

WWNWS-SC Report to the IHO-IRCC 11

Inter-Regional Coordination Committee

Mr. Peter Doherty, Chair WWNWS-SC



International Hydrographic Organization
Organisation Hydrographique Internationale

Genoa, Italy 5th – 7th June

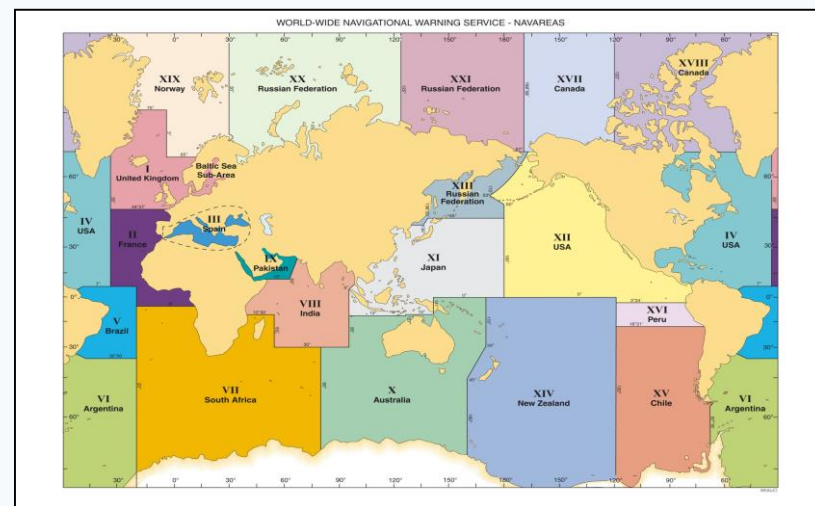
Principal Activities

- WWNWS background
- WWNWS10 meeting
- Inmarsat I3-I4 satellite migration / Inmarsat enhancements
- IMO - Navigation, Communications, and Search and Rescue Subcommittee meeting (NCSR6)
- IMO/IHO/WMO Document Review Working Group (DRWG17)
- MSI in a multi-satellite environment
- National Coordinator support
- MSI training
- Future work
- Actions



WWNWS Background

- The World-Wide Navigational Warning Service (WWNWS) is the internationally and nationally coordinated service for the promulgation of hazards to navigation – navigational warnings – which may endanger international shipping
- WWNWS-SC monitors and guides IHO/IMO WWNWS including 21 NAVAREA Coordinators
- Responsible for proposing new methods to enhance the provision of navigational warnings.
- Provide appropriate guidance to IHO Member State Representatives.
- IMO approval/oversight
 - IHO-SC with dual approval/oversight
- Close liaison maintained with WMO for WWMIWS and METAREA Coordinators



