

Report of NCSR 7

Sub-committee on Navigation, Communication and Search and Rescue

15th – 24th January 2020

International Maritime Organization (IMO), London headquarters

ITF delegation

ITF Accredited Permanent Rep.	Branko Berlan (Head of delegation)
Working Group on Navigation	Lennart Jonsson (Expert) George Arthur Quick (Advisor)
Working Group on Communications	Sergey Aysinov (Expert)
Working Group on Search and rescue	Odd Rune Malterud (Advisor)
IMO Liaison Assistant	Jihyeon Gina Kim



The Sub-Committee on Navigation, Communication and Search and Rescue (NCSR) undertakes all matters relating to maritime navigation and communication from ships' routing to satellite-based information exchanging. It also deals with Search and rescue (SAR) matters, such as communications in distress, cooperation amongst relevant coastal SAR centres, aeronautical communications, humanitarian response to refugees, etc.

Correct information on location, weather forecast, vessels/ fishing gears/ offshore facilities around you, hydrographic map and nearest coastal stations to cooperate with are paramount critical for persons onboard and ship's safety. Advancement of information communication technology (ICT) has brushed up systems relating all issues mentioned above. In order to ensure the best application of top-notch technology, it should be regulated safely and securely worldwide. The Sub-Committee endeavours to develop and update legal measures appropriately.

At this session, the followings were considered:

- Amendments to SOLAS Ch. III *Life-saving appliances and arrangements* and IV *Radiocommunications* for Modernisation of GMDSS (2024, implementation year);
- Revision of International SafetyNET manual;
- Safety measures for non-SOLAS ships in polar water;
- Rescue and assist persons in distress at sea including refugees;
- Further development matters in relation to E-navigation;



- Maritime Safety Information (MSI) and maritime services (MSs) in relation to satellite services;
- Aeronautical search and rescue; and
- Assessment and consideration on recognition of new satellite service providers.

Working Group on Navigation

Maritime navigation systems have been more and more developed thanks to advanced satellite linked technology.¹ The Group considered new satellite navigation systems to be recognised as World-Wide Radio Navigation System (WWRNS).

Secondly, due to the fact that non-SOLAS ships, such as fishing vessels and pleasure yachts, are not bound by SOLAS Convention and Polar code, the growing number of such ships in polar water urgently needs prescriptive safety measures. The Sub-Committee commenced its work on this by including a new agenda.

Safe navigation also encompasses refuge for ships in need. The resolution A.949 (23) on *Guidelines on places of refuge for ships in need of assistance* was adopted in 2003, it is timely to revise them including amendments to GMDSS with the advancement of communication technology. A preliminary draft structure and revision has been proposed for consideration.

Outcome of the Group

1. A draft Safety of Navigation (SN) circular on *Recognition of the Indian Regional Navigation Satellite System (IRNSS) as a component of the World-wide radio navigation system (WWRNS)* was drafted.
2. A new correspondence group was established to consider the possible applications of chapters 9 *Safety of navigation* and 11 *Voyage planning* of the Polar Code to non-SOLAS ships² and how best to enhance the safety of these ships when operating in polar waters.
3. A correspondence group on the revision of the Resolution A.949 (23) was established. The draft that will be produced by the Group will be reviewed on legal and environmental protection perspectives by fast track procedure³.
4. A draft Assembly resolution on *Guidelines for Vessel Traffic Services (VTS)* was produced for further development. For the ITF, it should be noted that regardless of information received from VTS centre, the final decision making authority is on master and crew. Meaning, even though ship-to-shore communication becomes more sophisticated, actual ship operations still heavily depend on seafarers onboard.

¹ Navigation system can be confused with satellite communication system. The IMO recognised navigation systems are, to date, the Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), BeiDou Navigation Satellite System (BDS) and Galileo Global Navigation Satellite System. On the other hand, the IMO recognised satellite communication systems are Inmarsat and Iridium. Complete attestation of Iridium is underway.

² The scope of application is fishing vessels of 24 metres in length and above and pleasure yachts of 300 gross tonnage and above not engaged in trade.

³ Fast track means adoption of a document to be faster than normal procedure due to the matter of urgency. In this event, the revised resolution A.949 (23) is expected to be approved in 2020 by MSC, finalised in early 2021 by NCSR 8, reviewed by Legal Committee in March 2021, approved in 2021 by MEPC 77 and finally concurrently approved by MSC in 2023 for adoption.



