

Sub-regional SAR Systems



**Brian Day
General Civil Aviation Authority
United Arab Emirates
ICAO Global SAR Forum
Abu Dhabi 2010**

LEGAL OBLIGATION

Article 25 of Chicago Convention

‘Each Contracting State undertakes to provide such measures of assistance to aircraft in distress in its territory as it may find practicable.....

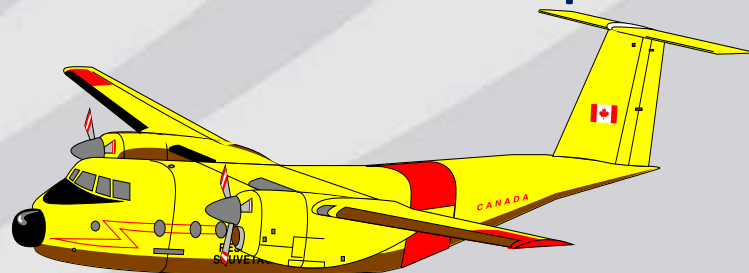
‘Each Contracting State, when undertaking search for missing aircraft, will collaborate in coordinated measures which may be recommended from time to time ...’



Annex 12 SARPS

ANNEX 12 – SAR

- “Contracting States shall, **individually or in cooperation with other States**, arrange for the establishment and prompt provision of search and rescue services within their territories to ensure that assistance is rendered to persons in distress.”



IAMSAR Manual

“In many areas of the world, the fastest, most effective and practical way to achieve a global SAR service is to develop regional systems associated with each ocean area and continent.” (IAMSAR Manual)

Fundamental concept is that:

- RCCs coordinate SAR actions in areas determined by:
 - the type, intensity and disposition of air traffic,
 - the nature of topography,
 - the availability of communication and navigation equipment, and
 - the sufficiency of supportive community infrastructure.

Uncomfortable facts that need to be faced

- In many accidents involving commercial air transport aircraft, there are survivors - still more in the general aviation sector.
- While carriage of ELTs by international aircraft is a mandatory safety requirement, the safety quotient is too often negated by ineffective SAR response to ELT signals.



GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

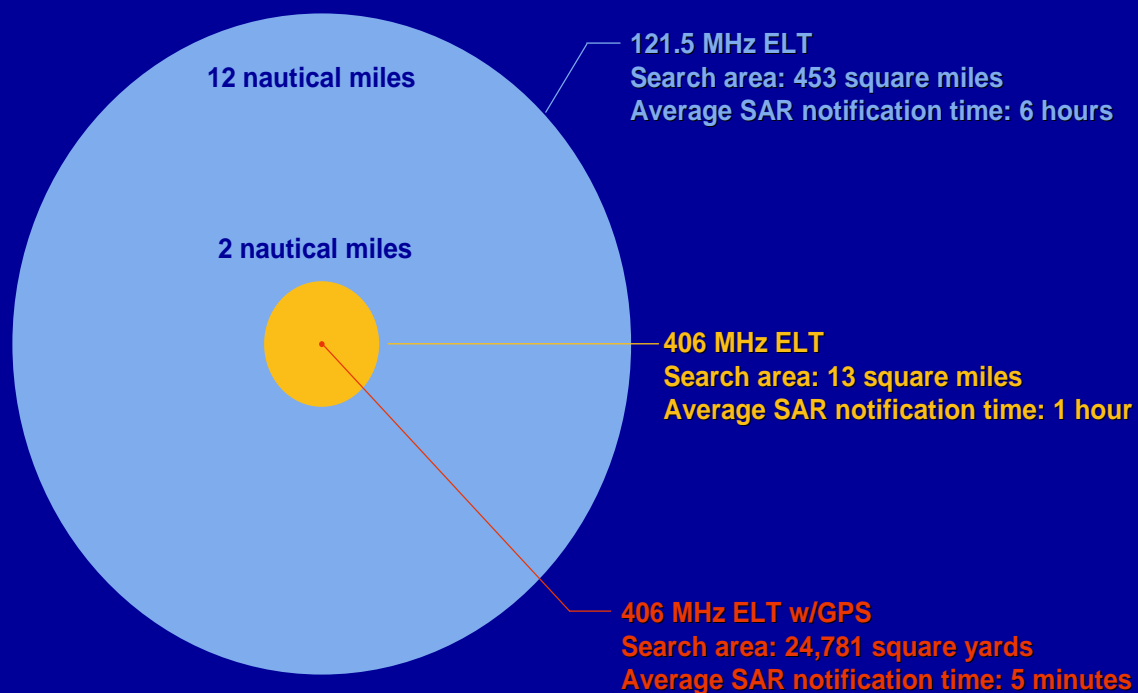
سماء الإمارات في أيد أمينة...
UAE sky in safe hands...

