



# ATM/AIM/SAR

SG/13

Nairobi, Kenya

16-19 September 2013

AIAG Outcome of 2012 Incident Analysis Highlights

- **Of 100 Air Safety Incident Reports analyzed during 10th AIAG meeting**
  - 13 reports were determined to be Events and Non-events
  - 3 reports were inconclusive, thereby resulting in a total of
  - 24 ATS incidents and
  - 59 AIRPROX
- **Among reports classified as AIRPROX**
  - 43 were classified as AIRPROX with high risk;
  - 15 were classified as AIRPROX with medium risk;
  - 1 was classified as AIRPROX with low risk

- Where ATC separation was compromised it was found that the required separation was restored as follows:  
**(Risk: Safety was not assured/Severity was medium)**
  - ATC intervention-1;
  - Combination of ATC intervention and TCAS TA or TCAS display-2
  - Combination of ATC intervention and pilot awareness-1
  - Pilot awareness-2
  - Combination of pilot awareness and TCAS TA/TCAS display-2
  - IFBP-3
  - TCAS TA or TCAS display-4

- Where ATC separation was compromised it was found that the required separation was restored as follows:

**(Risk: Of collision/ Severity was high)**

- TCAS RA-27
- TCAS RA with no previous warning or no time for action in-3
- Last minute visual separation in-4
- No previous warning in-3
- Combination of TCAS RA and no previous warning in-3
- Combination of last minute separation and no previous warning-1

## Feedback Rate

- 100 incidents reported by operators, the concerned air navigation service providers have provided feedback on
  - 69% for AFI region and
  - 57% for MENA region (Sudan and Egypt)

## Causes of incidents and contributing factors

- **Human Factors** – Either ATC or cockpit crew, remains being main cause of incidents or a combination factor:
  - *Human error* was either the main cause or as combination factor causing incidents in seventy (70) instances.
  - ATC error/Lack of proficiency was contributing factor in thirty-eight (38) instances;
  - Crew error was contributing factor in two (2) instances;
  - *Non-compliance* was either the main cause or as combination factor causing incidents in ten (10) instances.
  - Cockpit discipline / no compliance from crew were a contributing factor in twenty two (22) instances.

## Causes of incidents and contributing factors

- **The lack of coordination-** between ATC sectors, civil and military and FIRs continues to be dominant cause of incidents or a contributing factor:
  - It was either the main cause or as combination factor causing incidents in twenty-six (26) instances.
  - It was contributing factor in eight (8) instances.
- **Lack of mobile communication-** is third cause of incidents or a contributing factor to incident:
  - It was either the main cause or as combination factor causing incidents in twenty-seven (27) instances.
  - It was contributing factor in nine (9) instances;

## Causes of incidents and contributing factors

- **Lack of procedures-** or lack of appropriate procedures and Lack of appropriate ATM operations are fourth cause of incidents or a contributing factor to incident:
  - Procedures was either the main cause or as combination factor causing incidents in twenty (20)
  - ATM operations (ATC overload) was either the main cause or as combination factor causing incidents in five (5) instances.
- **IFBP-** Crew failing to establish contact on IFBP was contributing factor in eighteen (18) instances.
- **Facilities-** (equipment) was the main cause of incidents in one instance

## General recommendations

- Management of human factors such as but not limited to
  - fatigue,
  - work load,
  - working conditions, and
  - equipment resulting in inadequate ATC proficiency factors need to be continuously addressed.
  
- The SMS concept of —Just culturell appears to improve and Non-Punitive System and Culture should be implemented in the ACCs.

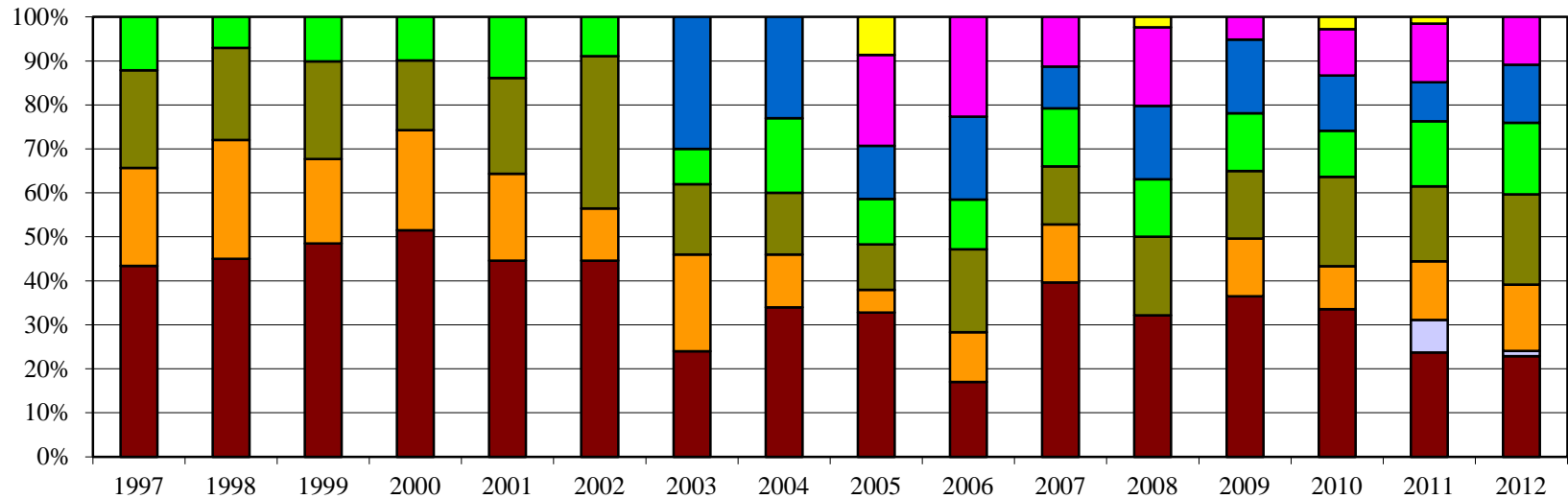
## General recommendations

- Coordination between ATS units / FIRs needs to be improved. Civil military coordination bodies should also be implemented to support coordination between sectors
- VHF/HF communications need to be enhanced in order to enable positive Air Traffic Control
- Controller-pilot data link communications (CPDLC) for en-route operations in accordance with the Regional Air Navigation Plan (ICAO Doc 7474) to be implemented and Global Operational data Link Document (GOLD) procedures implementation to be re-enforced.

## General recommendations

- Airspace re-organization, where more sectors are required and clarity of ATC procedures.
- Appropriate classification of airways
- Encourage the use of IFBP
- Emphasize Importance of Crew Advance Communication prior to FIRs Boundaries
- ANSPs to continue providing investigation reports in compliance with ICAO Annexes and format

## Contributing factors of AIRPROX



- Contribution of Controller Proficiency
- Contribution of Crew error
- Contribution of Airspace Organisation and ATC Procedures
- Contribution of Co-ordination between ATS Units
- Contribution of Mobile Communications
- Poor Discipline on board
- IFBP not used
- ATS freq not used



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