



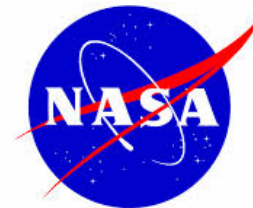
International SAR

SAR Controllers Training 2016

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- Global SAR System
- Persons Rescue at Sea (PRAS)
- Global Aeronautical Distress and Safety System (GADSS)
- Any other issues we need to discuss?

GLOBAL SAR SYSTEM





Global SAR System

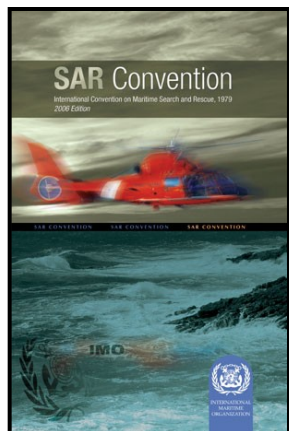
Two SAR organizations internationally



International
Maritime
Organization
(IMO)

International
Convention on Maritime
Search and Rescue
(1979)
"SAR Convention"

<http://www.imo.org>



International Civil
Aviation
Organization
(ICAO)

Convention on
International Civil
Aviation (1944):
Annex 12 – Search
and Rescue
"Chicago Convention"

<http://www.icao.int>



SARSAT provides capability for both IMO and ICAO for distress alerting

Global SAR System



- Conventions provide the framework for nations to implement a national SAR system to fulfill its SAR obligations



- Mandates cooperative arrangements, both domestically and internationally, to effectively coordinate SAR operations

Global SAR System



SAR Regions

- World is divided into aeronautical & maritime SAR Regions (SRRs) and SAR Sub-Regions (SRSs)
- Geographic area in which a nation is responsible for **coordinating** SAR operations.

Global SAR System



- Maritime SRRs only provisional until agreement is reached with nations with adjacent SRRs
- SAR agreements U.S. Coast Guard is working on:
 - Portugal – Agreement text has been negotiated; waiting for approval by DOS
 - Peru – Proposed text with the GOP for their consideration; waiting to hear back
 - Indonesia – Revised SAR agreement text with DOS for review before submission to GOI
 - Philippines – Same as above
 - Trinidad & Tobago? Cuba? Haiti?

Global SAR System



2016 Version goes into effect 01 July 2016



Persons Rescued at Sea (PRAS)



Persons Rescued at Sea (PRAS)



- Master bound by international law to assist persons in distress at sea
 - SOLAS (V/33), UNCLOS (Art. 98), Salvage Convention (Art. 10)
- Two instances in which a master is not obligated to render assistance to persons in distress:
 1. Not required to place his own vessel and crew in undue peril in order to render assistance
 2. No duty to render assistance in instances where doing so would be impracticable or futile

Persons Rescued at Sea (PRAS)



- Masters: Treat survivors humanely while on board ship
- SMC: Minimize impact to diverted merchant ship
 - Should not normally divert ship from its intended next port of call
- Key issue: Shipmaster has duty to render assistance to persons in distress – coastal State is obligated to effectively and efficiently coordinate the SAR operation in support of the responding shipmaster
 - Coastal State SMC is obligated to coordinate the disembarkation of survivors rescued to a **place of safety**; not the ship

Persons Rescued at Sea (PRAS)



Place of safety:

1. Location where rescue operations are considered to terminate;
2. Where survivors' safety of life is no longer threatened and where their basic human needs (such as food, shelter and medical needs) can be met; and a
3. Place from which transportation arrangements can be made for the survivors' next or final destination



Persons Rescued at Sea (PRAS)



- Place of safety (continued):
 - Can be on land or on a rescue unit
- SMC has primary responsibility for determining place of safety, in coordination with the ship
 - Normally ship's next port of call
- A liferaft, even with ample provisions, is not considered a place of safety ("lifesaving appliance")

Persons Rescued at Sea (PRAS)



- Excellent guidance on PRAS international legal requirements
- Obligations of the Master, Governments and RCCs are discussed
- Available at:
[http://www.uscg.mil/hq/cg5/cg534/nsarc/Rescue_at_Sea_Guide%20\(2015\).pdf_P.pdf](http://www.uscg.mil/hq/cg5/cg534/nsarc/Rescue_at_Sea_Guide%20(2015).pdf_P.pdf)



Persons Rescued at Sea (PRAS)



LARGE SCALE RESCUE OPERATIONS AT SEA

GUIDANCE ON ENSURING THE SAFETY AND SECURITY OF SEAFARERS AND RESCUED PERSONS



- Developed by the International Chamber of Shipping (ICS) for shipmasters
- Available at: <http://www.ics-shipping.org/docs/default-source/resources/safety-security-and-operations/large-scale-rescue-at-sea.pdf?sfvrsn=28>

