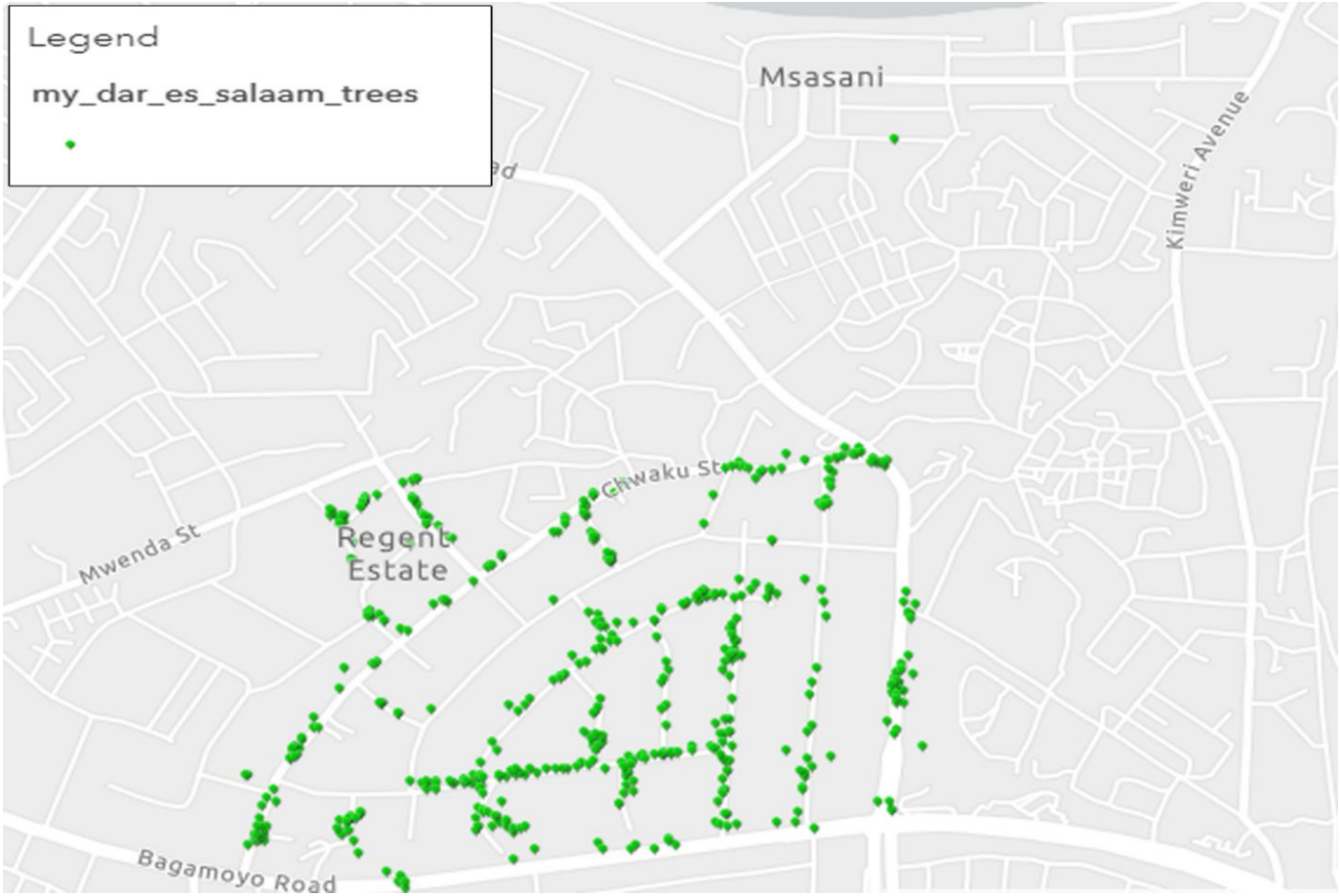
VISUALIZATION OF URBAN TREE DISTRIBUTIONS AND ITS IMPORTANCE FOR URBAN FORESTRY MANAGEMENT.

