inspector Competencies Report[1]	
SPI	RCAA oversight programme.	
Measurement	Activities carried out/ planned activities.	
Target	Planned oversight programme at least 90% accomplished	

MEASURES	Responsibility
1. The RCAA shall ensure that it has adequate staff in order to fulfil its safety oversight obligations.	RCAA (by its own structures)
2. The authority responsibilities (Arx) are applied in a coherent and uniform manner in all RCAA specific areas of activity.	CMC/ DN/ DZ-SOA/ DZ-SCP/ DA/ SATMANS
3. Utilisation of SMS evaluation indicator in all domains subject to RCAA oversight, except for ATM/ANS	DN/ DZ-SOA/ DZ-SCP/ DA

COMPETENCE OF PERSONNEL

Action area: General – Language proficiency

CMP.0001	**LPR (language proficiency requirements) feedback**	**MST.0033**
Description	The decision to address language proficiency requirements (LPRs) for pilots and air traffic controllers was first taken at the 32nd Session of the ICAO Assembly in September 1998 as a direct response to several fatal accidents, in which the lack of proficiency in English was identified as a contributing factor. The aim was to improve the level of language proficiency in aviation worldwide and reduce the communication breakdowns caused by a lack of language skills. With a view to promoting best practices and harmonising language proficiency testing methods, one of the activities carried out by EASA is the analysis at national level of Member States of how language proficiency requirements are carried out.	
Status	Ongoing (2020)	
ICAO/ EASA References	n/a	
SPI	n/a	
Măsurare	n/a	
Țintă	n/a	

MEASURES	**Responsibility**
1. RCAA shall prepare updated information on how language proficiency requirements are implemented in Romania, including the degree to which training organisations provide training courses in English.	DZ-SCP

Action area: Flight crew

CMP.0002	**Establishing training objectives for the 'Meteorological Information' part of the PPL/LAPL syllabus.**	**MST.0036**
Description	Member States should develop proportionate learning objectives for the 'Meteorological Information' part of the PPL/LAPL syllabus. Such learning objectives should be of a basic, non-academic nature and address key learning objectives in relation to: • practical interpretation of ground-based weather radar, advantages and/or limitations; • practical interpretation of meteorological satellite imagery, advantages and/or limitations; • forecasts from numerical weather prediction models, advantages and/or limitations;	
Status	Ongoing (2021)	
ICAO/ EASA References	• EASA BIS 'Weather Information to Pilots (GA and Rotorcraft) • EASA 'Weather Information to Pilots' Strategy Paper	
SPI	n/a	
Measurement	n/a	
Target	n/a	

MEASURE	**Responsibility**
1. Modification by the ATO and DTO of the training for the PPL/ LAPL syllabus in order to be in line with the mentioned objectives.	ATO/ DTO/ DZ-SCP

Action area: Aircraft maintenance staff

CMP.0003	**Oversight capabilities – mitigation the risk of fraud cases in Part-147**	**MST.0035**
Description	This action aims to mitigate the risk of fraud during examinations, by introducing specific elements into surveillance and collecting information on such occurrences, as well as the exchange of information as part of collaborative surveillance.	
Status	Ongoing (2020)	
ICAO/ EASA References	• EVT.0002 - Evaluation report related to the EASA maintenance licensing system and maintenance training organisations (02/03/2018)	
SPI	n/a	
Measurement	n/a	
Target	n/a	

MEASURES	**Responsibility**
1. Focus on the risk of fraud in examinations, by adding specific items in the AMTO audit checklists.	DN
2. Collecting data on the actual cases of fraud and exchange and share information as part of collaborative surveillance.	DN/DZ-SCP/AMTO

FLIGHT OPERATIONS - AEROPLANES

This section includes actions aimed at reducing the key safety risks to commercial operations with CAT and NCC[1] aeroplanes.

The Key Risk Areas at European level are:

- Airborne collision (MAC)
- RE
- Runway collision (RI)

The Key Risk Areas at national level are:

- LOC-I
- RE
- GCOL
- ARC
- SCF-NP – Depressurisation
- SCF-PP
- F-NI

[1] According to Regulation (EU) No 965/2012 laying down technical requirements and administrative procedures related to air operations.

Action area: CAT and NCC operations

OPS.0001	**Mitigate the risk of ”abnormal flight attitude (LOC-I)” occurrences**	**n.a.**
Description	LOC-I occurrences are situations where the pilot loses total or momentarily control of an aircraft in flight, resulting in a significant deviation from the planned flight path.	
Status	Ongoing (2017)	
References	• GASP SEIs – Mitigate contributing factors to CFIT, LOC-I, MAC, RE and RI occurrences.	
SPI	LOC-I occurrences for CAT operations performed by Romanian air operators	
Measurement	The number of LOC-I occurrences following CAT operations performed by Romanian air operators shall be considered.	
Target	Decrease or maintain the annual number of LOC-I occurrences	

MEASURES[1]	**Responsibility**
1. Air operators involved and approved training organisations shall include in their SMS[2] the LOC-I occurrences and at least the following factors that may lead to LOC-I: • Activation of warning systems for exceeding the flight envelope (including *low speed* or *high speed*); • Icing in flight; • Adverse weather conditions/ severe turbulence, windshear; • Fire/smoke during flight; • Improper aircraft loading.	Air operators/ ATO
2. Groundhandling providers shall include in their SMS the LOC-I occurrences and at least the following factors that may lead to LOC-I: • Deicing; • Improper aircraft loading; • Aircraft ground strikes due to groundhandling activities	ROMATSA Groundhandling providers

[1] In addition to the listed measures, the measures described in the actions ‘Runway Safety — Mitigate the risk of wildlife strike events’ and ‘Runway Safety — Mitigate the FOD risk on movement areas’ are also considered, as these factors may lead to LOC-I.

[2] The factors included in their SMS will address at least the following:
- Assessment of the risk to own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the actions effectiveness.

3. As part of its oversight activities, RCAA shall monitor the implementation of actions 1 and 2 by organisations.	DZ-SOA/ DZ-SCP/ DA
4. Actions for promoting good practices, as appropriate	GL-CAT/ GL-AD

OPS.0002	**Mitigate the risk of ”Runway excursion (RE)” occurrences**	**MST.0028**
Description	„Runway excursion” (RE) is a veer off or overrun from the runway surface. (ICAO) A runway excursion occurs when an aircraft departs the runway in use during the take-off or landing run. The excursion may be intentional or unintentional. Types of Runway Excursion - A departing aircraft fails to become airborne or to successfully reject the take off before reaching the end of the designated runway; - A landing aircraft is unable to stop before the end of the designated runway is reached; - An aircraft taking off, rejecting take off or landing veers off of the designated runway. The following occurrences do not fall within ICAO ADREP definitions for runway excursion, however they are considered sufficiently close to be included in this category due to the similarity of the causative and contributory factors or risk mitigation methods: - Aircraft attempting to land and touches the ground before the runway at the perimeter of the aerodrome; - Use of other take-off/landing runways or taxiways than the designated ones. According to the Romanian civil aviation risk portfolio, runway excursion is the highest key risk for CAT operations with aeroplanes, representing the main cause for accidents and serious incidents.	
Status	Ongoing (2017)	
References	• GASP – Mitigate factors contributing to CFIT, LOC-I, MAC, RE and RI occurrences. • European Action Plan for the Prevention of Runway Excursions, Edition 1.0, January 2013 • Global Action Plan for the Prevention of Runway Excursions, Part 1 - Recommendations, EUROCONTROL/Flight Safety Foundation. • Regulation (EU) No 139/2014	
SPI	RE occurrences for CAT operations.	
Measurement	The number of RE occurrences involving a Romanian civil aeronautical agent shall be considered. Such occurrences at airports in Romania and in other countries shall be considered.	
Target	Trend of decreasing number of RE compared to the average over the last 5 years	

MEASURES	Responsibility
1. Air operators involved and ATOs shall include in their SMS[1] the RE occurrences and at least the following factors that may lead to RE: • Unstable approach; • Abnormal runway contact – ARC; • High-speed rejected take-off; • Adverse weather conditions/ turbulențe/ windshear/ crosswind.	Air operators/ ATO
2. The aerodrome operators shall include in their SMS the RE occurrences and at least the following factor that may lead to RE: • Runway condition and inappropriate related information.	Aerodrome operators
3. The aerodrome operators shall include in their SMS the situations when a RE has occurred and it is necessary to remove the aircraft and minimise the effects.	Aerodrome operators
4. As part of its oversight activities, RCAA shall monitor the implementation of actions 1, 2, 3 and 4 by organisations.	DZ-SOA/ DZ-SCP/ SA
5. Continue to promote the implementation of the European Action Plan for the Prevention of Runway Excursion, as well as of those developed by other organisations.	DA/ SATMANS/ DZ-SOA/ GL-AD/GL-CAT
6. Establishment of the National Committee for Runway Safety (CNSP)[2].	SA/ SSC

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

[2] The CNSP will be established by Decision of the Director General of the AACR and the composition and powers of the Committee will be in line with GM1 ADR.AR.C.010 of Regulation (EU) No 139/2014.

OPS.0003	**Mitigate the risk of ”Runway incursion (RI)” occurrences**	**MST.0028**
Description	’Runway incursion’ (RI) is any incident occurred on an aerodrome involving wrong positioning of an aircraft or person in a protected/restricted area designated for aircraft landing or takeoff. ’Wrong positioning’ may be the consequence of deviation of ATC clearance by the pilot or compliance with an incorrect ATC clearance.	
Status	Ongoing (2017)	
References	• GASP – Reduction of factors contributing to CFIT, LOC-I, MAC, RE and RI risks. • ICAO Doc 4444 – PANS-ATM	
SPI	RI occurrences for CAT operations	
Measurement	The number of RI involving Romanian civil aeronautical agents shall be monitored. RI occurred both on the Romanian and foreign aerodromes shall be considered.	
Target	Trend of decreasing number of RI compared to the average over the last 5 years	

Measures	**Responsibility**
1. Air operators involved and the approved training organisations shall include in their SMS[1] the RI occurrences and at least the following factors that may lead to RI: • Deviation of ATC clearance; • Perception and situational awareness;	Air operators/ ATO
2. The aerodrome operators shall include in their SMS the RI occurrences and at least the following factor that may lead to RI: • Ground vehicle operation in the movement area.	Aerodrome operators
3. Groundhandling providers shall include in their SMS the RI occurrences and at least the following factor that may lead to RI: • Ground vehicle operation in the movement area.	Groundhandling providers
4. As part of its oversight activity, RCAA shall monitor the implementation of measures 1, 2 and 3 by organisations.	DZ-SOA/ DZ-DCP/ DA

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

5. Promoting the application of the following documents: • Doc 9870: Manual of the Prevention of Runway incursion; • European Action Plan for the Prevention of Runway Incursion; • Related documents developed by other organisations.	DA/ SATMANS/ DZ-SOA/ GL-AD/GL-CAT
6. Establishment of the National Committee for Runway Safety (CNSP)[1].	DA/SSC

[1] The CNSP will be established by Decision of the Director General of the AACR and the composition and powers of the Committee will be in line with GM1 ADR.AR.C.010 of Regulation (EU) No 139/2014.

OPS.0004	**Increasing the importance of local runway safety teams (LRST)**	**n.a.**
Description	Local Runway Safety Teams (LRST) are a key element in the aerodrome runway safety programmes, ensuring focus on runway safety of all parties involved. The LRST shall be composed of at least all parties involved in take-off and landing operations, i.e.: aerodrome operator, aeronautical information provider, air navigation service provider, air operators operating at the aerodrome, associations of local pilots or traffic controllers, other relevant organisations operating in the manoeuvring area, etc.	
Status	Ongoing (2017)	
References	• GASP – Reduction of factors contributing to CFIT, LOC-I, MAC, RE and RI risks.	
SPI	Number of LRST meetings	
Measurement	Number of LRST meetings organised at the Romanian aerodromes.	
Target	At least 2 LRST annual meetings at each aerodrome	

MEASURES	**Responsibility**
1. Ellaboration of guidance materials on the LRST organisation and functioning	DA
2. Include the verification of LRST functioning in oversight audits	DA

OPS.0005	**Mitigate the risk of wildlife strike occurrences**	**n.a.**
Description	Wildlife strike occurrences (bird strike or non avian strike) are defined as the collision between an animal (in the case of birds it is called bird strike) and an aircraft in flight or in the take-off or landing phase. This type of occurrence is relatively common and poses a significant danger to flight safety. It can cause major structural damage, especially for small aircraft. These events may also lead to loss of traction, especially in jet-engined aircraft, following bird ingestion into the engine. Such situations have led to fatal accidents. Bird strikes can occur at any phase of the flight, but most likely occur in the take-off, initial climb, approach and landing phases due to the concentration of birds in flight at low levels. Also, as the activity of most birds takes place in the day, most such events occur during this period	
Status	Ongoing (2019)	
References	• ICAO Doc. 9137 – Aiport Services Manual, Part 3 – Wildlife Hazard Management	
SPI	Number of bird strikes and non avian strikes occurrences on the Romanian aerodromes.	
Measurement	The number of bird strike and non avian strike occurrences at Romanian airports shall be considered separately in relation to the total number of movements at airports.	
Target	Decreasing trend in the number of bird strike and non-avian strike occurrences, relative to the total number of movements at Romanian airports	
MEASURES		**Responsibility**
1. Inclusion of wildlife strike occurrences in aerodrome operators' SMS.		Aerodrome operators
2. Promotion of the measures contained in the Annual analyses of wildlife strike occurrences drawn up at RCAA level on the basis of OMTC No 1309/2014 and application by aerodrome operators.		DA/Aerodrome operators
3. Verification of the application of the measure referred to in point 2 as part of the oversight activity.		DA
4. Promotion of measures contained in guidance material prepared by specialised bodies, such as ICAO Doc 9137: *Airport Services Manual Part 3 - Wildlife Control and Reduction.*		DA

5. Update OMT No 1309/2014.	SSC
6. In order to provide real aeronautical information, aerodrome/heliport operators will develop and ensure the publication of bird concentrations maps in their vicinity, as required by PIAC-AIM — Aeronautical Information Management, Edition 1/2020, Annex 2, AD.2.24 and AD.3.23 respectively.	Aerodrome operators/ DA
7. Establishment of the National Committee for Runway Safety[1].	DA/ SSC

[1] The CNSP will be established by Decision of the Director General of the AACR and the composition and powers of the Committee will be in line with GM1 ADR.AR.C.010 of Regulation (EU) No 139/2014.

OPS.0006	**Reducing the risk of FOD on moving surfaces**	**n.a.**
Description	Foreign Object Debris (FOD) are objects found in inappropriate locations on the movement surfaces of an aerodrome and which, as a result of their presence in that location, may cause damage to equipment or injuries to persons. FOD include a wide range of materials such as disassembled parts, paving fragments, catering items, building materials, stones, sand, luggage, animal debris. The main areas considered for this action are: - Runway FOD (RWY FOD) – refers to different objects present on the runway that may affect high-speed aircraft (landing or take-off). RWY FOD represents the greatest safety hazard; - Taxiway/ apron FOD (TWY/APRON FOD) – these types of FOD pose a lower risk than RWY FOD. However, there were situations where they were moved on the runway, e.g. due to the air jet generated by aircraft; - Maintenance FOD (MTN FOD) – refers to various objects used in the maintenance activity, which may cause damage to the aircraft.	
Status	Ongoing (2019)	
References	• ICAO Annex 19, Edition 2	
SPI	FOD occurrences on the movement surfaces at the Romanian aerodromes	
Measurement	The number of FOD on movement areas occurred at Romanian aerodromes, per RWY FOD, TWY/APRON FOD and MTN FOD shall be considered.	
Target	Decreasing trend in the number of FOD occurrences compared to the average over the last 5 years	
MEASURES		**Responsibility**
1. Aerodrome operators shall include in their SMS the FOD occurrences on the movement surfaces and at least the following factors that may lead to FOD: • Management of construction works in the airport perimeter; • Efficiency of the FOD control programme.		Aerodrome operators
2. As part of its oversight activity, AACR shall monitor the implementation of action 1 by organisations.		DA
3. Promotion of FOD related documents issued by specialised bodies		DA/DN

4. Establishment of the National Committee for Runway Safety [1].	DA/ SSC

[1] The CNSP will be established by Decision of the Director General of the AACR and the composition and powers of the Committee will be in line with GM1 ADR.AR.C.010 of Regulation (EU) No 139/2014.

OPS.0007	**Mitigate the risk of ”Mid-air collision – (MAC)” occurrences**	**MST.0028**
Description	This type of occurrence refers to the potential collision between two aircraft in flight. Also included are direct precursors such as loss of separation, actual TCAS RA (Traffic Collision Avoidance System – Resolution advisories), airspace infringements alerts.	
Status	Ongoing (2017)	
References	• ICAO Annex 19 and GASP 2020-2024 Objective 3 ‘Effective implementation of national safety programmes’ • GASP SEIs – Reduction of factors contributing to CFIT, LOC-I, MAC, RE and RI risks.	
SPI	MAC occurrences in the Romanian airspace involving aircraft operating CAT and NCC flights	
Measurement	The number of MAC occurred in the Romanian airspace, involving aircraft operating CAT and NCC flights shall be considered.	
Target	Decreasing trend in the annual number of MAC occurrences	

MEASURES	**Responsibility**
1. The air operators and approved training organisations shall include in their SMS[1] the MAC occurrences and at least the following factors that may lead to MAC: • Loss of separation due to aircraft; • Airspace infringement; • Level bust; • Incorrect response to TCAS-RA (air operators only); • Lateral deviation from the approved route (Navigation error);	Air operators/ ATO
2. ANSP will include in their SMS the MAC occurrences and at least the following factors that may lead to MAC: • Loss of separation due to ATC; • Airspace infringement; • Level bust; • COM malfunction; • Actions following TCAS-RA reporting; • Loss of identification or surveillance equipment failure.	ROMATSA
3. As part of its oversight activity, RCAA shall monitor the implementation of measures 1 and 2 by organisations.	DZ-SOA/ DZ-SCP/ SATMANS

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

OPS.0016	**A better understanding of the management structure of air operators**	**MST.0019**
Description	The action is for the RCAA to correctly understand the management structures of airlines or groups of airlines applying the same SMS and belonging to the same company. The following issues need to be taken into account: - Extensive use of outsourcing; - Influence of financial shareholders; - Control of management staff not subject to approvals. The action consists of implementing the document drawn up by EASA for this purpose.	
Status	Ongoing (2022)	
References	• EASA Practical Guide: Management of hazards related to new business models of commercial air transport operators[1] • EASA Guidance for the oversight of group operations[2]	
SPI	n/a	
Measurement	n/a	
Target	n/a	

MEASURES	**Responsibility**
1. Implementation of the applicable measures in the documents developed by EASA.	DZ-SOA

[1] https://www.easa.europa.eu/en/document-library/general-publications/management-hazards-related-new-business-models-commercial-air

[2] https://www.easa.europa.eu/document-library/general-publications/guidance-oversight-group-operations

OPS.0008	Mitigate the risk of ”Loss of separation between civil and military aircraft” occurrences	MST.0024
Description	Member States must pay attention to the safety of civil aircraft and establish regulations applicable to state aircraft. At European level, there have been a number of reported occurrences of loss of separation between civil and military aircraft and an increase in uncooperative international military traffic. In view of this situation and the possible threat to civil aviation safety, the European Commission has mandated EASA to conduct a technical analysis of the reported events. The technical analysis led to the issuance of recommendations to Member States: - fully apply the ICAO Manual on Civil-Military Cooperation in Air Traffic Management (Doc 10088); - coordinate closely to develop, harmonise and publish operational requirements and instructions for State aircraft; - give due consideration to the safety of civil aircraft; - support the development and harmonisation of civil-military coordination procedures for ATM at EU level; - make primary surveillance radar data available in military ATC centres for civilian ATC units; EASA continues to monitor events reported by Member States to consider developing actions. Additionally, due to the situation in Ukraine, EASA has developed and published the safety risk portfolio ”*Review of Aviation SafetyIssues arising from the war in Ukraine*”. The Member States are invited to evaluate the relevance of safety risks described in the mentioned document and to include, as appropriate, those risks in their safety programmes/plans. Also, organisations are encouraged to evaluate the relevance of such risks to their activity and to include them in their own SMS.	
Status	Ongoing (2017)	
References	• Doc. 10088 ICAO – ”*Manual on Civil / Military Cooperation in Air Traffic Management*”. • EASA *Review of Aviation Safety Issues arising from the war in Ukraine*	

SPI	’Loss of separation between civil and military aircraft’ occurrences produced in the Romanian airspace
Measurement	Number of ’Loss of separation between civil and military aircraft’ occurrences produced in the Romanian airspace is measured.
Target	Decreasing trend in the annual number of ’Loss of separation between civil and military aircraft’ occurrences

MEASURES	**Responsibility**
1. Application of the provisions of ICAO Doc. 10088 – ”*Manual on Civil/Military Cooperation in Air Traffic Management”, as applicable.*	AAMN/ SATMANS/ ROMATSA
2. Continuing cooperation for the development, harmonisation and appropriate publication of requirements and operational instructions for state aircraft, thereby to ensure increased attention to civil air traffic	AAMN/ ROMATSA/ SATMANS
3. Facilitating access and making available to ATC civil units of primary surveillance radar data by ATC military units	AAMN/ ROMATSA/
4. Verification within organisation oversight on how the organisations have assessed the relevance of the safety risks described in the document *Review of Aviation Safety Issues arising from the war in Ukraine* on their activity and how they have included them in their own SMS.	DN/ DZ-SOA/ DZ-SCP/ SATMANS/ DA

OPS.0010	**Safety of groundhandling**	**n.a.**
Description	This action area refers to actions to reduce the risk of occurrence of events involving the collision of an aircraft with other aircraft, obstacle or vehicle while the aircraft is moving on the ground, either under its own power or being towed. Ground handling occurrences related to aircraft loading, fuelling, etc. and Ground collision (GCOL) are also included in this category.	
Status	Ongoing (2017)	
References	n/a	
SPI	Groundhandling safety occurrences involving a Romanian aeronautical agent	
Measurement	The number of occurrences affecting the " groundhandling safety occurrences" which involve Romanian aeronautical agents shall be considered in relation to the number of movements on Romanian airports. TWY Incursion events will be considered separately.	
Target	Decreasing trend in the number of "groundhandling safety occurrences" / 100,000 total movements compared to the average over the last 5 years	

MEASURES	**Responsibility**
1. Aerodrome operators and groundhandling providers shall include in their SMS[1] the conditions leading to groundhandling safety reduction and at least the following factors that may lead to them: • Non compliance with the Aerodrome Manual in respect of the apron management. • Poor serviceability due to adverse weather conditions. • Communication and language barriers.	Aerodrome operators/ Groundhandling providers
2. As part of its oversight activity, RCAA shall monitor the implementation of measures 1 and 2 by organisations.	DA
3. Establishment of the National Committee for Runway Safety [2].	DA/SSC

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

[2] The CNSP will be established by Decision of the Director General of the RCAA and the composition and powers of the Committee will be in line with GM1 ADR.AR.C.010 of Regulation (EU) No 139/2014.

