Aviation Safety Analysis

Chris Balzia

Safety and Compliance Unit

Civil Aviation Directorate

MACE 2020 | FOCG Meeting | 18th November 2020

Discussion Points

This presentation will provide an insight on:

- ✓ Malta Civil Aviation Safety Report
  - Safety data related to year 2019
- ✓ Covid-19 RNO observations
- ✓ Occurrence Reporting
  - General observations
- ✓ Revision of State Documentation
  - Malta SSP and State Plan for Aviation Safety (SPAS)

tm

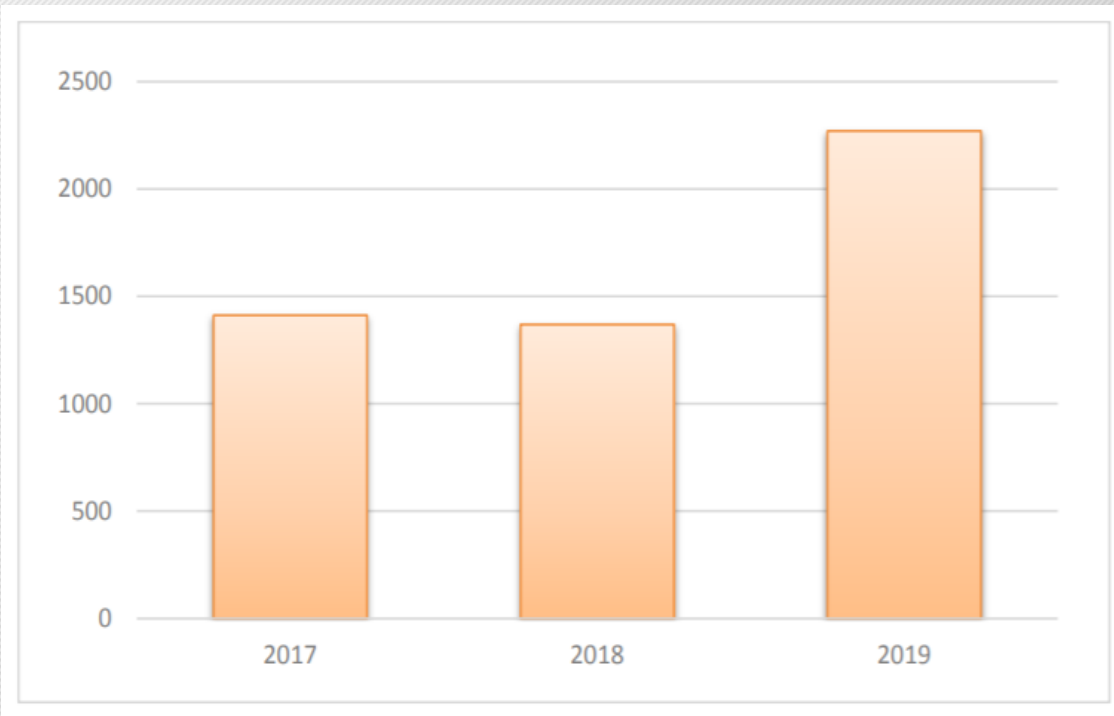# Malta Civil Aviation Safety Report
July 2020

TM-CAD Safety and Compliance Unit published its first interim Safety Review Report in July 2020 on the TM website.

- This will be published on an annual basis

- Data is extracted from the MOR/VOR database

- The Safety Report will identify the most common Occurrence Categories and also provide data on the SPI's identified in the Malta SPAS
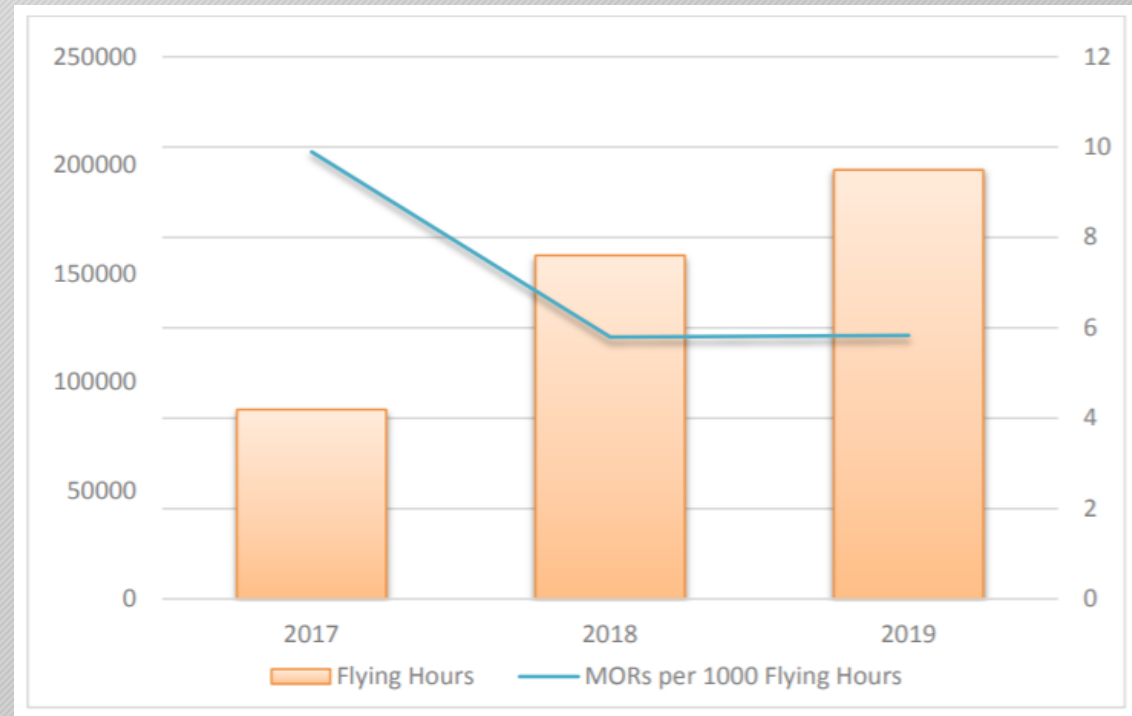
Malta Civil Aviation Safety Report
MOR Trends

