

THE ICAO MODEL



ADCI TF/1-PPT/3

AERODROME EMERGENCY PLANNING

THE ICAO MODEL

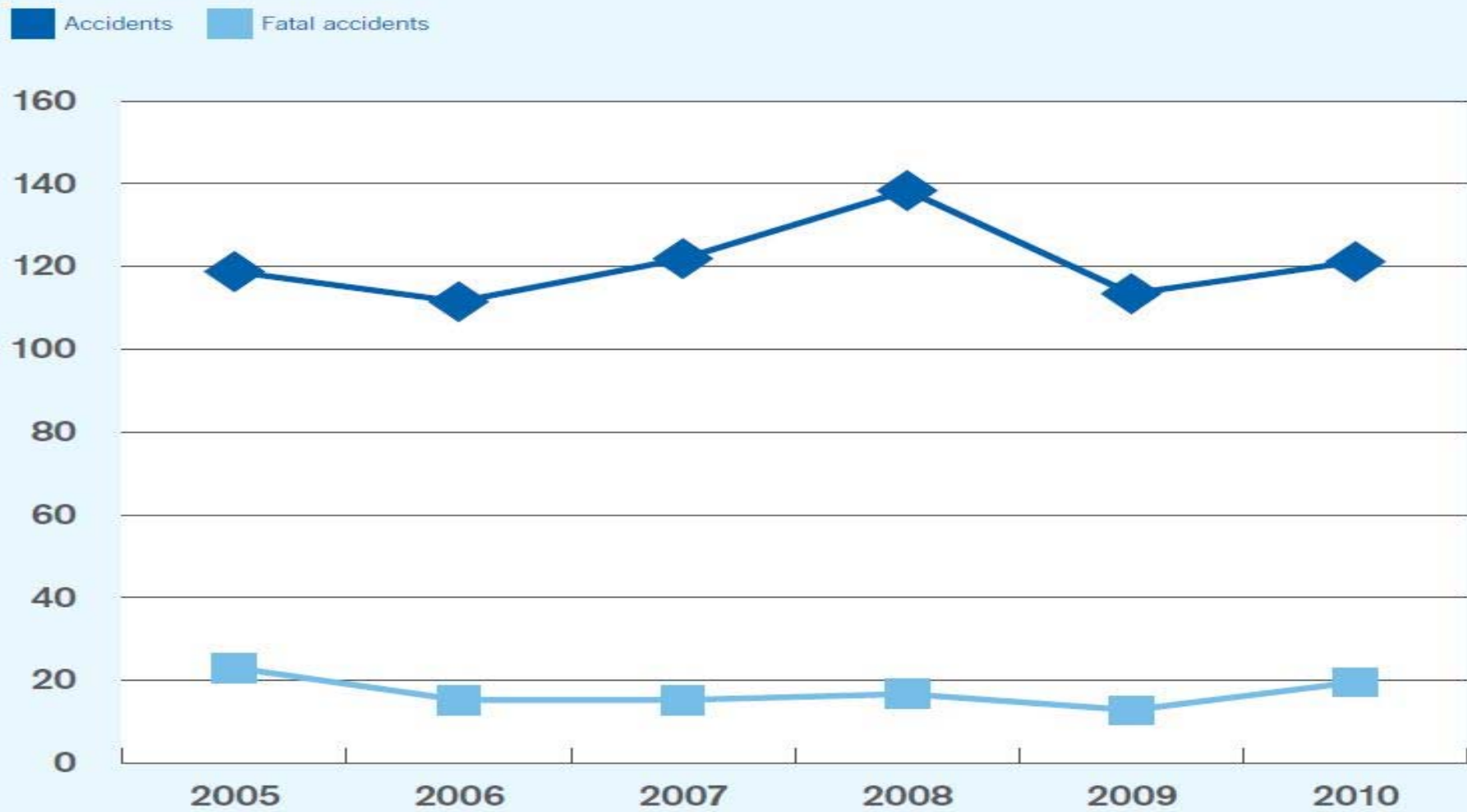


AN OVERVIEW OF THE IMPORTANCE OF EMERGENCY PLANNING AND ANNEX 14 VOLUME I PROVISIONS ON AERODROME EMERGENCY PLANNING

2011 State of Global Aviation Safety



