

# Supplementary Figures and Tables

## Regional Carbon Cycle Responses to 25 Years of Variation in Climate and Disturbance in the US Pacific Northwest

David P. Turner<sup>1</sup>

Department of Forest Ecosystems and Society  
Oregon State University  
Corvallis OR 97331  
david.turner@oregonstate.edu

William D. Ritts

Department of Forest Ecosystems and Society  
Oregon State University  
Corvallis OR 97331  
david.ritts@oregonstate.edu

Robert E. Kennedy

College of Earth, Ocean, and Atmospheric Sciences  
Oregon State University  
Corvallis OR 97331  
robert.kennedy@oregonstate.edu

Andrew N. Gray

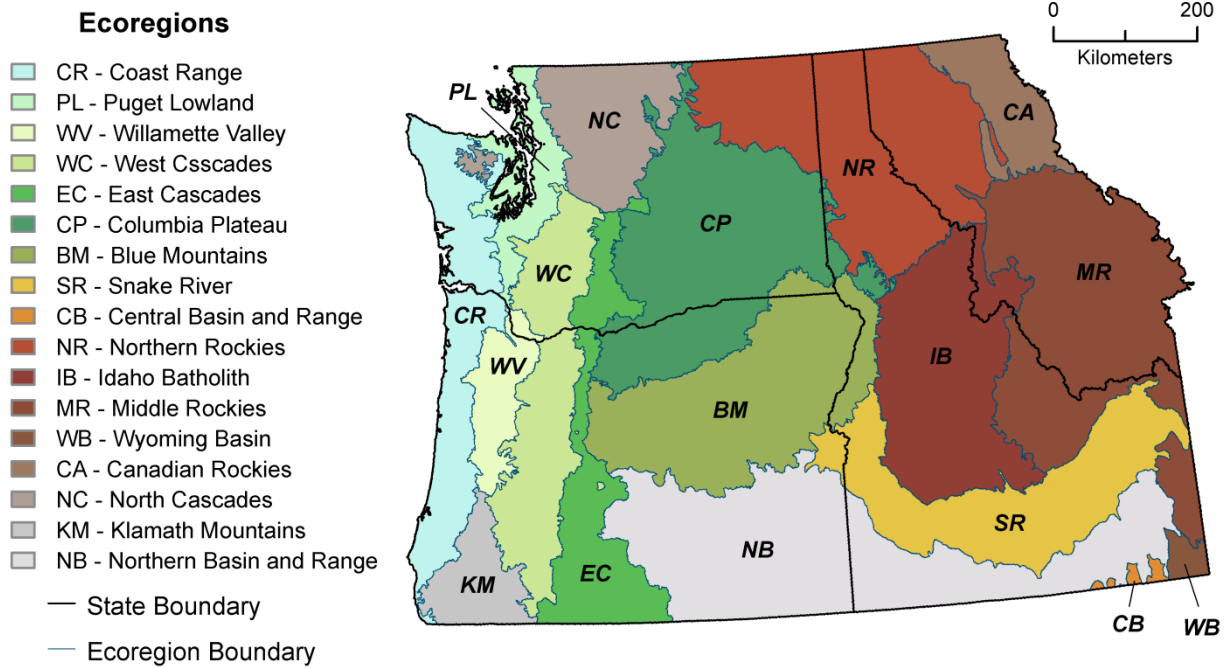
USDA Forest Service  
Pacific Northwest Research Station  
Corvallis OR 97331  
andy.gray@oregonstate.edu

