

TUTORIAL FOR RISKSCAPE – ASSET MODIFICATION TOOL

RiskScape is a natural hazard impact and risk modelling tool.

This tutorial provides an understanding of the functionality of RiskScape. In this tutorial, you will modify demonstration asset data for Vanuatu to understand how changing the attributes can increase or decrease the impacts. This scenario is a demonstration only and the results should not be used for decision making.

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This tutorial has been created for the PARTneR: Pacific Risk Tool for Resilience Advanced Training
January 2018

For more information about the tool visit
www.riskscape.org.nz

This tutorial is for demonstration purposes only and the results produced should not inform decision making in any way.

RiskScape v1.0.3. was used to create this tutorial

Date: 12th December 2018

1 Asset Modification Tool

 Please make notes

In this tutorial, we will use the **asset modification tool** to adjust a key attribute within the dataset provided. By adjusting the data, you can create mitigation scenarios.

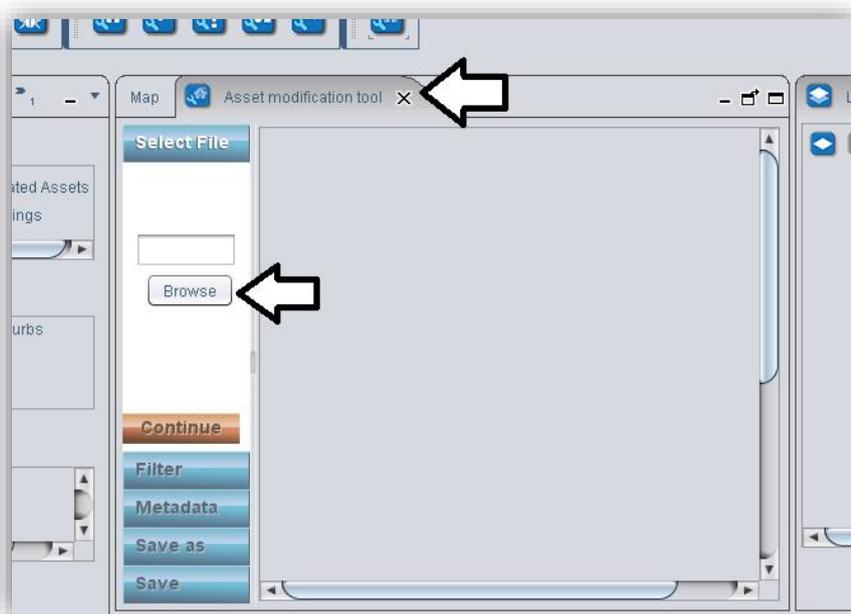
In this tutorial, we are going to adjust the flood heights of some buildings. Floor height is a controlling parameter for impact from floods and tsunamis. By adjusting this parameter, you can increase or decrease impact.

1.1. Step 1: Open the Asset Modification Tool

The Asset Modification Tab appears in the centre panel to the right.



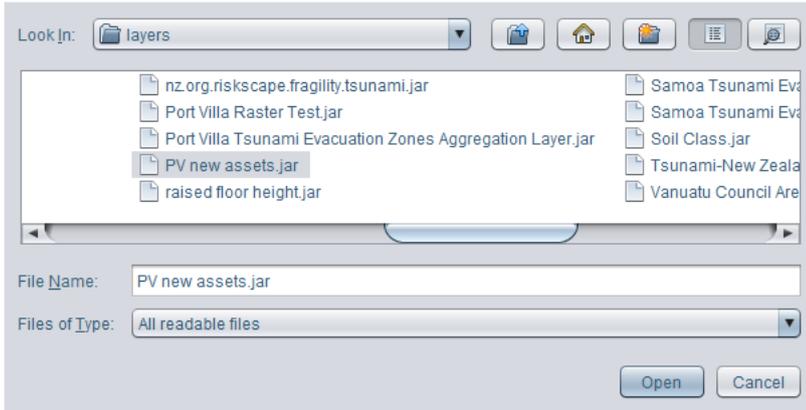
Click the “browse” button



The asset modification tool allows you to change attribute information held within an existing asset layer already loaded into RiskScape.

