

Supplemental Material

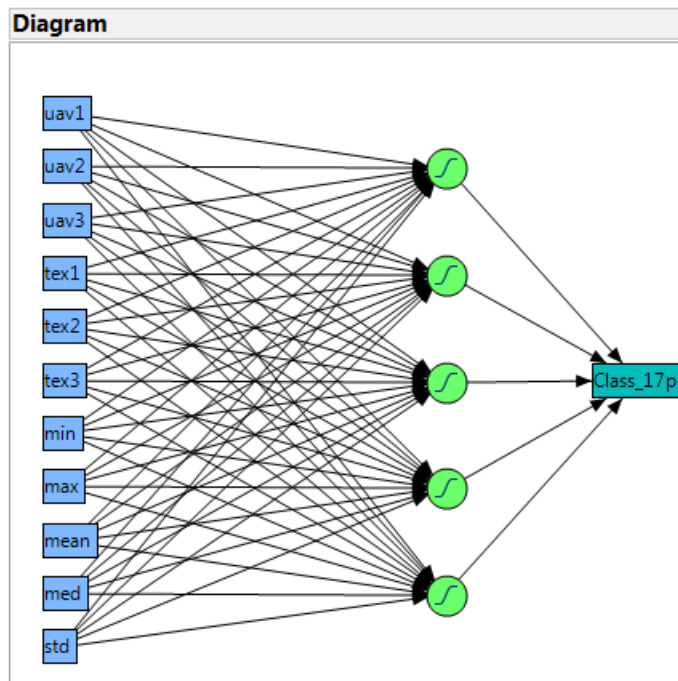


Figure S1. Artificial Neural Network used in our cover classification efforts, with five nodes using TanH with eleven input variables. uav1=blue band, uav2=green band, uav3=red band, tex1=entropy, tex2=ASM, tex3=evenness, min=minimum, max=maximum, mean=mean, med=median, std=standard deviation.

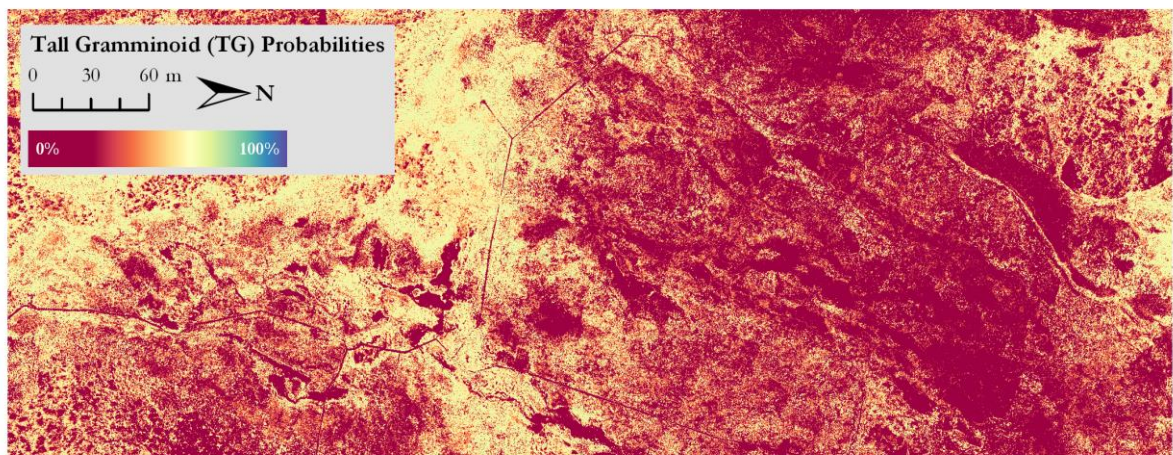


Figure S2. Probability map from an ANN for the Tall Graminoid cover class.

