

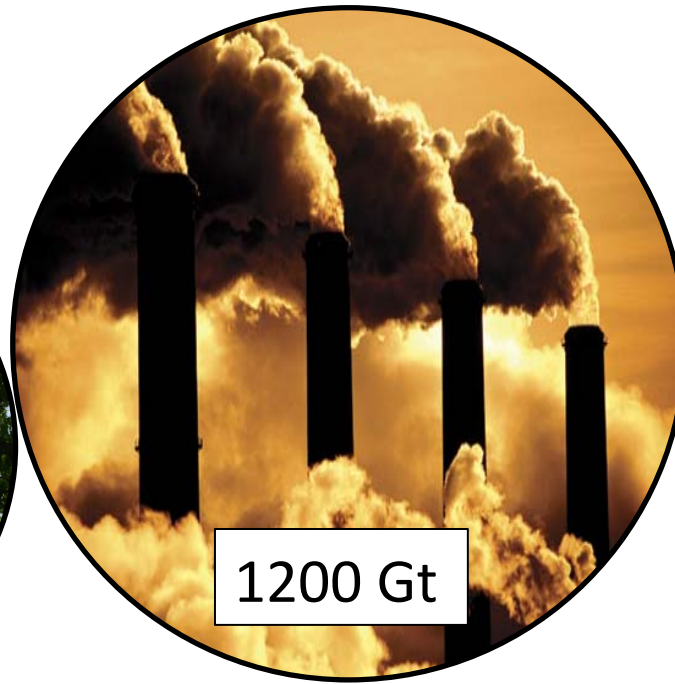


Permafrost: The Frozen Amplifier



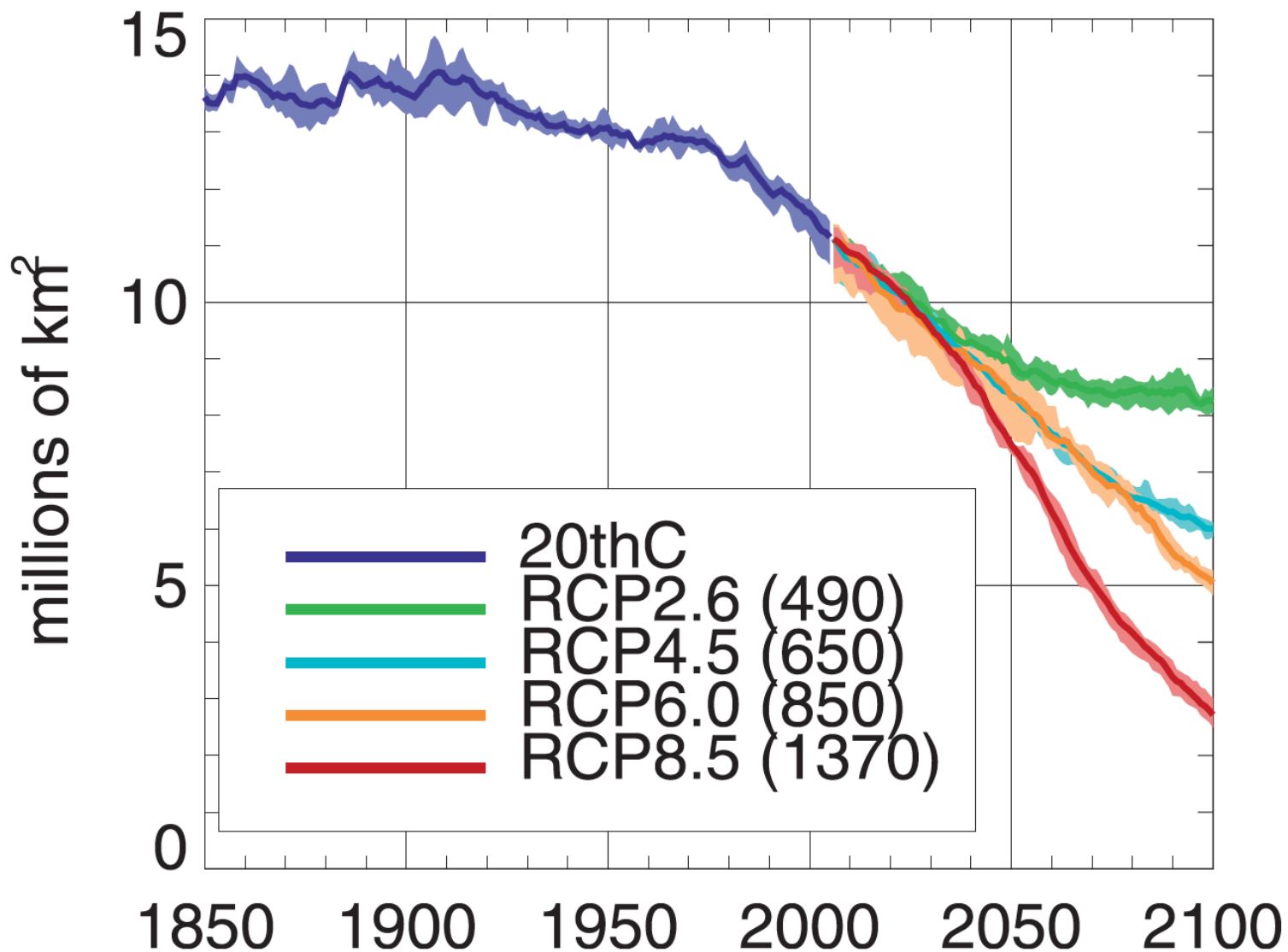
Susan Natali
Woods Hole Research Center

Permafrost is the largest vulnerable carbon pool on the planet



1 Gt = 1 000 000 000 tonnes

Permafrost Loss: 30% ($\sim 1.5^\circ$) v. 70% ($> 4.5^\circ$)