Navigate to the Layers folder in your "rsworkspace"

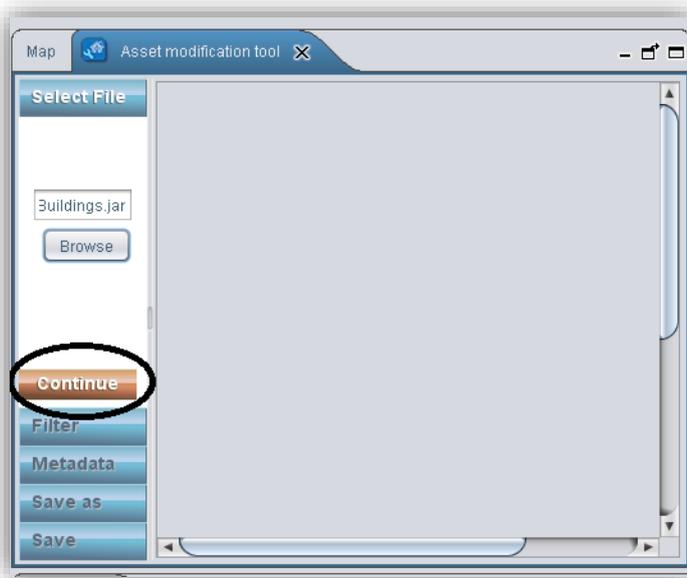
The default workspace is
C:\Users
\USERNAME
\rsworkspace



Select "**Efate Buildings Dec 2017**"

Click **Open**

Click the orange "**continue**" button

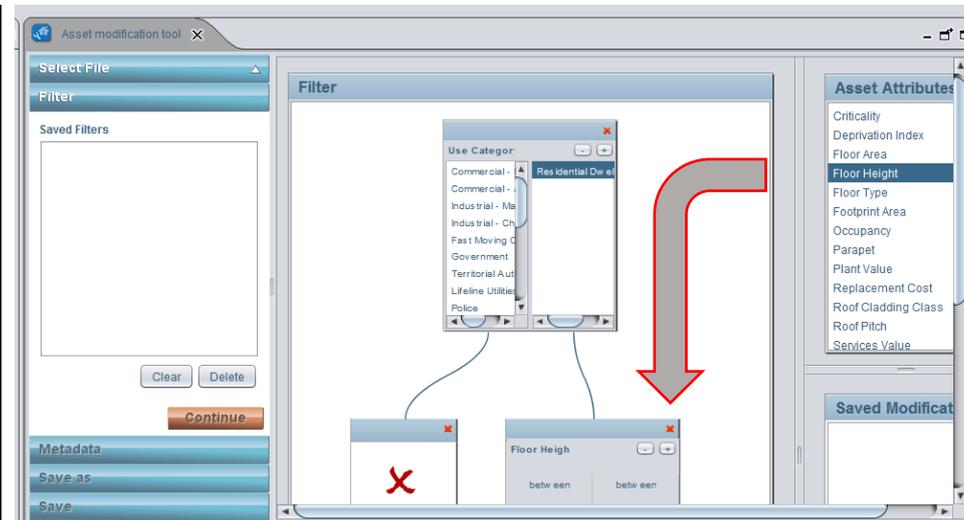


A filter decision tree is used to modify the asset data.

1.1.Step 2: **Create the modification**

In this tutorial, we are going to adjust the flood heights of some buildings. Floor height is a controlling parameter for impact from floods and tsunami. By adjusting this parameter you can increase or decrease impact.