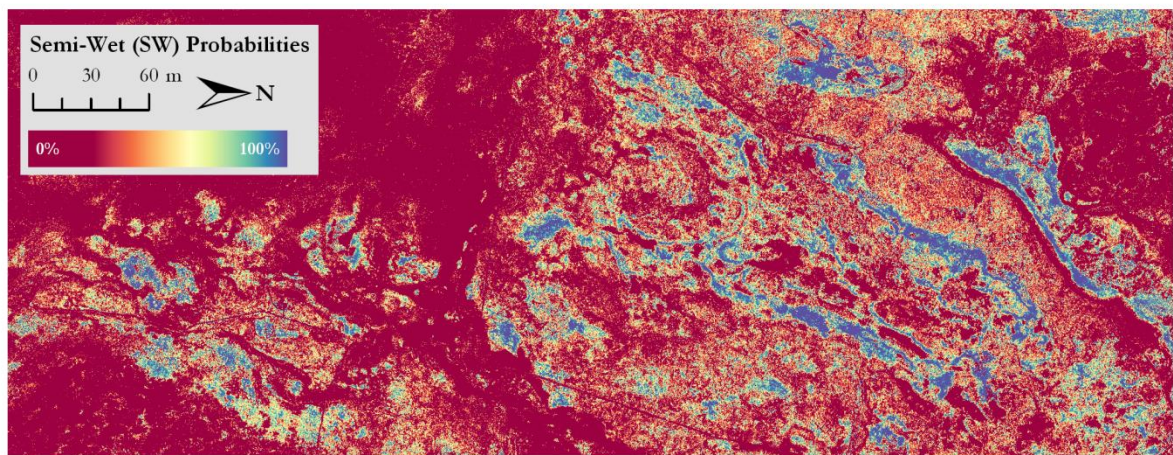


Figure S3. Probability map from an ANN for the Semi-Wet cover class.

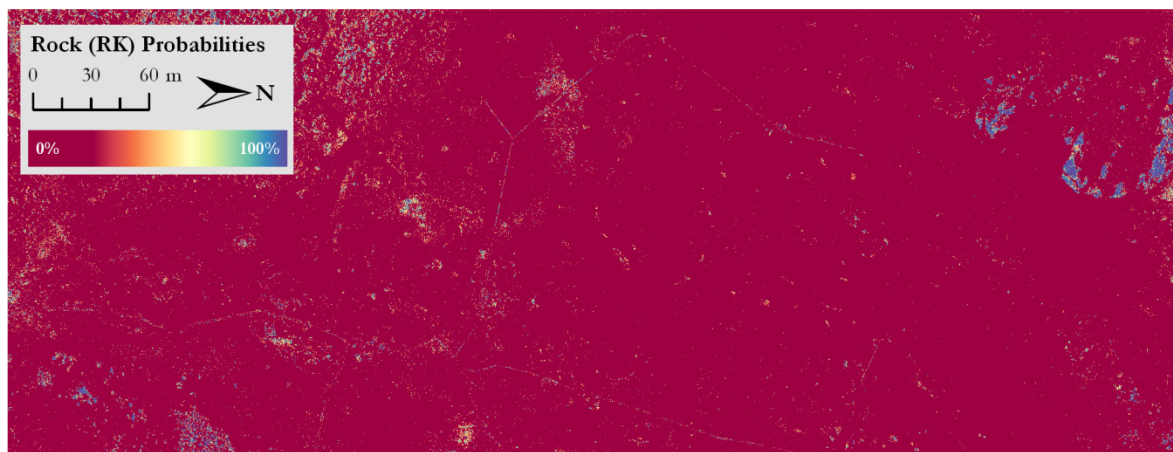


Figure S4. Probability map from an ANN for the Rock cover class.

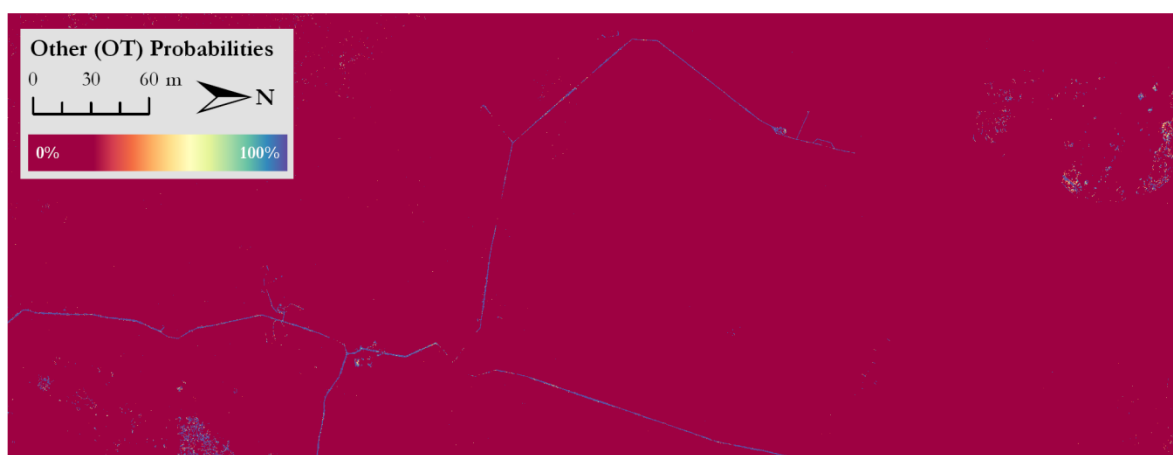


Figure S5. Probability map from an ANN for Other cover class.