Technology benefits are dependent on responsive operational SAR systems

Of what use is it that satellites reduce search areas if SAR services cannot or will not establish SPOCs and respond to crash alert messages sent through the Cospas-Sarsat system?

SAR

Search Areas Determined by Technology of Emergency Radio Beacons



More uncomfortable facts that need to be faced

- Water contact accidents still occur.
 - they involve large passenger carrying aircraft.
 - these SAR actions are intensely

difficult, requiring maritime/aviation, civil/military coordination of great complexity and vast resources beyond capacity of most States.



Technology benefits are dependent on responsive operational SAR systems

Of what use is it that mandated ELTs automatically and instantly transmit core data about aircraft when they crash if States do not establish registration d-bases which RCCs can rapidly access to acquire that core data?

SAR1



Can we seriously refer to a Global SAR system ..

...when, as found by the ICAO audit program, rescue coordination centres (RCCs) have not developed job descriptions for their technical staff in about 40% of audited States....



Can we seriously refer to a Global SAR system ..

...when, as found by the ICAO audit program, about 55% of States have not established training programmes for their RCC staff....





GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...

UAE sky in safe hands...

Can we seriously refer to a Global SAR system ..

...when, as found by the ICAO audit program, about 45% of States do not ensure that RCC personnel involved in the conduct of R/T communications are proficient in the use of the English language....

SAR1





GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...
UAE sky in safe hands...

Can we seriously refer to a Global SAR system ..

...when, as found by the ICAO audit program, about 60% of States' SAR personnel are not regularly trained and appropriate SAR exercises are not carried out....



SAR1

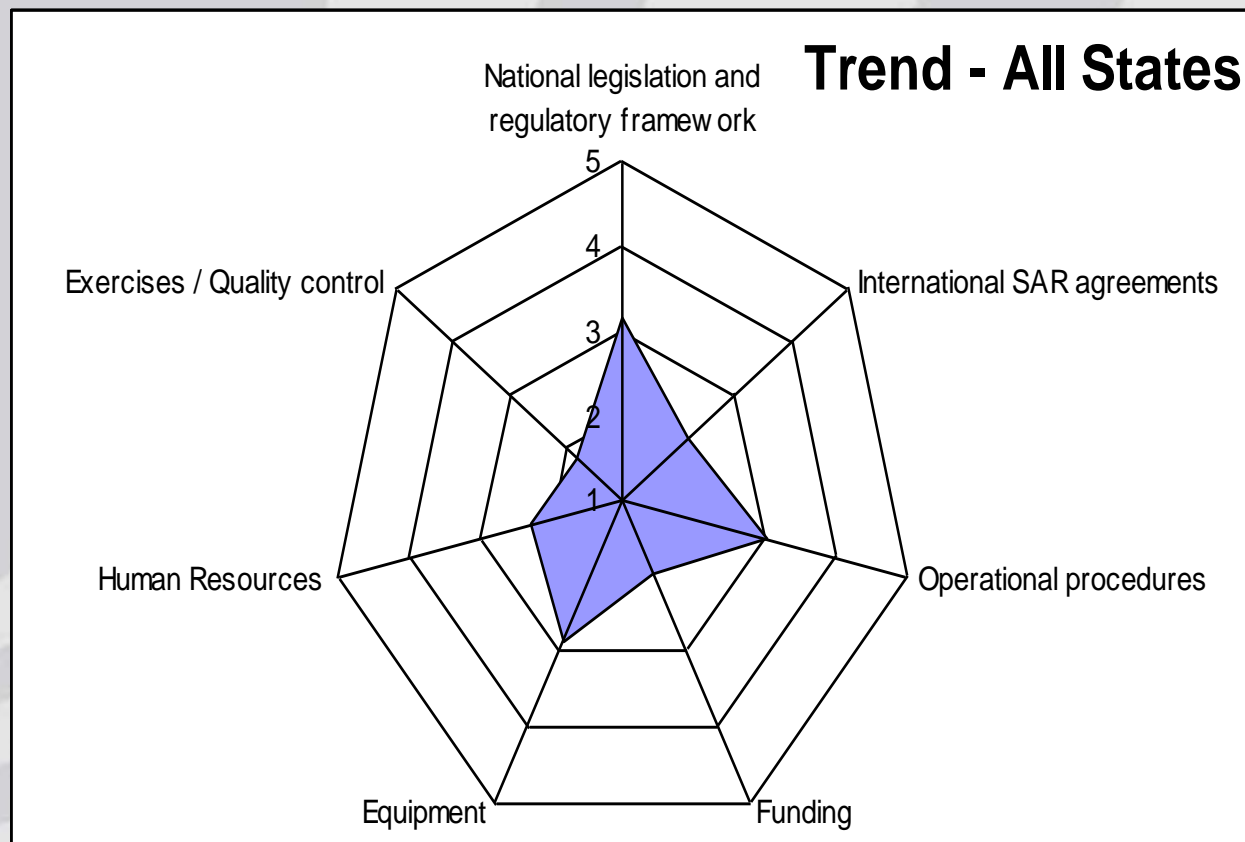
Can we seriously refer to a Global SAR system ..

