



ATM SAFETY MANAGEMENT SYSTEM AUDITORS

SEMINAR FOR CAR/SAM REGIONS

Mexico City, Mexico, 05-09 December 2005

ICAO Universal Safety Oversight Audit Programme /USOAP

What is safety oversight?

- Safety oversight is a function by which States ensure the effective implementation of:
 - Standards and Recommended Practices (SARPs)
 - the critical elements of a safety oversight system
 - relevant safety practices and procedures

Safety Oversight is a State's responsibility

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Outline

- Establishment and evolution of USOAP
- Programme principles, activities and staffing
- ISO Certification of the Safety Oversight Audit Section
- Audit Findings and Differences Database (AFDD)
- Analysis and implications of the audit findings
- General purpose of State Aviation Activity Questionnaire (SAAQ); timelines
- Structure and availability of the SAAQ
- General purpose Compliance Checklists; timelines; coordination

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Why an ICAO programme?

- Various reports in the early 1990s indicated a lack of implementation of ICAO SARPs by States
- Increased concern over the level of aviation safety world-wide
- Need to reduce accident rates to off-set the rapid increase in traffic



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Objective of the Programme

The objective of the ICAO Universal Safety Oversight Audit Programme (USOAP) is to promote global aviation safety through auditing Contracting States, on a regular basis, to determine the status of States' implementation of safety oversight and relevant ICAO Standards and Recommended Practices (SARPs), associated procedures, guidance material and safety-related practices.

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The making of the Programme

- Assembly Resolution A29-13 (1992)
- Approval of the ICAO safety oversight voluntary assessment programme by the Council (June 1995)
- DGCA Conference (November 1997)
- Approval of the ICAO Universal Safety Oversight Audit Programme by the Council (May 1998)
- Establishment of USOAP – A32-11 (1998)
- Expansion of the Programme – Assembly Resolutions A33-8 and A33-9 (2001)
- Comprehensive systems approach – A35-6 (2004)

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Two complementary roles



ICAO

- Develops principles and techniques to be adopted in Annexes
- Approves regional air navigation plans



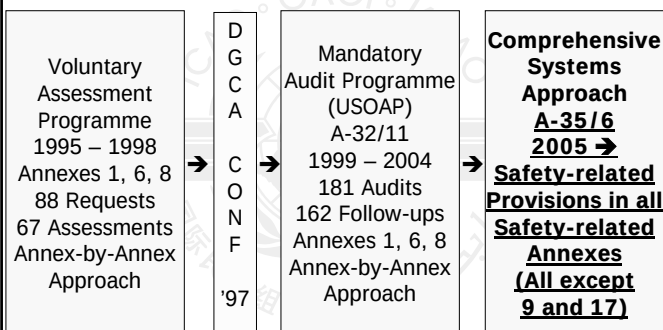
STATES

- Apply Annex Standards
- Carry out oversight responsibilities
- Implement infrastructure according to regional plans

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Evolution of the Programme



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Tentative Audit mission plan CAR/SAM Region 2005-2006

- April 2005 Canada
- October 2005 Panama, Trinidad & Tobago
- January 2006 Costa Rica (ACSA & COCESNA)
- March 2006 Peru
- June 2006 El Salvador 6-15
- Mexico 20-29

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General purpose

- The State Aviation Activity Questionnaire is one of the main tools to be used under the comprehensive systems approach.
- It is designed to enable ICAO to collect useful information on the organization and system established by a State to meet its safety-related obligations as a signatory to the Chicago Convention.
- As the SAAQ covers the whole spectrum of civil aviation activities, coordination amongst several entities within a State might be required.

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State Aviation Activity Questionnaire (SAAQ)

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General purpose

- The submitted information will allow ICAO to maintain an updated database of States' aviation activities, as well as to plan and conduct a standardized safety oversight audit in all Contracting States.
- It is essential that States carefully complete the SAAQ and submit it to ICAO within the prescribed period.

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Timelines

- All Contracting States were required to submit the State Aviation Activity Questionnaire duly completed by 31 May 2005.
- States are required to maintain the SAAQ up-to-date and/or update it at least six months prior to the scheduled audit.