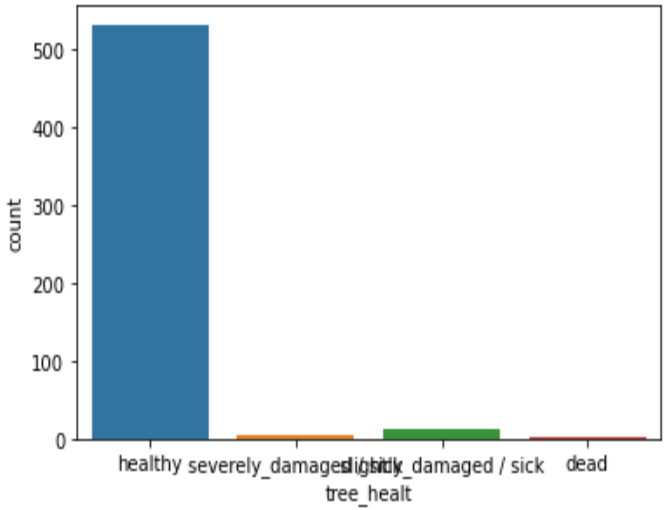
This is a Story of Tree Distribution in Dares salaam. These trees are a located at Dares salaam City. Our map shows 556 pilot tree that was mapped. The trees seem to be distrusted randomly or evenly distributed,

since we see that some are scarcity of tree in some area while there is high density of tree in some areas.



HEALTH TREES

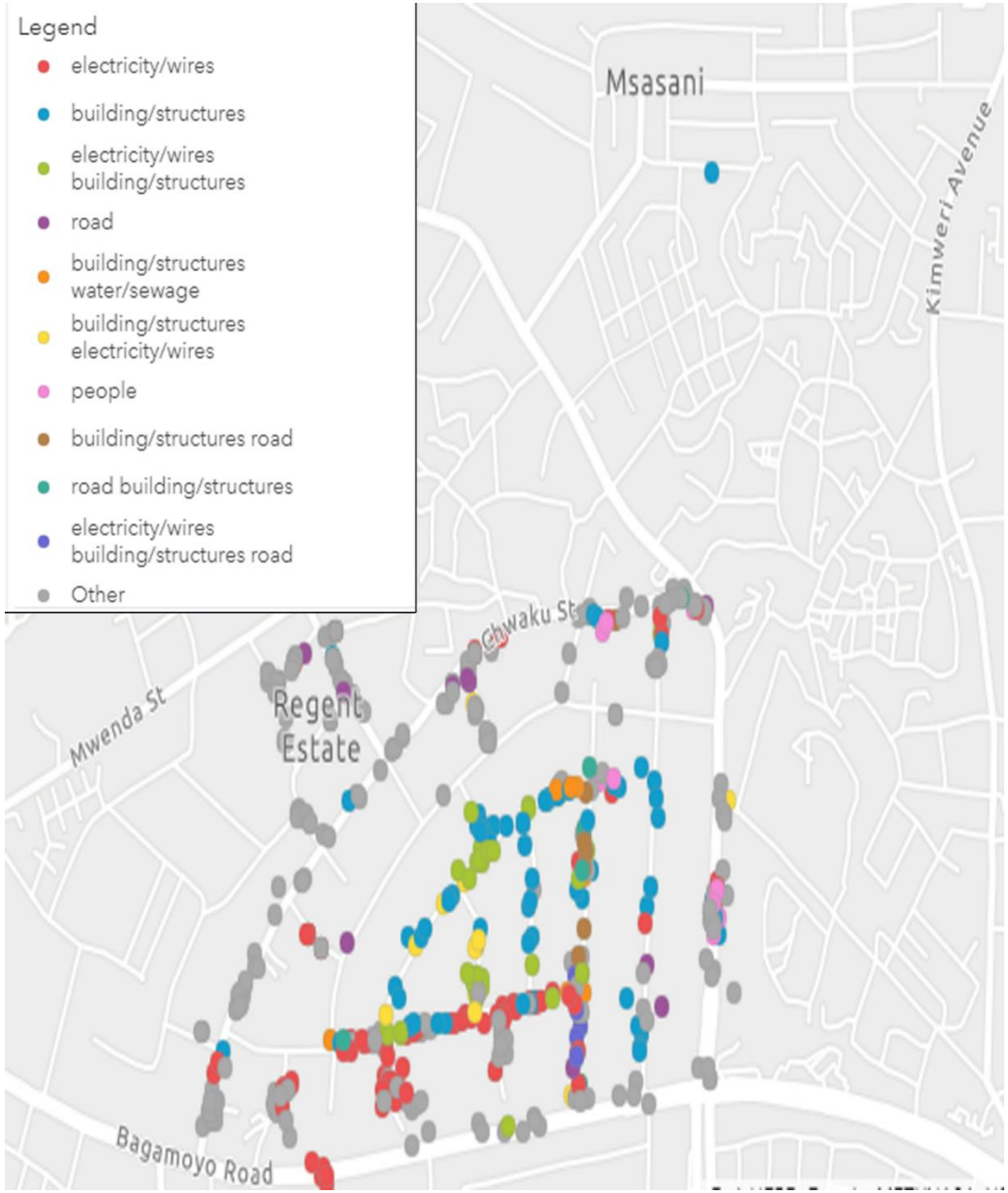

```
healthy                    531
slightly_damaged / sick     14
severely_damaged / sick      5
dead                         3
Name: tree_healt, dtype: int64
```