Amount of MOR events received by TM-CAD (2017-2019)
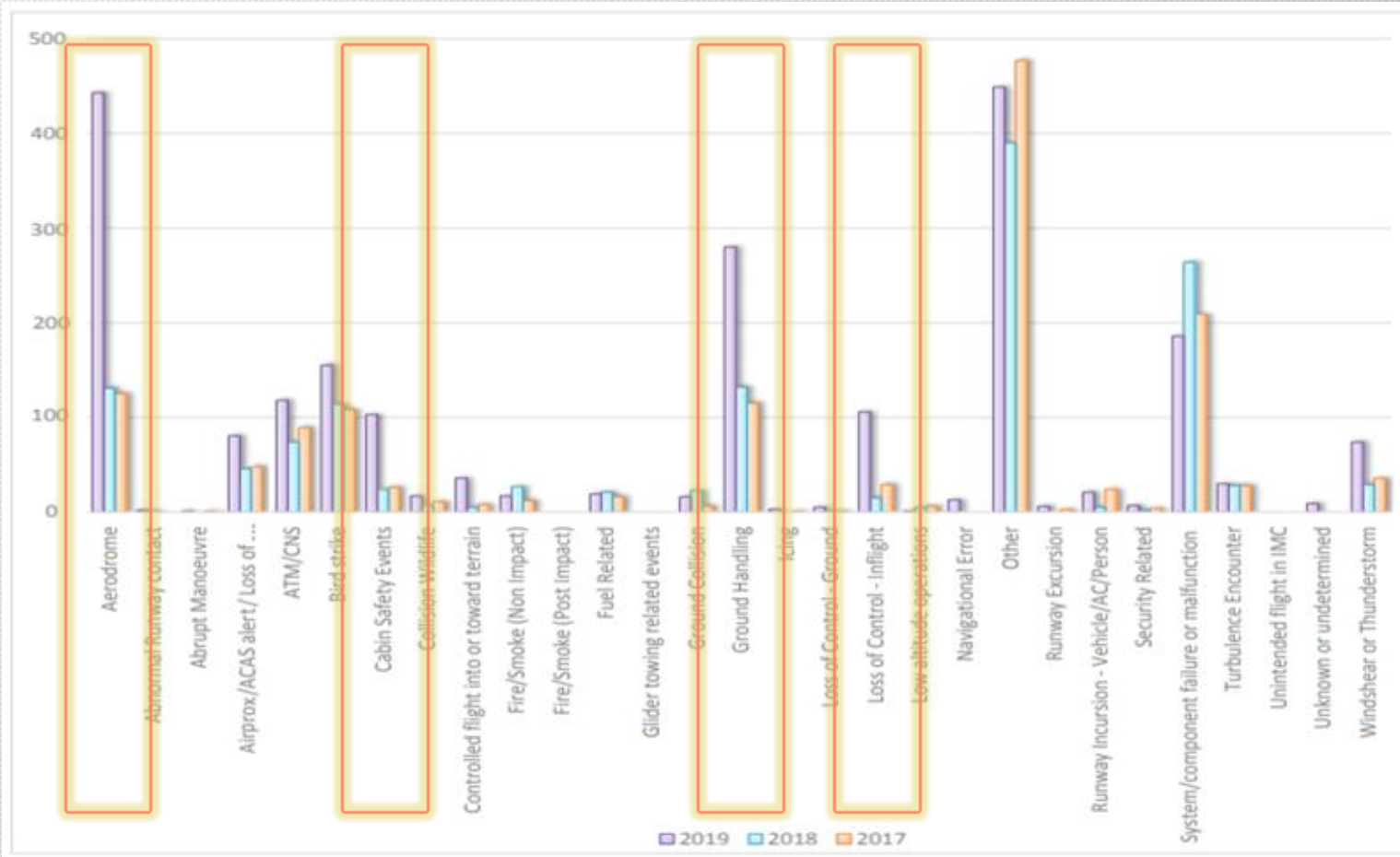

MOR submissions by Aircraft Operators relative to flying hours (2017-2019)

