

• **WORLD-WIDE NAVIGATIONAL WARNING SERVICE SUB-COMMITTEE 10th Meeting (WWNWS 10)**

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• **WORLD-WIDE METOCEAN INFORMATION & WARNING SERVICE SUB-COMMITTEE 1ST Meeting (WWMIWS 1)**

• • • • • **27 – 31 August 2018**
• • • • • Monaco

IMSO UPDATE

**Moin Ahmed, Director General
International Mobile Satellite Organization**

Contents

- IMSO as an oversight body for distress and safety communications and tracking of ships
- IMSO's role in GMDSS
- IMSO's support to the provision of MSI
- Multiple provider issues
- Capacity-building

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About IMSO

- 104 Member States
 - *PLURINATIONAL STATE OF BOLIVIA is the latest addition to Organization*
- Assembly of Parties
 - *Meets once in every two years*
- Advisory Committee
 - *Meets twice in a year*
- Headquarters
 - *4 Albert Embankment, London (UK)*



IMSO as a global oversight body for distress and safety communications and coordinator for tracking of ships

- Established as a global intergovernmental organization in 1976 upon adoption of the Convention on the International Maritime Satellite Organization (INMARSAT)
- **INMARSAT** Convention and Operating Agreement entered into force on 16 July 1979, and the Organization became operational from 1982 to serve maritime community;

IMSO relationships with other organizations

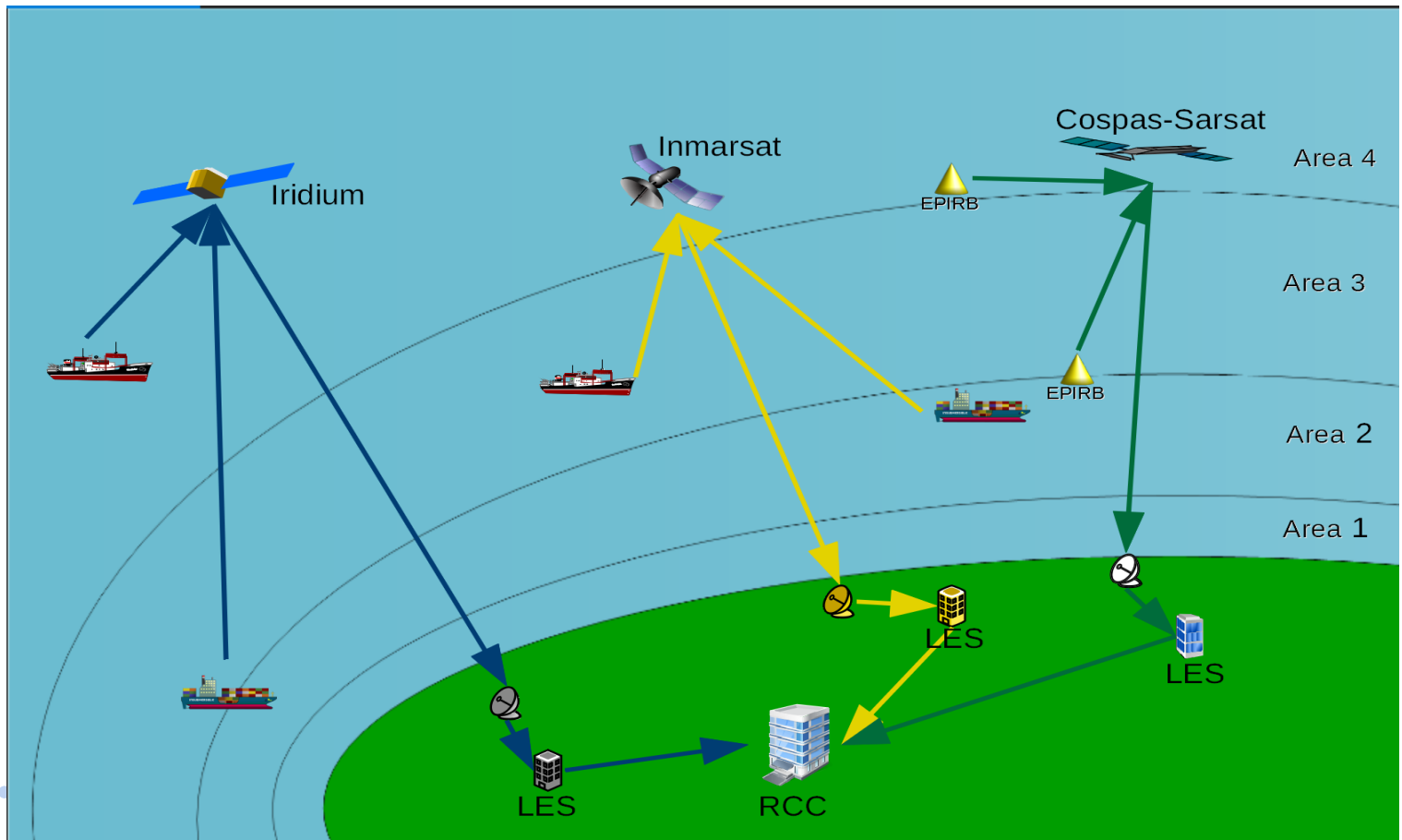
- **United Nations and Specialized Agencies**
 - *ITU, ICAO, IMO, WMO, and UNOOSA*
- **Intergovernmental Organizations**
 - *IHO, COSPAS-SARSAT, EC, ITSO, EUTELSAT IGO, and Intersputnik,*
- **Non-Governmental Organizations**
 - *ISO, CTO, IALA, CIRM, and ICS*
- **Cooperation Agreements and MoUs signed with:**
 - *ICAO, WMO, IHO, ISO, IALA, CIRM, ICS, and Intersputnik*