Further work

1. In addition to the recent recognition of IRNSS, in the future, Japanese Quasi-Zenith Satellite System (QZSS) will be also be considered for IMO's recognition once the system is attested.
2. The ITF is a member of the correspondence group on safety measures for non-SOLAS ships operating in polar waters. The possible partial applicability of Polar Code ch.12 *Manning and Training* to vessels under the scope of this work will be addressed.
3. The Joint IMO/ITU Experts Group on Maritime radiocommunication matters will consider matters relating to further usage of AIS technology.

Working Group on Communications

Maritime communications have evolved with advancement of ICT. Onboard and ashore installations and receiving and transmitting parties have changed. However, the ultimate goal of such communication remains the same, enhancing safety and security as well as environmental protection.

Global Navigation Satellite Systems (GNSS) in the maritime was implemented since 1976. A British satellite service provider "Inmarsat" is only recognised and approved globally. In 2019, a US satellite service provider "Iridium" was recognised and approved by the IMO. As a result, all instruments which had been created for the use of Inmarsat are under review, such as the assembly resolution 707(17) on *Charges for distress, urgency and safety messages through the Inmarsat system*.

The Group considered development of technical solutions to enhance interconnectivity amongst providers and measures to monitor MSI broadcast in multi-provider environment in relation to MSI.

Outcomes of the Group

1. The draft of the revision of SOLAS Ch. III and IV was drafted focusing on:
 - The SAR related information has not been amended to NAVTEX;
 - Three different definitions for NAVTEX;
 - Qualification of personnel in coast station and coast earth station and the SOLAS regulations; and
 - Prescriptive requirements in receiving MSI and SAR information.
2. A technical solution for the reception and dissemination of MSI and SAR-related information over different recognised mobile satellite services was discussed and Joint IMO/ITU Experts Group on Maritime Radiocommunication Matters (EG 16) will consider further.
3. The draft on revisions of MSC/Circ.1039 on *Guidelines for shore-based maintenance of satellite EPIRBs* and MSC.1/Circ.1040/Rev.1 on *Guidelines on annual testing of 406 MHz satellite EPIRBs* were finalised.
4. The draft MSC resolution on *performance standards for shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of MSI information* and the *revision of circular COMSAR/Circ.32* were continued carry out.
5. A draft liaison statement relating to the revision of recommendation ITU-R M.585-7 on *Assignment and use of identities in the maritime mobile service, for autonomous maritime radio devices (AMRD) Group B using AIS technology* will be conveyed to the International Telecommunication Union (ITU).

Further work

1. The ITF will draft, coordinated by France, the COMSAR/Circ.33 GMDSS coast station operator's certificate (CSOC) model course.
2. The Group will be expected to finalise amendments to SOLAS Ch.III and IV in the next session taking into account advice that will be from the SSE and HTW.
3. All working group considered update of IMO publications so as to streamline effective dissemination and electronic publishing. The ITF addressed that it is a critical matter for ships' crew, ship owners and company personnel. Thus, in the next session, the review of IMO publications is going to be thoroughly discussed.

Working Group on Search and Rescue

A distress or salvage situation could happen anytime, anywhere. Consequently, international standards that foster close cooperation amongst adjacent countries and countries of subjects are essential. The Group considered on reliable technologies and better communications amongst stakeholders in a distress event to enhance SAR operations, furthermore, feasibility for more effective implementation in every country.

The preparation of a SAR cooperation plan is mandatory. The regulation requires the plan to be developed in cooperation amongst the ship, the company and the search and rescue services⁴. The *Guidelines for preparing plans for cooperation between search and rescue services and passenger ships* (MSC/Circ.1079/Rev.1 with appendices) provides pragmatic procedures.

International Civil Aviation Organization (ICAO) and IMO, via a joint working group (ICAO/IMO JWG), have been working together in providing such standards. At this session, advancement of technologies in particular communications means and introduction of new satellite services have been considered.

