



Forests²⁰²⁰

CONFERENCE

Risk and opportunities for tropical forests

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ecometrica.com/forests2020

Key Challenge Areas



How are forests changing?



What is the restoration potential of forests?



What is the fire risk for forests?



What is the restoration time of forests?





How are forests changing?

Degradation – Reduction in aboveground biomass from an area that remains forest after disturbance



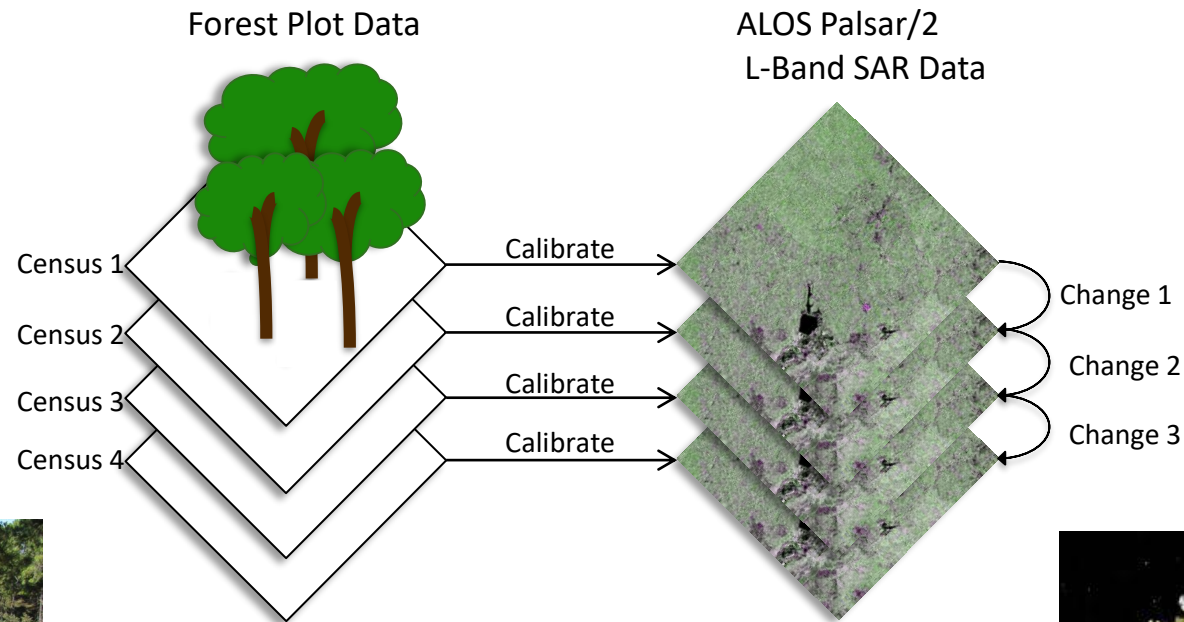
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Methodological Approach