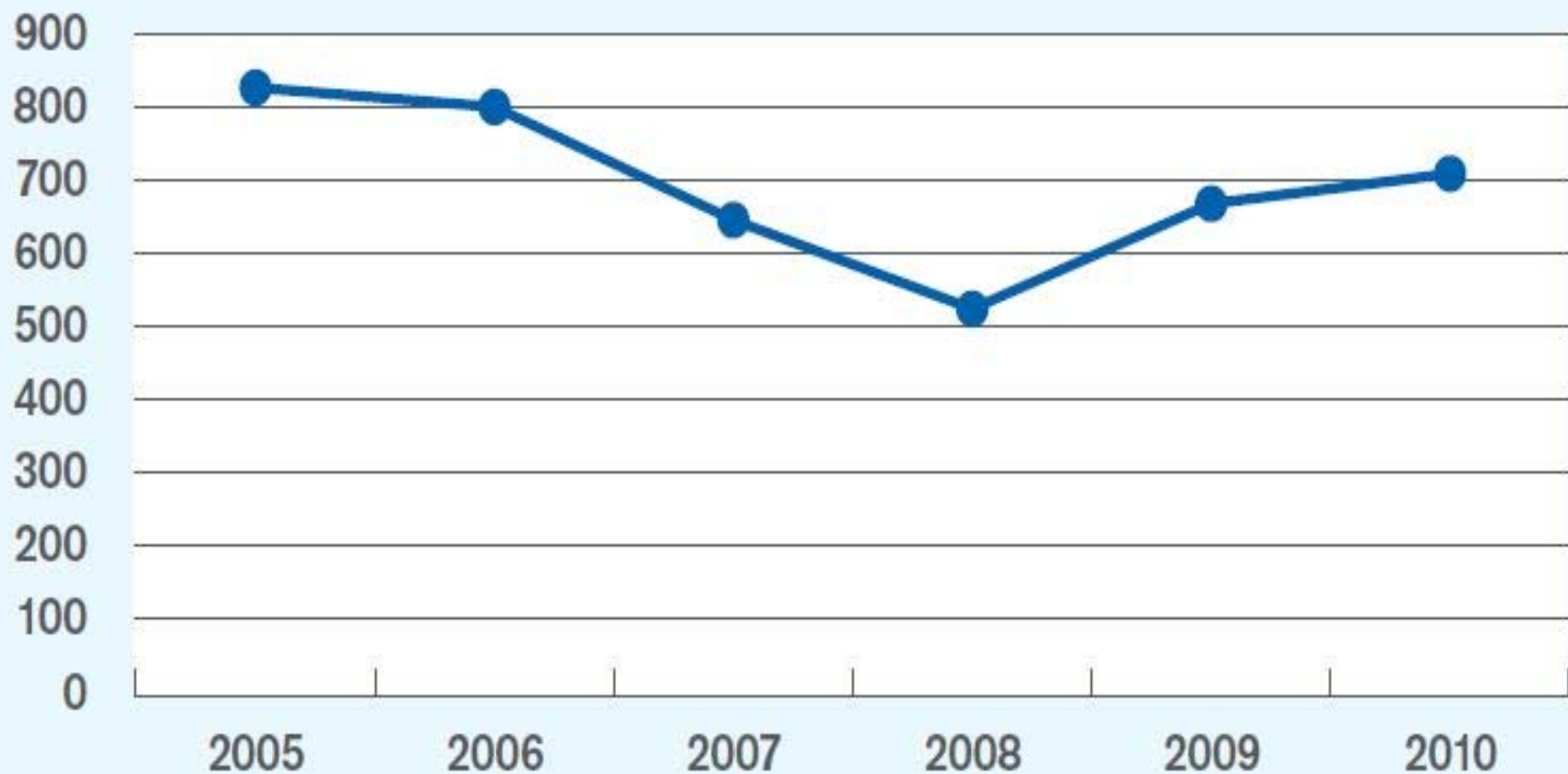
Accident Trends: 2005–2010



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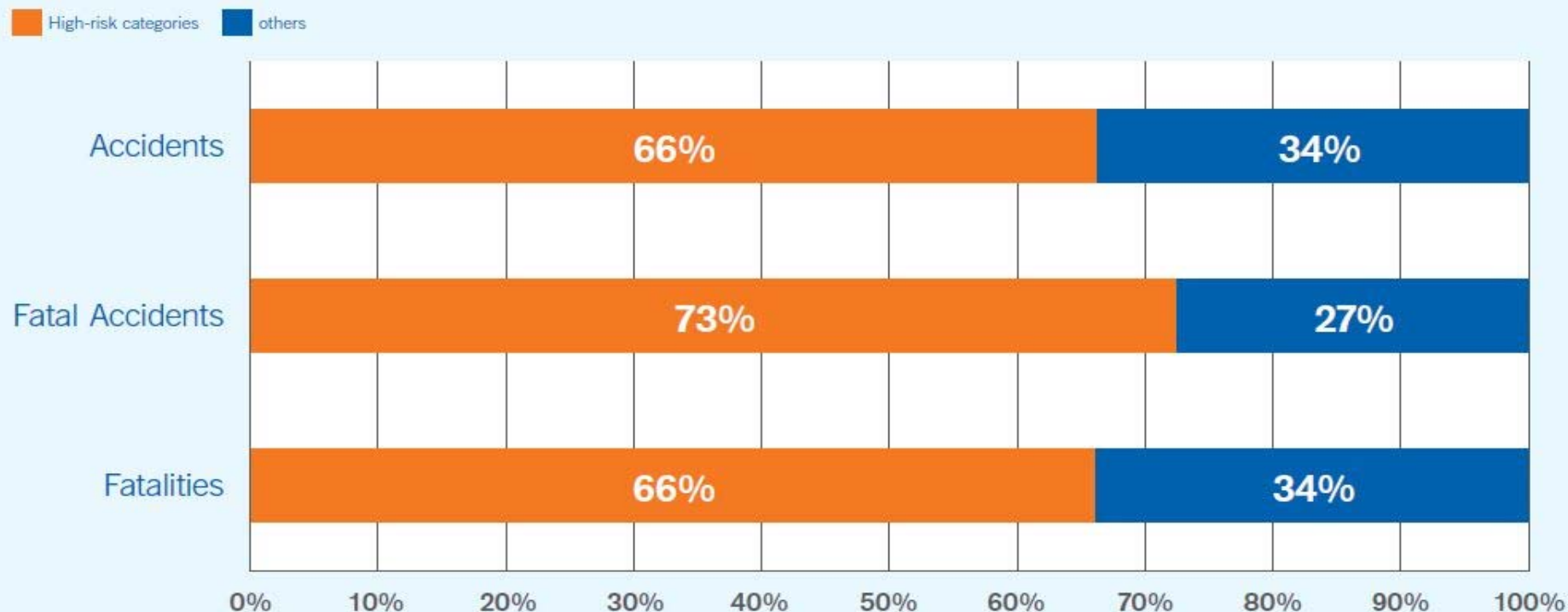
Fatality Trends: 2005–2010



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Distribution of High-risk Accidents: 2005–2010

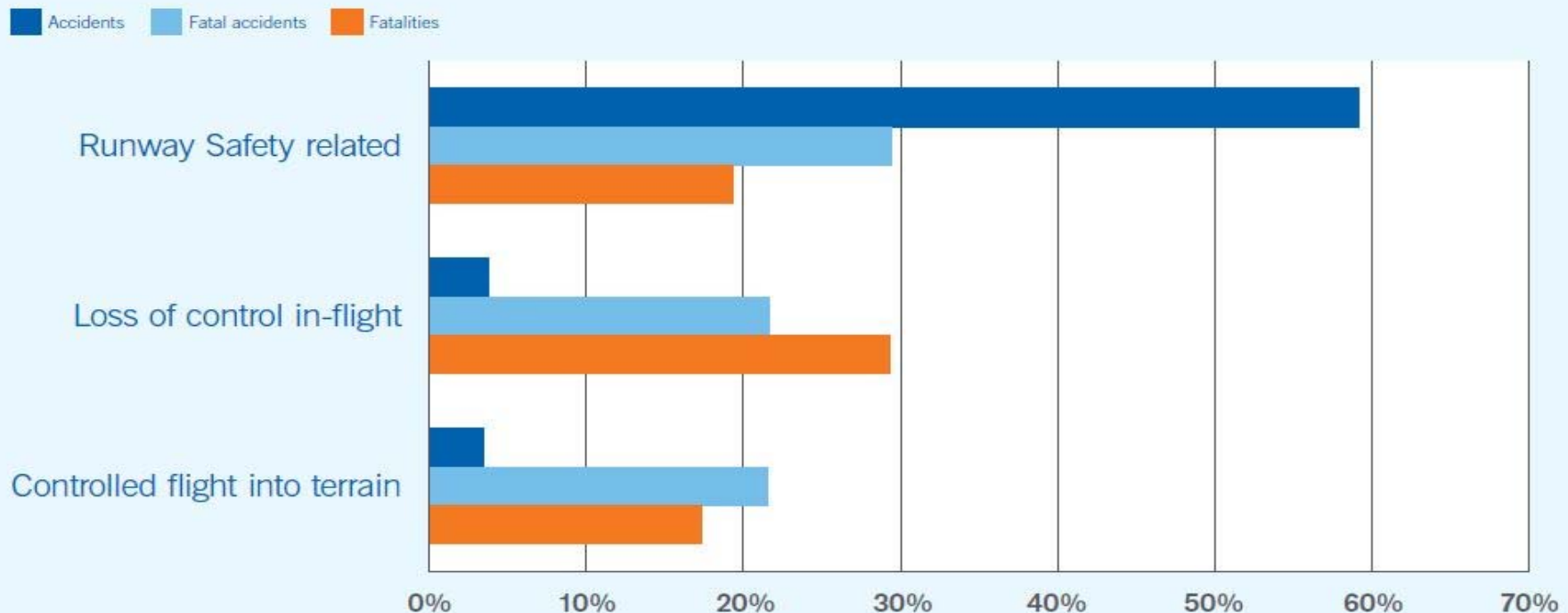


⁵ Runway safety related events include the following ICAO accident occurrence categories: Abnormal Runway Contact, Bird strike, Ground Collision, Ground Handling, Runway Excursion, Runway Incursion, Loss of Control on Ground, Collision with obstacle(s), Undershoot / Overshoot, Aerodrome

