Measurement Methods

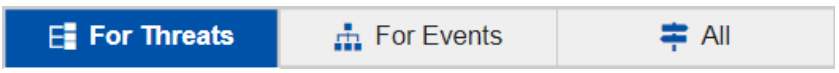
Likelihood: Define Measurement Methods Overview

You can manage the Likelihood's Measurement Methods on the **LIKELIHOOD OF EVENTS > MEASURE > Measurement Methods** page:

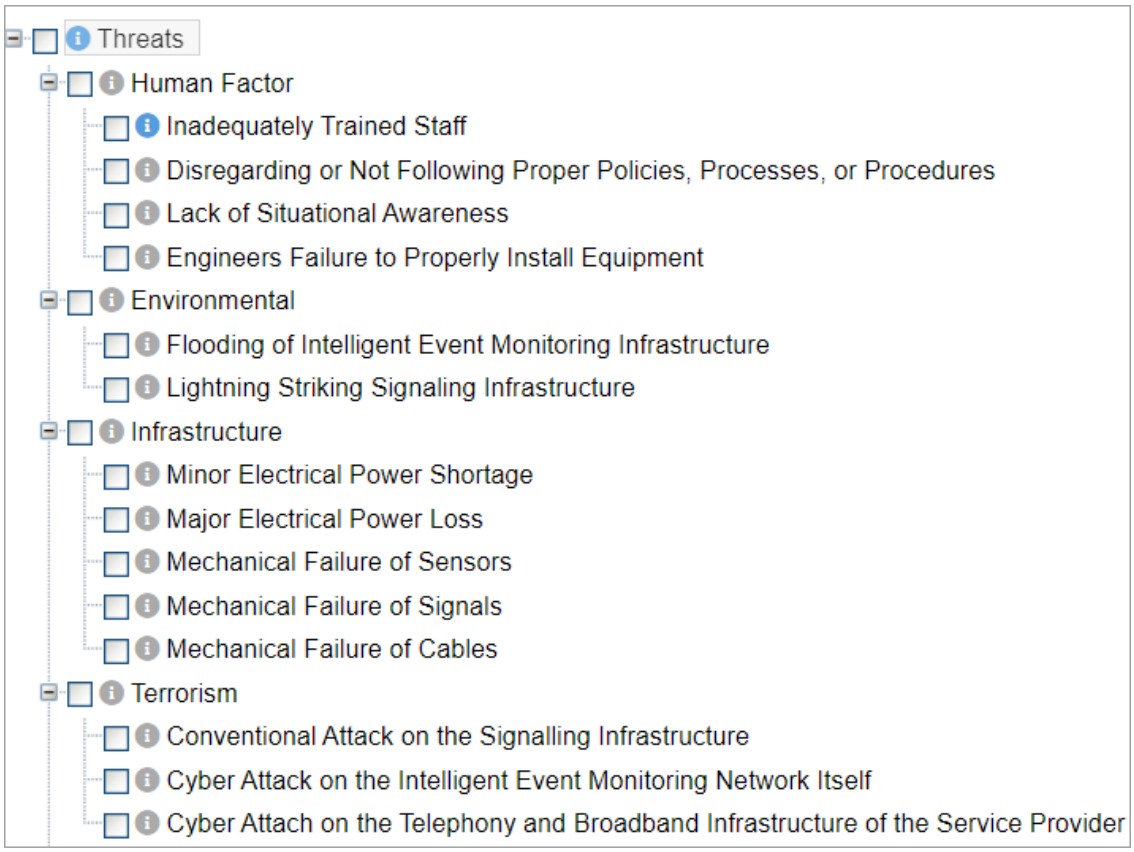
The Measurement Methods for Likelihoods page is where we designate how likelihoods are to be derived or assigned:

1. **For threats** given the **parent threat**
2. **For events** given the **covering threats**
3. **For events** with no **threats**

You can assign the measurement options For Threats and For Events on separate pages, or the same page by selecting from the three tabs:



For example, in the model with threats hierarchy as shown below:

