



**Surface Operations Risk Calculation Worksheet**  
**Calculating Risk Using the GAR Model**  
**(GREEN-AMBER-RED)**

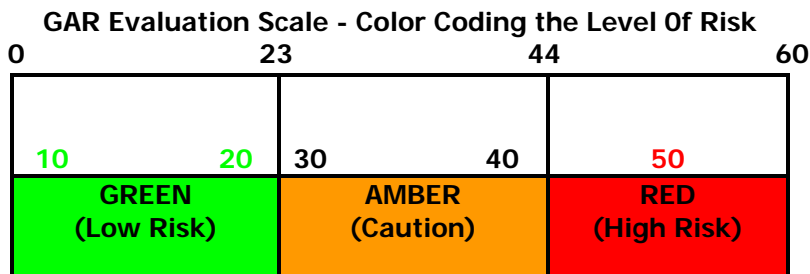
This Worksheet should be used for all surface operations unless other GAR forms have been mandated by local OIAs.

**GAR IS BASED ON A TEAM DISCUSSION TO UNDERSTAND AND EVALUATE THE RISKS ATTENDANT TO A MISSION AND HOW THEY WILL BE MANAGED.  
 RISK MANAGEMENT IS WHAT IS IMPORTANT; NOT THE ABILITY TO ASSIGN NUMERICAL VALUES OR COLORS TO RISK ELEMENTS.**

Assign a risk code of 0 (For No Risk) through 10 (For Maximum Risk) to each of the six elements below. The discussion should start with the junior (least experienced) members first on each category.

Supervision -qualifications / experience / communications	
Planning – details / clarity / vessel selection and condition	
Team Selection – qualifications / experience	
Team Fitness – physical / mental state	
Environment - seas / visibility / wind / current / temperatures	
Event/Evolution Complexity –details / tasks	

Total Risk Score	
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If the total falls in the green zone, risk is at a minimum. If the total falls in the amber zone, risk is moderate and you should consider adopting procedures to minimize risk.

**IF THE TOTAL FALLS IN THE RED ZONE, YOU NEED TO IMPLEMENT MEASURES TO REDUCE THE RISK PRIOR TO STARTING THE EVENT/EVOLUTION.**

**THE GAR MODEL SHOULD BE USED AS PART OF PLANNING OPERATIONS, AND SHOULD BE CONTINUALLY REASSESSED AS WE REACH MILESTONES WITHIN OUR PLANS, OR AS ELEMENTS CHANGE.**

## Afloat Risk Assessment and Management Instructions

It is vital to the safety of the crew and to the success of the mission that the coxswain and crew understand and evaluate the full impact of risk versus gain for each tasking. This must be a continuous, systematic process of identifying and detecting hazards, assessing risk, and implementing and monitoring risk controls.

1. Using the worksheet on the opposite side, review each of the Risk Factors and assign a numerical score as indicated. Score each element according to currently available information. Score items according to the examples given and your instincts. Absence of data automatically sets the score to maximum point value. To identify hazards, consider:

**P**lanning

**E**vent Complexity

**A**sset Selection (including Personnel and Equipment)

**C**ommunications (and Supervision)

**E**nvironmental Conditions

2. Consider the effects of environment on the ability to maintain communications throughout mission, both internal w/crew and external w/unit. Consider the condition of the vessel and associated equipment as factors in the mission environment.
3. If Risk Assessment is determined to be excessive, review the **Control Options** and determine if the risks can be reduced or controlled.

Below are **Control Options** to assist in risk control or reduction.  
Review the options and reassess the risks as appropriate.

**S**pread-out – Disperse the risk by increasing the time between events or using additional assets.

**T**ransfer – If practical, locate a better-suited asset to conduct the mission (i.e. different type of asset or crew).

**A**void – Circumvent hazard: Wait for risk to subside (i.e. wait until daylight or weather passes).

**A**cept – In some cases the benefit might justify the assumption of risk. In these cases a decision to accept risk may be made with the stipulation that risk is reevaluated as the mission progress.  
(No adjustment to Risk Assessment)

**R**educe – Reduce or limit risk exposure, use of PPE, additional training or rest, stress reduction.

4. Although one could selectively evaluate Risk Factors with a mind toward achieving an acceptable Risk Factor score, doing that would subvert the intent of this tool. This is intended to help everyone on the crew shift their thinking from a land based mindset, to the hazards of the maritime environment. All members of the crew should participate in the Risk Assessment scoring. This Risk Assessment process should continue throughout the mission as conditions evolve.