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Percentage of All Accidents: 2005–2010



Runway safety accidents represent 59% of all accidents, accounting for 29% of all fatal accidents and 19% of all related fatalities reported between 2006 and 2010.

While the loss of control in-flight occurrence category represents only 4% of all accidents, this category is of

significant concern as it accounts for 22% of all fatal accidents and 29% of all fatalities.

Similarly, accidents related to controlled flight into terrain account for only 3% of all accidents but represent 22% of all fatal accidents and 17% of fatalities.

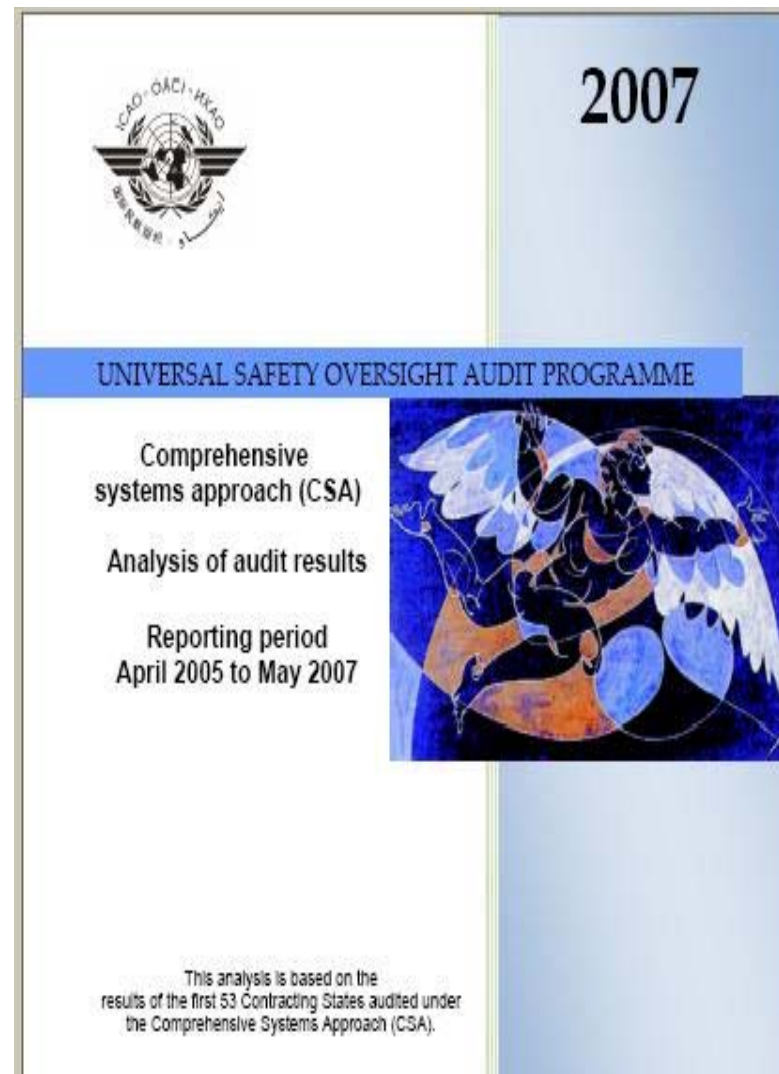
Aircraft Accident Survivals



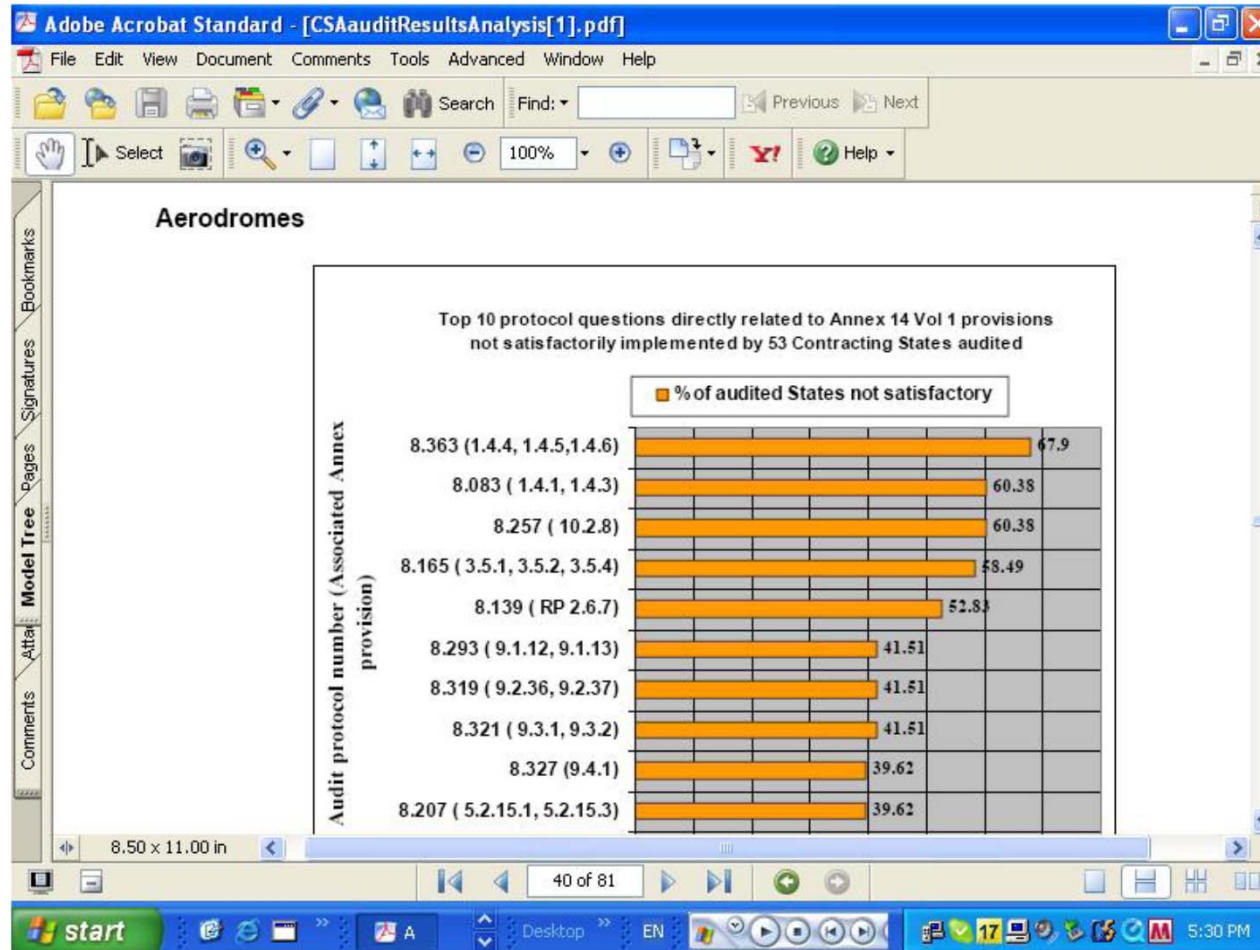
Table 1 – Aircraft accident survivors (1980 - 2007)

<u>Aircraft occupants on board</u>	<u>Number of accidents</u>	<u>Total number of occupants</u>	<u>Total number of survivors</u>	<u>Percentage of survivors</u>	<u>Seriously injured</u>
Less than 51	6 929	31 848	2 5274	79.4	1920
51 to 100	282	20 926	18 059	86.3	823
101 to 150	213	26 122	22 080	84.5	601
151 to 200	100	17 170	15 473	90.1	339
201 to 250	40	9 176	9 030	98.4	89
More than 250	77	24 551	22 709	92.5	344
All cases	7 641	129 793	112 625	88.5	4116

ICAO USOAP FINDINGS



Not satisfactorily implemented



AEP as part of certification process



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Airport emergency plan

Barbara Cole

May 08 2008 at 03:38PM

Without an aircraft crash simulation exercise, which will test emergency plans and response times, the airport will not be issued with an operating licence.

The exercise will have to take place before March 2010, when the airport is expected to open. The trial may involve a scenario where a plane crashes into the sea.