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IMSO's Role in GMDSS

- Core purpose is to ensure the provision of maritime mobile satellite communications services for the **GMDSS / SAR coordination**
(*IMSO Convention Article 3*)
- Legal instruments to deliver this function
 - IMSO Convention
 - IMO Resolution A.1001(25) on Criteria for the provision of mobile satellite communication systems in the GMDSS with network integrity of 99.9% availability and
 - Public Services Agreement (PSA)
- Working together with **National** Administrations, UN organizations such as **IMO, ICAO, ITU** as well as IGOs, NGOs and the industry organizations to improve safety and security at sea.

GMDSS



Basic requirements for a satellite service provider

- Provide satellite communication capabilities for:
 - distress communications in the ship-to-shore & shore-to-ship directions;
 - search & rescue coordinating communications;
 - transmission & reception of Maritime Safety Information (MSI);
 - general communications with shore facilities and other ships.
- Ability to maintain the contracted coverage through:
 - continuous availability (> 99.9 %) of service over coverage areas;
 - availability of spare satellite capacity;
 - capability to restore services within 60 minutes.

Mobile satellite communication systems

- So far, Inmarsat is the only recognized mobile satellite communication service provider in the GMDSS
- Ships equipped with mobile satellite earth station terminals rely on companies providing recognized communication services for distress and safety related communications
- IMSO is responsible for oversight of companies providing public safety services

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IMSO's basic roles in GMDSS

- Overseeing GMDSS service provider(s):
 - Satellite Constellation Network Performance
 - Satellite Constellation Network Availability
 - Service Restoration and spare satellite capacity
- Monitoring of migration of satellite services from one generation to another
- Satellite contingency planning and exercises
- Service portfolios – ground network and user equipment
- Global incident reporting and monitoring



IMSO's basic roles in GMDSS (continued.)

- Regular meetings with technical and operational staff
- Coordination with IMO and SAR centres
- Public Services Committee meetings – monitoring
- Work as a member of the International SafetyNET Coordinating Panel
- and issue Certificate to Maritime Safety Information service providers
- Technical and operational assessment of new satellite providers or new services
- Facilitation of cooperation between the Provider and end-users
- Reporting to IMO



Requirements for a GMDSS provider

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 - distress communications in the ship-to-shore & shore-to-ship directions;
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Updates on existing services:

- Closure of Inmarsat B service:
 - finally decommissioned on 11 January 2017.
- Notification for closure of Fleet-77 service:
 - confirmed that service will cease on 1 December 2020.
- Migration of Inmarsat GMDSS services from the I-3 to I-4 generation satellites
 - Planned to be accomplished in phases between April and December 2018
- SafetyNet II service introduced:
 - inaugurated on 14 November 2017;
 - testing phase involving several Maritime Safety Information Providers (MSIPs) carried out over a period of two years prior to inauguration.

