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APPROVED

Accountable Manager Director General of the AACR Nicolae STOICA (e-signed)

THE NATIONAL PLAN FOR AVIATION SAFETY 2023 – 2025

Courtesy translation

Issue 1/2023

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<u>Legal basis</u>

- 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.

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Endorsed at the CNSig 01 meeting of 26 April 2023

e-signed Roxana Găitan Secretary of CNSig

AACR internal endorsements

Air Operations Directorate	(e-signed) Silviu TRENTEA, Director
Personnel Certification Directorate	(e-signed) Desdemona CALIȚESCU, Director (Per Pro)
Airworthiness Directorate	(e-signed) Dragoș TRONARU, Director
Aeronautical Security Directorate	(e-signed) Mirela PRICOPI, Director (Per Pro)
ATM/ANS Department	(e-signed) Claudia VÎRLAN, Head of Department
Aerodrome Department	(e-signed) Daniel IVAN, Head of Department (Per Pro)
Safety Analysis Office	(e-signed) Daniel ACHIM, Head of Office
Compliance Monitoring	

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VOLUME I – GENERAL AND SAFETY PERFORMANCE

GENERAL

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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 2018/1139¹ (*New Basic Regulation*), and in Art. 26 of NPAS, PNSA development².

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.

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 2023–2025 (EPAS 2023–2025)

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.

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• Structure of EPAS 2023-2025

EPAS 2023-2025 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 Portfolios.

Volume I sets out a number of *Strategic Priorities*, 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
 - o Risk interdependence management
 - Improving safety by improving safety management
 - o Human factors management and human performance
 - Civil-military cooperation and coordination
 - o 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
 - o 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;

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- Digitalisation
- o 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 EMCO¹ 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 2023-2025².

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 VTOL³ aircraft ;
- New technologies and concepts;
- Environmental protection.

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

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

¹ Extended Minimum-Crew Operations

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

³ Vertical Take-off and Landing

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Actions/tasks that are the responsibility of Member States (MST), regardless of their type, are simply noted with MST.xxxx.

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	Risk interdependence management	MST.0040
and resilience		MST.0042
	Safety management	MST.0001
		MST.0002
		MST.0026
		MST.0028
	Human factors and human performance	MST.0037
		MST.0034
	Qualified and organised oversight	MST.0032
Competence of	General	MST.0033
personnel	Flight crew	MST.0036
	Aircraft maintenance personnel	MST.0035
Operational	CAT & NCC operations aproplance	MST.0024
operational	CAT & NCC operations - aeropianes	MST.0030
Salety		MST.0003
		MST.0019
	Potororaft operations	MST.0015
		MST.0031
		MST.0041
	Concrel aviation	MST.0025
		MST.0027
		MST.0038
	Aerodromes and groundhandling	MST.0029

Table 1 – Strategic priorities of EPAS 2023–2025 and related MST actions

Action	EPAS 2022-2026	EPAS 2023-2025
MST.0001	Х	X
MST.0002	Х	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	Х
MST.0026	Х	X
MST.0027	Х	Х
MST.0028	Х	X
MST.0029	Х	X
MST.0030	X	X
MST.0031	X	Х
MST.0032	X	Х
MST.0033	Х	Х
MST.0034	X	X
MST.0035	Х	X
MST.0036	X	X
MST.0037	Х	Х
MST.0038	X	X
MST.0039	Х	
MST.0040	X	X
MST.0041		X
MST.0042		X

Table 2 – Comparative EPAS actions

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National Plan for Aviation Safety 2023–2025 (PNSA 2023–2025)

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 pNSAC.

Similarly to EPAS 2023-2025, PNSA 2023-2025 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 2023-2025.

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 2023-2025 (see Table 1). The numbering mode has been simplified compared to that used in previous editions of the PNSAC, with the numbering of actions in accordance with the scheme below:



Actions were grouped as follows:

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

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- o Maintenance and continuing airworthiness management,
- o Air Traffic Management / Air Navigation Services,
- Aerodromes,
- o Groundhandling,
- Unmanned aircraft systems
- EMG New technologies and concepts.

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

The correlation between the actions contained in PNSA 2023-2025 and those of the Member States covered by EPAS 2023-2025 is presented in Table 3.

ltem 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	
	SYS.0005	Supporting safe return to normal operation	MST.0039	
		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	10 CMP.0001 Language proficiency requirements (LPR) feedback MST.0033			
	Flight crew			
11	CMP.0002	PPL/LAPL learning objectives in the Meteorological Information part of 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	
	FI	LIGHT 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	
20	OPS.0008	Mitigate the risk of "Loss of separation between civil and military aircraft" occurrences	MST.0024	

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21	OPS.0009	009 Implementing SESAR solutions to mitigate the risk of on-route MAC MST.0030 or TMA occurrences			
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			
27	OPS.0015	Member states shall maintain a permanent interaction with their national air operators regarding flight data monitoring (FDM)	MST.0003		
20	0000016	A better understanding of air operators' management structure	MST 0010		
20	OF3.0010	A beller understanding of all operators management structure	10151.0019		
	ROTORCRAFT OPERATIONS				
		Safety			
29	OPS.0017	Increase safety of rotorcraft operations	Increase safety of rotorcraft operations MST.0028		
30	OPS.0018	Promoting safety actions in rotorcraft operations MST.0015			
31	31 OPS.0019 Implementation of SESAR solutions for safe IFR operations MST.0031				
Efficiency / proportionality					
32	OPS.0026	AOC approvals harmonisations in rotorcraft operations –	MST.0041		
		procedures and documentation			
GENERAL AVIATION OPERATIONS					
		Safety			
33	OPS.0020	Increase safety of general aviation operations	MST.0028		
34	OPS.0021	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			
AERODROMES					
37	OPS.0024	Implementation of SESAR solutions for runway safety	MST.0029		
	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.

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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:



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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	
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	LAPL - Light Aircraft Pilot Licence		
LSPA	LSPA - Level of safety performance to be achieved		
MC	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	-	Satety management system	
SPI	-	Safety performance indicator	
SPO	-	Specialised operations	
TMA	-	I erminal maneuvering area	
USOAP	-	Universal Safety Oversight Audit Programme	

SAFETY PERFORMANCE

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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 2023-2025 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; the current edition of EPAS takes into account the decade 2010-2019, against which it compares data from 2021;
- 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. <u>Monitoring systems and processes</u>

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 Standardisation findings, as well as the State's reactivity in relation to findings closure, once the final report has been sent.

b. Member States' progress with SSP implementation

The objectives established in this respect is that states efficiently implement 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

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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 assessments 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).

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Safety performance at national level

ACCIDENTS

Description

The definition laid down in Regulation (EU) No 996/2010¹ shall apply.

Objective

Increasing the safety of civil air transport.

Performance indicator

- The number of fatal accidents in 2023;
- The number of accident fatalities in 2023;
- Total number of accidents in 2023.