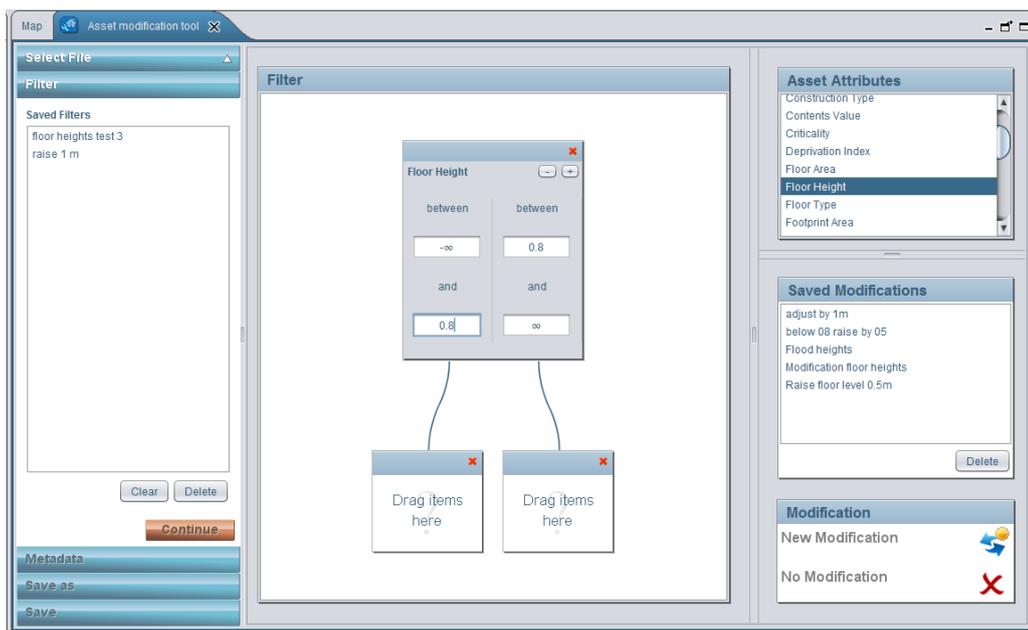
Drag "Floor Height" to the filter box



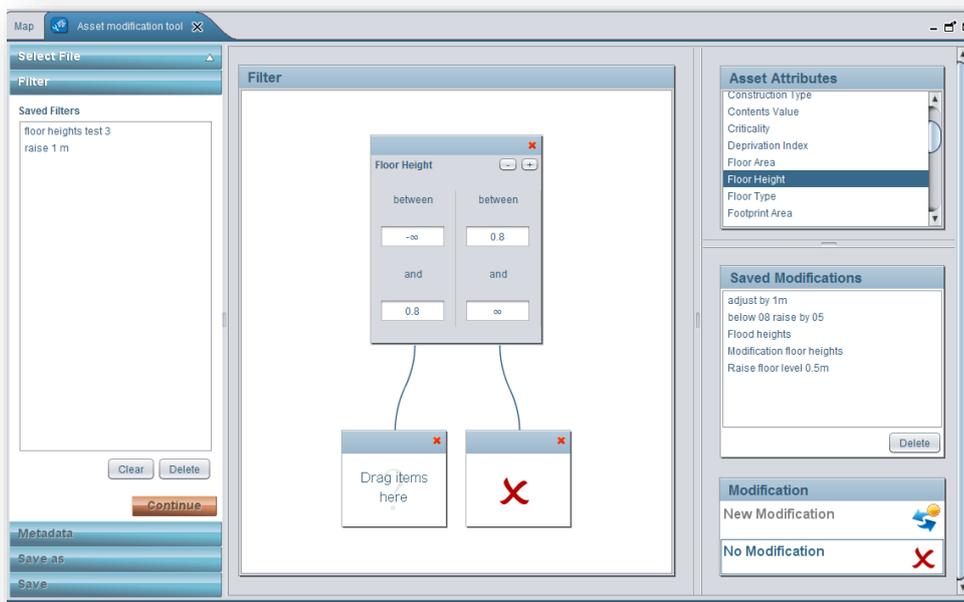
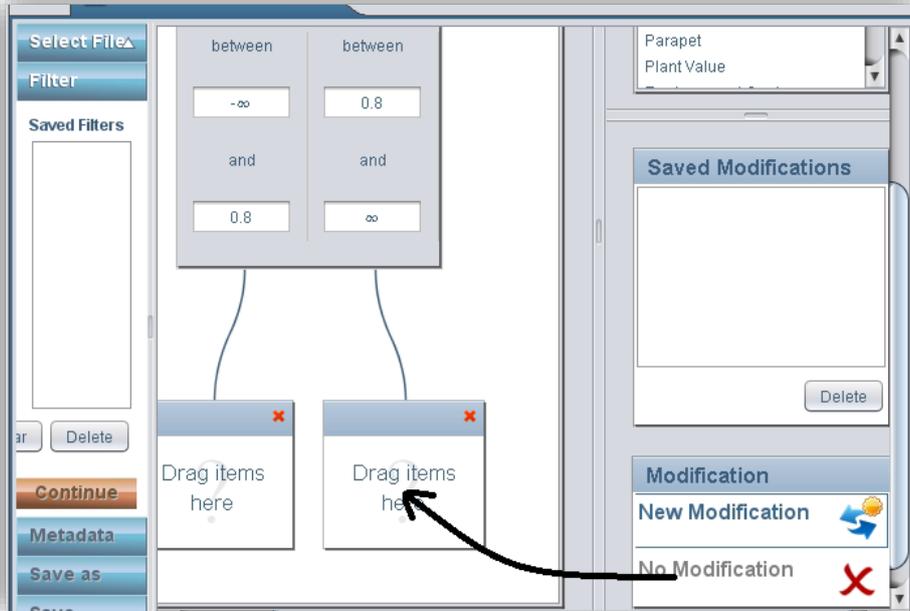
Enter **"0.8"** into the upper bound box for Floor Height.

