QUESTIONNAIRE ON SHORE-BASED FACILITIES FOR THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)

1. The Maritime Safety Committee, at its eighty-eighth session (24 November to 3 December 2010), approved circulation of the attached revised questionnaire on shore-based facilities in the GMDSS prepared by the Sub-Committee on Radiocommunications and Search and Rescue, at its fourteenth session.

2. The revised questionnaire contains the revision of MSC/Circ.684, taking into account changes in the provision of several services as well as the evolution of the database over the years.

3. Member Governments, including those which have submitted answers to MSC/Circ.684, are invited to provide or update, in accordance with the annexed questionnaire, the required information electronically, as far as possible, for inclusion in the GMDSS Master Plan (GMDSS.1 circular).

4. Administrations should submit information obtained, as appropriate, from national authorities responsible for shore-based facilities for the GMDSS, NAV/MET Area Coordinators and search and rescue authorities.

5. This questionnaire supersedes MSC/Circ.684.

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1. Indicate in brief the status of shore-based facilities for the GMDSS, using the following indicators:

- **O** = Operational
- **T** = Under trial
- **P** = Planned or to be decided

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>COAST STATIONS</th>
<th>SES for RCC</th>
<th>MSI BROADCAST SERVICE</th>
<th>Cospas-Sarsat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DSC Inmarsat LES</td>
<td>Inmarsat Fleet F77</td>
<td>NAVTEX</td>
<td>SafetyNET</td>
</tr>
<tr>
<td></td>
<td>A1</td>
<td>A2</td>
<td>A3 &amp; A4</td>
<td>B</td>
</tr>
</tbody>
</table>

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ANNEX 2

Sea Area A1 (Within range of shore-based VHF DSC coverage)

1 Does your Administration intend to establish Sea Area A1? If not operational now, indicate the date of operation in the following table.

2 Do they keep fulltime DSC watch on channel 70? If not, indicate watch hours in the following table.

3 Indicate details of VHF stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>VHF DSC Coast Station</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Type</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>------</td>
</tr>
</tbody>
</table>

(1) Monitored stations include remote-controlled stations.
(2) Refer to resolution A.801(19). See appendix.
(3) SD = "Distress and Safety" only, PS = Both "Public Correspondence" and "Safety and Distress".

4 Provide a map indicating:
   - Name and location of main VHF stations
   - Coverage of main and monitored Transmitter & Receivers
   - Name and location of associated RCC(s)
APPENDIX TO ANNEX 2

IMO RESOLUTION A.801(19), annex 3, paragraph 2

Criteria for establishing GMDSS sea areas

2.3 Determination of radius A

\[ A = 2.5 \left( \sqrt{H\text{ (in metres)}} + \sqrt{h\text{ (in metres)}} \right) \]

2.3.1 The following formula should be used to calculate the range A in nautical miles:
H is the height of the coast station VHF receiving antenna and h is the height of the ship's transmitting antenna which is assumed to be 4 m.

2.3.2 The following table gives the range in nautical miles (NM) for typical values of H:

<table>
<thead>
<tr>
<th>H (m)</th>
<th>50 m</th>
<th>100 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 m</td>
<td>23 NM</td>
<td>30 NM</td>
</tr>
</tbody>
</table>

2.3.3 The formula given above applies to line-of-sight cases but is not considered adequate for cases where both antennae are at a low level. The VHF range in Sea Area A1 should be verified by field strength measurements.

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ANNEX 3

Sea Area A2 (Within range of shore-based MF DSC coverage)

1. Does your Administration intend to establish Sea Area A2? If not operational now, indicate the date of operation in the following table.

2. Do they keep fulltime DSC watch on 2187.5 kHz? If not, indicate watch hours in the following table.

3. Indicate details of MF stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>Type</th>
<th>Name</th>
<th>MMSI</th>
<th>Position</th>
<th>Range (NM)</th>
<th>Status of implementation</th>
<th>Purpose (SD/PS)</th>
<th>Watch hours on 2187.5 kHz</th>
<th>RCC Associated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

(1) Monitored stations include station remote-controlled stations.
(2) Refer to resolution A.801(19). See appendix.
(3) SD = "Distress and Safety" only, PS = Both "Public Correspondence" and "Safety and Distress".