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* 2021, published by EASA².
- For operations:
 - o 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 2023 shall not exceed the averages for the last 10 years (2013-2022), 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 2013-2022 average	Fatalities 2013-2022 average	Total accidents 2013-2022 average
	Aeroplar	nes	
CAT+NCC	0,1	0,2	0,3
SPO	0,1	0,1	0,5
NCO	0,8	1,9	4,0
	Helicopt	ers	
TOTAL	0,2	0,6	1,0
CAT	0,1	0,5	0,1
SPO	0,0	0,0	0,2
NCO	0,1	0,1	0,7
	Balloor	าร	
n/a	0,0	0,0	0,0
	Sailplan	les	
n/a	0,1	0,1	0,6
	ULM		
n/a	0,9	1,3	3,5
	AUN		
n/a	0,6	0,6	1,4
	Parachu	tes	
n/a	0,5	0,5	0,8
A	DR and Groun	dhandling	
n/a	0,0	0,0	0,4
	ATM / A	NS	
n/a	0,0	0,0	0,0

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• 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.

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SERIOUS INCIDENTS

Description

The definition laid down in Regulation (EU) No 996/2010¹ shall apply.

Obiectiv

Increasing the safety of civil air transport.

Performance indicator

• Number of serious incidents;

Measurement

- The total number of serious incidents, involving Romanian civil aeronautical agents, differentiated by type of operation according to the *Air Safety Report* 2021, published by EASA² shall be monitored;
- For operations;
 - o 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 (2013-2022), 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.

2023 – 2025

Domain	Serious incidents 2013-2022 average	
Aeropla	anes	
CAT+NCC	2,1	
SPO	0,1	
NCO	0,9	
Helico	oters	
TOTAL	0,1	
CAT	0,0	
SPO	0,1	
NCO	0,0	
Balloc	ons	
n/a	0,0	
Sailpla	anes	
n/a	0,3	
ULM		
n/a	0,8	
ULAC		
n/a	0,0	
Parachu	tes	
n/a	0,0	
ADR and Grou	undhandling	
n/a	0,7	
ATM / /	ANS	
n/a		

VOLUME II – SAFETY ACTIONS

SYSTEMIC SAFETY AND RESILIENCE DOMAIN

2023 – 2025

Action area: Risk interdependencies

SYS.0011	Safety and security reporting coordination mechanism	MST.0040	
Description	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	Status Ongoing (2022)		
ICAO/EASA	AO/EASA n/a		
references	references		
SPI	n/a		
Measurement	Measurement n/a		
Target	Target n/a		
MEASURES Responsibili			
1. Development of a functional coordination mechanism for safety and security occurrence reporting systems managed by the RCAABAS/DSA			

2023 – 2025

SYS.0013	Assessment of safety culture at CAT ¹ air operators	MST.0042	
Description	ription 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 2023 guidance materials and practical tools to measure the safety culture of air operators. In this 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. Based on the results from the first phase, the scope and details of the second phase will be determined by EPAS 2024- 2026.		
Status	New action		
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	leasurement n/a		
Target	n/a		
MEASURES Responsibility			
1. Experime of those t of safety	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.		
		L	

Action area: Safety management			
SYS.0001	Development and monitoring of the State Safety MST.0001 Programme (SSP)		
Description	In particular, the following aspects shall be pursued in the development and monitoring of the PNSAC:		
	 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 ensure risk- and performance-based 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	ICAO Annex 19 and GASP 2020-2024 Goal 3 'Implement effective State Safety Programmes'		
	 GASP SEI-13 — Start of SSP implementation at the national level 		
	 GASP SEI-14 — Strategic allocation of resources to start SSP implementation 		
	 GASP SEI-15 — Strategic collaboration with key aviation stakeholders to start SSP implementation 		
	 GASP SEI-16 — Strategic collaboration with key aviation stakeholders to complete SSP implementation 		

SPI	Degree of implementation of the actions contained in the document "Comparative analysis against ICAO requirements for the implementation of PNSA" (<i>GAP Analysis</i>), current edition.		
Measurement	The degree of implementation posted on the ICAO secure website shall be monitored.		
Target	100% implementation of actions contained in the GAP Analysis.		
MEASURES Responsibility			
1. GAP Analysis update and submittal for approval BAS (with the support of specialised compartments)			
2. Completion Implement	n of PQ SSP (Protocol Questions for SSP fation)	BAS (with the support of specialised compartments)	

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	• GASP SEI-5 (industry) Improvement of industry compliance with applicable SMS requirements		
SPI	Actions to promote SMS (SMS guidance materials, guidelines and safety bulletins specific to the risk areas identified at national level, etc.).		
Measurement	nt Number of SMS promotion actions.		
Target	Carrying out at least a constant number of actions to promote SMS.		
MEASURES Responsibil		onsibility	
 Posting on the RCAA website the safety promotion documents developed by the European Safety Promotion Network, SMICG and other ESSI (ECAST, EHEST and EGAST)² and EASA working groups. 			
2. Promotion of the documents referred to in item 1 through DN, meetings with civil aeronautical agents, workshops, Circulars, etc		DN/ D SA/ S BAS	OA/ DCP/ ATMANS/

¹ Safety Management International Collaboration Group

² The European Strategic Safety Initiative (<u>European Commercial Aviation Safety Team</u>, <u>European Helicopter Safety Team</u> și <u>European General Aviation Safety Team</u>)

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.		
	At the date of the preparation of this document, the assessment tool is undergoing revision, an initial version of it including CAMO and Part-145 organisations. A new version will also include Part 21 organisations as well.		
	The tool is used for the assessment of SMS organisations: - CAT and NCC operators - CAMO - ATO - AeMC - Aerodromes - Part 145 maintenance - Design - Production	of the following	
Status	Ongoing (2018)		
ICAO/ EASA References	 EASA 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 AACR using the assessment tool developed by EASA in the applicable areas.		
Measurement	Of all 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	'get 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	
1. Update, a develope	 Update, as the case may be, of the SMS assessment tool developed by EASA. 		
2. Use of the SMS evaluation tool by the RCAA when DN/DOA/ evaluating the SMS of all civil aviation organisations for DCP/SA			

which the implementation of an SMS is mandatory in the	
applicable areas.	

2023 – 2025

SYS.0004	Development and monitoring of the National MST.0028 Plan for Aviation Safety (PNSA)		
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, and RI. 		
	- For helicopter operations:		
	 CAT: MAC, obstacle collision, LOC-I 		
	 SPO: LOC-I, obstacle collision, other injuries 		
	 NCO: LOC-I, obstacle collision, GCOL 		
	- For general aviation operations:		
	 NCO: LOC-I, MAC, obstacle collision 		
	 Sailplanes: LOC-I, obstacle collision 		
	\circ Balloons: obstacle collision, balloon landing, LOC-I		
	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	Measurement n/a		
Target	Farget n/a		
MEASURES Responsibility			
1. Development, at least annually, of a National Plan for BAS/ CNSig Aviation Safety.			
2023 – 2025

Action area: Human factors and human performance

SYS.0006	Foster a common understanding and oversi of human factors	ght	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 assessment of regulatory staff before an 	the d after	competency training;		
	 guidance materials to ensure the appropriate level of competence for human factors trainers; 				
	 promotion material to be provided as gu Member States and encourage impleme 	idance ntation	materials to		
	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 9	9859)			
	EASA BIS 'Human Factors competence for	r regula	atory staff'		
SPI	RCAA staff involved in supervisory activity to appropriate human factor training.	be p	rovided with		
Measurement	Number of RCAA staff involved in the oversigh completed appropriate human factor training.	it activi	ty who have		
Target	All regulatory staff to complete at least one hu course.	man fa	ctor training		
	MEASURES Responsibility				
1. Human factors training courses shall be included in the DN/ DOA/ DCP/ annual training plan for RCAA staff. SA/ SATMANS			OA/ DCP/ ATMANS		
 Implementation, after adoption by EASA, of guidance materials and competency assessment tools for staff involved in oversight activity. 			OOA/ DCP/ ATMANS		
		•			

SYS.0007	Flight time specification diagrames MST.003				
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	• GASP SEI-5 – Qualified technical personnel to support effective safety oversight				
SPI	n.a				
Measurement	n.a.				
Target	n.a.				
	MEASURES Responsibility				
1. RCAA shall ensure that the inspectors involved in flight DOA / DCP operations oversight have the required competencies to assess and approve individual flight time specification diagrams.					

