

Severity, Exposure & Probability (SEP) Risk Assessment Model

The SEP model is a 'quick and dirty' Risk Assessment process that can be easily used in the field

$$\text{Risk (R)} = \text{Severity} \times \text{Probability} \times \text{Exposure} \quad \text{or} \quad R = S \times P \times E$$

Identify specific hazards and assign them a value for each element below.
The higher the number, the greater the Severity, Probability or Exposure.

Severity: Scored 1 to 5. Describes the potential loss or consequence or a mishap. Protective devices or procedures, engineering controls, and PPE are used to mitigate Severity.

Should something go wrong, the results are likely to be found in the following areas:

Injury, occupational illness or death, Property damage or loss, Mission degradation,
Reduced morale, Adverse publicity, Administrative and/or disciplinary actions

1=none or slight 2=Minimal 3=Significant 4=Major 5=Catastrophic

Probability: Scored 1 to 5. The likelihood that given the Exposure, the projected consequences will occur. Training, situational awareness, morale and attitude change are used to mitigate Probability.

1=Impossible or remote under normal conditions 2=Unlikely under normal conditions
3=50/50 chance 4=Greater than 50% chance 5=Very likely

Exposure: Scored 1 to 4. The amount of time, number of cycles, number of people and resources (equipment) involved.

1=None or below average 2=Average 3=Above average 4=Great

Compute the value of Risk ($R = S \times E \times P$) to evaluate the effectiveness of mission and risk of execution. *Values in the Substantial to Very High range need to be controlled.*

<u>Values</u>	<u>Risk Level</u>	<u>Action</u>
80-100	Very High	Discontinue/STOP
60-79	High	Immediate Correction
40-59	Substantial	Correction Required
20-39	Possible	Attention Needed
1-19	Slight	Possibly Acceptable

Compute the Risk Value for each hazard identified. Focus attention from highest values down.