Significant increase in MOR submissions

TM-CAD received approximate 6 MORs per 1000FH

Malta Civil Aviation Safety Report

Occurrence Categories
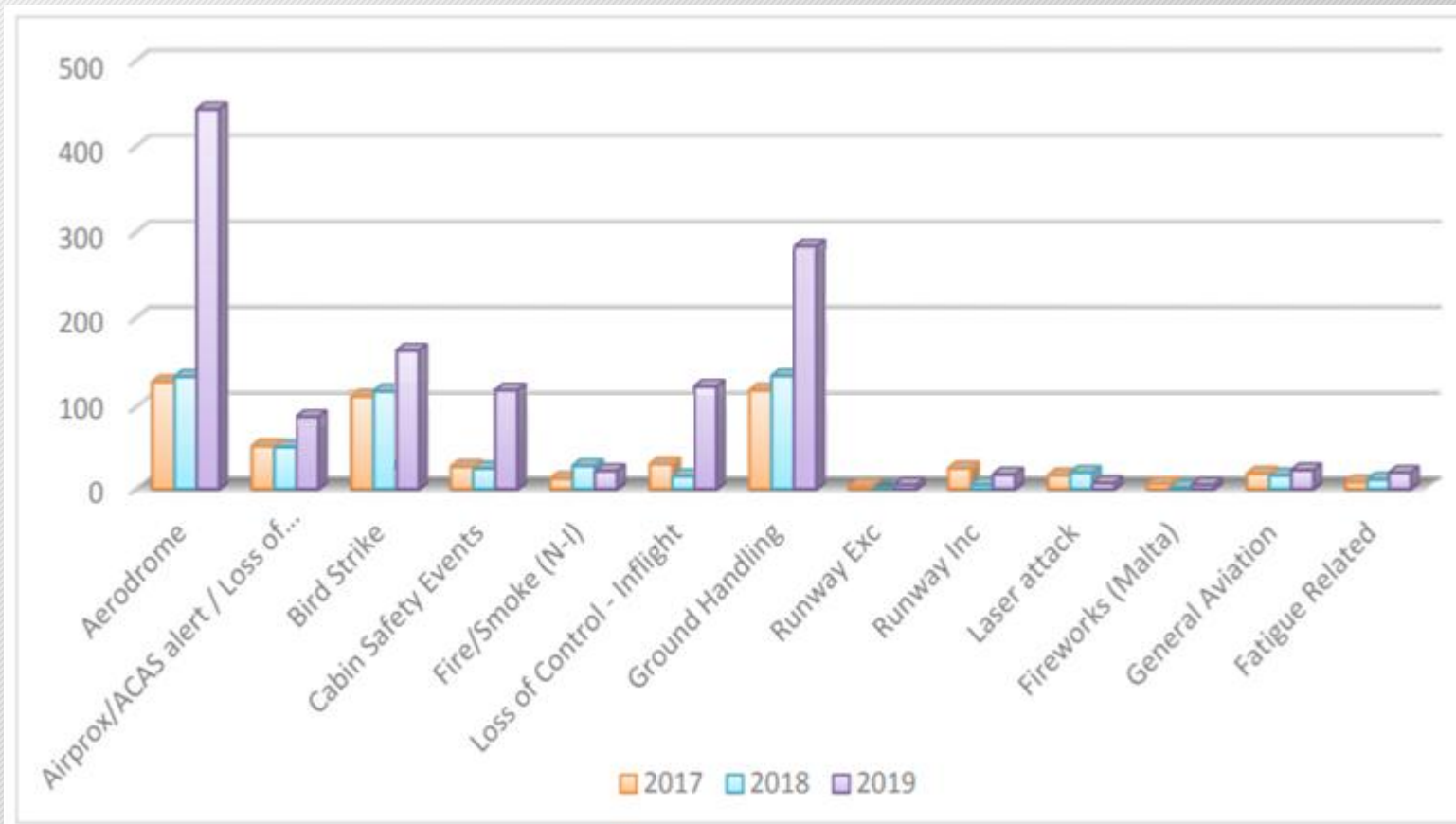

Considerable increases can be noticed for:

- Ground Handling
- Cabin Safety Events
- Aerodrome
- Loss of Control – Inflight

The increase is mostly related to:

- Increased operations
- Better categorisation by operators/organisations
- TM-CAD's evaluation process

Malta Civil Aviation Safety Report

Occurrence Categories – Malta State Safety Plan 2014-2017

Insights on:

- MAC (Airprox/TCAS alert/…)
- BIRD (Bird strike)
- CABIN (Cabin Safety Events)
- General Aviation
- Fireworks
- Fatigue

- F-NI (Fire/Smoke non impact)
- RAMP (Ground handling)
- LOC-I (Loss of Control in flight)
- RE (Runway Excursion)
- RI (Runway Incursion)
- Laser attack

MAC (Airprox/TCAS Alert/Loss of Separation…)

Pie chart: Other MAC events 85%, Involving UAS encounter 15%
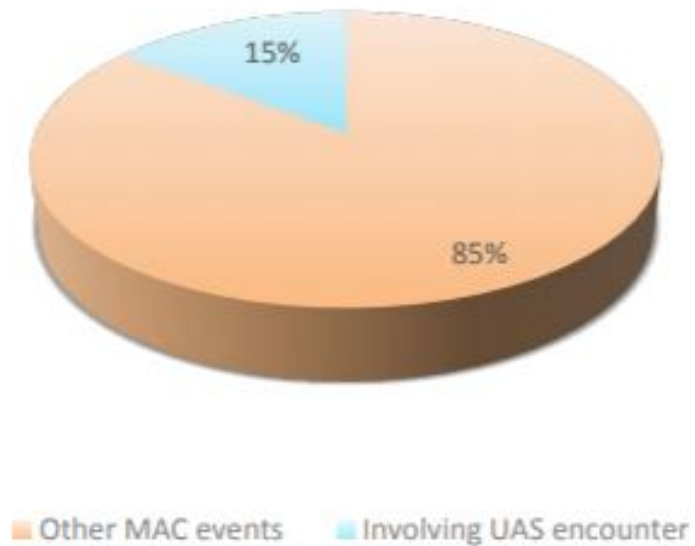
Between 2017-2019 15% of MORs involved a UAS sighting/close encounter.

