



ICAO/JRCC LCA SAR Workshop

5- 6 October 2023

Air Traffic Services in SAR Operations

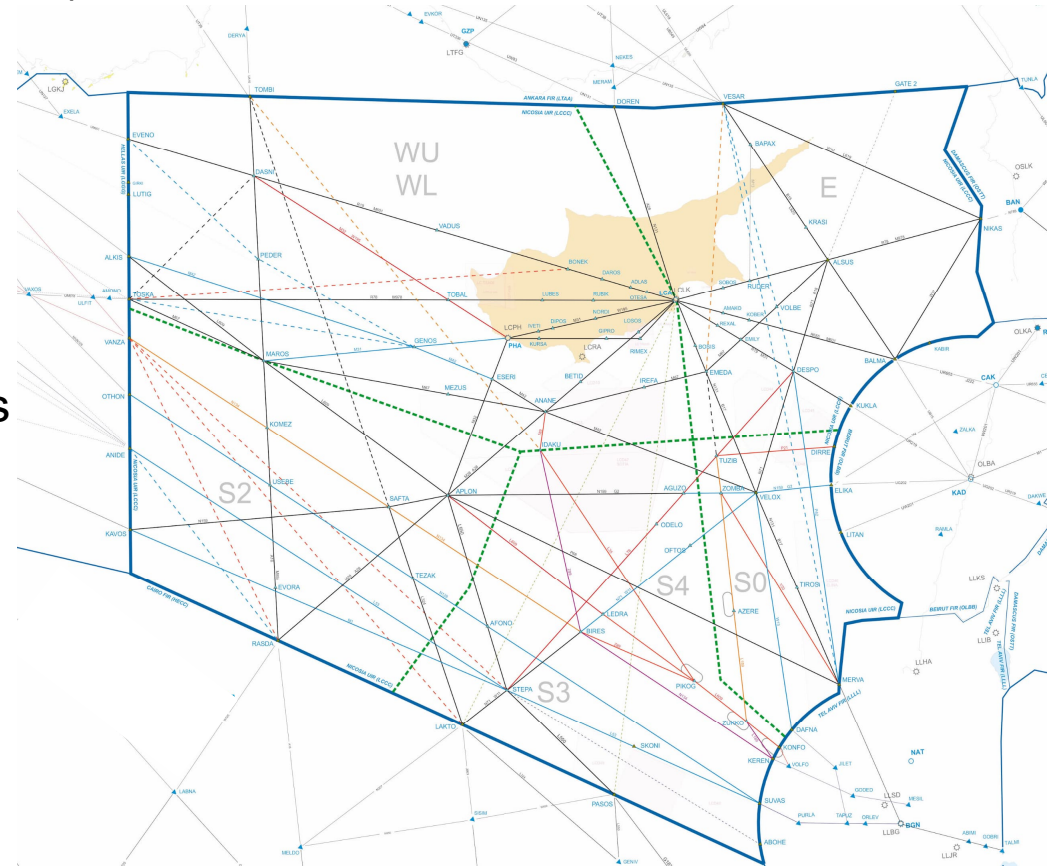


Nicolas Mytides
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Department Civil Aviation, Cyprus