2023 – 2025

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 compet 	ent authorities;			
	 b) Uniform application of authority requir contained in the regulations specific to differ 	rements (ARx), rent 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	 ICAO Annex 19 and GASP 2020-2022 Goal 2 'Strengthen States' safety oversight capabilities' 				
	 GASP SEI-4 & GASP SEI-10 — Strategic allocation of resources to enable effective safety oversight 				
	 GASP SEI-5 — Qualified technical personnel teleficitive safety oversight 	to support			
	 GASP SEI-6 — Strategic collaboration with ke stakeholders to enhance safety in a coordinate 	y aviation ed manner			
	EASA Aviation Inspector Competencies Report	rt ¹			
SPI	RCAA oversight programme.				
Measurement	Activities carried out/ planned activities.				
larget	Target To accomplish 90% of the planned oversight programme				
	MEASURES	Responsibility			
1. The RCA to fulfil its	 The RCAA shall ensure that it has adequate staff in order to fulfil its safety oversight obligations. DN/ DOA/ DCP/ SA/ SATMANS 				

2. The authority responsibilities (Arx) are applied in a coherent and uniform manner in all RCAA specific areas of activity.	CMC/ DN/ DOA/ DCP/ SA/ SATMANS
3. Utilisation of SMS evaluation indicator in all domains subject to RCAA oversight, except for ATM/ANS	DN/ DOA/ DCP/ SA

¹ https://www.easa.europa.eu/en/document-library/general-publications/easa-aviation-inspectorcompetencies-report

COMPETENCE OF PERSONNEL

2023 – 2025

Action area: General – Language proficiency

CMP.0001	LPR (language proficiency requirements) feed	back	MST.0033	
Description	n 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	ICAO/ n/a EASA References			
SPI	n/a			
Măsurare	n/a			
Ţintă	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.				

2023 – 2025

Action area: Flight crew

CMP.0002	Development of proportionate learning objectives for the 'Meteorological Informatic part of the PPL/LAPL syllabus.	on' 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-base advantages and/or limitations; 	ed weather radar,		
	 practical interpretation of meteorologica advantages and/or limitations; 	I satellite imagery,		
	 forecasts from numerical weather p advantages and/or limitations; 	prediction models,		
Status	tatus 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/ ATO/ DTO/ DCP LAPL syllabus in order to be in line with the mentioned objectives.				
· · · · ·				

2023 – 2025

Action area: Aircraft maintenance staff

CMP.0003 Oversight capabilities – mitigation the risk of fraud cases in Part-147		of	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.					
2. Collecting data on the actual cases of fraud and exchange and share information as part of collaborative surveillance. DN/DCP/AMTO					

FLIGHT OPERATIONS -AEROPLANES

This section includes actions aimed at reducing the key safety risks to commercial operations with CAT and NCC¹ 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.

2023 – 2025

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 lo momentarily control of an aircraft in flight, resulting in deviation from the planned flight path.			oses total or a significant
Status	Ongoing (2017)		
References	 GASP SEIs – Mitigate contributing factors to RE and RI occurrences. 	CFIT, I	_OC-I, MAC,
SPI	LOC-I occurrences for CAT operations performed operators	ed by F	Romanian air
Measurement	The number of LOC-I occurrences following performed by Romanian air operators shall be a	g CAT conside	operations ered.
Target	Decrease or maintain the annual number of LO	C-I oco	currences
		r	
	MEASURES ¹	Resp	onsibility
 Air operators involved and approved training organis shall include in their SMS² the LOC-I occurrences and a the following factors that may lead to LOC-I: Activation of warning systems for exceeding the envelope (including <i>low speed</i> or <i>high speed</i>); Icing in flight; Bad weather conditions/ severe turbulence, winds Fire/smoke during flight; Improper aircraft loading. 		Air op ATO	erators/
 2. ANSP shall include in their SMS the LOC-I occurrences and at least the following factors that may lead to LOC-I: Bad weather conditions/ severe turbulence, windshear; Laser attacks 		ROM	ATSA
 3. 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 		Grour provic	ndhandling lers

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.

4.	As part of its oversight activities, RCAA shall monitor the implementation of actions 1, 2 or 3 by organisations.	DOA/ DCP/ SATMANS/ SA
5.	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 ICA definitions for runway excursion, however they are sufficiently close to be included in this category due to t of the causative and contributory factors or risk mitigation. Aircraft attempting to land and touches the ground runway at the perimeter of the aerodrome; - Use of other take-off/landing runways or taxiway designated ones.	AO ADREP considered he similarity on methods: I before the vs than the	
	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, L RE and RI occurrences. European Action Plan for the Prevention of Run 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 	.OC-I, MAC, way y	
SPI	RE occurrences for CAT operations.		
Measurement	The number of RE occurrences involving a Ron aeronautical agent shall be considered. Such occur airports in Romania and in other countries shall be cor	nanian civil urrences at nsidered.	
Target	Trend of decreasing number of RE compared to the a the last 5 years	verage over	

	MEASURES	Responsibility
1.	 Air operators involved and ATOs shall include in their SMS¹ 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.	 ANSP shall include in their own SMS the RE occurrences and at least the following factors that may lead to RE: Unstable approach; Inappropriate aeronautical information on runway condition (GRF); ATC contribution to RE. 	ROMATSA
3.	The aerodrome operators shall include in their SMS the RE occurrences and at least the following factor that may lead to RE:	Aerodrome operators
	Runway condition and inappropriate related information.	
4.	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
5.	As part of its oversight activities, RCAA shall monitor the implementation of actions 1, 2, 3 and 4 by organisations.	DOA/ DCP/ SATMANS/ SA
6.	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.	SA/ SATMANS/ DOA/ GL-AD/GL-CAT
7.	Establishment of the National Committee for Runway Safety (CNSP) ² .	SA/ BAS

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	DPS.0003 Mitigate the risk of "Runway incursion (RI)" occurrences		MST.0028
Description	"escription 'Runway incursion' (RI) is any incident occurred on an aerodrom involving wrong positioning of an aircraft or person in protected/restricted area designated for aircraft landing or takeof		
	'Wrong positioning' may be the consequence of clearance by the pilot or compliance with clearance.	of devia an inc	ation of ATC correct ATC
Status	Ongoing (2017)		
References	 GASP – Reduction of factors contributin MAC, RE and RI risks. 	g to C	FIT, LOC-I,
	ICAO Doc 4444 – PANS-ATM		
SPI	RI occurrences for CAT operations		
Measurement	Measurement The number of RI involving Romanian civil aeronautical agen shall be monitored. RI occurred both on the Romanian and foreig aerodromes shall be considered.		
Target	Trend of decreasing number of RI compared to the last 5 years	o the a	verage over
		Γ	
	Measures	Resp	onsibility
 Air operato organisations and at least t Deviation Perceptic 	rs involved and the approved training shall include in their SMS ¹ the RI occurrences he following factors that may lead to RI: of ATC clearance; on and situational awareness;	Air op ATO	erators/
 2. ANSP shall include in their SMS the RI occurrences and at least the following factors that may lead to RI: RI with ATC contribution; RI in LVP operation conditions. 			ATSA
3. The aerodrome operators shall include in their SMS the RI occurrences and at least the following factor that may lead to RI:		Aerod opera	rome tors
 Ground vehicle operation in the movement area. 			
4. Groundhandling providers shall include in their SMS the RI Groundhandlin occurrences and at least the following factor that may lead to RI:			idhandling lers

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.