Activity in Mexico and Ghana

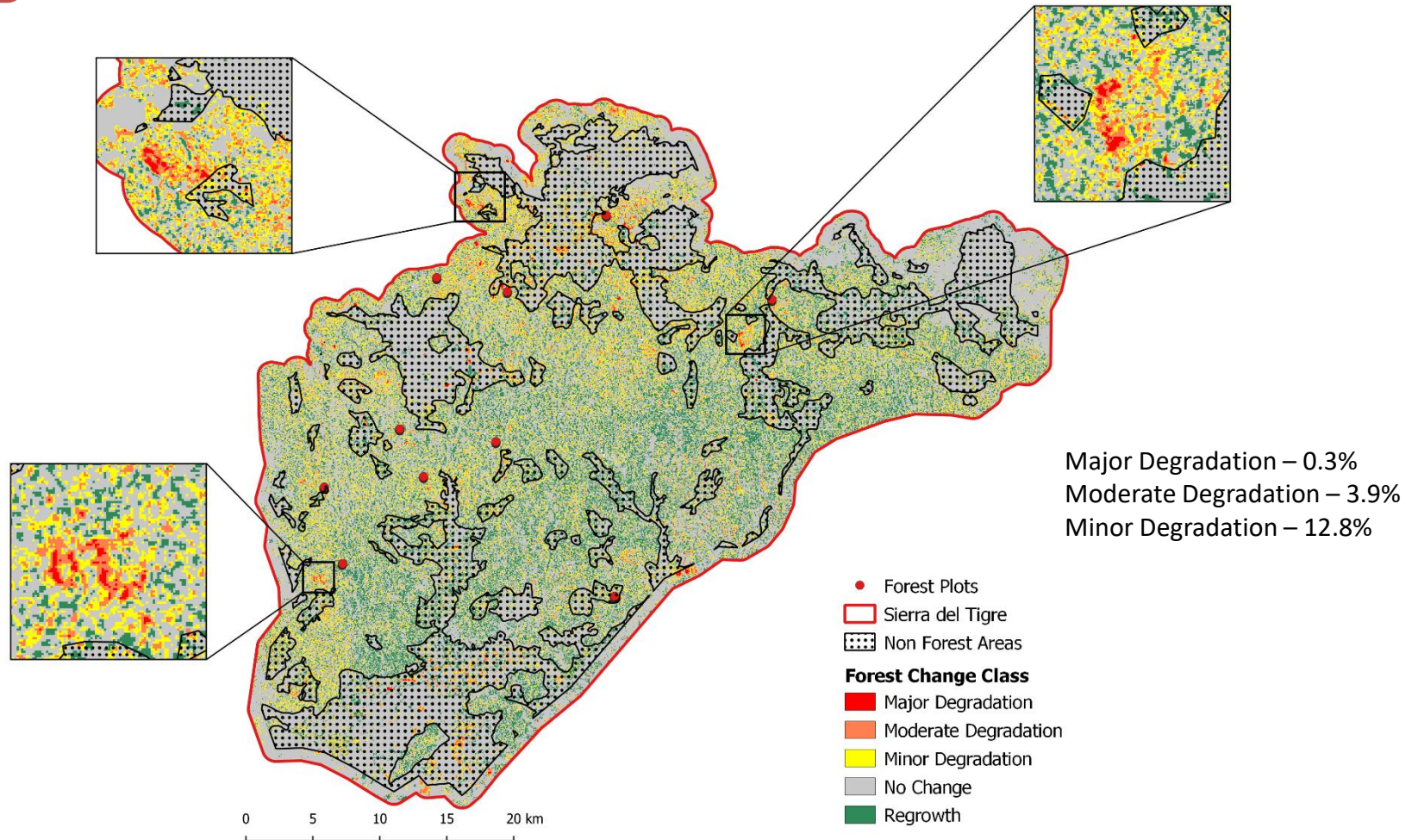


