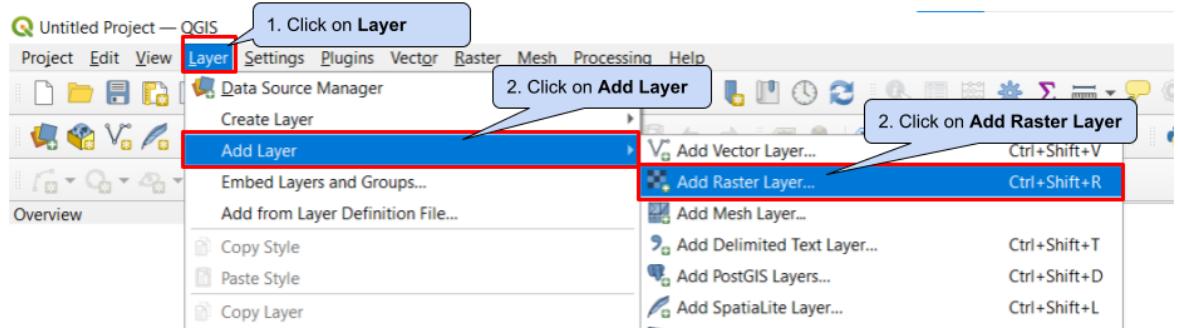
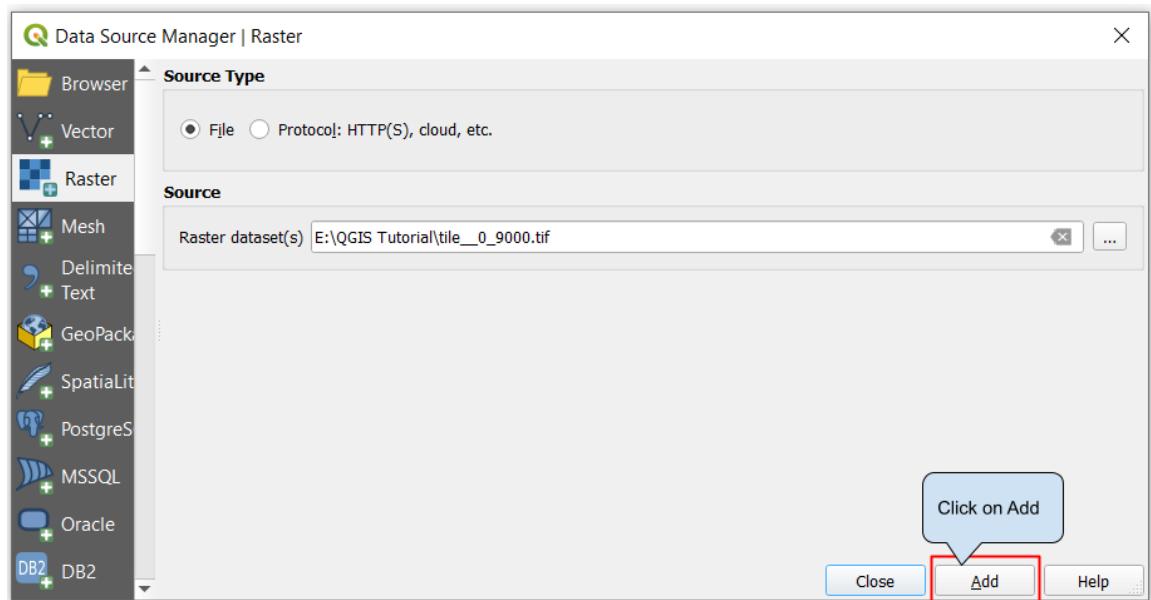
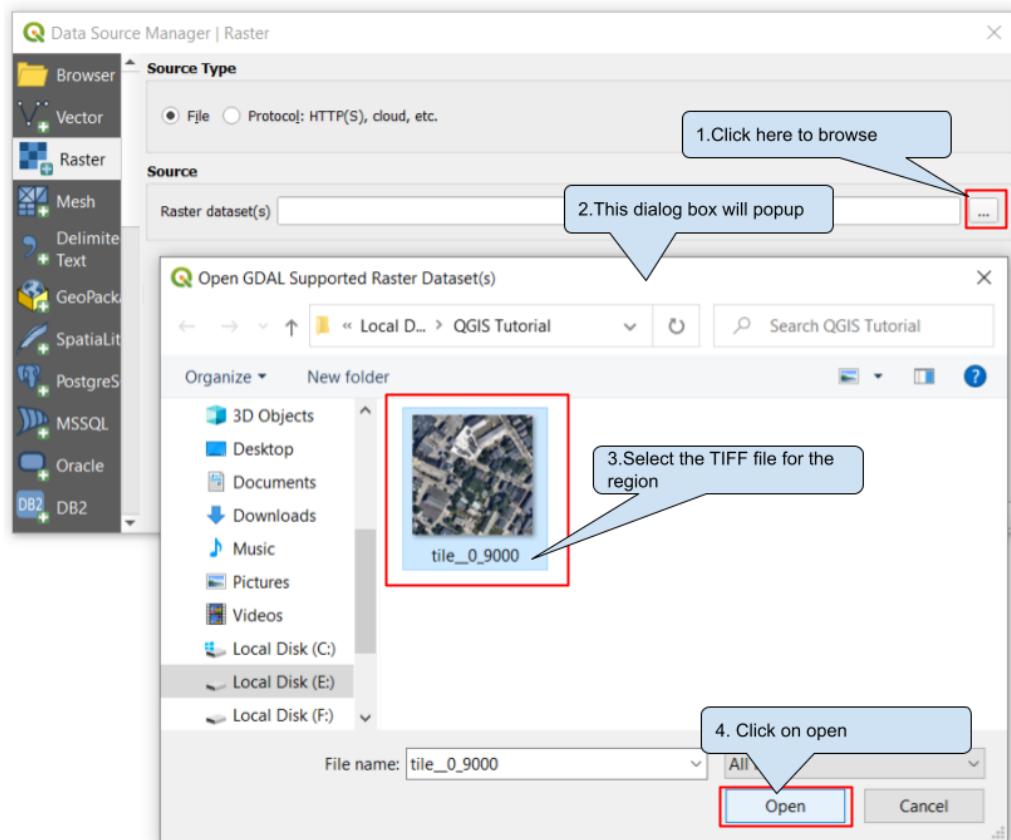
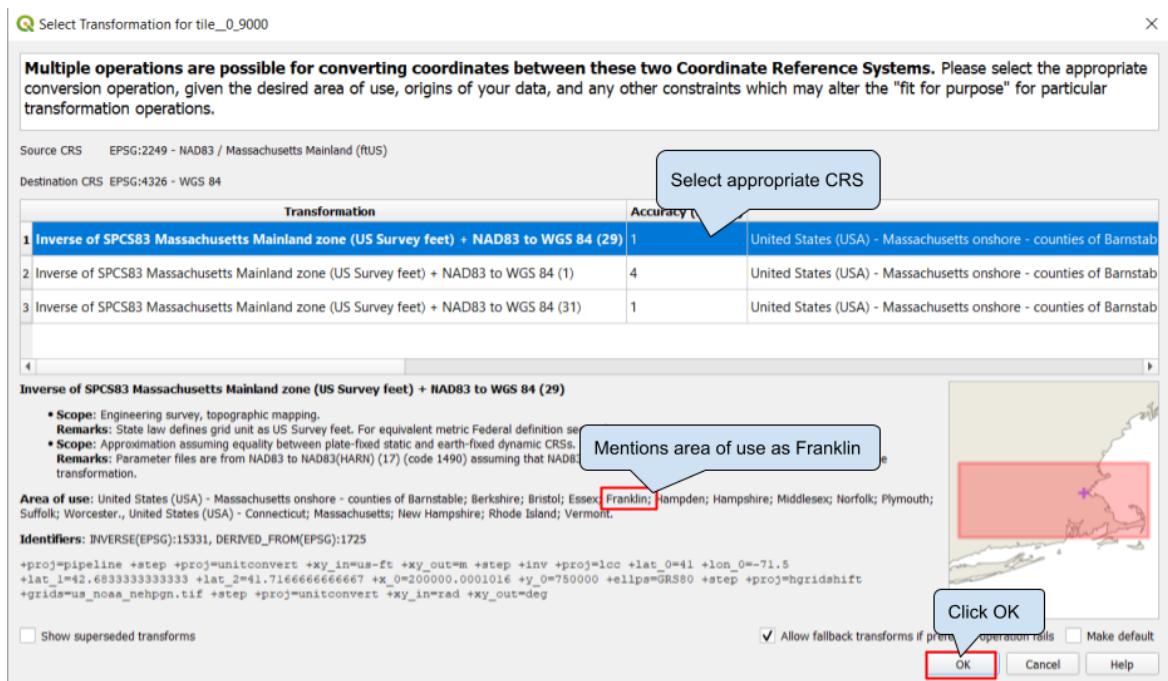