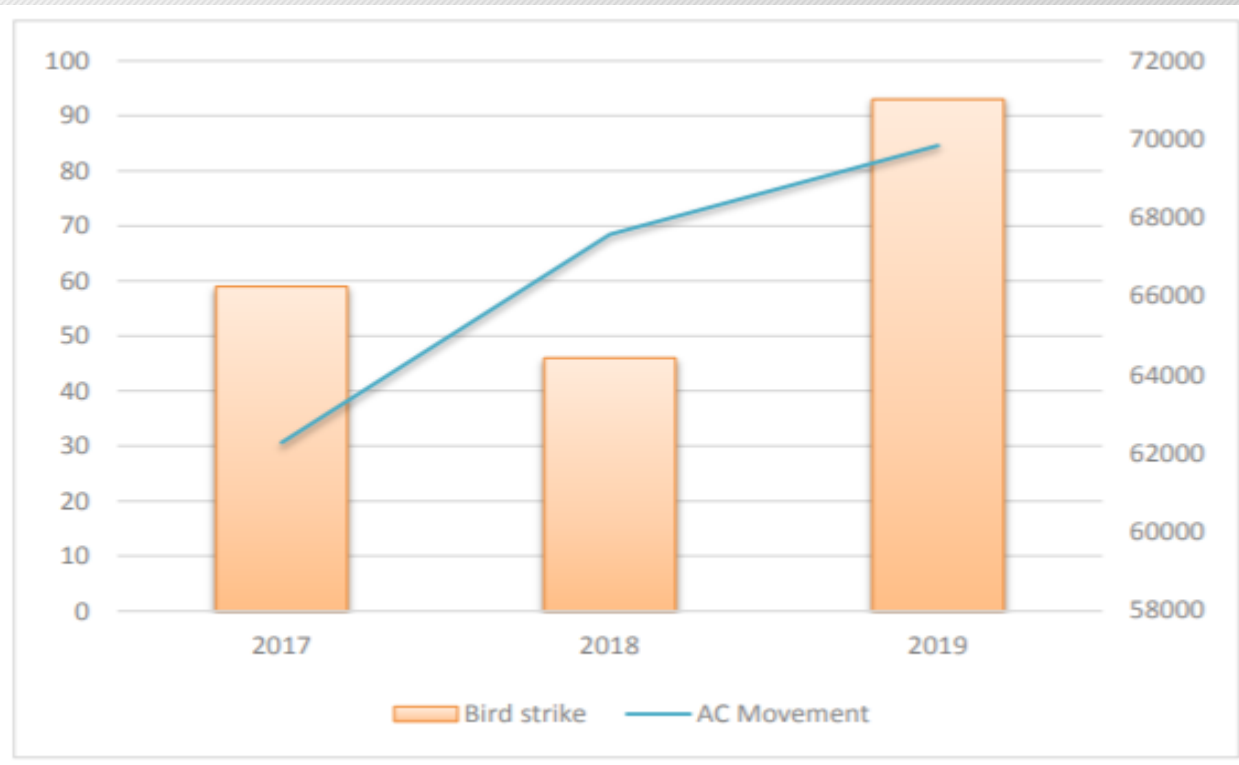In 2019, classified 88 events as such.

Common MAC events were related to:

- Level busts
- TCAS RAs

Matters of concern:

- Ignore TCAS call-out (traffic in-sight)
- Sightings of UAS

BIRD (Bird strike)

Bird strikes relative to aircraft movements at Luqa aerodrome LMML (2017-2019)

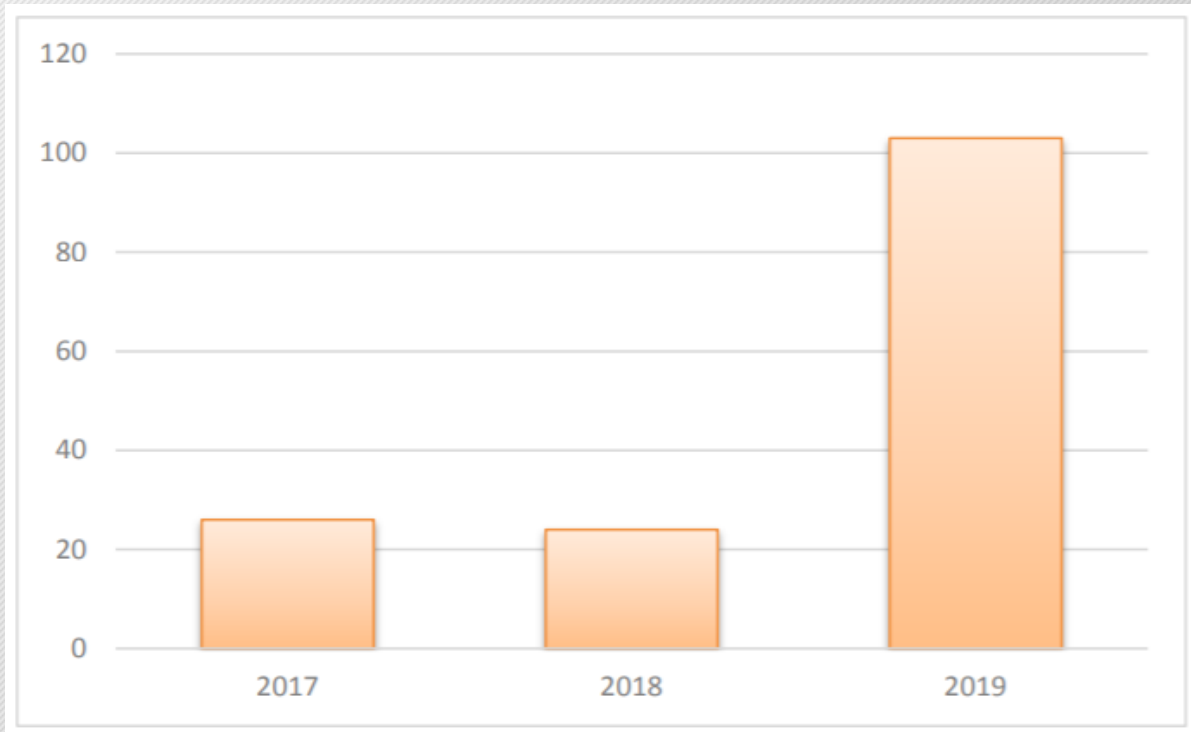In 2019, 93 bird strikes events where confirmed at Luqa aerodrome.

CAD is in liaison with aerodrome operator on this matter.

