
ICAO
INTERNATIONAL CIVIL AVIATION ORGANIZATION
A UN SPECIALIZED AGENCY
Workshop on the Management of the Air Navigation Deficiencies and the Monitoring of ASBU implementation
September 2025
The Air Navigation Deficiencies Management process

Outline

01 Definitions

02 Collection, notification, and posting of information in the AANDD

03 Reporting and documentation of deficiencies

04 Monitoring and removal of AASPG-endorsed deficiencies

05 Assessment and prioritization of deficiencies

01

Definitions

01 - Definitions

A deficiency is a situation where a facility, service or procedure does not comply with a Regional Air Navigation Plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation

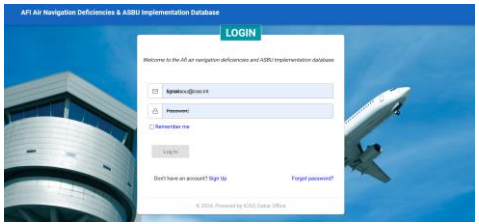
Finding : Generated in a USOAP CMA activity as a result of a lack of compliance with Articles of the Convention, ICAO Assembly Resolutions, safety-related provisions in the Annexes to the Convention, Procedures for Air Navigation Services (PANS) or a lack of application of ICAO guidance material or good aviation safety practices.

01 - Definitions

AFI Air Navigation Deficiencies Data Base (AANDD) :

A web-based platform providing an online tool for States and relevant stakeholders to manage air navigation deficiencies in the region.

The application is available on https://aandd.icao.int/



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02

Collection, notification, and posting of information in the AANDD

02- Collection, notification, and posting of information in the AANDD

Collection of information- **Sources**

States
(Regulatory bodies and ANSPs)

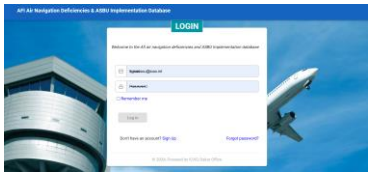
Regional Offices

Professional provider organizations
(IFACTCA, IFATSEA, …)

Regional Safety Oversight Organizations (RSOOs)

Users
(IFALPA, IATA)

AANDD



02- Collection, notification, and posting of information in the AANDD

Collection, notification of air navigation deficiencies – **Sources**

States

- To ensure comprehensive data collection, States—through their regulatory bodies and ANSPs—should establish reporting systems aligned with Annex 13, Chapter 8,

Users *(IFALPA, IATA, …)*

- Users of air navigation facilities and services to report any serious problems encountered due to the lack of implementation of air navigation facilities or services required by regional plans.

Professional provider organizations

- should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational

Regional Safety Oversight Organizations (RSOOs)

- as Safety Oversight bodies, should identify facilities, services and procedures that are not implemented or are unserviceable for prolonged periods or are not fully operational.

02- Collection, notification, and posting of information in the AANDD

Collection, notification of air navigation deficiencies – **Sources**

Regional Offices should maintain a list of specific deficiencies, if any, taking the following steps:

- Compare the status of implementation of the air navigation facilities and services with the regional air navigation plan documents and identify facilities, services and procedures not implemented;
- Review mission reports with a view to detecting deficiencies that affect safety, regularity and efficiency of international civil aviation;
- Make a systematic analysis of the differences with ICAO SARPs filed by States to determine the reason for their existence and their impact, if any, on safety, regularity and efficiency of international civil aviation;

02- Collection, notification, and posting of information in the AANDD

Collection, notification of air navigation deficiencies – **Sources**

Regional Offices (cont'd)

- Review aircraft accident and incident reports with a view to detect possible systems or procedures deficiencies;
- Review inputs, provided to the Regional Offices by the users of air navigation services on the basis of Assembly Resolution A37-15, Appendix L;
- Assess and prioritize the result of the above according to the paragraph 4 of PART V of the APIRG Procedural Handbook Part;
- Report the outcome to the State(s) concerned for resolution; and
- **Report the result of above to AASPG for further examination, advice and report to the ICAO Council, as appropriate through PIRG reports.**

02- Collection, notification, and posting of information in the AANDD

Collection of information – Minimum reporting areas

- To improve reporting of air navigation deficiencies, APIRG adopted a list of minimum reporting areas (Appendix D of AASPG handbook).
- States, RSOOs, ANSPs, users, and professional organizations are encouraged to report deficiencies based on this list, in addition to those defined by ICAO Council policy.