Zhiqiang Yang

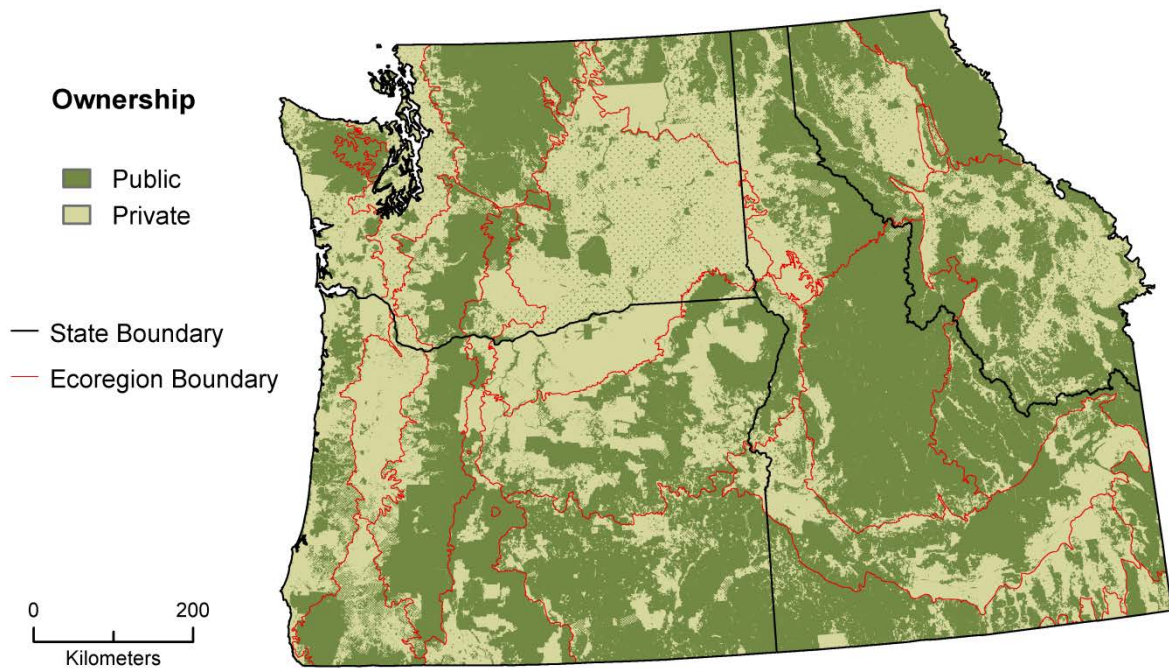
Department of Forest Ecosystems and Society  
Oregon State University  
Corvallis OR 97331

<sup>1</sup>Corresponding Author

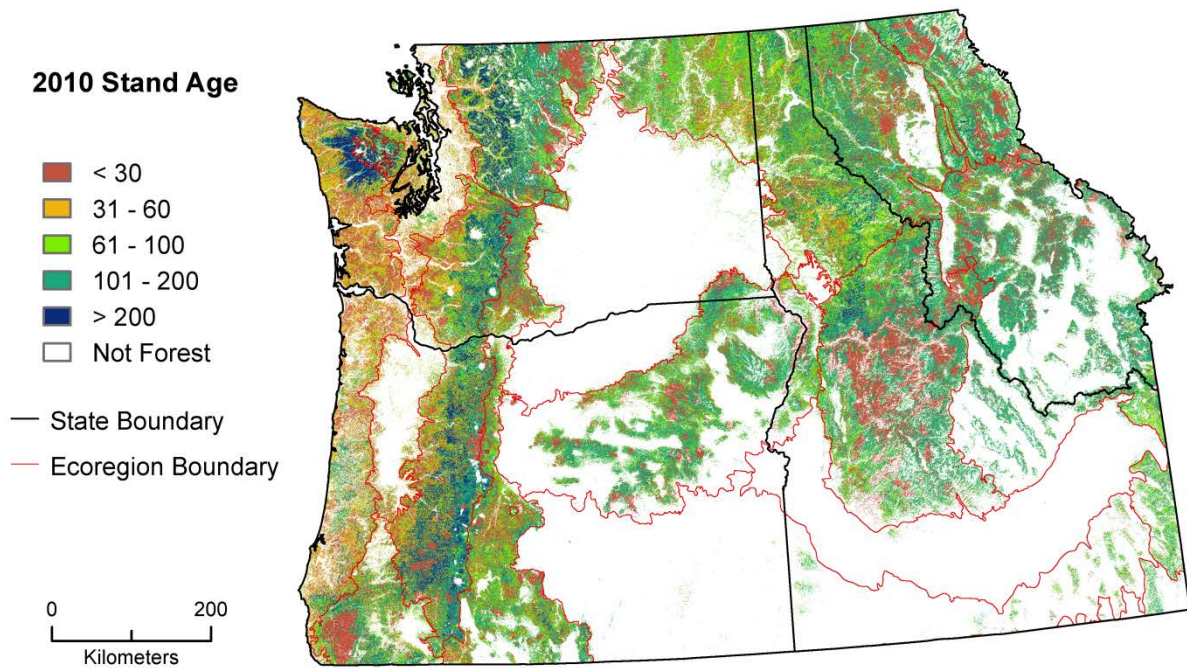
Published in *Regional Environmental Change*