...when, as found by the ICAO audit program, 65% of audited States have not concluded bilateral SAR agreements with neighbouring States, in order to coordinate SAR operations....



Can we seriously refer to a Global SAR system ..

...when, this is the state of compliance of all States with ICAO SAR SARPs on the African continent ...



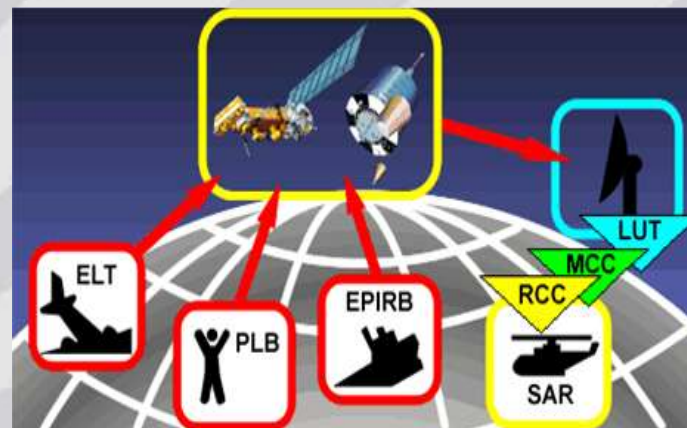
Some action being taken

The 14 African States that make up the Southern African Development Community have firmly resolved , as a consequence of the findings of ICAO/AFCAC SAR Project, 2002 – 2007, that they will go “all out” for integrated SAR services across Southern Africa. At their request, ICAO has mounted a project to support this strategy. The project is being funded by the United Arab Emirates and is being coordinated with SADC, ICAO COSCAP, ICAO ACIP, AFCAC, ICAO RO Nairobi, and all involved States.



Benefits of regionalised SAR

- Jurisdiction based on risk and need, not arbitrary lines of national delineation;
- elimination of duplication;
- improve distribution of distress alerts;
- Operationally less complex
 - Less links in the operational chain;
- Common training
 - Default regulation;
- More complete coverage of service;





GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...
UAE sky in safe hands...

Benefits of Regionalised SAR

- more standardised coverage
 - modicum of service throughout region rather than e.g. excellent national services bordering none;
- consistency of response;
- cost-effective
 - economies of scale,
 - shared use of assets,
 - SAR coordination is cheap,
 - more hardware may not be necessary.

Applied Safety Management

- **Systematic** – according to predetermined plan and applied in a consistent manner throughout;
- **Proactive** – prevention through identification of hazards and introduction of mitigating measures before the risk-bearing event occurs;
- **Explicit** – all activities organized, documented, visible and dedicated to the life saving task.



GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...

UAE sky in safe hands...

Applied Risk Management

- Identify risks,
 - Prioritise risks,
 - Develop risk mitigation strategies,
 - Apply strategies,
 - Evaluate strategies.
-
- Regionalised SAR is organisational risk management!

Nomenclature

- A single ARCC in a region and “lesser RSCs” is unappealing from the State perspective.
- Could we call them something else?
- A centralised “Regional ARCC” and decentralised RCCs might do it! OR
- RCCs throughout the region, one nominated as a Nodal RCC - “where lines, systems, or paths meet”.



GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...

UAE sky in safe hands...