4. Provide a map indicating:
   - Name and location of main MF stations
   - Coverage of main and monitored Transmitter & Receivers
   - Name and location of associated RCC(s)
APPENDIX TO ANNEX 3

IMO RESOLUTION A.801(19), annex 3, paragraph 3

Criteria for establishing GMDSS sea areas

3.3 Determination of radius B

The radius B may be determined for each coast station by reference to Recommendation ITU-R P.368-9 and P.372-10 for the performance of a single side band (J3E) system under the following conditions:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>2182 kHz</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>3 kHz</td>
</tr>
<tr>
<td>Propagation</td>
<td>ground wave</td>
</tr>
<tr>
<td>Time of day &amp; Season</td>
<td>(Administration should determine time periods and seasons appropriate to their geographic area based on prevailing noise level)</td>
</tr>
<tr>
<td>Ship's transmitter power (PEP)</td>
<td>60 W (See footnote to regulation IV/16(c)(i) of the 1981 amendments to the 1974 SOLAS Convention)</td>
</tr>
<tr>
<td>Ship's antenna efficiency</td>
<td>25%</td>
</tr>
<tr>
<td>S/N(RF)</td>
<td>9 dB (voice)</td>
</tr>
<tr>
<td>Mean transmitter power</td>
<td>8 dB below peak power</td>
</tr>
<tr>
<td>Fading margin</td>
<td>3 dB</td>
</tr>
</tbody>
</table>

The range of sea area A2 should be verified by field strength measurements.

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ANNEX 4

Sea Areas A3 and A4 (Outside Sea Area A2)

1. Does your Administration intend to equip one or more HF DSC station? Is it operational now?
   If not operational now, indicate the date of operation in the following table.

2. Do they keep fulltime DSC watch on the bands?
   4 MHz (4207.5 kHz)?
   6 MHz (6312 kHz)?
   8 MHz (8414.5 kHz)?
   12 MHz (12577 kHz)?
   16 MHz (16804.5 kHz)?
   If not, indicate watch hours in the following table.

3. Indicate details of HF stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>Name</th>
<th>MMSI</th>
<th>Position</th>
<th>Status of implementation</th>
<th>Purpose (SD*/PS)</th>
<th>Frequency Band*</th>
<th>Watch hours</th>
<th>RCC Associated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

* SD = "Distress and Safety" only, PS = Both "Public Correspondence" and "Safety and Distress".

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ANNEX 5

Inmarsat facilities

1. Does your Administration operate an Inmarsat Land Earth Station (LES)?
   If not operational now, indicate the date of operation in the following table.

2. Indicate details of Inmarsat LES

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>Location</th>
<th>Ocean Area</th>
<th>Service provided (Status of Implementation [Data of operation])</th>
<th>RCC Associated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td>Inmarsat-B Inmarsat-C Fleet F 77</td>
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<td></td>
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</tbody>
</table>

* AOR-E = Atlantic Ocean Region – East
* AOR-W = Atlantic Ocean Region – West
* IOR = Indian Ocean Region
* POR = Pacific Ocean Region

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ANNEX 6

Rescue Coordination Centres (RCCs) using Ship Earth Stations (SESs)

1. Does your Administration intend to commission a ship earth station for RCC operation?
   - YES
   - NO

   Is it operational now?
   - YES
   - NO

   If not operational now, indicate the date of operation in the following table.

2. Indicate details of SES

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>RCC</th>
<th>SES DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Name</td>
<td>Position</td>
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</table>

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ANNEX 7

518 kHz NAVTEX Service

1. Does your Administration operate NAVTEX Service on 518 kHz? Is it operational now? If not operational now, indicate the date of operation in the following table.

2. Indicate details of NAVTEX stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>NAVTEX Coast Station</th>
<th>Position</th>
<th>Range (NM)</th>
<th>B1 Character</th>
<th>Transmission times (UTC)</th>
<th>Language</th>
<th>Status of implementation</th>
</tr>
</thead>
</table>

* Refer to resolution A.801(19). See appendix.

490 kHz NAVTEX Service

1. Does your Administration operate NAVTEX Service on 490 kHz? Is it operational now?

2. Indicate details of NAVTEX stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>NAVTEX Coast Station</th>
<th>Position</th>
<th>Range (NM)</th>
<th>B1 Character</th>
<th>Transmission times (UTC)</th>
<th>Language</th>
<th>Status of implementation</th>
</tr>
</thead>
</table>
ANNEX 7 (cont.)

4209.5 kHz NAVTEX Service

1. Does your Administration operate a 4209.5 kHz NAVTEX Service? YES  NO
   If not operational now, indicate the date of operation in the following table.

2. Indicate details of 4209.5 kHz NAVTEX stations

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Country</th>
<th>NAVTEX Coast Station</th>
<th>Position</th>
<th>Range (NM)</th>
<th>B1 Character</th>
<th>Transmission times (UTC)</th>
<th>Language</th>
<th>Status of implementation</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
APPENDIX TO ANNEX 7

IMO RESOLUTION A.801(19), annex 4, paragraph 3

Criteria for use when providing a NAVTEX service

The ground-wave coverage may be determined for each coast station by reference to Recommendations ITU-R P.368-9 and P.372-10 for the performance of a system under the following conditions:

- Frequency - 518 kHz
- Bandwidth - 500 Hz
- Propagation - ground wave
- Time of day & Season - (Administration should determine time periods in accordance with NAVTEX time transmission table (NAVTEX Manual, figure 3) and seasons appropriate to their geographic area based on prevailing noise level.)

