



Advisory Note 03/2017  
Supersedes 10/2009

## BRIDGE RESOURCE MANAGEMENT (BRM) AND THE REDUCTION OF SINGLE PERSON ERRORS

### Purpose

This advisory note reminds coastal pilots of the importance of well executed Bridge Resource Management (BRM) techniques to enhance safety and reduce the risk of single person errors when conducting coastal pilotage operations.

### BRM and Passage Planning

A clear understanding of the agreed passage plan and the establishment of a 'shared mental model' by the entire bridge team forms the basis of a safe voyage under coastal pilotage conditions.

It is essential that the vessel being piloted closely follows the passage plan as agreed with the pilot. Coastal pilots should ensure that every member of the bridge team understands the part they play in ensuring the safe and effective execution of the agreed passage plan.

The following considerations should form part of early discussions with the bridge team and the implementation of effective BRM throughout each voyage:

- Navigational and operational tasks responsibilities should be clearly defined and delegated.
- Dangers that may be encountered at any stage of each voyage should be identified as early as possible.
- Appropriate precautions and contingency arrangements necessary to manage identified risks should be implemented.
- Navigational, operational and general safety priorities should be set and constantly reviewed in the context of the prevailing circumstances and conditions.
- The vessel's position, speed and heading with respect to other vessels and all navigation hazards, should be continuously monitored.
- The vessel's actual position should be continuously monitored against the agreed passage plan.
- Deviation from the agreed passage plan or standard operating procedures should be noted and addressed immediately.
- All electronic aids, systems and navigational equipment required onboard should function properly and only be used by appropriately trained personnel.

## BRM Principles in the Standards of Training, Certification and Watchkeeping (STCW) Code

Coastal pilots should endeavour to use BRM techniques consistent with the principles detailed in 'Guidance on Watchkeeping at Sea' (per section B-VIII/2 of Chapter VIII of the STCW Code). Some of the key principles are listed below:

- A sufficient number of qualified individuals should be on watch to ensure all duties can be performed effectively.
- Duties should be clearly and unambiguously assigned to specific individuals, who should confirm that they understand their responsibilities.
- Tasks should be performed according to a clear order of priority.
- No member of the navigational watch should be assigned more duties or more difficult tasks than can be performed effectively.
- Instruments and equipment considered necessary for effective performance of duties should be readily available to appropriate members of the navigational watch.
- Communications among members of the navigational watch should be clear, immediate, reliable and relevant to the business at hand.
- All essential information should be collected, processed and interpreted and made available to those who require it for the performance of their duties.
- Non-essential activity and distractions should be avoided, suppressed or removed.
- Members of the navigational watch should at all times be prepared to respond efficiently and effectively to changes in circumstances.

As a general principle, coastal pilots should be mindful of the need to continuously reassess how bridge personnel resources are allocated and used throughout each voyage.

## Human Performance Limitations

Pilots should be mindful of human performance limitations and the risks associated with potential complacency of crew members during extended coastal pilotage voyages.

These risks are particularly relevant to bridge team members who regularly undertake the same route, where over-familiarity may be an issue. Potential impacts may include (but not be limited to):

- accelerated fatigue levels
- reduced vigilance when performing lookout duties
- decreased performance of routine monitoring tasks
- decreased comprehension and/or responsiveness to pilot requests.

Pilots should ensure that bridge team members remain alert and actively monitor the progress of the vessel at all times in coastal pilotage areas.

## Crew Responsibilities and Single Person Error Risk Reduction

Although section 326(3) of the *Navigation Act 2012* provides that masters are not relieved of responsibility for the conduct and safe navigation of a vessel when the vessel is under pilotage, it is essential that coastal pilots work closely with masters and bridge teams to ensure that errors are detected (and corrected) as early as possible.

To ensure appropriate safety outcomes, coastal pilots should endeavour to establish a bridge environment which encourages open communication and input from bridge team members.

For example, if a deviation from the agreed plan, or a navigational error is identified by a member of the bridge team at any stage (such as putting the helm the wrong way), the team member should not hesitate to challenge the pilot in a timely manner and confirm if the pilot is aware of the deviation or error.

Appropriate ‘challenge and response’ techniques are considered a very important aspect of effective BRM and should be encouraged by coastal pilots accordingly.

### Use of Standard Marine Communication Phrases (SMCP)

To avoid ambiguity and the potential for miscommunication, coastal pilots should always ensure all verbal communication with bridge personnel is in accordance with the IMO ‘Standard Marine Communication Phrases’ (SMCP) per Table A-II/1 of the STCW code.

The use of closed-loop communication techniques should also be used to wherever possible to eliminate any doubt or misunderstanding.

### Summary

AMSA considers the use of BRM techniques to be one of the most effective ways to reduce single person errors and the risks associated with collisions and groundings in coastal pilotage areas.

Coastal pilots are strongly encouraged to give due consideration to the information provided herein and apply appropriate BRM techniques throughout all voyages.

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Please forward any queries about this PAN to [coastal.pilotage@amsa.gov.au](mailto:coastal.pilotage@amsa.gov.au).

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