This creates two subsets of the data:

- data with Floor height less than 0.8m (from $-\infty$ to 0.8m)
- data with Floor height greater than 0.8m (from 0.8m to ∞)



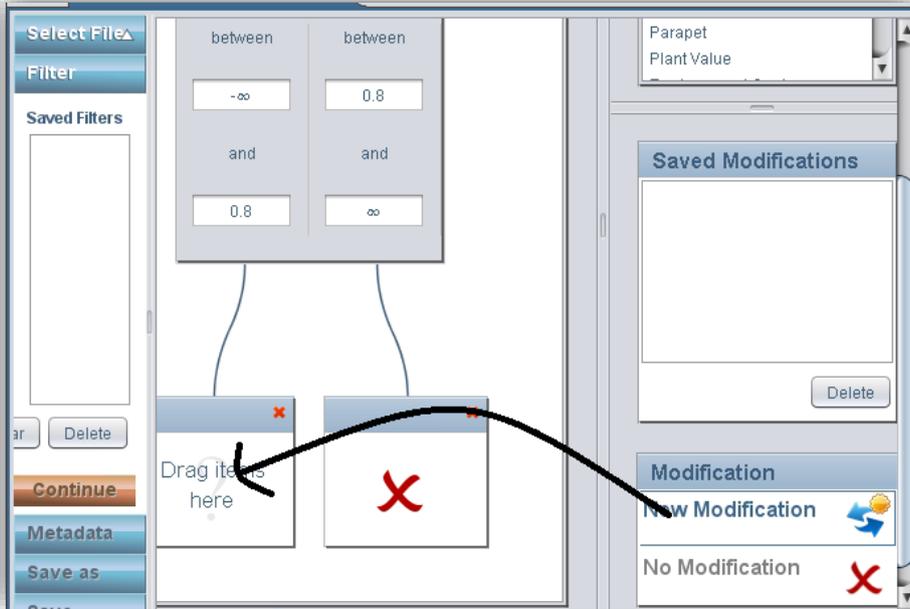
For floor heights greater than 0.8m **drag "no modification" to the decision box.**



An X appears in the decision tree on the bottom left.

By doing this you have told RiskScape not to modify any buildings with floor heights greater than 0.8m.

