

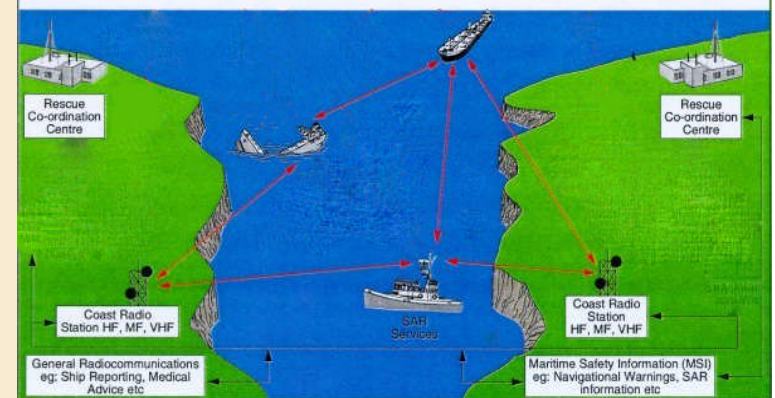
Functions of the Global System

1. Alerting

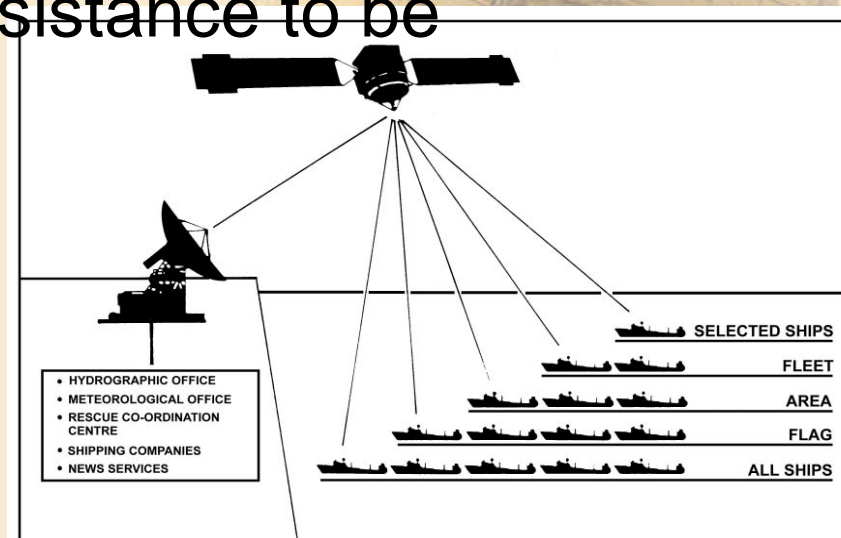
Distress alerting **is the rapid and successful reporting of a distress incident to a unit which can provide or coordinate assistance.** This would be another ship in the vicinity or a rescue coordination center (RCC). When an alert is received by an RCC, normally via a coast station, the **RCC will relay the alert to SAR units and to ships in the vicinity of the distress incident.** A distress alert should indicate the identification and position of the distress and, where practicable, its nature and other, information which could be used for rescue operations.



The communication arrangements are designed to enable distress alerting to be performed in all three directions: **Ship-to-shore**, **ship-to-ship** and **shore-to-ship**, in all sea areas. The probability of a successful alert will be high and, as the alerting time is expected to be short, response should be rapid, thereby increasing the likelihood of distances of up to about 100 miles. When there is no ship within about 100 miles of the ship in distress, the system is designed to enable assistance to be provided through arrangements made from the shore, using either **satellite** or **HF communications**, or a combination of both.



The relaying of a distress alert from RCC to ships in the vicinity of a distress incident will be made by satellite communication to ship earth stations and by terrestrial communications using appropriate frequencies. To avoid all ships in a large sea area being alerted, an "**area call**" will normally be transmitted so that only those ships in the vicinity of the distress incident are alerted. On receipt of a relayed distress alert, **ships in the area addressed should establish communication with RCC concerned** to enable the assistance to be coordinated.



2. SAR coordinating communications

In general, these are the communications necessary for the coordination of **ships and aircraft** participating in a search resulting from a distress alert and include communications between **RCCs** and any "**on-scene commander**" or "**coordinator surface search**" in the area of the distress incident.

