Input paper: [[1]](#footnote-1) ENAV17-11.25.1



Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **□** ENG **□** PAP **□** Input

**X** ENAV **□** VTS

Agenda item [[2]](#footnote-2) 11

Technical Domain / Task Number 2 2.4.1……………………

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GMDSS Report from Rapporteur

# Summary

Since ENAV16, the correspondence group on the modernization of GMDSS (CG as refered in this document) prepared an interim report on the detail review of the modernization of GMDSS. There was also this summer some preparatory meeting for ITU-R WRC15 and this week (on 26th October 2015) there is an important preparatory meeting for the WRC-15 as well. In September 22nd IMO/ICAO JWG on the harmonisation of SAR procedures had some discussion on the modernisation of GMDSS on an operational point of view. And the 11th IMO/ITU expert group (the Group as refered in this document) on 5th to 9th October 2015 studied the CG interim report in order to identify points to be further developed by the CG in order to complete a full report to NCSR3.

In order to have a short but global overview of the last update in the modernization of GMDSS, this report will refer to the 11th IMO/ITU expert group (the Group as refer in this document) which is a key body between IMO and ITU for the modernization of GMDSS.

## Purpose of the document

The deadline to submit the report of the CG to NCSR3 has been exceptionally fixed to the 11th December 2015. It is suggested at ENAV17 to take the opportunity to review the interim report of the CG for this is a possibility to input some views of e-navigation and any new technology to support GMDSS. This task could be input to “Monitor Developments with GMDSS Modernization (2.4.1)” as assigned to WG 3 Telecommunications. The result of this review will be send to the co-ordinator of the CG.

## Related documents

* interim report of the correspondence group on the modernization of GMDSS reviewed by 11th IMO/ITU Eperts Group
* draft revised text of SOLAS IV as review by 11th IMO/ITU Eperts Group
* additional information to WRC-15
* IMO/ITU 11/4/6 (France) coordination with the work on the implementation of the e-navigation SIP

# Background

The objective of the work on the modernization of GMDSS is to amend SOLAS in order to prepare new communication systems. Because of new rules for SOLAS amendments by IMO (refer to MSC.1/Circ.148) there is now a 4 year cycle between any SOLAS amendment. Basically, for next SOLAS amendments to entry into force in 2020, these amendments should be adopted between 2016 and 2018. If not, the next amendments would entry into force in 2024. As the Group agreed for a first entry into force in 2020, this is another reason for ENAV committee to have a closer look to what is happening with the modernization of GMDSS.

The GMDSS modernization project could be a framework to develop e-navigation communications by primarily securing in SOLAS the fundamental principles of communications for safeguarding human life at sea by the Contracting Governments. GMDSS modernization is tracing a path for a highway to e-navigation. This is another good reason for ENAV to have a closer look to what is happening with the modernization of GMDSS.

For instance, the GMDSS modernization project offers a possible common shore-based system architecture (CSSA) for communication by sharing for instance a Coastal Radio Station for different users: Rescue Co-ordination Centre (RCC), Maritime Assistance Service (MAS), Vessel Traffic Service (VTS), Maritime Safety Information (MSI) provider, Public Correspondence (PC)... it should be kept in mind that GMDSS is dealing not only with distress communications, but also urgency, safety and routine communications.

If IMO is looking for an entry into force of amendments of SOLAS in 2020, this means adoption of amendments before the end of the year 2018. But IMO is not ready neither for GMDSS nor e-navigation in order to present an agenda for WRC-2019 at ITU. This phasing between the two international organizations has not been facilitated with the fusion of NAV and COMSAR sub-committees in one sub-committee, the NCSR, meeting once a year. Meanwhile, the point of IMO agenda in Resolution 808 (preliminary agenda for WRC-19) proposes to consider regulatory actions to support GMDSS modernization and implementation of e-navigation (report to annex 3).

# Report on gmdss modernization

## New carriage or retrofit requirements

The 11th IMO/ITU expert group (The Group) noted that there was no guarantee that no new carriage or retrofit requirements would be proposed in future. In this context, it was also noted that consequential updates of equipment based on decisions of ITU-R World Radio Conferences might be necessary.

## Shore-to-shore communication and new satellite providers

Because some French inputs on GMDSS modernization were discussed during 22nd IMO/ICAO JWG in September, the ideas supported by the JWG were discussed by the Group that underlined the following points:

* Flimsiness of PSTN that cannot support alone links between RCC and ships. It has been highlighted the necessity to have robust telecommunications for shore-to-shore communications, not only for CRS and MSI providers for terrestrial radiocommunications but also for LES for satellite radiocommunications.
* Necessity to fit some RCC with a satellite terminal corresponding to any new recognized mobile satellite system for GMDSS because there is no interoperability between satellite systems.
* Necessity to fit MSI providers with a satellite terminal corresponding to any new recognized mobile satellite system for GMDSS in order to monitor MSI broadcast as required by IMO instruments.
* Necessity to have an unique procedure for EGC whatever the different satellite systems that may be recognized for GMDSS
* If performance standards for CRS and LES are not really necessary, there are already requirements for LES in Res.A.1001(25), the Group agree to develop guidelines and IEC standards for CRS.

The Group noted the view that it would need further consideration to add MSI broadcasts to the list in the annex to Resolution A.707(17) on services wherefore no charges would be brought to the originator, as suggested by the CG.