	Ground vehicle operation in the movement area.	
5.	As part of its oversight activity, RCAA shall monitor the implementation of measures 1, 2, 3 and 4 by organisations.	DOA/ DCP/ SATMANS/ SA
6.	 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. 	SA/ SATMANS/ DOA/ GL-AD/GL-CAT SA/ BAS
7.	Establishment of the National Committee for Runway Safety (CNSP) ¹ .	

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 sa teams (LRST)	fety 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 partie off and landing operations, i.e.: aerodrome oper information provider, air navigation service provi operating at the aerodrome, associations of loc controllers, other relevant organisations o manoeuvring area, etc.	s involved ator, aero der, air op al pilots o perating	in take- nautical perators or traffic in the	
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 organ		the Ro	omanian	
Target	Target At least 2 LRST annual meetings at each aerodrome			
MEASURES Responsibility				
1. Ellaboration of guidance materials on the LRST organisation SA and functioning				
2. Include the verification of LRST functioning in oversight audits S				

OPS.0005	Mitigate the risk of wildlife strike occurrence	es	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			
		ĩ		
	MEASURES	Resp	onsibility	
1. Inclusion of operators' SM	wildlife strike occurrences in aerodrome	Aeroc opera	Irome tors	
 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. 		erodrome tors		
 Verification or point 2 as pa 	f the application of the measure referred to in rt of the oversight activity.	SA		
4. Promotion o prepared by Airport Serv Reduction	f measures contained in guidance material specialised bodies, such as ICAO Doc 9137: ices Manual Part 3 - Wildlife Control and	SA		

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5.	Update OMT No 1309/2014.	BAS
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/ SA
7.	Establishment of the National Committee for Runway Safety ¹ .	SA/ BAS

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	s 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/APRO types of FOD pose a lower risk However, there were situations moved on the runway, e.g. du generated by aircraft; 	ON FOD) – these than RWY FOD. where they were e to the air jet		
	 Maintenance FOD (MTN FOD) – objects used in the maintenance a cause damage to the aircraft. 	refers to various ctivity, which may		
Status				
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 occurrent the average over the last 5 years	nces compared to		
	MEASURES	Responsibility		
1. Aerodrome o occurrences following fact	operators shall include in their SMS the FOD on the movement surfaces and at least the ors that may lead to FOD:	Aerodrome operators		
 Management of construction works in the airport perimeter; Efficiency of the FOD control programme. 				
2. As part of i implementati	ts oversight activity, AACR shall monitor the on of action 1 by organisations.	SA		
3. Promotion of bodies	FOD related documents issued by specialised	SA/DN		

4. E	Establishment of the National Committee for Runway	SA/ BAS	
ξ	Safety ¹ .		

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 operating CAT and NCC flights	e involving aircraft		
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		
 The air operative opera	ators and approved training organisations shall fir SMS ¹ the MAC occurrences and at least the ors that may lead to MAC: eparation due to aircraft; infringement; st; response to TCAS-RA (air operators only); on 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		
 Loss of id 	lentification or surveillance equipment failure.			

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.0008	Mitigate the risk of "Loss of separation betw civil and military aircraft" occurrences	/een	MST.0024	
Description	A number of occurrences have been reported at European level concerning the loss of separation between civil and military aircraft, as well as an increase in non-cooperating military traffic over 'High Seas'.			
	Additionally, due to the situation in Ukraine, EASA has developed and published the safety risk portfolio " <i>Review of Aviation</i> <i>SafetyIssues arising from the war in Ukraine</i> ". 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 evaluat such risks to their activity and to include them in	te the in their c	relevance of 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	Resp	onsibility	
1. Application of on Civil/Militation applicable.	f the provisions of ICAO Doc. 10088 – "Manual ary Cooperation in Air Traffic Management", as	SATM ROM	IANS/ ATSA	
 Continuing co and appropria instructions f attention to c 	opperation for the development, harmonisation ate publication of requirements and operational or state aircraft, thereby to ensure increased ivil air traffic	AAMN ROM/ SATM	J/ ATSA/ IANS	
3. Supporting t military coord	he development and harmonisation of civil- lination at European and extra-community level	AAMN ROM/ SATM	J/ ATSA/ IANS	
4. Facilitating ad primary surve	ccess and making available to ATC civil units of aillance radar data by ATC military units	AAMN ROM	J/ ATSA/ IANS	

5.	Verification within organisation oversight on how th	
	organisations have assessed the relevance of the safety risk	SATMANS/ SA
	described in the document Review of Aviation Safety Issue	S
	arising from the war in Ukraine on their activity and how the	У
	have included them in their own SMS.	

OPS.0009	Implementation of SESAR solutions aiming reduce the risk of MAC enroute and in TMA areas	to	MST.0030	
Description	This action is based on the evaluation together with the ANSPs of the needs for implementing SESAR solutions related to MAC.			
	These solutions, e.g. solutions #60 and implemented as far as it is feasible.	#69,	should be	
	The SESAR solutions catalogue can be access link:	sed at t	he following	
	https://www.sesarju.eu/sites/default/files/docume Solutions Catalogue 2021 small.pdf	nts/rep	orts/SESAR	
Status	Ongoing (2019)			
References	 ATM Master Plan (Level 3 Ed 2019), action ATC02.9 - Enhanced Short Term Conflict Alert (STCA) for TMAs 			
	SESAR Solutions Catalogue 2021 Fourth edition			
SPI	n/a			
Measurement	n/a			
Target	n/a			
	MEASURES Responsibility			
1. Periodical evaluation (at least every 2 years) of the needs and feasibility of the implementation of SESAR solutions related to MAC occurrences.			ATSA	
2. Verification, as part of the oversight activity, of the SATMANS implementation of the considered SESAR solutions.				

