



ICAO

UNITING AVIATION

39th

TRIENNIAL ASSEMBLY

27 SEP-07 OCT 2016

39th

TRIENNIAL ASSEMBLY

**TECHNICAL
COMMISSION**

DAY 1

29 SEP 2016



39th

TRIENNIAL ASSEMBLY

ANNUAL REPORTS OF THE COUNCIL

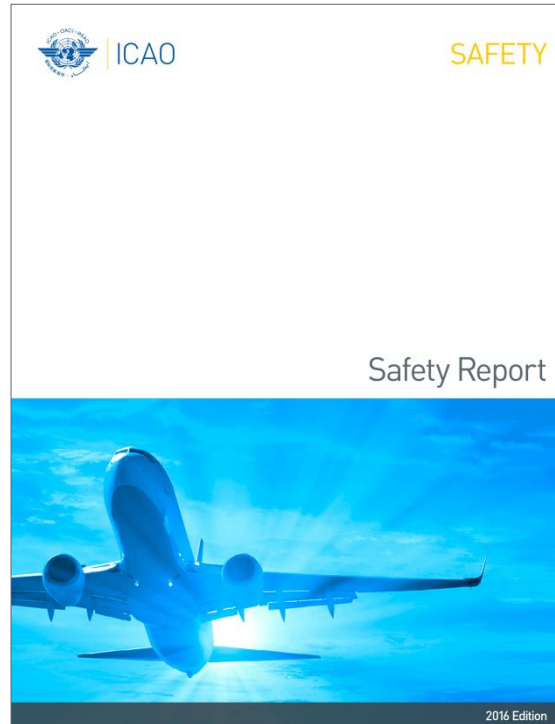
(2013, 2014, 2015)

ITEM 32

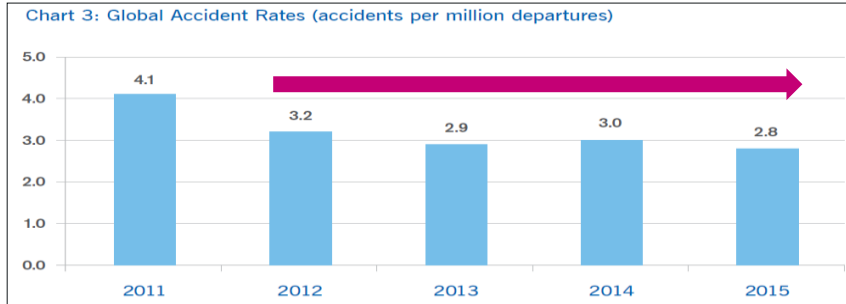


Safety &
Air Navigation

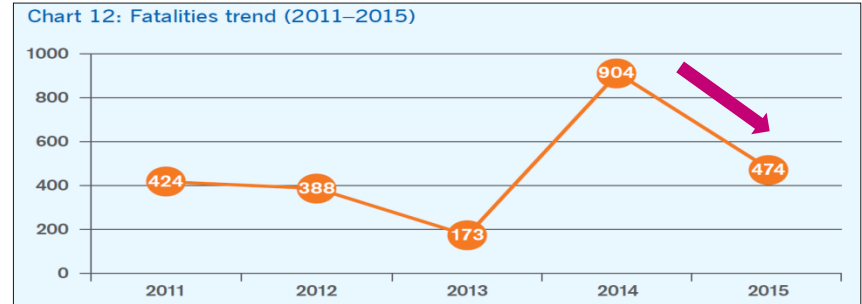
GLOBAL STATUS



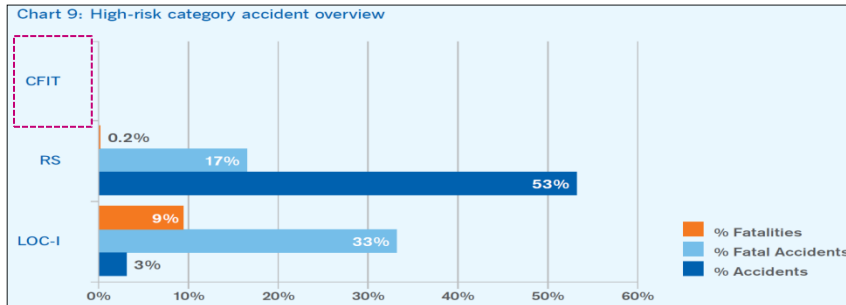
State of Global Aviation Safety



Global accident rate remains low and stable



Uptick in fatalities in 2014, but went back down in 2015



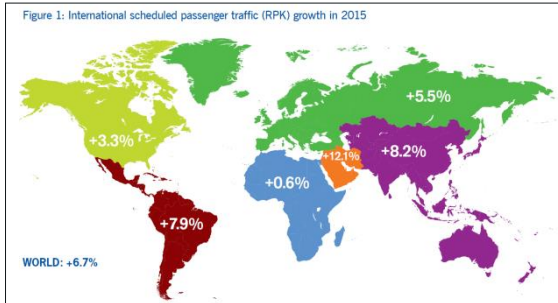
No CFIT accidents in 2015

Table 1: Departures, accidents and fatalities by RASG region

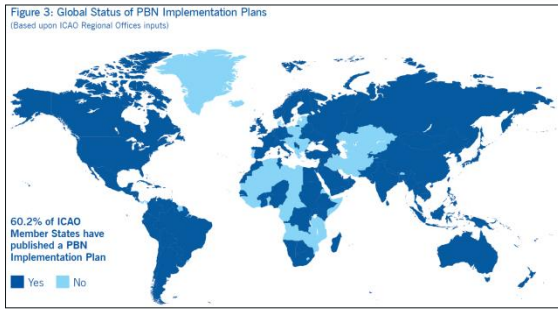
RASG	Estimated Departures (in millions)	Number of accidents	Accident rate (per million departures)	Fatal accidents	Fatalities
AFI	0.8	6	7.3	0	0
APAC	9.8	24	2.5	3	98
EUR	8.1	24	3.0	1	150
MID	1.2	3	2.5	1	224
PA	13	34	2.6	1	2
WORLD	33	92	2.8	6	474