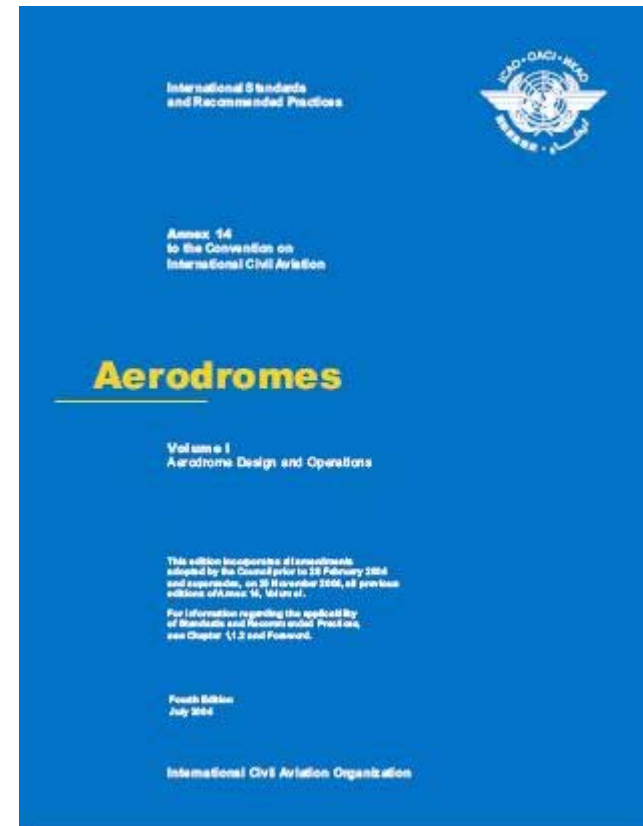
As a precursor to that, about 1 000 people are now preparing to tackle a similar big emergency aircraft crash simulation exercise next month at Durban International Airport.

In terms of international and local regulations, airports must have a full-scale exercise to test the readiness of various role-players and their equipment every two years.

ICAO Provisions on AEP



- Annex 14 — *Aerodromes*
- Volume I — *Aerodrome Design and Operations*
- Chapter 9, Section 9.1 Aerodrome Emergency Planning contains 15 Standards and Recommended Practices (SARPs)



ICAO Provisions on AEP



What is AEP?

The process of preparing an aerodrome to cope with an emergency occurring at the aerodrome or in its vicinity.

What are the objective(s) of AEP?

To minimize the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations.

ICAO Provisions on AEP



What do the AEP contain?

The aerodrome emergency plan sets forth the procedures for coordinating the response of different aerodrome agencies (or services) and of those agencies in the surrounding community that could be of assistance in responding to the emergency.

ICAO Provisions on AEP



Planning for AEP should include provisions for:

- ✓ Emergency Operations Centre
- ✓ Command Post
- ✓ Communication System

Testing of the Plan

ANNEX 14, VOL I PROVISIONS



- Chapter 9, Section 9.1
- Introductory Note – objectives
- 9.1.1 (Std) - An aerodrome emergency plan shall be established at an aerodrome, commensurate with the aircraft operations and other activities conducted at the aerodrome

ANNEX 14, VOL I PROVISIONS



- 9.1.2 (Std)
- Coordination of actions to be taken
- Examples of emergencies:
 - 6 types involving aircraft
 - 5 types not involving aircraft
 - 3 types *compound emergencies*

ANNEX 14, VOL I PROVISIONS



- INVOLVING aircraft:
 1. Acft accident on-airport
 2. Acft accident off-airport (land and water)
 3. Acft incident in flight (turbulence, decompression and structural failure)
 4. Acft incident on ground
 5. Acft incident (sabotage/bomb threats)
 6. Acft incident (unlawful seizure)

ANNEX 14, VOL I PROVISIONS



- NOT INVOLVING aircraft:
 1. Structural fire
 2. Sabotage/bomb threat
 3. Natural disaster
 4. Dangerous goods
 5. Medical emergencies/pandemics

ANNEX 14, VOL I PROVISIONS



- COMPOUND emergencies:
 1. Acft/structures
 2. Acft/fuelling facilities
 3. Aircraft/aircraft

ANNEX 14, VOL I PROVISIONS



9.1.3 (Std)

- Coordinating responses/participation of existing agencies
- Examples of agencies located:
 - *on aerodromes – ATS, RFF, ADM, HEALTH, ACFT OPTRS, SECURITY/POL
 - *off aerodromes – FIRE DEPT, POLICE, MEDICAL, AMBULANCE, HOSPITAL, MILITARY, HARBOUR PATROL