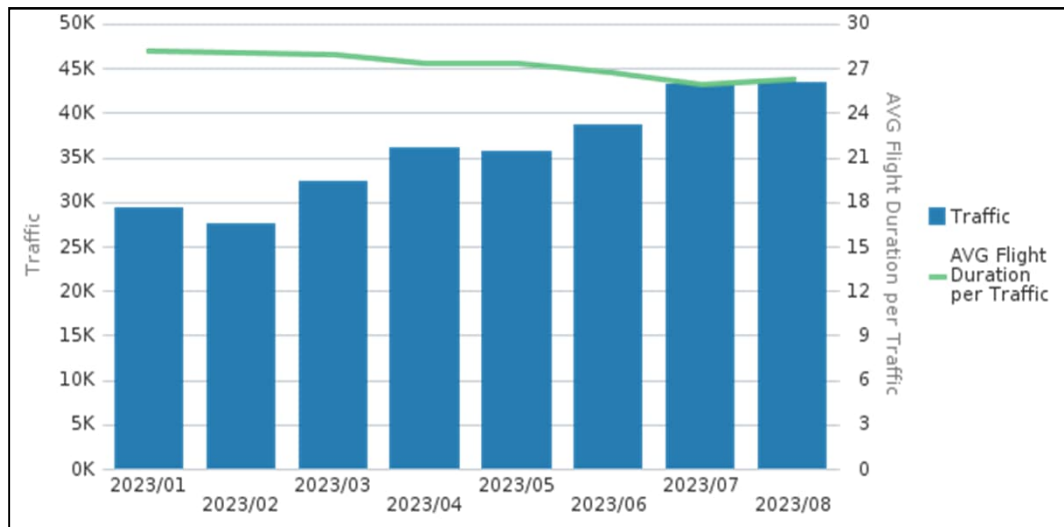
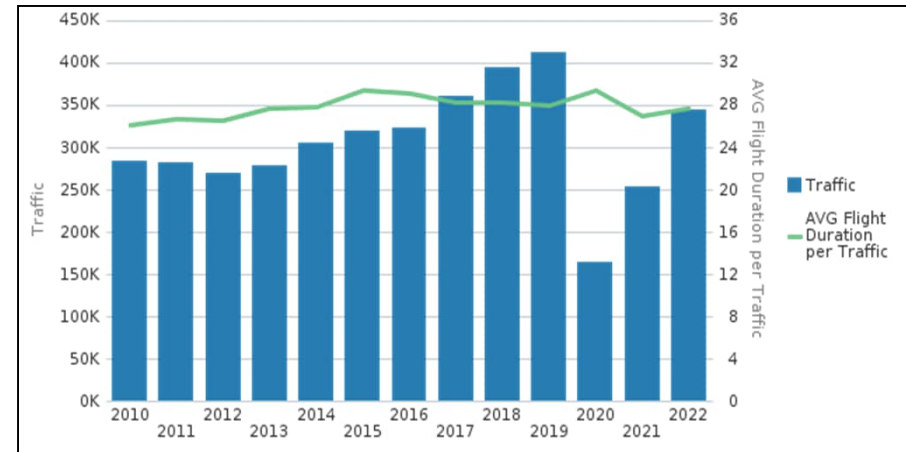
Nicosia FIR

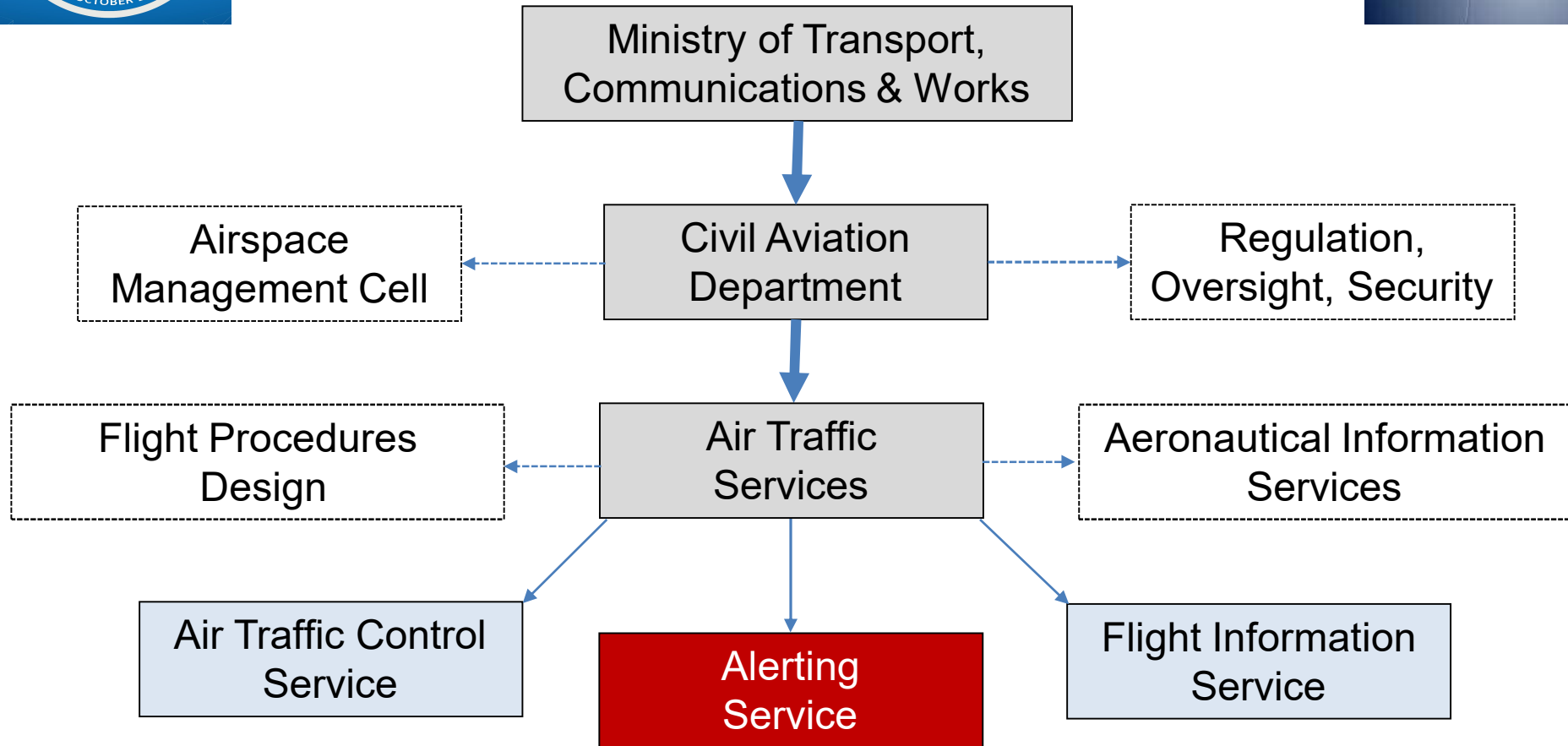
- Republic of Cyprus SAR region (SRR) → Nicosia FIR
- area of 175,000 sq.km
- neighboring FIRs
- DCAC ATS Units
- Nicosia ACC
- LCLK & LCPH Control Tower Units
- close cooperation with JRCC
- military
- aeronautical information service





Traffic volume





Notification of appropriate organizations regarding aircraft in need of search and rescue aid, and assisting of such organizations as required



Alerting service

- for all aircraft provided with air traffic control service
- in so far as practicable, to all other aircraft having filed a flight plan or otherwise known to the air traffic services
- to any aircraft known or believed to be the subject of unlawful interference.

... priority shall be given to aircraft on emergency being compelled to land, hospital flights or aircraft carrying person requiring urgent medical attention,

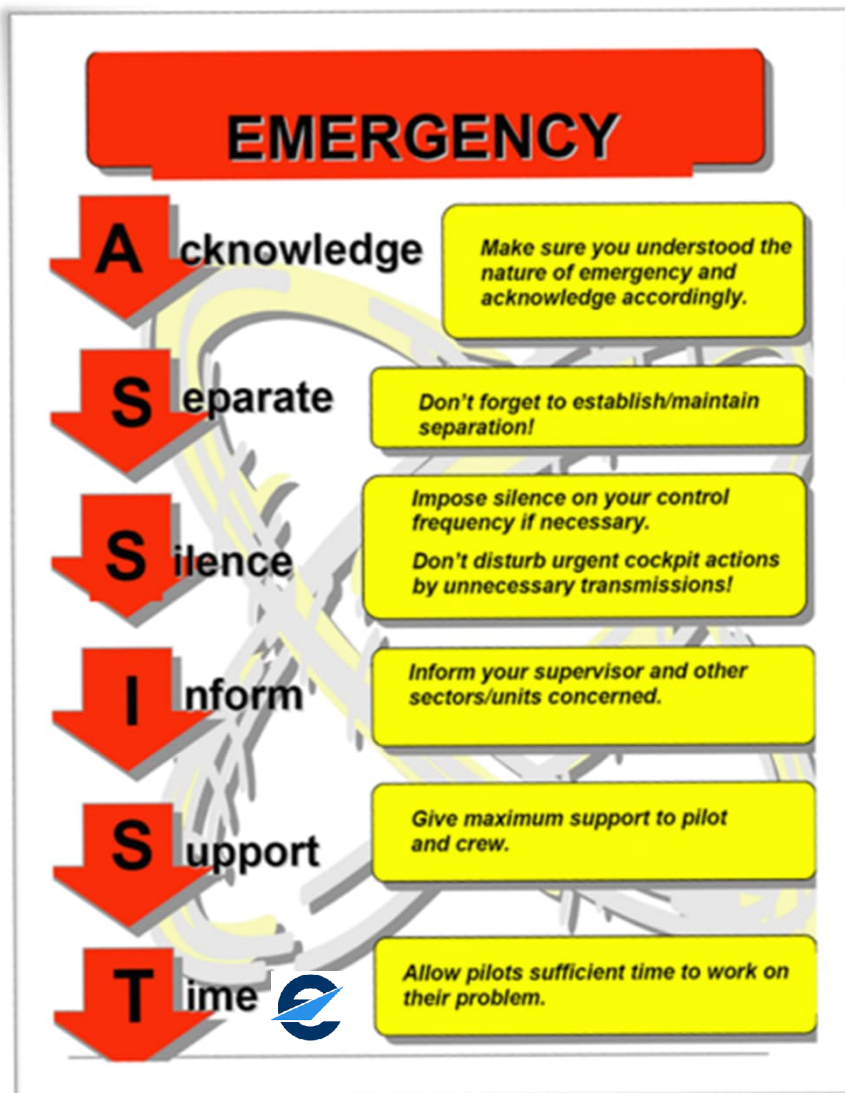
aircraft engaged in SAR operations



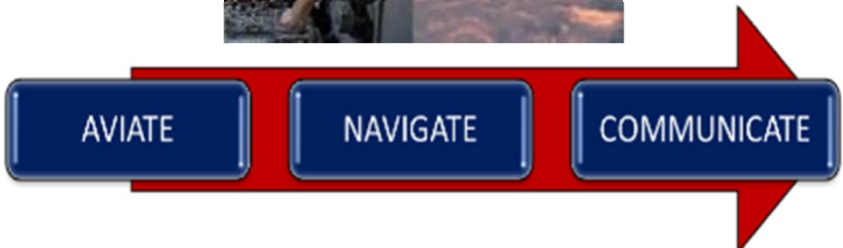
ATC emergency handling

- emergency response plan
- notification of JRCC, other emergency services
- passing alerting and other pertinent information, updating as situation develops
- assisting aircraft in distress, as far as practicable
- assisting engaged SAR assets
- informing and handling other traffic, considering imposition of silence
- monitoring emergency frequency, ELT signals
- need for airspace reservation, NOTAM issuance
- weather reports and forecasts
- possible impact on service provision & airport operations