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Progress & outcome of the evaluation of a new GMDSS system – Inmarsat FleetBroadband MSDS



- Nov 2016 - The United Kingdom applied to MSC 97 to seeking recognition of the Inmarsat FleetBroadband Maritime Safety Data Service for use in the GMDSS.
- MSC 97 - considered the application and forwarded it to the NCSR Sub-Committee for its consideration.

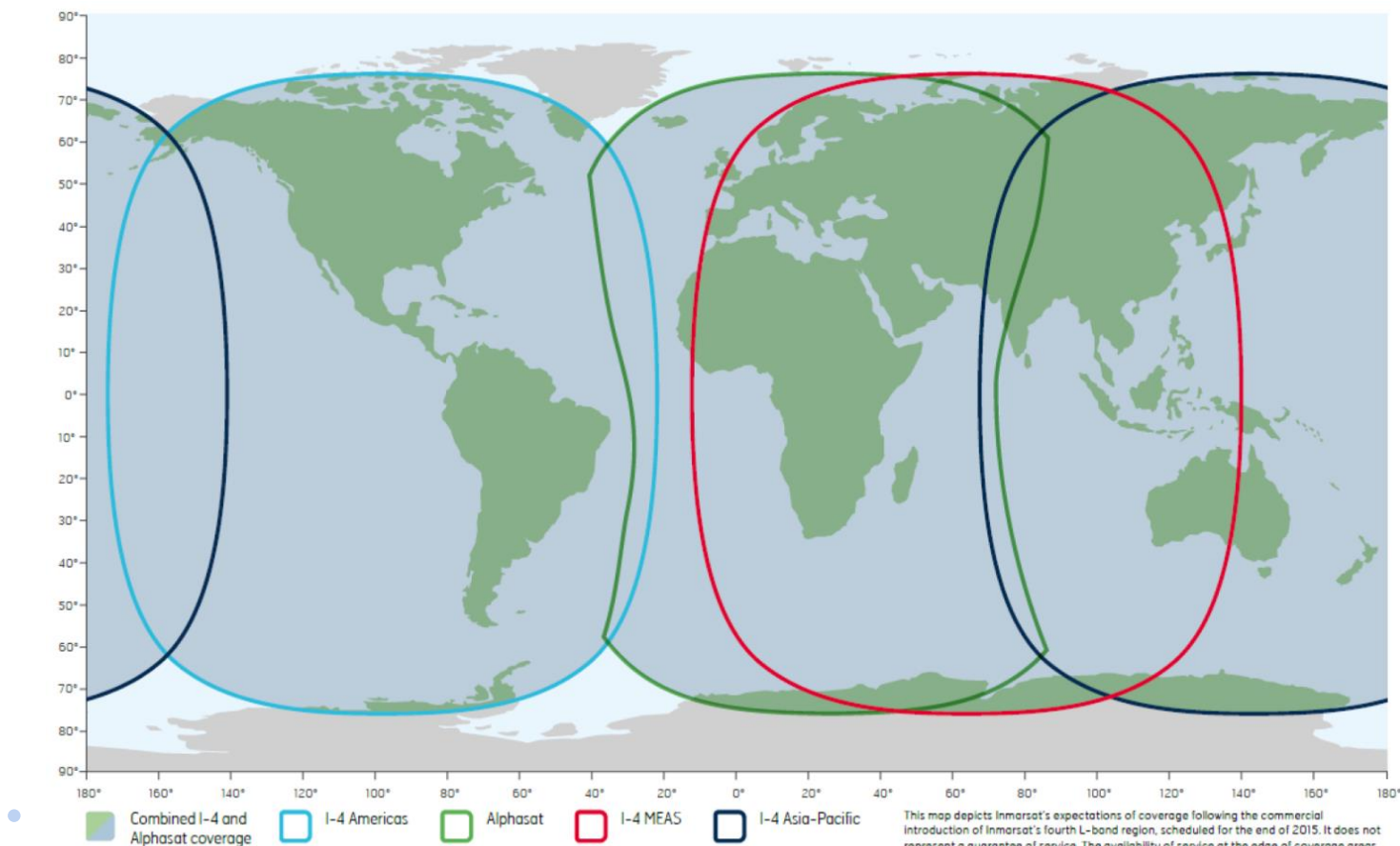
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Progress & outcome of the evaluation of a new GMDSS system– Inmarsat FleetBroadband MSDS