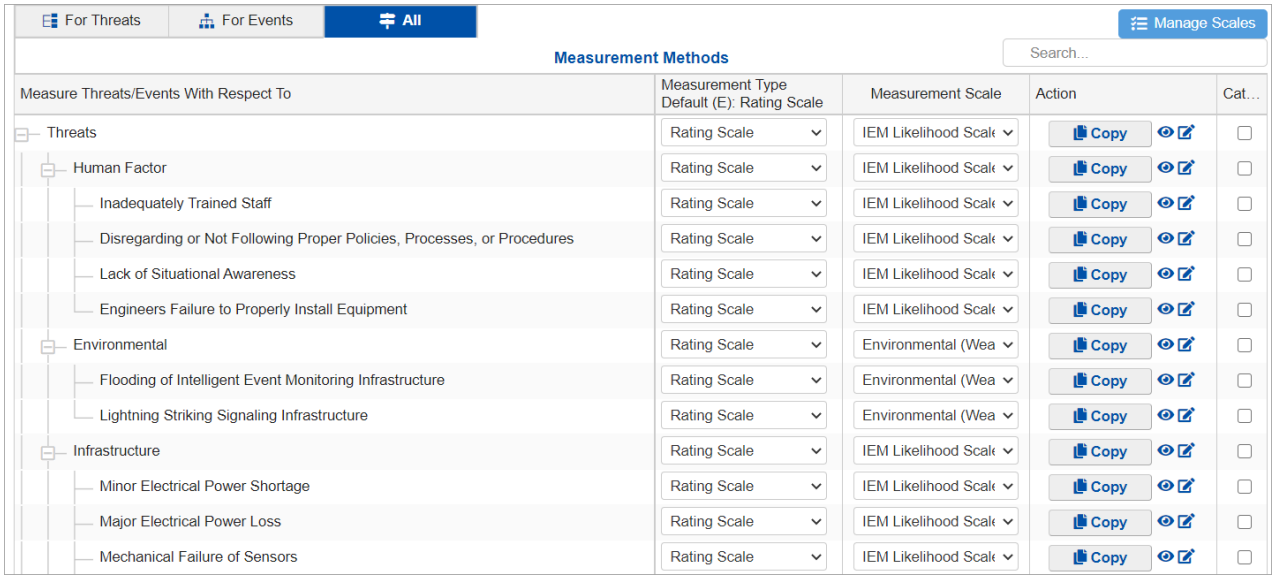


The nodes that have children are the non-covering threats. (e.g. Human Factor, Environmental, ..).

The nodes that have no children are the covering threats (e.g. Inadequately Trained Staff, Disregarding or Not Following Proper Politics.., ..)

Depending on the selected tab, the measurement options (Measurement Type, Scale, and other Advanced Options) will be displayed to the right of the threat elements (first column).

- **For Threats** - measurement options are available for the **non-covering threats** to define how to measure the threats below the given non-covering threat.
- **For Events** - measurement options are available for the covering threats to define how to measure the events given the covering threat, and the events with no threats.
- **All** - measurement options are available both for non-covering and covering threats which allow defining the two mentioned above on the same page.



The following measurement types are available for evaluating Threats and the Events given Threat:

- Rating
- Direct
- Step Function
- Utility Curve
- Pairwise Comparisons
- Pairwise with Given Likelihood
- Pairwise of Probability

For Likelihood evaluation, we recommend using Pairwise with Given Likelihood instead of Pairwise unless the elements being evaluated
are the entire set of possible outcomes (which may not be the case) since the resulting likelihoods will be adjusted to add to 100%.

Depending on the selected tab, the Total Judgments is displayed at the bottom of the page.

