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ASRT/3 Meeting
Nov 2018, Cairo
ICAO RGS-WG/5

MID Annual Safety Report
7th Edition Overview
Cairo, Egypt, 25-27 Nov 2018

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Regional Officer, Safety Implementation,
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RGS-WG/5 Meeting
Nov 2018, Cairo
Today’s Meeting

- Objective of ASRT
- Risk Assessment Methodology
- Reactive information data
- Proactive information data
- Focus Areas and Emerging Risks
- Challenges
- Way forward
Objective of ASRT

- Gathering and Analyzing safety information
- Identification of safety focus areas & emerging risks
- Production of the annual safety report

2nd Edition, Jan 2014
5th Edition, Jan 2017
6th Edition, June 2018
7th Edition, In progress
Data Collection & Sources

Data collection methods
- Existing safety databases of different aviation stakeholders
- Surveys
- Experts opinion
- Industry meetings

Data sources for ASR (7th edition)
ASR Structure-7th Ed

Reactive
- Fatal Accidents & Accidents
- Serious incidents

Proactive
- Safety audit results and incident reports. An area for improvement!

Predictive
- SSP/SMS implementation and analysis of FDM de-identified data. An area for improvement!
Risk Assessments Methodology

- Frequency rating: 1 is the most frequent and 6 is the least frequent
- Severity: 1 is the most severe and 4 is the least severe

“Feared consequence” of the risk portfolio of DGAC France:

<table>
<thead>
<tr>
<th>No.</th>
<th>Identification of Undesirable Event</th>
<th>Accident types</th>
<th>Damage to aircraft or injury in flight</th>
<th>Damage to aircraft or injury on ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>UE.1</td>
<td>Unstabilised or non-compliant approach</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.2</td>
<td>Abnormal system attitude (roll, pitch, speed...)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>UE.3</td>
<td>Events relating to atmospheric conditions (Runaway, sudden gust and aerological parameters)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.4</td>
<td>In-flight encounter of dangerous weather phenomena (Thunderstorm, turbulence, icing)</td>
<td>X</td>
<td>#</td>
<td>X</td>
</tr>
<tr>
<td>UE.5</td>
<td>Store failure</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.6</td>
<td>Event pertaining to works/maintenance operations on or near a runway</td>
<td>#</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.7</td>
<td>Loss of separation in flight and/or airspace infringement: Level bust</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.8</td>
<td>Wildlife hazard, including bird strike</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.9</td>
<td>Misunderstanding, unsuitability of transmitted information (misunderstanding, misinterpretation)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.10</td>
<td>Event occurring outside the runway/taxiway area</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.11</td>
<td>Aircraft maintenance event</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.12</td>
<td>Loss of cabin pressure</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.13</td>
<td>Aircraft system failure resulting in flight management disturbance</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.14</td>
<td>Loss of control pressure</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>UE.15</td>
<td>Aircraft damage due to EOA</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Frequency and Severity ratings:
- Frequency: 1 is the most frequent and 6 is the least frequent
- Severity: 1 is the most severe and 4 is the least severe
Reactive Safety Information

State of Occurrence
20 November 2018

Accident Rate

- Reduced accident rate for 2017 compared to 2016
- Below global rate in 2017
- Matched 5 year average global rate! (avg global = 2.67)

(Source iSATRS as of 10 Oct 2018)
Number of Accident

Number of Accidents
Scheduled Commercial above 5700 kg

(Source iSATRS as of 10 Oct 2018)
Fatal Accident Rate

- No fatal accident rate in 2017
- Average rate (2013-2017) is 0.64
- Slightly Above average global rate!
  (avg global = 0.44)

(Source iSATRS as of 10 Oct 2018)
Number of Fatal Accident

(Source iSATRS as of 10 Oct 2018)
Fatalities

Fatalities:
• 2014 = 38
• 2015 = 224
• 2016 = 1

(Source iSATRS as of 10 Oct 2018)
Proactive Safety Information
ICAO USOAP

Effective Implementation (EI)

Source: ICAO USOAP CMA On Line Framework (OLF), as of 10 October 2018

ICAO USOAP:

➢ 13 out of 15 States have been audited
➢ Overall MID EI = 73.24% which is above Global average (66.27%)
➢ 3 states are below 60% (Libya, Syria, Lebanon)

NO SSC in MID Region
8 areas and 6 critical elements are above the target of 60%

Critical elements CE4 (Qualified technical personnel), and CE8 (Resolution of Safety issues) are the lowest in terms of EI (below 60%)

Source: ICAO iSTARS, as of 10 October 2018
Incidents Reported by the States
Findings were mainly in the areas:

- Flight Operations (FLT) (29.1%),
- Organization Management (ORG) (19.49%),
- Maintenance (MNT) (17.23%), and
- Ground Handling Operations (GRH) (8.47%).
A total of 34 audits took place in 2017 have been included in the analysis covering the IATA MENA Region.

- 40 findings were recorded
- Majority of findings were in the areas of:
  - Passengers & Baggage handlings (PAB)
  - Aircraft Handling & Control (HDL)
  - Load Control (LOD)
Identification of Focus areas & Emerging Risks
<table>
<thead>
<tr>
<th>Undesirable/Safety Event</th>
<th>Potential Accident Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Event, Accident Severity</td>
<td>CFIT</td>
</tr>
<tr>
<td>Technical Problems with Landing Gear Collapse/not Extended during landing</td>
<td>Major</td>
</tr>
<tr>
<td>Contained engine Failure/Power Plant Malfunctions</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Fire/Smoke-non impact</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Un-stable or non-compliant Approach</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Deviation from pitch or roll attitude</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Security Risks with impact on safety</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Tail/Cross wind/Windshear</td>
<td>Major</td>
</tr>
<tr>
<td>Loss of separation in flight and or airspace/TCAS RA infringement</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Runway Incursion</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Maintenance events and technical failures</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Contaminated runway/Poor braking action</td>
<td>Major</td>
</tr>
<tr>
<td>Birdstrike/Engine Bird Ingestion</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Wake Turbulence</td>
<td>Catastrophic</td>
</tr>
<tr>
<td>High energy go-around</td>
<td>x</td>
</tr>
</tbody>
</table>
Focus Areas

Focus Areas:

1. Runway Safety (RS); (RE and ARC during landing);
2. Loss of Control-In Flight (LOC-I);
3. Controlled Flight Into Terrain (CFIT); and
4. Mid-Air Collision (MAC)
Emerging risks:

1. Security Risks with impact on safety-SEC;
2. Fire/smoke- (non-impact)- (FN-I);
3. Runway incursion (RI);
4. Birdstrike-(BIRD); and
5. Wake Vortex.
Challenges

- Accidents with the category “Unknown”
- Low level of incidents reporting by States (confidentiality concerns)
- Unavailability of predictive safety information
- Differences between organizations with respect to:
  - Taxonomy and classifications/categories
  - Reporting criteria (State of occurrence/operator/registry, MTOW..etc)
  - Regional distribution (MENA, MID…etc)
way forward...

- Develop a process for future work methodology
- Establishment of ASRT Core Team to support the Rapporteur & Secretariat in performing the root cause Analysis/contributory factors
- States to use the previous developed template which will contain the focus areas and emerging risks to submit their occurrences as well as to share analysis data