WWNWS 10 Meeting

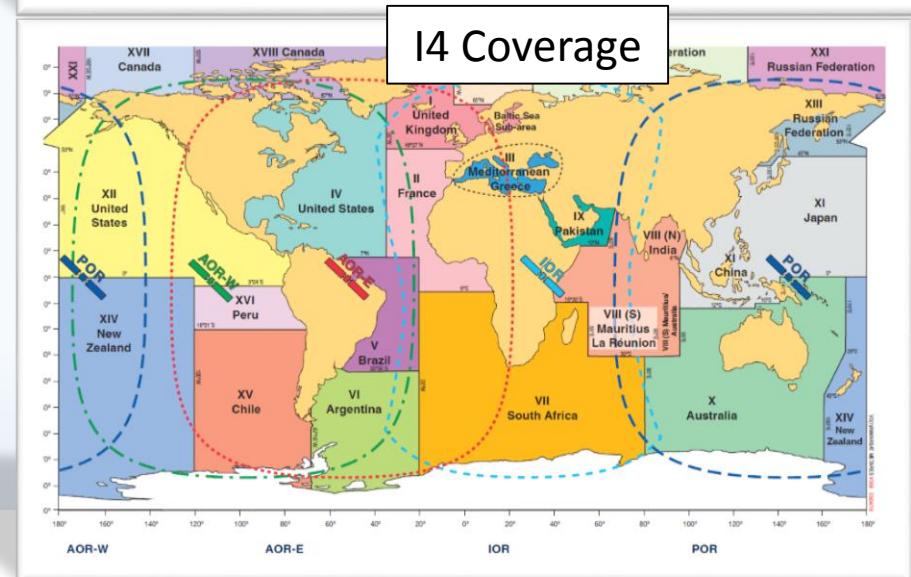
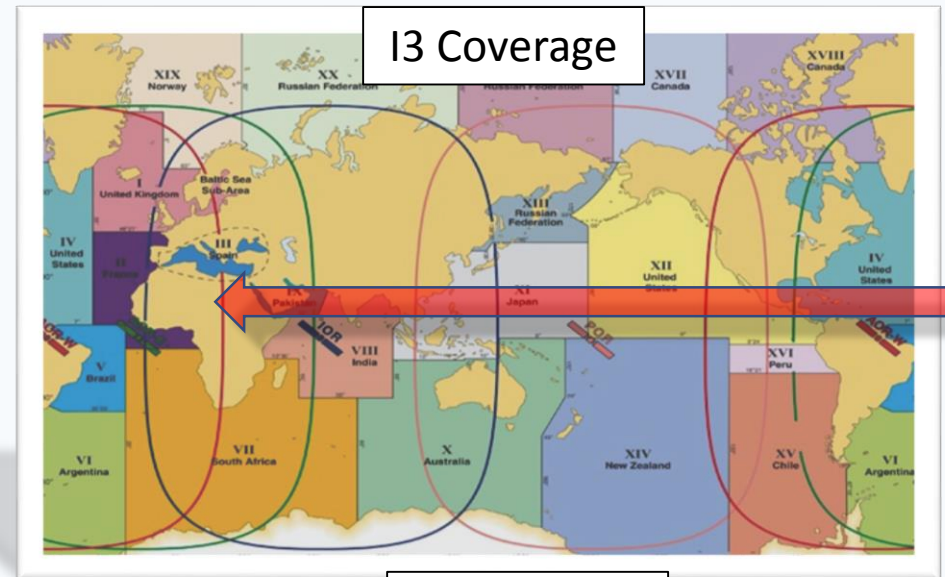
10th meeting in Monaco 27-31 August 2018.

- Attendees:
 - 48 delegates from 21 IHO Member States and supporting organizations
 - 21 delegates from the WWMIWS
 - Secretariat of the World Meteorological Organization (WMO)
 - Secretariat of the International Mobile Satellite Organization (IMSO)
 - Chairs of IMO NAVTEX and International SafetyNET Coordinating Panels
 - Inmarsat
 - Iridium
 - Security of Navigation, Stabilisation, Advice and Training (including AWNIS) (SONSAT)
 - IHO Secretariat
 - The delegates included representatives of 18 NAVAREA Coordinators, one Sub-Area Coordinator and six National Coordinators.
- Inmarsat satellite migration, I3-I4; new coverage footprints
- Inmarsat SafetyNET enhancements (SafetyNET II)
- IMO International SafetyNET Coordinating Panel name change
- Document Review (IMO Resolution A.705 (MSI), A.706 (WWNWS), A.1051 (Met-Ocean Information and Warning Service), SafetyNET Manual)
- Iridium as a new recognized mobile satellite service (RMSS)
 - Development of a user manual



Inmarsat I3-I4 Satellite migration

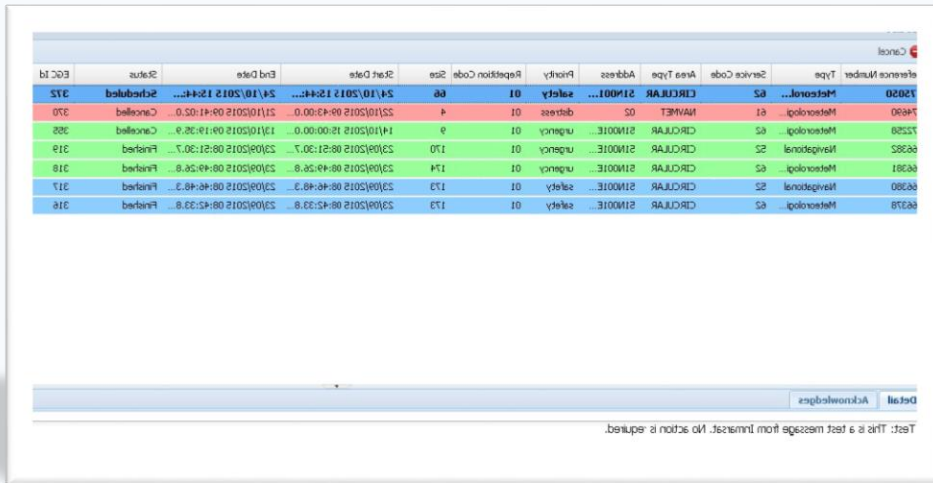
- Migrate to new, more capable I4 satellites—coverage shift
- Migration started 9 May 2018 and completed on 12 December 2018
- New coverage required NAVAREAs/METAREAs to modify broadcast procedures
- Required notifications to ships