Measurement Methods for Evaluating Threats

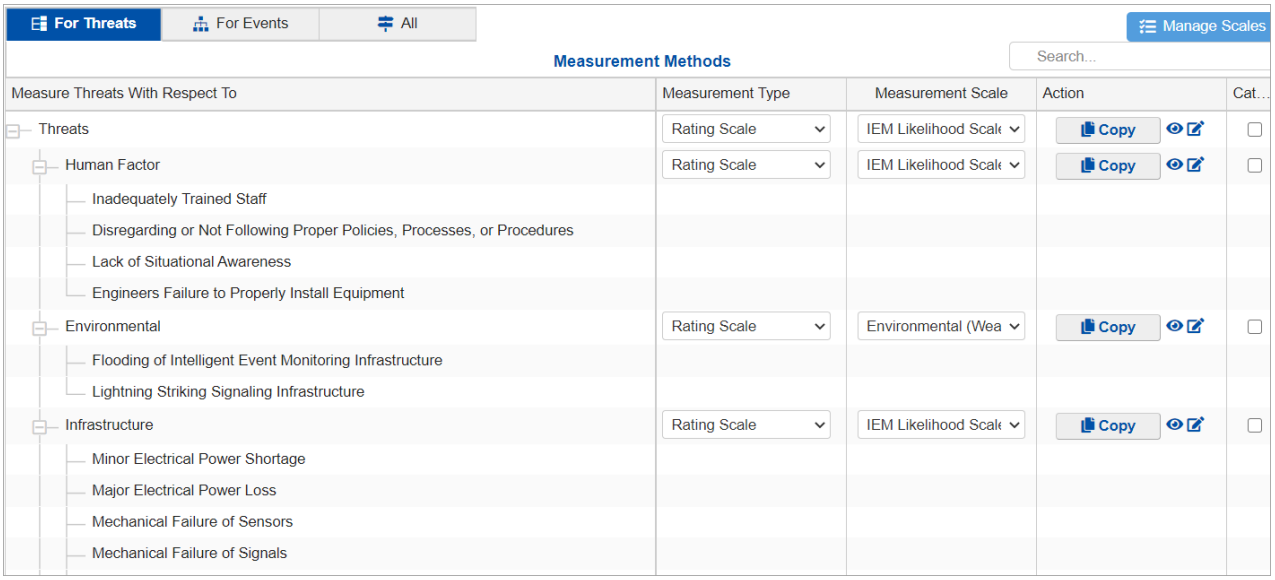
Measurement Methods for Evaluating Threats

Measurement Methods for evaluating threats can be found on the **LIKELIHOOD OF EVENTS > MEASURE > Measurement Methods** > **For Threats** tab.

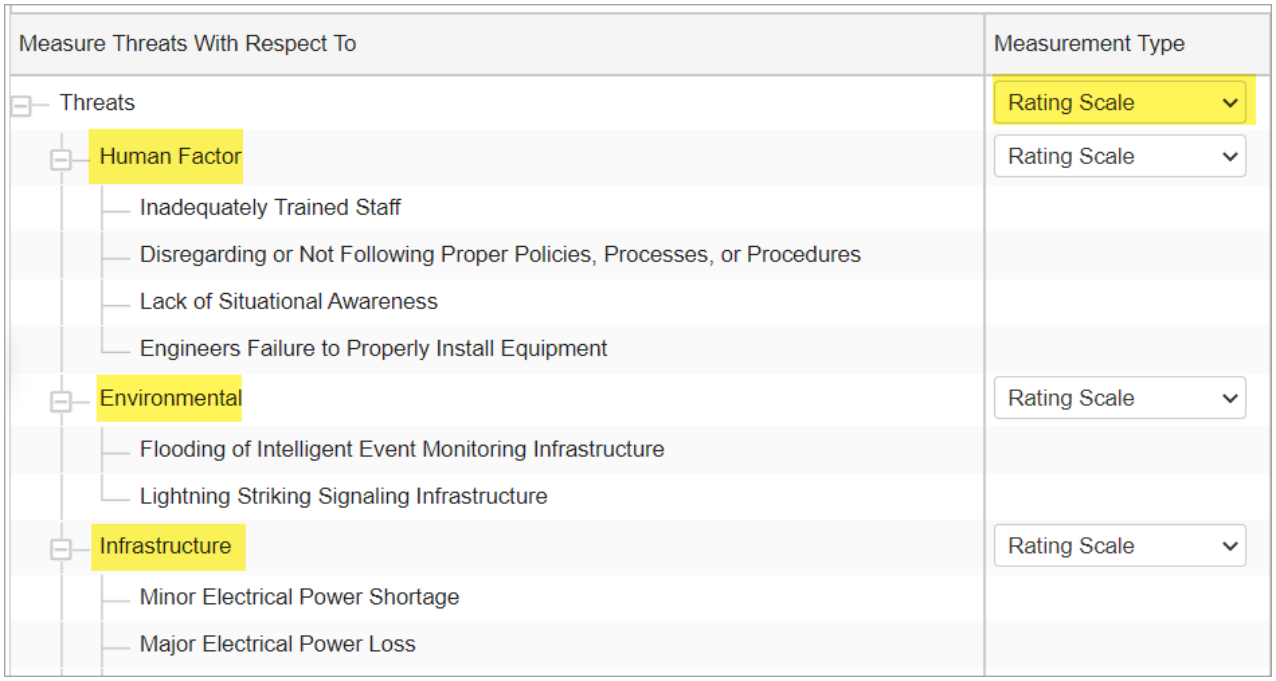
This is where we designate how threat likelihoods are to be derived or assigned for those threats (elements) in the threats hierarchy given their parent threat (non-covering threat).