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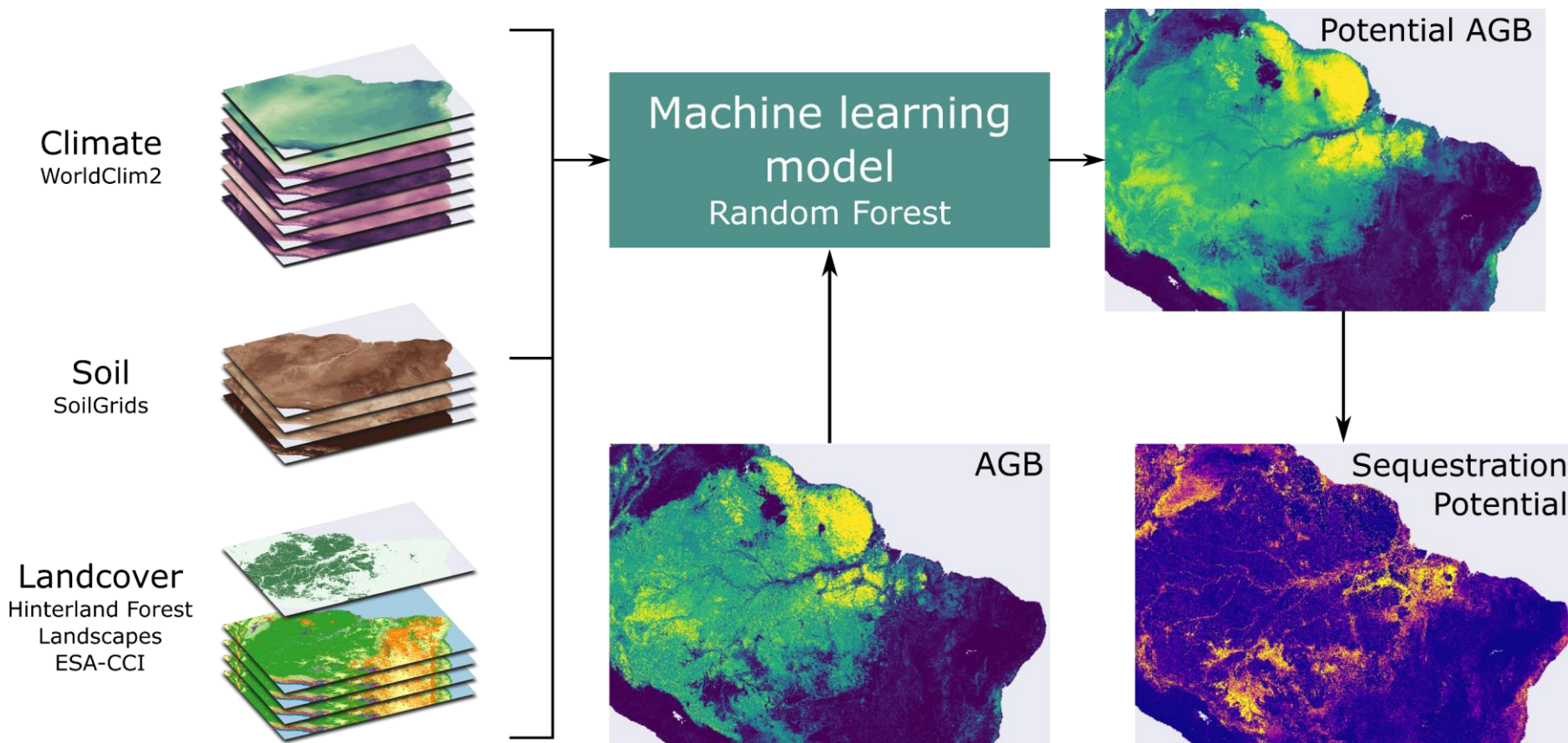