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 involv aeronautical agent	ing a Romanian	
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	
 Aerodrome operators and groundhandling providers shall include in their SMS¹ 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	
 As part of its oversight activity, RCAA shall monitor the SA implementation of measures 1 and 2 by organisations. Establishment of the National Committee for Runway Safety² 		SA SA/ BAS	

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 (CF occurrences	IT)"	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 airspa	ace	
Measurement	The number of CFIT occurrences in the Roma be considered.	nian ai	rspace shall
Target	Decreasing trend in the annual number of CFIT	occuri	rences
	MEASURES	Resp	onsibility
 The air oper organisations and at least the Incorrect s GPWS wa Errors in the Deviation the Adverse was 	erators involved and the approved training will include in their SMSO ¹ CFIT occurrences he following factors that may lead to CFIT: etting of altimeter; rnings (air operators only); he air navigation maps; below glideslope; eather conditions.	Air op ATO	erators/
 2. ANSPs will include in their SMS the CFIT occurrences and at least the following factors that may lead to CFIT: Errors in providing information on pressure; MSAW alerts – actions; <i>Visual approach</i> clearance in adverse weather conditions Conditions and authorisations for VFR or SVFR flights. 			ATSA
3. Aerodrome co occurrences a CFIT:	perators will include in their SMS the CFIT and at least the following factor that may lead to	Aeroc opera	lrome tors
4. As part of it implementation	s oversight activity, RCAA shall monitor the on of measures 1, 2 and 3 by the organisations.	DOA/ SATM	DCP/ IANS/ SA

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	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 failu incapacitation. If the response to the emerge ground fires tend to rapidly expand and caus smoke and toxic fumes, whether associated w also incapacitatate passengers or crew, thus of hazard.	rres or due to crev ncy is inadequate se casualties. Also vith fire or not, can constituting a majo	
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" occ Romanian aeronautical agents shall be conside	currences involving ered.	
Target	Decreasing trend in the number of "Fire, s occurrences.	moke and fumes	
	MEASURES	Responsibility	
1. The air operators involved, the approved training Air operators/ organisations and CAMO organisations shall include in their ATO/ CAMO SMS ¹ the conditions for fire/ smoke/ fumes.			
2. As part of its oversight activity, RCAA shall monitor the DOA/ DCP/ DN implementation of measure 1 by organisations.			
 The implement recommenda of lithium batt monitoring. 	entation and follow-up of the safety bulletin tions issued by ICAO and EASA on the hazards eries or other fire-related occurrences and their	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 Fai or Malfunction – Non Powerplant (SCF-NP)" Depressurisation occurrences	lure 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	Iteasurement 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 occ	currences.	
	MEASURES Responsibility		
1. Air operators the SCF-NP	1. Air operators involved and CAMO organisations shall include Air operators/ the SCF-NP – Depressurisation occurrences in their SMS ¹ . CAMO		
2. As part of its oversight activity, AACR shall monitor the DOA/ DN implementation of measure 1 by organisations.			

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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OPS.0014	Failure of a system/component - Mitigate the of "System/Component Failure or Malfunction Powerplant (SCF-PP)" occurrences	e risk n.a. on –		
Description	Actions to reduce the risk of failure/malfunc systems or components are considered.	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 occ	currences.		
	MEASURES	Responsibility		
1. The air operator involved, the approved training organisations and CAMO organisations shall include in theirAir operators/ ATO/ CAMO SMS1 the SCF-PP – engine failure occurrences.		Air operators/ ATO/ CAMO		
2. As part of its oversight activity, RCAA shall monitor the DOA/ DCP/ DN implementation of measure 1 by organisations.				

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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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OPS.0015	Maintaining a regular dialogue with the Romanian air operators on Flight Data Monitoring (FDM) programmes		MST.0003
Description	Many safety indicators used to monitor the safety performance at the industry level are based on information contained in FDM programmes. FDM is a proactive way of using safety information obtained from operation, besides that provided by Air Safety Reports, in order to highlight safety trends and eliminate risk factors.		
	The action consists of maintaining a permanent dialogue with operators on FDM programmes in order to promote FDM good practices.		
	Air operators involved in CAT operations with aeroplanes and helicopters, as well as in offshore operations with helicopters are considered.		
Status	Ongoing (2017)		
References	n/a		
SPI	n/a		
Measurement	n/a		
Target	n/a		
	MEASURES	Resp	onsibility
1. Industry awa Operators Fli	1. Industry awareness regarding the activity of the European DOA Operators Flight Data Monitoring (EOFDM) operators forum		
2. Organising at least a meeting (possibly also virtual) with FDM poerators for promoting FDM good practices			

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A better understanding of air operators' governance structure		MST.0019	
The action consists of the correct understanding by RCAA of the governance structures of air operators or groups of air operators applying the same SMS and belonging to the same company.			
 Aspects to be considered include: extensive use of outsourcing, the influence of financial stakeholders, and control of the management staff, not subject to approvals. The action consists in the implementation of the EASA document prepared on this matter. 			
Ongoing (2022)			
 EASA Practical Guide: Management of hazards related to new business models of commercial air transport operators¹ EASA Guidance for the oversight of group operations² 			
n/a			
n/a			
n/a			
MEASURE Responsibility			
1. Implementation of applicable measures contained in EASA DOA documents.			
	A better understanding of air operators' governance structure The action consists of the correct understanding governance structures of air operators or group applying the same SMS and belonging to the set Aspects to be considered include: • extensive use of outsourcing, • the influence of financial stakeholders, and • control of the management staff, not subject to The action consists in the implementation of the prepared on this matter. Ongoing (2022) • EASA Practical Guide: Management of haza business models of commercial air transport • EASA Guidance for the oversight of group of n/a n/a MEASURE on of applicable measures contained in EASA	A better understanding of air operators' governance structure The action consists of the correct understanding by R governance structures of air operators or groups of a applying the same SMS and belonging to the same context Aspects to be considered include: extensive use of outsourcing, the influence of financial stakeholders, and control of the management staff, not subject to approximate the influence of the implementation of the EAS prepared on this matter. Ongoing (2022) EASA Practical Guide: Management of hazards relibusiness models of commercial air transport operation n/a n/a m/a n/a MEASURE Responsion of applicable measures contained in EASA DOA 	

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

2 https://www.easa.europa.eu/document-library/general-publications/guidance-oversight-groupoperations

2023 - 2025

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)
- o MAC (Mid-air collision) Airspace infringement

OPS.0017	Increasing the safety of rotorcraft operation	S	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, aer	rial phot	tography;	
	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	occurre	ences.	
	MEASURES	Respo	onsibility	
 The air o organisations SMS¹ the L0 obstacle coll factors that m Poor take Human po Adverse Crew exp As part of i 	perator involved, the approved training and CAMO organisations will include in their OC-I, LOS-G, CFIT, ARC, AI, MAC, GCOL, ision occurrences and at least the following may lead to such occurrences: off management; erformance and human factors; weather conditions; berience/ training/ competence. ts oversight activity, RCAA will monitor the	Air op(ATO/ 0	erators/ CAMO DCP/ DN	
implementatio	on of measure 1 by organisations.			