Regional accident rates remain low

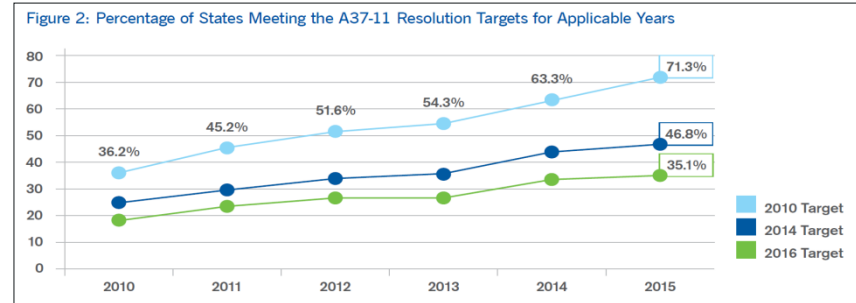
State of Global Air Navigation



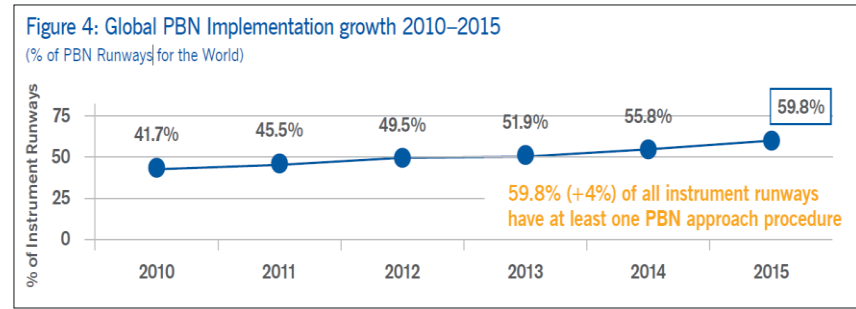
Traffic grew by 6.7% in 2015



More focus on PBN Implementation Plans needed



Only 35% of States are meeting the 2016 Target for A37-11



60% of all instrument runways have at least one PBN approach



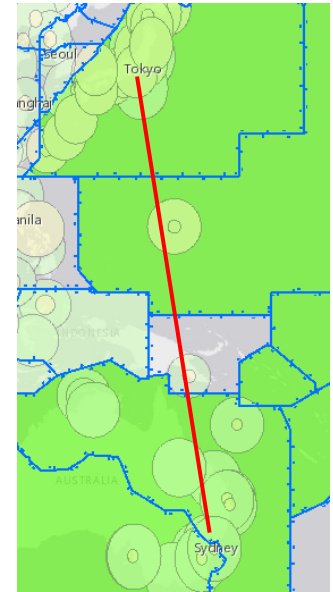
Safety & Air Navigation

KEY ISSUES



Global Tracking Updates

- **Normal Tracking SARPs Adopted**
 - Complementary, Risk-based SARP SL circulated
 - Abnormal event guidance under development
- **Autonomous Distress Tracking SARPs Adopted**
 - Work underway to identify and develop PANS procedures
- **Data Recovery SARPs Adopted**
 - Guidance material under development





Conflict Zones

- **2014 – Senior-Level Task Force** on Risk to Civil Aviation arising from Conflict Zones (TF-RCZ) developed 12 item work programme.
- **2015 – Development of the Conflict Zone Information Repository (CZIR)** for an initial one year evaluation period starting 2 Aprils 2015.
- **2016 – Report of the (CZIR) Repository Review** group’s recommendation for the future operation of the repository considering the experiences by States during the one year evaluation period.
- **2016 – Secretariat** studies and explores improvements for the future operation of the Conflict Zone Information Repository.



Conflict Zones

Other ICAO achievements resulting from the 12 item TF-RCZ work programme:

- Guidance on Risk Assessment for operation over or near conflict zones
- Review the application of ICAO treaties relating to conflict zones (Meeting on 13 and 14 July 2015)
- Review of existing material on the coordination of Military and Civil flight operations



Public Health Concerns - Ebola

ICAO Actions

- ICAO has signed a MOU with the UNDP on “*Operational Aspects of Ebola Response Multi-Partner Trust Fund*”
- ICAO web application for tracking Ebola related NOTAMs (iSTARS/SPACE)
- Action Plan for States and International Organizations to facilitate harmonized implementation of WHO recommendations relevant to the aviation sector;
- ICAO, IATA, ACI, supporting WHO and US CDC to develop several procedures & guidance material on management of EVD in the aviation sector
 - Planning guide for screening, procedures for aircraft cleaning crew, etc.