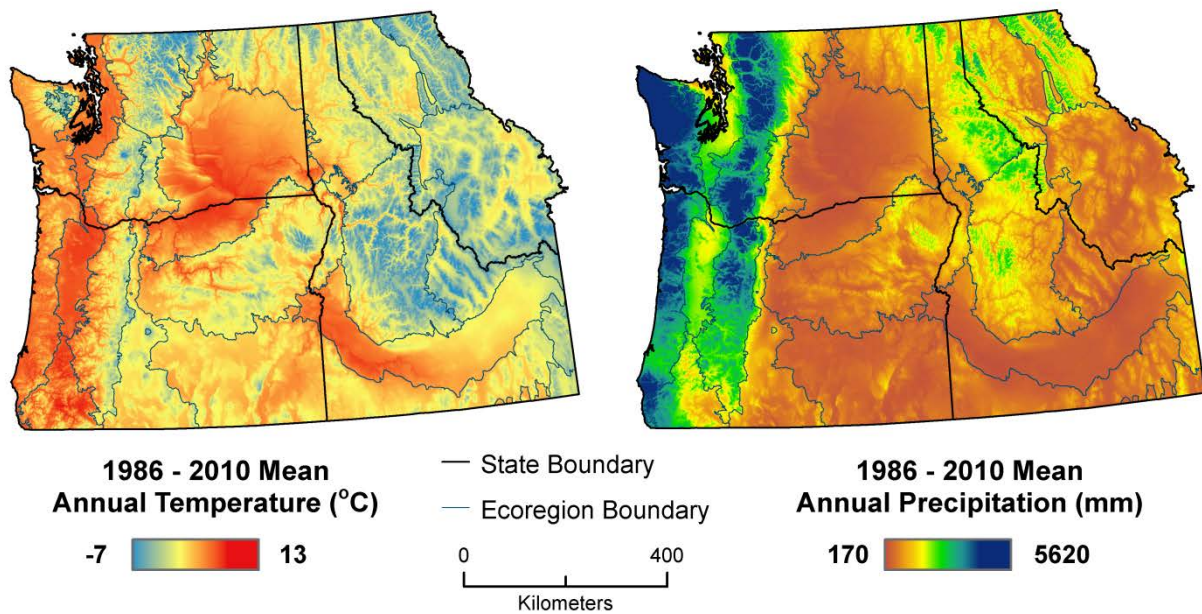
**SFig. 1** Omernick ecoregions.



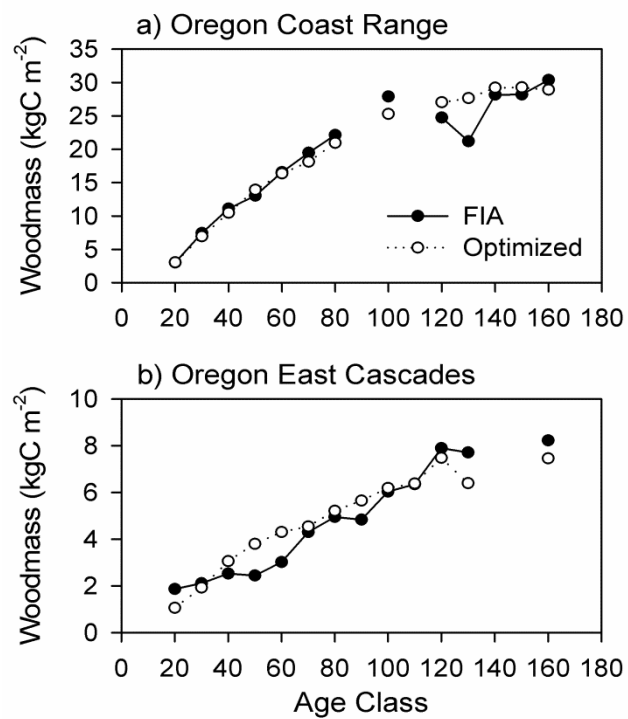
**SFig. 2** The distribution of private and public land over the study domain.



**SFig. 3** Stand age in 2010 over the study domain.

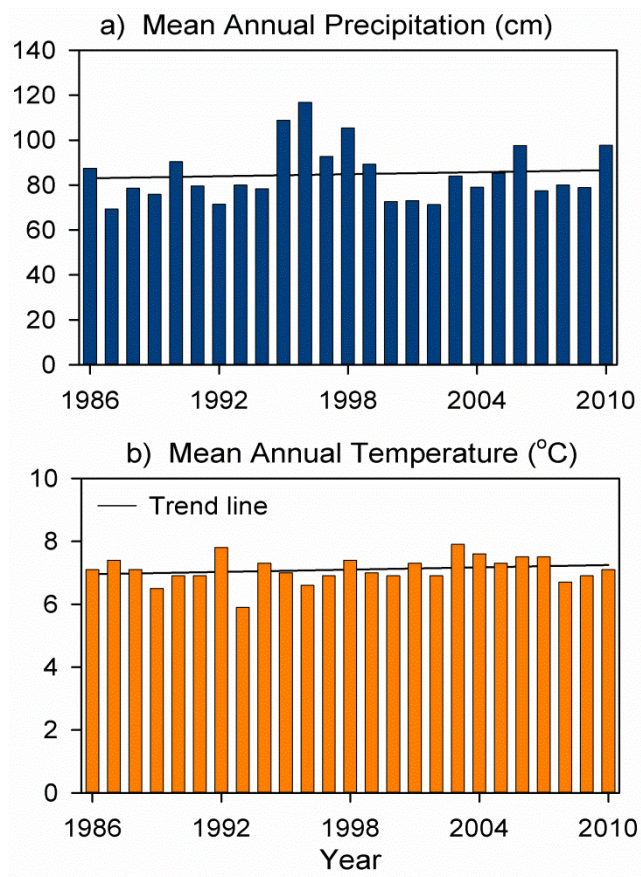


**SFig. 4** Climate variation over the study domain: a) Mean Annual Temperature, b) Annual Precipitation. Values are means for 1986-2010 interval.

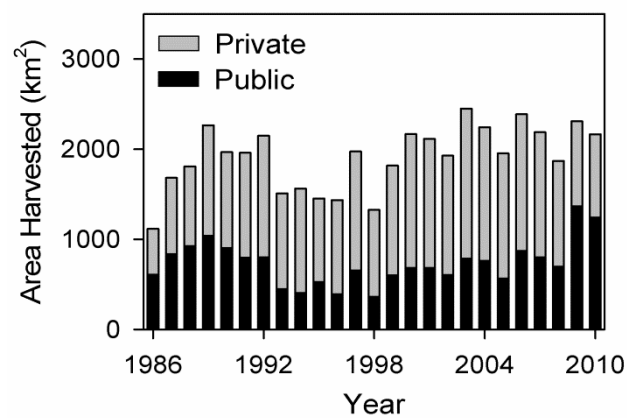


**SFig. 5** Comparison of age-bin means for observed (FIA) and simulated (optimized Biome-BGC) aboveground wood biomass: a) Oregon Coast Range, b) Oregon East Cascades.

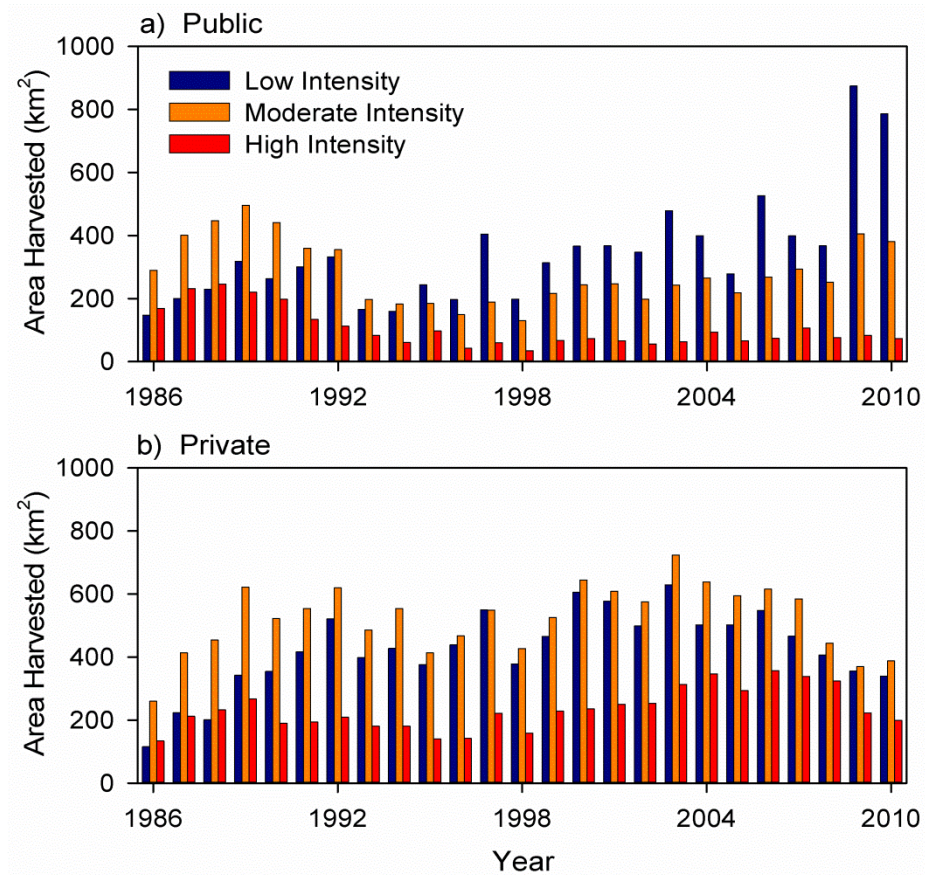




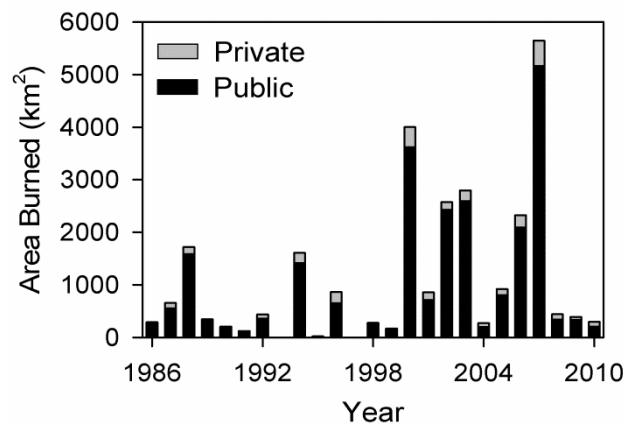
**SFig. 6** Interannual variation in Mean Annual Temperature and Annual precipitation over the Northwest region.



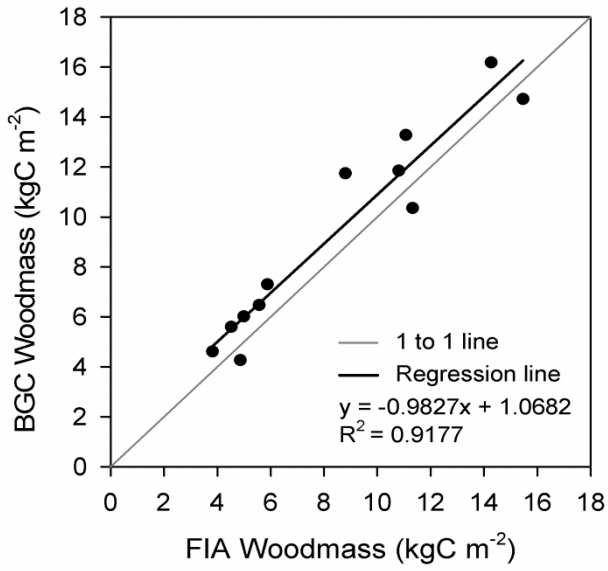
**SFig. 7** Annual time series for total area harvested (1986-2010) over the study domain.



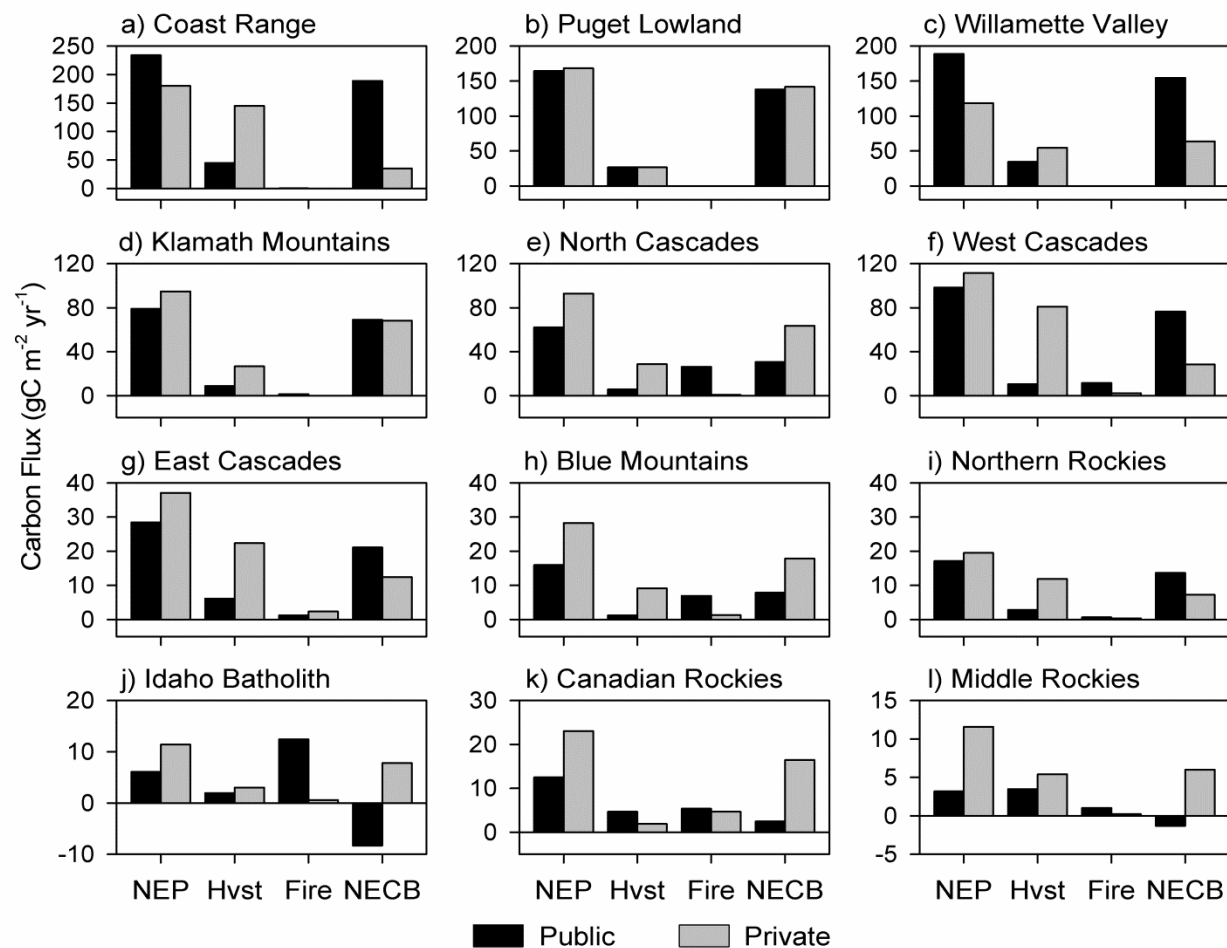
**SFig. 8** Annual time series for area harvested by intensity class (1986-2010) over the study domain.



**SFig. 9** Annual time series for total area burned (1986-2010) over the study domain.



**SFig. 10** Comparison of ecoregion mean aboveground wood mass between Biome-BGC simulations and Forest Inventory and Analysis plots data. See STable 1 to link FIA woodmass values here to ecoregion acronyms.



**SFig. 11** Net ecosystem production, fire emissions, harvest removals, and net ecosystem carbon balance (2006-2010) by ecoregion.



**STable 1.** Mean aboveground wood mass and net aboveground wood growth by ecoregion from FIA plot data. See SFig. 1 for ecoregion names and locations.

Ecoregion	AGWoodC (kgC m <sup>-2</sup> )		AGNetGrow (kgC m <sup>-2</sup> )	
	Mean	Standard Deviation	Mean	Standard Deviation
CR	14.3	11.4	0.246	0.201
PL	11.3	8.7	0.256	0.149
WV	8.8	6.9	0.257	0.163
KM	11.1	8.9	0.121	0.118
NC	10.8	9.1	0.096	0.137
WC	15.5	10.6	0.138	0.167
EC	5.6	4.9	0.118	0.154
BM	5.0	3.5	0.107	0.125
NR	5.9	4.4	0.125	0.118
IB	4.9	3.9	0.062	0.065
CA	4.5	3.4	0.098	0.065
MR	3.8	2.8	0.046	0.049