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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OPS.0018	Actions to promote safety of rotorcraft operations	Μ	IST.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 operations with helicopters.	the safet	ty of hoist
Status	Ongoing		
References	Documentation issued by ESPN-R, VAST, NCA, Hell Offshore etc.		
	ESPN-R Hoist Operation Safety Promoti	on	
SPI	Actions to promote the safety of rotorcraft operations		
Measurement	The number of actions taken to promote the operations shall be considered.	safety of	rotorcraft
Target	At least a steady number of actions to pror helicopter operations	mote the	safety of
		Γ	
	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.		L-LAGA	
2. Organisation Hoist Operati	nisation in 2023 of a meeting for promoting ESPN-R DOA/ GL-LAGA		L-LAGA

OPS.0019	Implementation of SESAR solutions aiming facilitate safe IFR operations	to MST.0031	
Description	This action should be based on the evaluation, together with ANSPs and their flight procedure designers, of the possibility to establish a network of low-level IFR routes in their airspace to facilitate safe helicopter operations. The SESAR solutions, such as solution #113, should be implemented as far as it is feasible. See SESAR Solutions Catalogue at the following link: <u>https://www.sesarju.eu/sites/default/files/documents/reports/SESAR</u> Solutions Catalogue 2019 web.pdf		
Status	Ongoing (2019)		
References	ATM Master Plan (Level 3 Ed 2019) action NAV12 (ATS IFR Routes for Rotorcraft Operations)		
	SESAR Solutions Catalogue 2021 Four	th edition	
SPI	n.a.		
Measurement	n.a.		
Target	n.a		
	MEASURES	Responsibility	
1. Evaluation, as required, of the needs and feasibility of ROMATSA implementing SESAR solutions related to the safe conduct of IFR rotorcraft operations.			
2. Verification, as part of the oversight activity, of SESAR SATMANS solutions implemented.			

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	New action		
References	BIS 'Administrative Burden for Small Helic	opter 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			
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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

Increasing the safety of general aviation MST.0028 operations						
The key risk areas highlighted at both European and national level shall be taken into account in this action:						
 NCO with aeroplanes: LOC-I, SCF-PP, SCF-NP, FUEL, MAC, obstacle collision 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, obstacle collision Parachutes: LOC-I, ARC Balloons: obstacle collision. balloon landing. LOC-I 						
Although they did not constitute serious incidents or accidents, " <i>Airspace infringement</i> " occurrences are taken into accountas they are relatively frequent.						
Ongoing (2017)						
European Action Plan for Airspace Infringement Risk Reduction (EAPAIRR)						
KRA occurrences at European level, as infringement" occurrences – per operation operators/pilots under the responsibility of competent authorities, broken down by type of	well as type of the operati	s "Airspace - involving Romanian on.				
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.						
Decreasing trend in the annual number of K European level and "Airspace infringement" oc	RA occ currenc	currences at				
MEASURES	Resp	onsibility				
1. KRA occurrences at European level and "Airspace DOA/ DCP/ AR/ infringement" occurred in general aviation shall be monitored. AZLR						
omote safety shall be adapted to be in line with of the targeted occurrences.	DOA/ AZLR	DCP/ AR/ / GL-LAGA				
	Increasing the safety of general aviation operations The key risk areas highlighted at both Europea level shall be taken into account in this action: - NCO with aeroplanes: LOC-I, SC FUEL, MAC, obstacle collision - SPO with aeroplanes: LOC-I, SCI - ULM: LOC-I, CFIT, SCF-PP, CTC - ULAC: LOC-I, CFIT, ARC, TURB - Sailplanes: LOC-I, ARC, GTOW, collision - Parachutes: LOC-I, ARC - Balloons: obstacle collision, balloo Although they did not constitute serious incid "Airspace infringement" occurrences are taken are relatively frequent. Ongoing (2017) European Action Plan for Airspace Infringement (EAPAIRR) KRA occurrences at European level, as infringement" occurrences – per operation operators/pilots under the responsibility of competent authorities, broken down by type of It measures the number of KRA occurences at Airspace Infringement involving an operate responsability of the Romanian competent authorities, broken down by type of It measures the number of KRA occurences at Airspace Infringement involving an operate responsability of the Romanian competent authorities, broken down by type of It measures the number of KRA occurences at Airspace Infringement involving an operate responsability of the Romanian competent authorities, broken down by type of It measures the number of KRA occurences at Airspace Infringement involving an operate responsability of the Romanian competent authorities, broken down by type of It measures the number of KRA occurences at Airspace Infringement involving an operate responsability of the Romanian competent authorities, broken down by type of KE European level and "Airspace infringement" occur MEASURES	Increasing the safety of general aviation operations The key risk areas highlighted at both European and revel shall be taken into account in this action: - NCO with aeroplanes: LOC-I, SCF-PP, SFUEL, MAC, obstacle collision - SPO with aeroplanes: LOC-I, SCF-NP, F - ULM: LOC-I, CFIT, SCF-PP, CTOL - ULAC: LOC-I, CFIT, ARC, TURB - Sailplanes: LOC-I, ARC, GTOW, SCF-Nc collision - Parachutes: LOC-I, ARC - Balloons: obstacle collision, balloon land Although they did not constitute serious incidents or "Airspace infringement" occurrences are taken into accurare relatively frequent. Ongoing (2017) European Action Plan for Airspace Infringement Ris (EAPAIRR) KRA occurrences at European level, as well as infringement" occurrences – per operation type operators/pilots under the responsibility of the competent authorities, broken down by type of operation type of aresponsability of the Romanian competent authorities. Decreasing trend in the annual number of KRA occurrence European level and "Airspace infringement" occurrence MEASURES Resp ences at European level and "Airspace DOA/ ozcurred in general aviation shall be monitored. DOA/ AZLR				

2023 – 2025

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 <i>Safety Promotion Network</i> (SPN) on the key risks to the safety of the general aviation operations.					
Status	Status Ongoing (2017)					
References	References n.a.					
SPI	Actions to promote safety in collaboration wit agents performing general aviation operations.	h civil	aeronautical			
Measurement	Number of safety promoting actions taken.					
Target	Carrying out at least a constant number of acti safety of general aviation operations.	ons to	promote the			
		I				
	MEASURES	Resp	onsibility			
1. Posting safety promotion materials on their own websites. DOA/DCP/ A AZLR/ GL-LA						
2. Promoting the to civil aero	ne safety materials through workshops, circulars onautical agents.	DOA/ AZLR	DCP/ AR/ / GL-LAGA			

2023 – 2025

OPS.0022	Promotion of Just Culture in general aviation MST.002						
Description The action consists in promoting Just Culture to general aviation operators in order to encourage occurrence reporting and promote positive safety behaviour.							
Status	Status Ongoing (2018)						
References	eferences n.a.						
SPI	Number of reports made by civil aeronautical agents performing general aviation operations.						
Measurement	Number of reports made by general aviation op	erators	S.				
Target	Target Increasing number of reports made by civil aeronautical agents performing general aviation operations.						
	MEASURES	Resp	onsibility				
1. Promote the provisions on Just Culture among civil aeronautical agents performing general aviation operations.							
measures Responsibility 1. Promote the provisions on Just Culture among civil aeronautical agents performing general aviation operations. DOA/DCP/DN/ GL-LAGA/ AR/ AZLR							

2023 – 2025

OPS.0023	Loss of separation – Airspace complexity and MST.0038 traffic congestion in general aviation					
Description The action consists in ensuring that 'airspace complexity' and 'traffic congestion' are taken into account as safety relevant factors in airspace changes affecting general aviation operations.						
Status	tus New action					
References	• European Action Plan for Airspace Infringement Risk Reduction (EAPAIRR)					
	BIS Airborne collision risk					
SPI	n.a.					
Measurement	n.a.					
Target	n.a.					
	MEASURE	Resp	onsibility			
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.						