Public Health Concerns - Ebola

ICAO Actions

- WHO and ICAO recommended exit screening of passengers, not entry
- ICAO has facilitated the lifting of restrictions on flights by some States
- ICAO has attended the CASSOA Ministerial Meeting on Ebola which resulted in a declaration for States to avoid imposing restrictions on flights
- Joint ICAO/WHO assistance visits to States and international airports undertaken through CAPSCA (www.capsca.org)

Public Health Concerns - Zika



WHO Distribution Map Zika
September 2016



Vector Control Register
as part of risk assessment process to inform aircraft disinsection policy decisions

Investigating non-chemical disinsection as additional method or possible alternative due to possible health effects and resistance concerns associated with the use of chemicals

Remotely Piloted Aircraft Systems (RPAS)

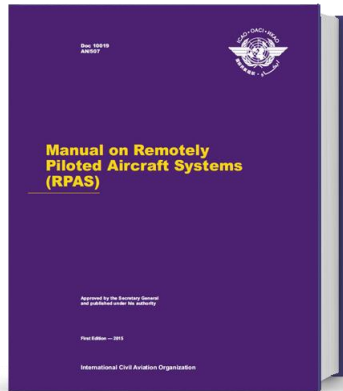
- **RPAS Programme**

- Scope – International IFR Operations
- In place - SARPS on Annexes 2, 7 and 13
- 18 of 19 Annexes affected
- Other UAS outside International IFR Operations

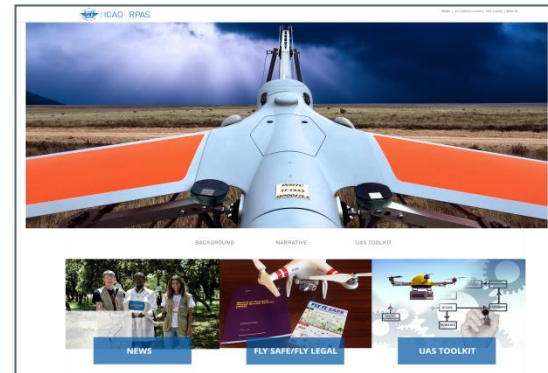


Remotely Piloted Aircraft Systems (RPAS)

- **Guidance material**
 - ICAO RPAS Manual



- ICAO UAS Toolkit



RPAS Activities

- **RPAS Symposiums**

- Montreal, March 2015
- Sweden, May 2016
- Nigeria, April 2017
- Montreal, Sept 2017



- **RPAS Workshops**

- Sweden, May 2016
- Lima, June 2016
- China and Thailand, November 2016
- All Regions by 2017





Lithium Batteries

- Prohibition on passenger aircraft
- Additional restrictions on cargo aircraft
- Risk of non-compliance
- Need for transport versus need for safety
- **Solution:**
 - Development of performance-based package standard by SAE
 - Additional operational controls
 - Provisions for effective risk assessments
 - Increased surveillance and improved traceability
- Acceptable mitigation measures in place before lifting prohibition

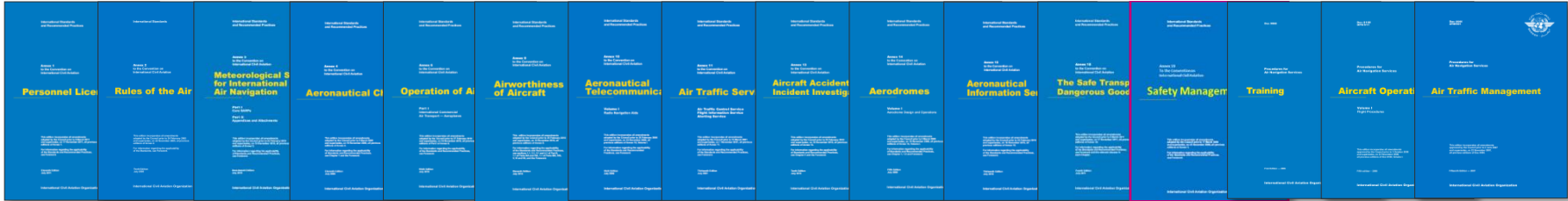
**Cargo compartment
fire protection systems
unable to suppress or
extinguish a fire
involving high density
lithium batteries**



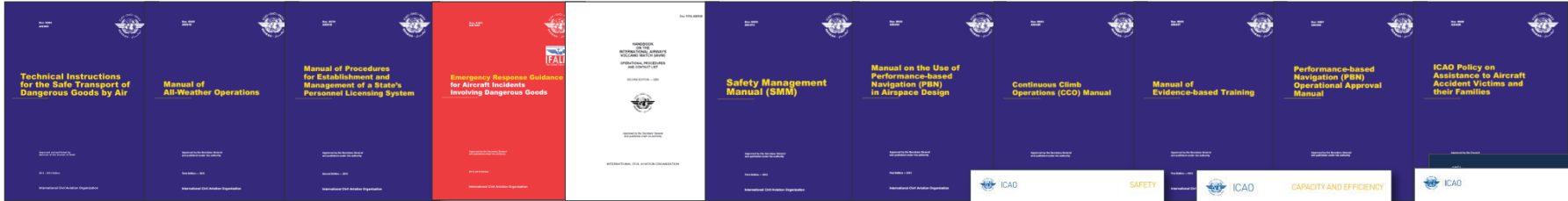
ICAO

UNITING AVIATION

Deliverables during the last Triennium (2013)



Annex 1 Annex 2 Annex 3 Annex 4 Annex 6 Annex 8 Annex 10 Annex 11 Annex 13 Annex 14 Annex 15 Annex 18 **Annex 19** PANS-TRG PANS-OPS PANS-ATM



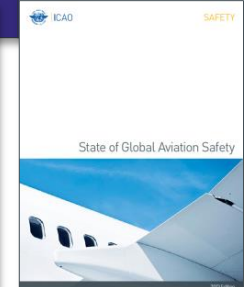
DOC 9284 DOC 9365 DOC 9379 DOC 9481 DOC 9766 DOC 9859 DOC 9992



