



PREVENTION AT SEA

CIRCULAR 10/2018

REAL - TIME EVALUATION  
OF POTENTIALLY EVOLVING  
RISKS

Don't Cure,  
**PREVENT**

## Real – Time evaluation of potentially evolving risks

**Case#1:** During a PaSea Navigational audit, the cargo vessel was about to pass through the River Mersey, Liverpool, where tidal differences are observed, making the passage through certain point (see arrow in below map) dangerous due to potential grounding. A common practice is for the under pilotage vessel to pass this specific section of the river at specific time intervals and always during 'high-water' period.

The PaSea Auditor requested to review the Passage Plan and observed that the responsible Officer had prepared it well, pre – calculating the tide and the correct time for the vessel to commence passing through this area.

At the time that the vessel was actually navigating through the River Mersey, the PaSea Auditor suggested to the Officer in charge to continuously calculate the 'high-water' level, taking into account the tidal streams, squat and echo sounder's indications for each following way point – the results of these calculations where almost the same with local Pilot's tidal application.



As a result, it was ensured **real – time** that the vessel would not face any difficulties or further delays during her entrance at the Port facilities.

### Why this was helpful?

From the above case it is evidenced that it is crucial to adopt a risk methodology which takes into consideration the complexity of daily shipping tasks and the potential risks evolving at the same time. The role of the 'human element' should not be underestimated since onboard operations are conducted by humans in a dynamic environment, who are expected to comply with regulations and maintain the vessel's seaworthiness at all times.

Prior to carrying out operational tasks, crew members are required to be fully trained and conversant with the elements involved in the decision making process. They should be in a position to recognize the risks which are present in order to carry out an effective *dynamic risk assessment*.

## Why Dynamic Risk Assessment?

During a dynamic phase, the decision making process involves analysis and review of all risks vs benefits presented by an incident, selecting an appropriate response and making a judgement on whether the risks are proportional to the benefits.

Dynamic Risk Assessment is defined as the continuous process of identifying hazards, assessing risk, taking action to eliminate or reduce risk, monitoring and reviewing, in the rapidly changing circumstances of an operational incident.

## Why the need to apply this in Shipping?

The model of dynamic real – life risk assessment is considered vital for the shipping industry as it can assess in real-time the surrounding environment and the actual parameters that can affect the outcome of the an operation/task.

Each task needs to be considered as a new challenge onboard and specific procedures for evaluation of potential hazards need to be followed in accordance with the complexity of the task and evolving conditions, always assessing the *human element*.

# An effective Marine Risk Assessment Methodology – Focusing on the ‘human element’

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Potential risks can be effectively identified and placed under control or mitigated by utilizing the right tools.

Over the last few years, Prevention at Sea has been working on project H.EL.M.E.T. which is the acronym for ‘Human Element Maritime Enhancement Tool’.



H.EL.M.E.T. Marine Risk Assessment is part of the H.EL.M.E.T. project powered by Prevention at Sea, an automated ecosystem designed for big data gathering from various sources and data analysis with the aim to evaluate and measure the impact of the human element on ship condition, operation and management as well as continuously monitor and improve ship status and the human element performance.

H.EL.M.E.T. MRA has been designed to introduce the traditional safety and vetting inspection from a different perspective, based on a unique concept and approach by focusing on the human element, awareness and ‘compliance’.

Its aim is to enhance common sense, ensure efficient critical thinking of people involved in ship operation, improve technical skills, maintain a safety culture and promote proactive thinking as well as smooth ‘transfer of shipping knowledge’ from old school shipping to new generation.

It has been designed to help the shipping industry in the collection and analysis of data based on seafarers’ or ship professionals’ behaviour, critical thinking, judgement and evaluation of risk perception with the aim to map their relation vis-à-vis the ship condition, operation and management as well shape the corresponding profiles and trends.

Its target is to identify ‘high risk’ areas attributed to the aforementioned and prevent incidents that affect the smooth operation and may result in financial losses/ consequences (ship rejection, detentions, off-hires, delays at ports, non-conformances, heavy fines, court battles etc.) or safety impact (accidents etc.).

As the H.EL.M.E.T. MRA is in line with the BIMCO charter party Circular No. 10 for vetting inspections, the H.EL.M.E.T. MRA report can be officially presented to charterers or other third parties asking for ship’s risk evaluation or used for internal purposes targeting to improvement and quality assurance.

**For more information on how the H.EL.M.E.T. project can be implemented to assist you and your Company, please contact us!**



# PREVENTION AT SEA

DON'T CURE, PREVENT! FOR MORE INFORMATION,  
PLEASE DO NOT HESITATE TO CONTACT US.



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