

GAR Risk Calculation Worksheet

{Green – Amber – Red}

THE GAR IS BASED ON A TEAM DISCUSSION TO UNDERSTAND THE MISSION AND EVALUATE THE RISKS INVOLVED AND HOW THEY WILL BE MANAGED.

ACCURATELY ASSESSING AND MANAGING THE RISKS IS WHAT IS IMPORTANT; NOT THE ABILITY TO ASSIGN NUMBERS AND COLORS, THEY ARE TOOLS TO HELP YOU FACTOR AND QUANTIFY THE RISKS!

Assign a risk code 1 (minimal risk) through 10 (maximum risk) to each of the six elements below.

The discussion should start with the least experienced member speaking about the perceived risks for each category and should include the opportunity for team members to ask questions.

SUPERVISION: <i>off-site management / field leader(s) / qualifications / experience / communication tools</i>	
PLANNING: <i>details / clarity / emergency action plan / first aid / transportation / shelter / food and water</i>	
TEAM SELECTION: <i>training / qualifications / experience / aptitude / abilities / functionality / liabilities</i>	
TEAM FITNESS: <i>physical fitness / mental and emotional state / health concerns / rest & fatigue cycles</i>	
ENVIRONMENT: <i>Weather- temperature, wind, visibility, precipitation / terrain / water / remoteness / heights</i>	
EVENT & EVOLUTION COMPLEXITY: <i>details / step-procedures / task load / number of people-agencies</i>	
TOTAL RISK SCORE: Combine the risk score for each element and apply score to GAR evaluation scale.	

If there is a risk score of 8 or higher in any category, the mission may need to be canceled, rescheduled or delayed until proper resources, personnel and mitigation factors can be employed, consider not mobilizing assets and personnel, or sheltering in place.

GAR Evaluation Scale – Color Coding the Level of Risk

0	15	23	24	30	43	44	50	60
GREEN			AMBER			RED		
(Low Risk)			(Caution)			HIGH RISK		

If the total falls in the **GREEN** zone risk is minimum, avoid becoming complacent.

If the total falls in the **AMBER** zone risk is moderate, adopt procedures and precautions to minimize the risk.

If the total falls in the **RED** zone **avoid activating the mission** until procedures, personnel and resources can be implemented or conditions change that will reduce the risk.

THE GAR MODEL SHOULD BE USED DURING PLANNING, TO ACCOMPANY JOB HAZARD ANALYSES, TAILGATE MEETINGS, CONTINUALLY DURING OPERATIONS, WHEN CONDITIONS CHANGE, AND DURING DE-BRIEFINGS OR MISSION/MISHAP ANALYSIS.

FIELD NOTES

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If the Risk Assessment determines high or unacceptable levels of risk, the control options below may help determine if the risks can be reduced to an acceptable level or controlled for a period of the mission.

CONTROL OPTIONS

- **Spread-out:** Disperse the risk by increasing the amount of time between events, or by utilizing additional people, resources or assets.
- **Transfer:** If practical locate a better equipped team, asset or location to accommodate the mission.
- **Avoid:** Circumvent the hazard- wait for the risk to subside. (weather change, daylight, increased visibility)
- **Accept:** In some situations the benefit may be to accept the risk. In this situation thresholds need to be reevaluated and the level of risk monitoring and safety observer oversight must also increase.
- **Reduce:** Implement risk reduction. (PPE, additional training, rest and fatigue and stress reduction, remove time constraints or budgetary restrictions)



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.

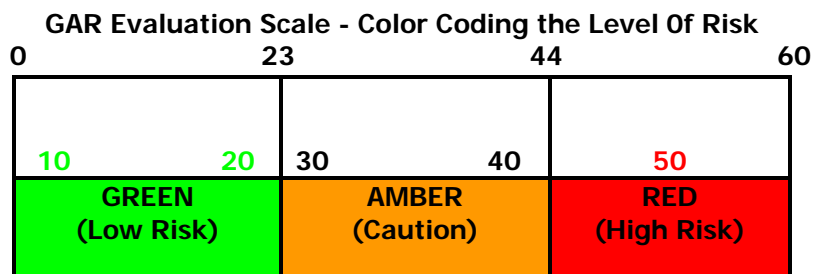
GAR IS BASED ON A TEAM DISCUSSION TO UNDERSTAND AND EVALUATE THE RISKS ATTENDANT TO A MISSION AND HOW THEY WILL BE MANAGED.

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:

Planning

Event Complexity

Asset Selection (including Personnel and Equipment)

Communications (and Supervision)

Environmental 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.

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

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

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

Accept – 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)

Reduce – 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.

