IMSO ASSEMBLY 22 RECORD OF DECISIONS

Submitted by IHB

SUMMARY

Executive Summary: This document provides details of the IMSO Assembly 22 Record of Decisions regarding GMDSS.

Action to be taken: Paragraph 2.

Related documents: IMSO Assembly 22/6 and 22/14

1. See attached document.

2. The Sub-Committee is invited to note the information provided and take action as appropriate.

AGENDA ITEM 6: GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

References: ASSEMBLY/22/6

6.1 The Assembly **NOTED** ASSEMBLY/22/6 "Global Maritime Distress and Safety System (GMDSS)"; in particular information provided by the Director General in relation to the activities of the Directorate concerning GMDSS services, and that the Director General has continued to keep the Advisory Committee regularly informed of GMDSS activities.

6.2 The Assembly **NOTED** that at its Twenty-First Session, it had noted the broad support provided by the Directorate to the GMDSS in general, and had encouraged the Director General to continue to promote all aspects of the use of maritime mobile satellite communications in the GMDSS.

6.3 In relation to the GMDSS services provided by Inmarsat, the Assembly **NOTED**:

(a) analysis of GMDSS services provided by Inmarsat, including annual reports made by the Directorate to the IMO Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), in particular IMSO's assessment that Inmarsat had continued to provide a sufficient quality of service to meet its obligations under the GMDSS, other than in relation to the issue reported in paragraph (b) below;

(b) information and analysis concerning a significant Inmarsat satellite service outage on 22 October 2011 in the Pacific Ocean Region, and its restoration; IMSO has written to the Executive Chairman of Inmarsat to formally draw attention to this failure by the company to fulfil its obligations under the terms of the Public Services Agreement and IMO resolution A.1001(25); the matter has also been discussed at the highest level within the Public Services Committee; additionally, IMSO is continuing to work with Inmarsat technical and operational staff to apply the lessons from this incident, monitor the health of the specific Inmarsat-3 F3 satellite concerned and develop procedures to minimise the potential of a re-occurrence anywhere in the network; lessons learned from this incident have been incorporated into the standard operating procedures which are tested in regular contingency exercises;

(c) Inmarsat's next (fifth) generation of Inmarsat satellites will operate in the Ka-band and will be optimised to provide broadband connectivity to maritime and other mobile users; they will not therefore be configured initially to provide maritime distress and safety services. Inmarsat currently intends to maintain these vital services on the Inmarsat-4 constellation whose lifetime is expected to extend into the 2020s. Inmarsat intends to continue to procure future L-band satellites which will be capable of continuing to support safety services. The Director General will keep the Advisory Committee informed as this situation develops;

(d) Inmarsat intends to seek future recognition and approval for the Inmarsat FleetBroadband FB500 terminal to be used in GMDSS ship installations. Inmarsat is now working to develop and implement the specific elements of service and backup that would be required by the Organization before FB500 terminals could be approved for such use. IMSO remains closely involved in discussions relating to the design and implementation of the proposed new capabilities and the timetable for their introduction;

(e) the Inmarsat **'**505' emergency calling service provides a non-GMDSS-compliant voice connection to an RCC via some FleetBroadband terminals. This valuable service passed its first anniversary having been utilised in some 100 incidents. Use of the service is monitored on a regular basis and no misuse or false calls have been noted;

(f) a presentation was made to the Advisory Committee concerning the Ancillary Terrestrial Component (ATC) development by LightSquared in the United States, using some L-band spectrum leased from Inmarsat to extend cellular telephone coverage within the continental United States; the United States Federal Communications Commission (FCC) has subsequently received evidence that this proposed service might interfere with some essential uses of the Global Positioning System (GPS) within the USA, and has denied LightSquared the permissions it would need to proceed with service offerings at this time. The proposal also had some potential to interfere with essential Inmarsat-C based GMDSS services in US coastal and internal waters. This potential situation might also have concerned other States in the future, and it was understood that the ITU, which sometimes refers to this ground based infrastructure as "complementary ground component" (CGC)" was also considering this matter.