OPS.0011	**Mitigate the risk of ”Dangerous ground proximity – Controlled flight into terrain (CFIT)” occurrences**	**n.a.**
Description	This type of event refers to the collision or quasi-collision of an aircraft with the ground, a water surface or obstacle, without any indication of loss of aircraft control.	
Status	Ongoing (2017)	
References	n/a	
SPI	CFIT occurrences produced in Romanian airspace	
Measurement	The number of CFIT occurrences in the Romanian airspace shall be considered.	
Target	Decreasing trend in the annual number of CFIT occurrences	

MEASURES	**Responsibility**
1. The air operators involved and the approved training organisations will include in their SMSO[1] CFIT occurrences and at least the following factors that may lead to CFIT: • Incorrect setting of altimeter; • GPWS warnings (air operators only); • Errors in the air navigation maps; • Approach below ILS slope (Deviation below glideslope); • Adverse weather conditions.	Air operators/ ATO
2. Aerodrome operators will include in their SMS the CFIT occurrences and at least the following factor that may lead to CFIT: • Lack of information or incorrect information on obstacles.	Aerodrome operators
3. As part of its oversight activity, RCAA shall monitor the implementation of measures 1, 2 and 3 by the organisations.	DZ-SOA/ DZ-SCP/ DA

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

OPS.0012	**Mitigate the risk of ”Fire, smoke and fumes” occurrences**	**n.a.**
Description	The uncontrolled fire on board an aircraft, in particular when in flight, constitutes one of the most serious safety hazards. Fires in the event of an aircraft crash shall also be included in this action area. In-flight fires may eventually lead to a loss of control of the aircraft, either due to structural or control systems failures or due to crew incapacitation. If the response to the emergency is inadequate, ground fires tend to rapidly expand and cause casualties. Also smoke and toxic fumes, whether associated with fire or not, can also incapacitatate passengers or crew, thus constituting a major hazard.	
Status	Ongoing (2017)	
References	n/a	
SPI	”Fire, smoke and fumes” occurrences involving a Romanian aeronautical agent.	
Measurement	The number of ”Fire, smoke and fumes” occurrences involving Romanian aeronautical agents shall be considered.	
Target	Decreasing trend in the number of ”Fire, smoke and fumes” occurrences.	
MEASURES		**Responsibility**
1. The air operators involved, the approved training organisations and CAMO organisations shall include in their SMS[1] the conditions for fire/ smoke/ fumes.		Air operators/ ATO/ CAMO
2. As part of its oversight activity, RCAA shall monitor the implementation of measure 1 by organisations.		DZ-SOA/ DZ-SCP/ DN
3. The implementation and follow-up of the safety bulletin recommendations issued by ICAO and EASA on the hazards of lithium batteries or other fire-related occurrences and their monitoring.		Air operators/ groundhandling service providers

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

OPS.0013	**Mitigate the risk of ”System/Component Failure or Malfunction – Non Powerplant (SCF-NP)” – Depressurisation occurrences**	**n.a.**
Description	Actions to mitigate the risk posed by failure/malfunction of systems or components - other than powerplant are considered.	
Status	Ongoing (2017)	
References	n/a	
SPI	Certain SCF-NP occurrences recorded by the Romanian air operators performing CAT operations.	
Measurement	The number of SCF-NP occurrences in relation to the number of movements in the national airspace recorded by Romanian air operators in the ‘Depressurisation’ category shall be considered. “Rejected take-off” occurences due to non-SCF-PP causes shall be considered.	
Target	Decreasing trend in the number of SCF-NP occurrences.	
MEASURES		**Responsibility**
1. Air operators involved and CAMO organisations shall include the SCF-NP – Depressurisation occurrences in their SMS[1].		Air operators/ CAMO
2. As part of its oversight activity, AACR shall monitor the implementation of measure 1 by organisations.		DZ-SOA/ DN

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

OPS.0014	**Failure of a system/component - Mitigate the risk of ”System/Component Failure or Malfunction – Powerplant (SCF-PP)” occurrences**	**n.a.**
Description	Actions to reduce the risk of failure/malfunction of powerplant systems or components are considered.	
Status	Ongoing (2017)	
References	n/a	
SPI	Certain SCF-PP occurrences recorded by the Romanian air operators	
Measurement	The number of SCF-PP occurrences in relation to the number of movements in the national airspace recorded by Romanian air operators in ‘engine failure’ category shall be considered.	
Target	Decreasing trend in the number of SCF-PP occurrences.	
MEASURES		**Responsibility**
1. The air operator involved, the approved training organisations and CAMO organisations shall include in their SMS[1] the SCF-PP – engine failure occurrences.		Air operators/ ATO/ CAMO
2. As part of its oversight activity, RCAA shall monitor the implementation of measure 1 by organisations.		DZ-SOA/ DZ-SCP/ DN

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

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ROTORCRAFT OPERATIONS

Includes actions aimed at mitigating the key safety risks to rotorcraft operations.

Key risk areas at European level are:

- CAT: MAC, obstacle collision, LOC-I
- SPO: LOC-I, obstacle collision
- NCO: LOC-I, obstacle collision, GCOL

Key risk areas at national level are:

- LOC-I (*Loss of control in flight*)
- LOC-G (*Loss of control on ground*)
- ARC (*Abnormal runway contact*)
- CFIT (*Controlled flight into terrain*)
- CTOL (*Collision with obstacle during take-off or landing*)
- LALT (*Low altitude operations*)
- SCF-PP (*System/ component failure - powerplant*)
- MAC (*Mid-air collision*) – Airspace infringement

OPS.0017	**Increasing the safety of rotorcraft operations**	**MST.0028**
Description	The purpose of the action is to reduce the number of rotorcraft accidents and incidents. Rotorcraft operations include: • Commercial operations (CAT), also including cargo flights to and from offshore oil and gas installations; • SPO (aerial work), such as advertising, aerial photography; • Non-commercial operations (NCO).	
Status	Ongoing (2017)	
References	n/a	
SPI	LOC-I, LOC-G, CFIT, ARC, AI, MAC, GCOL, obstacle collision occurrences in rotorcraft operations.	
Measurement	The number of LOC-I, LOC-G, CFIT, ARC, AI, MAC, GCOL, obstacle collision occurrences will be considered.	
Target	Decreasing trend in the annual number of such occurrences.	

MEASURES	**Responsibility**
1. The air operator involved, the approved training organisations and CAMO organisations will include in their SMS[1] the LOC-I, LOS-G, CFIT, ARC, AI, MAC, GCOL, obstacle collision occurrences and at least the following factors that may lead to such occurrences: • Poor take-off management; • Human performance and human factors; • Adverse weather conditions; • Crew experience/ training/ competence.	Air operators/ ATO/ CAMO
2. As part of its oversight activity, RCAA will monitor the implementation of measure 1 by organisations.	DZ-SOA/ DZ-SCP/DN

[1] The factors included in their SMS will address at least the following:
- Assessment of the risk to their own operations;
- The definition of the established safety performance level;
- The definition and implementation of the necessary actions;
- Monitoring the effectiveness of the actions.

OPS.0018	**Actions to promote safety of rotorcraft operations**	**MST.0015**
Description	AACR, in collaboration with rotorcraft operators, shall promote the safety of operations, using for this purpose all guidance materials provided by various working groups (ESPN-R – ex EHEST –, VAST – fost IHSF – NCA, Hell Offshore etc.) In the current year, the focus is on promoting the safety of hoist operations with helicopters.	
Status	Ongoing	
References	• Documentation issued by ESPN-R, VAST, NCA, Hell Offshore etc. • ESPN-R Hoist Operation Safety Promotion	
SPI	Actions to promote the safety of rotorcraft operations	
Measurement	The number of actions taken to promote the safety of rotorcraft operations shall be considered.	
Target	At least a steady number of actions to promote the safety of helicopter operations	

MEASURES	**Responsibility**
1. Promotion of guidance materials provided by various working groups (ESPN-R – ex EHEST – VAST – ex IHSF – NCA, Hell Ofshore etc.) by annual or bi-annual safety meetings with helicopter operators.	DZ-SOA/ GL-HEL
2. Organisation in 2024 of a meeting for promoting *ESPN-R Hoist Operation Safety Promotion*.	DZ-SOA/ GL-HEL

OPS.0026	**AOC approvals harmonisation in rotorcraft operations - procedures and documentation**	**MST.0041**
Description	The purpose of this action is to harmonise and, to the extent possible, to simplify the processing of AOC application in the area of commercial operations with helicopters, including the use of common application forms and compliance lists, so that: • establish a harmonised process, a standardised checklist/guide for application for and changes to a helicopter AOC (OPS SPECs) with possible extension to CAMO and ATO; • harmonise the process to add/remove a helicopter from the AOC; • harmonise/standardise Member States' practices and to develop a common application process (e.g., common application form for the removal of an item from the MEL); • develop guidance materials on the implementation of the EFB provisions with regard to the versatility of helicopter operations. EASA will facilitate and support the development of this task with the Helicopter Expert Group, a Subgroup of the Air OPS TEB.	
Status	Ongoing (2023)	
References	• BIS 'Administrative Burden for Small Helicopter Operators'	
SPI	n/a	
Measurement	n/a	
Target	n/a	
MEASURES		**Responsibility**
1. Use of EASA guidance materials to harmonise and, to the extent possible, simplify the processing applications in the domain of commercial operations with helicopters		DZ-SOA/ DZ-SCP/DN

GENERAL AVIATION

Includes actions aimed at mitigating the key safety risks to general aviation operations with aircraft other than helicopters (small aircraft, ULM, ULAC, sailplanes, parachutes).