2023 - 2025

AERODROMES AND GROUNDHANDLING

Key risk areas at European level are:

- LOC-I
- GCOL
- F-NI
- Collision on runwayObstacle collision inflight
- -RE

Key risk areas at national level are:

- RE
- GCOL
- F-NI

2023 – 2025

OPS.0024	Runway safety – Implementation of SESAR runway safety solutions	MST.0029						
Description	ption This action is based on the evaluation together with the ADR operators, airline operators and ANSPs of the need to implement the related SESAR runway safety solutions. These solutions (#01, #02, #04, #026, #47, #48, #70)							
	should be implemented to the extent feasible.							
	See SESAR Solutions Catalogue at the following link: <u>https://www.sesarju.eu/sites/default/files/documents/reports/SESAR</u> <u>Solutions_Catalogue_2019_web.pdf</u>							
Status Ongoing (2019)								
• GASP SEIs (States) – Mitigate contributing factors to the risks of RE and RI								
	SESAR Solutions Catalogue 2019 – This		UII					
SPI	n.a.							
Measurement	n.a.							
Target	n.a.							
	MEASURES	Resp	onsibility					
 Periodical evaluation (at least every 2 years) by CNAB and ROMATSA of the needs and feasibility of SESAR solutions implementation related to runway safety; the evaluation shall also include other aerodromes, if their recorded traffic will reach values for which SESAR solutions implementation is feasible. 								
2. As part of SESAR so	the oversight activity, verification of applied lutions mentioned at para. 1 above.	SA/ S	ATMANS					

UNMANNED AIRCRAFT SYSTEMS

2023 – 2025

OPS.0025	Mitigate the risks associated with unmanned aircraft systems operation	Mitigate the risks associated with unmanned n.a. aircraft systems operation						
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 (EL order to harmonise European requirements fo conduct of flight activities with unmanned ai airspace, a few delegated or implementing reg issued.	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	 Commission Delegated Regulation (EU) Commission Implementing Regulation (E) 	2019/94 EU) 2019	45 9/947					
SPI	Civil unmanned aircraft occurrences during Romanian airspace	operat	tion in the					
Measurement	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 of unmanned civil aircraft in national airspace.	from th	e operation					
	MEASURES	Respo	onsibility					
1. To monitor	such occurrences in Romania.	BAS						
2. To promote	materials for safe unmanned aircraft operation.	DN/ SA	۹					

¹ Air Code of Romania

VOLUME III – SAFETY RISK PORTFOLIOS

2023 – 2025

General

2023 - 2025

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..
- 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 2012 2021 the National was considered. The source of information is the National Database on reported civil aviation occurrences;
- Causes the main causes of accidents and serious incidents occurred between 2012-2021 were highlighted. The source of information is the National Database on reported civil aviation occurrences, AIAS 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.

2023 – 2025

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

2023 - 2025

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 n	umber of serious incidents:	24

The distribution of these events per year is shown in Table 4, as well as in Figures 1 and 2.

	Table 4										
CAT aeroplanes	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	1	1	1	0	0	0	0	0	0	0	1
fatal accidents	0	0	1	0	0	0	0	0	0	0	0
non-fatal accidents (injuries)	0	1	0	0	0	0	0	0	0	0	0
non-fatal accidents without casualties	1	0	0	0	0	0	0	0	0	0	1
serious incidents	3	0	0	1	7	5	2	1	0	3	1



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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 AIAS so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in the table below and in Figures 3 and 4.

Cause	Fatal accidents	Non-fatal accidents (injuries)	Non-fatal accidents (without casualties)	Serious incidents
LOC-I	1		,	0
RE		1		8
GCOL			1	2
ARC			1	1
SCF-NP (depressurisation)				4
SCF-PP				2
F-NI				2
SCF-NP (tyre)				1
SCF-NP (brakes)				1
TURB				1
MED				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	operatio	ns CAT					
% fatal accidents	1	100%	0%	0%	0%	0%	0%	0%
% non-fatal accidents (injuries)	1	0%	100%	0%	0%	0%	0%	0%
% non-fatal accidents (without casualties)	2	0%	0%	50%	50%	0%	0%	0%
% serious incidents	24	0%	33%	8%	4%	17%	8%	8%
		Key Risk Areas						
Precursors ¹		LOC-I	RE	GCOL	ARC	SCF-NP (Depres)	SCF-PP	F-NI
Activation of flight envelope exceedance warning system		х						

¹ Will be completed with GL-CAT conclusions.

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Icing in flight	x						
Adverse weather conditions/ turbulence/ windshear	x	x					
Laser illumination	x						
Fire/ smoke in flight	x				х	х	х
Inappropriate aircraft loading	x						
Misinterpretation of markings			х				
Aircraft maintenance	x				x	x	x
Unstable approach		x					
ARC		x	х	х			x
High-speed rejected take-off	х	х	х				х
Runway condition and appropriate related information		х	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 and of the only accident with injured people;
- SCF-NP (System/ component failure non-powerplant) key risk area refers to events like Depressurisation, responsible for 4 serious incidents; followed by Risk Areas SCF-PP (System/ component failure – powerplant) and F-NI (Fire – non impact) risk area.

Key risk areas:

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

Rotorcraft operations

2023 - 2025

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: 12, of which:

- fatal accidents: 3
- with casualties: 0
- without victims: 9

TOTAL number of serious incidents:

The distribution of these events per year is shown in Table 7, as well as in Figure 4.

1

										la	ible /
HEL	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	2	2	1	2	0	1	2	1	0	0	1
fatal accidents	1 NCO	1 CAT	0	1 NCO	0	0	0	0	0	0	0
accidents with injuries	0	0	0	0	0	0	0	0	0	0	0
accidents without casualties	1 SPO	1 NCO	1 SPO	1 NCO	0	NCO	2 NCO/ SPO	1 NCO	0	0	1 NCO
serious incidents	0	0	0	0	0	0	1 SPO	0	0	0	0



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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 5 below.

				I able 8
	Cause	Fatal accidents	Accidents without casualties	Serious incidents
LOC-I		3	2	
LOC-G			2	
ARC			1	1
CFIT			1	
CTOL			1	
LALT			1	
SCF-PF	C		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:

2023 – 2025

							Table	9	
	Rotorcraft o	perations	(HEL)						
% fatal accidents	3	100%	0%	0%	0%	0%	0%	0%	
% accidents without casualties	9	22%	22%	11%	11%	11%	11%	0%	
% serious incidents	1	0%	0%	100 %	0%	0%	0%	0%	
	Key risk areas								
Precursors ¹		I-DC-I	P-OC-G	ARC	CFIT	OTHER	SCF-PP	MAC (Air. Infr.)	
Improper management of tak	e-off	x			х				
Improper management of land	ding	x		х					
Fire/smoke		x							
Human performance				х					
Adverse weather conditions		х	х						
Crew experience/ training/ co	mpetence		х		х	x			
	a af a bishas sa sa sa sa	ممتلمما متم	ممر مالا	-!		م مامام م	1-		

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.
- CFIT, CTOL, LALT and SCF-PP 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)
 - o CTOL (Collision with obstacle during take-off or landing)
 - LALT (Low altitude operations)
 - o SCF-PP (System/ component failure powerplant)
 - MAC (*Mid-air collision*) Airspace infringement

¹ To be completed with GL-HEL conclusions.