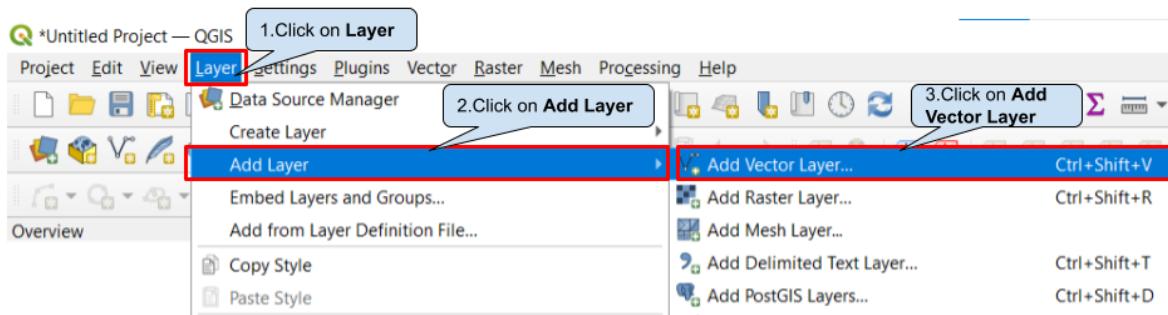
1. Load the tiff file into QGIS using drag and drop or the approach shown below can also be adopted(Drag and drop is easy)