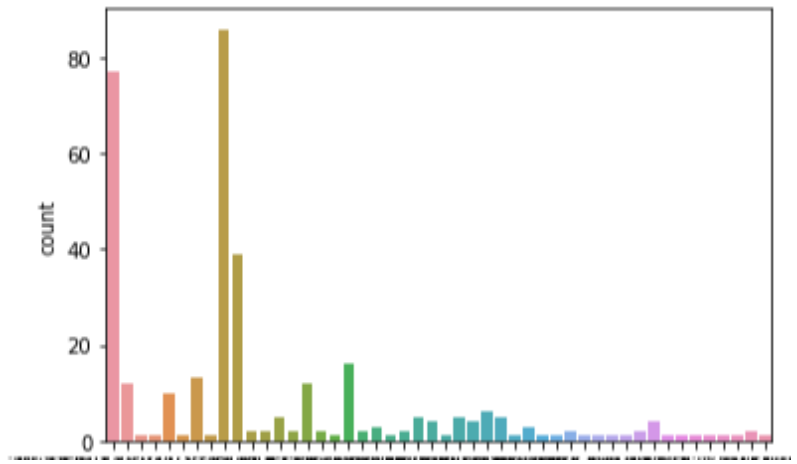


We are starting to explain the Health of Tree, we have observed different health status as some tree are healthy, slightly damaged, sick, severely damaged, dead and other (unknown). The good thing is that most of trees are in good health status.

But few of them are not in good status due to sick or managed but also there are some dead trees. Statistically the details are clearly shown bar graph above.

THREAT TREES






```
Out[47]: electricity/wires                                                    86
         building/structures                                                  77
         electricity/wires building/structures                                39
         road                                                                 16
         building/structures water/sewage                                     13
         building/structures electricity/wires                                12
         people                                                               12
         building/structures road                                             10
         road building/structures                                              6
         electricity/wires water/sewage                                        5
         electricity/wires road building/structures                            5
         electricity/wires building/structures road                            5
         water/sewage                                                          5
         building/structures people                                            4
         electricity/wires road                                                4
         water/sewage building/structures                                      4
         road electricity/wires                                                3
         electricity/wires road building/structures people                     3
         road electricity/wires building/structures                            2
         people building/structures                                           2
         water/sewage road                                                     2
         road water/sewage                                                     2
         electricity/wires road building/structures water/sewage               2
         electricity/wires water/sewage building/structures                    2
         electricity/wires road water/sewage                                   2
         electricity/wires building/structures water/sewage                    2
         road building/structures water/sewage                                 2
         electricity/wires road people building/structures                     1
         electricity/wires road water/sewage people                            1
         electricity/wires building/structures people                          1
         building/structures electricity/wires water/sewage road               1
         water/sewage road building/structures                                 1
         electricity/wires road water/sewage building/structures               1
         building/structures road electricity/wires water/sewage people        1
         building/structures road water/sewage electricity/wires               1
         building/structures road electricity/wires                            1
         building/structures electricity/wires road                            1
         building/structures water/sewage road                                 1
         electricity/wires water/sewage road                                   1
         electricity/wires building/structures water/sewage people             1
         road people                                                           1
         people electricity/wires                                              1
         water/sewage building/structures road electricity/wires               1
         people building/structures road                                       1
         road building/structures people electricity/wires                     1
         electricity/wires other                                               1
         people building/structures other                                      1
         electricity/wires road building/structures water/sewage people        1
         Name: threat, dtype: int64
```

There is an issue of threat in the trees. Those threat may cause risk to people, road and water infrastructure, electricity and buildings.