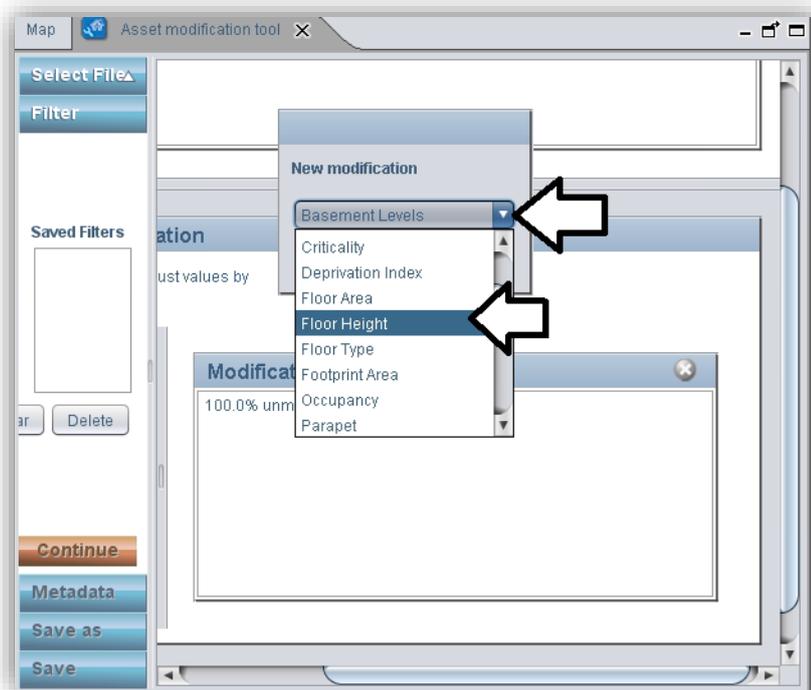
Next **Drag "New modification" to the decision box** for the floor height less than 0.8m.



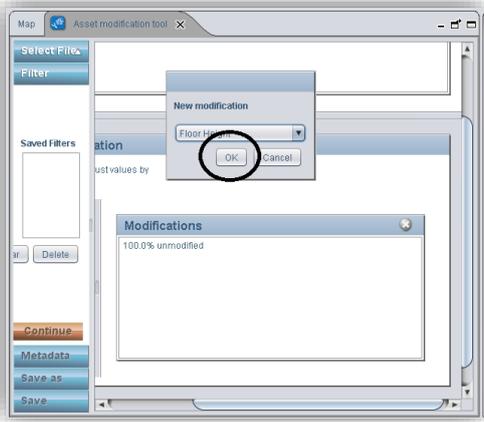
By doing this you are asking RiskScape to create a new modification of buildings with floor heights less than 0.8m.

The asset modification tool will offer modification options.

Select "Floor Height" from the new modification drop down



Click **OK**



We are going to raise these selected floor heights to see if this makes a difference to impact.

