



EGYPTIAN CIVIL AVIATION AUTHORITY · ECAA SMSGD

Egypt's State Safety Programme: the gears now turn together

SSP and NASP 2026–2028 · baseline 2025 · consolidation 2026

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PAST • PRESENT • UPCOMING

Four years, one direction

2024

Built

Development of SPIs set for quarterly collection from AOC large aircraft CAT sector, NASP 2024–2025 published, On-line MOR portal in service since 8/2024. EAC 19-00 understanding SMS, 19-14 Risk Based Oversight based on ICAO iSTARS RBS customized with scores.

2025

Baseline

First full year of the system as designed. Monthly SPI returns all sectors, alert-level breach reports, red-band internal investigations. The baseline MID-RASP asks for.

2026

Consolidation

Events, safety issues, risk categories, exposure and attribution move in one instrument. Targets held at own 2025 rates; reporting maturing.

2026–28

Maturity

NASP 2026–2028 on the 2025 baseline. Effectiveness, Targets at State and organisation level, graded by exposure.

WHERE WE STAND

Guidance and tools are in place

Instrument	What it carries	Status
SSP Document · NASP 2026–2028	State policy, objectives, SEIs, baseline 2025	Final stage
Draft ECAR Part 39 MOR last published in Jan 2019	Reportable events by domain, based on our SPIs set outputs and transposing EU 2026/1821 (covering national context and international alignment)	In final review
EAC 19-00 · Understanding SMS last published in Mar 2024	ERC, barriers, KRA, safety issues, risk assessment	In final review
EAC 19-4 · Issue 7 Rev 1 last published in Aug 2025	Safety performance: SPIs, targets, Poisson limits	In final review
EAC 19-14 · Issue 2 Rev 1 last published in Aug 2025	Risk-based oversight: indicators, three cycles	In final review
Tools	On-line MOR portal, MOR Assessment Tool · SPIs· barriers assessment	In service

THE METHOD

One fact enters once and is carried upward

1 • Report

Initial ERC by Safety Manager (SMS learning ladder), MOR portal, screened, registered

2 • Classify

KRA Level 1 • risk category (3 dimensions)

3 • Consequence

Outcomes • ERC Q1 • KRA Level 2

4 • Barriers

ERC Q2: six barriers, twelve questions

5 • Risk

Reporter Final ERC • cross-domain ERC • State ERC is the higher of both, aggregation by Org. & State

6 • Safety issue

The manifestation of a hazard, or several hazards - one per occurrence by default or admin override upon assessment

7 • Indicators

Own act only: iOCC, iSPI, iRESP

8 • Oversight

Organizational Risk Profile & Sectoral Risk Profiling. → surveillance plan
State Risk Portfolio
Annual Safety Review capability by Jan 2027

Every indicator draws on the same three assessments: severity, barriers, attribution. Two indicators never count one fact under two definitions.

CLASSIFICATION AND CONSEQUENCE

Where, how and to whom the risk belongs

KRA Levels 1 and 2

14 national Level 1 buckets, with the ERCS, ten as the declared parent set and a published crosswalk to the EU. Level 2 is chosen after the ERC Q1, and it carries the cause and the attribution.

KRA is the way of communication with Committees and public with no aviation risk taxonomy experience.

Risk category, three steps

CAST/ICAO CICTT Taxonomy categories recorded as Driver, Actual and Precursor (potential). One occurrence may carry several categories, but it still feeds only one safety issue.

Two ERCs, one State ERC

Reporter ERC from its own perspective; cross-domain ERC where another national entity contributed. The State ERC, the higher of the two, is used for national analysis. ECAA do the complete assessment with a full access to the EAAID involvement with regard to accidents and serious incidents.

Consequential analysis: fatalities, injuries, damage and operational consequence are recorded before ERC Q1. An entity is charged only for its own act (such as: for air operator “crew factor – technical failures - flight planing and preparation, while a cross domain organization such as ATC factor”) external drivers are never charged (such as: birds/wildlife – GNSS interference - weather unless planing is involved)

ERC QUESTION 2 · BARRIER EFFECTIVENESS

Six barriers, twelve objective questions

Group	Barrier	Weight
A	Physical and technical systems (Aircraft – Equipment – Infrastructure)	5
A	Planning and preparation (Tactical Planing)	2
A	Procedures and compliance (Regulations – SOP – Checklists)	3
B	Detection and awareness (Situational Awareness)	2
B	Safety monitoring and warnings (warning system activation)	3
B	Corrective and containment action (recovery by personnel)	1

Why six, not eight

Two groups mirror the risk: Group A - Avoiding Barriers, Group B – Recovery Barriers . Each barrier is two yes / no questions the reporter can answer from its own side. With NR – Non Relevant proportionate to the other barriers in same groups to maintain weight distribution integrity.