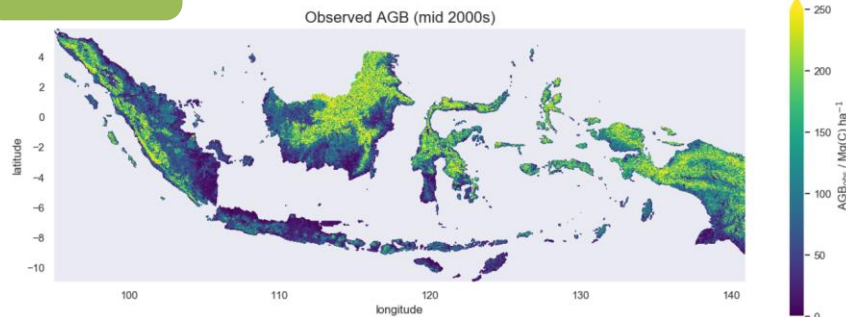
Degradation - Mexico





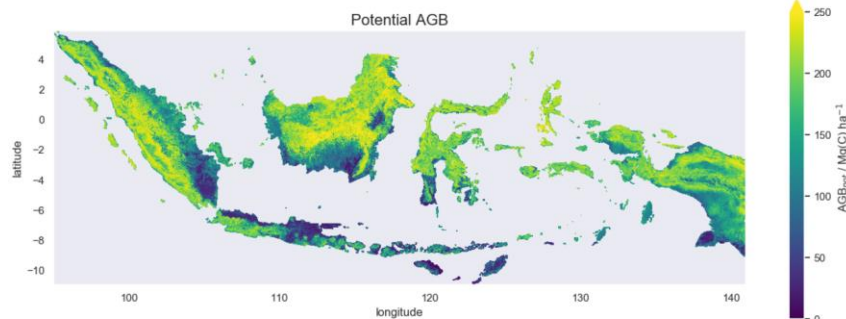
What is the restoration potential of forests?



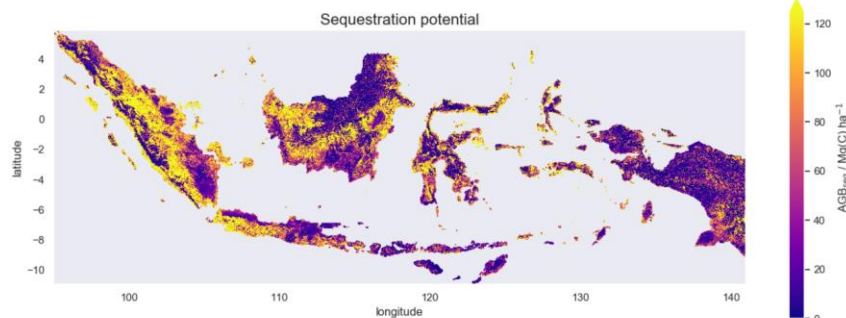


INDONESIA; Area ~ 1.9 million km²

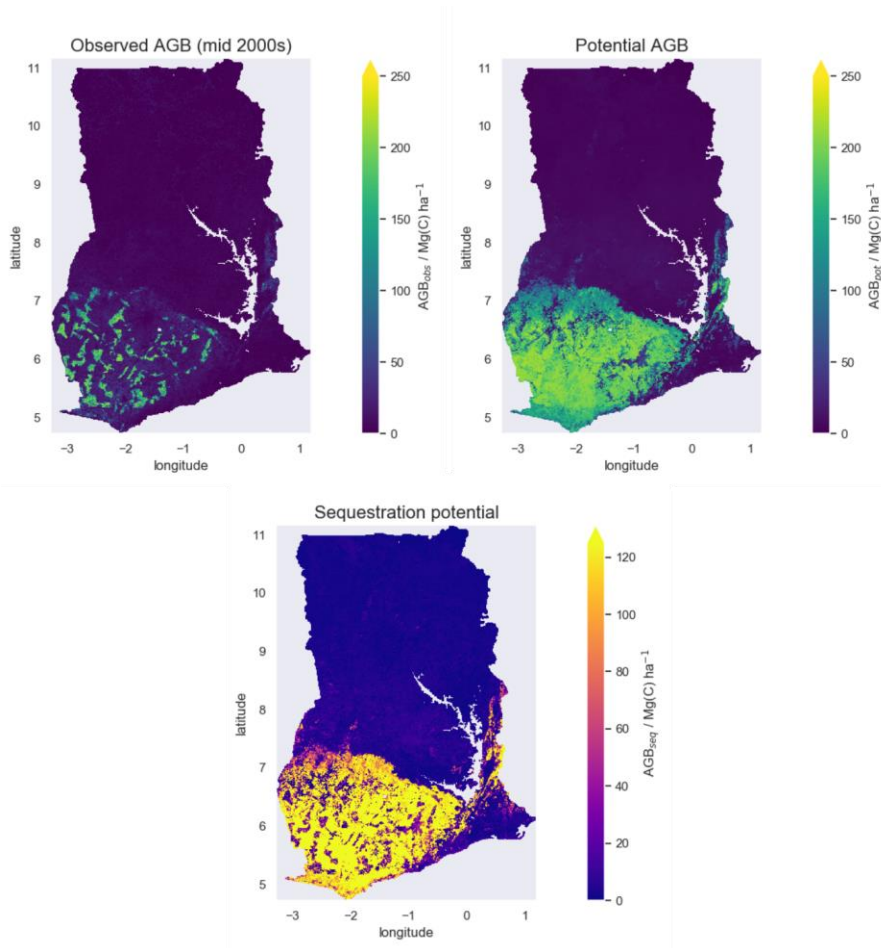
Observed AGB in mid-2000s:
 ~ 20.6 billion Mg(C)



