

General Guidelines for Passage Planning

1.) Objectives

- *The development of a plan for voyage or passage, as well as the close and continuous monitoring of the vessel's progress and position during the execution of such a plan, are of essential importance for safety of life at sea, safety and efficiency of navigation and protection of the marine environment.*
- *The need for voyage and passage planning applies to all vessels. There are several factors that may impede the safe navigation of all vessels and additional factors that may impede the navigation of large vessels or vessels carrying hazardous cargoes. These factors will need to be taken into account in the preparation of the plan and in the subsequent monitoring of the execution of the plan.*
- *Voyage and passage planning includes appraisal, i.e. gathering all information relevant to the contemplated voyage or passage; detailed planning of the whole voyage or passage from berth to berth, including those areas necessitating the presence of a pilot; execution of the plan; and the monitoring of the progress of the vessel in the implementation of the plan. These components of voyage/passage planning are analysed below.*

2.) Appraisal

2.1) *All information relevant to the contemplated voyage or passage should be considered. The following items should be taken into account in voyage and passage planning:*

- *the condition and state of the vessel, its stability, and its equipment; any operational limitations; its permissible draught at sea in fairways and in ports; its maneuvering data, including any restrictions;*
- *any special characteristics of the cargo (especially if hazardous), and its distribution, stowage and securing on board the vessel;*
- *the provision of a competent and well-rested crew to undertake the voyage or passage;*
- *requirements for up-to-date certificates and documents concerning the vessel, its equipment, crew, passengers or cargo;*
- *appropriate scale, accurate and up-to-date charts to be used for the intended voyage or passage, as well as any relevant permanent or temporary notices to mariners and existing radio navigational warnings;*
- *accurate and up-to-date sailing directions, lists of lights and lists of radio aids to navigation; and*
- *any relevant up-to-date additional information, including:*
 1. *mariners' routing guides and passage planning charts, published by competent authorities;*
 2. *current and tidal atlases and tide tables;*
 3. *climatological, hydrographical, and oceanographic data as well as other appropriate meteorological information;*

4. *availability of services for weather routing (such as that contained in Volume D of the World Meteorological Organization's Publication No. 9);*
5. *existing ships' routing and reporting systems, vessel traffic services, and marine environmental protection measures;*
6. *volume of traffic likely to be encountered throughout the voyage or passage;*
7. *if a pilot is to be used, information relating to pilotage and embarkation and disembarkation including the exchange of information between master and pilot;*
8. *available port information, including information pertaining to the availability of shore-based emergency response arrangements and equipment; and*
9. *any additional items pertinent to the type of the vessel or its cargo, the particular areas the vessel will traverse, and the type of voyage or passage to be undertaken.*

2.2) *On the basis of the above information, an overall appraisal of the intended voyage or passage should be made. This appraisal should provide a clear indication of all areas of danger; those areas where it will be possible to navigate safely, including any existing routing or reporting systems and vessel traffic services; and any areas where marine environmental protection considerations apply.*

3.) Planning

- *On the basis of the fullest possible appraisal, a detailed voyage or passage plan should be prepared which should cover the entire voyage or passage from berth to berth, including those areas where the services of a pilot will be used.*
- *The detailed voyage or passage plan should include the following factors:*
- *the plotting of the intended route or track of the voyage or passage on appropriate scale charts: the true direction of the planned route or track should be indicated, as well as all areas of danger, existing ships' routing and reporting systems, vessel traffic services, and any areas where marine environmental protection considerations apply;*
- *the main elements to ensure safety of life at sea, safety and efficiency of navigation, and protection of the marine environment during the intended voyage or passage; such elements should include, but not be limited to:*
- *safe speed, having regard to the proximity of navigational hazards along the intended route or track, the maneuvering characteristics of the vessel and its draught in relation to the available water depth;*
- *necessary speed alterations en route, e.g., where there may be limitations because of night passage, tidal restrictions, or allowance for the increase of draught due to squat and heel effect when turning;*
- *minimum clearance required under the keel in critical areas with restricted water depth;*
- *positions where a change in machinery status is required;*
- *course alteration points, taking into account the vessel's turning circle at the planned speed and any expected effect of tidal streams and currents;*
- *the method and frequency of position fixing, including primary and secondary options, and the indication of areas where accuracy of position fixing is critical and where maximum reliability must be obtained;*
- *use of ships' routing and reporting systems and vessel traffic services;*
- *considerations relating to the protection of the marine environment; and*

- *contingency plans for alternative action to place the vessel in deep water or proceed to a port of refuge or safe anchorage in the event of any emergency necessitating abandonment of the plan, taking into account existing shore-based emergency response arrangements and equipment and the nature of the cargo and of the emergency itself.*
- *The details of the voyage or passage plan should be clearly marked and recorded, as appropriate, on charts and in a voyage plan notebook or computer disk.*
- *Each voyage or passage plan as well as the details of the plan, should be approved by the ships' master prior to the commencement of the voyage or passage.*

4.) Execution

- *Having finalized the voyage or passage plan, as soon as time of departure and estimated time of arrival can be determined with reasonable accuracy, the voyage or passage should be executed in accordance with the plan or any changes made thereto.*
- *Factors which should be taken into account when executing the plan, or deciding on any departure therefrom include:*
 - *the reliability and condition of the vessel's navigational equipment;*
 - *estimated times of arrival at critical points for tide heights and flow;*
 - *meteorological conditions, (particularly in areas known to be affected by frequent periods of low visibility) as well as weather routing information;*
 - *daytime versus night-time passing of danger points, and any effect this may have on position fixing accuracy; and*
 - *Traffic conditions, especially at navigational focal points.*
- *It is important for the master to consider whether any particular circumstance, such as the forecast of restricted visibility in an area where position fixing by visual means at a critical point is an essential feature of the voyage or passage plan, introduces an unacceptable hazard to the safe conduct of the passage; and thus whether that section of the passage should be attempted under the conditions prevailing or likely to prevail. The master should also consider at which specific points of the voyage or passage there may be a need to utilize additional deck or engine room personnel.*

5.) Monitoring

- *The plan should be available at all times on the bridge to allow officers of the navigational watch immediate access and reference to the details of the plan.*
- *The progress of the vessel in accordance with the voyage and passage plan should be closely and continuously monitored. Any changes made to the plan should be made consistent with these Guidelines and clearly marked and recorded.*