Covid-19 RNO: Natural increase in reported Bird strikes across various aerodromes.

Recommendation for the SMS to monitor for trends.

Cabin (Cabin Safety Events)

A significant increase when compared to previous years. 'Cabin Safety Events' has quite a wide Terms of Reference.

Most common:

- Unruly/drunk passengers
- Smoking in cabin lavatory

(2017-2019 = 70%)

- Use of onboard oxygen (portable – pax medical)

Covid-19 RNO

- 17 events related to non-obedience to protocols
- Some cases involved individuals under the influence of alcohol
- Observation: it is important that Cabin Crew/Staff are aware of the company's OHSA Covid-19 protocols.

LOC-I (Loss of Control in Flight)
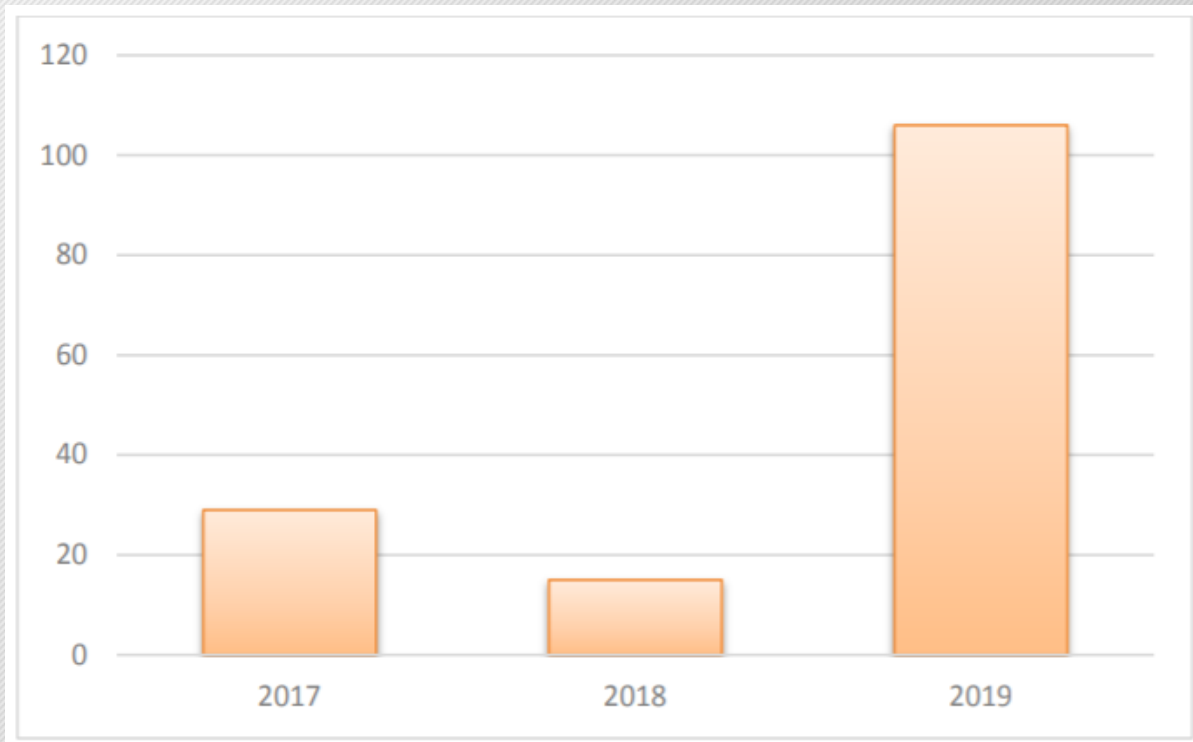
The increase is mostly attributed to the new evaluation under the LOC-I category, coupled with increased flight activity.

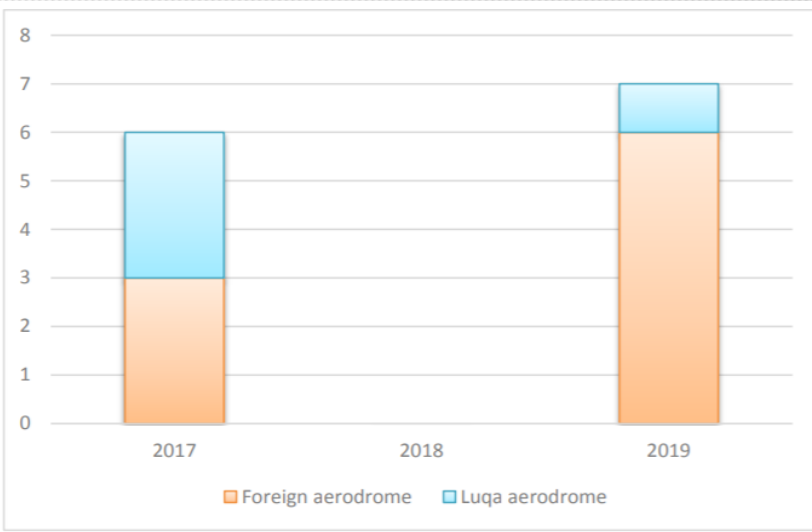In 2019, we had 106 events classified as such. No fatalities occurred.