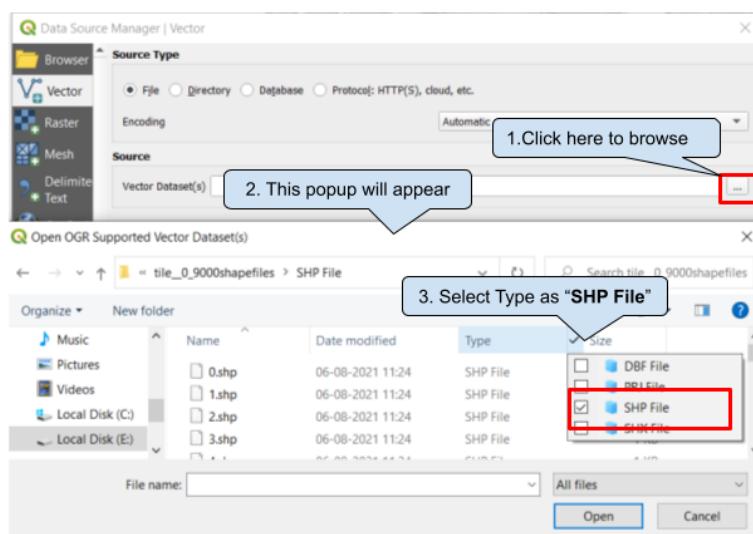


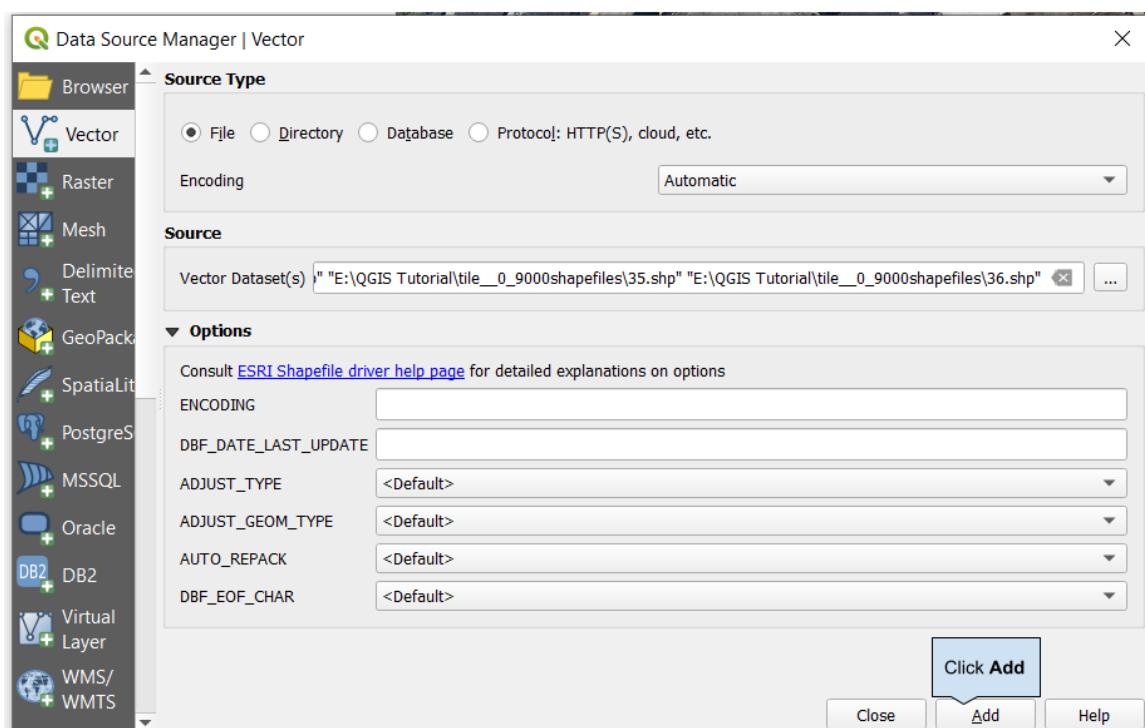
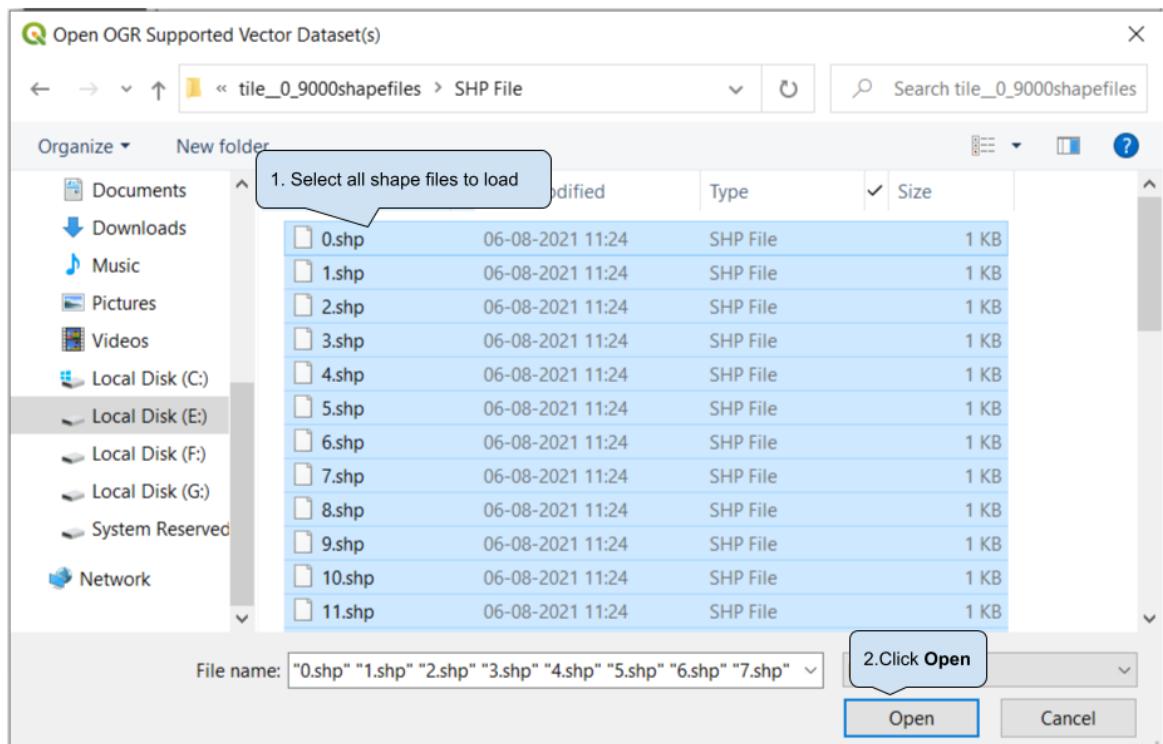


2. After loading the TIFF file, we will load the shapefile generated by model predictions using drag and drop (Select an load only .shp format files, which is the ESRI shapefile format) or as steps mentioned below