Inmarsat Enhancements

SafetyNET II

- web-based user interface
- broadcast over multi satellites
- message monitoring and cancellation
- no extra equipment needed



The screenshot displays a web-based interface for Inmarsat SafetyNET II. It features a table with columns for Reference Number, Type, Service Code, Area Type, Address, Priority, Repetition Code, Size, Start Date, End Date, and Status. The table lists several messages, some with status 'Cancelled' and others 'Finished'. At the bottom, there is a 'Test' button and a status bar indicating 'Test: This is a test message from Inmarsat. No action is required.'

| Reference Number | Type | Service Code | Area Type | Address | Priority | Repetition Code | Size | Start Date | End Date | Status |
|------------------|--------------|--------------|-----------|----------|----------|-----------------|------|----------------------|----------------------|-----------|
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | safety | 01 | 66 | 5/10/2012 12:44:... | 5/10/2012 12:44:... | Scheduled |
| 12820 | Metastore... | 61 | NAVNET | 05 | distress | 01 | 4 | 5/10/2012 09:43:00.0 | 5/10/2012 09:41:05.0 | Cancelled |
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | urgency | 01 | 9 | 5/10/2012 18:00:00.0 | 5/10/2012 09:19:38.9 | Cancelled |
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | urgency | 01 | 110 | 5/10/2012 08:21:30.3 | 5/10/2012 08:21:30.3 | Finished |
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | urgency | 01 | 114 | 5/10/2012 08:49:58.8 | 5/10/2012 08:49:58.8 | Finished |
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | safety | 01 | 113 | 5/10/2012 08:46:48.7 | 5/10/2012 08:46:48.7 | Finished |
| 12820 | Metastore... | 65 | CIRCLAR | 21001... | safety | 01 | 113 | 5/10/2012 08:45:33.8 | 5/10/2012 08:45:33.8 | Finished |



IMO NCSR6

- IMO International SafetyNET Coordinating Panel name change
 - International EGC Coordinating Panel (NCSR 6/9/2)
- Interim Iridium Manual (NCSR 6-INF.17)
 - IMO MSC Circular and with the goal to submit a final manual at NCSR8 in 2021
- A.705(17), as amended - Promulgation of Maritime Safety Information
 - NCSR6 approved – Awaiting MSC 101 adoption
- A.706(17), as amended - World-Wide Navigational Warning Service
 - NCSR6 approved – Awaiting MSC 101 adoption
- A.1051(27) - World-Wide Met-Ocean Information and Warning Service.
 - NCSR6 approved – Awaiting MSC 101 adoption



- Interim Iridium Manual submitted for MSC approval
 - Service will be called “SafetyCAST”
 - Certificates of Authorization to be issued by IMO in 2019
 - Test and evaluation in 2019/20
 - Fully operational 2020-2021 timeframe
- Revised - International SafetyNET Manual
 - Draft prepared
 - WWNWS11 to review and submit to NCSR7-2020

MSI via a multi-satellite environment

- IMO approval of Iridium as a Recognized Mobile Satellite Service (RMSS)
- Resource burden on Maritime Safety Information provider (NAV/MET):
 - Potentially double and triple the cost
 - Additional Personnel
- Broadcasting challenges:
 - MSI providers use different processes (email, web, machine to machine) for broadcast
 - Requires RMSS to offer multi interface solutions (Email, web interface and have a common data interface standard)
- Approval of additional satellite services?
 - BeiDou – Chinese Satellite navigation system proposal 2020
- S-124 Impacts?