NOTE: You can also define Measurement Methods for Threats in **All** mode where the measurement methods options For Threats and For Events options are available.

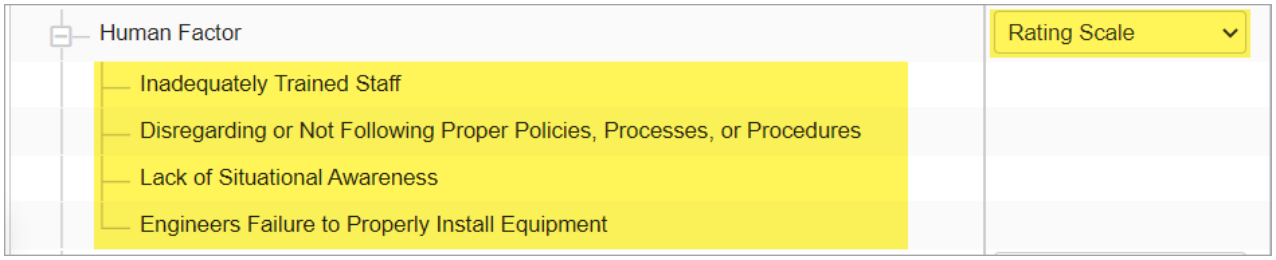
When the **For Threats** tab is selected, only the non-covering threats have available measurement options to the right.



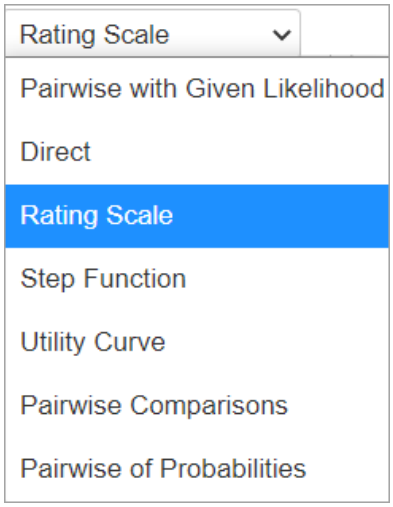
In our example, "Threats" (non-covering threat) children: Human Factor, Environmental, and Infrastructure are to evaluate using Rating Scale (IEM Likelihood Scale), as specified on the options to the right of the "Threats" node or their parent.



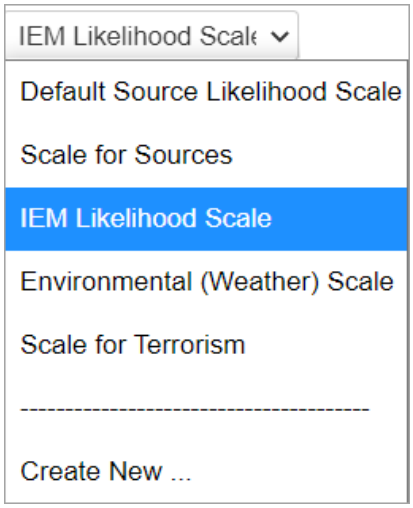
Similarly, the children below "Human Factor" will also be evaluated using the Rating Scale, as specified on the measurement options to the right of Human Factor.