For SAR operations, it should be possible to transmit messages in both directions as distinct from "alerting" which is generally the transmission of a specific message in one direction only, and distress and safety traffic by radiotelephony and radiotelex will normally be used for passing such messages.

The techniques which will, under the global system, be available for distress and safety traffic will be **radiotelephony or radiotelex** or both. These communications will be carried out by terrestrial or satellite means, dependent upon the equipment fitted on the ship and the area in which the incident occurs.



3. On-scene communications

On-scene communications will normally take place in the **MF and VHF bands** on frequencies designated for distress and safety traffic by radiotelephony or radiotelex. These communications will be between the **ship in distress** and **assisting units** and will relate to the provision of assistance to the ship or to the rescue of survivors. When aircraft are involved in on-scene communications, they will normally be able to use **3023, 4125 and 5680 kHz**. In addition, SAR aircraft should be provided with equipment to communicate on **2182 kHz or 156.8 MHz or both**, as well as on other maritime mobile frequencies.



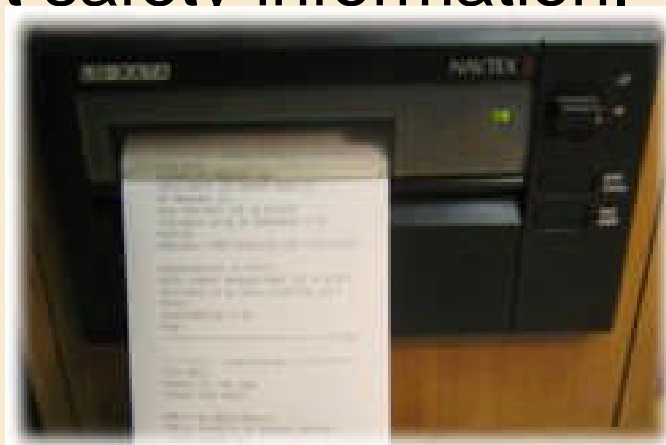
4. Locating signals

Locating signals are **transmissions intended to facilitate the finding of a ship in distress or of the location of survivors.** This will be based on the use of SAR 9GHz transponders (**SART**) at the scene in conjunction with the assisting unit's **9GHz radar.**



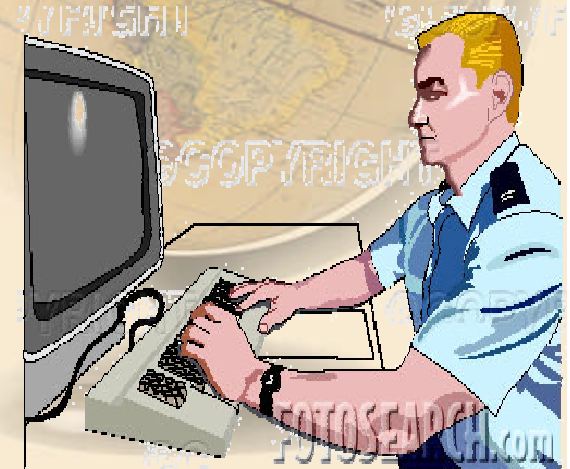
5. Dissemination of marine safety information

Provision has been made for ships to be advised of **navigational** and **meteorological warnings** and **urgent information to shipping**. At **MF**, the frequency **518kHz** has been made available for broadcasts means of narrow-band, direct-printing telegraphy using forward error correction. Similarly, the information will be broadcast via INMARSAT **SafetyNet** and also possible on **HF**. The new system is intended to provide fully **automatic reception** of all marine safety information, including navigational and meteorological warnings and other urgent safety information.



6. General radiocommunications

General radiocommunications in the global system are those communications between **ship stations** and **shore-based communication networks** which concern the management and operation of the ship and may have an impact on its safety. These communications may be conducted on any appropriate channel, including those used for public correspondence (e.g., orders for pilot and tug services, chart replacement, repairs, etc.).