MSI Service Provider

Within a multi-provider environment

- Multi-provider terminal/receiver solution?
 - A terminal with two or more radios/transceivers
 - cost, manufacturer risk, complexity and antenna interference.
 - Determined not to be a viable solution.
- Monitoring in a multi-provider environment
 - Satellite configuration
 - LEO vs Geostationary
 - easier when the information provider is inside the RMSS coverage footprint;
 - challenge when information provider is outside of the RMSS coverage footprint
 - RMSS must provide a solution that the WWNWS approves



MSI Training

Objectives:

1. **Endeavour to be informed** of all events that could significantly affect the safety of navigation within their coastal region.
2. **Assess all information** in the light of expert knowledge for relevance to navigation in the coastal region.
3. **Draft navigational warnings** in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information
4. **Pass NAVAREA warnings** for further promulgation to the NAVAREA Coordinator

21 Courses
325 Students
119 Countries



Brazil 2018

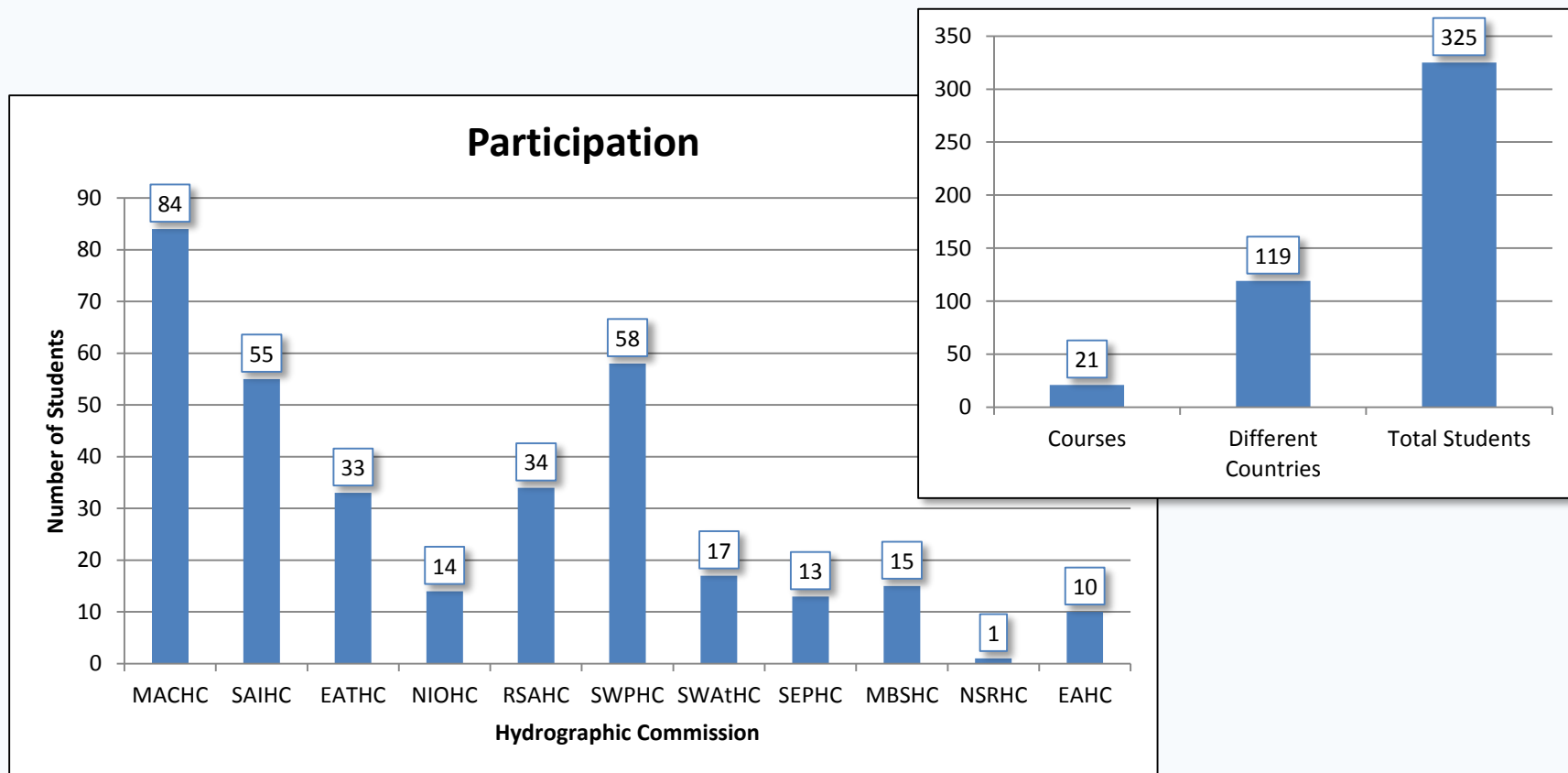


MSI Training

- 2007 Jamaica (MACHC)
- 2007 Mozambique (SAIHC)
- 2008 Spain (MBSHC)
- 2009 Ghana (EAtHC)
- 2009 Oman (NIOHC / RSAHC)
- 2010 Namibia (SAIHC)
- 2010 Australia (SWPHC)
- 2011 Brazil (SWAtHC, SEPHC & MACHC)
- 2013 Trinidad (MACHC)
- 2013 Spain (MBSHC)
- 2013 South Africa (SAIHC)
- 2014 Oman (NIOHC / RSAHC)
- 2014 New Zealand (SWPHC)
- 2014 Ivory Coast (EAtHC)
- 2015 Japan (EAHC)
- 2015 Turkey (MBSHC)
- 2016 St. Lucia (MACHC)
- 2017 Barbados (MACHC)
- 2017 South Africa (SAIHC)
- 2018 New Zealand (SWPHC)
- 2018 Brazil (SWAtHC)
- 2019 Jakarta 9-13 Sep ???
- 2019 Mauritius 22-24 Oct



MSI Training



Support for a train-the-trainer opportunities



National Coordinator Support

Example from NAVAREA IV – 52 National Coordinators

| | Country / Territory | PHASE 1. MSI STATUS Color coded (legend) | MSI 2017 | MSI 2018 | M SI 2019 | Training Date | Training Date | Training Date | Training Date |
|----|--------------------------|---|----------|----------|-----------|------------------|------------------|------------------|------------------|