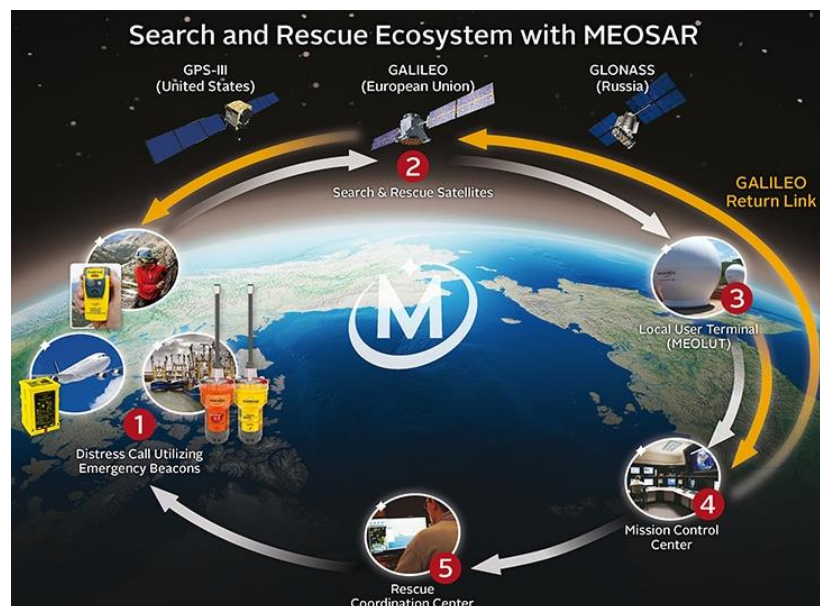


Figure 1: Outlook of Satellite Service in aeronautical aspect (© Orolia Maritime)

⁴Chapter V, Section 7.3 of the SOLAS Convention



Outcomes of the Group

1. The JWG in the next session will

- review definitions of maritime services (MSs);
- develop appropriate communication methodology between Rescue Control Centres (RCCs) and the SAR communication provider; and
- consider the ship-to-aircraft interoperability during SAR event⁵.

2. A draft COMSAR circular, *Interim Guidance for SAR Services Regarding Implementation of Autonomous Distress Tracking (ADT) of Aircraft in Flight* was approved for dissemination amongst IMO members. ADT provides notification and location of an aircraft in potential distress.

3. It was agreed that description of MSs in the context of e-navigation should be updated in MSC.1/Circ.1610 on *Initial descriptions of Maritime Services in the context of e-navigation*.

Further work

1. The next intersessional JWG meeting (JWG 27), at the IMO headquarters 12th-16th Oct 2020, will consider SAR cooperation between aviation and the maritime including the application of modern ICT means. The ITF must support training and electronic information for the seafarers.

2. MS 10 *Maritime assistance service* and 16 *Search and rescue service* of MSC.1/Circ.1610 will be developed. The development will also consider medical services at sea. How seafarers could get medical services while sailing in high seas.

3. MS 10, under of development by FAL Committee, due to be liaised with the Sub-committee. The importance of this work is to make the existing measures to be updated considering advanced technology and benefit for maritime professionals onboard.

4. An editorial review will be conducted for 2019 Consolidated IAMSAR Manual, released June 2019.

5. The continuous update of the International SafetyNET Services Manual⁶.

Experts Group on Ships' routing

New ships' routing schemes were presented:

- an additional two-way route in the Great Barrier Reef and Torres Strait, in Far North Queensland, Australia to enhance environmental protection;
- changes for the two-way route in the traffic separation schemes (TSS) off Ushant, France to take into technological developments;
- consolidated routing systems off the western coast of Norway, off the coast of southern Norway and off the coast of Norway from Vardø to Røst to harmonise applications to ships types (figure 2); and
- changes to TSS Slupska Bank, Poland to reduce the danger in shallow water (figure 3).

The importance of this information for global maritime professionals is to be aware of new navigation regulations operating in those area.

⁵ Global Maritime Distress and Safety System (GMDSS) and Global Aeronautical Distress and Safety System (GADSS)

⁶ SafetyNET is an integral part of the GMDSS, providing an international automatic direct-printing satellite-based service for the promulgation of MSI, navigational and meteorological warnings, meteorological forecasts, SAR information and other urgent safety-related messages to ships.

