

Highlight of changes

Rev. #	Date of modification	Description of modification	Responsible person
12	01. 01. 2021	New hazards are identified from following AIRPLANES SPECIALISED OPERATIONS:	Primož Škufca
		(a) Orthophoto aerial flights procedures	MAN
		(b) Parachute dropping flights procedures	10.

Highlight of changes procedure is started from revision #12.

	Haz	ard identification	Risk l	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1/17	28.03.2017	In a scope of safety briefing for year 2017 the SMS manager describe following Service Information Notice/Billten relating to safety events: Airbus-Helicopter SIN 2992-S-00 – Reminder for safe departure EASA SIB 2017-03	4	4	8 HIGH	mitigation action was describe during Annual safety briefing	 During departure the pilot should follow as described below: Use of an appropriate checklist lift off helicopter in hover position at 5ft AGL, at least 2 seconds, check that helicopter is behaving normally, do a parameter and power check. If no warning/cation lights and if parameters are in limits: continue with departure! If warning/cation lights illuminates and if parameters are not in limits: land immediately! 	2	2	4 LOW	28.03.2017	Initial process completed	Roman Bernard



	Haz	zard identification	Risk I	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2/17	28.03.2017	In a scope of safety briefing for year 2017 the SMS manager describe following Service Information Notice relating to safety events: Airbus-Helicopter SIN 3074-S-00 - Risk of hypoxia	3	3	6 MEDI-UM	mitigation action was describe during Annual safety briefing	Un pressurized helicopters intended to be operated at high altitudes shell carry equipment for storing and dispensing oxygen supplies to aircrew and passengers.	2	2	4 LOW	28.03.2017	Initial process completed	Roman Bernar
3/17	28.03.2017	In a scope of safety briefing for year 2017 the SMS manager describe following Service Information Notice relating to safety events: Airbus-Helicopter SIN 3013-S-29 – emergency procedure in the event of hydraulic failures on EC120B	3	4	8 HIGH	mitigation action was describe during Annual safety briefing	 The emergency procedure: Use the terrain with a surface suitable for running landing (concrete, asphalt) Head wind flat approach Max running speed is 10 kts Nose titled very slightly upwards during running landing is recommended Do not lower the collective after touch suddenly 	2	2	4 LOW	28.03.2017	Initial process completed	Roman Bernar
4/17	28.03.2017	In a scope of safety briefing for year 2017 the SMS manager describe following Service Letter relating to safety events: Turbomeca No. 2969/16/ARL1 – use of the fuel booster pump during dry ventilation	2	6	6 MEDI-UM	mitigation action was describe during Annual safety briefing	Procedure - During engine ventilation switch booster pumps ON, due to best culling and lubrication.	2	1	3 LOW	28.03.2017	Initial process completed	Roman Bernar
5/17	29.03.2017	In a scope of safety briefing for year 2018 the SMS manager describe following Service Information Notice relating to safety events: Airbus-Helicopter SIN 3093-S-00 – Flight at high speed	3	3	6 MEDI-UM	mitigation action was describe during Annual safety briefing (2018)	At high speed: 1. the helicopter's longitudinal static and dynamic stability is deducted, 2. the strong dissymmetry between advancing and retreating bleads leads to high loads and high stresses in the rotor control chain (pitch roads, swashplates, servo controls) Airbus Helicopters warm that the flying close to V _{NE} needs to be carefully managed.	2	2	4 LOW	26.04.2018	Initial process completed	Roman Bernard



	Haz	zard identification	Risk I	evel before	action	Cotinents of electro		Risk	level after a	ction	Date of	Deserves	Deservatible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6/17	03.04.2017	Flycom Safety Information Notice 2017-4-3 VFR by night	3	3	6 MEDI-UM	03.05.2017 by new OM revision	On the bases of CAA audit report from 24.02.2017. CAA found, that the parts of the OM, revision 24, relating to CAT/VFR/NIGHT operations are not comply with Operations specifications and privileges of an AOC. Commercial air transport under VFR by night IS NOT ALLOWED (see Flycom's Safety Information Noties, No. 2017-apr-03/1)!	1	1	2 LOW	04.08.2017	Initial process completed	Roman Bernar
7/17	03.04.2017	Flycom Safety Information Notice 2017-4-3 M&B	3	3	6 MEDI-UM	03.05.2017 by new OM revision	On the bases of CAA audit report from 24.02.2017. CAA found, that the parts of the OM, revision 24, relating to Mass and centre of gravity are not comply with CAT.POL.MAB requirements. The table in OM Part A, Chapter 8.1.8 (e) – Applicable passenger and baggage masses IS NOT VALID from 3rd day in April 2017 (see Flycom's Safety Information Noties, No. 2017-apr-03/2)!	1	1	2 LOW	04.08.2017	Initial process completed	Roman Bernar
3/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Low-level flights – not less than 200 ft AGL	4	4	8 HIGH	at development of applicable SOP	On the bases of size and distance of landing sites the pilot has to determinate minimum flight heights and minimum speeds respected H-V diagram. Minimum flying altitude is not less than 200 ft AGL. Between 200 and 650 ft AGL hovering is not allowed. The minimum speeds based on height should be defined on the bases of H-V diagram (see RFM, section 5, chapter 5-5). Strong tailwinds and steep turns should be avoided.	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
9/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Mid-air collisions	5	3	8 HIGH	at development of applicable SOP	All crew members have to observe the area around the helicopter and the flight path. Whenever an air traffic is in view the operation has to be stopped. A pilot have to inform FIS about aerial work. A pilot have to stay on airport frequencies near to operating site and inform them about aerial work.	1	5	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
10/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> High flight altitude	3	3	6 MEDI-UM	at development of applicable SOP	t is mandatory to use the supplemental oxygen system to prevent hypoxia when flying above 10.000 ft of pressure altitude.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk l	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
11/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Confined areas	4	4	8 HIGH	at development of applicable SOP	The pilot shell conducted enhance pre-flight briefing to determinate potential emergency landing sites. On the bases of size and distance of landing sites the pilot has to determinate minimum flight heights respected H-V diagram.	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
12/17	12.12.2017	UV/IR/video Infrastructure Survey Television & Movie Flights: Man-made obstructions and ground activities - collision with structures	3	3	6 MEDI-UM	at development of applicable SOP	Study the obstacles in the area of operations. Maintain continuous watch for obstacles	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
13/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Downdraft	3	4	7 HIGH	at development of applicable SOP	Expect downdrafts according to meteorological reports; Monitor helicopter performance and instruments to recognize downdrafts; Select flight path to allow safe escape maneuver; Stay vigilant to power and wind conditions;	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
14/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Settling with Power – Vortex Ring State	3	3	6 MEDI-UM	at development of applicable SOP	Where operating helicopter with low speeds a pilot should avoid rates of descend greater than 300 feet per minute.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
15/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Slow speeds	4	4	8 HIGH	at development of applicable SOP	The pilot shall find himself flying at critically slow airspeeds during strong tailwinds. The pilot should determinate a minimum speeds and minimum flight heights on the bases of H-V diagram and correct that with tailwind component.	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran



Revision #12

INTEGRATED ORGANISATION MANAGEMENT MANUAL PART – 4.6: Hazard Register

	Haz	ard identification	Risk l	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
16/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Engine failure and emergency landing	5	2	7 HIGH	at development of applicable SOP	Wearing proper PPE (helmet, hard hat, goggles, steel toe cap shoes, adequate clothing); Select flight path to minimize exposure over population and hostile structures. On the bases of size and distance of landing sites the pilot has to determinate minimum flight heights and minimum speeds respected H-V diagram. Minimum flying altitude is not less than 200 ft AGL. Between 200 and 650 ft AGL hovering is not allowed. The minimum speeds should be defined on the bases of H-V diagram (see RFM, section 5, chapter 5-5)	4	2	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
17/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Work over water and hostile environment	5	2	7 HIGH	at development of applicable SOP	When operating over the water the pilot shall be equipped with adequate survival equipment ranging from life vests, rafts and dry suits. When operating over the hostile environment the pilot conducted enhance pre-flight briefing to determinate potential emergency landing sites.	4	2	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
18/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Lack of power/performance	3	3	6 MEDI-UM	at development of applicable SOP	Check HOGE performance before the flight; Keep the wind from right-front sector; Avoid downdrafts; Adjust helicopter mass according to HOGE; Avoid low-speed downwind turns; Stay vigilant to power and wind conditions.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
19/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Bird strike	5	3	8 HIGH	at development of applicable SOP	The pilot shall check available bird tams. The crew shall wear the protection gear, e.g. helmets (with visor), glasses, gloves, etc	4	2	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran

5/23



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
20/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Limited flight crew experience	3	3	6 MEDI-UM	at development of applicable SOP	The flight crew may not maintain permanent currency, but rather take refresher training before the intended operation.	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
21/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Local health risk	3	3	6 MEDI-UM	at development of applicable SOP	Take strict crew health precautions as recommended in OM. The crew will be offered adequate prophylaxis, vaccination and medical advice.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
22/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Poor accommodation to obtain suitable rest, limited available diet	4	2	6 MEDI-UM	at development of applicable SOP	Proper planning of bases and accommodation. Proper planning of rest time.	3	1	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
23/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> High temperatures	3	3	6 MEDI-UM	at development of applicable SOP	Maximum air temperature should not be exceeded ISA+20 °C.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
24/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Noise	3	3	6 MEDI-UM	at development of applicable SOP	The crew shall wear the active noise cancelling headsets or other noise protection equipment. The missions over the congested areas shall be planned with minimum weight of helicopter and flying in head wind conditions, which reduces the power of the helicopter and consequently the level of noise.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran



PART – 4.6: Hazard Register

	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
25/17	12.12.2017	<u>UV/IR/video Infrastructure Survey</u> <u>Television & Movie Flights:</u> Pressure changes	3	3	6 MEDI-UM	at development of applicable SOP	The pilot shall avoid rates of descend greater than 1000 feet per minute.	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
1/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Environmental factors	4	4	8 HIGH	at development of applicable SOP	 Landing site must be cleaned from sand and other objects that can blow away and damage people and property. The length of the line of sling should be increase in case of dirty conditions. The ground task specialist shall wear adequate eye protection to prevent eye injuries. The pilot and ground task specialist shall keep radio communication alive. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
2/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Radio communication failure	4	4	6 MEDI-UM	at development of applicable SOP	 Delay of the mission until radio communication is re-established. The ground task specialist shall wear adequate radio communication equipment like protection helmet with integrated radio communication headsets or other radio communication headsets. 	2	2	4 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
3/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Failure of lifting equipment including cargo hook	3	3	6 MEDI-UM	at development of applicable SOP	 Use only approved and checked slings and lifting equipment. The ground task specialist shall check the undersling load between the rotations during the lift-of procedure. Pilot should identify safe routing with underslung load. He should identify areas where the helicopter is prohibited from flying with undersling loads. Functional check of release mechanisms on helicopter cargo-hook, both electrical and manual mast be done before use. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
4/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Static build-up and load discharge	3	3	6 MEDI-UM	at development of applicable SOP	 The grounding ground task specialist as a discharging procedure shall be used when receiving the load. Plan the helicopter external sling load operations in days when there is not a lot of moisture in the air. 	1	2	3 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran

Revision #12

Date of revision: January 1, 2021 Date of print: February 22, 2021



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
5/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Sling get stuck in the load when lifting or when detaching the load	4	4	8 HIGH	at development of applicable SOP	 When the load is hooked on to the lifting ropes and the helicopter starts to lift, the ground task specialist must check and send a massage to pilot that the lifting equipment is not entangled in the load being lifted. Pilot should use vertical reference or side maneuver to be able to see if sling get stuck. 	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
6/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Positioning the load above the ground staff	4	4	8 HIGH	at development of applicable SOP	 The helicopter shall approach from a level or a flight path below or beside the ground task specialist to minimize or remove the time the load is above the task specialist. Task specialist should always observe flight path, stay in radio contact with the pilot and guide the pilot to positioning a load 	3	3	6 MEDI-UM	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
7/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Operating over cable cars	5	4	9 HIGH	at development of applicable SOP	Operation of the cable car shall be prohibited while the helicopter operation. If not, the flight path has to be chosen such as the cable car will not be crossed.	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
8/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Interference between the ground task specialist and slings	4	4	8 HIGH	at development of applicable SOP	The pilot will not release the sling before he has received the drop signal. If still wire ropes or lifting chains is used the length of these shall be such that they cannot reach the ground staff.	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
9/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Loss of load	4	4	8 HIGH	at development of applicable SOP	 The pilot should avoid the operating areas where the falling load can cause damage or accident. Operating area should be secured by the customer, or additional task specialist will secure. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk l	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
10/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Load is too heavy	4	4	8 HIGH	at development of applicable SOP	 The pilot has to observe load indicator during tensioning the slung and be prepared to drop or release the load. The ground specialist has define weight of the load defensively. The ground specialist and other personnel on ground should be out of danger zones. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
11/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Unexpected movement of the load	4	4	8 HIGH	at development of applicable SOP	The helicopter external sling load operations pilots are trained to control these phenomena. If the phenomena are not controllable, the pilot has to release load in safety zones. During drop off the load no persons and objects are in the zone.	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
12/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Brown/Whiteout effect	4	4	8 HIGH	at development of applicable SOP	 Clean up working zones as good as possible. Select length of loading equipment to reduce downwash effect. The pilot and ground specialist has to keep radio communication alive! Stop operation if monitoring cannot be assured. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
13/18	01.03.2018	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Arrival of empty and oscillating hook	4	4	8 HIGH	at development of applicable SOP	 The pilot has to select a low speed when arriving, observe hook, stabilize hook before approaching. The length of the line has to be so large that it is impossible to hit the hook in the tail rotor. 	3	2	5 LOW	26.04.2018 SOP approval by CAA: SI- SPO/HR 001-3	Initial process completed	Sernc Zoran
14/18	21.03.2018	<u>CAT:</u> High number of people at the event to be transported - Planica 2018	3	3	6 MEDI-UM	22.03.2018	The landing and take-off sites should be additionally protected by a fence Minimum two ground specialist should be presented on each landing and take-off sites.	2	2	4 LOW	22.03.2018	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk I	evel before	action			Risk	level after a	action	Date of		
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	Estimated date of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	Process status	Responsible person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15/18	25.04.2018	In a scope of safety briefing for year 2018 the SMS manager describe following Service Information Notice relating to safety events: Airbus-Helicopter SIN 3007-S-00 – Wearing polarized sunglasses	5	2	7 HIGH	mitigation action was describe during Annual safety briefing	Wearing polarized sunglasses in flight can have an impact on the good reading of information displayed on the cockpit panel. DO NOT use of polarized sunglasses in flight.	1	2	3 LOW	26.04.2018	Initial process completed	Roman Bernar
16/18	25.04.2018	In a scope of safety briefing for year 2018 the SMS manager describe following Service Information Notice relating to safety events: Airbus-Helicopter SIN 3242-S-00 – Reporting of in-service events	3	3	6 MEDI-UM	mitigation action was describe during Annual safety briefing	Airbus Helicopters requests from operators to provide information on all events considered as abnormal, occurring within the scope of aircraft operation or maintenance, within 2 working days. For that procedure the Airworthiness Postholder is responsible.	2	2	4 LOW	26.04.2018	Initial process completed	Roman Bernar
01/19	31.01.2019	CAA correction action answer relating to Flycom correction action plan No FLD02-064-18 for finding No OPS.FLO.2018.001: Flycom did not following the chapter 14 - Mnanagement of change - of SMM, which refers to new Basic Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018.	4	1	5 LOW	01.02.1019	On the basis of replacing Basic Regulation (EU) 216/2008 by new Basic Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018, no additional action is requested by Flycom, because new Basic Regulation (EU) 2018/1139 have no influences to Commission Regulations	1	1	2 LOW	01.02.1019	Initial process completed	Roman Bernar
02/19	31.01.2019	New regulations: – Commission Regulation (EU) 2018/394 – Commission Regulation (EU) 2018/1042 – Commission Implementing Regulation (EU) No 2018/1975	4	1	5 LOW	01.02.1019	Commission Regulation (EU) 2018/394 (adopted opinion 01/2016) have no influences to Flycom operations. Commission Regulation (EU) 2018/1042 (adopted opinions 15/2017 and 14/2017) have no influences to Flycom operations. Commission Implementing Regulation (EU) No 2018/1975 (adopted opinions 07/2017 and 10/2017) have no influences to Flycom operations.	1	1	2 LOW	01.02.1019	Initial process completed	Roman Bernar



