



Aerodrome Safety

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Airports Facing New Challenges

➤ Capacity

- Airport congestion/ Enhance runway operations capacity
- Global ATM system/NextGen/SESAR

➤ Safety

- Airside accidents

➤ New larger Aircraft

- A-380, B747-8

Principal Challenge

- **The principal challenge for aerodrome operators will be to provide sufficient aerodrome capacity and efficiency without adversely affecting safety.**

Major Airport Safety Issues

- **Aerodrome certification**
 - Annex 14 requirements
 - Guidance material (Doc 9774)
 - ICAO survey – lack of implementation
 - USOAP audit results indicate the same
 - Assembly Resolution A36-13, Appendix P
 - Regional seminars/workshops
 - Training

Major Airport Safety Issues

➤ Runway Excursion

- ICAO ADREP - 71 runway excursion accidents including 7 fatal accidents with a total of 367 fatalities in 2007
- Help of PBN programme – stabilized approach
- a joint ICAO/IATA Runway Excursion Risk Reduction Toolkit providing a multi-disciplinary perspective.

➤ Airport efforts to minimize the RE

- Provision of RESA
- provisions for standardized visual aids providing consistent situational awareness for flight crews
- Other alternative means

Major Airport Safety Issues

➤ Runway Incursion

- Aerodrome design and operations among many contributing factors
- Manual on the Prevention of Runway Incursions (Doc 9870)
- Visual aids for Advanced Surface Movement Guidance and Control Systems (A-SMGCS) and for prevention of runway incursions
- Technological solutions

Major Airport Safety Issues

- **Runway Surface Maintenance**
 - USOAP audits indicate deficiencies concerning runway friction measuring
 - Annex 14 requirements
 - Runway surface free from the accumulation of contamination
 - The periodic measurement of runway friction characteristics, the establishment of a minimum friction level, and the corrective maintenance action
 - ICAO to provide further guidance

Major Airport Safety Issues

- **Foreign Object Debris (FOD)**
 - A long standing safety concern
 - Current SARPs in Annex 14
 - Amendment 10 to Annex 14 Vol I strengthened the inspection of movement areas and corrective and preventive maintenance

ICAO USOAP Audit -AGA

- **Among top non-satisfactory areas:**
 - Aerodrome certification
 - SMS
 - Runway end safety areas (RESA)
 - Runway friction measuring and reporting
 - Aerodrome emergency planning/Rescue and fire fighting
 - Bird/wildlife hazard control
 - Surveillance programme
 - Training

ICAO future work programme (1/3)

- **Developing provisions for a global reporting format for runway surface conditions, common taxonomies, revised criteria for friction measuring devices and a study into rainfall rate, drainage and runway texture**
- **Development of provisions and guidance to address RI and RE from an aerodrome design perspective. This would include new concepts and enhanced safety considerations for taxiway designs and standardized naming conventions for taxiways.**
- **To study technological solutions to runway incursions. Technological advancements in the prevention of RI include, inter alia, runway status lights (RWSL). SARPs providing for the standardization of the visual signal provided to flight crews are expected to be proposed for inclusion in Annex 14, Volume I**

ICAO future work programme (2/3)

- ICAO will continue to study the use of new ICAO performance level “C” foam for RFF. This newer generation of extinguishing agent is found to be more efficient than the types currently in use.
- Updated guidance on aerodrome surface inspection, including the use of automated FOD detection systems will be developed
- a standard TRAINAIR training package will be developed for global use on the prevention of runway incursions. This package will provide training modules for ATC, pilots and aerodrome personnel.

ICAO future work programme (3/3)

- A gap analysis of the ICAO Runway Safety Programme will be conducted to identify any areas of the programme that require strengthening and to examine the need for integration of multiple safety data sources that will lead to the development and implementation of data-based mitigation strategies.
- ICAO will convene a Global Runway Safety Symposium (GRSS) in Montreal, 24 – 26 May, 2011
- The GRSS will also set the stage for a subsequent series of regional ICAO Runway Safety Workshops over the next three years

New Larger Aircraft

- **Compatibility issues**
- **Annex 14, Volume I – Code F specs in 1999**
- **Airport modifications**
- **Circular 305 in 2004**
- **Addressing existing aerodromes In the long term**

PANS -AERODROMES

Background

- **ANC's review of amendments to Annex 14, Volume I, related to Code F**
- **Safety and efficiency challenges facing existing aerodromes worldwide in day-to-day operations**
- **It was considered beneficial to develop PANS-Aerodromes to address aerodrome operational issues.**

Need for PANS-Aerodromes

- **Annex 14, Volume I is mainly used as a design document; it does not sufficiently address aerodrome operational management, which is equally important for aerodrome safety and efficiency**
- **Many challenges aerodromes are facing today are of an operational nature**

Need for PANS-Aerodromes

- **USOAP audit results reveal that States need more guidance on aerodrome operational management**
- **There is a lack of global operational procedures that would assist States to achieve compliance with SARPs**
- **Certification of existing aerodromes**
- **Procedures for aeronautical studies,**

Status of PANS-Aerodromes

- **Same as PANS-ATM and PANS-OPS**
- **Complementary to Annex 14, Volume I**
- **Amplification of the basic principles in the corresponding SARPs**
- **Provides operational practices that are beyond the scope of SARPs but with respect to which a measure of international uniformity is desirable**

Scope and Contents of PANS- Aerodromes

- **Specify the operational procedures to be applied by aerodrome operators to ensure aerodrome operational safety and to enhance aerodrome operational efficiency**
- **specify procedures to be applied by both aerodrome regulators and operators for initial aerodrome certification and continuing aerodrome**

Scope and Contents of PANS- Aerodromes

- **A draft table of contents in the Appendix of AN-WP/8379**
- **A living document**
- **The first edition of the document would focus on high-priority issues such as operational procedures at existing aerodromes, and other operational management issues as revealed by the IISQAP audits**

Organization and Scheduling of Work

- **PANS-Aerodromes Study Group (PASG)**
- **PASG/1, was held in December 2009 in Montreal**
- **First draft of the document (December 2011)**
- **Review of the document by the Secretariat (June 2012)**

THANK YOU!