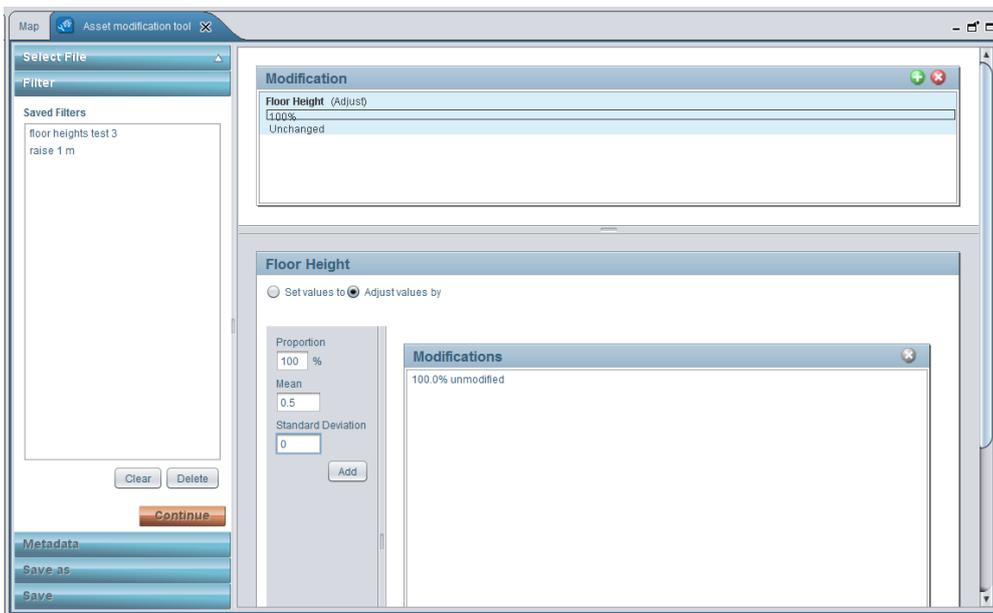
Select **“Adjust Values by”**

Enter 100 into the proportion field. This selects 100% of the buildings with the floor height from infinity (0) to 0.8m. If you enter 50, this would only select half the buildings.

Enter 0.5 into the Mean. This raises all the floor heights by an additional 0.5 meters.

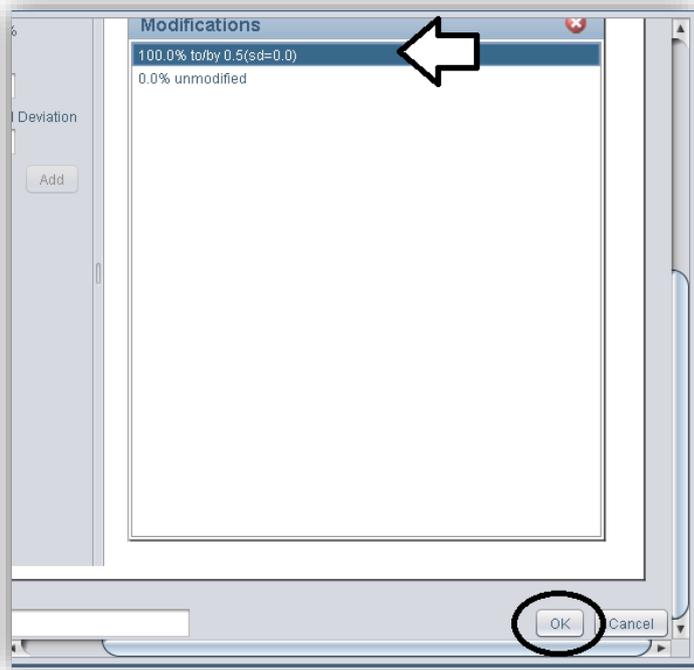
Enter 0 into the Standard Deviation.

Click **“add”**

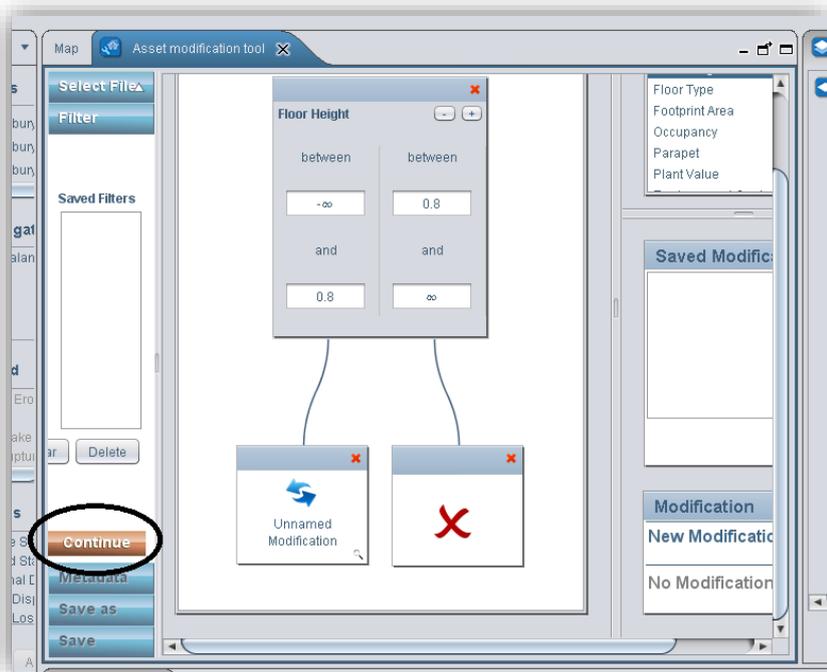


Select the modification that appears on the right and click **“OK”**

Optional: You can save this modification to use later if you wish. Scroll to the bottom and select save as and name the modification.