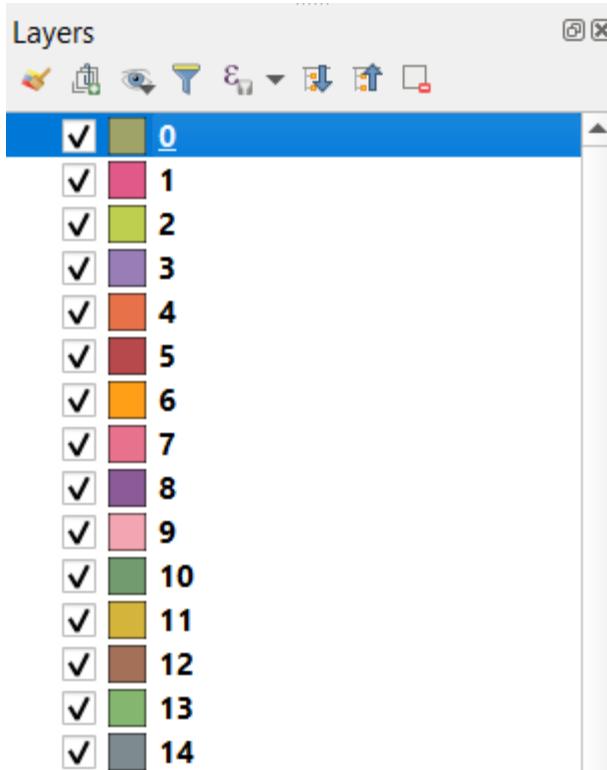


After clicking on Add Vector Layer a popup will appear as shown below:





- Multiple shapefiles will appear on the raster file, and the Layer pane in the left side of the QGIS window will populate with the shapefiles.

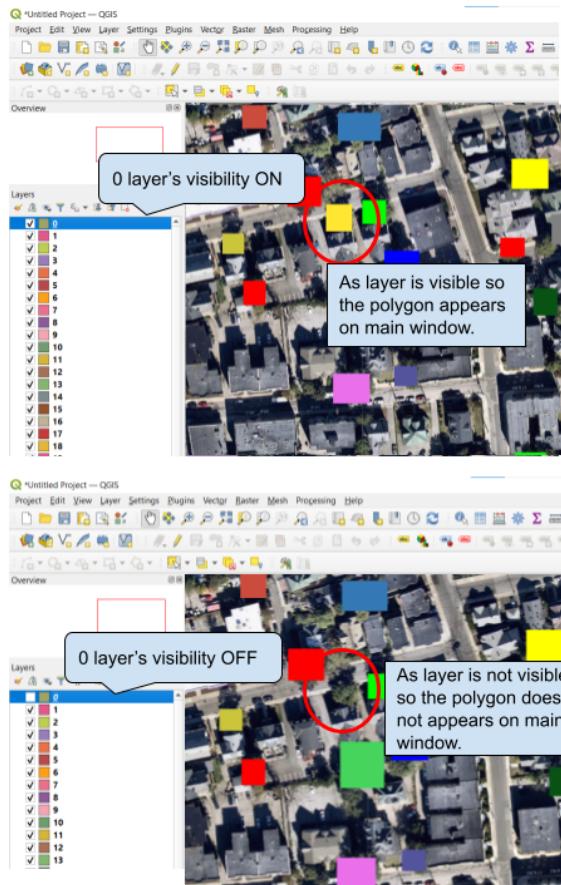


Also the main window showing the tiff (raster) file will be overlaid by the shapefiles, as shown below

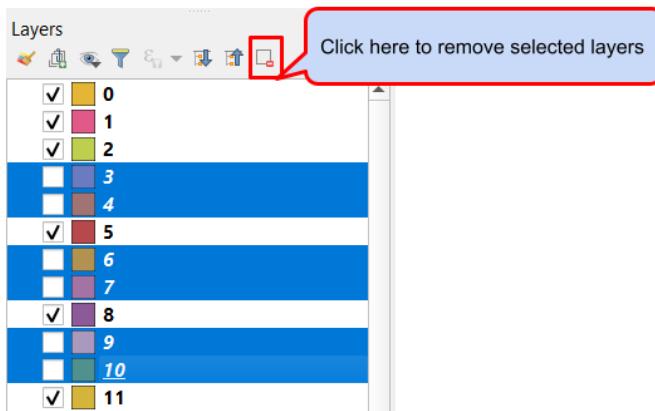
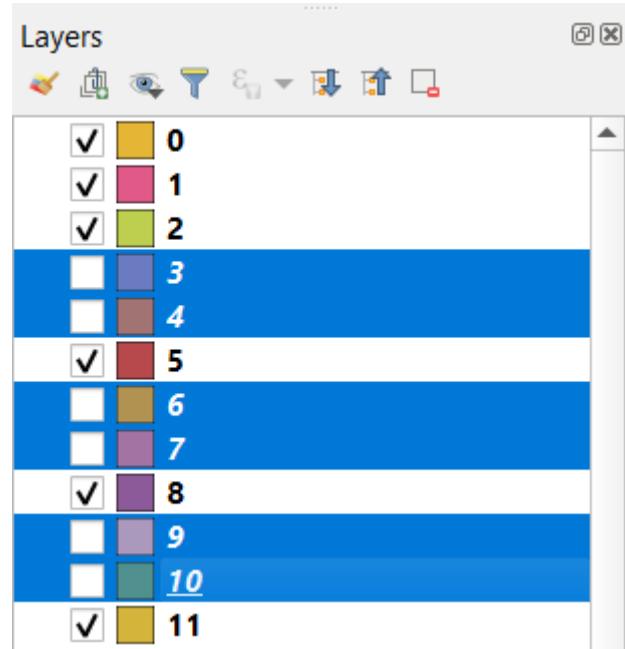


(If you can't see the shapefile overlaid but they appear in the Layer pane then, make sure to order layers. Move the TIFF image to bottom by right click and selecting "Move to bottom" or manually hold and drag)

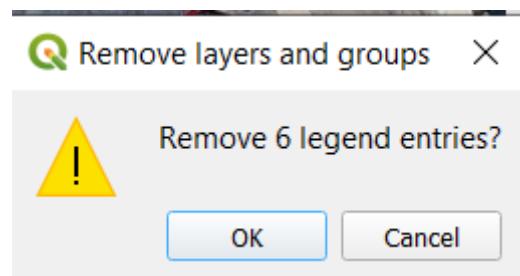
4. Cycle through each shapefile and check whether the polygon covers a tree or not by changing the visibility of the layer from Layer pane.