Inmarsat is still the only recognized mobile satellite radiocommunication system for GMDSS. The report on the audit of Iridium for is compatibility to GMDSS under the present IMO instruments is expected to be posted for NCSR3

## The role of MF/HF

From the GMDSS master plan, it appears there are 95 HF DSC coast stations and 15 HF NBDP MSI coast stations. From others sources (French hydrography service – SHOM) there are still 30 HF facsimile stations and 330 HF stations dedicated to general radio communication for radiotelephony, radiotelegraphy and data. The Group notes that it would be necessary to implement the principles established in Res.A.801(19), and to wonder how IMO could foster co-operation between Member States as it is mentioned in this resolution. China confirmed that HF radiocommunications are still very well used by ships.

Germany recalled that HF would remain a secondary mean of radiocommunication in sea area A3. Alternative solution to MSI on HF NBDP should be found. NAVDAT HF has respectively been in evidence in the report of the CG. Japan underlined that VDES need to be taken into account, for instance to broadcast MSI. But if VDES has been quoted in the report of the CG, no specific action with VDES has been identify in the modernization of GMDSS.

The French amendment proposition to SOLAS IV R5 at 22nd IMO/ICAO JWG was discussed by the Group (document ICAO/IMO JWG-SAR/22-WP22). Some countries (USA, Japan) have supported the idea to precise the role of IMO would have in the coordination of HF stations distribution in SOLAS. It was convey France would precise its proposition in an input to NCSR3.

The Group has also noted the proposition of the CG to have one frequency in each HF band to be allocated for air/sea communication (as well as air/land/sea communication), but SAR experts advise is required on this idea.

## NAVDAT

The Group noted that SOLAS Chapter IV should be revised to allow ships to use NAVDAT services in addition to, or in place of, NAVTEX, in places where NAVDAT would be available.

**3.5 Emergency devices for survival craft**

The Group noted the new agenda item for the NCSR Sub-Committee for a revision of the Performance standards of EPIRBs and that it was expected that the option for the addition of an AIS-SART to an EPIRB would be included.

The Group noted that the consideration whether all lifeboats, and whether some or all inflatable liferafts, should be equipped with installed locating devices was the responsibility of the SSE Sub-Committee and the requirement might stay in SOLAS Chapter III. It was further noted that a proposed revision of SOLAS Chapter III in this regard could form part of the package of amendments of SOLAS Chapter IV. It was also noted that a locating device would replace the current requirement for a radar reflector. *(Nota: meanwhile the interest of a radar reflector is to be operative without any power supply on the contrary of an emergency locating device)*

**3.6 Standards for MOB devices to protect GMDSS integrity**

MOB is not part of GMDSS. The real question is the numerous developing used of AIS for different purpose that has diverted the primary used of AIS as ship identification device. The Group noted the view that the issue of responsibilities between IMO and ITU was broader than only this particular issue on the protection of the integrity of the GMDSS. In this context, it was noted that the current GMDSS was protected in Appendix 15 to the RR.

France has mentioned the permanent problem of a duplicate GMDSS regulation between SOLAS and RR. It should be relevant to think about a unique text in SOLAS with a reference to frequency in RR. Otherwise a real GMDSS manual covering the ship side as well as the shore side would be necessary.

**3.7 IMO instruments**

The Group discussed the priorities between all the IMO instruments (resolution, circulars…) to be revised. The fear was shared between the president of the Group to keep a long list of texts that might discourage everyone and to get a very short list that would deter at least to modernize the GMDSS. In reality all the IMO regulatory reference will need to be reviewed, which is not an easy task due to the abundance of existing texts.

**3.8 Coordination with the work on the implementation of the e-navigation SIP**

The French document (IMO/ITU EG 11/4/6) related to the coordination between e-navigation and GMDSS was supported by Norway, Denmark and Japan. Meanwhile the group concurred to the conclusion that both works are related but should be developed separately. IMO secretary could not say more for this question is pending to a political decision of IMO Member States at MSC or the Assembly.

The group also reviewed a list prepared by the GC of points that are not included in the modernization process. And there are e-navigation ideas amongst them. It will later be possible, however, to return to these points in the event of modernization in 2 stages if it is decided to do so by Member States.

To summarize the selected radio systems:

* The Maritime Cloud was once mentioned, but there is no following in this issue.
* The main reason is IMO/ITU EG and IMO/ICAO JWG identified the necessity to have robust communication systems not only ship-to-shore and shore-to-ship, but shore-to-shore either. There is no indication in the Maritime Cloud on the nature of the communications systems used hence there is no guarantee on its robustness.
* Ship-to-shore and shore-to-ship robust communications are still born for terrestrial radiocommunications on VHF and MHF, and for satellite radiocommunications only on Inmarsat.
* NAVDAT is clearly expected to take over NAVTEX and NAVDAT HF to take over MSI on NBDP HF.
* Irridium is still pending to recognition, audit report expected at NCSR3.
* AIS is not a communication system in GMDSS.
* AIS-SART is only a locating device not a means for distress in GMDSS.
* no specific action with VDES has been identify in the modernization of GMDSS

# References AND ANNEXES

The following reference documents are annexed to this input paper:

1. interim report of the correspondence group on the modernization of GMDSS reviewed by 11th IMO/ITU Eperts Group
2. draft revised text of SOLAS IV as review by 11th IMO/ITU Experts Group
3. additional information to WRC-15
4. IMO/ITU 11/4/6 (France) coordination with the work on the implementation of the e-navigation SIP

# Action requested of the Committee

The Committee is invited to take note of the above information and take action accordingly.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)