

This document is a translation made by SHK of the original response in Swedish to the safety recommendation. In case of discrepancies between this translation and the Swedish original text, the Swedish text shall prevail in the interpretation of the response.

Summary of recommendations and implemented/planned measures for RM 2018:01

Recommendation RM 2018:01 R1

Develop the risk analyses in regard to tactical requirements and low-level flight with helicopters in consideration of the helicopter’s ability to handle aviary collisions as well as the occurrence and behaviour of birdlife.

Measures taken:

1. The risk analyses have been reviewed, resulting in the following.
The Air Combat Training School/Flying School have made adjustments to their execution of training with night vision goggles (NVG);
 - The speed when flying in the navigation paths has been lowered from 100 to 80kt, which reduces the impact energy in case of a bird collision. The bird is also given a greater possibility for evasive manoeuvres.
 - The altitude during the first four exercises (of six) has been raised to 65 feet and is then lowered to 20 feet in the last two exercises, which gives a shorter exposure at altitudes with more frequent occurrence of birds.
 - Adapted exercise planning with the aim of always having two helicopters flying in the same navigation path. This is done to startle fewer birds, as the area affected by noise from the helicopters becomes smaller than when using different navigation paths and the paths are also shortened to achieve the same effect.
 - The navigation paths have been rerouted in order to, as far as possible using the available information; avoid areas with a more concentrated bird population.
2. The Headquarters Air Force Department (HKV PROD FLYG) has produced documentation regarding the number of reported bird collisions with helicopters in order to provide a more clear basis in further processing.

The helicopter systems 10, 14, 15 and 16 have been selected as the basis, as statistics from these helicopter systems can be considered relevant for the period 2018 and on. The documentation covers the period 1994–2017 and the number of reported bird collisions is 120, with 111,577 flying hours.

Type	Total	Daylight	Darkness	Incident	Serious incidents
HKP 10	48	39	9	2	-
HKP 14	9	9	-	-	-
HKP 15	39	36	3	3	1
HKP 16	24	21	3	-	-

The documentation indicates a frequency of 10.8 reported bird collisions/10,000fh, a frequency of 0.5 reported bird collisions classified as incidents/10,000fh, and a frequency of 0.01 reported bird collisions classified as serious incidents/10,000fh.

The flight safety objective set by the Swedish Armed Forces (FM) for helicopters in 2012 (current) is <10.0 incidents/10,000fh and <0.7 serious incidents/10,000fh, irrespective of cause.

3. HKV PROD FLYG has conducted a simplified investigation regarding the possibility of equipping HKP15 with a fortified windshield, like the one used for the New Zealand version of the Augusta A109. The investigation indicates that this would be an extensive and costly modification.

Planned measures:

Discussions will be held within/between HKV PROD FLYG, Air Component Command (FTS) and the Helicopter Wing regarding the possibilities of further reducing the risks entailed by low-level flight with HKP 15.

HKV PROD FLYG intends to investigate the possibility of fitting the helmets used in helicopter systems 14, 15 and 16 with a protective visor when flying with NVGs.

Timeframe:

Quarter (Q) 4 2018

Responsibility of:

Head of Operations (VL)

Recommendation RM 2018:01 R2

Ensure that access to FRÄD meets the requirements of the risk analysis.

Measures taken:

Considering the weather limitations of the Swedish Maritime Administration and the fact that on a few occasions they have not responded to a red alert, the Head of Flight Operations (CF) has issued an operational order (OpO) 18:03 Limited flight operations:

The following limitations apply to flight operations in FM as of the issuing of this OpO, in general, by type of aircraft and by flight system:

General

In the planning of flights, greater consideration shall be given to the risk of a rescue helicopter not arriving in case of an alert.

Aircraft (FPL) 39

When flying over water, confirmation shall be obtained before each session that there is a rescue helicopter on standby that can arrive within 90 minutes to the exercise area in question.

The Flight Operations Coordinator (LiL) is permitted to deviate from their duty to report in case of a very urgent operation.

FPL60

When flying over water, confirmation shall be obtained before each session that there is a rescue helicopter on standby that can arrive within 90 minutes to the exercise area in question.

Helicopter

When flying over water, confirmation shall be obtained before each session that there is a rescue helicopter on standby that can arrive within 90 minutes to the exercise area in question.

The Local Head of Flight Operations (L CF) is permitted to deviate from their duty to report in case of a very urgent operation.

For helicopters, L CF is also permitted such deviations during joint exercises with vessels equipped with the resources to carry out rescue operations (localisation and rescue) within 90 minutes.

Transport and specialised aircraft (TpSpecflyg)

No limitations in addition to the general.

Unmanned aerial vehicle (UAV)

No limitations (also exempt from the general).

Other deviations from this OpO can be made by the CF.

Planned measures:

The Swedish Armed Forces and the Swedish Maritime Administration are working intensely to rectify the issues of availability and capacity of the Swedish Maritime Administration's rescue helicopters. The leadership of the Armed Forces and the Air Force is closely monitoring these efforts.

A review of which exercises we deem possible to carry out without access to FRÄD and in which conditions.

Timeframe:

This work is currently under way and is expected to be completed in 2018.

Responsibility of:

VL