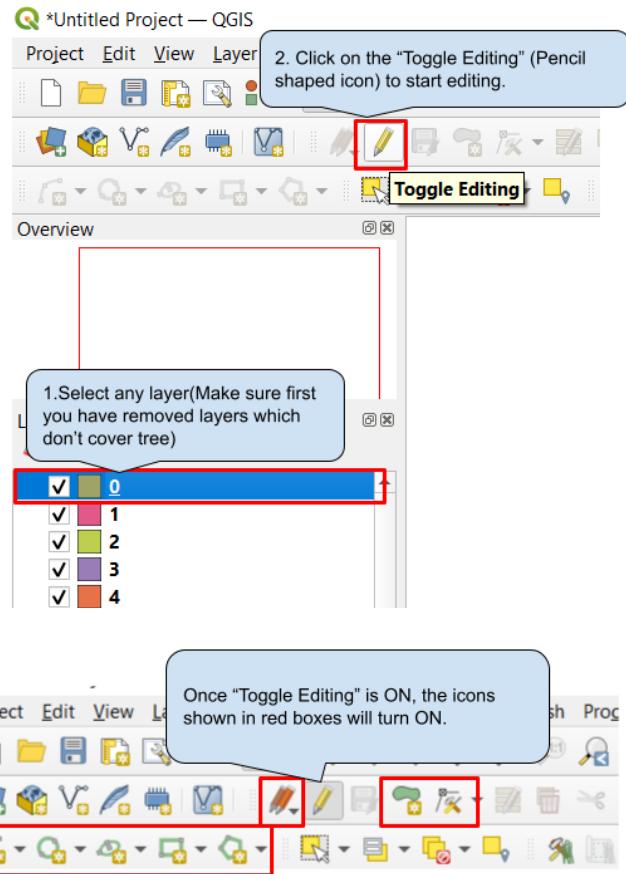
If the polygon has a tree beneath it then keep it as it is, and if the polygon doesn't cover the tree then turn the layer's visibility to OFF(May cover buildings, roads etc). Repeat this procedure for all the shapefiles. At the end some layer's visibility would be OFF. Remove those layers by selecting those layers(multi select using **CTRL** and click - on windows)



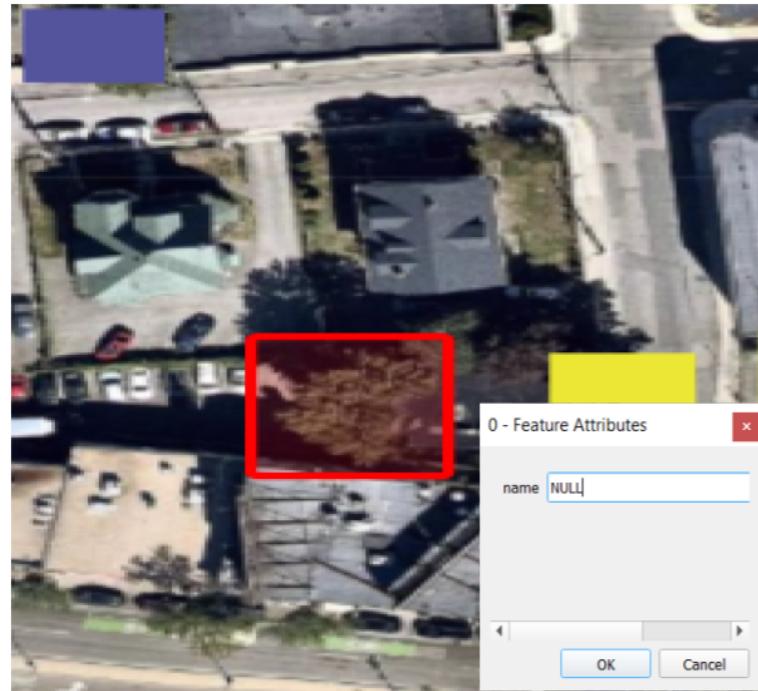
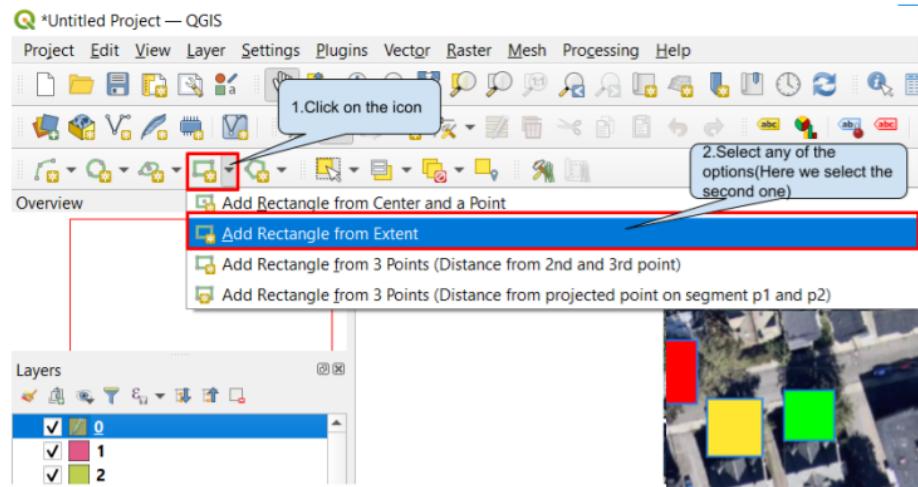
Click on the remove icon as shown in the figure above. Click “OK” in the next popup box asking for confirmation.



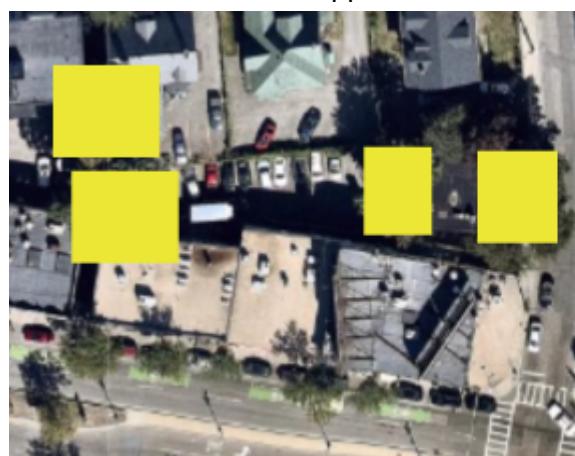
5. Now we will be having only those shapefiles which cover canopies/trees. Some trees may not have any polygon covering them. To record i.e. create shapefile over those, trees follow these steps



Create rectangular shapefiles following steps below, (as we worked in the previous tutorial)



Draw a rectangular shapefile and click “OK”, repeat the process for trees which are not covered by shapefiles. The result would appear similar to the image below.

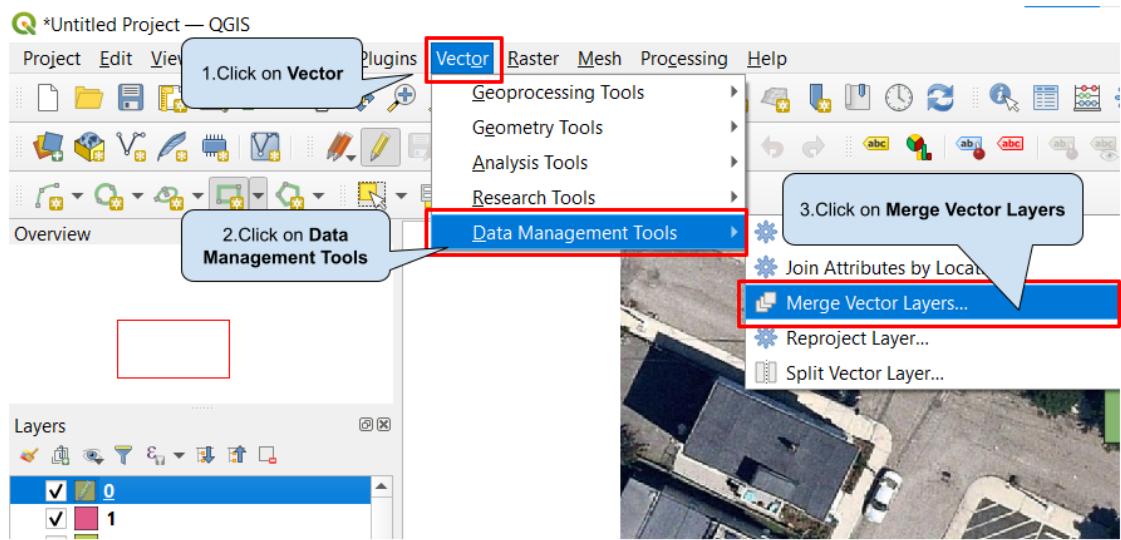


The yellow colored boxes are new ones.

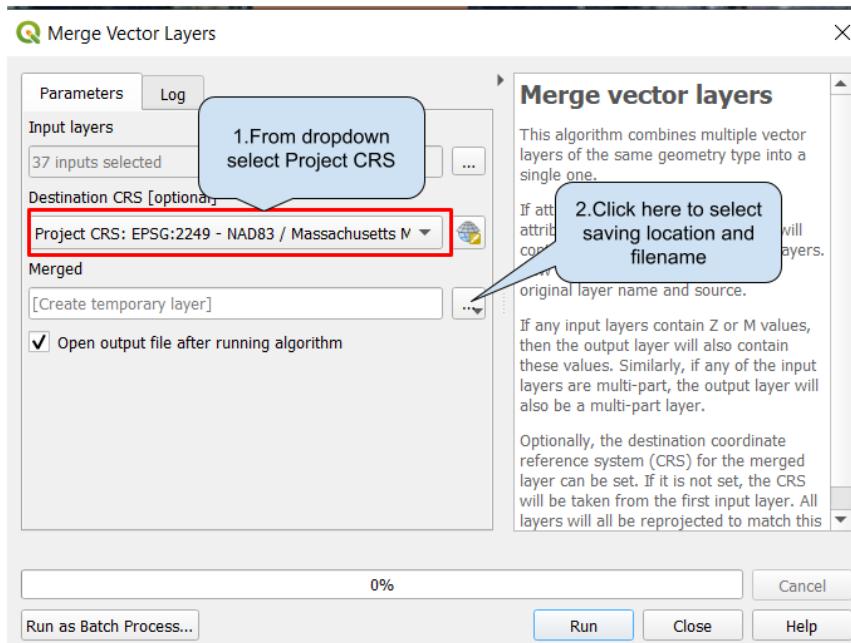
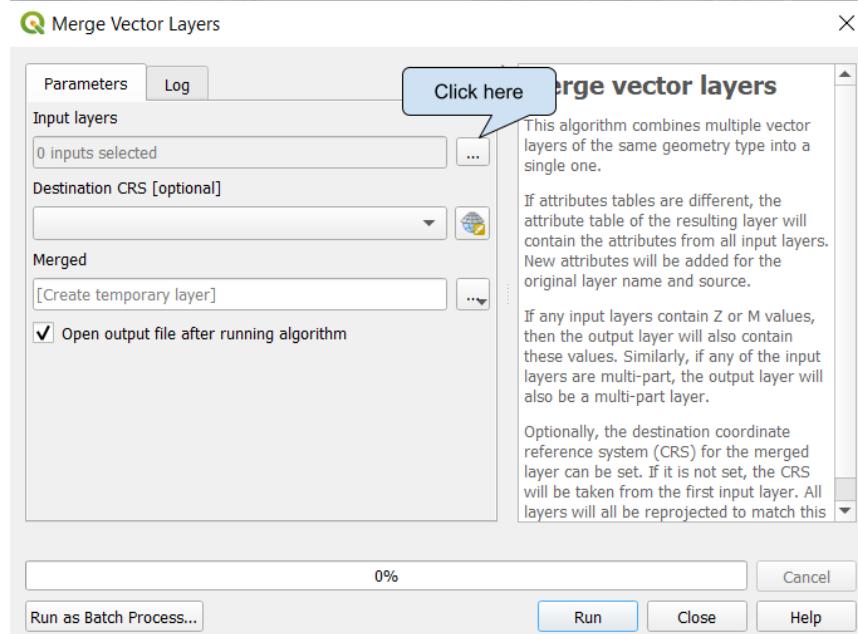
6. Click on the save button to save after you have covered all trees with rectangular polygons.