- NCSR 4 considered the application and
 - noted that recognition was sought initially for the coverage area under the **Inmarsat-4 Middle East and Asia (MEAS) region satellite that overlapped with other I-4 constellation satellites** but with the intention that recognition also included, subject to any necessary further assessment, additional coverage areas provided by future satellites.
 - agreed that **IMSO** should undertake the necessary technical and operational assessment and provide a report for consideration by the NCSR Sub-Committee.

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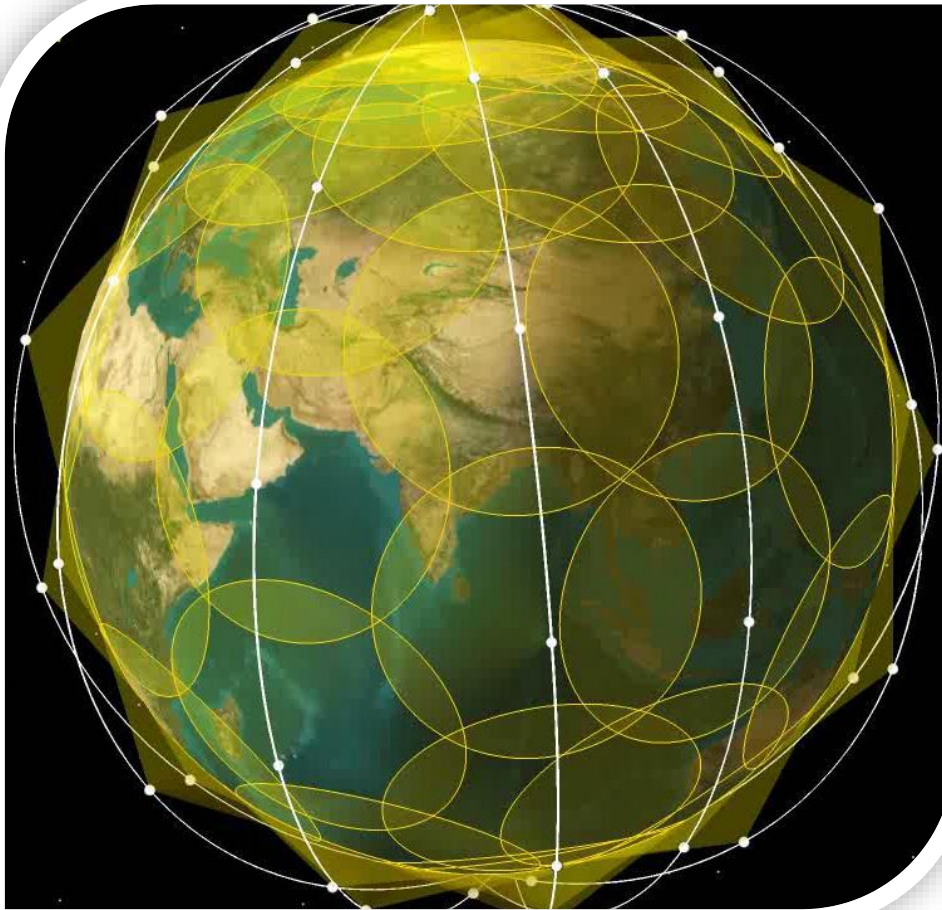
GMDSS – Inmarsat FleetBroadband



Progress & outcome of the evaluation of a new GMDSS system– Inmarsat FleetBroadband MSDS

- Mar 2017 – *IMSO convenes a team of experts to conduct the technical and operational assessment of the Inmarsat FleetBroadband MSDS;*
- Aug 2017 – *IMSO's contracted team of experts starts work;*
- Oct 2017 – *IMSO completes the assessment of Inmarsat FB MSDS;*
- Nov 2017 – *IMSO submits the assessment report to NCSR 5;*
- Mar 2018 – *NCSR 5 advises MSC 99 that the Inmarsat FleetBroadband MSDS (re-named then as **Fleet Safety**) had satisfied the technical and operational requirements needed for providing recognized satellite communication services in the GMDSS;*
- Jun 2018 – *MSC 99 accepts the recommendation from NCSR 5 and adopts resolution MSC.450(99) on the Statement of Recognition of Maritime Satellite Services provided by the Inmarsat Global Ltd.*

