

PyBetVH Short Basic Tutorial

In this short tutorial it will be explained how to launch PyBetVH tool on the VHub platform (<https://vhub.org>) and how PyBetVH works using the illustrative examples of PVHA that are available together with the tool on the dedicated VHub web page at <https://vhub.org/resources/betvh>. The examples are not “real world” case studies and their scope is just to illustrate how the PyBetVH tool works. The steps are listed and described here below.

1. Connect to the main PyBetVH web page at <https://vhub.org/resources/betvh>
2. Under the Supporting Docs tab, you can find the following files:
 - example01-volcanic_field.zip (first example as input to PyBetVH)
 - example02-central_volcano.zip (second example as input to PyBetVH)
 - PyBetVH-short_tutorial.pdf (this tutorial)
3. Download the two zip archives and load them in your VHub workspace. Then, unzip the archives somewhere in your home directory. These two folders contain all the necessary input to run the two PVHA using PyBetVH.
4. Go back to <https://vhub.org/resources/betvh> and launch PyBetVH (you need to be a registered user, so insert your username and password if you still haven't signed in)
5. When the tool is started, click on the Load PVHA button in the upper-left panel. From the “Select a directory” dialog search and select the folder in your workspace containing the first example and press OK button.
6. Once the example is loaded, the event tree became active and you can explore its branches by clicking with the mouse on the collapsing/expanding nodes. You can press “Show vent location” button to open a pop-up window showing the geometry of the volcanic system and the location of the vents as defined by the user. After having selected the desired path, in order to produce and visualize the corresponding results, you have to click on the “Compute” button. Most interesting outputs are given by selecting Node 4 (vent location map) and Node 7&8 which shows the hazard curves and together with their uncertainties (best guess and percentiles) and the corresponding hazard maps and probability maps. The default plot at node 7&8 is the hazard map but you can switch among the tabs to visualize the desired output. On the left panel you can interactively adjust some parameters case-by-case.
7. Load the second example and try the central volcano geometry.