How Does Permafrost Thaw Affect Emissions Targets?

< 2°C: 790 Gt
Remaining budget



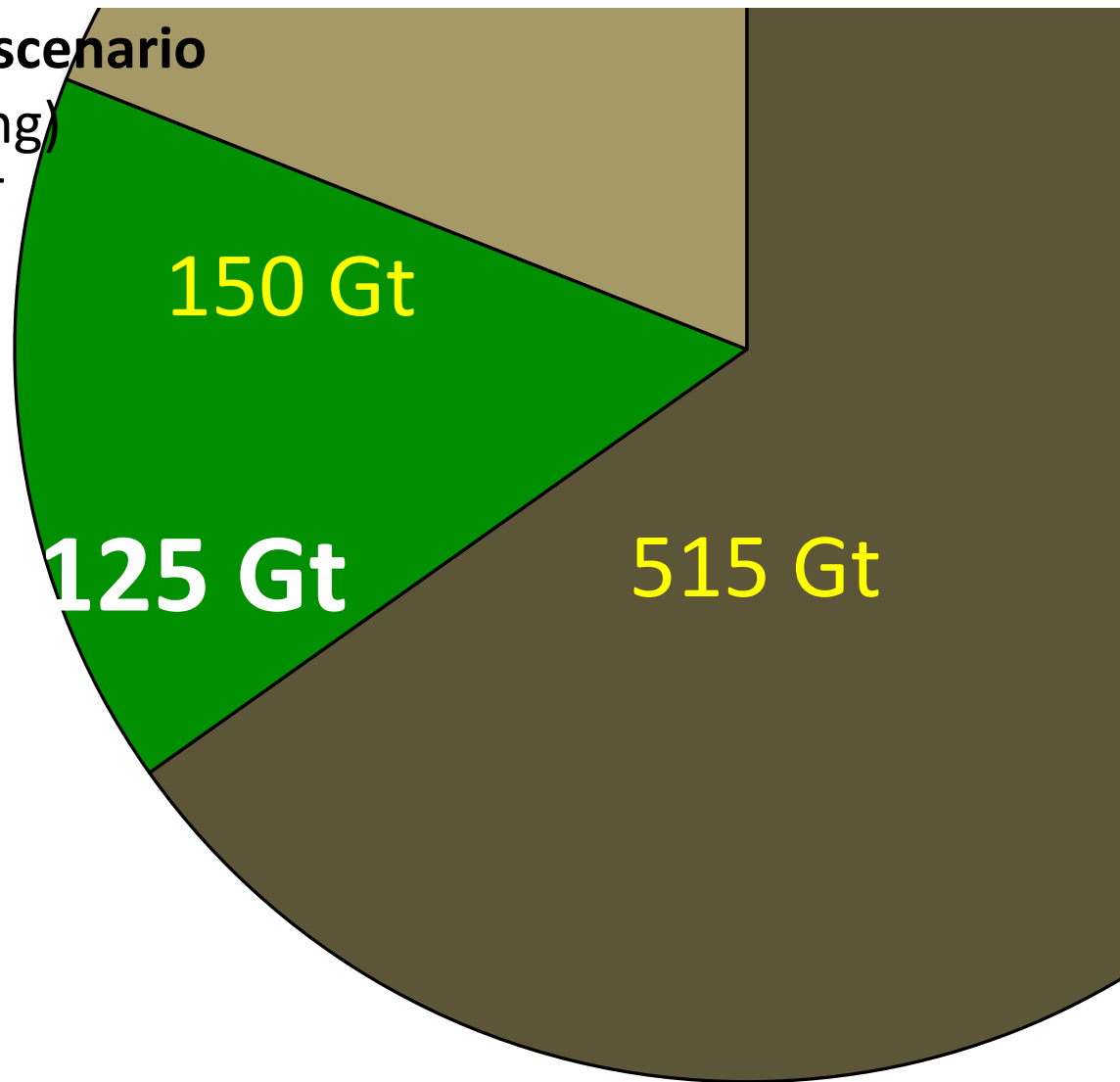
Permafrost Emissions by 2100

High warming scenario

(> 4.5 C warming)

uses up ~125GT

of remaining
carbon budget



Permafrost Carbon at 4.5° ~ = US emissions

130-160 Gt