Doc 9137 ASM Part 7 AEP



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Airport Services Manual

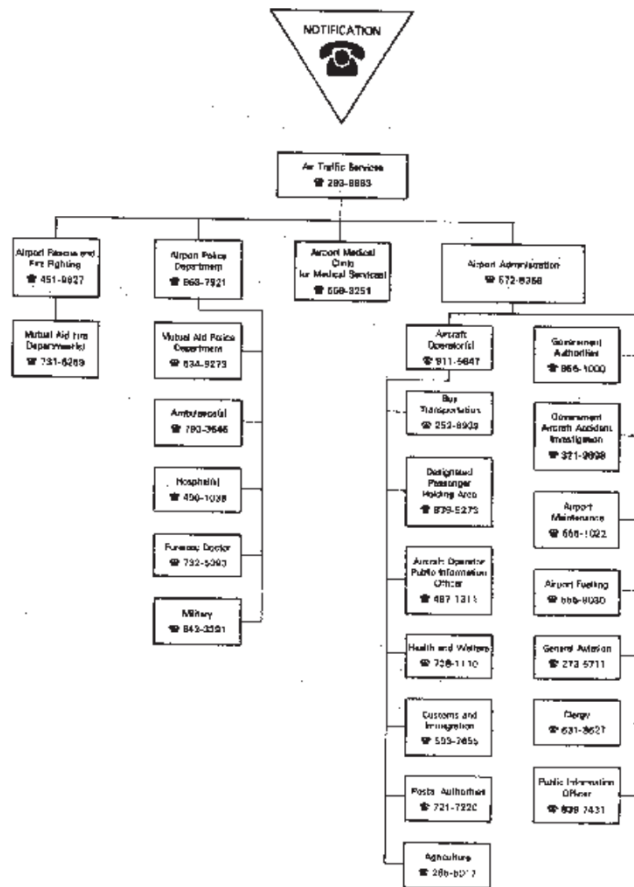


Figure 8-1. Flow control chart — aircraft accident on airport.

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Airport Services Manual

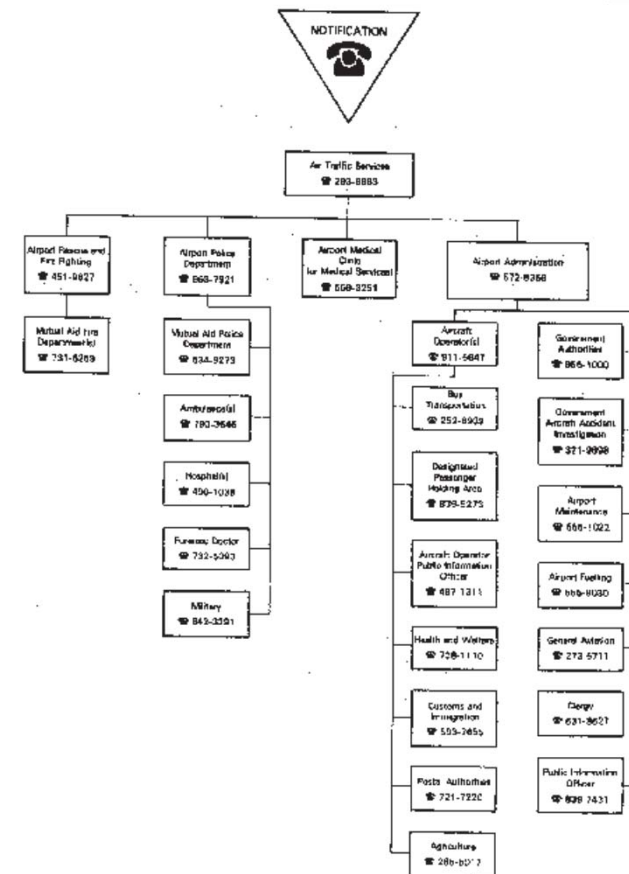


Figure 8-1. Flow control chart — aircraft accident on airport.