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
3/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Low level flights	4	4	8 HIGH	at development of applicable SOP, rev 01	 The route, pick-up and delivery zones should be checked for obstacle and obstructions by the pilot before operations start. The task specialist should always observe flight path, stay in radio contact with the pilot and guide the pilot to avoid obstacles and obstructions. 	3	3	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
4/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): High flight altitudes	3	3	6 MEDIUM	at development of applicable SOP, rev 01	 Oxygen Requirements: 10.000ft – 13.000ft maximum 30Min (without additional O₂), at 13.000ft and above additional O₂ is mandatory for all occupants. Helicopter performance at high altitudes: Check HOGE performance before the flight; keep the wind from right-front sector; plan operations early in the morning and late in the afternoon; 	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
5/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Confined areas	4	4	8 HIGH	at development of applicable SOP, rev 01	 The proximity of the ground and obstacles require a permanent attention of the flight crew and proficient assistance of ground task specialist. The flight crew should plan flight route, where the emergency landing can be possible or to minimize exposure over confined areas. 	3	3	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
6/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Man-made obstructions and ground activities - collision with structures	3	4	7 MEDIUM	at development of applicable SOP, rev 01	 All pilots should be well briefed in terms of operation in height of power lines towers, cables, buildings and trees in the area of operation. A intensive survey of the operational site should be performed by the pilot and the task specialist before starting operations. Task specialist should always observe flight path, stay in radio contact with the pilot and guide the pilot to avoid obstacles and obstructions. The length of the line of sling load has to be chosen long enough that the load should be above obstacles, trees and terrain. 	3	2	5 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
7/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Downdraft	4	4	8 HIGH	at development of applicable SOP, rev 01	 Contour flying requires the helicopter to maintain a constant sling load height above the terrain for which a sufficient climb performance must be available. The flight crew should increase "power reserve" when planning flights during downdrafts conditions. If there is any doubt about safety the operation shall be aborted. 	3	3	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
8/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Settling with Power – Vortex Ring State	3	3	6 MEDIUM	at development of applicable SOP, rev 01	 Where operating helicopter with low speeds a pilot should avoid rates of descend greater than 300 feet per minute. A pilot has to observe VSI and set VS to protect, if in the situation recover, drop the load. 	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran



PART – 4.6: Hazard Register

	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
9/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Slow speeds	4	4	8 HIGH	at development of applicable SOP, rev 01	The pilot shall find himself flying at critically slow airspeeds during strong tailwinds. The pilot should determinate a minimum speeds and minimum flight heights on the bases of H-V diagram and reduce exposure time.	3	3	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
10/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Engine failure and emergency landing	5	2	7 MEDIUM	at development of applicable SOP, rev 01	 The pilot must be vigilant to any power loss. Proper piloting is essential for minimizing the consequences. Wearing proper PPE (helmet, hard hat, goggles, steel toe cap shoes, adequate clothing). Select flight path to minimize exposure over population and hostile structures. When operating over the water the crew will be equipped with adequate survival equipment ranging from life vests, rafts and dry suits. NOTE: A mitigating circumstance is favorable statistics of Arriel 2B and 1D engine; Engine failure rate ii 2.189.400 FH/5 years for Arriel ID and Arriel 2B engines is 0,18x10E-5/FH; EASA calculated average far single engine helicopters is 0,74xIOE-5 (source: FOCA AltMoC Helicopter operations over hostile environment); 	4	2	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
11/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Lack of power/performance	3	3	6 MEDIUM	at development of applicable SOP, rev 01	 All pilots should check HOGE performance before the flight, keep the wind from right-front sector; avoid downdrafts; Adjust helicopter mass according to HOGE; Avoid low-speed downwind turns; Stay vigilant to power and wind conditions; The ground task specialist shall define weight carefully and designate escape routes where to release "too heavy" loads. Pilot should select flight path to minimize exposure over population and hostile structures. 	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
12/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Bird strike	5	3	8 HIGH	at development of applicable SOP, rev 01	The pilot shall check available bird tams. The crew shall wear the protection gear, e.g. helmets (with visor), glasses, gloves, etc.	4	2	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
13/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Limited flight crew experience	3	3	6 MEDIUM	at development of applicable SOP, rev 01	The flight crew may not maintain permanent currency. They should take refresher sorties as needed and provided by OM and SOP.	3	2	5 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran

Revision #12



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	oction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
14/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): High temperatures	3	3	6 MEDIUM	at development of applicable SOP, rev 01	 Helicopter performance at high altitudes: Check HOGE performance before the flight; keep the wind from right-front sector; Plan operations early in the morning and late in the afternoon; 	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
15/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Noise	3	3	6 MEDIUM	at development of applicable SOP, rev 01	 The crew shall wear the active noise cancelling headsets or other noise protection equipment. The ground task specialist shall wear the headsets to keep radio communication alive or other noise protection and communication equipment. The missions over the congested areas shall be planned with minimum weight of helicopter and flying in head wind conditions, which reduces the power of the helicopter and consequently the level of noise. 	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
16/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Pressure changes	3	3	6 MEDIUM	at development of applicable SOP, rev 01	The pilot shall avoid rates of descend greater than 1000 feet per minute.	2	2	4 LOW	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
17/19	24.03.2019	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Positioning the load above the ground staff	4	4	8 HIGH	at development of applicable SOP, rev 01	 The helicopter shall approach from a level or a flight path below or beside the ground task specialist to minimize or remove the time the load is above the task specialist. Task specialist should always observe flight path, stay in radio contact with the pilot and guide the pilot to positioning a load 	4	3	6 MEDIUM	20.06.2019 SOP approval by CAA	Initial process completed	Sernc Zoran
01/20	24.04.2020	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO, Load 1 and Load 2): Dangerous goods transported containers or barrels leakage	4	4	8 HIGH	at development of applicable SOP, rev 03	If containers or barrels are carried in nets, they must be lined with a rubber lining or must be placed on the pallet to prevent damages in case of cargo hard dropping-off.	4	2	6 MEDIUM	10.10.2020 SOP approval by CAA	Initial process completed	Sernc Zoran
02/20	15.09.2020	HELICOPTER EXTERNAL SLING LOAD OPERATIONS (HESLO. Load 1 and Load 2): Bora wind	4	4	8 HIGH	at development of applicable SOP, rev 00/HR	Wind speed in Dinaric coastal mountains and over congested areas should not be exceeded 15 kts.	3	3	6 MEDIUM	26.01.2021 by high-risk authorization	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
03/20	29.09.2020	HELICOPTER EXTERNAL SLING				at development	The task specialist should:				10.10.2020	Initial	Sernc Zoran
		LOAD OPERATIONS (HESLO,	4	4	8	of applicable	1. load and secure the dangerous goods in such a way as to reduce the	٨	2	6	SOP	process	
		Load 1 and Load 2):	4	4	HIGH	SOP, rev 05	possibility of the load overturning. Pallets, flat-bottomed baskets, fle-	4	2	MEDIUM	approval by	completed	
		Overturning of dangerous goods					2. determinate a flat surface for delivery of dangerous goods.				CAA		
04/20	29.09.2020	HELICOPTER EXTERNAL SLING				at development	Dangerous goods shall be checked for the integrity of packaging before				10.10.2020	Initial	Sernc Zoran
		LOAD OPERATIONS (HESLO,			Q	of applicable	they are placed or fasten to the external sling loading equipment.			2	SOP	process	
		<u>Load 1 and Load 2):</u>	4	4	нсн	SOP, rev 05	Dangerous goods should be refused, if packaging is damaged,	1	1	1.0W	approval by	completed	
		Dangerous goods dis-integrity of			mon					LOW	CAA		
		packaging											
05/20	29.09.2020	HELICOPTER EXTERNAL SLING				at development	The external sling load containing dangerous goods packages must be				10.10.2020	Initial	Sernc Zoran
		LOAD OPERATIONS (HESLO.			6	of applicable	segregated in all cases between different classis/divisions of dangerous			2	SOP	process	
		<u>Load 1 and Load 2):</u>	4	2	MEDIUM	SOP, rev 05	goods. Only one classis/divisions of dangerous goods should be located in	1	1	IOW	approval by	completed	
		Segregation of incompatible					one sling load.				CAA		
		dangerous goods											
06/20	01.12.2020	PARACHUTE OPERATION by				at development	The airplanes we use for Parachute operations are single-engined. The				01.01.2021,	Initial	Sernc Zoran
		AIRPLANE:				of applicable	crew is permanently exposed to engine failure and a consequent				by issue of	process	
		Engine failure at low altitude				OM for SPO(A)	emergency landing or ditching. There are poor chances to perform a				OM for	completed	
							complete engine relight at low altitude and with full load of skydivers	-			SPO(A)		
			A	2	MEDIUM		onboard.	В	1	LOW			
							KISK CONTROI:						
							1. Pliot must be vigilant to any power loss encountered						
							2. Select the suitable emergency landing field						
							3. Prepare skydivers for impact (neads down, leaning to each other)						



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
07/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Engine failure at high altitude	В	2	MEDIUM	at development of applicable OM for SPO(A)	The aircrafts we use for skydive operation are built to carry heavy loads of skydivers (up to 10) at once, which means the airplane is heavy loaded most of its flight time. Engine failure is always a possibility, which can result in outside emergency landing, ditching or even leaving the airplane. The positive side of high altitude engine failure is that we have more time to relight the engine or to calculate and consider proper landing sites. Risk control: 1. Pilot must be vigilant to any power loss encountered 2. There is enough time to select the best field for landing or even return to airport. 3. Engine can be relighted if the problem of engine failure is not in engine itself	С	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
08/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Static line jumps	В	3	MEDIUM	at development of applicable OM for SPO(A)	With static line jumps, student Skydivers main canopy is connected with line to airplanes bench, which pulls the main canopy from container, after skydiver exits the aircraft. After skydiver is gone, the static line is still hanging outside the airplane, hitting the back fuselage with its metal parts. The skydive instructor is responsible pull the static line back inside the airplane and properly secure it. Risk control: 1. Those kinds of jumps are prohibited	E	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
09/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Emergency descent with skydivers onboard	В	4	HIGH	at development of applicable OM for SPO(A)	There are multiple reasons possible (weather change, medical problems, fear, disobedience of passengers, etc). The pilot needs to consider active AAD (Automatic Activation Devices) in parachutes, which can open reserve parachutes if rate of descent is to high at low altitude. Risk control: 1. Pilots reduces ROD above 2000 ft AGL to normal approach rate. 2. Skydivers can turn off their AAD devices.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran

Revision #12



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	ction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
10/20	01.12.2020	PARACHUTE OPERATION by <u>AIRPLANE:</u> Descent after dropping skydivers	A	2	MEDIUM	at development of applicable OM for SPO(A)	After skydivers leave the aircraft, pilot initiates a pitch down attitude. Descent angle is very steep and pilot needs to have a really good mental picture what is beneath to safely descent, specially in steep and narrow valleys. They must also ensure not to descent above dropping point, to stay clear of skydivers. Risk control: 1. Pilots descents away from jump run direction and dropping point. 2. Pilot approaches the airport at special care, looking out for possible open parachutes. 3. Local ATC can inform the pilot when all parachutes have opened, so it's safe for approache	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
11/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Dropping of wingsuiters	A	3	HIGH	at development of applicable OM for SPO(A)	The biggest hazard arises on exit, when wing suiters jump and immediately open their wings to start flying. Pilot needs to have in mind, that as soon as the wings open, they start flying horizontally. The risk arises, when the pilot wants to descent, not hitting the wing suiters. Risk control: 1. Pilot waits with starting the descent for about 15 seconds after the last one has jumped out. 2. Pilots keeps an eye of exit direction of the wing suiters. 3. Pilot chooses a descent direction which significantly differes to a wing suiters glide path.	A	1	MEDIUM	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
12/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Parachute opening on exit	A	3	HIGH	at development of applicable OM for SPO(A)	Skydivers parachute can open if they are treated uncarefully, especially in tight spaces such as aircraft cabin. The biggest risk arises, when the doors open and there is a possibility that reserve or main parachute deploys and catches on any part of the airplane fuselage, control surfaces or the tail. Risk control: 1. Skydivers are briefed in more detail. 2. Pilot uses his rearview mirror to supervise exits. 3. Each skydiver checks gear and handles of other nearby skydiver before exit.	A	1	MEDIUM	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
13/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Exit point	В	4	HIGH	at development of applicable OM for SPO(A)	Determination of exit point is done by the pilot and it is one of the most critical parts of a safe jump run. The pilot needs to consider the wind conditions, number of skydivers on board, types of skydivers, traffic below, speed over ground, surrounding terrain, etc, not to drop skydivers over problematic areas (condensed, high-terrain, water, obstacles,). Risk control: 1. Pilot gets information about exit point from first skydiver who looks down. 2. Pilot uses his windows and GPS devices to determine best suitable dropping point. 3. Pilot makes two jump runs if needed to ensure that skydivers jump at specific point.	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
14/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Jump run with students	с	4	MEDIUM	at development of applicable OM for SPO(A)	Jump run is defined as a flight direction above the dropping point, extending from exit point to the point when all skydivers leave the aircraft. When students with very little experience are on board, length and time of jump run can increase significantly, resulting in unwanted dropping point for last skydivers. Risk control: 1. Skydive instructor helps the student to get out quickly. 2. Pilot decides when the jump run is not safe anymore and makes another jump run.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
15/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> High altitude flights	с	4	MEDIUM	at development of applicable OM for SPO(A)	The airplanes are not pressurized, when flying above 10.000 ft, pilots and skydivers are subject to hypoxia. Risk control: 1. Flight time above FL100 is very little (below 5 min). 2. Pilot assures oxygen bottles are onboard in case of any problems. 3. If any problems occur, pilot descents below FL100.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
16/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Downdraft	с	4	MEDIUM	at development of applicable OM for SPO(A)	Downdrafts may be expected in windy condition near steep slopes in the hilly or mountainous terrain. Intensity of the downdrafts may well exceed airplane's climb performance. Risk control: 1. Pilot should increase power reserve. 2. If any doubt about safety, operation should be aborted.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran

Revision #12

Date of revision: January 1, 2021 Date of print: February 22, 2021



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
17/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Lack of performance	В	4	HIGH	at development of applicable OM for SPO(A)	The parachute activities are conducted at elevations which impair available power. Lack of power might be critical at some steep climbs along the terrain, especially when operating at high density altitudes the engine power output may not be sufficient for the given flight parameters. Risk control: 1. Avoid low speeds downwind turns. 2. Avoid flying to close to terrain. 3. Pilot should select flight path to minimize exposure to population and structures.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
18/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> High temperatures	с	3	MEDIUM	at development of applicable OM for SPO(A)	The airplanes are not air conditioned. During the work in hot environment the crew will be exposed to extremely high temperatures. Airplane performances are degraded during high temperatures too. Risk control: 1. Plan most of operation during early or late day hours. 2. Drink enough of liquids. 3. Stop operation if conditions are not safe.	D	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
19/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Noise	с	3	MEDIUM	at development of applicable OM for SPO(A)	The noise created by the airplane engine is transferred to the cockpit and cabin. At all times the crew shall wear the headsets or other noise protection equipment. The noise is additionally transferred to the environment too. To minimize the noise influences the climb out direction should be away from condensed areas or narrow valleys, preferably in head wind conditions, which reduces the level if noise. Risk control: 1. Pilots should wear noise cancelling headsets. 2. Operation over congested areas should be kept to a minimum and appropriate flight path directions chosen.	D	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
20/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Weather change	В	5	HIGH	at development of applicable OM for SPO(A)	Weather conditions throughout the day can vary and differ significantly, that's why pilot needs to keep an open eye for all deteriorations in weather conditions. Risk control: 1. If rapid changes of weather, pilot should have live information about weather (SIGMETs, METARs, wind changes). 2. Operation should be cancelled if unpredictable weather.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran

Date of revision: January 1, 2021 Date of print: February 22, 2021



	Haz	ard identification	Risk l	evel before	action	Estimated date		Risk	level after a	iction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
21/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Skydivers with colored smoke bombs	В	3	MEDIUM	at development of applicable OM for SPO(A)	Skydivers jumping from our aircrafts, are sometimes specially trained professionals, who conduct demo jumps with coloured smoke bomb attached on their legs. The smoke bombs are triggered on airplane door just before exit. Pilot and skydivers need to take special care when operating such jumps, as the smoke can fill the cabin, blindfolding the pilot and preventing the visual conditions through the windshield. Risk control: 1. Only very experienced skydivers should be allowed to jump and a very strict briefing should be made before flight. 2. Pilot should take special care when skydivers deploy the bombs. 3. Skydivers should check each other for any unwanted movements	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
22/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Taxiing with skydivers	с	4	MEDIUM	at development of applicable OM for SPO(A)	Airplane with 10 skydivers onboard is considered fairly heavy, now we add also unpaved terrain (dirt runways, grass taxiways, etc.) and the risk for malfunction on ground gets bigger. The pilot may not see the hole or bump in the ground, which can cause structural damage to the airplane. This risk especially applies to uncontrolled airfields, from which parachute operations can take place. Risk control: 1. Taxiing is considered as high workload phase, so special care should be taken by pilot, to look outside and take measures if something is not right. 2. Pilot may request a taxiway/runway status report from airport operator to ensure there are no hidden objects on taxi path. 3. Pilot should taxi with slow speed, especially on unpaved or grass surfaces in order to stop immediately to prevent unwanted damages or incidents.	D	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran

Revision #12



	Haz	ard identification	Risk le	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
23/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Aircraft loading and climb	A	3	HIGH	at development of applicable OM for SPO(A)	Special care should be taken, when parachuters are loading the aircraft as the Centre of gravity position is very important for safe conduct of flight. The improper loading of aircraft may not be seen on ground, but presents a high risk in climb phase, as the balance may shift even more, due to pitch up attitude and skydivers sliding to the back of the airplane, which can lead to a loss of airplane control. Risk control: 1. For loading of the aircraft a Task specialist should be properly briefed in order to ensure the aircraft is properly loaded and that jump out order is correct. 2. If pilot suspects, the loading is wrong, he should take actions in order to change the seating positions or ask some skydivers to stay on ground. 3. All parachuters are weighted each year and their weight is entered into our manifest software. The weight data of all flights is accessible to the pilot.	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
24/20	01.12.2020	<u>PARACHUTE OPERATION by</u> <u>AIRPLANE:</u> Pilot training for parachute operation	В	2	MEDIUM	at development of applicable OM for SPO(A)	 Pilots who fly for Aviofun d.o.o., come from different flight schools, organisations, operators and their parachute operation courses and trainings may vary very differently. So special care should be taken, providing new pilots a good operational flight check and training to satisfy company regulations and all safety matters. There is no prescribed parachute operation courses or trainings available, that is why every operator has their own rules and ways of training. Risk control: FLYCOM Aviation regulation is that new pilots must make at least 5 parachute flights with instructor, even more if deemed necessary. The pilot training should be performed in different weather conditions and aircraft configurations (different loading, fuel,) 	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran



							r						
	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	ction	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
25/20	01.12.2020	AEROPHOTO OPERATION by				at development	Aerophoto operations have pre-described line altitudes at which the pilot				01.01.2021,	Initial	Sernc Zoran
		<u>AIRPLANE:</u>				of applicable	must fly. The lines are normally flown at altitudes at least 1000ft AGL, but				by issue of	process	
		Low level flights				OM for SPO(A)	terrain is not ideally flat, so sometimes operations seldom deviate below				OM for	completed	
							those limited by rules of the air.				SPO(A)		
			В	2	MEDIUM		Risk control:	В	1	LOW			
							1. The aerophoto flight plan should be reviewed with mission operator, to						
							discuss all possible threats during the flight.						
							2. If the pilot sees, the altitude will be too low, he needs to abort the						
							mission and leave the assigned line.						
26/20	01.12.2020	AEROPHOTO OPERATION by				at development	Bird strike risk is usually attributed to a greater proportion of flight				01.01.2021,	Initial	Sernc Zoran
		<u>AIRPLANE:</u>				of applicable	conducted at low levels. In some cases, windscreen bird penetration may				by issue of	process	
		Bird strike				OM for SPO(A)	result in injury to pilots and has sometimes led to loss of control. Low				OM for	completed	
			Α	3	HIGH		speeds decrease severity of consequences.	В	2	MEDIUM	SPO(A)		
							Risk control:						
							1. Pilot should check for possible bird tames.						
							2. Pilot should take immediate actions to deviate away from bird flocks.						
27/20	01.12.2020	AEROPHOTO OPERATION by				at development	Normally aerophoto projects are very large with a numerous line that we				01.01.2021,	Initial	Sernc Zoran
		<u>AIRPLANE:</u>				of applicable	need to fly. Our airplanes are equipped with additional long-range fuel				by issue of	process	
		Long aerophoto missions				OM for SPO(A)	tanks, which allow us to extend our aerophoto operations for about 3h.				OM for	completed	
			Р	2			Flying single pilot for 7h straight can be exhausting, physically very	р	1		SPO(A)		
			D	2	INEDION		dangerous, due to lack of attention, prone to mistakes, etc.	D	I	LOW			
							Risk control:						
							1. Additional pilot is required for operations more than 4h.						
							2. Mission should be aborted if any exhausting factors are visible.						