Causes were:
- Unstabilised approaches
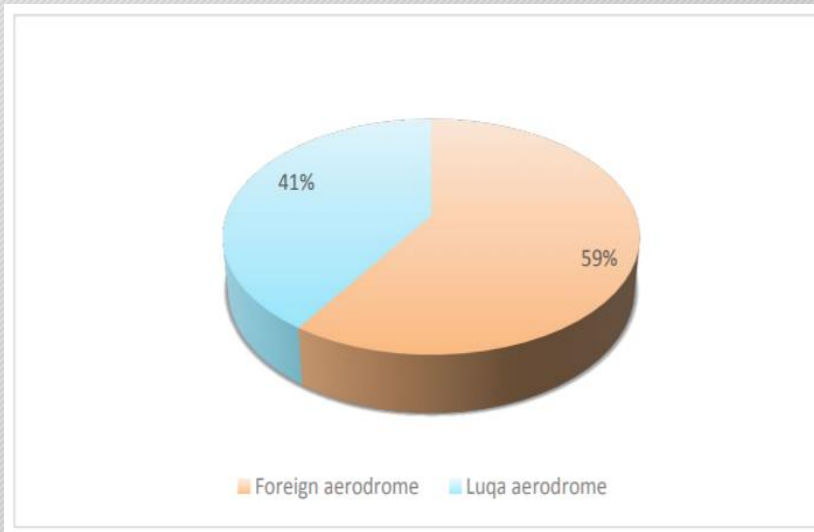- Incorrect aircraft configuration

Covid-19 RNO: Unstabilised approaches, high speed events increased.
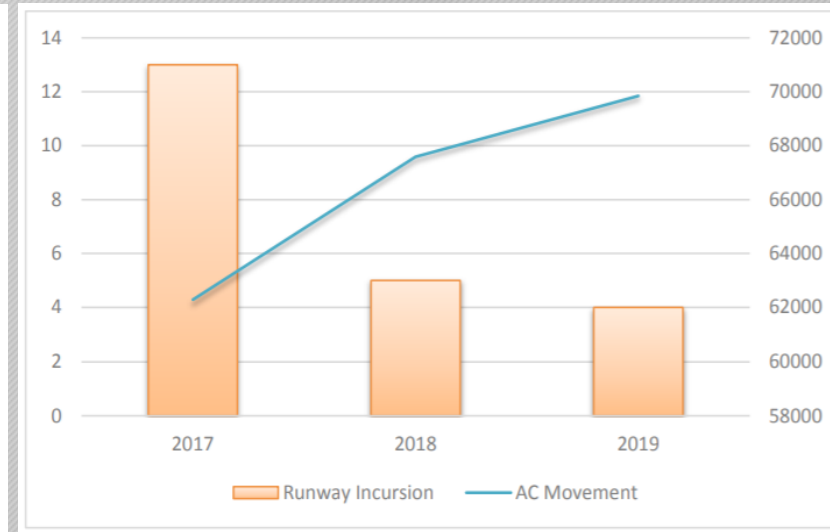Recommend SMS to monitor for trends

Runway Excursion / Incursion

Runway Excursions (2017-2019)


Runway Incursions (2017-2019)

Runway Incursions @ Luqa Aerodrome (2017-2019)

- 7 events in 2019
  - Majority- RE was the worst possible outcome
  - 1 investigated by the UK AAIB
- 1 of which at Luqa Aerodrome

- 21 reported events in 2019, of which 4 events were at Luqa aerodrome

Events were not a deliberate incursion:
  - Aircraft slowly exiting runway
  - Aircraft tow-truck incursion