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Structure of the SAAQ

Part 5
Air Navigation
Services

Part 6
Aerodromes

Part 7
Aircraft Accident
and Incident
Investigation

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Structure of the SAAQ

Part 1
General
Administrative
Information

Part 2
Legislation

Part 3
Organization

Part 4
Operational
Activities

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Structure of the SAAQ

Part 1
General
Administrative
Information

- ✓ Name and coordinates of National Safety Oversight Coordinator
- ✓ Working days, hours, holidays and leave periods
- ✓ Access to operational sites
- ✓ Website
- ✓ Documentation

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Structure of the SAAQ

Part 2 Legislation

- ✓ Primary Aviation Legislation
- ✓ Level of promulgation
- ✓ Amendment procedures
- ✓ Delegation of authority
- ✓ Adoption of regulations
- ✓ Implementation/amendment of SARPs
- ✓ Establishment of CAA
- ✓ Issuance/suspension/revocation
- ✓ Arts. 28, 29, 83 *bis*
- ✓ Availability to users

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Structure of the SAAQ

Part 4 Operational Activities

- ✓ Personnel licensing and training
- ✓ Aircraft operations and air operator certification
- ✓ Aircraft nationality and registration marks
- ✓ Airworthiness certification and inspection
- ✓ Environmental protection
- ✓ Safe transport of dangerous goods by air
- ✓ Instrument flight procedures

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Structure of the SAAQ

Part 3 Organization

- ✓ Organization
- ✓ Additional authorities and their relationship with the CAA
- ✓ Organizational chart
- ✓ Staffing levels
- ✓ Regulatory staff
- ✓ Administrative support and equipment
- ✓ Financial resources
- ✓ Training policy and programme
- ✓ Policy on safety management

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Structure of the SAAQ

Part 5 Air Navigation Services

- ✓ Air traffic services
- ✓ Meteorological services
- ✓ Aeronautical information services and aeronautical charts
- ✓ Communications, navigation and surveillance
- ✓ Search and rescue

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Structure of the SAAQ

Part 6 Aerodromes

- ✓ Aerodrome legislation
- ✓ Ownership and operational control
- ✓ Services offered
- ✓ Certification requirements
- ✓ Civil use of military facilities
- ✓ Safety management system requirements
- ✓ Coordination with ATS and AIS
- ✓ Specific procedures
- ✓ Emergency planning

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General purpose

→ The Compliance Checklists are tools which will provide ICAO with information on a State's level of implementation of international Standards and Recommended Practices (SARPs);

→ The Compliance Checklists will enable States to identify any difference which may exist between their own practices and those established by international standards (Article 38 of the Chicago Convention).

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Structure of the SAAQ

Part 7 Aircraft Accident and Incident Investigation

- ✓ AIG specific legislation
- ✓ Designation and type of authority
- ✓ Regional offices
- ✓ Judicial/administrative procedures
- ✓ Procedures Manual
- ✓ Number of accidents/incidents
- ✓ Aircraft accident investigators
- ✓ Facilities and equipment
- ✓ Incident reporting systems
- ✓ Database (ADREP compatible)

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General purpose

- States submitting completed compliance checklists will enable ICAO to maintain a database on the level of compliance by States of ICAO SARPs.
- Proper completion of the compliance checklists will facilitate the work of the ICAO SOA team.

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General purpose

- The compliance checklists address all standards and recommended practices, including the definitions, found in an Annex.
- The compliance checklists do not include the appendices, attachments, tables and figures which may be found in an Annex.
- The compliance checklists do not cover Procedures for Air Navigation Services (PANS) or Technical Instructions.

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Coordination

- ICAO SOA Section (SPO and/or team leader) will communicate directly with the State's National Safety Oversight Coordinator on the completion of the compliance checklists.
- Improper completion of the compliance checklists will result in the checklists being returned to the State through the State's National Safety Oversight Coordinator for correction.

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Timelines

- States are required to submit to ICAO and keep up-to-date Compliance Checklists for all Annexes, with the exception of Annex 9 –*Facilitation* and Annex 17–*Security*.
- All Contracting States are required to submit the compliance checklists duly completed by 31 May 2005.
- States are required to maintain the compliance checklists up-to-date and/or update the compliance checklists at least six months prior to the scheduled audit.

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The Compliance Checklist

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to consider as a guide in detecting differences:

- in character or other means of identification
- the national regulation is different from the corresponding ICAO SARP or Standard
- the national regulation differs in principle, though the corresponding ICAO Standard is not directly imposing an additional obligation

- Different in character or other means of compliance

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es to consider as a guide in d
e differences:

Applicable

a Contracting State deems
related to aircraft, personn
iliary services not applicabl
ing aviation activities of the
acting State.

- Not applicable

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ies to consider as a guide in c
ole differences:

roductive or partially imple
ented

category applies when the nation
roductive than the corresponding
in no regulation has been promul
s the corresponding ICAO SAR

- Less protective or partially implemented / not implemented

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Annex 11 and status of implementation

Annex 11

AIR TRAFFIC SERVICES

Air Traffic Control Service - Flight Information Service

Alerting Services

Aeronautical Information Services

Annex Standard or Recommended Practice

Protection of electronic aeronautical data while stored in transit shall be totally monitored by the cyclic redundancy check (CRC). To achieve protection of the integrity level of critical and essential aeronautical data classified in 2.18.2, a 32- or 24-bit CRC algorithm shall apply respectively.