Key risk areas at European level are:

- NCO: LOC-I, MAC, obstacle collision
- Sailplanes: LOC-I, obstacle collision
- Balloons: Obstacle collision, balloon landing, LOC-I

Key risk areas at national level are:

- NCO with aeroplanes: LOC-I, SCF-PP, SCF-NP, FUEL
- SPO with aeroplanes: LOC-I, SCF-NP, FUEL, ARC
- ULM: LOC-I, CFIT, SCF-PP, CTOL
- ULAC: LOC-I, CFIT, ARC, TURB
- Sailplanes: LOC-I, ARC, GTOW, SCF-NP, CTOL
- Parachutes: LOC-I, ARC

OPS.0020	**Increasing the safety of general aviation operations**	**MST.0028**
Description	The key risk areas highlighted at both European and national level shall be taken into account in this action: - NCO with aeroplanes: LOC-I, GCOL,SCF-PP, SCF-NP, FUEL, MAC, obstacle collision - SPO with aeroplanes: LOC-I, GCOL,SCF-NP, FUEL, ARC - ULM: LOC-I, CFIT, SCF-PP, CTOL - ULAC: LOC-I, CFIT, ARC, TURB - Sailplanes: LOC-I, ARC, GTOW, SCF-NP, obstacle collision - Parachutes: LOC-I, ARC - Balloons: obstacle collision, balloon landing, LOC-I Although they did not constitute serious incidents or accidents, ”*Airspace infringement*” occurrences are taken into accountas they are relatively frequent.	
Status	Ongoing (2017)	
References	European Action Plan for Airspace Infringement Risk Reduction (EAPAIRR)	
SPI	KRA occurrences at European level, as well as ”Airspace infringement” occurrences – per operation type - involving operators/pilots under the responsibility of the Romanian competent authorities, broken down by type of operation.	
Measurement	It measures the number of KRA occurences at European level and Airspace Infringement involving an operator/pilot under the responsability of the Romanian competent authorities.	
Target	Decreasing trend in the annual number of KRA occurrences at European level and ”Airspace infringement” occurrences.	

MEASURES	**Responsibility**
1. KRA occurrences at European level and ”Airspace infringement” occurred in general aviation shall be monitored.	DZ-SOA/ DZ-SCP/ AR/ AZLR
2. Actions to promote safety shall be adapted to be in line with the evolution of the targeted occurrences.	DZ-SOA/ DZ-SCP/ AR/ AZLR/ GL-LAGA

OPS.0021	**Improving the dissemination of safety information**	**MST.0025**
Description	The action consists in the dissemination of materials to promote the safety of general aviation operations by RCAA, Aeroclub of Romania and/or associations in the field (AZLR), by organising safety workshops/meetings or other safety promotion actions. These actions will include the promotion of the materials developed by the *Safety Promotion Network* (SPN) on the key risks to the safety of the general aviation operations.	
Status	Ongoing (2017)	
References	n.a.	
SPI	Actions to promote safety in collaboration with civil aeronautical agents performing general aviation operations.	
Measurement	Number of safety promoting actions taken.	
Target	Carrying out at least a constant number of actions to promote the safety of general aviation operations.	

MEASURES	**Responsibility**
1. Posting safety promotion materials on their own websites.	DZ-SOA/ DZ-SCP/ AR/ AZLR/ GL-LAGA
2. Promoting the safety materials through workshops, circulars to civil aeronautical agents.	DZ-SOA/ DZ-SCP/ AR/ AZLR/ GL-LAGA

OPS.0022	**Promotion of Just Culture in general aviation**	**MST.0027**
Description	The action consists in promoting Just Culture to general aviation operators in order to encourage occurrence reporting and promote positive safety behaviour.	
Status	Ongoing (2018)	
References	n.a.	
SPI	Number of reports made by civil aeronautical agents performing general aviation operations.	
Measurement	Number of reports made by general aviation operators.	
Target	Increasing number of reports made by civil aeronautical agents performing general aviation operations.	
MEASURES		**Responsibility**
1. Promote the provisions on Just Culture among civil aeronautical agents performing general aviation operations.		DZ-SOA/ DZ-SCP/DN/ GL-LAGA/ AR/ AZLR

OPS.0023	**Airspace complexity and traffic congestion in general aviation**	**MST.0038**
Description	The action is to ensure that "airspace complexity" and "traffic congestion" are taken into account as safety-relevant factors in changes to airspace affecting general aviation operations..	
Status	Ongoing (2022)	
References	• European Action Plan for Airspace Infringement Risk Reduction (EAPAIRR) • BIS Airborne collision risk	
SPI	n.a.	
Measurement	n.a.	
Target	n.a.	

MEASURE	**Responsibility**
1. The procedures applied to airspace changes affecting general aviation operations shall be adapted to take into account ‘airspace complexity’ and ‘traffic congestion’ as safety-relevant factors.	ROMATSA

UNMANNED AIRCRAFT SYSTEMS

OPS.0025	**Mitigate the risks associated with unmanned aircraft systems operation**	**n.a.**
Description	Unmanned aircraft means any aircraft operating or designed to operate autonomously or to be piloted remotely without a pilot on board [1]. Following the entry into force of Regulation (EU) No 1139/2018, in order to harmonise European requirements for the planning and conduct of flight activities with unmanned aircraft in European airspace, a few delegated or implementing regulations have been issued. As of 31 December 2020, for the planning and conduct of unmanned aircraft flight activities in EU airspace, including that of Romania, the operators of these aircraft are required to comply with the requirements of national regulation and Regulation (EU) 2019/947 .	
Status	Ongoing (2017)	
References	n/a	
SPI	Civil unmanned aircraft occurrences during operation in the national airspace	
Measurement	The number of occurrences resulting from the operation of unmanned civil aircraft in national airspace/number of unmanned aircraft recorded will be considered.	
Target	To reduce the number of occurrences resulting from the operation of unmanned civil aircraft in national airspace.	
MEASURES		**Responsibility**
1. To monitor such occurrences in Romania.		SSC
2. To promote materials regarding the safe unmanned aircraft operation.		DN/ DA

[1] Air Code of Romania

VOLUME III – SAFETY RISK PORTFOLIOS

General

National plan for aviation safety

2024 – 2026

The purpose of this volume is to identify the main hazards to civil aviation in Romania and to highlight the risk posed by them. The risks thus identified form the **Risk Portfolio**.

This approach is part of the Safety Risk Management process carried out at the level of the Romanian Civil Aeronautical Authority and consists of 5 distinct stages:

1. **Identification of safety issues** — is the main purpose of this document, embodied in the Risk Portfolio. This phase is based on both the statistical information contained in the national database on reported civil aviation occurrences and the experience gained by specialists from the RCAA and industry.
2. **Assessment of safety issues** –the risk identified and included in the Risk Portfolio are subject to a safety assessment, which is also initiated by this analysis, based on both statistical considerations and human factors.
3. **Establishing safety actions** – starting from the Risk Portfolio, but also taking into account other elements such as EPAS, actions to increase safety are set out in the National Plan for Aviation Safety, approved annually by the responsible manager, i.e. the Director General of RCAA.
4. **Implementation of safety actions** – this step consists of the implementation of the actions set out in the National Plan for Civil Aviation Safety, both by the authorities involved and by the industry..
5. **Safety Performance Monitoring** — RCAA produces annualy a Report on the compliance with the safety performance indicators set by the National Plan for Aviation Safety for each safety action. On the basis of this report is reviewed if the actions already established shall be maintained or new actions shall be initiated.

Considering the specificities of civil aviation operations, the analysis was carried out separately for the following types of operations, which are also reflected in the National Plan for Aviation Safety :

- Commercial air transport operations with aeroplanes (CAT, NCC);

- Rotorcraft operations (CAT, SPO, NCO);

- General aviation operations other than with helicopters (NCO,SPO, gliders, baloons).

For each type of operation, the following analysis steps have been taken:

1. **Safety performance** – the number of accidents, serious incidents and incidents occurred between 2014 – 2023 was considered. The source of information is the National Database on reported civil aviation occurrences;
2. **Causes** – the main causes of accidents and serious incidents occurred between 2014-2023 were highlighted. The source of information is the National Database on reported civil aviation occurrences, SIAA Investigation Reports, Internal Investigation Reports prepared by the aeronautical agents, analyses carried out by RCAA;
3. **Risk portofolio** – by aggregating the above mentioned information the Risk portfolio is established for the category of operations analysed, consisting of:

a. *Key risk areas* – categories of occurrences that directly result in the production of accidents / serious incidents, or their immediate precursors. Their prioritisation was made based on their contribution to the producing of accidents / serious incidents, as well as based on RCAA and industry specialists' experience. Additionally, accidents were classified in fatal, with injuries or without casualties.

b. *Safety issues* – the safety issues leading to Key Risk Areas have been considered. They are prioritised according to their contribution to the occurrence of accidents and serious incidents. This stage includes the views of specialists in the committees and working groups supporting the NPAS development.

4. **Conclusions**.

The following **definitions** and **abbreviations** are used in this document:

- The Civil Air Code;
- Regulation (EU) No 2018/1139 – *Basic Regulation*;
- Regulation (EU) No 376/2014 on reporting, analysis and follow-up of occurrences in civil aviation;
- Regulation (EU) No 965/2012 of the Commission laying down technical requirements and administrative procedures related to air operations.

Aeroplane operations

All commercial operations with aeroplanes (CAT) and non-commercial complex aeroplanes (NCC) are analysed in this chapter.

This type of air operations, in particular the air transport of passengers is the top priority in civil aviation safety management,.

Safety performance - CAT+NCC with aeroplanes

According to the National Database the following accidents (fatal, with injuries and without casualties) and serious incidents occurred during the last decade (2012-2022):

TOTAL number of accidents: 4, of which:

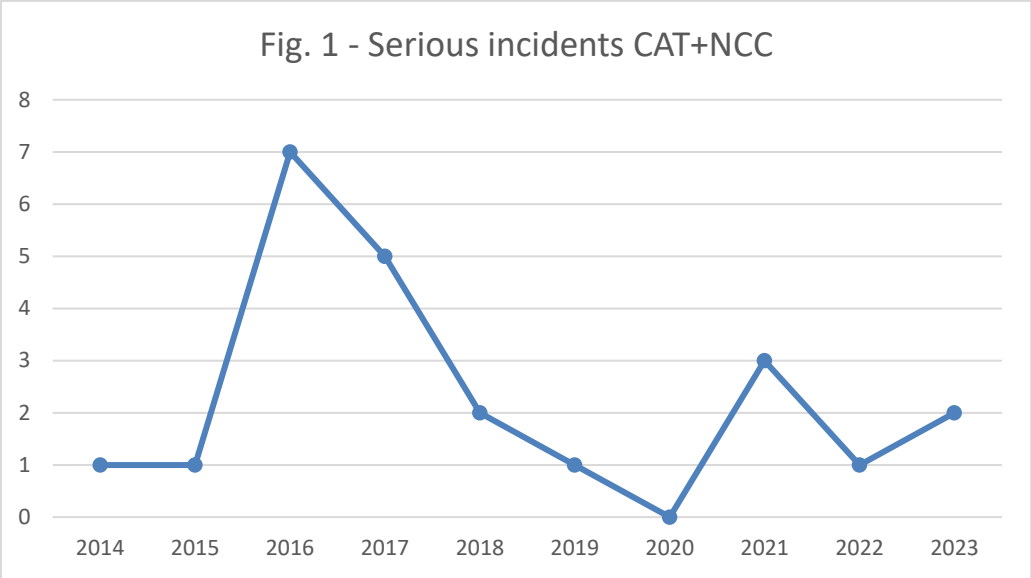
- fatal: 1
- non-fatal (injuries): 1
- non-fatal (without casualties): 2

TOTAL number of serious incidents: 24

The distribution of these events per year is shown in Table 4, as well as in Figure 1.