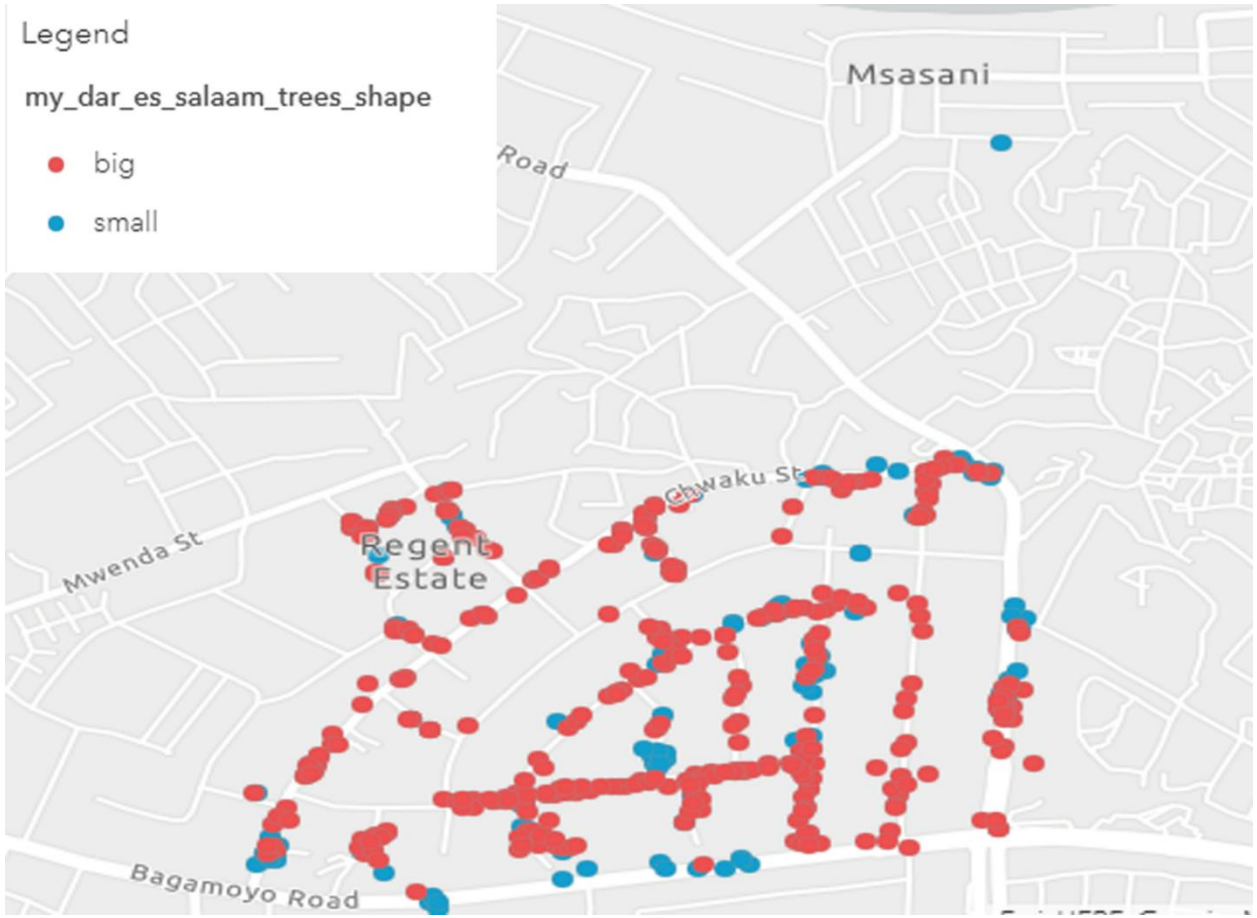
These issues should be taken seriously by the authority as we suggest the respective

measures should be taken to face those threat for the safety of the buildings, water and electricity resources, road as well as people who live around those trees.

Also, we are preparing a software application for threat respond where local people may send information to authority due to trees that seem to cause risk at any time being.