Potential AGB in mid-2000s:
 ~ 30.8 billion Mg(C)



AGB deficit in mid-2000s:
 ~ 10.2 billion Mg(C)



GHANA; Area ~ 0.24 million km^2

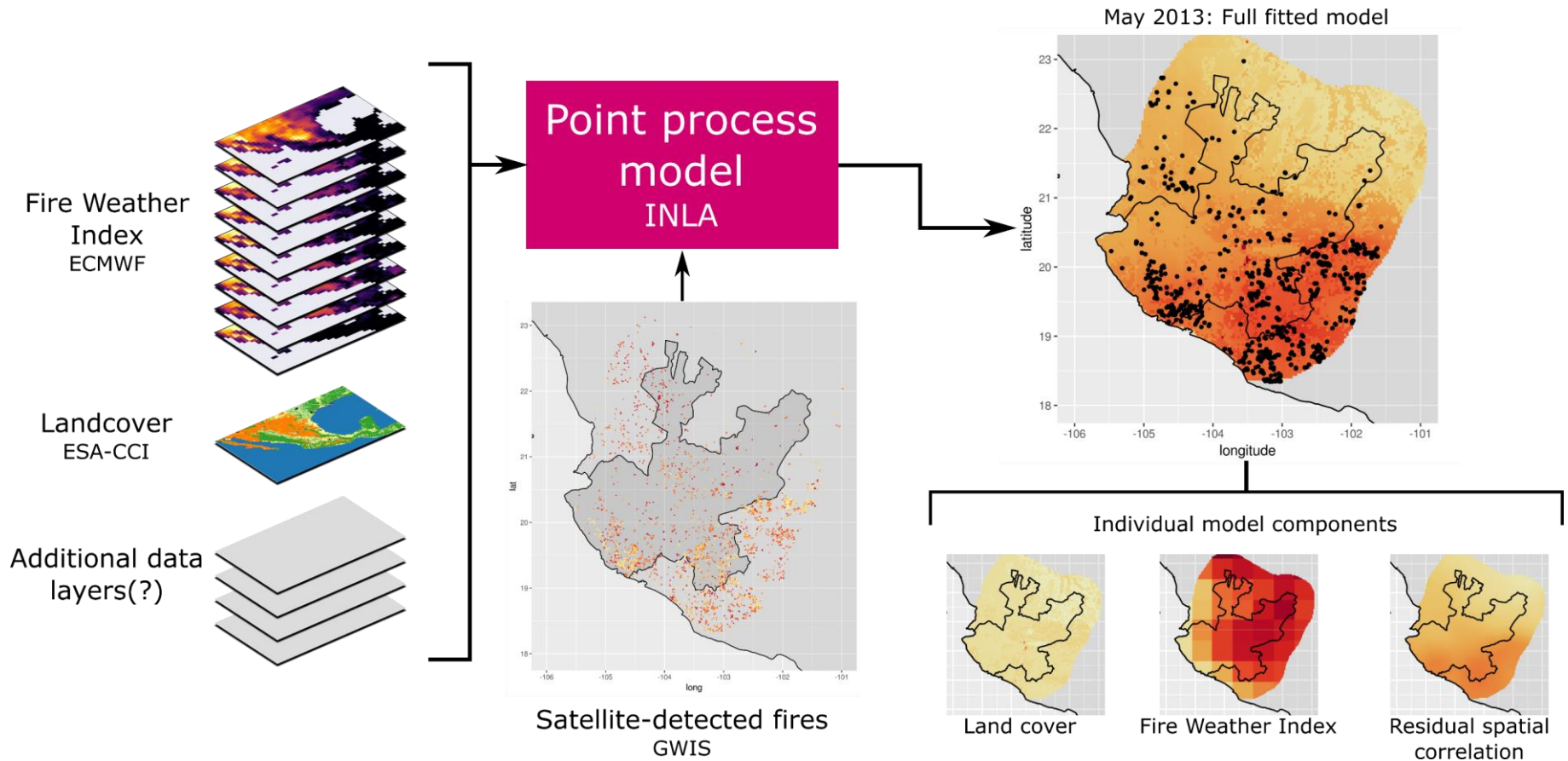
Observed AGB in mid-2000s:
 ~ 0.33 billion Mg(C)