You can change the Measurement Type by selecting from the pull-down menu:



You can change or create a new measurement scale (if applicable) by selecting from the pull-down:

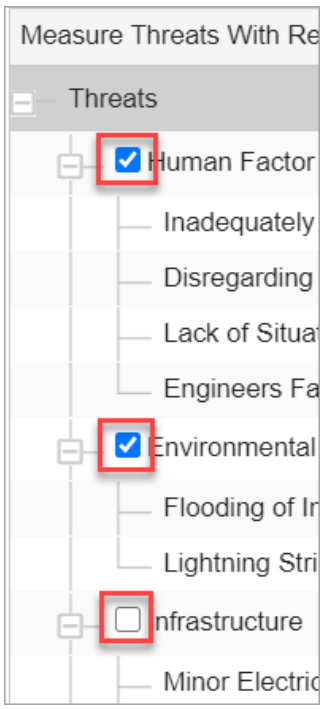


You can edit the currently selected scale by clicking  under the Action column.

You can also copy the measurement options from one non-covering threat to one or more non-covering threats.

Simply click  to the right of the non-covering threat you want to copy.

Checkboxes will appear to the left of the other non-covering nodes. Check the nodes you want to paste the measurement options to.



You can also check all the nodes at the bottom of the page.

Once done, click Proceed.

You can also make a non-covering threat a Category by checking the Category check box.

You can jump to the specific evaluation step of the given covering threat by clicking 

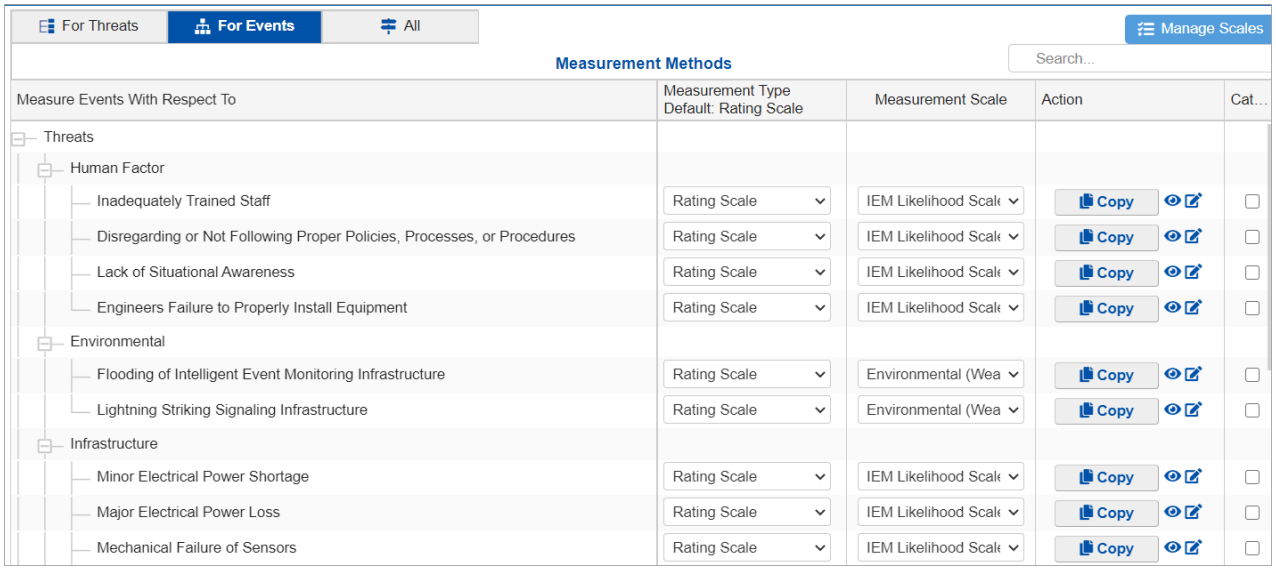
Measurement Methods for Evaluating Events Given Threats

Measurement Methods for evaluating events given threats can be found on the **LIKELIHOOD OF EVENTS > MEASURE > Measurement Methods** > **For Events** tab.

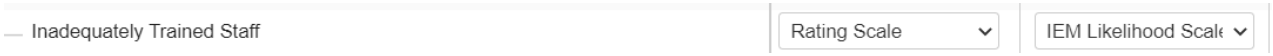
This is where we designate how likelihoods are to be derived or assigned for the events given the covering threats in the threats hierarchy.

> **NOTE:** You can also define Measurement Methods for Events given Threats in **All** mode where measurement methods options For Threats and For Events options are available.