Table 4

CAT aeroplanes	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	1	0	0	0	0	0	0	0	1	0
fatal accidents	1	0	0	0	0	0	0	0	0	0
non-fatal accidents (injuries)	0	0	0	0	0	0	0	0	0	0
non-fatal accidents without casualties	0	0	0	0	0	0	0	0	1	0
serious incidents	0	1	7	5	2	1	0	3	1	2

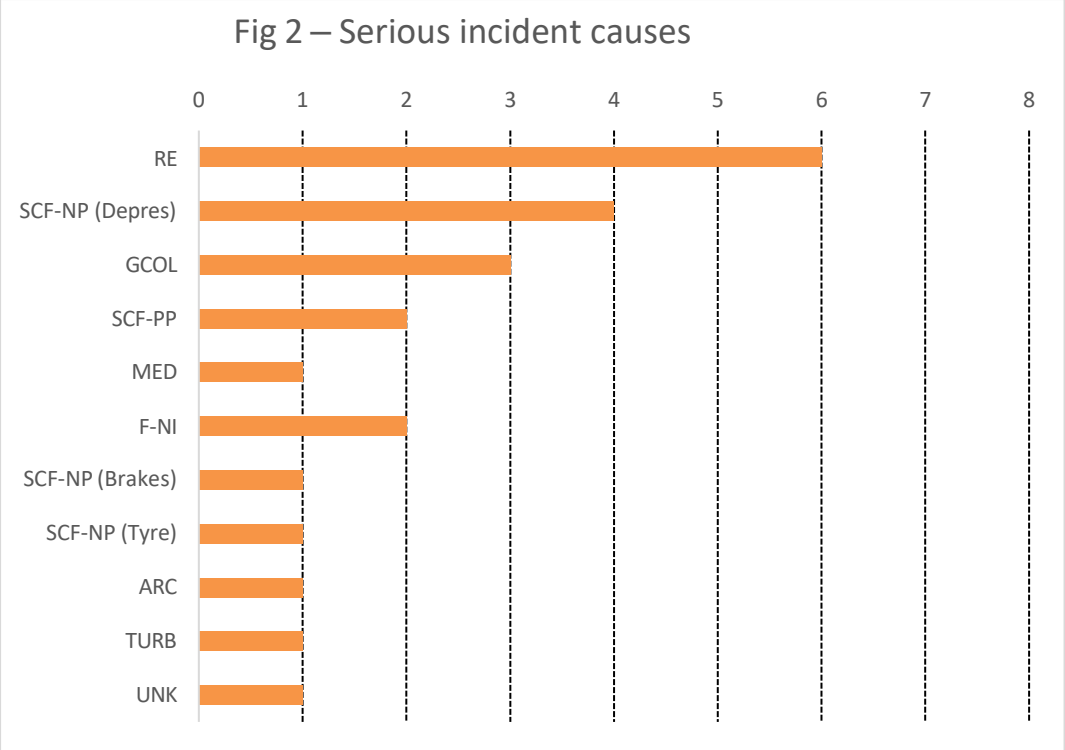


Causes of accidents / serious incidents - CAT aeroplanes

The analysis of the safety reports in the National Database as well as of the Investigation Reports prepared by SIAA so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in the table below and in Figure 2.

Table 5

Cause	Fatal accidents	Non-fatal accidents (injuries)	Non-fatal accidents (without casualties)	Serious incidents
LOC-I	1			0
ARC			1	1
RE				6
SCF-NP (depressurisation)				4
GCOL				3
SCF-PP				2
MED				2
F-NI				1
SCF-NP (tyre)				1
SCF-NP (brakes)				1
TURB				1
UNK				1



Compared to the previous edition of the Risk Portfolio, the following changes have occurred in category CAT operations:

- emergence of a new cause of accident without casualties: ARC
- emergence of a new cause of serious incident: TURB
- following update of the national database, F-NI (Fire-Non Impact) occurrences increase their priority in producing serious incidents.

There were no occurrences in NCC operations.

Risk portfolio for aeroplane operations

In view of the above, the key risk areas resulting for aeroplane operations are:

Table 6

Aeroplane operations CAT								
% fatal accidents	1	100%	0%	0%	0%	0%	0%	0%
% non-fatal accidents (injuries)	1	0%	0%	0%	0%	0%	0%	0%
% non-fatal accidents (without casualties)	2	0%	100%	0%	50%	0%	0%	0%
% serious incidents	24	0%	4%	26%	17%	13%	8%	8%
		Key Risk Areas						

Precursors[1]	LOC-I	ARC	RE	SCF-NP (Depres)	GCOL	SCF-PP	F-NI
Activation of flight envelope exceedance warning system	x						
Icing in flight	x	x					
Adverse weather conditions/ turbulence/ windshear	x						
Laser illumination	x						
Fire/ smoke in flight	x				x	x	x
Inappropriate aircraft loading	x						
Misinterpretation of markings			x				
Aircraft maintenance	x				x	x	x
Unstable approach		x					
ARC		x	x	x			x
High-speed rejected take-off	x	x	x				x
Runway condition and appropriate related information		x	x				

Conclusions:

- The main key risk area is LOC-I (*Loss of control in flight*), which caused the only fatal accident in the type of operations analysed;
- RE (*Runway excursion*) key risk area is the main cause of serious incidents;
- SCF-NP (*System/ component failure – non-powerplant*) key risk area refers to events like *Depressurisation*, responsible for 4 serious incidents; followed by GCOL (*Ground collision)* and SCF-PP *(System/component failure)* risk area.

*Key risk areas***:**

- LOC-I (*Loss of control in flight*)
- ARC – *Abnormal runway contact*
- RE (*Runway excursion*)
- SCF-NP (*System/ component failure – non-powerplant*) – Depressurisation
- GCOL (*Ground collision*)
- SCF-PP (*System/ component failure – powerplant*)
- F-NI (*Fire – non impact*)

[1] Will be completed with GL-CAT conclusions.

Rotorcraft operations

All comercial operations with rotorcraft, including offshore operations are analysed in this chapter.

Safety performance - HEL

According to the National Database the following accidents (fatal, non-fatal and without casualties) and serious incidents occurred during the last decade (2012-2022):

TOTAL number of accidents: 8, of which:

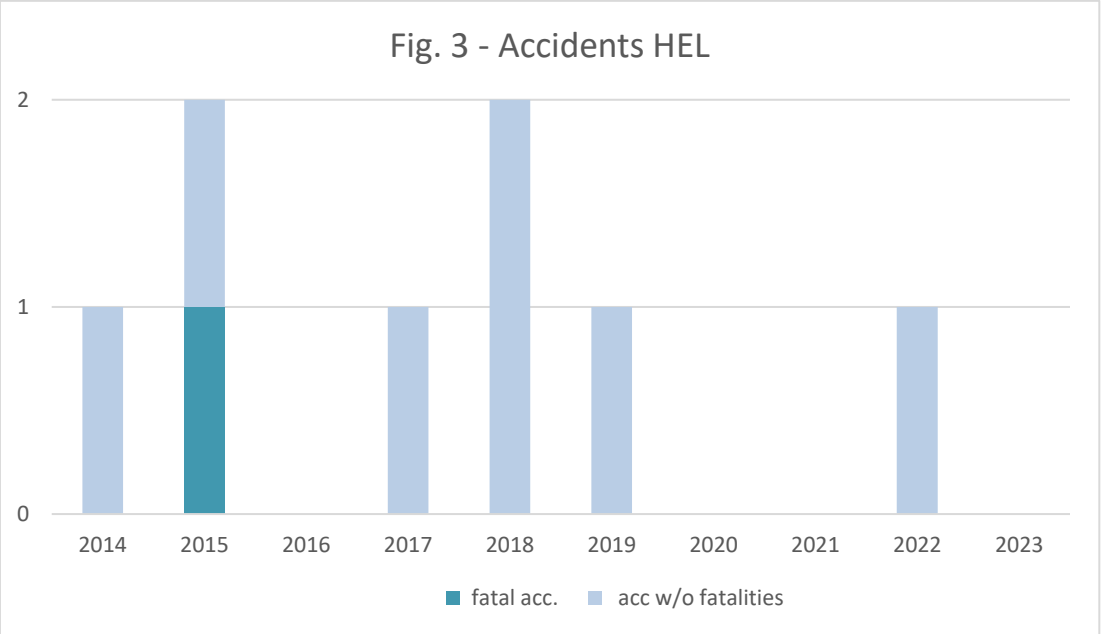
- fatal accidents: 1
- with injuries: 0
- without casualties: 7

TOTAL number of serious incidents: 1

The distribution of these events per year is shown in Table 7, as well as in Figure 3.

Table 7

HEL	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	1	2	0	1	2	1	0	0	1	0
fatal accidents	0	1 NCO	0	0	0	0	0	0	0	0
accidents with injuries	0	0	0	0	0	0	0	0	0	0
accidents without casualties	1 SPO	1 NCO	0	NCO	2 NCO/ SPO	1 NCO	0	0	1 NCO	0
serious incidents	0	0	0	0	1 SPO	0	0	0	0	0

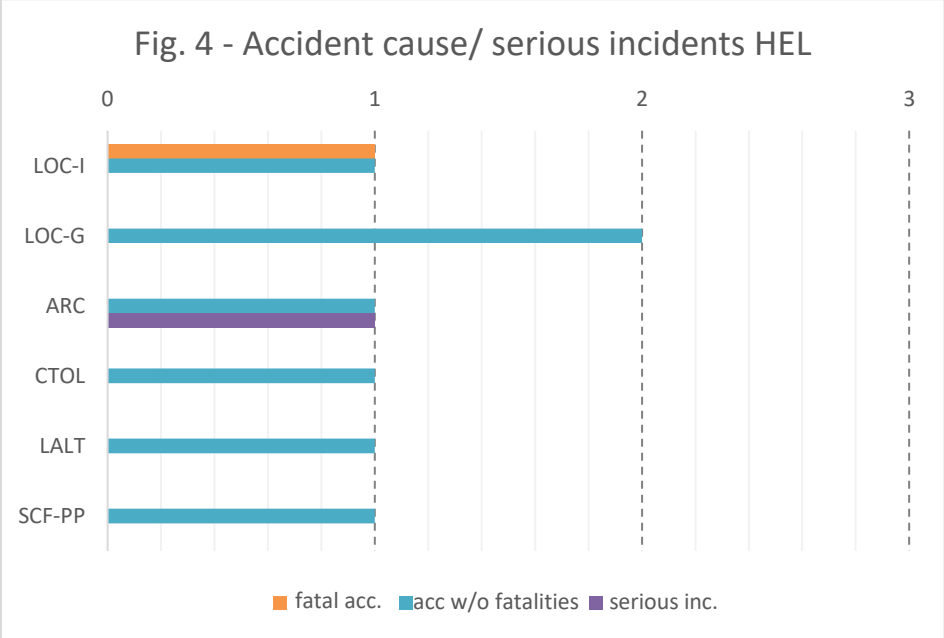


Causes of accidents / serious incidents - HEL

The analysis of the safety reports in the National Database as well as of the Investigation Reports prepared by AIAS so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in Table 8 and Figure 4 below.

Table 8

Cause	Fatal accidents	Accidents without casualties	Serious incidents
LOC-I	1	1	
LOC-G		2	
ARC		1	1
CTOL		1	
LALT		1	
SCF-PP		1	



As in the case of aeroplane operations, LOC-I occurrences remain the main cause of fatal accidents in helicopter operations as well.

Risk portfolio for HEL operations

In view of the above, the key risk areas resulting for rotorcraft operations are:

Table 9

Rotorcraft operations (HEL)							
% fatal accidents	1	100%	0%	0%	0%	0%	0%
% accidents without casualties	7	14%	28%	14%	14%	14%	14%
% serious incidents	1	0%	0%	100%	0%	0%	0%

Precursori [1]	Key risk areas					
	LOC-I	LOC-G	ARC	OTHER	SCF-PP	MAC (Air. Infr.)
Improper management of take-off	x					
Improper management of landing	x		x			
Fire/smoke	x					
Human performance	x		x			
Adverse weather conditions		x	x			
Crew experience/ training/ competence		x		x		

LOC-I occurrence is of a higher percentage, being the main cause of accidents.
MAC – *Airspace infringement* is considered a high-risk event as the number of such incidents is increased.

Conclusions:

- The main key risk area is LOC-I (*Loss of control in flight*), which was the cause of all fatal accidents, as well as of the accidents without casualties for this type of operations;
- Risk area LOC-G (*Loss of control on ground*) constitute another cause for the accidents without casualties, as well as ARC (*Abnormal runway contact*) which is also the cause for serious incidents.
- CTOL (*Collision with obstacle during take-off or landing*), LALT (*Low altitude operations*) SCF-PP (*System/ component failure – powerplant)* constitute other causes of accidents without casualties.

Key risk areas:

- Priority 1:
  - LOC-I (*Loss of control in flight*)
  - LOC-G (*Loss of control on ground*)
  - ARC (*Abnormal runway contact*)
  - CFIT (*Controlled flight into terrain*)
  - CTOL (*Collision with obstacle during take-off or landing*)
  - LALT (*Low altitude operations*)
  - SCF-PP (*System/ component failure powerplant*)
  - MAC (*Mid-air collision*) – Airspace infringement

[1] To be completed with the conclusions of the GL-HEL working group.

General aviation operations

This chapter analyses general aviation operations with aircraft other than helicopters - that have been described in the previous chapter. Consequently, operations with light aeroplanes (NCO and SPO operations), ultra-light motor-powered aircraft (ULM), ultra-light non-motorised aircraft (ULAC), gliders and parachutes are included. Operations with balloons have not generated accidents and serious incidents so far.

Safety performance of general aviation

According to the National Database the following accidents (fatal, with injuries and without casualties) and serious incidents occurred during the last decade (2012-2022):

- NCO with aeroplanes (Non-commercial operations with other than complex motor powered aircraft)
- SPO with aeroplanes
- ULM operations (Ultra-light powered aircraft)
- ULAC operations (Ultra-light non-powered aircraft)
- Operations with gliders
- Operations with parachutes

The distribution of these events per year is shown in Tables 10-19, as well as in Figures 7-10:

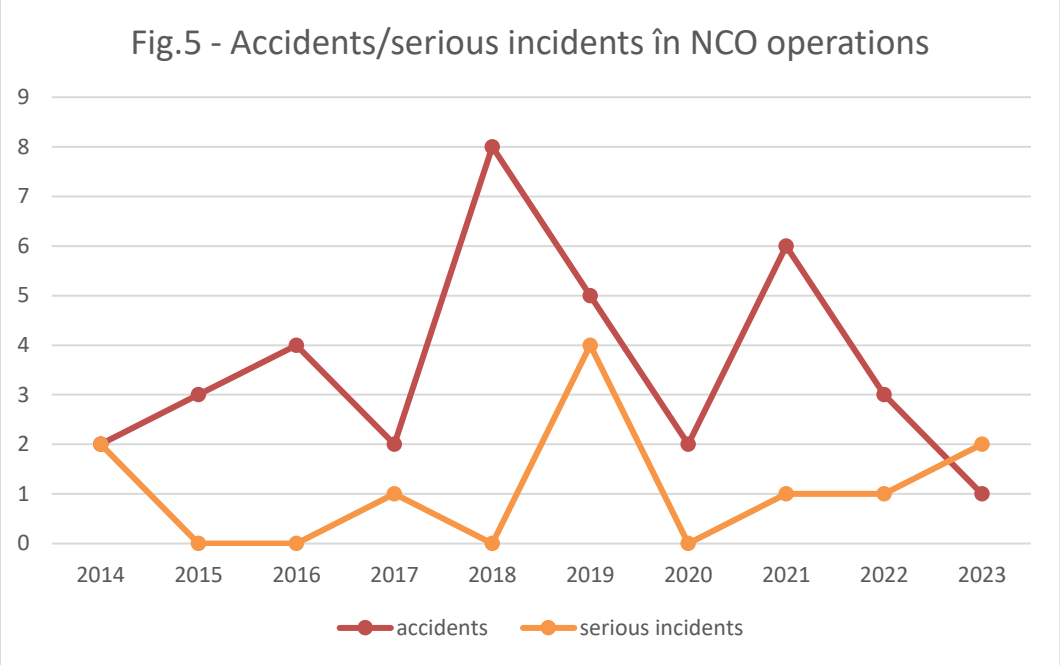
NCO with aeroplanes

TOTAL accidents: 36, of which:
- Fatal accidents 8
- Accidents (with injuries) 5
- Accidents without casualties 23

Serious incidents, TOTAL: 11

Table 10

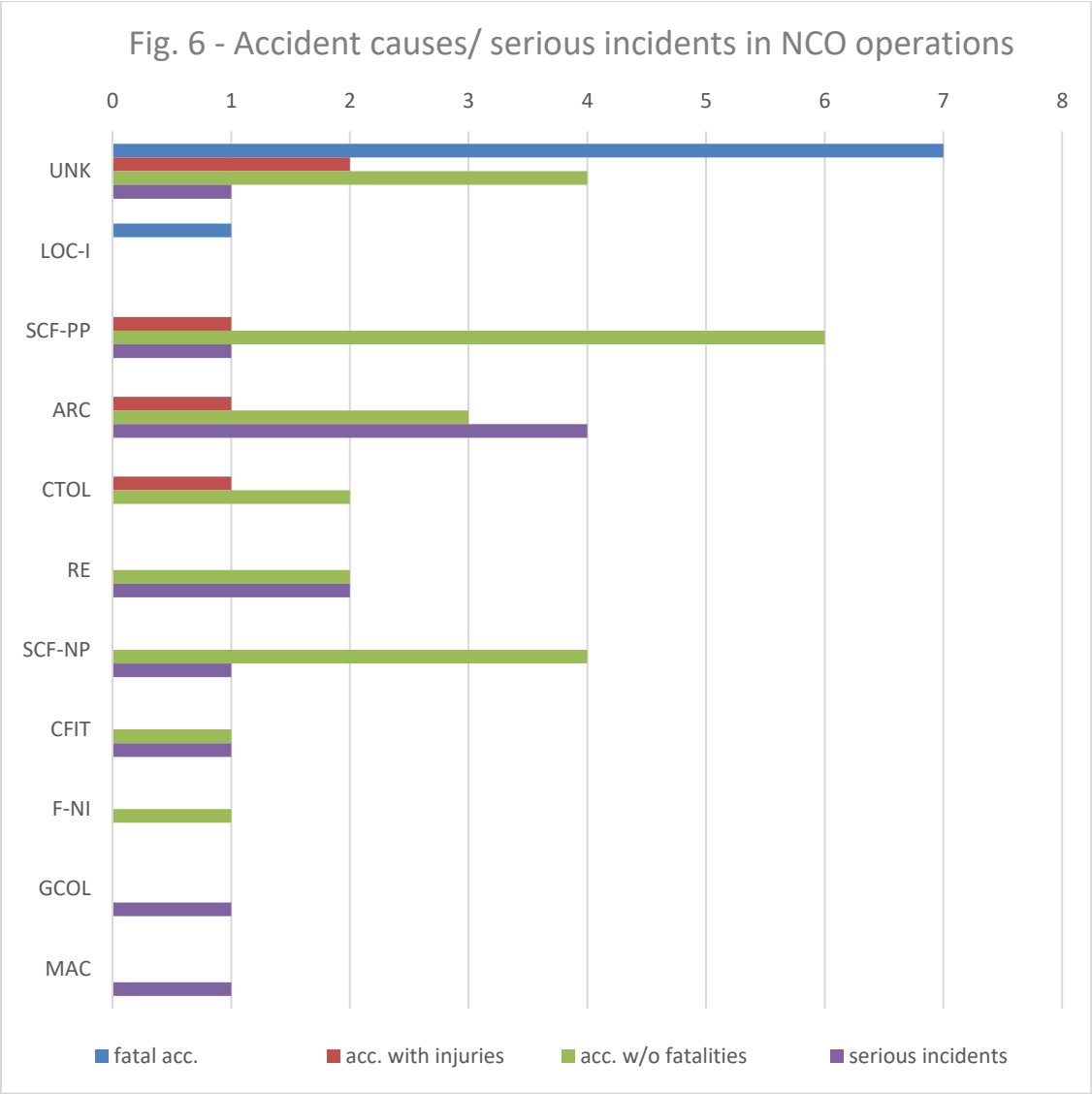
NCO aeroplanes	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	2	3	4	2	8	5	2	6	3	1
fatal accidents	1	0	1	0	1	2	0	1	2	0
accidents with injuries	0	0	1	1	2	1	0	0	0	0
accidents without casualties	1	3	2	1	5	2	2	5	1	1
serious incidents	2	0	0	1	0	4	0	1	1	2



Causes of accidents and serious incidents in NCO

Table 16

Cause NCO	Fatal accidents	Accidents with Injuries	Accidents without casualties	Serious incidents
UNK	7	2	4	
LOC-I	1			
SCF-PP		1	6	1
ARC		1	3	4
CTOL		1	2	
RE		1	2	2
SCF-NP			4	1
CFIT			1	1
F-NI			1	
G-COL				1
MAC				1



For NCO operations with aircraft, there is no change in risk areas from the previous year.

Conclusions:

For NCO with aeroplanes:

- For fatal accidents, the Key Risk Areas are UNK și LOC-I.
- For accidents with injuries, the Key Risk Areas are UNK, SCF-PP,ARC, CTOL,and RE. It is the same situation for the accidents without casualties.
- The Key Risk Areas for serious incidents are: SCF-PP, ARC and RE.

SPO with aeroplanes

TOTAL accidents: 5, of which:

- Fatal accidents: 1
- Accidents with injuries 2
- Accidents without casualties: 2

Serious incidents, TOTAL: 0

Table 11

SPO aeroplanes	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	0	2	0	0	1	0	0	0	1	1
fatal accidents	0	1	0	0	0	0	0	0	0	0
accidents with injuries	0	0	0	0	1	0	0	0	0	1
accidents without casualties	0	1	0	0	0	0	0	0	1	0
serious incidents	0	0	0	0	0	0	0	0	0	0

Causes of accidents and serious incidents in SPO

Table 17

Cause SPO	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
LOC-I	1		1	
UNK		1		
SCF-NP			2	
ARC		1		

Conclusions:

For SPO with aeroplanes:

- For fatal accidents, the key risk area is LOC-I.
- For accidents with injuries, the key risk areas are ARC and UNK.
- For accidents without casualties, the key risk areas is SCF-NP

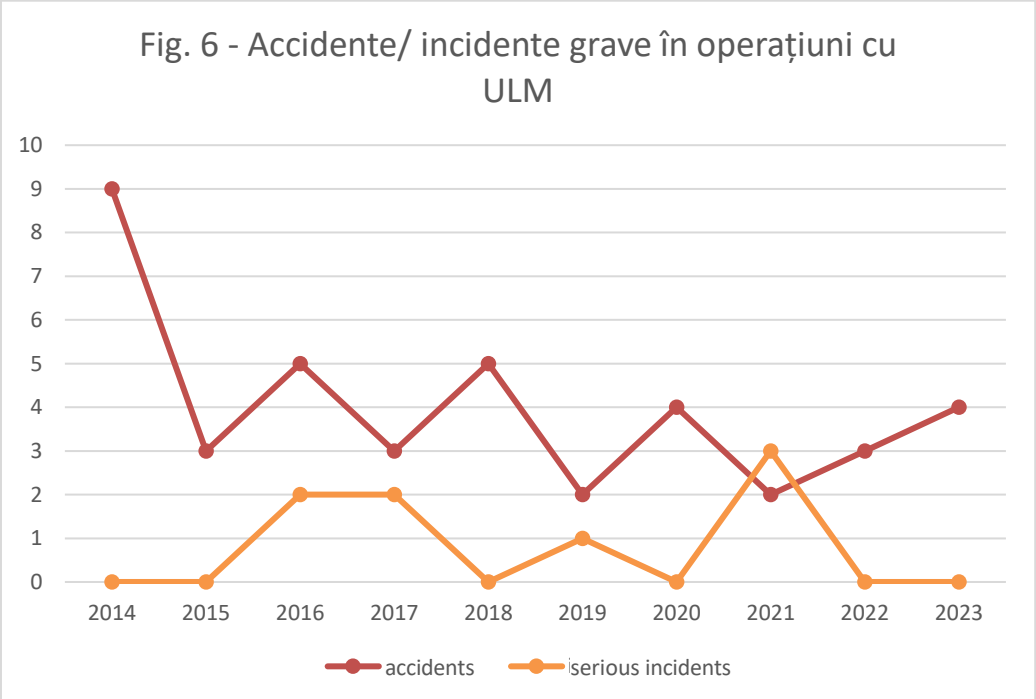
Operations with ULM

TOTAL accidents: 33, of which:
- Fatal accidents 8
- Accidents with injuries 9
- Accidents without casualties 15

Serious incidents, TOTAL: 8

Table 12

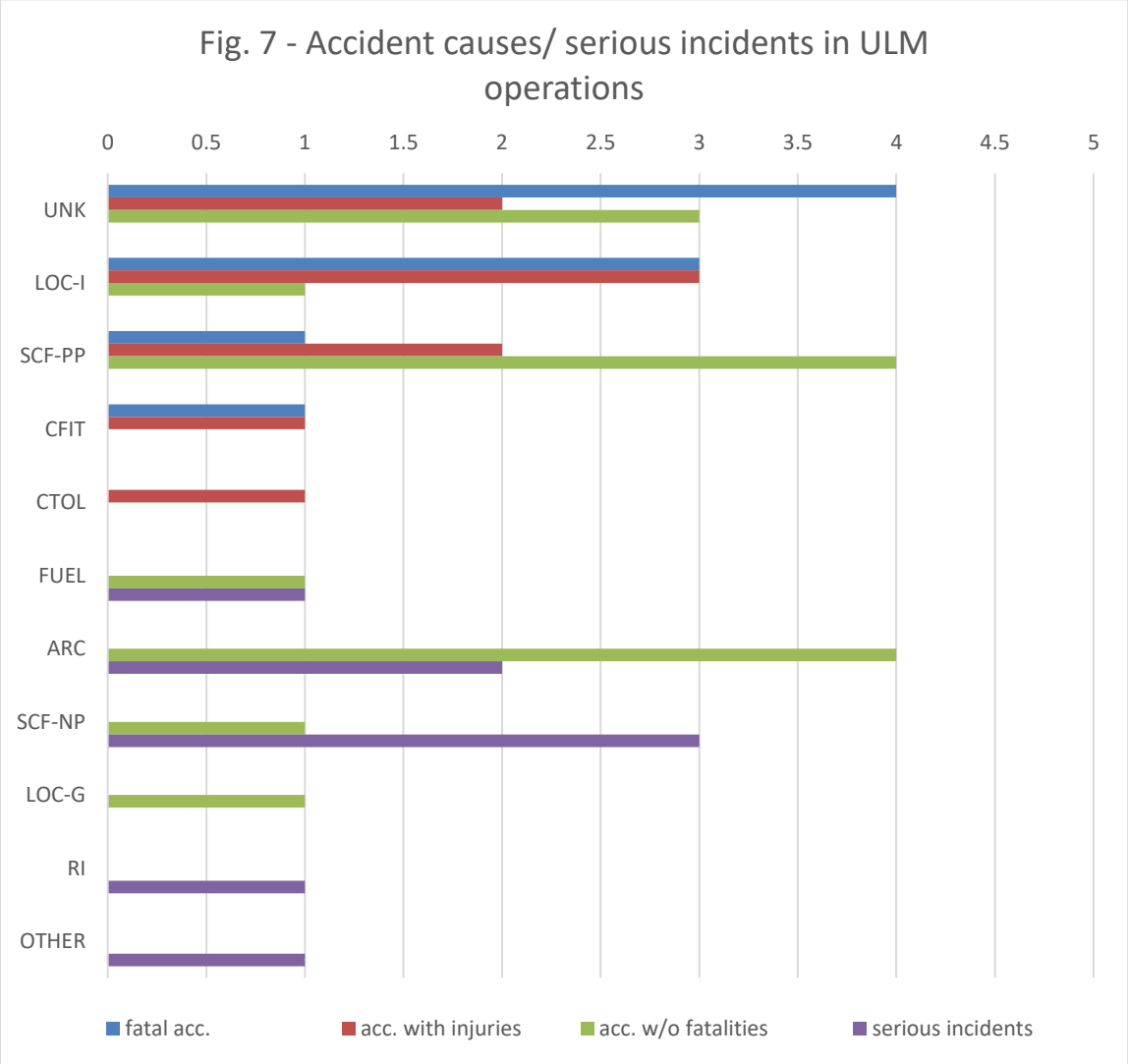
ULM	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	5	3	5	2	4	2	3	4	4	1
fatal accidents	1	0	2	2	0	0	1	0	2	1
accidents with injuries	1	2	1	0	1	1	1	1	1	0
accidents without casualties	3	1	2	0	3	1	1	3	1	0
serious incidents	0	0	2	2	0	1	0	3	0	0



Causes for accidents and serious incidents - ULM

Table 18

Cause ULM	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
UNK	4	2	3	
LOC-I	3	3	1	
CFIT	1	2	4	
SCF-PP	1	1		
CTOL		1		
FUEL			1	1
ARC			4	2
SCF-NP			1	3
LOC-G			1	
RI				1
OTHER				1



Conclusions:

For ULM operations:

- For fatal accidents, the UNK events outstrip LOC-I events, following SCF-PP, CFIT, CTOL.
- For accidents with injuries, the key risk areas are: UNK, LOC-I, SCF-PP, CFIT,CTOL, FUEL.
- For accidents without casualties, the key risk areas are: LOC-I, UNK, SCF-PP, FUEL and ARC.

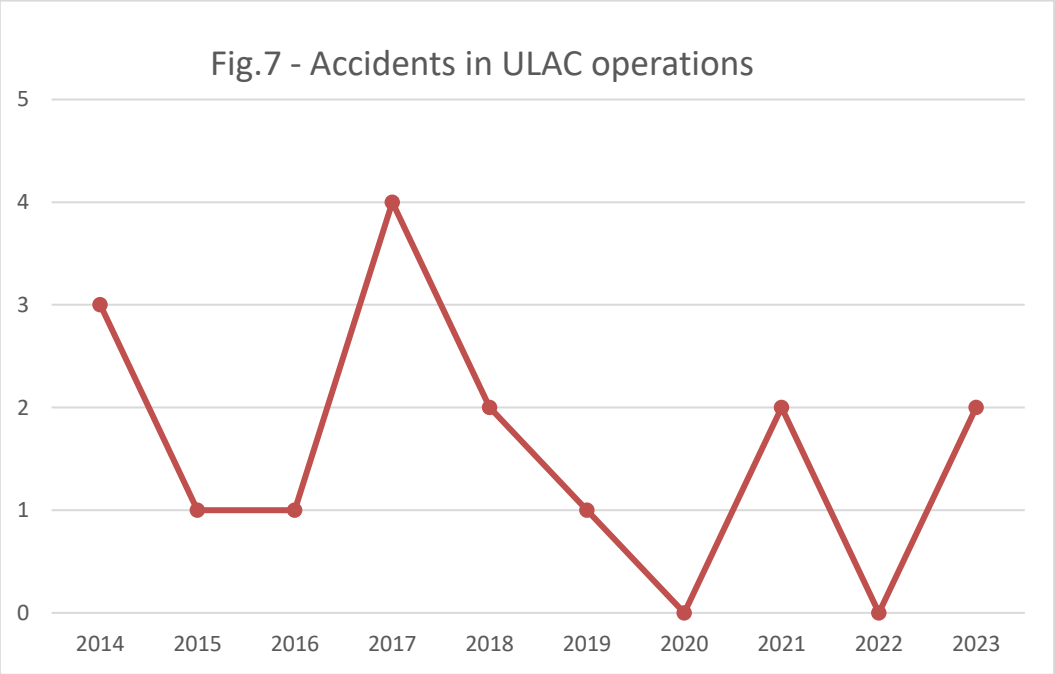
Operations with ULAC

TOTAL accidents: 16, of which:
- Fatal accidents 6
- Accidents with injuries 10
- Accidents without casualties 0

Serious incidents, TOTAL: 0

Table 13

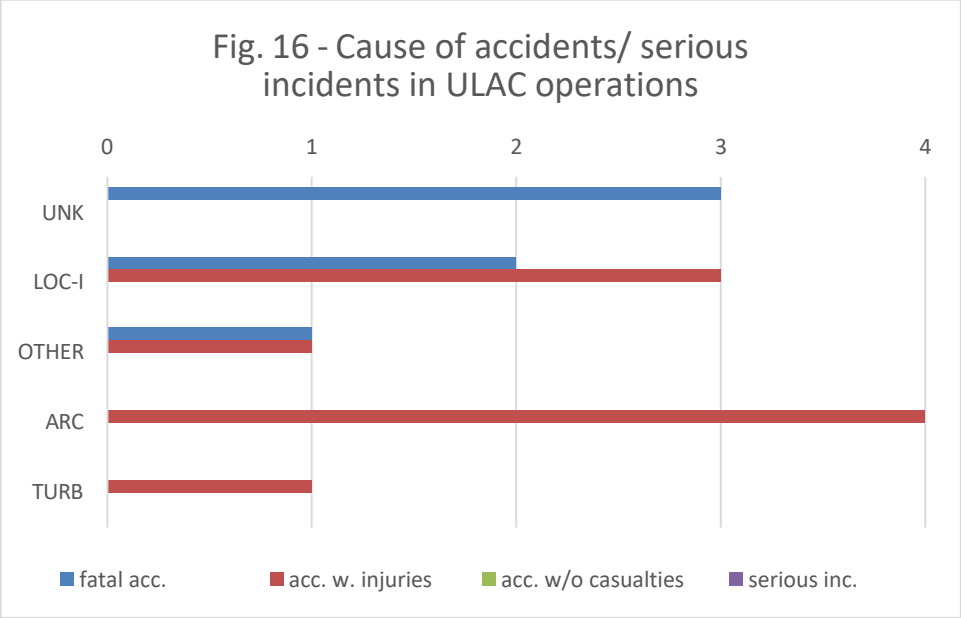
ULM	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	3	1	1	4	2	1	0	2	0	2
fatal accidents	1	1	0	2	1	1	0	0	0	0
accidents with injuries	2	0	1	2	1	0	0	2	0	2
accidents without casualties	0	0	0	0	0	0	0	0	0	0
serious incidents	0	0	0	0	0	0	0	0	0	0



Causes of accidents and serious accidents – ULAC

Table 19

Cause ULAC	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
UNK	3			
LOC-I	2	3		
OTHER	1	1		
ARC		5		
TURB		1		



Conclusions:

For ULAC operations:

- For fatal accidents, the key risk areas are: UNK, LOC-I and OTHER.
- For accidents with injuries, the key risk areas are: LOC-I, OTHER, CFIT, ARC and TURB.
- There were no accidents without casualties and serious incidents.