6.4 The Assembly also **NOTED** that the Director General has kept the Advisory Committee informed of developments in relation to possible new GMDSS providers, as follows:

(a) IMO COMSAR 15 noted the widespread desire to include additional satellite system providers in the GMDSS, considered that the development of more precise guidance on how applications should be submitted to the Organization and evaluated would be necessary, and invited interested parties to submit proposals in this respect. Bearing in mind the complexities of the issues involved, COMSAR invited IMSO to contribute specifically to the work of the Correspondence Group in this regard. Meanwhile, IMSO continues to maintain a close liaison with Thuraya and its technical and operational advisers, and other potential additional satellite operators in the GMDSS, to ensure that the future evolution of the GMDSS takes full account of the advantages that may be achieved from the participation of other satellite operators in the GMDSS; and

(b) a submission was made to IMO MSC 88 by the United Arab Emirates concerning the Thuraya Satellite System in relation to GMDSS under the Criteria of Resolution A.1001(25). Should IMSO be requested to carry out any work in connection with this submission, the cost of such work should not be borne by Inmarsat nor by LRIT Data Centre Operators. The Advisory Committee has agreed that a daily fee for GMDSS related work, which is outside of the scope of its Inmarsat-related activities, should be calculated by dividing the annual agreed GMDSS budget by 260 working days. The fees for 2011 and 2012 were set at £2,500 and £2,700 respectively. Any expenses incurred would be charged at cost.

6.5 The Assembly further **NOTED** that:

(a) a significant proportion of the effort of the Directorate is expended on activities in relation to the satellite-based elements of the GMDSS. The Advisory Committee has expressed a desire that IMSO should take a more active role in the promotion and management of satellite services for maritime distress and safety in general, and the Director General has undertaken to seek opportunities to do so within the resources available. In this regard, the Directorate currently undertakes a wide range of GMDSS-related activities, generally in co-operation and co-ordination with various organs of IMO, WMO and/or IHO;

(b) IMSO has submitted a number of significant GMDSS-related documents to IMO, which are notified to IMSO Member States and posted to the IMSO Website;

6.6 The Assembly further **NOTED** that, in addition to participating in all sessions of the IMO Maritime Safety Committee, COMSAR and NAV Subcommittees, the Directorate has participated actively in a number of GMDSS-related international committees and working groups; specific activities in which IMSO is actively involved within these various forums are regularly reported to each session of the Advisory Committee. The Director General provided additional information on the current status of the following activities:

(a) **Annual Reports by IMSO on the Analysis and assessment of the GMDSS performance of Inmarsat Global Ltd**

These reports reflect the broad range of information that IMSO keeps under continuous review as the core of its GMDSS-related monitoring activity.

(b) **Spectrum issues**

Spectrum issues are an ongoing activity that is dealt with by the Joint IMO/ITU Experts Group, in which the IMSO Directorate participates to support the existing maritime mobile satellite spectrum allocations and ensure that IMO maintains a watchful eye against any attempt to dilute the protection of the distress frequencies in particular. While IMSO does not have the resources to attend the series of lengthy ITU Conferences and Preparatory Meetings, the Director General

was aware that WRC-12 adopted 22 resolutions that impact specifically on maritime radiocommunications in general and the GMDSS in particular, as well as Resolutions which affect communication capabilities in developing countries, including one relating to the use of orbital positions and associated spectrum for delivering public telecommunication services in developing countries, which the WRC requested ITU to bring to the specific attention of IMSO and ITSO.

(c) **Maritime Search and Rescue Operations**

IMSO maintains close knowledge of and liaison with the operational end of maritime Search and Rescue, through visits to RCCs, whenever possible, and regular attendance at the annual meetings of the ICAO/IMO Joint Working Group on the Harmonization of Aeronautical and Maritime SAR. This group works on all aspects of operational SAR, including maintenance of the IAMSAR Manual, development of operational methods and techniques, as well as consideration of possible future enhancements, in relation to which IMSO provided valuable input concerning practical satellite capabilities for maritime SAR.

(d) **Broadcast of maritime safety information**

IMSO staff have worked on the fundamental design of MSI communications services, and maintain a close watch on the ongoing provision of this broadcast, active participation on the International NAVTEX Panel, and close liaison with the World Meteorological Organization (WMO) and the International Hydrographic Organization (IHO). This work includes involvement in revision and/or maintenance of the International NAVTEX Manual and the International SafetyNET Manual. IMSO has been closely involved in the technical and operational work supporting the establishment of new NAV/MET Areas covering northern latitudes and continues to work with Inmarsat to ensure that the required SafetyNET receiver modifications are introduced in the most appropriate manner. At the request of IMO COMSAR, IMSO is involved in the development of a data interface definition for an Inmarsat-C SafetyNET terminal similar to the existing definition for NAVTEX, for use by manufacturers of Inmarsat-C terminals and navigation display systems.

(e) **IMO Correspondence Group on the Scoping Exercise to establish the need for a Review of the Elements and Procedures of the GMDSS**

At the invitation of IMO MSC, IMSO participates actively in the scoping exercise, including preparation of a detailed proposal to COMSAR concerning guidance on a procedure for the submission and evaluation of applications by additional satellite system providers for participation in the GMDSS, which was subsequently endorsed by COMSAR 16 as a draft MSC Circular on Guidance to prospective GMDSS satellite service providers for subsequent approval by the Committee. This guidance provides for IMSO to undertake the Technical and Operational Assessment of any applicant satellite system to be recognized as a

GMDSS provider, and produce a report as part of the evaluation process to be carried out by COMSAR prior to the eventual recognition by MSC. COMSAR 16 in March 2012 also approved a draft revised Work Plan on the "Review and Modernization of the Global Maritime Distress and Safety System", which extends from now until 2017. It is envisaged that actual implementation of the Plan would begin in 2017 and extend for a period of perhaps five years thereafter.