Score: For each question Yes =1, No =0, both Yes = strong, one = weak, none = absent; of 16. Bands 85 / 70 / 50 % → Effective, Limited, Minimal, Not effective. This changing the ARMS ERC barriers assessment from subjectivity into objectively quantitative results. Any absent recovery barrier caps the result. Not-relevant answers are used in pairs only, at one per group.

SAFETY ISSUES AND PROBABILITY

Lenses that show what oversight looks at

36 national safety issues

Built on the MID-RASP 27 Safety Issues covering high-risk categories (LOC-I, CFIT, MAC, RE, RI), as well as what ICAO addressed in the GASP 2026-2028 of SCF-NP, TURB and ARC. Worth to mention that the SCF-NP had been one of national SPIs since 2024.

The lens

Concentrated in one organisation → that entity's oversight plan.
Spread across several → the State Safety Risk Portfolio. Repeated failed barriers point to the cause and the focus control area.

Probability mode	Basis	Used when
A · Exposure	Rate per departures, movements, hours	A reliable denominator exists
B · Dominance	Share of reports or findings	No denominator; stable reporting
C · Recurrence	Repeats per unit of time, important for emerging risks, rather than waiting for a complete risk profiling cycle to surface.	Neither A nor B is reliable

Lessons from SPIs led us to Poisson

What 2024–2025 taught us

- Reporting grew as SMS matured
- With few events, mean + SD raised false alarms
- External drivers do not belong in an organization's SPI, cross domain organization if any, matters in ERC and risk profiling
- Size differences need each organisation's own baseline

Events (prior year)

Method

20 or more

Target + alert levels: mean + 1, 2, 3 SD

5 to 19

Alert levels only: Poisson limits on the profiling-cycle count

Fewer than 5

Poisson limits; at Level 3, Safety Department review

ICAO Annex 19 (3rd ed.) 3.4.2.1: SPIs supported by qualitative means as needed, SPTs where appropriate

Result: a single event never reaches an alert level; an alert points to a real concentration. 2026 targets = each organisation's own 2025 rate; as a State safety objective of continuous reduction of aviation safety risks is reflected in reaching the end-2028, at or below 2025. SPI-ALBRF Alert Level Breach Form required from the organizations at Level 3 only, with SAG composition, risk assessment and monitoring effectiveness of actions taken by next risk profiling cycle (the cycle is 4 months period)

RISK PROFILING · EAC 19-14

Eight indicators, three cycles a year

Indicator	Measures	AOC wt
iRESP	Reporting and response on time; effectiveness	0.20
iACC/SI	Accidents and serious incidents	0.20
iSMS	SMS maturity	0.15
iOCC	Own-act occurrences by ERC	0.10
iSPI	Share of SPIs at Alert Level 3	0.10
iSANA · iSAFA	National · foreign ramp inspections	0.10 each
iAUDT	Audit findings	0.05