Global Aviation Safety Plan



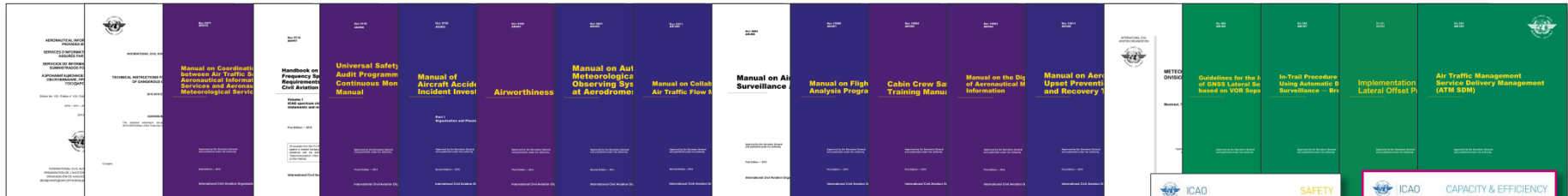
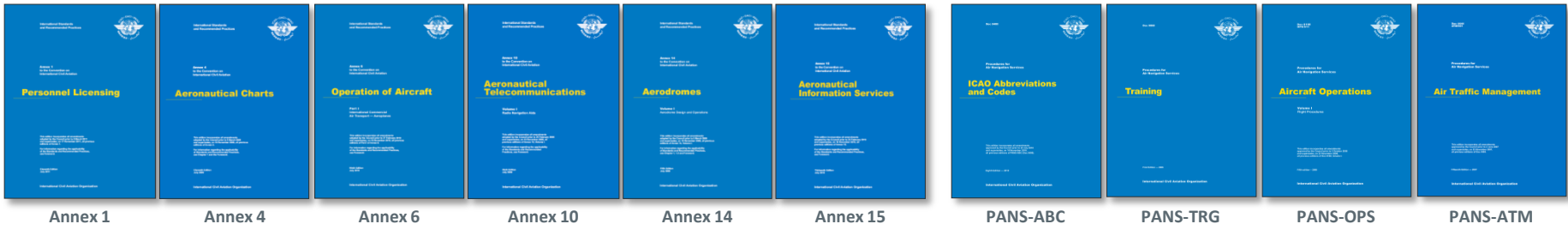
Global Air Navigation Plan



Annual Safety Report



Deliverables during the last Triennium (2014)



DOC 7383 DOC 9284 DOC 9377 DOC 9718 DOC 9735 DOC 9736 DOC 9756 DOC 9760 DOC 9837 DOC 9971 DOC 9994 DOC 10000 DOC 10002 DOC 10003 DOC 10011



Annual Safety Report



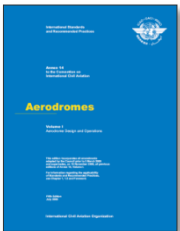
Annual Air Navigation Report



Deliverables during the last Triennium (2015)



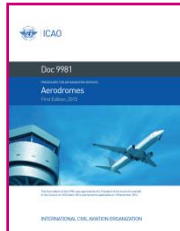
Annex 6



Annex 14



Annex 18



PANS-AERO



PANS-TRG



DOC 8697 DOC 9137-AN1 DOC 9137-AN2 DOC 9625 DOC 9691 DOC 9718 DOC 9756 DOC 9776 DOC 9896 DOC 9976 DOC 9997 DOC 10019 DOC 10020 DOC 10039 DOC 10049



Annual Safety Report



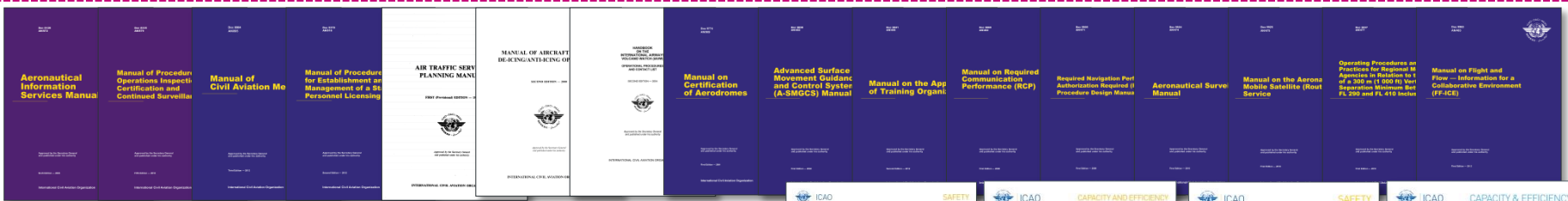
Annual Air Navigation Report



Deliverables during the last Triennium (2016)

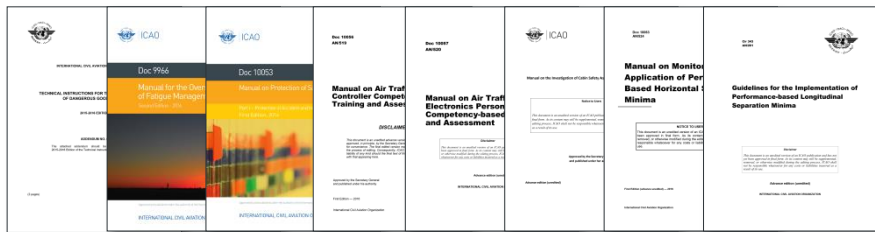


Annex 1 Annex 2 Annex 3 Annex 4 Annex 6 Annex 8 Annex 10 Annex 11 Annex 13 Annex 14 Annex 15 Annex 19 PANS-ABC PANS-AGA PANS-ATM PANS-OPS



DOC 8126 DOC 8335 DOC 8984 DOC 9379 DOC 9426 DOC 9640 DOC 9766 DOC 9774

FORECAST



DOC 9284 DOC 9966 DOC 10053 DOC 10056 DOC 10057 DOC 10062 DOC 10063 CIR 343



Global Aviation Safety Plan Global Air Navigation Plan Annual Safety Report Annual Air Navigation Report

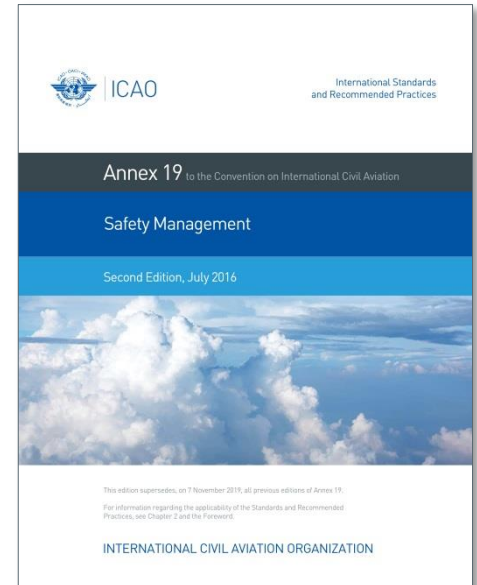
State Safety Programme (SSP) Implementation

• Initiatives

- Establishment of ICAO Safety Management Programme;
- Deliverables identified to support SSP implementation;
- State letter AN 8/3-16/89 requests States to consider means to support programme.

• USOAP SSP Audits

- ICAO to begin auditing SSP from January 2020 in accordance with criteria in line with the GASP;
- Starting in January 2018, select States will be invited to receive an SSP audit on a voluntary, but non-confidential basis;





Events during the last Triennium (2013, 2014, 2015, 2016)

Language Proficiency Requirements Technical Seminar
25-27 March 2013
ICAO Headquarters, Montréal

Regulation of Emerging Modes of Aerospace Transportation (REMATS)
24 - 25 May 2013
Centre Mont-Royal, Montréal

Advanced ATM Techniques Symposium and Workshops
Today's Opportunities for Saving Fuel and Reducing Emissions
4 - 6 November 2013, ICAO Headquarters, Montréal

Multi-crew Pilot Licence Symposium
10 - 12 December 2013, ICAO Headquarters, Montréal

GLOBAL TRACKING MULTI-DISCIPLINARY MEETING
Montréal, Canada, 12 - 13 May 2014

Loss of Control In-flight Symposium
20 - 22 May 2014, ICAO Headquarters, Montréal

2014 Meteorology Divisional Meeting
ICAO Headquarters, Montréal, Canada, 7-18 July 2014

ICAO BUSINESS CLASS (IBC2014)
Technology Propelling the Future of Aviation
Montréal, Canada, 14 - 16 October 2014

NEXT GENERATION OF AVIATION PROFESSIONALS
Celebrate the Past, Prepare for the Future
Montréal, Canada, 3 - 4 December 2014

2nd High-level Safety Conference
2 - 5 February 2015, ICAO Headquarters, Montréal

ICAO-WHO CAPSCA Global Symposium
Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation
28 - 30 April 2015, ICAO Headquarters, Montréal

ICAO / UNOOSA AeroSPACE Symposium
18-20 March 2015, ICAO Headquarters, Montréal

Remotely Piloted Aircraft Systems (RPAS) Symposium
23 - 25 March 2015, ICAO Headquarters, Montréal

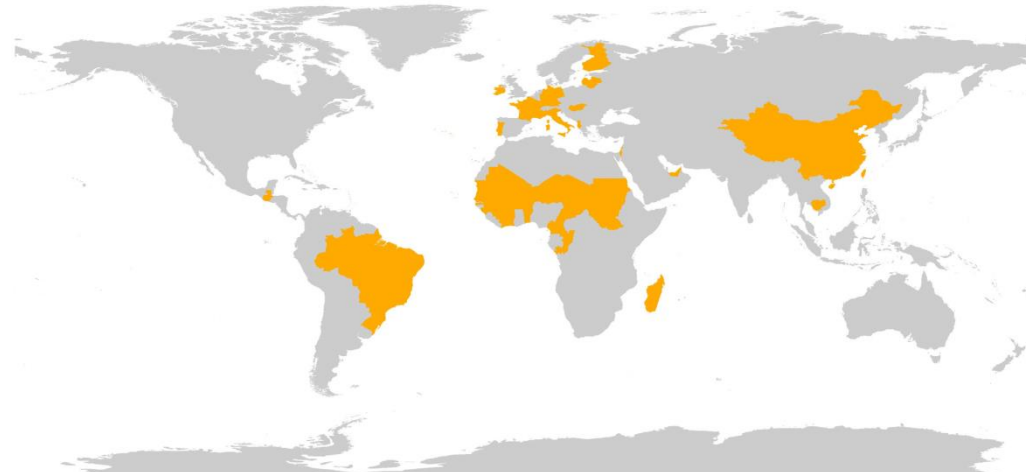
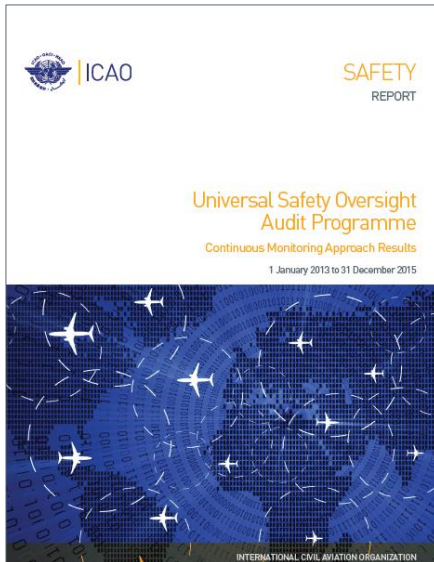
ICAO / UNOOSA Symposium
15 - 17 March 2016, Abu Dhabi, United Arab Emirates

FMAS2016
Symposium on Fatigue Management Approaches

RPAS and Remote ATS Symposium
19-10 May 2016, Stockholm, Sweden



Universal Safety Oversight Audit Programme (USOAP)