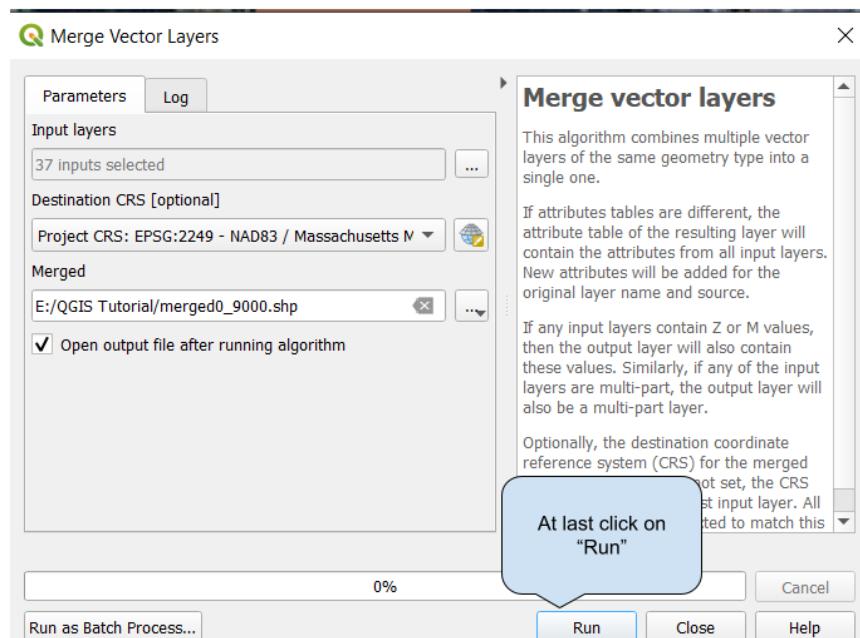
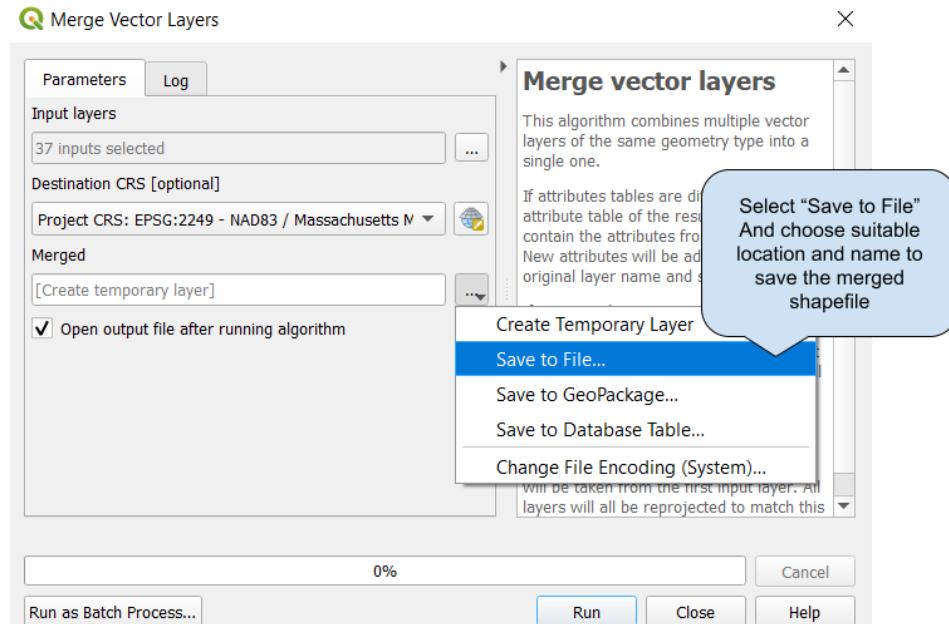


7. The deepforest model requires a single tiff image and corresponding shapefiles with it. So we will merge all the individual shape files into a single shape file(vector layer).