Transmitter power & Antenna efficiency

- (The range of a NAVTEX transmitter depends on the transmitter power and local propagation conditions. The actual range achieved should be adjusted to the minimum required for adequate reception in the NAVTEX area served, taking into account the needs of ships approaching from other areas. Experience has indicated that the required range of 250 to 400 nautical miles can generally be attained by transmitter power in the range between 100 and 1,000 W during daylight with a 60% reduction at night.)
  - RF S/N in 500 Hz bandwidth - 8 dB (Bit error rate $1 \times 10^{-2}$)
  - Percentage of time - 90

Full coverage of NAVTEX service area should be verified by field strength measurements.

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ANNEX 8

International SafetyNET Service

1  Does your Administration intend to broadcast MSI through the International SafetyNET Service?  
   If not operational now, indicate the date of operation in the following table.

2  Indicate detail of International SafetyNET Service

<table>
<thead>
<tr>
<th>NAV/MET Area</th>
<th>Type of MSI</th>
<th>Country</th>
<th>LES</th>
<th>Ocean Area</th>
<th>Area Covered(^{(1)})</th>
<th>Broadcast schedule (UTC)</th>
<th>Status of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NAV</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>MET</td>
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<tr>
<td></td>
<td>SAR</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Coastal warning</td>
<td></td>
<td></td>
<td></td>
<td>(())</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[^{(1)}\] Service area covered in NAV/MET information

\[^{(2)}\] Provide a map indicating Area covered and B1 characters

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# ANNEX 9

**HF Narrow Band Direct Printing (NBDP) MSI Broadcast Service**

1. Does your Administration intend to broadcast MSI through HF NBDP?  
   ![YES NO](image)
   Is it operational now?  
   ![YES NO](image)
   If not operational now, indicate the date of operation in the following table.

2. Indicate details of HF NBDP MSI Broadcast Service

<table>
<thead>
<tr>
<th>Country</th>
<th>NBDP Coast Station</th>
<th>Position</th>
<th>Frequency Band*</th>
<th>Schedule (UTC)</th>
<th>Status of implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 MHz (4210 kHz)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 MHz (6425 kHz)</td>
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<td></td>
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<td></td>
<td>8 MHz (8416.5 kHz)</td>
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<td></td>
<td>12 MHz (12579 kHz)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>16 MHz (16806.5 kHz)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>19 MHz (19680.5 kHz)</td>
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<td></td>
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<td></td>
<td>22 MHz (22376 kHz)</td>
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<td></td>
<td>26 MHz (26100.5 kHz)</td>
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</tr>
</tbody>
</table>

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ANNEX 10

Cospas-Sarsat MCC and LUT

1. Does your Administration intend to operate Cospas-Sarsat ground facilities? 
   Yes  No
   If not operational now, indicate the date of operation in the following table.

   Is it operational now?  Yes  No

2. Indicate details of the Cospas-Sarsat facilities

<table>
<thead>
<tr>
<th>Ground Segment Operator</th>
<th>MCC Location</th>
<th>Designator</th>
<th>Status of Implementation</th>
<th>LEOLUT Location</th>
<th>Status of Implementation</th>
<th>RCC Associated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

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ANNEX 11

EPIRB Registration Data

406 MHz EPIRB

1 MID-Numbers (country codes) assigned to 406 MHz EPIRBs?

2 406 MHz coding schemes currently used by the country:
   Serial protocol:
   MMSI:
   Radio call sign:

3 Database for 406 MHz EPIRBs:
   - Address:
   - Open 24 hours a day, all days of the year?
     If not, specify the opening hours (UTC), days etc:
   - Telephone No. for database information:
   - Telefax No. for database information:
   - Telex No. for database information:
   - AFTN No. for database information:
   - E-mail address for database information:

4 How often does your Administration update the database?

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## ANNEX 12

**Maritime Mobile Service Identities (MMSI)**

1. MID-Numbers (country codes) assigned to equipment other than 406 MHz EPIRBs?

2. **National database for MMSI number:**
   - Same database as for 406 MHz EPIRBs? [YES] [NO]
   - If not, fill in the following information:
   - Address:
   - Open 24 hours a day, all days of the year? [YES] [NO]
   - If no, specify the opening hours (UTC), days etc:
   - Telephone No. for database information:
   - Telefax No. for database information:
   - Telex No. for database information:
   - AFTN No. for database information:
   - E-mail address for database information:

3. How often does your Administration update the national database?

4. How often does your Administration update the ITU database?