USOAP CMA Off-site Validation from 1 January 2013 to 31 December 2015

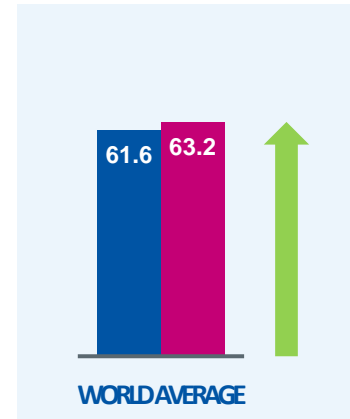
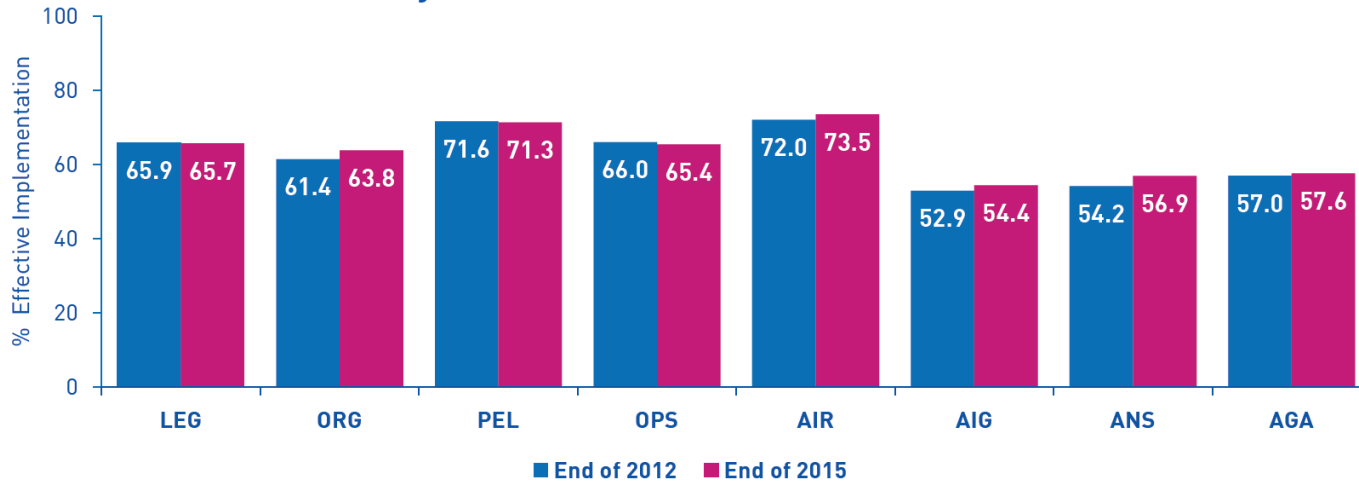


Universal Safety Oversight Audit Programme (USOAP)

USOAP CMA Activity	2013	2014	2015	2016*
USOAP CMA Audits	8	5	10	6
ICAO Coordinated Validation Missions (ICVMs)	20	15	18	11
Off-site Validation Activities	1	15	21	16
Seminar/workshops	7	12	10	7
Total	36	47	59	40

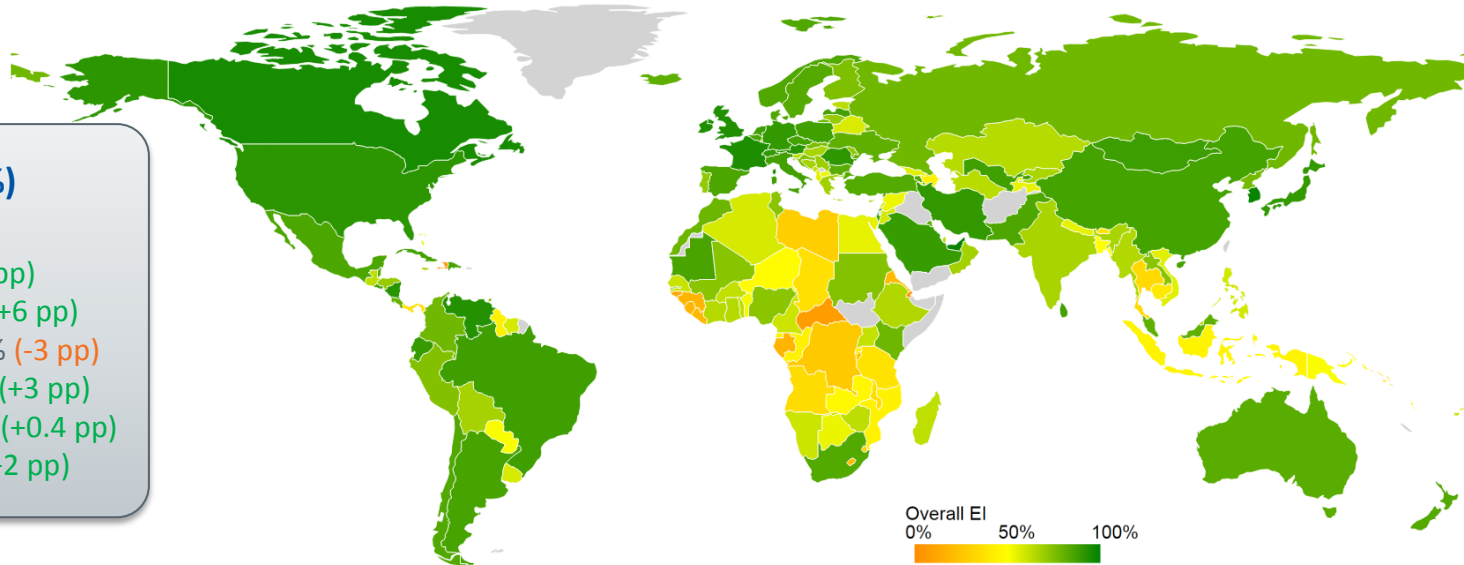
Current Global Safety Audit Results

EI by audit area (end of 2012 vs end of 2015)