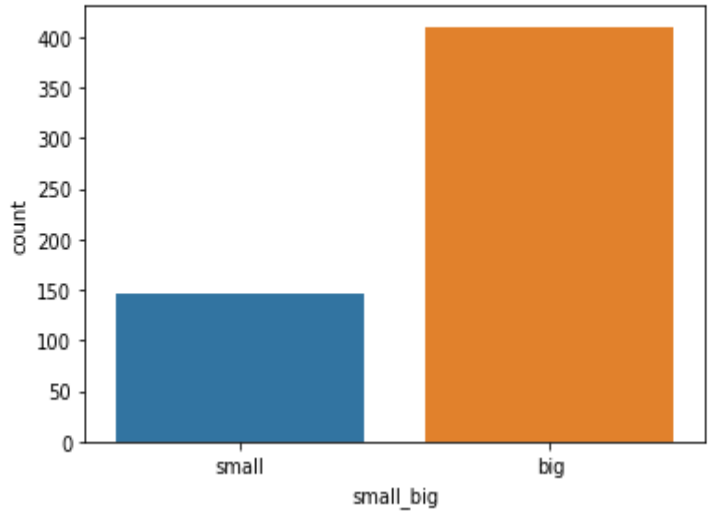
So that the authority may take urgently measure of those threes so as to avoid problems to people and properties.

SHAPE TREES




```
big      410
small    146
Name: small_big, dtype: int64
```

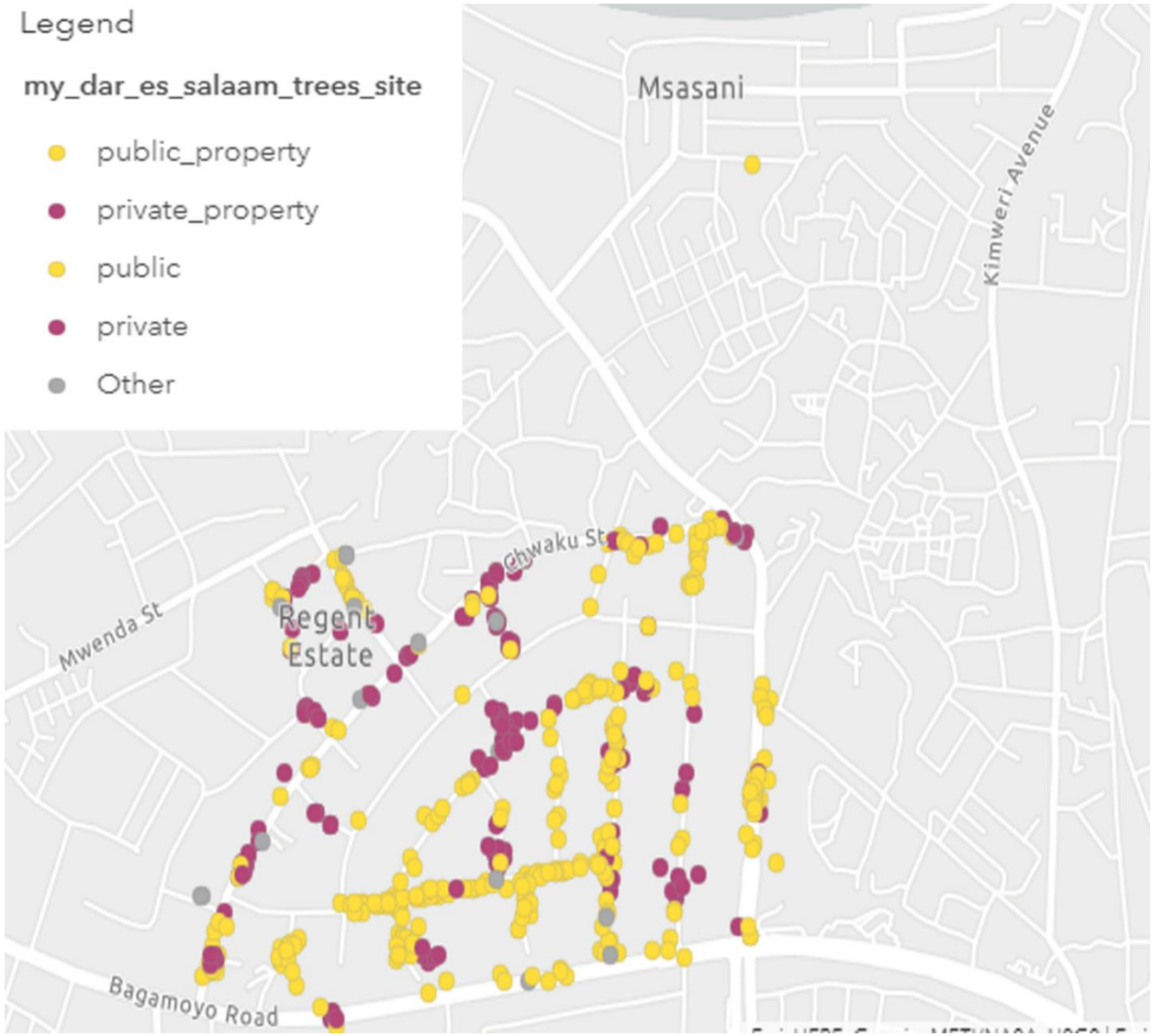
```
<AxesSubplot:xlabel='small_big', ylabel='count'>
```