7. Bridge-to-bridge communications

Bridge-to-bridge communications are **inter-ship VHF radiotelephone communication** for the purpose of assisting the **safe movement of ships**. A ship in distress should transmit the distress call and message on anyone or more of the following international maritime distress frequencies as may be available:

2182kHz (radiotelephony)

156.8MHz (VHF channel 16 radiotelephony)

It is also recommended, in remote ocean areas, to transmit the distress call and message in addition on a ship/shore H/F circuit to a CRS. This should be done in all cases where distress calls on 2182kHz or 156.8MHz (VHF channel 16 are not replied to by other stations).



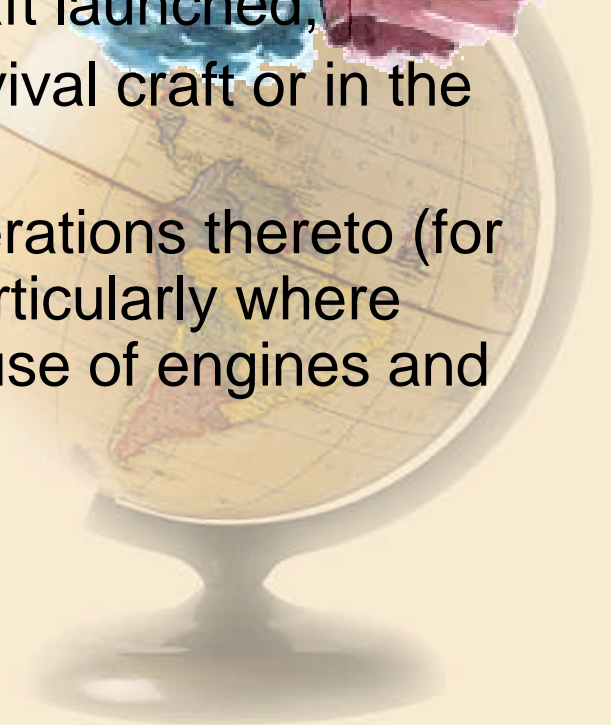
Important components of the distress message include:

1. identification of the ship;
2. position;
3. nature of the distress and kind of assistance required; and
4. any other information which might facilitate the rescue (e.g., course and speed if under way; the master's intention, including the number of persons, if any leaving the ship; type of distress).



It will also be important to furnish relevant information, such as:

1. weather in immediate vicinity, direction and force of wind, sea swell, visibility, presence of navigational dangers (e.g. icebergs)
2. time of abandoning ships;
3. number of crew remaining on board;
4. number of seriously injured;
5. number and type of survival craft launched;
6. emergency location aids in survival craft or in the sea;
7. course and speed, and any alterations thereto (for casualties under way, particularly where these retain the use or partial use of engines and steering).



When requesting **medical assistance** for an ill or injured person, additional relative information may also be necessary in certain cases. Codes from Chapter 3 of the **International Code of Signals** may be used if necessary to help overcome language barriers. If medical evacuations are being considered, the benefits of such operations to both the person needing assistance and to rescue personnel;



- patient's name, age, gender, nationality and language;
- patient's respiration, pulse rate, temperature and blood pressure;
- location of pain;
- nature of illness or injury, including apparent cause and related history;
- symptoms;
- type, time, form and amounts of all medications given;
- time of last food consumption;
- ability of patient to eat, drink, walk or be moved;
- whether the vessel has a medical chest, and whether a physician or other medically trained person is aboard;
- whether a suitable clear area is available for helicopter hoist operations or landing;
- name, address and phone number of vessel's agent;
- last port of call, next port of call, and ETA of next port of call; and
- additional pertinent remarks.



It will normally be impracticable to include all information in the initial distress message. The timing of subsequent transmissions will be governed by circumstances. In general, if time allows, a **series of short messages** will be preferable to none or two long ones.

Distress messages should always **be cancelled** as soon as saving of life is no longer required or search is terminated.

It is important that all means for indicating the position of ships in distress or survival craft should be properly used. Radio transmissions should be made as soon as possible but other means, e.g. **rockets and hand flares**, should be conserved until it is known that they may attract the attention of aircraft or ships in the vicinity. The attention of masters is directed to the great advantage of prior training, so that as many of the ship's crew as possible are familiar with the proper use of all the appliances provided for their safety.