Level of Implementation

Not Implemented

In Progress

Fully Implemented

Annex SARP

Std. / Doc.

Annex Reference

Legis.

ICAO SARF's compliance and status of implementation

THIRTEENTH EDITION - JULY 2001

Annex Reference and SARF Identifier	ANNEX 11 AIR TRAFFIC SERVICES Air Traffic Control Services - Flight Information Services Alerting Service	Regulatory Completion Status Adopted or Disputed Reference	Difference			Time of the Difference Identified by the State	Comments: Indicating the reason for the Difference
			No	Yes	Level of implementation of SARF		
			None existing (at Risk)	Difference in Other aspects of compliance	Less practice or partially implemented		
2.18.2 Chapter 7	Protection of electronic aeronautical data (audio stored or in transit) shall be totally monitored by the cyclic redundancy check (CRC). To achieve protection of the integrity level of critical and essential aeronautical data as classified in 2.18.2, a 32- or 24-bit CRC algorithm shall apply respectively.						
2.19 Chapter 7	To achieve protection of the integrity level of routine aeronautical data as classified in 2.18.2, a 16-bit CRC algorithm shall apply.						

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Availability of the SAAQ and the Compliance Checklist

- The **SAAQ** and the **Compliance Checklist** are available in English from the following sources

- CD-ROM
- ICAO-NET

- States can complete them in any of the ICAO languages.

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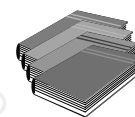
Programme Activities



PLANNING



AUDITS



**AUDIT
REPORTS**



**AUDIT FINDINGS
AND DIFFERENCES
DATABASE (AFDD)**



**WORKING
PAPERS**

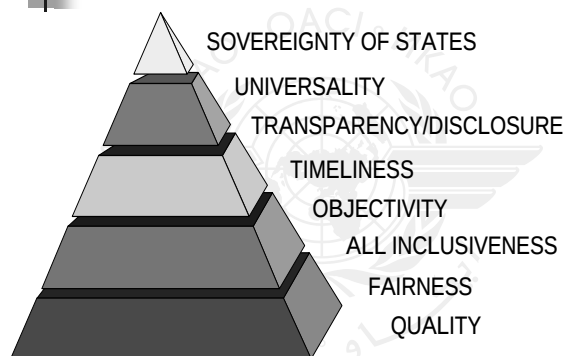


TRAINING

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Programme Principles



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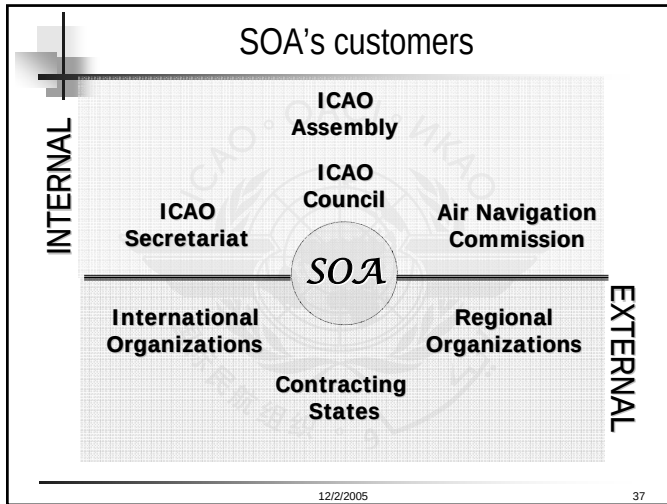
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ISO certification of SOA

- Demand for external quality assurance of the Programme.
- Standardization of procedures and processes.
- Increase in efficiency and effectiveness.
- Ease to integrate new areas of audit activities.
- Consistently provide product that meets customer requirements.
- Enhance customer satisfaction.