| 1 | Anguilla | | 0 | 1 | 0 | May-2007 | Jul-2016 | | |
| 2 | Antigua & Barbuda | | 0 | 0 | 0 | May-2007 | Apr-2011 | Apr-2013 | Jul-2016 |
| 3 | Bahamas | | 0 | 0 | 0 | | | | |
| 4 | Barbados | | 3 | 2 | 1 | May-2007 | Jul-2016 | Jun-2017 | |
| 5 | Belize | | 0 | 4 | 3 | Jul-2016 | | | |
| 6 | Bermuda (NAVTEX Station) | | | | | Jul-2016 | | | |
| 7 | Brazil (NAVAREA V) | | | | | Apr-2011 | Oct-2018 | | |
| 8 | Cayman Islands | | 0 | 0 | 0 | May-2007 | | | |
| 9 | Colombia | | 289 | 291 | 87 | May-2007 | Apr-2011 | Oct-2018 | |
| 10 | Costa Rica | | 0 | 1 | 0 | Apr-2013 | Jul-2016 | Jun-2017 | |
| 11 | Cuba | | 12 | 5 | 2 | Jun-2017 | | | |

MSI STATUS COLOR CODING

Clear--No training, not providing MSI

Red--Received training, not providing MSI

Yellow--Received training, providing moderate MSI

Green--Fulfilling all obligations



Future Work

- Continue process of editorial amendments to the WWNWS Guidance Documents/Manuals on MSI
- Monitor developments in IMO regarding E-Navigation, S-124, AIS Aids to Navigation and GMDSS Modernization and their impact on the provision of navigational warnings to mariners at sea.
- Provide appropriate advice and guidance to IMO, WMO and IHO through member states' national delegations and, as appropriate, at the relevant IMO and WMO committees and sub-committees



Actions

- Take note of the information provided in this report on the outcomes of WWNWS10;
- Request National Coordinators review the contents of the relevant Annexes of the GMDSS Master Plan and IHO Publication C-55 – *Status of Hydrographic Surveying and Nautical Charting Worldwide* – to ensure consistency for their national entries.
- Urge the use of the Joint Manual on MSI to ensure correct terminology and formats are used in MSI messages;
- Encourage closer engagement of the National MSI Coordinators of Member States with the relevant NAVAREA Coordinator(s);
- Urge close liaison between regional CB Coordinators and the Chair WWNWS-SC on programming and candidate selection for MSI training;
- Encourage the attendance of Member States and Observers at WWNWS-SC meetings;