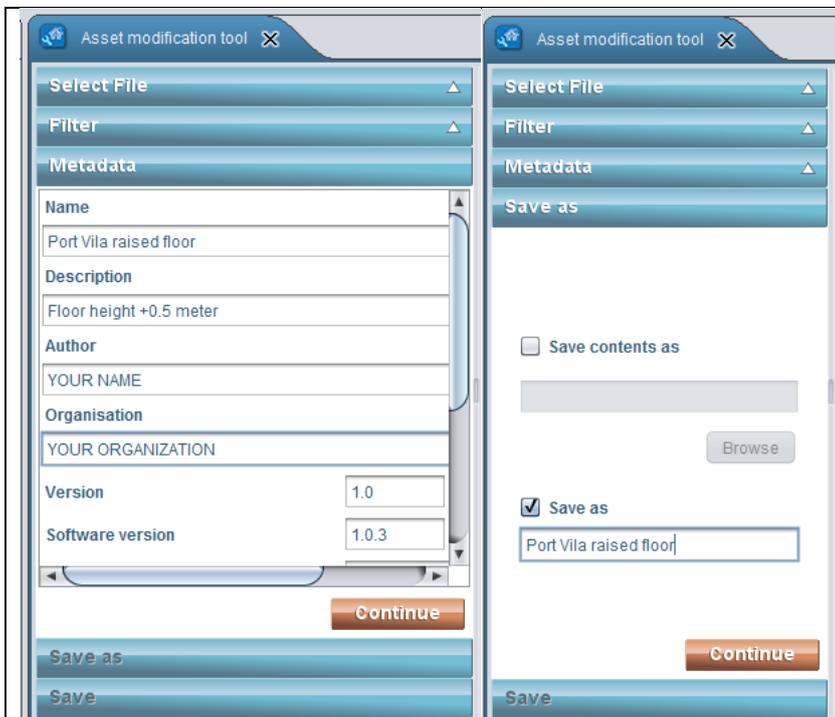


Click the orange **“Continue”** button

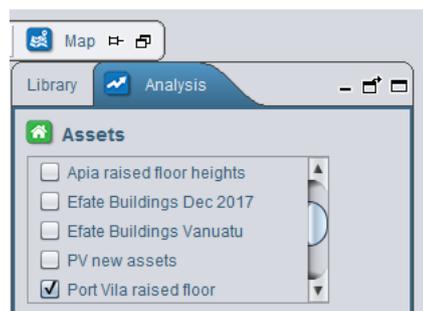


Fill in the **Metadata** fields and click the orange **“continue”** button.

Fill in the **Save as** field and click the orange **“continue”** button.