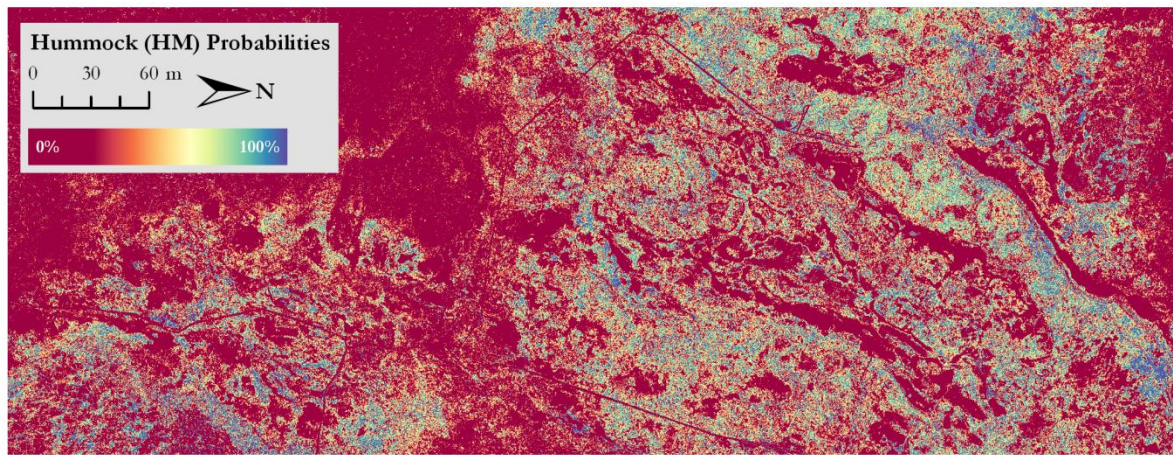


Figure S6. Probability map from an ANN for the Hummock cover class



Figure S7. Probability map from an ANN for the Water cover class

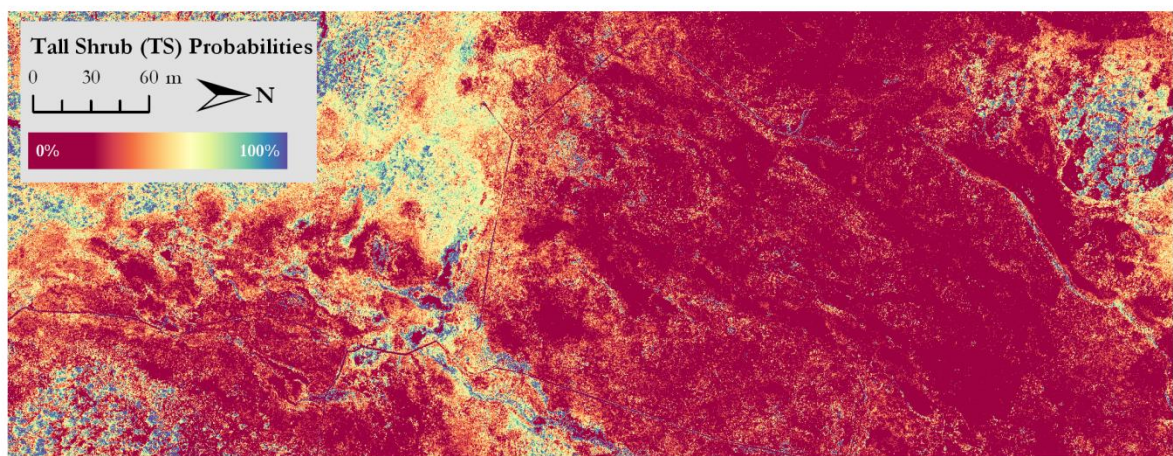


Figure S8. Probability map from an ANN for the Tall Shrub cover class

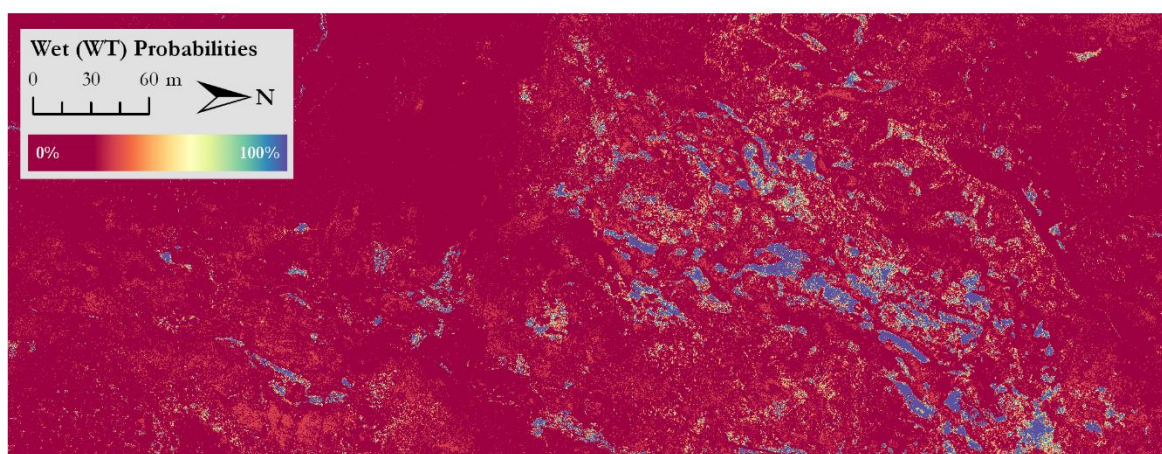
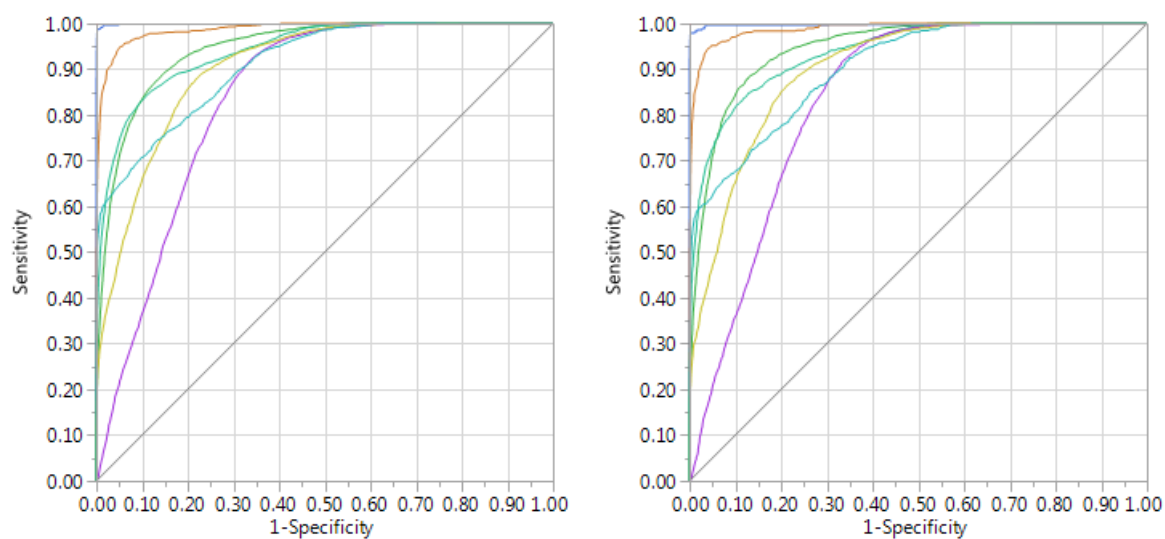


Figure S9. Probability map from an ANN for the Wet cover class



Class_17p	Area	Class_1	Area
H2O	1.0000	H2O	1.0000
HM	0.9458	HM	0.9474
OT	0.9988	OT	0.9977
RK	0.9877	RK	0.9887
SW	0.9425	SW	0.9392
TG	0.8388	TG	0.8379
TS	0.9060	TS	0.9033
WT	0.9119	WT	0.9051

Figure S10. ROC curve for cover types. H2O-water, HM-Hummock, OT-Other, RK-Rock, SW-Semi-wet, TG-Tall graminoid, TS-Tall shrub, WT-wet.