USCG Afloat Risk Assessment

Mission:

Date:

Step 1: Identify, Assess, & Mitigate Risk Elements

Instructions: To determine the level of risk for each element below, estimate the risk level based on the Low/Medium/High scale. If your perceived rating is Medium or High, explore mitigations. Draw a line through the risk zone that corresponds to the mitigated risk level and document the perceived risk(s) and mitigation(s) in the space provided.

Rate Risk Zone

Planning - Enough time and information to conduct thorough pre-mission planning. Consider: B-0 response, completeness of mission information and of on-scene details.

NOTES/MITIGATIONS:

Complete	Partial	None
L	M	H

Event - Refers to mission complexity. Consider: non-standard mission profile, coordinating multi-agency/nationality, language barriers, not performed often, etc.

NOTES/MITIGATIONS:

Low	Moderate	Extreme
L	M	H

Asset - Crew - Proper number and skill set for the mission. Consider: time at unit, familiarity w/OP area, fatigue, u/w time, crew selection, adequate supervision, etc.

NOTES/MITIGATIONS:

Excellent	Marginal	Poor
L	M	H

Asset - Cutter/Boat Resources - Proper number and operational characteristics for mission. Consider: operational thresholds/limitations, status of equipment, etc.

NOTES/MITIGATIONS:

Ideal	Restrictions	Limitations
L	M	H

Communications/Supervision - Ability to maintain comms throughout mission. Consider: availability/quality of internal w/command and external w/customer.

NOTES/MITIGATIONS:

Excellent	Partial	None
L	M	H

Environment - External conditions surrounding mission. Consider: weather, night/day, sea state, currents, water temp, air temp, visibility, etc.

NOTES/MITIGATIONS:

Ideal	Marginal	Extreme
L	M	H

***Other (Unit Specific Element):**

L	M	H
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***Other (Unit Specific Element):**

L	M	H
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Step 2: Determine Overall Risk Level

Consider: 1) the rating for each element above, 2) the importance of the element for mission execution, and 3) how elements may interact. Rate the perceived **Overall Risk Level** when considering this information. Circle the risk zone (**Low, Medium, or High**) that corresponds to your perceived overall risk level:

Low	Medium	High
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***PEACE elements are required per COMDTINST 3500.3A. Additional unit specific elements are permitted.**

USCG Afloat Risk Assessment

Step 3: Determine Risk vs. Gain: Do gains warrant the risk?

Step 3a. Enter the **Overall Risk Level** (Step 2 on prior page) in the **RISK** box below (Low, Medium, or High).

Step 3b. Review the definitions for Gain below and enter the level in the **GAIN** box below. (Low, Medium, or High).

Level of Gain

- **Low** – Situation with unclear benefits or a low probability for providing concrete results.
Examples: passenger transport, non-critical logistics missions, and public affairs demonstrations.
- **Medium** – Situation that provides immediate and real benefits.
Examples: saving property, protecting the environment, deterring illegal operations.
- **High** – Situation that provides immediate and real benefits that if ignored could result in loss of life.
Examples: Urgent SAR and MEDEVACs.

RISK
(Low, Med, High)

Vs.

GAIN
(Low, Med, High)

Step 3c. Use the **Risk vs. Gain** values from above and follow the column and row until they cross. The intersecting point is the recommended action.

Example, if Risk is 'low' and Gain is 'medium', the recommendation is: "Accept the Mission. Continue to monitor Risk Factors, if conditions or mission changes".

Risk vs. Gain	High Gain	Medium Gain	Low Gain
Low Risk	Accept the Mission. Monitor Risk Factors and re-evaluate if conditions or mission/activities change.	Accept the Mission. Monitor Risk Factors and re-evaluate if conditions or mission/activities change.	Accept the Mission. Monitor Risk Factors and re-evaluate if conditions or mission/activities change.
Medium Risk	Accept the Mission. Monitor Risk Factors and employ Controls when available. Re-evaluate if conditions or mission change.	Accept the Mission. Monitor Risk Factors and employ Controls when available. Re-evaluate if conditions or mission change.	Accept the Mission Only with Command Endorsement Communicate Risk vs. Gain to Chain of Command. Implement Controls and continuously evaluate conditions and mission for change.
High Risk	Accept the Mission Only with Command Endorsement. Communicate Risk vs. Gain to Chain of Command. Implement Controls and monitor Risk Factors. Continuously evaluate conditions and mission change.	Accept the Mission Only with Command Endorsement. Communicate Risk vs. Gain to Chain of Command. Implement Controls and monitor Risk Factors. Continuously evaluate conditions and mission change.	DO NOT Accept the Mission. Communicate to Chain of Command. Wait until Risk Factors change or Controls are available to warrant Risk exposure.

NOTES: