



**ORGANIZACIÓN DE
AVIACIÓN CIVIL
INTERNACIONAL**



AERONAUTICAL FREQUENCY MANAGEMENT IN THE SAM REGION

From Frequency Finder database quality control to coordinated spectrum protection towards WRC-27

Agenda Item 6.2

ICAO South American Regional Office
NAM/CAR/SAM Regional WRC-27
Preparatory Workshop

SAM

31 August – 1 September 2026



1. Why aeronautical frequency management matters

2

Spectrum management is a CNS safety and resilience function, not only an administrative process



A finite resource

Radio spectrum is scarce, demand is increasing and aeronautical systems must retain protected access.



CNS dependency

Current and future CNS/ATM systems depend on sufficient and suitably protected radio spectrum.



Operational impact

Interference, incompatible assignments or poor records can directly affect communication, navigation and surveillance services.



SAM focus: make frequency information reliable enough to support planning, compatibility analysis, coordination and protection.

2. ICAO spectrum-management framework

How global policy, technical criteria and regional implementation connect



The SAM Office role sits at the implementation interface:
technical criteria and **global policy** become **regional coordination** with States.



ICAO



GLOBAL POLICY
FOR THE PROTECTION
OF THE AERONAUTICAL
RADIO SPECTRUM

POLICY



ICAO



DOC 9718
VOLUME I

ICAO



DOC 9718
VOLUME II

FREQUENCY
PLANNING AND
ASSIGNMENT
CRITERIA



118.700

118.700

118.700

Global VHF COM channel pressure (excluding Europe and North America)

98% in use



Accurate and consistent data is required

Compatibility between terrestrial VHF and future space-based VHF depends on reliable frequency records.



Inter-regional coordination matters

Frequency Finder is being used as the mechanism to implement broader coordination.



SAM implication

The regional quality control process is not optional housekeeping; it is a prerequisite for future planning.

98%
IN USE

5. Frequency Finder: ICAO's assignment-management and coordination tool

A common platform for data, analysis and coordination



Online database

No local synchronization burden; common regional/global reference.



VHF COM module

Operational basis for the current COMS quality-control work.



Compatibility analysis

Co-frequency and adjacent-frequency checks support technical assessment.



New / MOD frequency

Structured workflow for new or modified assignments.



FREQUENCY FINDER

FREQUENCY ASSIGNMENTS

Frequency MHz	Service	Location	Status
118.100	TWR	XXXX	In use
121.900	APP	XXXX	In use
123.450	A/G	XXXX	Out of use
128.650	ATIS	XXXX	In use



ANALYSIS SUMMARY



Exports and queries

Supports review, reporting and coordination with States.



Core message: Frequency Finder is not only a database — it is a regional coordination tool.



6. SAM Frequency Finder database quality-control process

From AIP compliance to validated Frequency Finder data



VALIDATION WORKBOOK TOPIC



Black text

AIP source — official national reference.



Red text

Existing Frequency Finder VHF COMS data requiring State check.



Green highlight

AIP and Frequency Finder match, but still require confirmation.



Green edits

New or corrected data provided by the State.



Case 1 — In AIP and in FF

Confirm all fields and correct if needed.



Case 2 — In AIP but not in FF

Confirm it is in operational use and complete mandatory fields.



Case 3 — In FF but not in AIP

Confirm whether it is in use or out of use; obsolete records can be removed.



Validation
workbook review



Data
analysis



Consistency
check



State
confirmation



Validated
Frequency Finder data



Quality assured
and ready to use



Reliable and accurate validation ensures trusted data for effective frequency management and safe, efficient aviation operations in the SAM Region.

7. What States are validating

The quality-control process verifies both technical and operational consistency



8. Roles in the SAM database quality-control cycle

2



9. SAM regional rollout: from individual workbooks to a regional picture

Country/territory-specific validation files feed one coordinated regional dataset.



Priority review focus: ACC, APP, TWR, FIR boundary frequencies, oceanic/remote sectors and internationally coordinated services.



Civil aviation



ANSP



CNS focal point



Spectrum data



ICAO SAM



ICAO HQ

10. From regional frequency management to WRC-27 preparation

Reliable SAM data supports national and regional aviation spectrum positions



REGIONAL TECHNICAL WORK

- ✓ Frequency Finder QC
- ✓ Validated assignments
- ✓ FIR-boundary coordination
- ✓ Interference awareness



NATIONAL PREPARATION

- ✓ CAA + ANSP + CNS focal point
- ✓ National radio regulator
- ✓ WRC-27 national position
- ✓ Delegation awareness



INTERNATIONAL PROCESS

- ✓ CITEL / ITU-R
- ✓ WRC-27 agenda items
- ✓ ICAO Position support
- ✓ Protection of aviation spectrum



SAM message: the quality of regional frequency data strengthens the technical basis for aviation participation in national and international spectrum processes.





Keep data current



Update and validate assignments using the AIP as the primary reference.