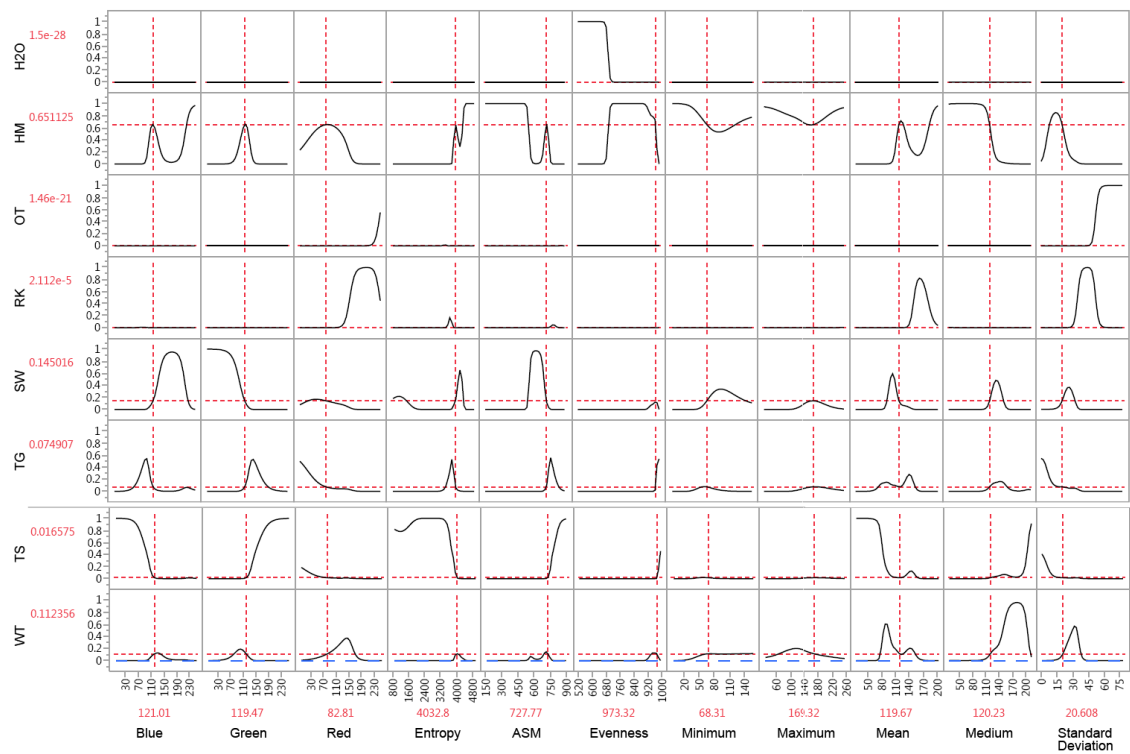


Figure 11. Prediction profiler indicating the response of different variables in the model for cover types. H2O-water, HM-Hummock, OT-Other, RK-Rock, SW-Semi-wet, TG-Tall graminoid, TS-Tall shrub, WT-wet.