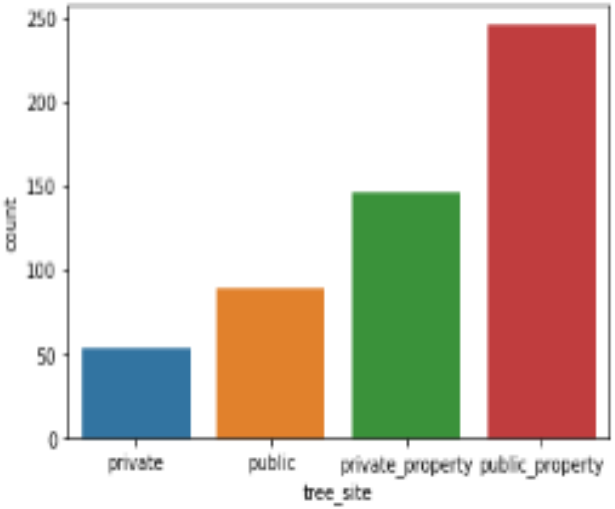
There are small and big tree found in the area of concerns, where by big trees seem to be much more than small trees.

Numerically you can observe from the bar graph above, also the visualization of tree based on their size is shown on the map above as well.

SITE TREES

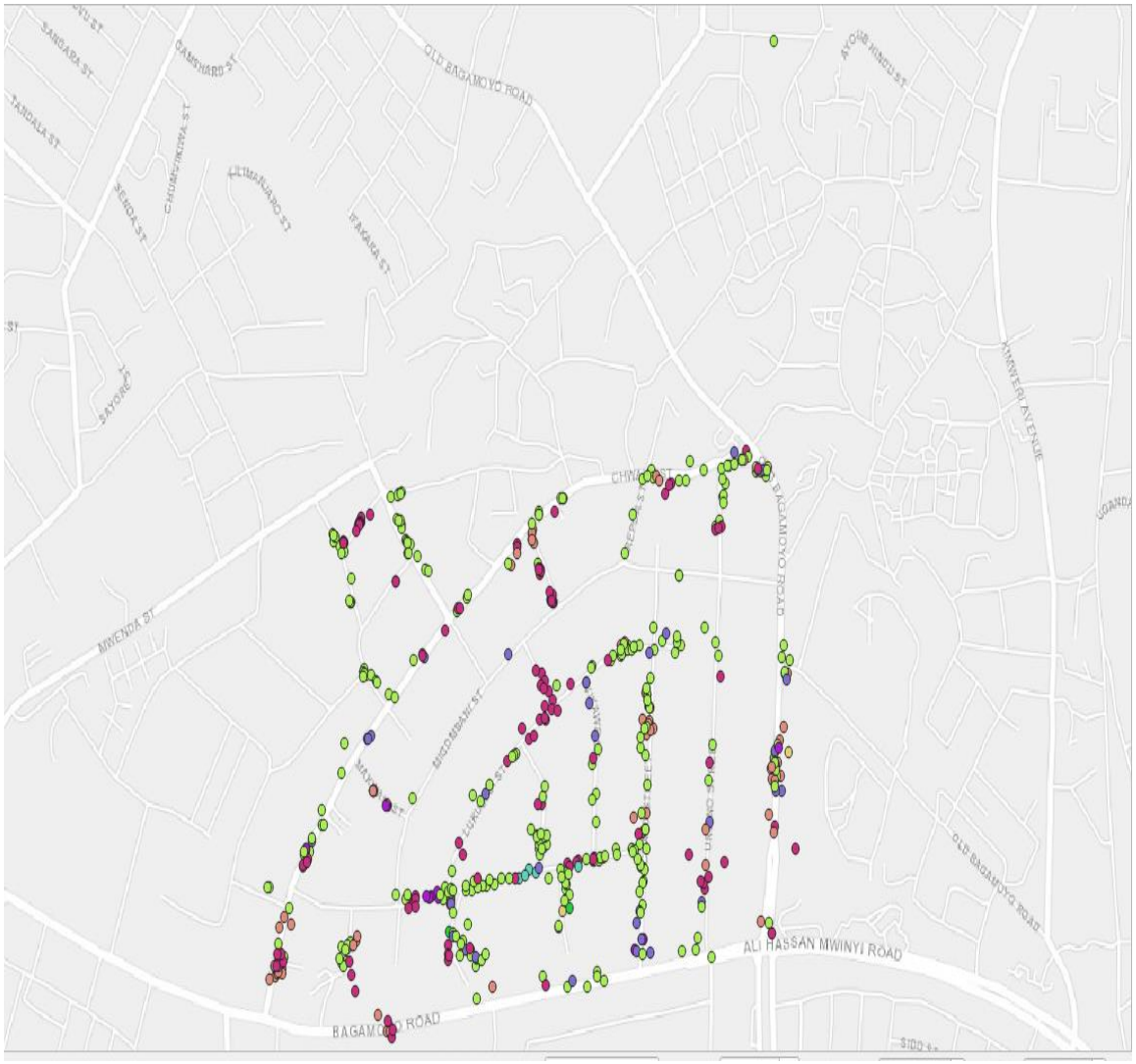



```
public_property     246
private_property    146
public               89
private              54
Name: tree_site, dtype: int64
```