Three cycles

April: Dec–Mar

August: Apr–Jul

December: Aug–Nov, which sets next year's audit plan

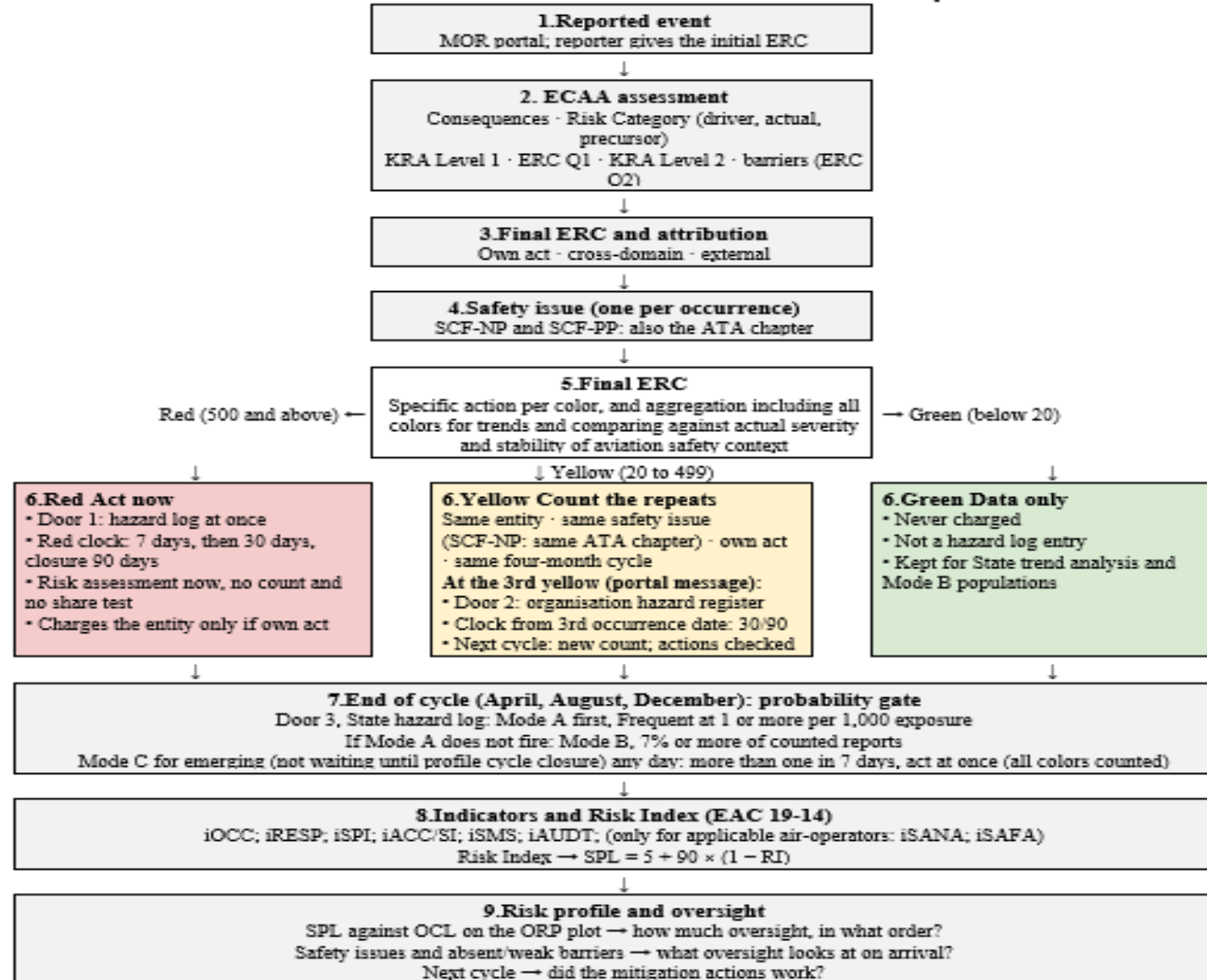
iSMS & iAUDT entered only in Dec cycle where all findings and SMS maturity are collected

Risk Index → $SPL = 5 + 90 \times (1 - RI)$, plotted against organisational complexity (OCL) on the ORP plane.

Non-AOC domains: six indicators. Enforcement acts as a gate, not a weight. ORP boundaries follow ICAO iSTARS.

From a reported event to risk profiling (safety intelligence)

ECAA SMSGD · EAC 19-00 · one fact enters once and is carried upward



continuous loop: new reports, next cycle ↑

External events (weather, GNSS interference, foreign ATC, bird strike en route) are kept for State analysis and never charged to a national organisation. A bird strike at or near an aerodrome (taxi, take-off, initial climb, approach, landing) goes to that aerodrome.

ANNEX 19 · APPLICABLE 26 NOVEMBER 2026

Surveillance planned on risk

How much and in what order

The ORP zone and peer ranking set surveillance intensity and priority.

What to look at

The safety-issue lens and failed barriers give inspectors the focus on arrival.

Did it work

The next cycle's SPL and recurrence test confirm whether actions were effective.



Thank You .

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