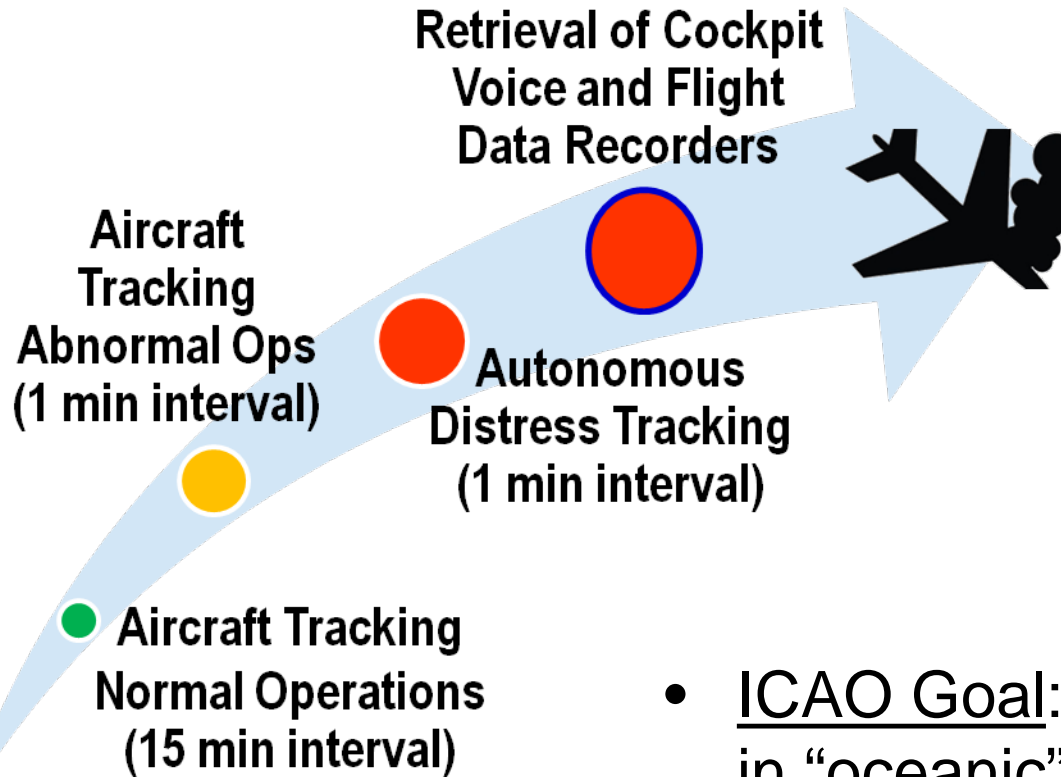


International Civil Aviation Organization

Global Aeronautical Distress and Safety System (GADSS) Initiative



ICAO's GADSS Initiative



- Due to global/ICAO response to Air France 447, Malaysia Air 370, Air Asia, Yemeni Airlines disasters

- ICAO Goal: Global a/c flight tracking in “oceanic” and “remote” regions

GADSS components: Aircraft systems, air traffic control, global SAR system

ICAO's GADSS Initiative



**Aircraft Tracking:
Normal Operations**
(15 min interval)

- No change to air traffic control procedures
- Air carrier responsible for tracking aircraft

- Uses existing technology
- Developing coordination procedures between air carrier, ATC and RCC

ICAO's GADSS Initiative



Autonomous
Distress Tracking
(1 min)



Abnormal Ops
(1 min)



Abnormal
and

Autonomous Distress Tracking

(1 minute interval)

- Autonomous Activation: Capability to broadcast position info independent of other a/c systems
- Triggering events: Unusual attitudes/speed conditions, loss of power on engines, ground proximity warnings

ICAO's GADSS Initiative



Autonomous
Distress Tracking
(1 min)



Abnormal
and

Abnormal Ops
(1 min)



Autonomous Distress Tracking

(1 minute interval)

- Not technology-specific
- Locate accident site within 6 NM
- Activation: Automatically based on flight behavior, manually from the air, or manually from the ground
- Power/position info autonomous fm other a/c systems
- Applies to new aircraft beginning in 2021

ICAO's GADSS Initiative



- RCC Impact:
 - Ensure global tracking of all large passenger/cargo aircraft
 - Expedite notification of an aircraft in distress
 - Reduce search area for SAR authorities
- CG-SAR working with FAA, ICAO and Cospas-Sarsat to ensure effective RCC notification of aircraft distress
- Timeline:
 - **NOV 2015:** ICAO adoption of **normal** (15 min) tracking
 - **JAN 2021:** ICAO adoption of **autonomous & distress** tracking

What other topics do we need to discuss?