MINIMUM REPORTING AREAS

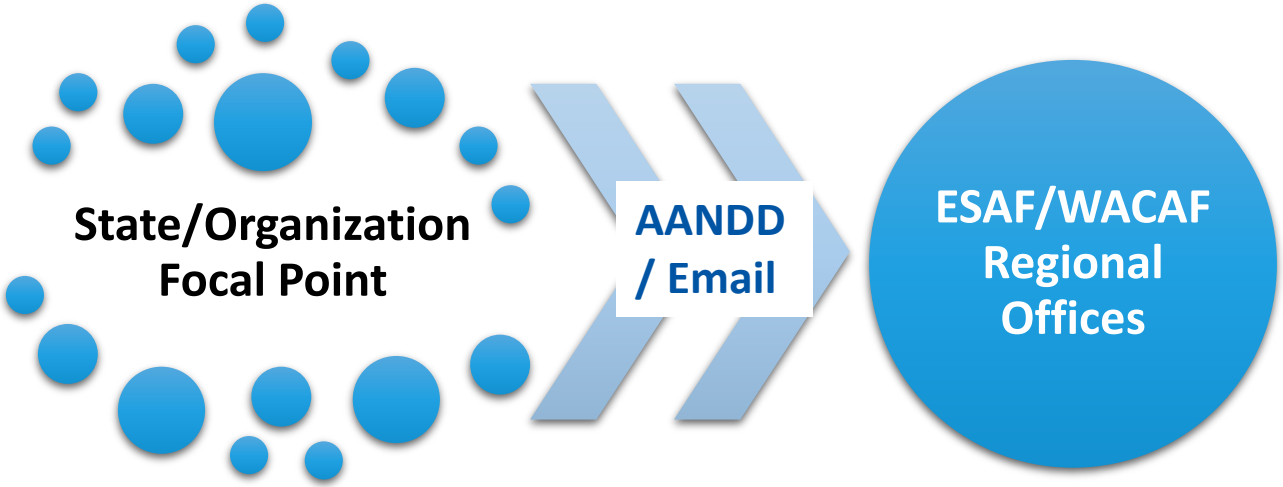
PLANIFICATION DES OPÉRATIONS DES AÉRODROMES (AOP)						
N°	**Area**	**Reference**	**Description English**	**Remarks English**	**Description Français**	**Observations Français**
1.	AOP	Annex 14 - Vol 1, Chapter 1 PANS-Aerodromes, Part 1, 2	**Aerodrome Master Plan**	The lack of airports master plans affect their short to medium term capacity enhancement projects; restricting their ability to fulfil capacity needs.	**Plan directeur d'aérodrome**	L'absence de plans directeurs d'aéroports affecte leurs projets de rdéveloppement des capacités à cou et moyen terme, limitant ainsi leur aptitude à répondre aux besoins en termes de capacité.
GESTION DU TRAFIC AERIEN (ATM)						
N°	**Area**	**Reference**	**Description English**	**Remarks English**	**Description Français**	**Observations Français**
24.	**ATM**	[Annex 11 Para 2.6] [AFI/7 Rec. 5/21]	**Designation of Airspace**	Use of non-standard naming of ATS airspace may lead to misunderstanding of the type of ATS available which in turn leads to inefficiency in traffic management and impacts on flight safety	**Désignation de l'espace aérien**	L'utilisation d'une dénomination non standard de l'espace aérien ATS peut conduire à une mauvaise compréhension du type de service disponible, ce qu entraîne une inefficacité dans la gestion du trafic et des répercussions sur la sécurité des vols
COMMUNICATION NAVIGATION SURVEILLANCE (CNS)						
N°	**Area**	**Reference**	**Description English**	**Remarks English**	**Description Français**	**Observations Français**
81.	**CNS**	[AFI/7, Rec. 5/24] Annex 10 Vol.2 &3	**Improvement of communications**	Unreliable communication systems	**Amélioration des communications**	Systèmes de communication peu fiables
AERONAUTICAL METOROLOGY (MET)						
N°	**Area**	**Reference**	**Description English**	**Remarks English**	**Description Français**	**Observations Français**
135.	**MET**	Annex 3, Chapter 9, App. 8	**Fight briefing services**	Deficiencies in providing Aeronautical users with the latest available information on existing and/or expected meteorological conditions along the route to be flown, at the aerodrome of intended landing, alternate aerodromes and other aerodromes as relevant, may lead to safety issues for	**Services de briefing de vol**	Les carences dans la fourniture aux utilisateurs aéronautiques des dernières informations disponible sur les conditions météorologiques existantes et/ou prévues le long de la route à suivre, à l'aérodrome d'atterrissage prévu, aux aérodromes de dégagemen et aux autres aérodromes, le cas échéant, peuvent entraîner des problèmes de sécurité pour les