Fatigue
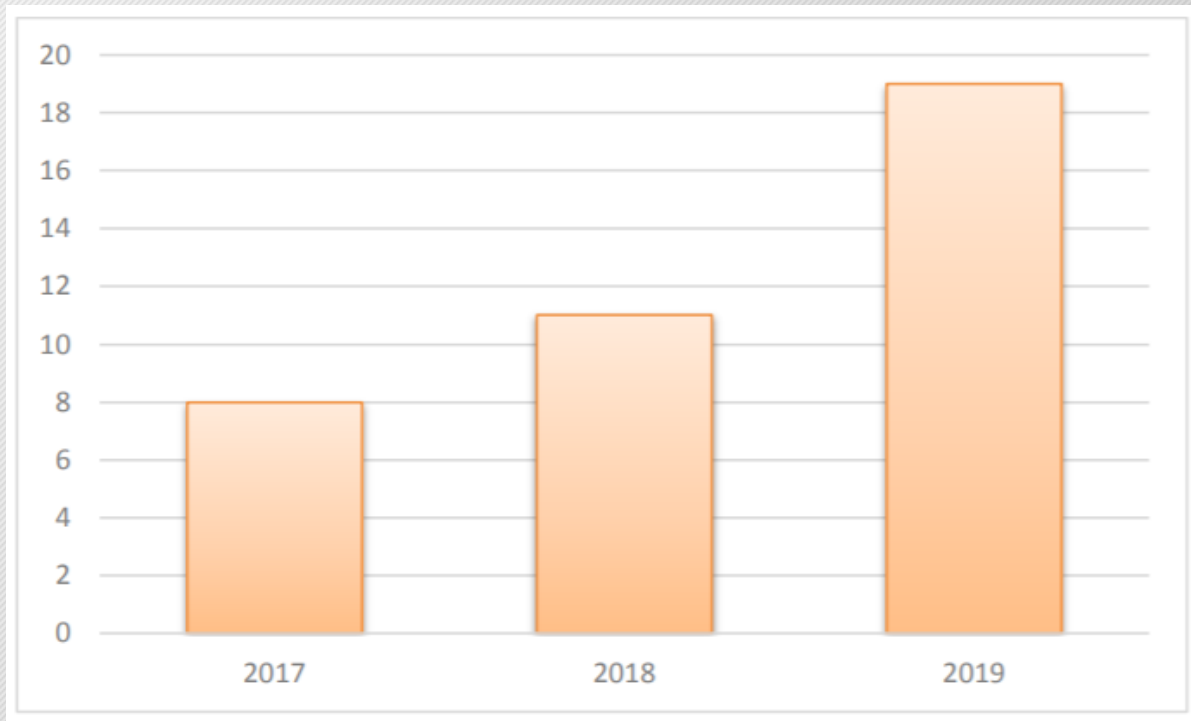
A total of 19 MORs were submitted as 'Fatigue related'.
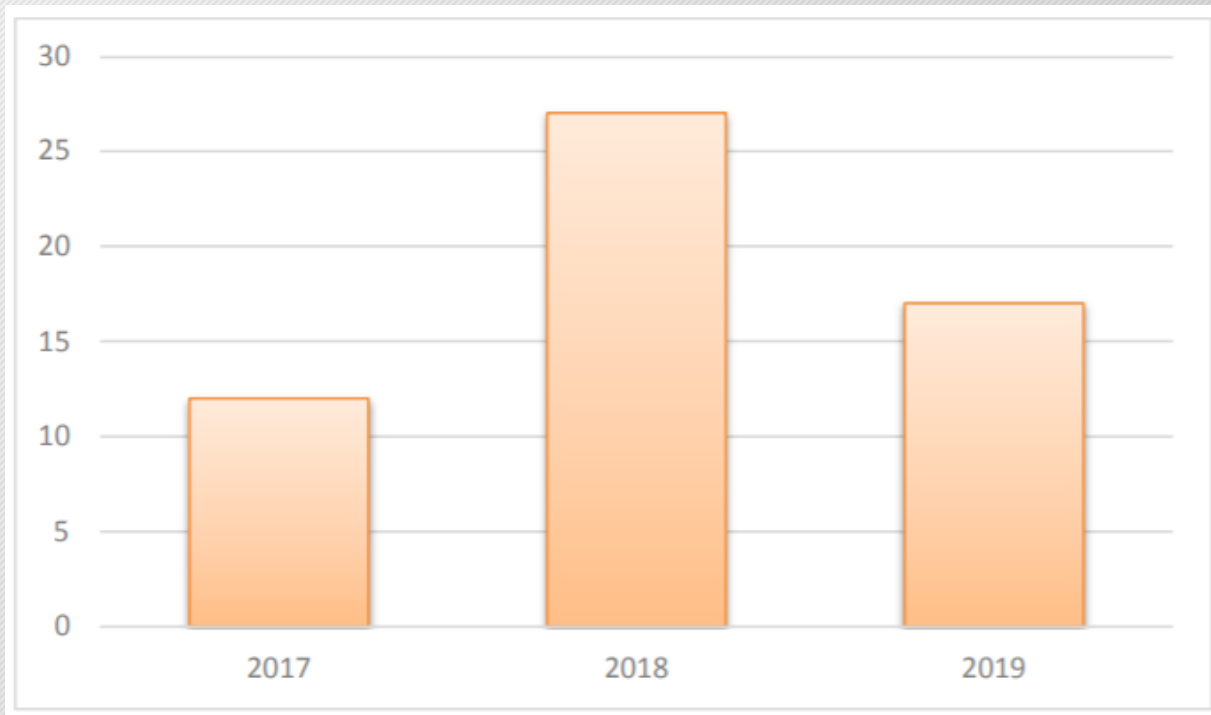
RCA were identified as:

- Multiple flight-legs across different time zones
- Disruption in operations/crew scheduling

Fatigue related reports (real cases) are becoming a concern.

Covid-19 RNO
Delays due to Country restrictions such as Health, Visas, frustration etc..
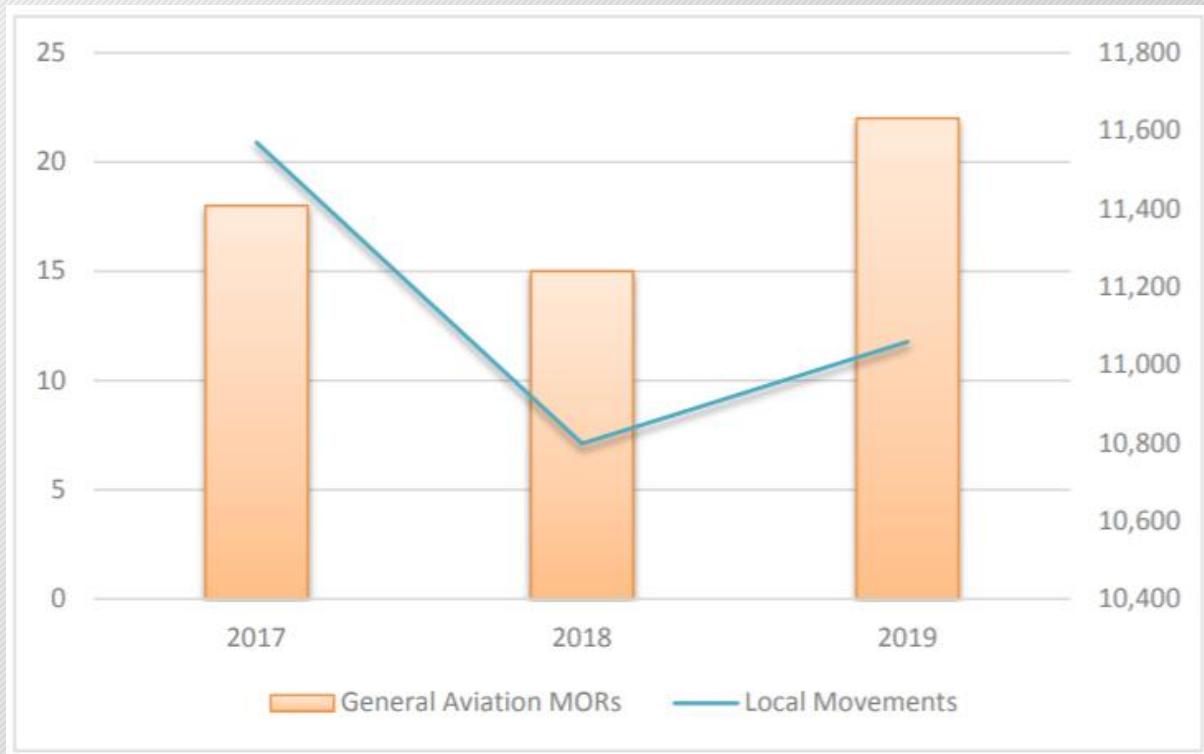
F-NI (Fire/Smoke Non-Impact)

17 of such events were reported to CAD in 2019.