ANNEX 14, VOL I PROVISIONS

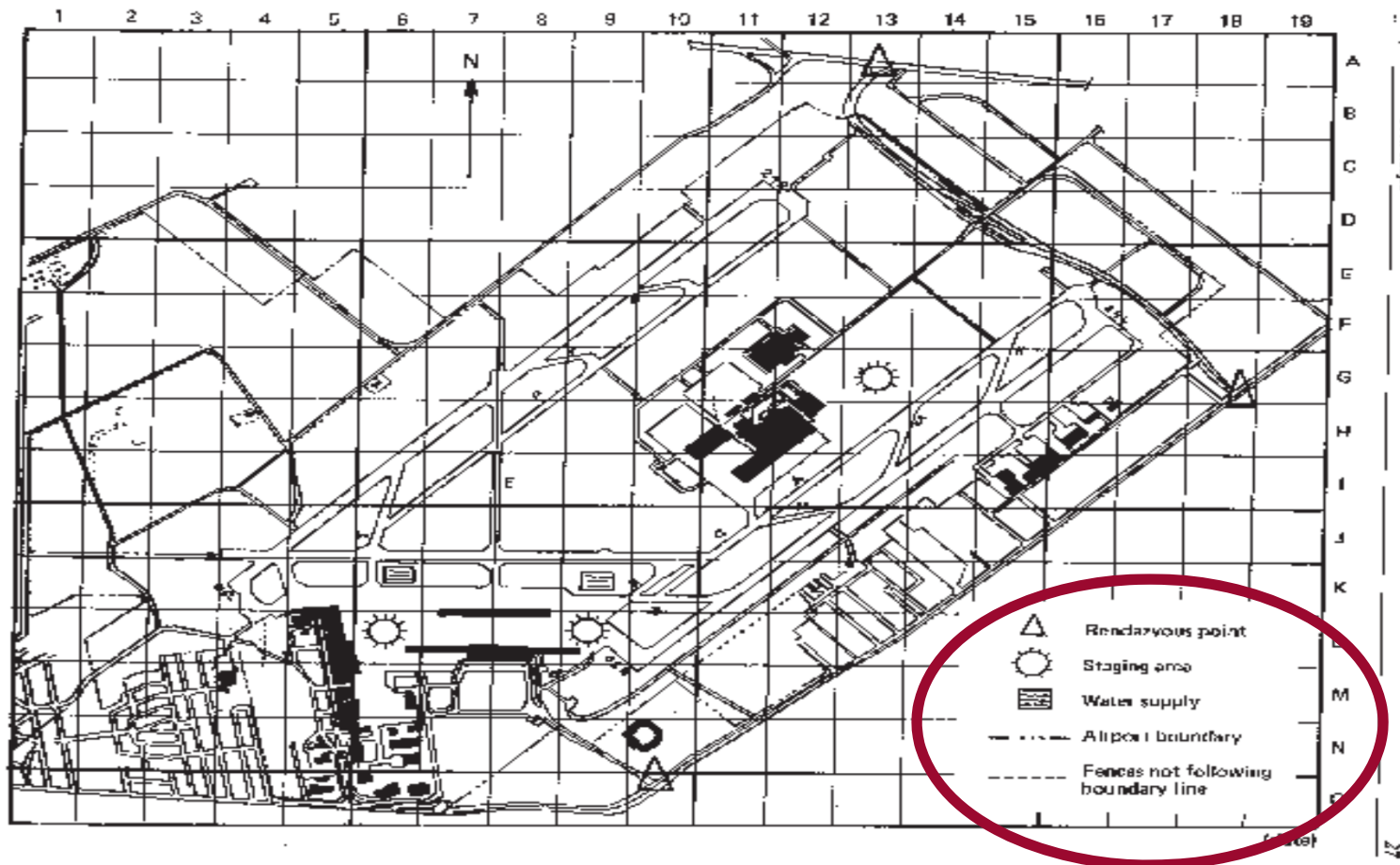


- 9.1.5
- An AEP should include:
 - types of emergencies
 - agencies involved
 - responsibility and role of each agency, EOC & Command Post, for each type of emergency
 - coordinates of offices/people to be contacted
 - grid maps of aerodrome & immediate vicinity

GRID MAPS



Figure 7-1. Sample grid map — airport



GRID MAPS



- Hospital ① 55 beds
Capable of handling all emergency medical cases
- Hospital ② 70 beds
Capable of handling most emergency medical cases except special cases such as extensive burns

Hospital ① 55 beds
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Hospital ③ 40 beds
 Capable of handling common emergency medical cases such as simple wounds or fractures

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Capable of handling common emergency medical cases such as simple wounds or fractures

ANNEX 14, VOL I PROVISIONS



- 9.1.7 to 9.1.10

Availability of a fixed emergency operations centre and mobile command post for use during emergency

- 9.1.11

Need for 2-way communication systems between EOC and CP and for all airport agencies involved in emergency

ANNEX 14, VOL I PROVISIONS



- 9.1.12 & 9.1.13 (Std)

Periodic testing & review results

Frequency of exercise:

- full-scale once every two years
- partial exercise during intervening years

ANNEX 14, VOL I PROVISIONS



- 9.1.14 (Std) & 9.1.15

Plan to include specialist rescue services for emergencies in difficult environment

Plan to include establishment, testing and assessment at regular intervals of a pre-determined response for specialist rescue service

ICAO Provisions on AEP



- *Annex 14 — Aerodromes Volume I — Aerodrome Design and Operations*
- *Annex 18 — The Safe Transport of Dangerous Goods by Air*
- *Airport Services Manual, Part 1 — Rescue and Fire Fighting (Doc 9137)*
- *Airport Services Manual ,Part 7 — Airport Emergency Planning (Doc 9137)*

ICAO Provisions on AEP



- *Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods 2007-2008 Edition (Doc 9481)*
- *Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference (Doc 8973) (Restricted)*
- *Human Factors Training Manual (Doc 9683)*
- *Guidance on Assistance to Aircraft Accident Victims and their Families (Circ 285)*

THE END