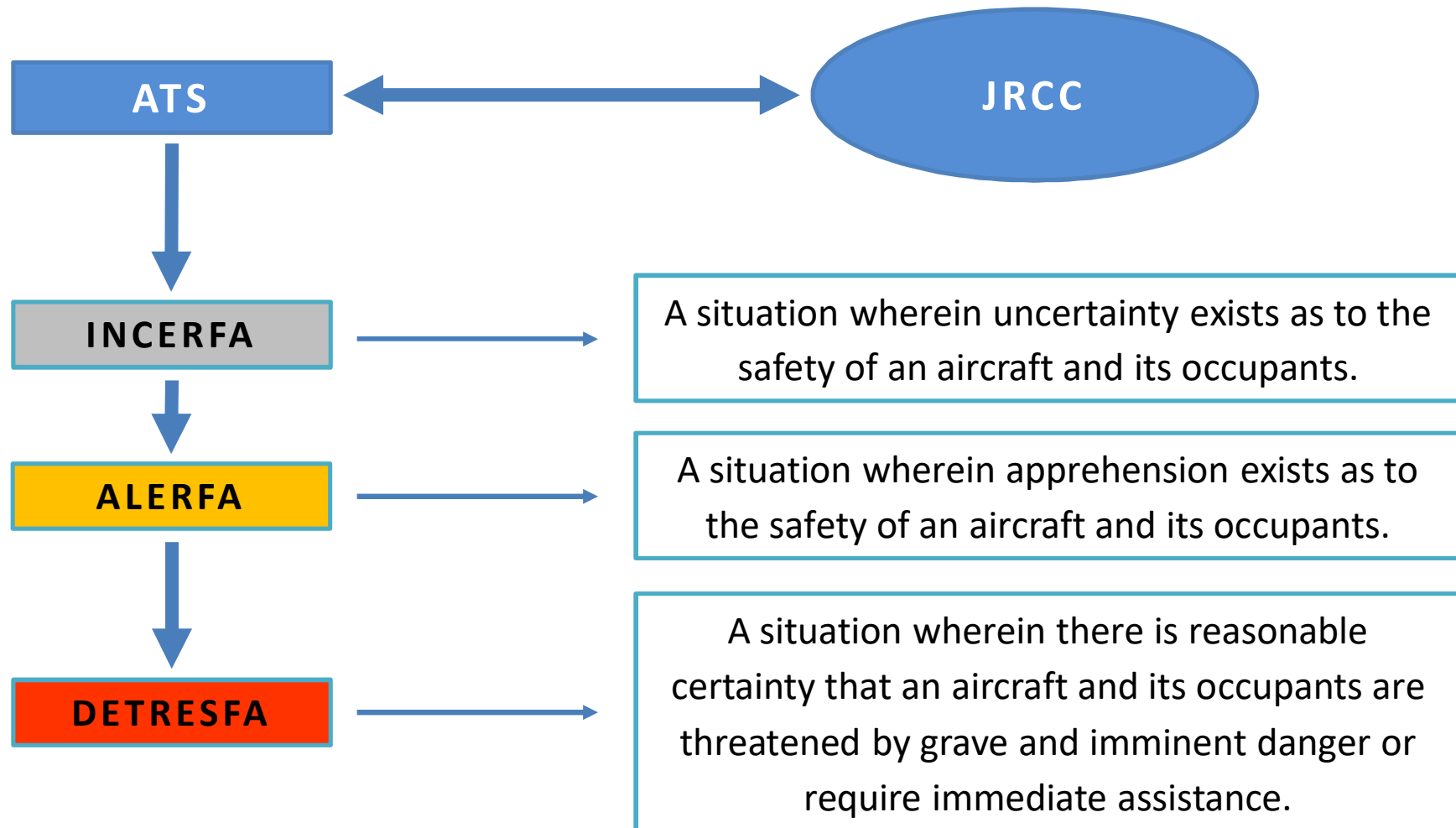


when aircraft is known or believed to be in a state of emergency, including being subjected to unlawful interference, ATS Units shall give aircraft maximum consideration, assistance and priority over other aircraft as may be necessitated by the circumstances.





Phases of emergency





Emergency declaration



EMERGENCY DECLARATION



Pilot
ATC
RFF
AO
Security Services

Airport State of Emergency	ATC Notification
LOCAL STANDBY	RFF Airport Operations Centre
FULL EMERGENCY CRASH ON/OFF AIRPORT CRASH ON WATER	RFF JRCC Airport Operations Centre AAIIB
BOMB THREAT HIJACK SABOTAGE other security-related incidents	RFF Airport Operations Centre DCA Airport Services JRCC
STRUCTURAL FIRE HAZMAT MEDICAL NATURAL DISASTER	RFF Airport Operations Centre
GROUND EMERGENCY	



ALERTING INFORMATION

- State of emergency, nature & location
- Aircraft callsign/company
- Type of aircraft
- ETA
- Anticipated runway, wind conditions/any airside info (RFF)
- POB
- Pilot intentions
- Other pertinent information (fuel quantity, endurance, dangerous goods)

some information may not be timely available → sought from other sources

Effective communication in crisis management

clarity, confidence, control, commitment, competency

**SUCCESSFUL CRISIS
MANAGEMENT REQUIRES
EFFECTIVE
ACTION AND
COMMUNICATION
TO HAPPEN
SIMULTANEOUSLY.**



Emergency response preparedness

- development of emergency response plans
- coordination between involved entities, awareness
- plans be reviewed, checked, updated → demonstrate readiness
- emergency events debriefing → evaluation, mitigation
- ATS units participation in SAREX
- emergency exercises, table-top
- mandatory occurrence reporting system
- Airport Emergency Forum
- ATCO emergency refresher training
- checklists





ATC checklists

Engine on Fire or APU on Fire

May result in:

- Abandoned Take-off
- Engine Failure (multiple)
- Engine Failure (single)
- Smoke or Fire in the cockpit
- Emergency Landing

> Expect

- Heavy workload in the cockpit
- Engine shutdown / failure

ACFT on the Ground

- Hot brakes
- Passenger evacuation
- RWY blocked

ACFT in the Air

- Pressurisation problem
- ACFT losing altitude
- Landing next suitable aerodrome
- Possible diversion

> Remember

A 'Acknowledge' - S 'Separate'

- Ask if dangerous goods
- Ask for number of passengers
- Inform landing aerodrome
- Clear RWY according to instructions
- Keep safety strip clear
- Towing equipment on station
- In case of diversion