Progress & outcome of the evaluation of a new GMDSS system— Iridium application for recognition



 **iridium®**
Everywhere



Progress & outcome of the evaluation of a new GMDSS system– Iridium application for recognition

- June 2013 – US notified MSC 92 of its intention to sponsor Iridium's bid to become the next GMDSS provider
- July 2014 – US submitted Formal application to NCSR 1
- Nov. 2014 – MSC 94 requested IMSO to undertake the technical and operational assessment of Iridium. **Scope of the assessment: IMO Resolution A.1001(25) and MSC.1/Circ.1414**

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Progress & outcome of the evaluation of a new GMDSS system– Iridium application for recognition

- Dec 2014 – *IMSO-Iridium conclude Agreement on managing the assessment work;*
- Mar 2015 – *IMSO's contracted team of experts starts work;*
- Apr 2015 – *First visit of experts to Iridium facilities in the US;*
- Jun 2015 – *IMSO review on first visit and future plan;*
- Sep 2015 – *Second visit of experts to Iridium facilities in the US;*
- Nov 2015 – *Finalization/submission of assessment report;*
- Mar 2016 – *NCSR 3 considers the report & identifies several outstanding items needing to be resolved before Iridium could be recognized;*
- Jun 2016 – *MSC 96 considers recommendations of NCSR 3 and tasks IMSO with continuing with the evaluation of Iridium in respect of the outstanding items identified by NCSR 3;*

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Progress & outcome of the evaluation of a new GMDSS system– Iridium application for recognition (Cont.)

- Feb 2017 – *Iridium commences integration with RCCs and MSIPs;*
- Apr 2017 – *Approved ship earth station available for demonstration of compliance with the outstanding items;*
- May 2017 – *IMSO convenes a new Group of Experts to verify Iridium’s compliance with the list of outstanding items;*
- Jun 2017 – *MSC 98 approves a Performance Standard for SES terminals for Iridium to comply with;*
- Oct 2017 – *IMSO completes its assessment of the outstanding items;*
- Nov 2017 – *IMSO submits the assessment report to NCSR 5;*
- Mar 2018 – *NCSR 5 considers the assessment report from IMSO and advises MSC 99 that, following extensive deliberations, it could not reach a consensus and therefore requested the MSC to provide guidance to the NCSR Sub-Committee on the way forward;*



Progress & outcome of the evaluation of a new GMDSS system— Iridium application for recognition

- **Jun 2018** – *MSC 99 considered the recognition of the Iridium system and concluded that the Iridium system had satisfied the criteria established to receive recognition as a mobile satellite communication service provider in the GMDSS and adopted resolution MSC.451(99) on the Statement of Recognition of Maritime Satellite Services provided by Iridium Satellite LLC, subject however to IMSO monitoring the implementation of services and verifying that all elements had been brought into service satisfactorily;*
- **Jul 2018** – *final draft of a new reference Public Service Agreement (PSA) developed at the 42nd session of the IMSO Advisory Committee for consideration at the 25th session of the IMSO Assembly to allow oversight of new recognized satellite service providers in the GMDSS.*



GMDSS – multiple providers issues

- With the recognition of Iridium as the new mobile-satellite communication service provider in the GMDSS and further applications under way, several questions now arise as to how multiple providers will co-exist and interact, notably, how:
 - to maintain operational integrity when ships may fit a variety of satellite terminals associated with differing contracted coverage areas?
 - to handle broadcast of MSI over multiple systems with non-coincident coverage (involves MSI providers)?
 - to handle distress relays sent over multiple systems with non-coincident coverage (involves SAR people)?
- will IMSO undertake oversight when different coverage and contingency requirements are involved?

Website for the SafetyNET Panel



Website for the SafetyNET Panel

- Skeleton of the website is ready
- IMSO is working with the chairman of the SafetyNET Coordinating Panel on the content of the website
- The URL for the website is iscp.imso.org

Capacity-Building

Ongoing efforts

- Partnership arrangement
- Collaboration with other Organizations

THANK YOU FOR YOUR ATTENTION

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