(e) **Electronic Navigation (eNav)**

IMSO continues to follow developments concerning the communications aspects of the electronic navigation (eNav) project being undertaken under the auspices of IMO and in IALA; IMO has concluded, in its eNav strategy, that "*GMDSS communications are essential to safe navigation and will play a key role in the implementation of the eNavigation strategy*." The Directorate will therefore continue to monitor the evolution of the communications elements of the e-navigation project and provide assistance to IMO and the IALA process as needed.

6.7 The Assembly further **NOTED** that, in addition to the major activities noted in paragraph 6.6, information was provided on the activities of the Directorate in relation to the following issues:

(a) advice and discussions regarding **counter-piracy operations** - the Directorate has been involved in leading efforts to implement effective maritime information flows to naval forces engaged in counter-piracy operations and merchant shipping in the North West Indian Ocean area of operations;

(b) the **withdrawal of telex services** – has been an issue of concern because it has not yet been possible to identify a sufficiently reliable and robust replacement for SAR communications; the Directorate is monitoring this situation carefully because it affects the reliable and immediate delivery of distress alerts to RCCs;

(c) general **distribution of distress alerts** within the Search and Rescue (SAR) system; there remains a desire to establish a workable method of delivering distress alerts directly and immediately to the responsible RCC, as opposed to the present system whereby an alert is delivered to the "first" RCC which then assumes the responsibility for either prosecuting the distress itself or passing it on to the responsible RCC when possible. This procedure is often hampered by the non-availability of some RCCs, and that factor also frustrates efforts to deliver all distress alerts to the appropriate responsible RCC. The efficient delivery of ALL distress alerts to an RCC that will act upon those alerts remains a matter of concern for the Directorate;

(d) **Satellite Detection of AIS** (Automatic Identification System for Ships) – is now being provided by some commercial satellite operators; it is generally being seen as a complement to the LRIT system rather than a replacement for it; the costs of purchasing satellite AIS data can exceed the cost of LRIT data by a considerable margin. The Directorate is continuing to monitor the development of satellite AIS services; and

(e) **Distress priority communications in the shore-to-ship direction** – there has been a number of incidents in the past in which the acting RCC has had difficulty establishing a shore-to-ship communications link to the vessel in distress, and IMSO was requested by the COMSAR Subcommittee to work with Inmarsat and some Member States to identify ways of improving the situation. Two issues affect this: the lack of priority over the public switched networks generally used by RCCs for SAR communications, and the possible "blocking" of the Land Earth Station (LES) gateway by other ongoing calls. The Directorate has worked with Inmarsat to develop operational means whereby an RCC can pre-empt ongoing calls at an LES in favour of SAR communications, and reported the outcome to IMO (COMSAR 15/5).

6.8 The Assembly **NOTED** that the Primary Purpose of IMSO is "to ensure the provision, by each Provider, of maritime mobile satellite communications services for the GMDSS according to the legal framework set up by IMO". While Inmarsat is at present the only GMDSS Provider, the process of revision and modernization of GMDSS is being undertaken within IMO, including the incorporation of modern and more efficient satellite communication technologies, and the incorporation of additional satellite service providers into the GMDSS. IMSO is deeply involved in this process which will continue during the succession period. According to the timeline and planned outputs for the GMDSS modernization project as agreed by COMSAR 16, completion of GMDSS review should be finalized at COMSAR-19 in 2015, while completion of the GMDSS Modernization Plan is scheduled to be approved at MSC 98 in 2017

6.9 The Assembly **DECIDED**:

(a) to express its appreciation to the Director General, and in particular to the Deputy Director General, for the detailed information provided, and the significant work carried out, in relation to the complex issues and future work plan of GMDSS, including potential future providers of GMDSS; and

(b) to request the Director General to continue to participate actively in relevant meetings for operational and technical purposes and to keep up to date with developments.

6.10 The Assembly **NOTED** its concern regarding the recent outage of the Inmarsat satellite in the Pacific Ocean Region and requested the Director General to keep Member States informed of developments.

6.11 The Assembly further **DECIDED** to request the Director General to prepare a submission for the next Session of the Assembly, with the advice of the Advisory Committee, identifying issues relating to the oversight of potential new GMDSS providers.