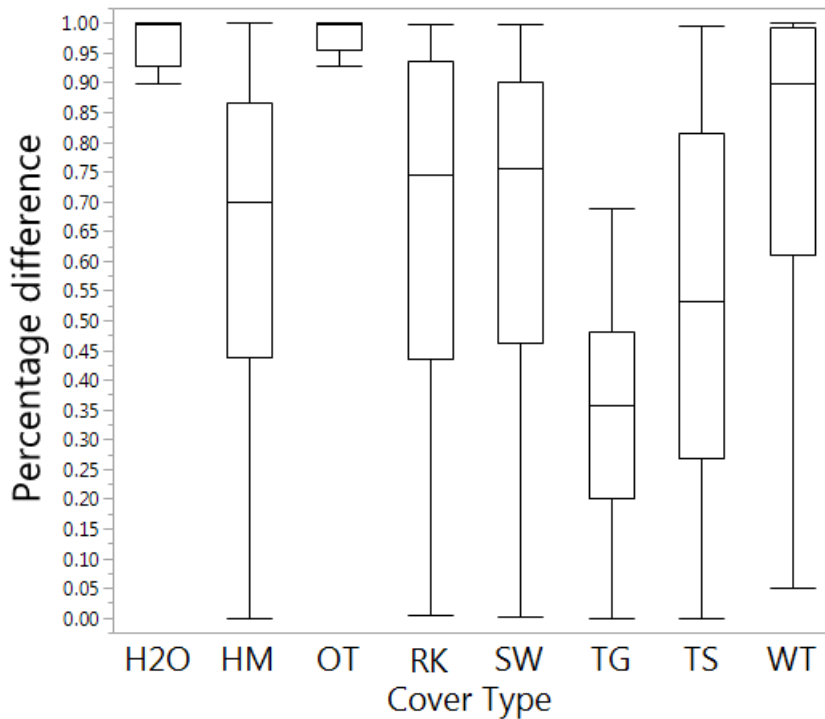


Figure S12. Difference in the probability for the highest and second highest classes from the ANN. H2O-water, HM-Hummock, OT-Other, RK-Rock, SW-Semi-wet, TG-Tall graminoid, TS-Tall shrub, WT-wet.

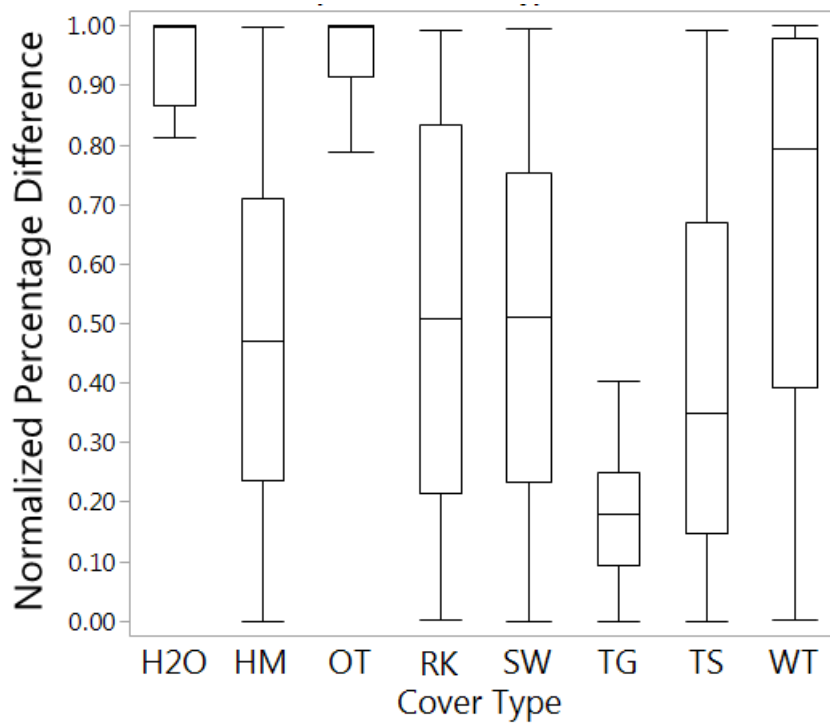


Figure S13. Normalized difference in the probability for the highest and second highest classes from the ANN. H2O-water, HM-Hummock, OT-Other, RK-Rock, SW-Semi-wet, TG-Tall graminoid, TS-Tall shrub, WT-wet.

Table S1. Annual average of cloud cover in Landsat imagery over Stordalen

Year	Number of Images	Percent Cloud Cover
1984	34	33.02941176
1985	44	62.84090909
1986	42	64.33333333
1987	42	61.57142857
1988	46	63.2173913
1989	46	64.47826087
1990	41	60.51219512
1991	36	59.5
1992	44	46.77272727
1993	47	62.31914894
1994	31	60.16129032
1995	44	59.95454545
1996	34	57.38235294
1997	37	53.13513514
1998	34	66.38235294
1999	30	65.96666667
2000	67	53.41791045
2001	37	54.40540541
2002	40	50.275
2003	21	39.23809524

2004	51	55.56862745
2005	47	59.74468085
2006	59	47.94915254
2007	47	62.0212766
2008	14	47.64285714
2009	42	60.85714286
2010	29	59.44827586
2011	43	61.02325581
2012	18	57.94444444
2013	57	66.35719298
2014	82	54.0454878
2015	91	62.91681319
2016	106	59.19688679
2017	108	63.05574074
2018	33	41.99515152