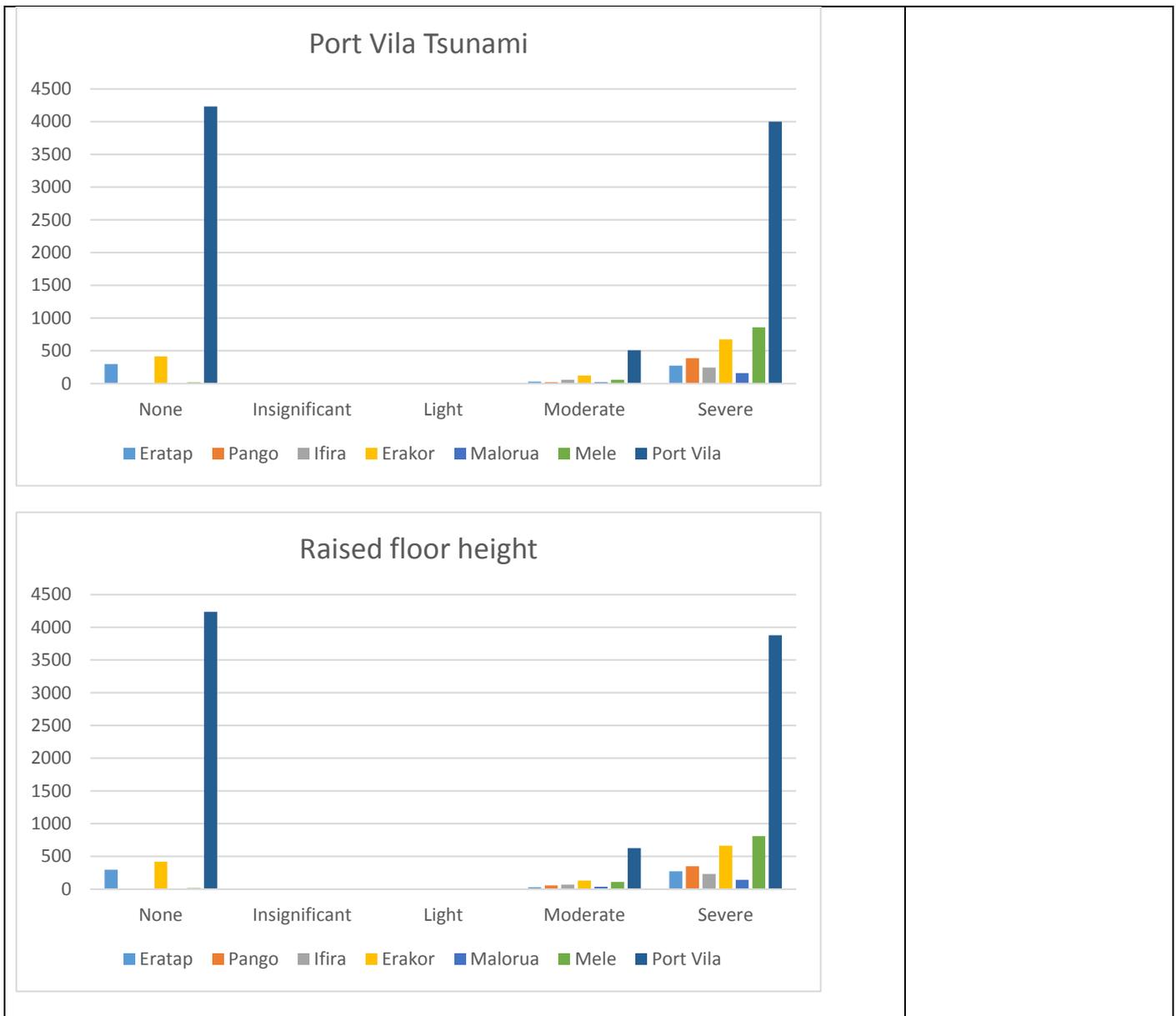
The new modified asset file will automatically appear in the analysis bar under Assets.



1.1.Step 3: **Re-run the scenario per Tutorial 1**

Run through Tutorial 1 but this time select your new modified asset layer in the analysis selections step.

Compare the aggregated results (explore the aggregated results as a CSV excel file and compare the number of buildings and their damage states).



Disclaimer:

Certain information in this tutorial was created pursuant to the terms of an End-User License Agreement available on the RiskScape website (<https://riskscape.org.nz/>) using the RiskScape tool owned jointly by National Institute of Water and Atmospheric Research Limited (NIWA) and Institute of Geological and Nuclear Sciences Limited (GNS). While all reasonable effort has been made to ensure that this tutorial is as accurate as practicable, neither NIWA nor GNS nor the other data source organisations can be held responsible for any data, interpretations, conclusions and recommendations contained within the tutorial or for any actions taken based on the tutorial. NIWA and GNS and the other data source organisations therefore, to the full extent permitted by law, exclude liability, including for negligence, for any loss or damage, direct or indirect and howsoever caused resulting from any person's or organisation's use or reliance on this Report, Result, Information.

Please note: This tutorial is for demonstration purposes only and the results produced are not intended to inform natural hazard management decision making.