Root Causes were:
- Smoke in cabin (contaminated air)
- Electrical component failures
- Galley area incidents

A serious incident of Smoke in cabin was reported in 2020, following Covid-19 RNO. Indications point at a faulty component

General Aviation

The most common occurrence category is related to System/Component Failure or Malfunction.

In 2019 the CAD received 22 events related to GA.

We are investing time to increase awareness of occurrence reporting within the GA community.

Areas of concern:
- Repeated failure of components
- RCA, Causal Factors identification

Covid-19 RNO Observations

Increase in:

- Unstabilised approaches
- High Speed approaches/Overspeed
- Crew responsiveness events/Aircraft Configuration errors
- Unruly passengers wrt Covid-19 health protocols
- Delays due to Covid-19 restrictions/Country protocols (domino effect)

Each Organisation's SMS function must react to the new operational challenges, identify any hazards and if necessary re-visit operational risks.

⚠️ Challenges with the Aviation Health Safety Protocol (EASA-ECDC) or company procedures? Is an impact assessment/review being carried out?

Occurrence Reporting
General Observations

- CAD noticed a general improvement in the quality and detail of reports.

- CAD recommends the use of ICAO ADREP taxonomy guidance material, such as for:
  - Occurrence Class
 - Occurrence Category
 - Event Type

Occurrence Reporting
General Observations

- The **'Occurrence Category'** and **'Event Type'** fields are not always duly filled with the appropriate details.

- Reporting timeline obligations are not always adhered to.

- SMS targets
  - Root Cause Analysis/Causal Factors
  - Mitigation Measures

- Continuous improvement

- With the new ERCS, future data will be presenting further insight on **'Key Risk Areas'**

tm

Revision of State Documentation

State Safety Programme
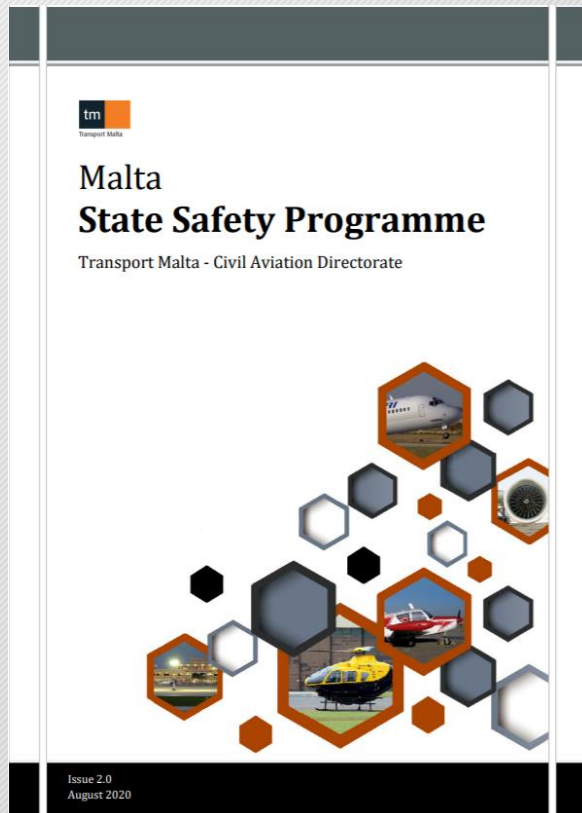
State Plan for Aviation Safety
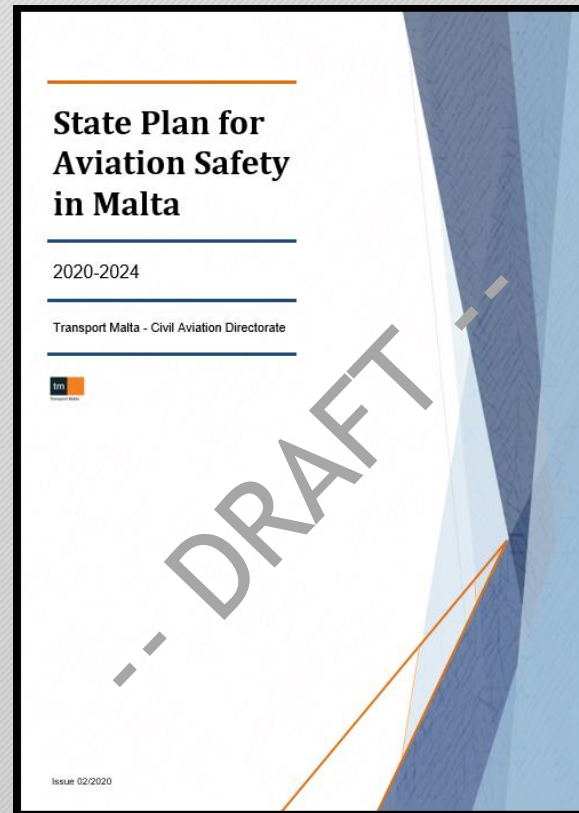
- A revised Malta SSP has been published in August 2020.

- The SPAS in Malta will be published in the coming days/weeks.

- Both documents will be publicly available on TM-CAD website and distributed via Centrik.

- Coordination on implementation between all involved will be sought.

- Any feedback to enhance safety is appreciated.

Thank you for your attention.

Questions?

aviationsafety.tm@transport.gov.mt

tm