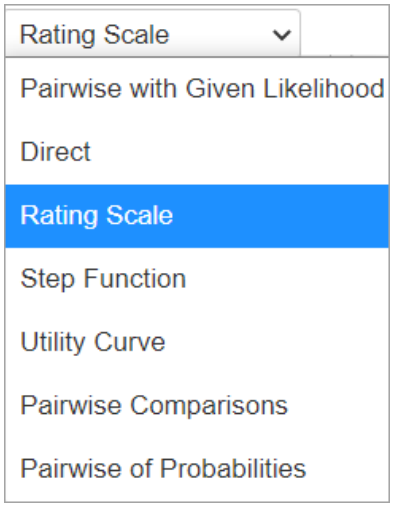
When the **For Events** tab is selected, only the covering threats have available measurement options to the right.



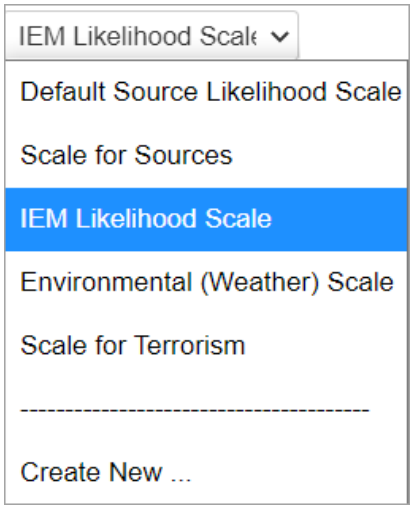
From above, the events given "Inadequately Trained Staff" will be evaluated using the Rating Scale (IEM Likelihood Scale) as specified on the options to the right of this covering threat.



You can change the Measurement Type by selecting from the pull-down menu:



You can change or create a new measurement scale (if applicable) by selecting from the pull-down:



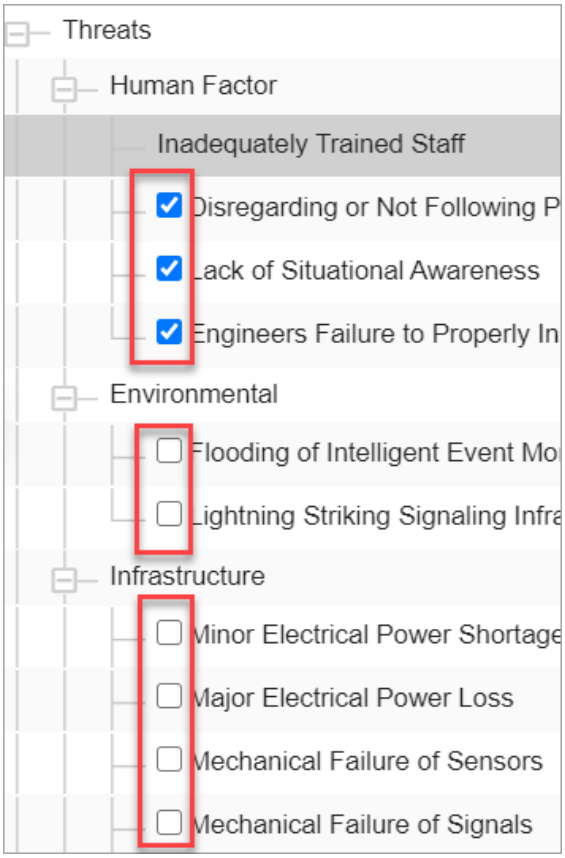
You can edit the currently selected scale by clicking 

You can also copy the measurement options from one covering threat to one or more covering threat(s).

Simply click 

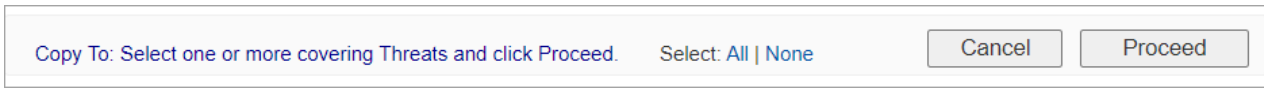
to the right of the covering threat you want to copy.

Checkboxes will appear to the left of the other covering nodes. Check the nodes you want to paste the measurement options to.



You can also check all the nodes at the bottom of the page.

Once done, click Proceed.



You can also make a covering threat a Category by checking the Category check box.

You can jump to the specific evaluation step of the given covering threat by clicking