ICAO Safety Audit Results

Effective implementation of safety oversight systems by State



Regional Averages (EI%)

from Jan 2013 to Dec 2015

- World: 61% to 63% (+2 pp)
- RASG-AFI: 40% to 46% (+6 pp)
- RASG-APAC: 62% to 59% (-3 pp)
- RASG-EUR: 71% to 74% (+3 pp)
- RASG-MID: 68% to 68% (+0.4 pp)
- RASG-PA: 68% to 70% (+2 pp)

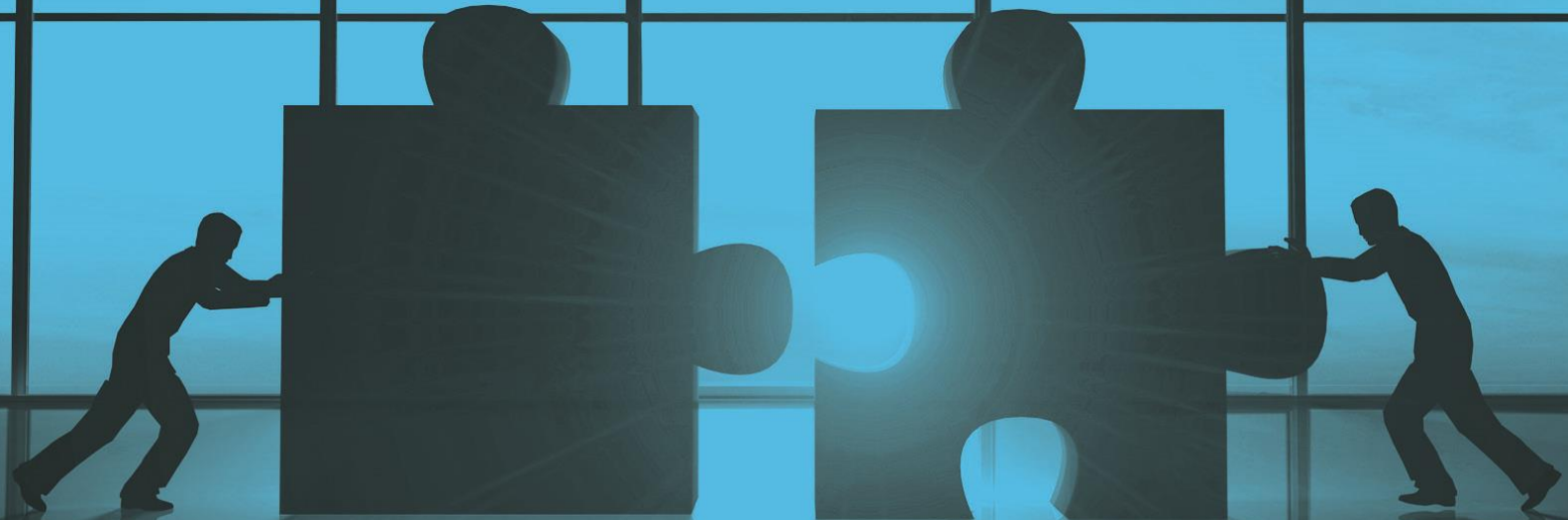
*pp = percentage points



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NO COUNTRY LEFT BEHIND

Aviation Tools to Support Implementation

A 'NO COUNTRY LEFT BEHIND' Initiative:
iMPLEMENT
Facilitating Data-Driven Decisions for Aviation

			
State Safety Briefing	Regional Safety Briefing	Aerodrome Briefing	Solution Center
			



 State Safety Briefing	 Solution Center	 CAA HR Benchmark	 Economic Dev. Indicators
 Dashboards	 Regional Safety Briefing	 Approach Paths	 Airport Briefing





39th

TRIENNIAL ASSEMBLY

SAF AND AN MONITORING & ANALYSIS

ITEM 33



SAF and AN Monitoring and Analysis

ITEM 33

Council Papers

WP No.	Title
30	Report on GASP and GANP Implementation priorities, status of implementation, and information on USOAP CMA
31	Report on outcomes of the second High-level Safety Conference (HLSC 2015) and emerging issues

GASP & GANP Priorities and USOAP CMA

- **Provides:**
 - A report on the status of the objectives and enablers of the 2014-2016 edition of the Global Aviation Safety Plan (GASP).
 - A report on the status of the 2013-2028 Global Air Navigation Plan (GANP) priorities.
 - An overview of the status and results of the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA).