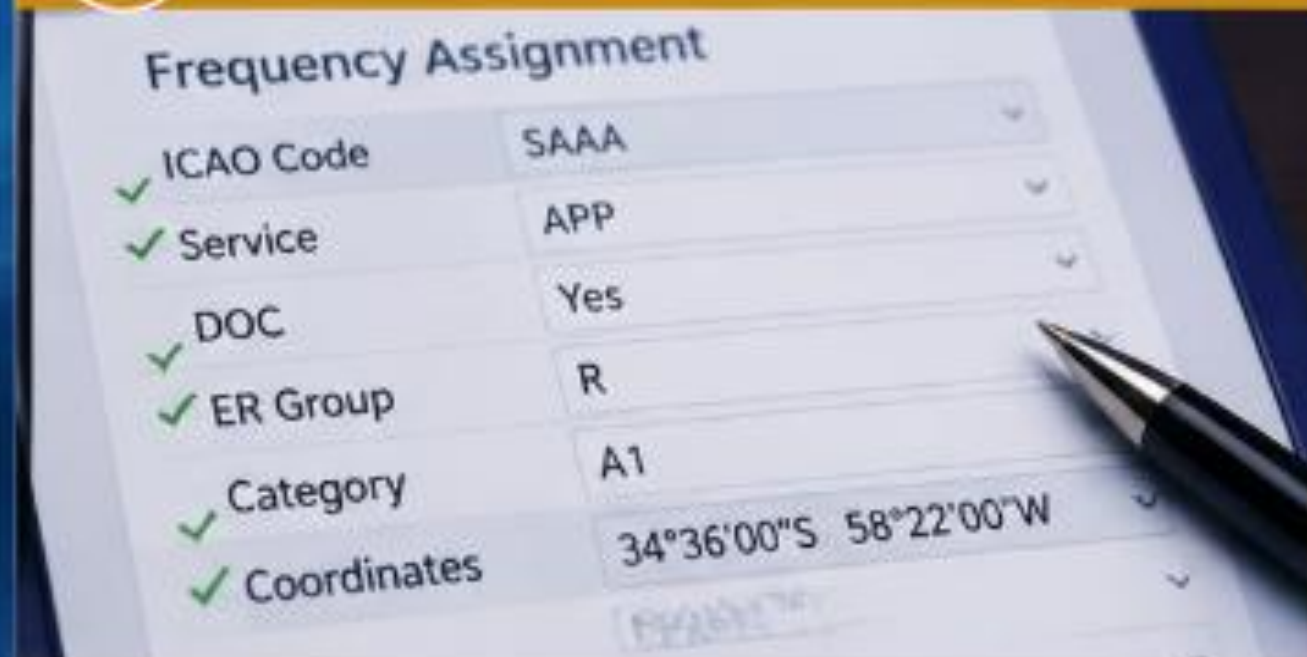
Confirm operational status



Mark each frequency as in use or out of use; identify sensitive NAT records.



Complete mandatory fields



ICAO code, service, DOC, ER Group, Category and coordinates.



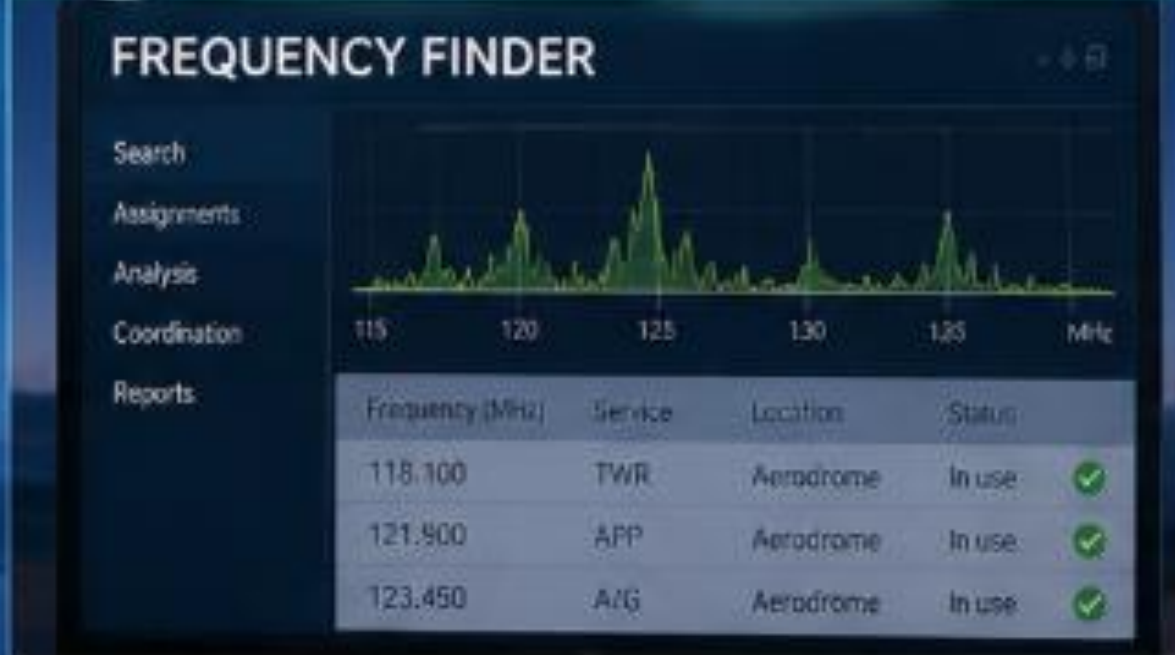
Coordinate early



Address FIR-boundary and cross-border cases bilaterally or multilaterally.



Use Frequency Finder systemestically



Use common ICAO tools for planning, analysis and coordination.



Engage national regulators



Connect aviation requirements with national spectrum and WRC-27 preparation.

SAM CLOSING MESSAGE

The regional challenge is not simply to find a frequency.

It is to maintain reliable data, apply common planning criteria, coordinate across FIR boundaries and ensure that the spectrum required by CNS remains available and protected.



Thanks