Operations with gliders

TOTAL accidents: 7, of which:
- Fatal accidents: 2
- Accidents with injuries: 3
- Accidents without casualties: 3

Serious incidents, TOTAL: 3

Table 14

Gliders	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	**1**	**1**	0	**1**	**1**	**1**	0	0	**1**	**1**
fatal accidents	0	**1**	0	0	0	0	0	0	0	**1**
accidents with injuries	0	0	0	0	0	**1**	0	0	**1**	0
accidents without casualties	**1**	0	0	**1**	**1**	0	0	0	0	0
serious incidents	0	0	0	0	**1**	0	0	**1**	**1**	0

Causes of accidents and serious incidents – gliders

Table 20

Cause Gliders	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
LOC-I	1	3		
ARC			2	
GTOW			1	
SCF-NP				2
CTOL				1

Conclusions:

For operations with gliders:

- For fatal accidents, as well as for accidents with injuries, the key risk area is LOC-I followed by UNK.
- For accidents without casualties, the key risk areas are ARC and GTOW.
- For serious incidents, the key risk areas are SCF-NP and CTOL.

Operations with parachutes

TOTAL accidents: 8, of which:

- Fatal accidents: 5
- Accidents with injuries 3
- Accidents without casualties 0

Serious incidents, TOTAL: 0

Table 15

Parachutes	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	**1**	**1**	**2**	**1**	0	0	**1**	0	**2**	0
fatal accidents	0	**1**	**2**	0	0	0	**1**	0	**1**	0
accidents with injuries	**1**	0	0	**1**	0	0	0	0	**1**	0
accidents without casualties	0	0	0	0	0	0	0	0	0	0
serious incidents	0	0	0	0	0	0	0	0	0	0

Causes of accidents and serious incidents - parachutes

Cause Parachutes	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
LOC-I	2	3		
UNK	2			
OTHER	1			
ARC		2		

For parachute operations, the risk areas have not changed from the previous year.

Conclusions:

For operations with parachutes:

- For fatal accidents, as well as for accidents with injuries, the main key risk area is LOC-I, followed by UNK, OTHER and ARC.
- There were no accidents without casualties or serious incidents.

General conclusions

Taking into account all the above mentioned facts, the key risk areas for general aviation operations other than with helicopters are:

Key risk areas:

- NCO operations with aeroplanes:
  - LOC-I (*Loss of control inflight*)
  - SCF-PP (*System/ component failure – powerplant)*
  - SCF-NP *(System/ component failure – non-powerplant*
- ARC *(Abnormal runway contact)*SPO operations with aeroplanes:
  - LOC-I (*Loss of control inflight*)
  - SCF-NP *(System/ component failure – non-powerplant)*
  - ARC (*Abnormal runway contact)*
- Operations with ULM:
  - LOC-I (*Loss of control inflight*)
  - CFIT (*Controlled flight into terrain)*
  - SCF-PP (*System/ component failure – powerplant)*
  - CTOL *(Collision with obstacle during takeoff and landing)*
  - FUEL *(Fuel)*
  - ARC (*Abnormal runway contact)*
- Operations with ULAC:
  - LOC-I (*Loss of control inflight*)
  - CFIT (*Controlled flight into terrain)*
  - ARC (*Abnormal runway contact)*
  - TURB (*Turbulence)*
- Operations with gliders:
  - LOC-I (*Loss of control inflight*)
  - ARC (*Abnormal runway contact)*
  - GTOW *(Glider towing)*
  - SCF-NP *(System/ component failure – non-powerplant)*
  - CTOL *(Collision with obstacle during takeoff and landing)*
- Operations with parachutes:
  - LOC-I (*Loss of control inflight*)
  - ARC (*Abnormal runway contact)*

Aerodrome and groundhandling Operations

This chapter analyzes the occurrences involving aerodrome and / or groundhandling operators, regardless of the type of operation. The analysis was carried out separately for airports and other aerodromes.

Safety performance ADR – airports

According to the National Database the following accidents (fatal, with injuries and without casualties) and serious incidents occurred at airports between 2012-2022:

TOTAL accidents: 0, of which:

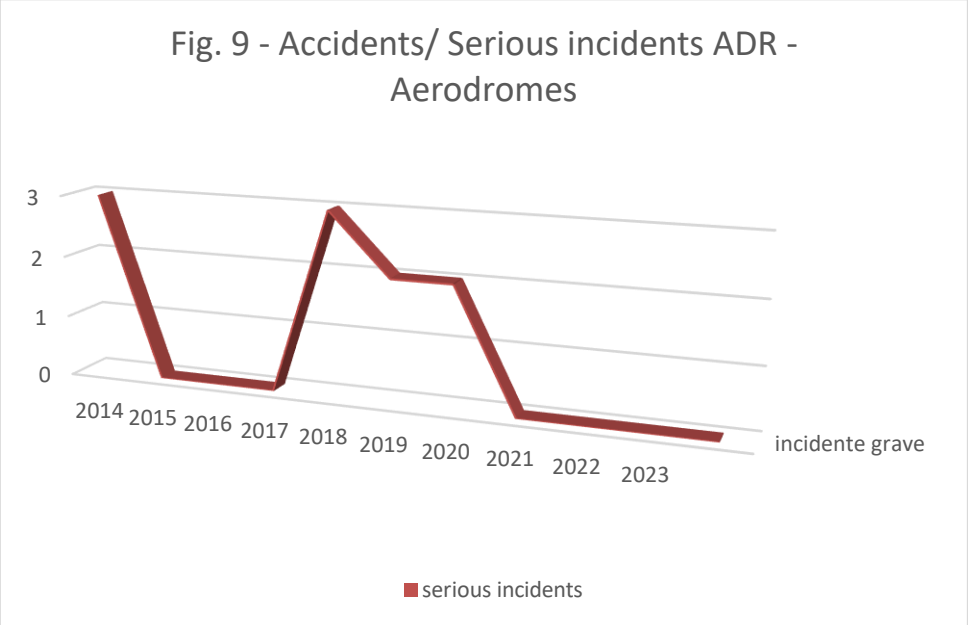
- Fatal accidents: 0
- Accidents with injuries: 0
- Accidents without casualties: 1

Serious incidents, TOTAL: 7

The distribution of these events per year is shown in Table 16, as well as in Figure 9:

Table 16

ADR	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	0	0	0	0	0	0	0	0	0	0
fatal accidents	0	0	0	0	0	0	0	0	0	0
accidents with injuries	0	0	0	0	0	0	0	0	0	0
accidents without casualties	0	0	0	0	0	0	0	0	0	0
serious incidents	0	0	3	2	2	0	0	0	0	0

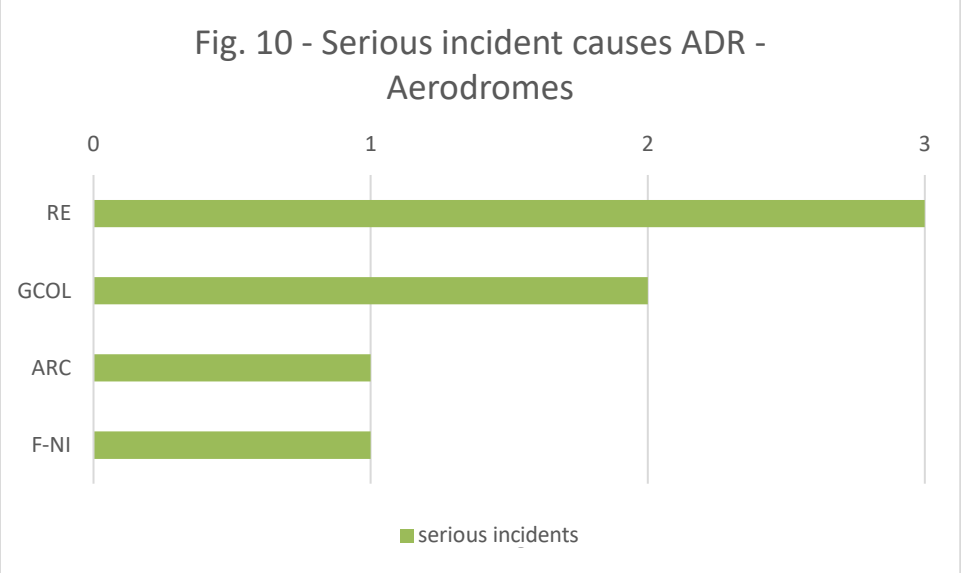


Causes of accidents / serious incidents ADR – Airports

The analysis of the existing safety reports in the National Database as well as of the Investigation Reports produced by AIAS so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in Table 17 and Figure 10 below.

Table 17

Cause	Accidents without casualties	Serious incidents
RE		5
GCOL		2
ARC		1
F-NI		1
SCF-NP (Tyre)		1



***Conclusions*:**

For serious incidents ADR – Airports:

- The main cause of serious incidents was RE, followed by GCOL.

Safety performance ADR – other aerodromes

The analysis of the National Database revealed the following accident type (fatal, with injuries and without casualties) and serious incidents occurred at aerodromes (except for airports) between 2014-2023:

TOTAL accidents: 3, of which:

- Fatal accidents: 0
- Accidents with injuries: 0
- Accidents without casualties: 3

Serious incidents, TOTAL: 0

The distribution of these events per year is shown in Table 18.

Table 18

ADR	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
accidents	0	0	0	**1**	**2**	0	0	0	0	0

Causes of accidents / serious incidents ADR – other aerodromes

The analysis of the safety reports in the National Database as well as of the Investigation Reports produced by SIAA so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in Table 19 below.

Table 19

Cause	Accidents with injuries	Accidents without casualties
RE	1	1
CTOL		1
ARC		1

Conclusions:
For accidents at ADR – other aerodromes:

- The main accident cause was RE, followed by GCOL.

General conclusions

Taking into consideration the above information, the key risk areas for ADR operations at airports and other aerodromes are:

- RE – Runway excursion
- GCOL – Ground collision