General aviation operations

2023 – 2025

This chapter analyses general aviation operations with aircraft <u>other than helicopters</u> - 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
- ULAC operations
- Operations with gliders
- Operations with parachutes

The distribution of these events per year is shown in Tables 10-15, as well as in Figures 7-12:

NCO with aeroplanes

TOTAL accidents:

- 40, of which: 8
- Fatal accidents
- Accidents (with injuries) 6
- Accidents without casualties 26

Serious incidents, TOTAL:

									7	Table 10)
NCO aeroplanes	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	0	5	2	3	4	2	8	5	2	6	3
fatal accidents	0	0	1	0	1	0	1	2	0	1	2
accidents with injuries	0	1	0	0	1	1	2	1	0	0	0
accidents without casualties	0	4	1	3	2	1	5	2	2	5	1
serious incidents	2	0	2	0	0	1	0	4	0	1	1

11



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	8	2
ARC		1	4	3
CTOL		1	3	
RE		1	1	2
SCF-NP			4	2
CFIT			1	1
F-NI			1	
G-COL				1
MAC				1

2023 - 2025



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.

2023 - 2025

1

1

SPO with aeroplanes

TOTAL accidents:

7, of which:

- Fatal accidents:
- Accidents with injuries 2
- Accidents without casualties: 4

Serious incidents, TOTAL:

										Ta	ble 11
SPO aeroplanes	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	2	1	0	2	0	0	1	0	0	0	1
- fatal	0	0	0	1	0	0	0	0	0	0	0
-with injuries	1	0	0	0	0	0	1	0	0	0	0
-without casualties	1	1	0	1	0	0	0	0	0	0	1
serious incidents	0	1	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	
SCF-PP		1		
UNK		1		
SCF-NP			2	
FUEL			1	
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 UNK and SCF-PP.
- For accidents without casualties, the key risk areas are: LOC-I, SCF-NP and FUEL.
- The cause for the only serious incident is ARC.

2023 - 2025

Operations with ULM

TOTAL accidents:	44, of which:
 Fatal accidents 	13

- Accidents with injuries
- Accidents without casualties 19

Serious incidents, TOTAL:

8

12

										Tal	ble 12
ULM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	9	3	5	3	5	2	4	2	3	4	4
- fatal	4	1	1	0	2	2	0	0	1	0	2
-with	1	2	1	2	1	0	1	1	1	1	1
injuries											
- without	4	0	3	1	2	0	3	1	1	3	1
casualties											
serious	0	0	0	0	2	2	0	1	0	3	0
incidents											



Causes for accidents and serious incidents - ULM

				Table 18
Cause ULM	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
LOC-I	5	3	2	
UNK	3	2	3	
CFIT	2	2		
SCF-PP	1	3	5	
CTOL	1	1		
AMAN	1			

2023 - 2025





Conclusions:

For ULM operations:

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

2023 – 2025

Operations with ULAC

TOTAL a	ccidents:
---------	-----------

- 15, of which:
- Fatal accidentsAccidents with injuries
- Accidents with injulies
 Accidents without casualties

Serious incidents, TOTAL:

0 0

6

9

										Ta	ble 13
ULM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	1	0	3	1	1	4	2	1	0	2	0
- fatal	0	0	1	1	0	2	1	1	0	0	0
-with	1	0	2	0	1	2	1	0	0	2	0
injuries											
 without casualties 	0	0	0	0	0	0	0	0	0	0	0
serious incidents	0	0	0	0	0	0	0	0	0	0	0



Causes of accidents and serious accidents – ULAC

			-	Table 19
Cause ULM	Fatal accidents	Accidents with injuries	Accidents without casualties	Serious incidents
UNK	3			
LOC-I	2	3		
OTHER	1	1		
ARC		4		
TURB		1		

2023 – 2025



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.

2023 – 2025

Operations with gliders

TOTAL accidents:

7, of which: 1

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

Serious incidents, TOTAL:

										Ta	ble 14
Gliders	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	1	0	1	1	0	1	1	1	0	0	1
- fatal	0	0	0	1	0	0	0	0	0	0	0
-with injuries	1	0	0	0	0	0	0	1	0	0	1
- without casualties	0	0	1	0	0	1	1	0	0	0	0
serious incidents	0	0	0	0	0	0	0	0	0	0	0

3



Causes of accidents and serious incidents - gliders

		C .		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

2023 – 2025

Conclusions:

For operations with gliders:

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

2023 – 2025

Operations with parachutes

TOTAL accidents:

10, of which:

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

Serious incidents, TOTAL: 0

										Ta	ble 15
Parachutes	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	2	0	1	1	2	1	0	0	1	0	2
- fatal	0	0	0	1	2	0	0	0	1	0	1
-with injuries	2	0	1	0	0	1	0	0	0	0	1
- without casualties	0	0	0	0	0	0	0	0	0	0	0
serious incidents	0	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		

2023 – 2025

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.
2023 – 2025

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 with aeroplanes:
 - LOC-I (Loss of control inflight)
 - SCF-PP (System/ component failure powerplant)
 - SCF-NP (System/ component failure non-powerplant)
 - FUEL (Fuel)
- SPO with aeroplanes:
 - LOC-I (Loss of control inflight)
 - SCF-NP (System/ component failure non-powerplant)
 - FUEL (Fuel)
 - ARC (Abnormal runway contact)
- Operations with ULM:
 - LOC-I (Loss of control inflight)
 - o CFIT (Controlled flight into terrain)
 - SCF-PP (System/ component failure powerplant)
 - CTOL (Collision with obstacle during takeoff and landing)
 - AMAN (Abrupt manoeuvre)
 - 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

2023 - 2025

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: 1, of which:

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

Serious incidents, TOTAL: 10

The distribution of these events per year is shown in Table 16, as well as in Figure 13:

										Ta	ble 16
ADR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	1	0	1	1	2	1	0	0	1	0	2
- fatal	0	0	0	1	2	0	0	0	1	0	1
-with	0	0	1	0	0	1	0	0	0	0	1
injuries											
- without	1	0	0	0	0	0	0	0	0	0	0
casualties											
serious	1 NCO	0	0	0	3	2	2	0	0	0	0
incidents	2										



2023 – 2025

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 14 below.

			Table 17
Cause	Accidents without casualties	Serious incidents	
GCOL	1	2	
RE		5	
ARC		1	
F-NI		1	
SCF-NP (Tyre)		1	



Conclusions:

For accidents and serious incidents ADR – Airports:

- The key risk area for the only accident without casualties and also for serious incidents was GCOL.
- The key risk area for serious incidents was RE.

2023 - 2025

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 2012-2022:

TOTAL accidents:	5, of which:
 Fatal accidents: Accidents with injuries: Accidents without casualties: 	0 1 4
Serious incidents, TOTAL:	0

The distribution of these events per year is shown in Table 18, as well as in Figure 15:

										Ta	able 18
ADR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
accidents	1	1	0	0	0	1	2	0	0	0	0
- fatal	0	0	0	0	0	0	0	0	0	0	0
-with injuries	0	1	0	0	0	0	0	0	0	0	0
- without casualties	1	0	0	0	0	1	2	0	0	0	0
serious incidents	0	0	0	0	0	0	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 AIAS so far revealed the main causes of accidents/serious incidents analysed in this chapter, which are presented in Table 19 and Figure 16 below.

2023 – 2025

			Table 19
	Cause	Accidents with injuries	Accidents without casualties
RE		1	1
GCOL			1
CTOL			1
ARC			1



Conclusions:

For accidents at ADR – other aerodromes:

• The key risk area 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