Basic attitudes

- For planners :
 - Understanding of the “big picture”, sensitivity and humility, and
 - Consideration of each case on its merits.
- For States :
 - an evolutionary expansiveness of thought beyond parochial, State-wide constraints.

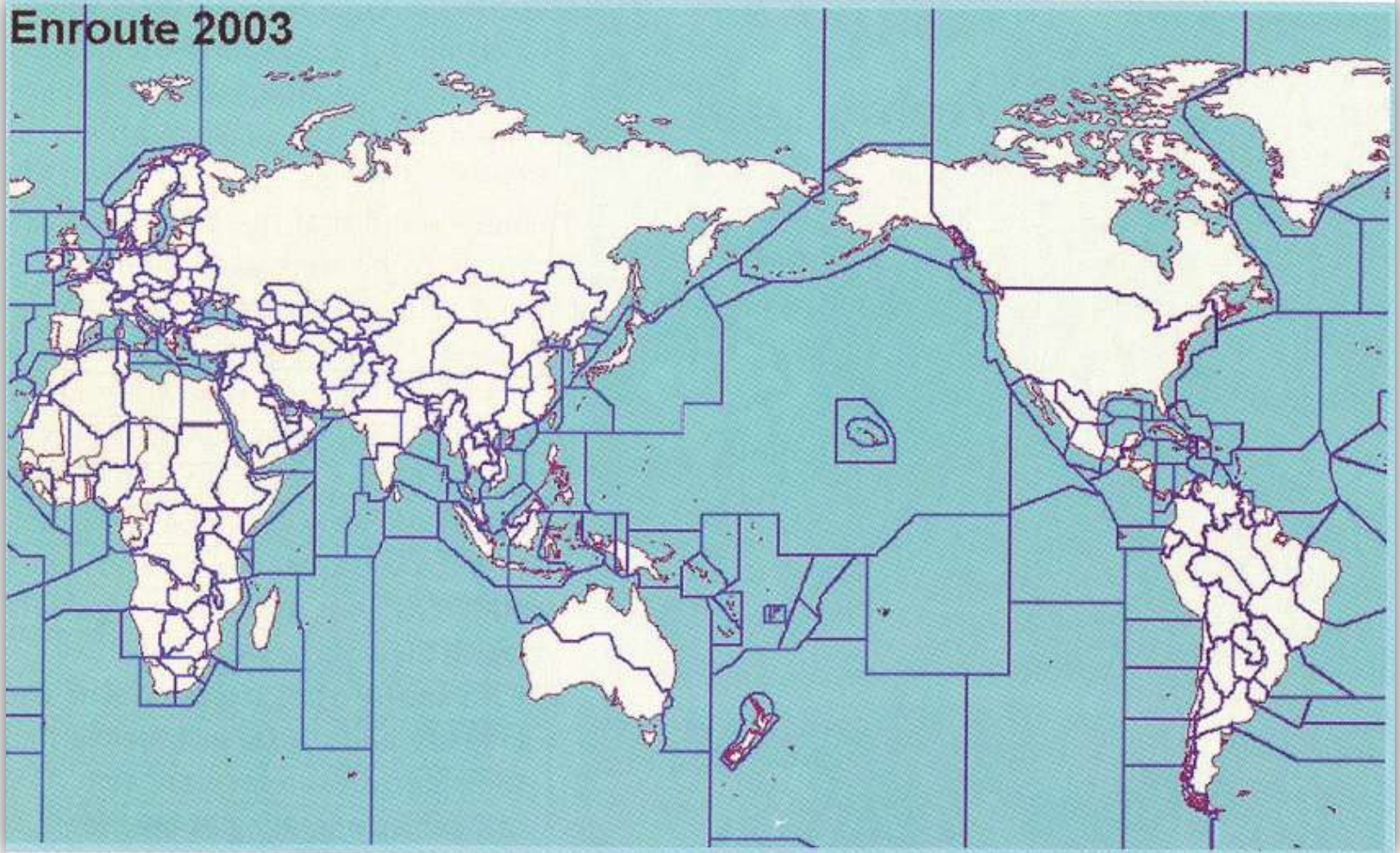


GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...
UAE sky in safe hands...

Enroute 2003





GCAA

دولة الإمارات العربية المتحدة
الهيئة العامة للطيران المدني
UAE General Civil Aviation Authority

سماء الإمارات في أيد أمينة...
UAE sky in safe hands...

