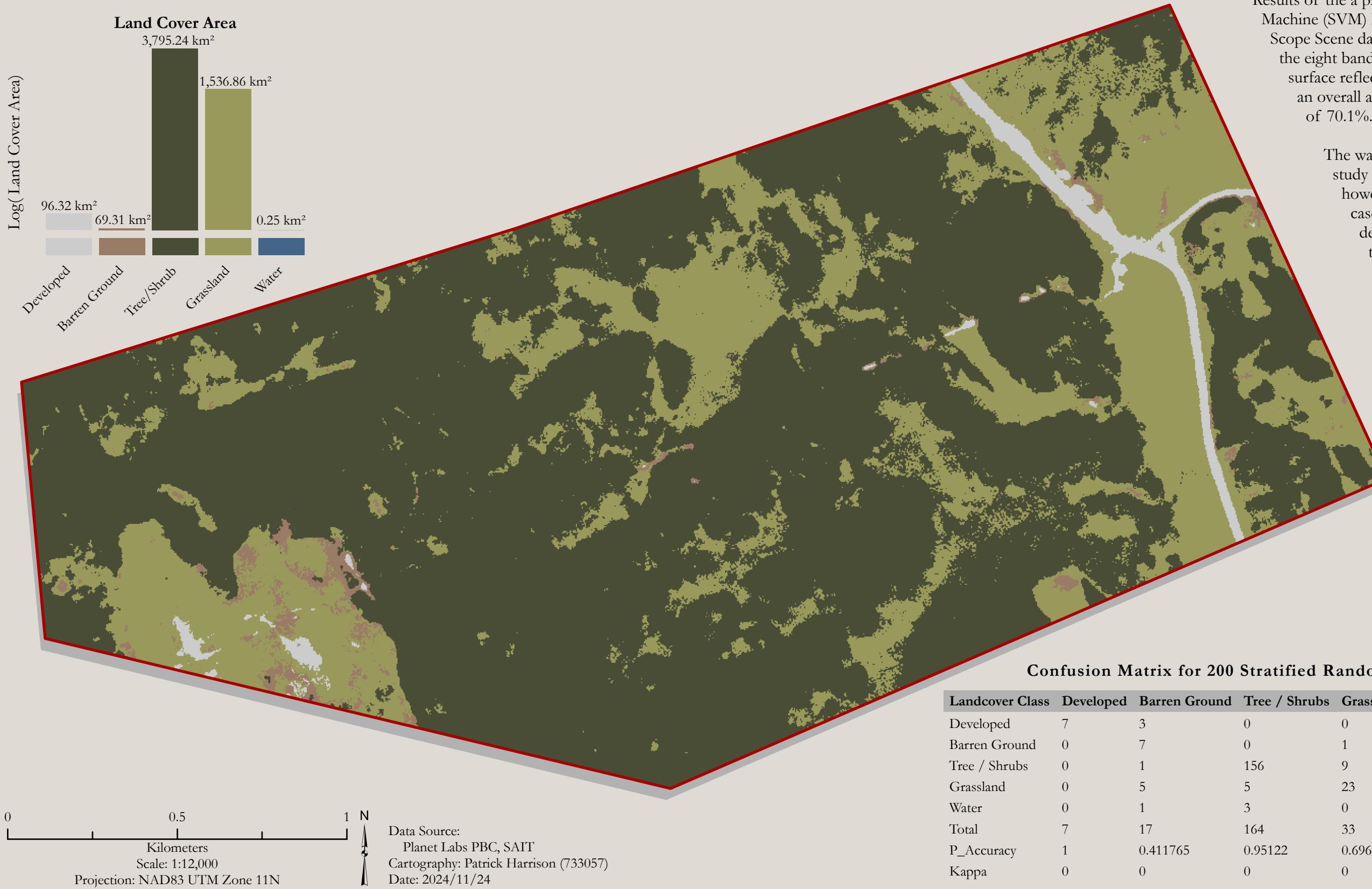


LANDCOVER CLASSIFICATION FOR THE WAIPAROUS AREA (2020)

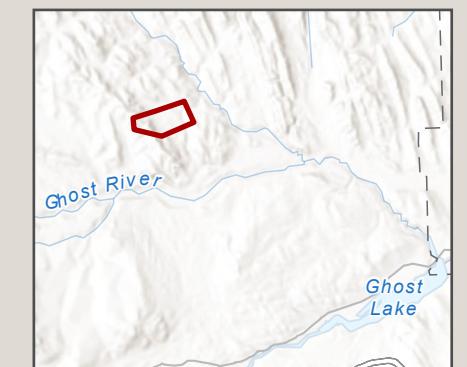
GEOS 451 | Assignment 03



Results of the a pixel based, supervised, Support Vector Machine (SVM) landcover classification for Planet Scope Scene data. The Planet Scope Scene data here is the eight band analytical product corrected for surface reflectance. The resulting classification has an overall accuracy of 87.4% with a kappa value of 70.1%.

The water classification (not shown in actual study area) was determined to be 100% however by visual inspection, this is not the case. The 200 accuracy points were not dense enough to get a good metric for the model performance.

Related to the water classification, there were many issues differentiating between shadowed trees and water. Another common issue with this classification is bright barren ground with developed areas.



Confusion Matrix for 200 Stratified Random Assessment Points

Landcover Class	Developed	Barren Ground	Tree / Shrubs	Grassland	Water	Total	U Accuracy	Kappa
Developed	7	3	0	0	0	10	0.700	0.000
Barren Ground	0	7	0	1	0	8	0.875	0.000
Tree / Shrubs	0	1	156	9	0	166	0.940	0.000
Grassland	0	5	5	23	0	33	0.697	0.000
Water	0	1	3	0	1	5	0.200	0.000
Total	7	17	164	33	1	222	0.000	0.000
P_Accuracy	1	0.411765	0.95122	0.69697	1	0	0.874	0.000
Kappa	0	0	0	0	0	0	0.000	0.701