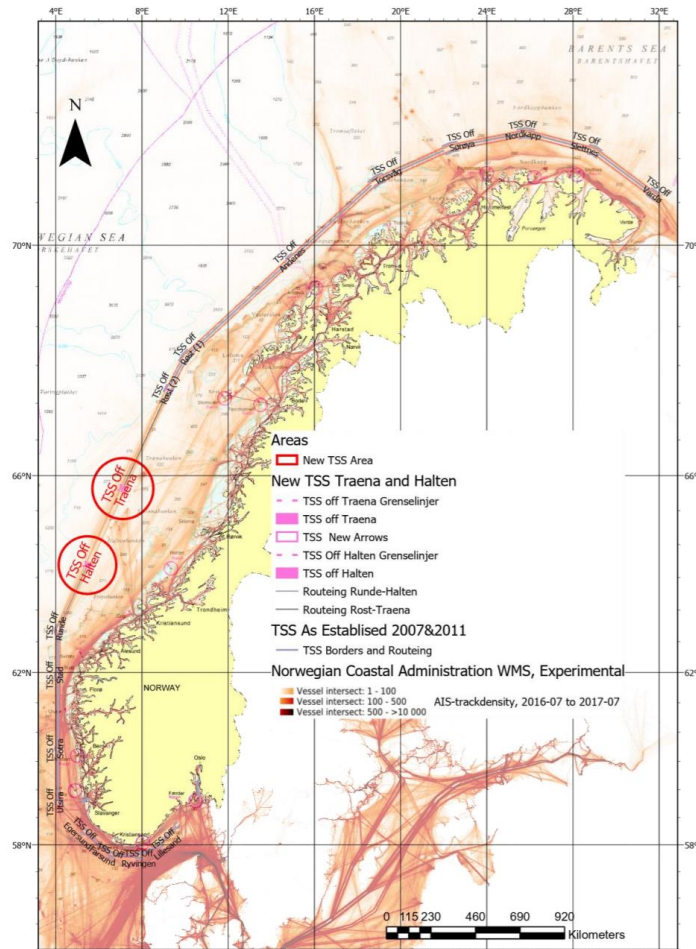


Figure 2: Norwegian TSS including the proposed new TSS marked with red circles

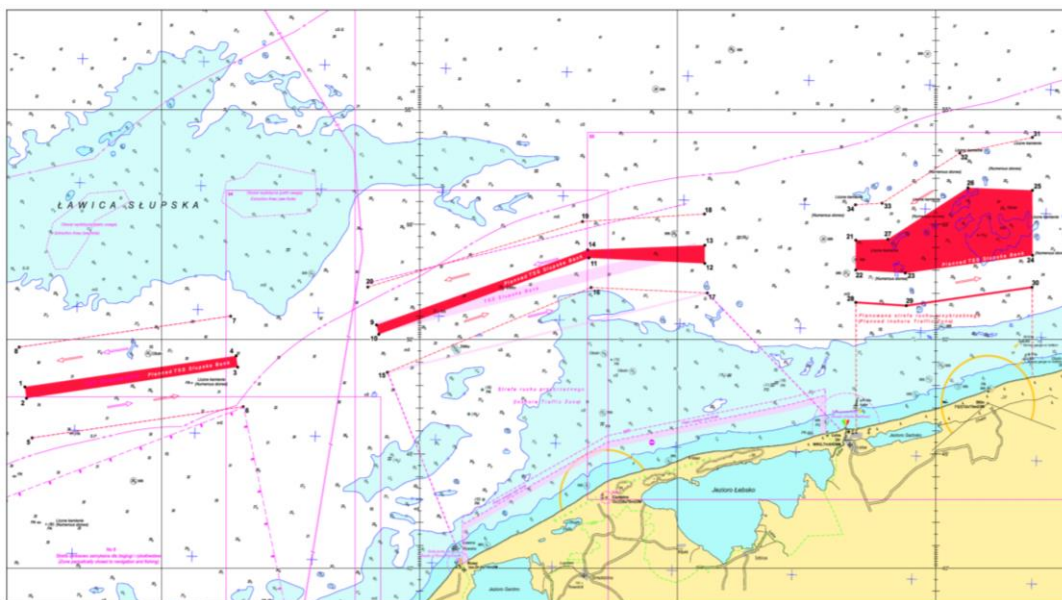


Figure 3: Chartlet of the proposed amended TSS and associated routing measures (Poland)



Action point

Seafarers should realise that currents of new technologies for navigation, all types of communications amongst ship and shore and search and rescue are already being implemented to improve safety aboard. We have seen telemedical services or how individual mobile text messages could play a great deal of roles in distress situations.

This transition will inevitably require seafarers to be updated and appropriately trained. Sometimes, such changes may not provide such updates or trainings before its introduction and expect seafarers to simply adopt, such as recognition of e-certificates.

It is pivotal importance for seafarers to know that:

- information must be provided by governments and companies before any transformation happens;
- appropriate trainings and familiarisation should be provided, including cyber security and protection of seafarer's personal information;
- technical support should be deployed in case of malfunction, and seafarers should have knowledge over the support; and
- technologies are supplementary. The final decision making authority should be on seafarers, no complacency is acceptable.

The ITF delegation participates in all discussions to make sure the aforementioned aspects are enshrined in developing regulations.

*Aforementioned IMO documents can be provided if requested.