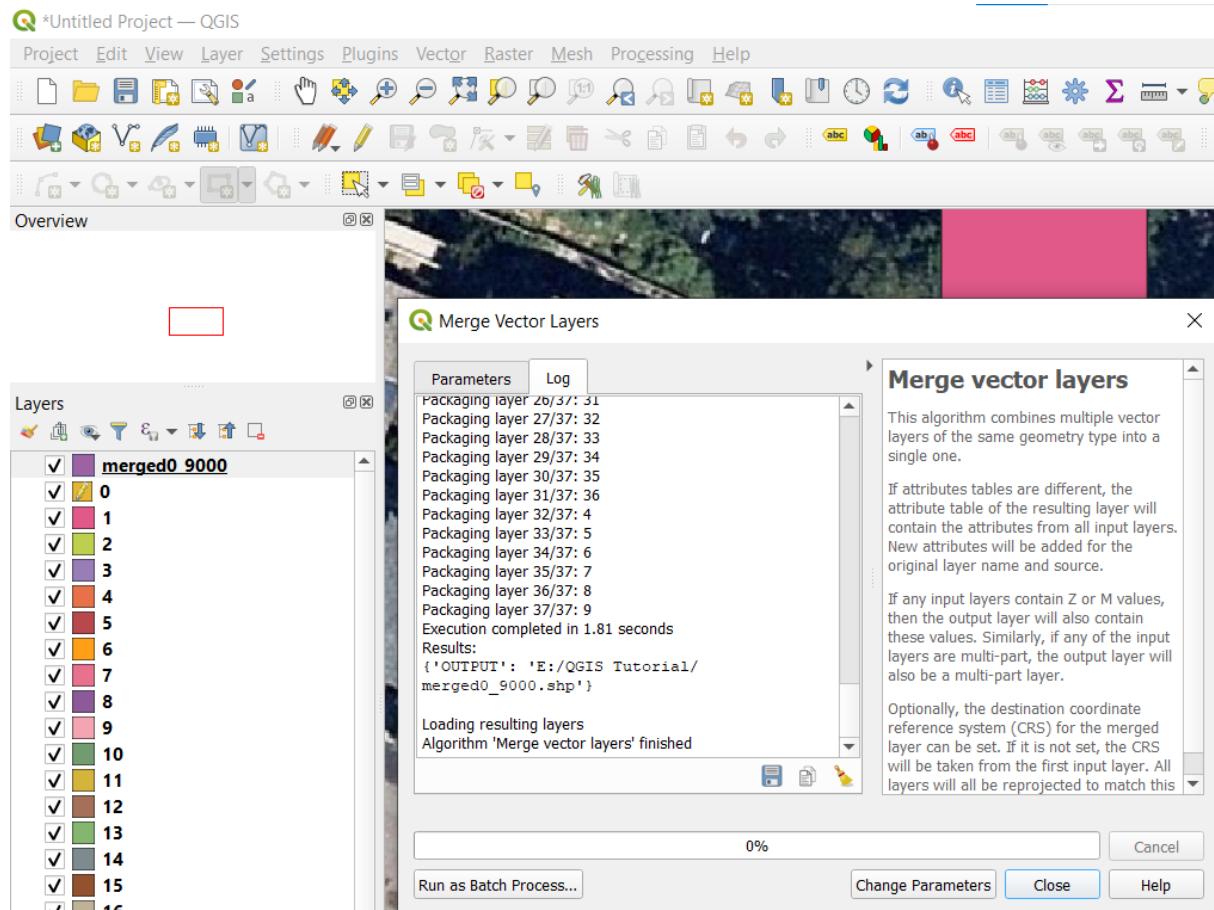


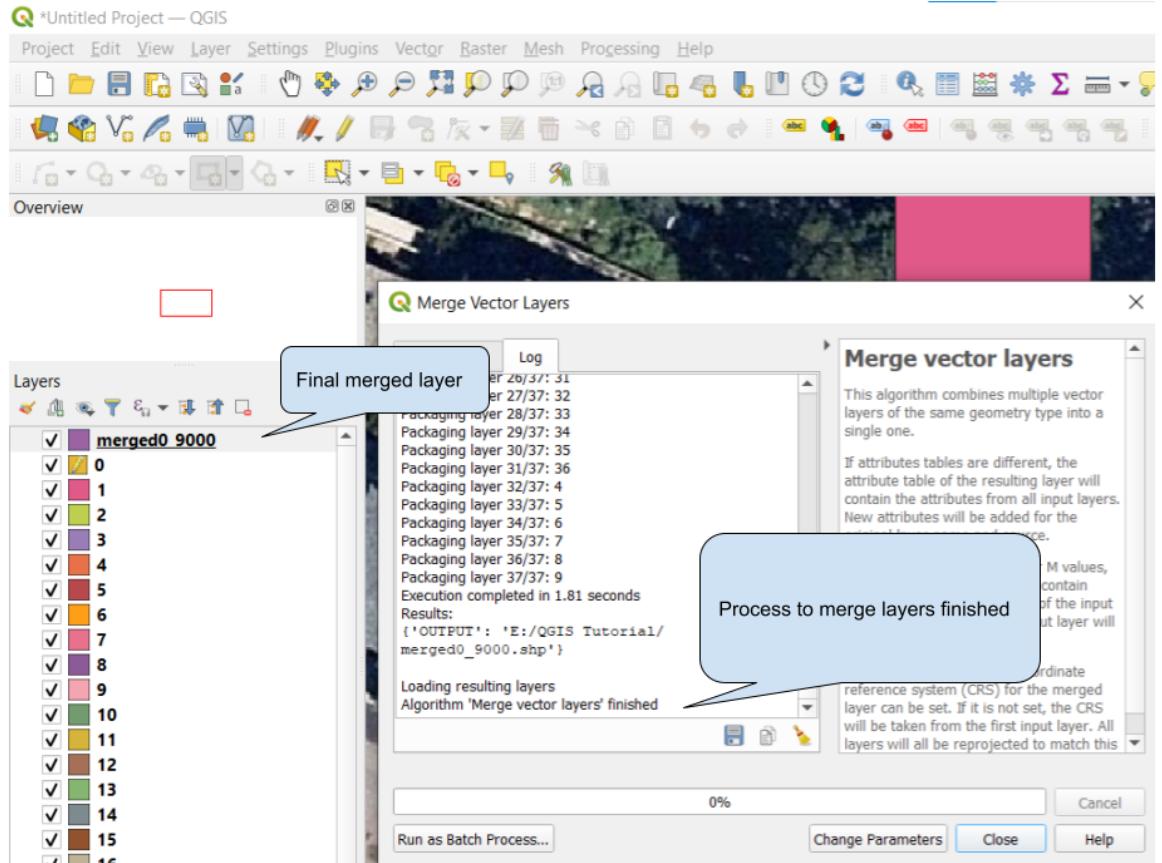
A popup will appear as shown below:





After clicking on “Run” and processing a new layer will be added in the Layer pane, also as all the shapefiles now are merged into a new layer all the polygons will have common color.





- We will use this shapefile created for a tile of size 3000*3000 for various similar sized tiles and at last merged all the shapefiles for individual smaller tiles of 3000*3000, and corresponding TIFF image which then can be fed to the model for training.