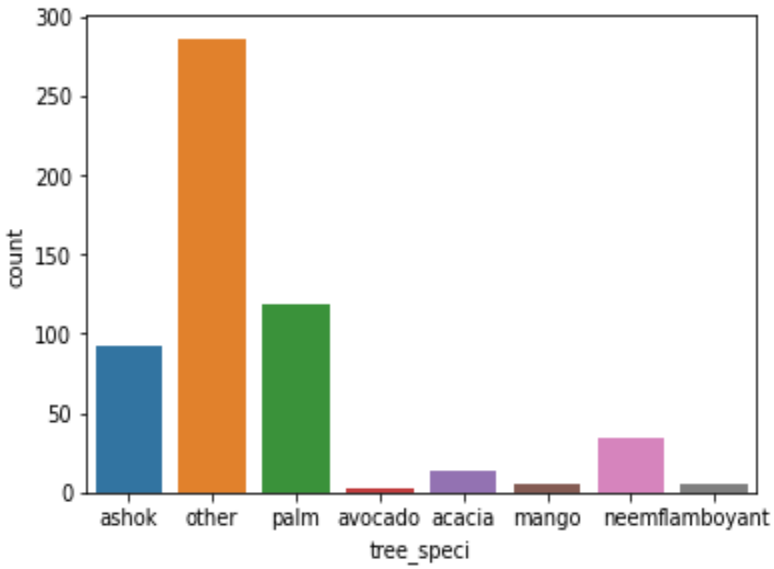


We have observed that the trees are located on public and private sites. This is crucial in case of make decision on dealing with trees. As Public trees are found to be more that trees are located or owned Privately by local people.

SPECIES TREES




```
other          286
palm           119
ashok           92
neem            34
acacia          13
mango            5
flamboyant       5
avocado          2
Name: tree_speci, dtype: int64
```



There is an Interesting thing we have observed in our analysis that is different tree species are found in our trees.

This feature can be use as opportunity for the authority to expose business opportunity for local farmers.

Local farmers can be issued a business to plant trees and selling them to the authority. And here we as a (Team Aktas)

we are coming with Web solution for the Authority to use so that it will bring together farmers of trees to sell their trees to the authority. This will open and increase Employment and Business for entrepreneurs.

END OF STORY

BY TEAM-AKTAS

2020