			D : 1 1					D: 1					
	Haz	ard identification	RISK I	evel before	action	Estimated date	Short description of mitigation action / proposed controls	Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
28/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Traffic avoidance	A	2	MEDIUM	at development of applicable OM for SPO(A)	Most of aerophoto projects are flown at altitudes, where majority of light aircraft traffic or even non-powered aircraft is flying. Some aircrafts don't even have transponders and are not using and reporting to ATC services. Which can lead to undetection of traffic, close encounters or even mid-air collisions. Risk control: 1. ATC traffic services should be used at all times. 2. Aircrafts should be equipped with traffic warning devices, such as FLARM, TCAS. 3. When flying in areas with known busy traffic, additional pilot should be	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
29/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Radio communication failure	с	3	MEDIUM	at development of applicable OM for SPO(A)	required. Lack or loss of communication during operation can lead to misunderstandings and the possibility for entering in unwanted, restricted areas with no prior clearance. Risk control: 1. Mission should be aborted and landing at the nearest suitable airfield performed. 2. A outside VHF radio should be taken.	D	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
30/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Flying over congested areas	D	2	MEDIUM	at development of applicable OM for SPO(A)	Operation over congested areas can result in harming people's eyes on the ground, if they use binoculars and are looking from below into active LiDAR cameras. Flying over congested areas can also result in no suitable/possible emergency landing area in case of engine failure. Risk control: 1. Camera operator should regularly check the power of LiDAR cameras, so there is no risk for people below. 2. Pilot should fly higher over such areas, to increase the possibility to glide away and land at suitable field in case of engine failure.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran



	Haz	ard identification	Risk I	evel before	action	Estimated date		Risk	level after a	action	Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
31/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Aerophoto in prohibited zones	с	5	HIGH	at development of applicable OM for SPO(A)	Zones are prohibited for a reason and each zone has their own specifics, which need to be educated properly. Flying in prohibited zones can result in sanctions if not flown as agreed with all relevant authorities prior to flight. Risk control: 1. Pilot should attain all necessary documents, approvals for such flights and clarify all doubts with appropriate authorities. 2. Pilot should always have a contingency plan when flying in this zone. 3. If any abnormality arises, pilot should leave the zone by most speditious means possible. 4. Camera operator should switch off cameras by pressing emergency	В	2	MEDIUM	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
32/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Pilot fatigue	D	4	HIGH	at development of applicable OM for SPO(A)	 Pilots can get fatigued, continuously looking at the aerophoto screen, looking outside and airplane instruments and checking all parameters, whilst flying. There is no autopilot possible on this kind of operation. The operations can sometimes up to 7 flight hours, which can result in serious pilot fatigue and loss of concentration. Risk control: Mission length should be reduced to max. 4 h and divided into more sections. Additional pilot should be added, to reduce the workload. Mission should be aborted if any fatigue is noticed. 	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran
33/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> High altitude flights	D	2	MEDIUM	at development of applicable OM for SPO(A)	Our airplanes are not pressurized. When flying above FL100, flight crew and task specialists are subject to hypoxia. Risk control: 1. If flights above FL100 are conducted, oxygen should be taken onboard. 2. Descent should be initiated if any signs of hypoxia are noted and mission aborted.	С	2	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran



PART – 4.6: Hazard Register

Hazard identification			Risk level before action			Estimated date		Risk level after action			Date of	Process	Responsible
Occurre nce S/N:	Identification date	Short description of hazard	Severity	Likelihood	Risk level	of mitigation	Short description of mitigation action / proposed controls	Severity	Likelihood	Risk level	item closing	status	person
1	2	3	4	5	6	7	8	9	10	11	12	13	14
34/20	01.12.2020	<u>AEROPHOTO OPERATION by</u> <u>AIRPLANE:</u> Engine failure and emergency landing	A	2	MEDIUM	at development of applicable OM for SPO(A)	The airplanes we use for such operations are single-engined. The crew is permanently exposed to engine failure and a consequent emergency landing or ditching. There are poor chances to perform a complete engine relight at low altitude. Despite very favorable statistics of Pratt & Whitney engines, used on such aircrafts, the consequences of engine failure at low altitude may be catastrophic. The pilot must be vigilant to any power loss encountered, with fast and correct actions right after that. Proper piloting is essential to minimize the consequences. Risk control: 1. Pilot must be vigilant to any power loss encountered 2. Immediate steps should be taken in finding a suitable emergency landing field. 3. ATC must be informed and if altitude permits relight initiated.	В	1	LOW	01.01.2021, by issue of OM for SPO(A)	Initial process completed	Sernc Zoran

24/23



Instructions for data entering;

- 1. Enter the serial number of identified hazard and risk assessment process
- 2. Enter the date when the hazard was identify
- 3. Enter short description of hazard or hazard title
- 4. Enter assessed likelihood risk of the identified hazard
- 5. Enter assessed severity of consequences evaluation risk of the identified hazard
- 6. Calculated risk probability; enter L (low) acceptable risk

M (medium) – risk is of concern, mitigation measures are required

- H (high) risk is unacceptable, major and immediate mitigation measures are required
- 7. Enter estimated date of mitigation action when the aviation safety risks should be managed
- 8. Enter short description of mitigation action or proposed controls for manage aviation safety risks
- 9. Enter assessed likelihood of the risk after mitigation
- 10. Enter assessed severity of consequences evaluation of the risk after mitigation
- 11. Calculated risk probability after mitigation; enter L (low) acceptable risk,
 - M (medium) risk is of concern, mitigation measures are required
 - H (high) risk is unacceptable, major and immediate mitigation measures are required
- 12. Enter date when the measures is implemented to operations (for example: manuals revision, additional instruction, change of procedures, etc.)
- 13. Enter the status of hazard identification and risk assessment process: enter **OK** process completed otherwise the widow is empty
- 14. Enter the person responsible for managing identified hazard.