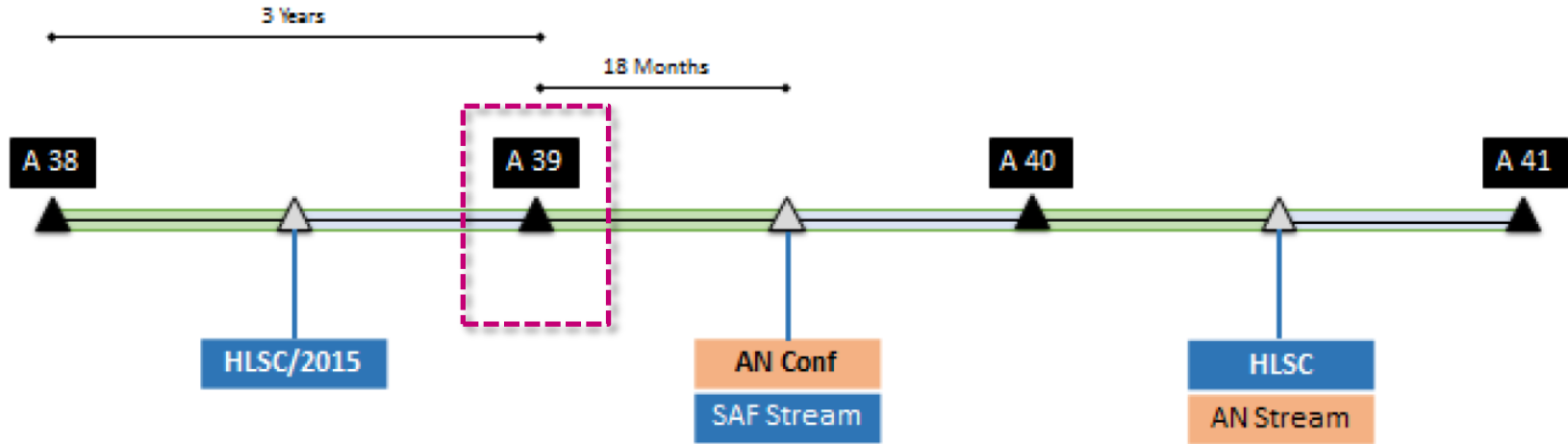


High-level Safety Conference (2015)

- Provides the outcomes of the second High-level Safety Conference held in 2015
- Highlights the value of the HLSC outcomes in providing timely input to the development of the budget which is being presented to the Assembly for endorsement.
- **The Assembly is invited to:**
 - Note this information
 - Consider divisional-type meetings as a formal means to recommend inputs for additional technical work to be undertaken by ICAO for consideration during the budget review and approval process



Strategic Planning: Assembly and High-level Meetings



Alternating High-level meetings to prepare technical work ahead of budget discussions



SAF and AN Monitoring and Analysis

ITEM 33

Groups

GROUP 33.1: Aircraft Tracking

GROUP 33.2: RPAS

GROUP 33.3: Conflict Zones

GROUP 33.4: Safety Management

GROUP 33.5: Monitoring and Analysis

GROUP 33.6: Harmonization

GROUP 33.7: Other



SAF and AN Monitoring and Analysis

ITEM 33

Working Papers

GROUP 33.1: Aircraft Tracking

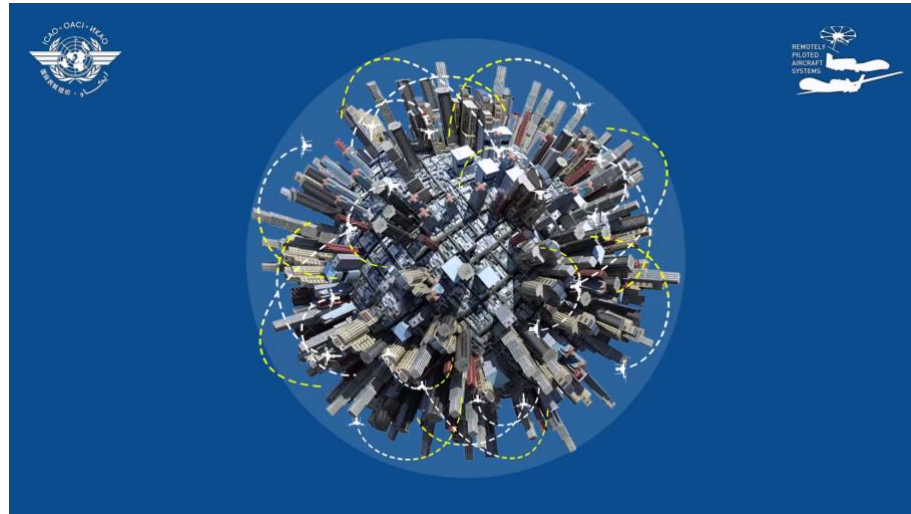
WP#	Presented by
290	Singapore
168	AFCAC

Information papers provided by: China (WP/274), the United States (WP/269) and the IMSO (WP/394)

SAF and AN Monitoring and Analysis

ITEM 33

GROUP 33.2: RPAS





SAF and AN Monitoring and Analysis

ITEM 33

Working Papers

GROUP 33.2: RPAS

WP#	Presented by
439	Brazil
335	China
303	Dominican Republic
281	Japan
103	United States
146	Mexico, supported by 20 Latin-American States
289	Singapore, Malaysia, Marshall Islands, New Zealand, Palau, Papa New Guinea and Solomon Islands
95	Slovakia on behalf of the EU, ECAC and EUROCONTROL (Introduced by Turkey)
116	ACI, CANSO, IATA, ICCAIA, IFALPA, IFATCA, IAOPA

Information papers provided by: Brazil (WP/265), Cuba (WP/454), Indonesia (WP/226), Russian Federation (WP/296 Rev. 1), the United States (WP/82); and Slovakia on behalf of the EU, ECAC and EUROCONTROL (WP/107) . A related information paper under Agenda Item 16 was provided by Spain (WP/132).



SAF and AN Monitoring and Analysis

ITEM 33

Working Papers

GROUP 33.3: Conflict Zones

WP#	Presented by
108 Rev I	Slovakia on behalf of the EU, ECAC and EUROCONTROL; and by Australia and Malaysia (Introduced by Netherlands)
200	CANSO
376	Russian Federation

Information papers provided by: Slovakia on behalf of the EU and its Member States and the other Member States of the ECAC, by EUROCONTROL, Australia and Malaysia (WP/297)



SAF and AN Monitoring and Analysis

ITEM 33

Working Papers

GROUP 33.4: Safety Management

WP#	Presented by
283	Brazil
342	China
324	Venezuela
359	Venezuela
109	Peru; endorsed by the Countries of the SAM Region and the 22 Member States of the Latin American Civil Aviation Commission (LACAC)
195	CANSO

Information papers provided by: Cuba (WP/362); India (WP/135); Republic of Korea (WP/420); Spain (WP/419); and ASECNA (WP/385)