> If needed, inform pilot about:

- Next suitable aerodrome
- Aerodrome details
- WX information of landing
- Observed fire and/or smoke

Engine Failure

May result in:

- Abandoned Take-off
- Pressurisation Problems
- Fuel Dumping
- Precautionary Approach

> Expect

- Heavy workload in the cockpit
- Deviation from SID
- Intermediate level-off
- Descent
- Course deviation
- Pressurisation problems

> Remember

A 'Acknowledge' - S 'Separate'

- Inform landing aerodrome
- Clear RWY according to instructions
- Keep safety strip clear
- Offer pilot extended final
- Towing equipment on station
- In case of forced landing,

> If needed, inform pilot about:

- Next suitable aerodrome
- Alternate aerodrome details
- WX information of landing

Emergency Descent

> Expect

- Descent without warning
- No emergency squawk
- Poor or no RTF (oxygen mask)

When an aircraft operated as a controlled flight (or a similar malfunction requiring an emergency descent)

- Initiate a turn away from the assigned route
- Advise the appropriate air traffic control
- Set transponder to Code 7700 and select emergency descent
- Turn on aircraft exterior lights
- Watch for conflicting traffic both visually
- Coordinate its further intentions with the ATIS

The aircraft shall not descend below the indicated altitude to provide a minimum vertical clearance of 300m (1000 ft) above all obstacles terrain 600m (2000 ft) above all obstacles

> Remember

A 'Acknowledge' - S 'Separate' - S 'Silence'

- Acknowledge emergency on RTF
- Take all necessary action to safeguard passengers
- May be required to suggest a heading
- May be required to state the minimum safe altitude
- Provide separation or issue essential traffic information
- Emergency broadcast if necessary
- After emergency descent, request intentions
- Diversion
- Injuries
- ACFT damage
- Consider ACFT still to be in an emergency

Unlawful Interference

> Expect

- Squawk 7500
- Course / level deviations
- No or unusual replies to RTF communication
- No compliance with given instructions

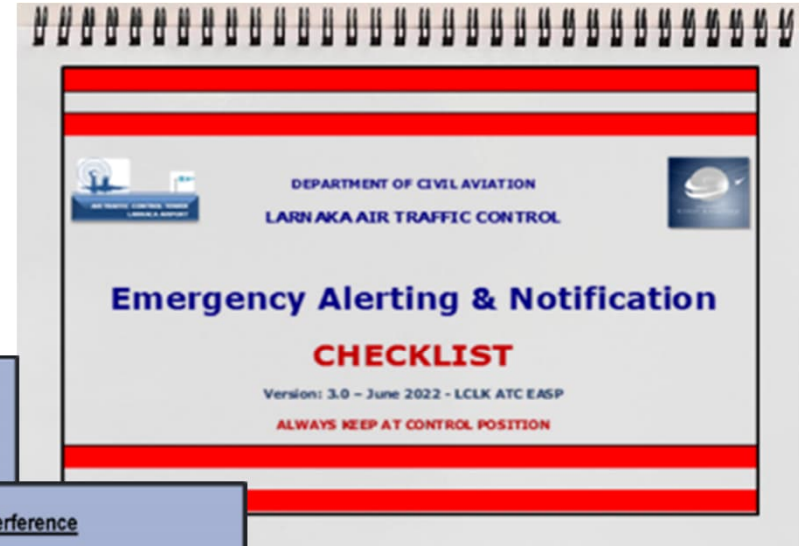
> Remember

A 'Acknowledge' - S 'Separate' - S 'Silence' - I 'Inform' - S 'Support' - T 'Time'

- Do not initiate any further RTF referring to the hijacking unless confirmed by the pilot
- Comply with pilot's requests as far as possible
- Transmit pertinent information without expecting a reply
- Monitor all flight manoeuvres - give room for manoeuvre
- Collect any necessary information e.g. destination aerodrome, WX situation at destination, routing, etc.

> If needed, inform pilot about:

- Confirm squawk
- No reply here shall NOT be taken as an indication that the squawk was set by mistake
- Any information requested





Recovery to normal operations

- disabled aircraft removal
- airside inspections, FOD clearing
- airfield lighting, surface guidance systems
- navigational facilities
- changes in declared distances
- RFF category recovery
- NOTAMs
- impact on service provision
- ATFM measures





Thank you for
your attention !