03

Reporting and documentation of deficiencies

03 - Reporting and Documentation of Deficiencies

Reporting/Notification of information on deficiencies

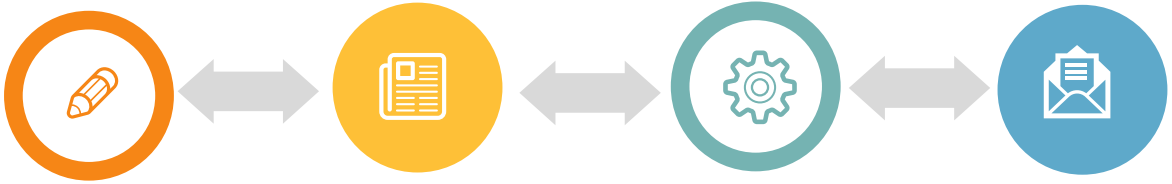


Newly identified deficiencies and Evidences

Reception and confirmation

03 - Reporting and Documentation of Deficiencies

Reporting of information on deficiencies



Notification of information on deficiencies

by States / organizations through AANDD

Review by Regional Officer SME

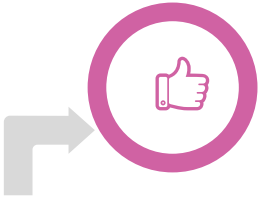
Review and analyze Coordinate with the State / Organization for clarifications

Review by Regional Office review Committee

Review and confirmation of the deficiency

Regional Office confirmation of deficiency

Notify the State once the deficiency is confirmed. Provide a deadline for implementing corrective actions.



Closure upon timely action

Timely corrective action by States leads to deficiency closure and deletion in AANDD.

Unresolved deficiency escalation to AASPG

If not resolved, the case is escalated to AASPG and the State must submit an action plan.

04

Monitoring and removal of AASPG-endorsed deficiencies

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04 - Monitoring & removal of AASPG' endorsed deficiencies

Monitoring & Removal of AASPG' endorsed deficiencies

Actions taken on time by the State

- The case is closed and captured in the AANDD as proposed for deletion
- The information is provided to the AASPG meeting

Actions not taken on time by the State

- The case is submitted to the AASPG Meeting for consideration and endorsement;
- The AASPG' endorsed deficiencies are uploaded in the AANDD by the Regional Offices; and
- The State is requested to submit an action plan within a given timeframe

04 - Monitoring & Removal of AASPG' endorsed deficiencies

Escalation, endorsement, and follow-up of deficiencies

1. The States implement their action plans and submit relevant evidences for consideration to ICAO Regional Offices

2. In case of challenges in the implementation, the State Focal point should inform and coordinate with the Regional Office SME

3. State focal points and ICAO Regional Offices must ensure timely updates of deficiency information in the AANDD system.

04 - Monitoring and removal of AASPG-endorsed Deficiencies

Monitoring by the Regional Office

Monitoring: ICAO Regional Offices monitor State implementation of action plans and report progress to AASPG.

Assessment: Upon completion of implementation, the RO SME submits a documented report with evidence to the Regional Office Review Committee. The Committee's report is submitted to AASPG for consideration.

Deletion: If deemed satisfactory by AASPG, the deficiency is deleted from the AANDD by the Regional Office. The State is informed.

Final Removal: Upon AASPG validation, the deficiency is permanently removed from the database.

05

Assessment and prioritization of deficiencies

05 - Assessment and prioritization of deficiencies

Safety risk assessment

Deficiency resolution is prioritized in three levels based on safety risk, following the methodology in ICAO Doc 9859 – Safety Management Manual.

Table 1. Safety risk probability table

Likelihood	*Meaning*	*Value*
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Table 2. Example safety risk severity table

Severity	*Meaning*	*Value*
Catastrophic	• Aircraft / equipment destroyed • Multiple deaths	A
Hazardous	• A large reduction in safety margins, physical distress or a workload such that operational personnel cannot be relied upon to perform their tasks accurately or completely • Serious injury • Major equipment damage	B
Major	• A significant reduction in safety margins, a reduction in the ability of operational personnel to cope with adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency • Serious incident • Injury to persons	C
Minor	• Nuisance • Operating limitations • Use of emergency procedures • Minor incident	D
Negligible	• Few consequences	E

05 - Assessment and prioritization of deficiencies

Safety risk assessment

Table 3. Example safety risk matrix

Safety Risk		*Severity*				
Probability		*Catastrophic A*	*Hazardous B*	*Major C*	*Minor D*	*Negligible E*
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

05 - Assessment and prioritization of deficiencies

Safety risk assessment

Table 4. Example of safety risk tolerability

Safety Risk Index Range	*Safety Risk Description*	*Recommended Action*
5A, 5B, 5C, 4A, 4B, 3A	INTOLERABLE	Take immediate action to mitigate the risk or stop the activity. Perform priority safety risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the safety risk index to tolerable.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	TOLERABLE	Can be tolerated based on the safety risk mitigation. It may require management decision to accept the risk.
3E, 2D, 2E, 1B, 1C, 1D, 1E	ACCEPTABLE	Acceptable as is. No further safety risk mitigation required.

05 - Assessment and prioritization of deficiencies

Three Deficiency Priority Levels

"U" priority (Red)

- Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

"A" priority (Orange)

- Top priority requirements necessary for air navigation safety.

"B" priority (Green)

- Intermediate requirements necessary for air navigation regularity and efficiency.

Thank You

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