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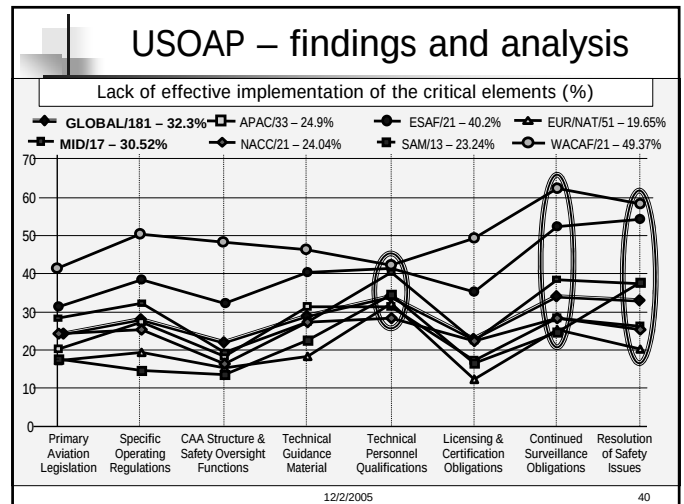
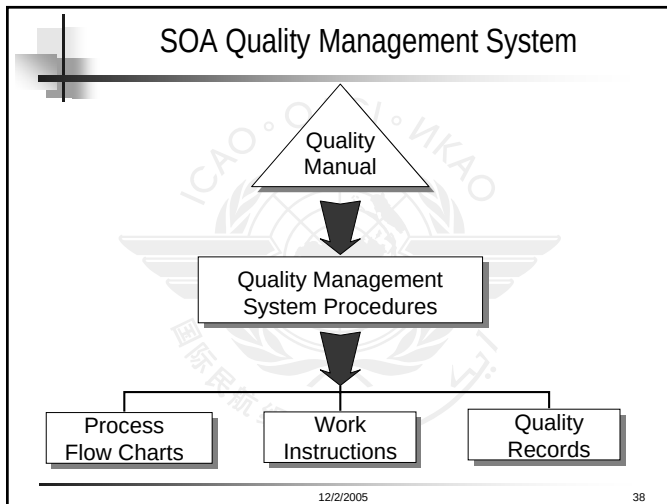


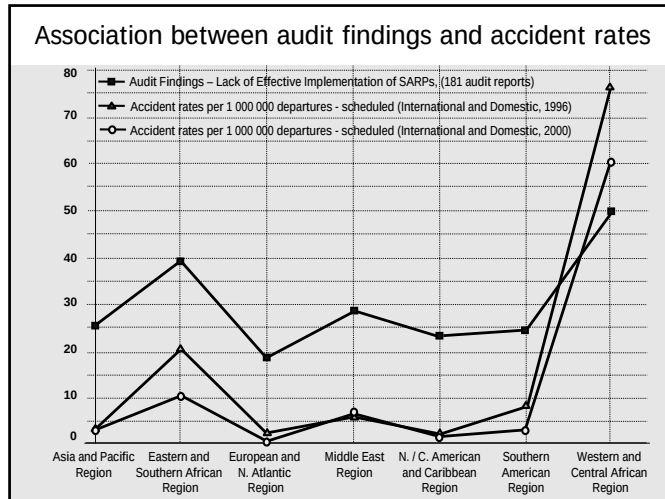
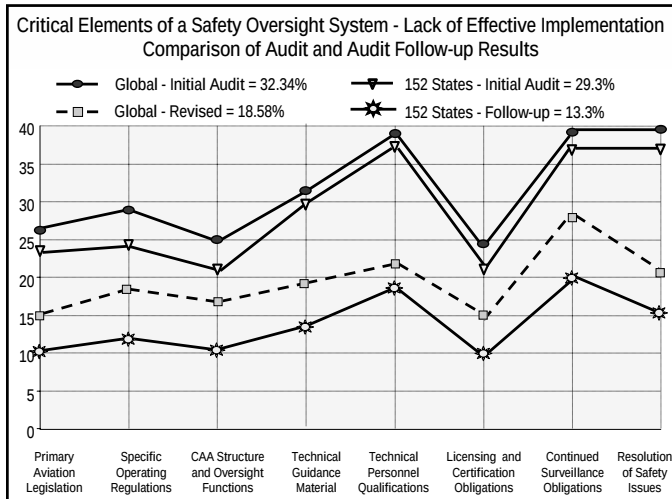
Analysis of the findings

Audit Findings and Differences Database (AFDD)

- Based on factual and recent data
- Enables an accurate identification of deficiencies impacting on safety
- Consistent with accident/incident rates
- Reliable safety tool, both for ICAO and its Contracting States
- Updated as audit follow-up validation missions are completed
- Several sub-applications

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What does this all mean?

1. What is the impact of the results of the audits on safety?
2. What can and should be done?



What can and should be done?

- Increased commitment on the part of Governments to fulfill their responsibilities
- Greater support to Civil Aviation Administrations
- Working together – joining efforts
- Full participation in the comprehensive systems approach
- Implementation of the unified strategy to resolve safety-related deficiencies.



Working together

ICAO

REGIONAL AND
INTERNATIONAL
ORGANIZATIONS



CONTRACTING
STATES

AVIATION
INDUSTRY

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Thank you!
Any questions?

Review

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- Structure and availability of the SAAQ
- General purpose Compliance Checklists; timelines; coordination

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