Potential AGB in mid-2000s:
 ~ 1.19 billion Mg(C)

AGB *deficit* in mid-2000s:
 ~ 0.86 billion Mg(C)



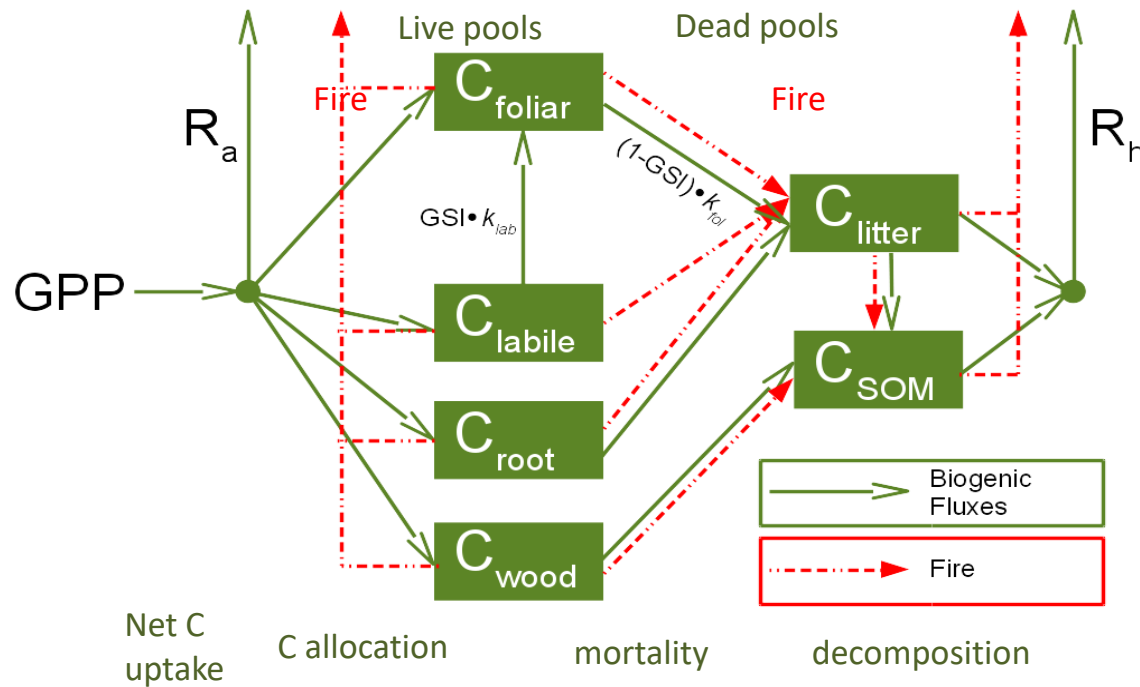
What is the fire risk for forests?





What is the restoration time of forests?

DALEC – FOREST C MODEL

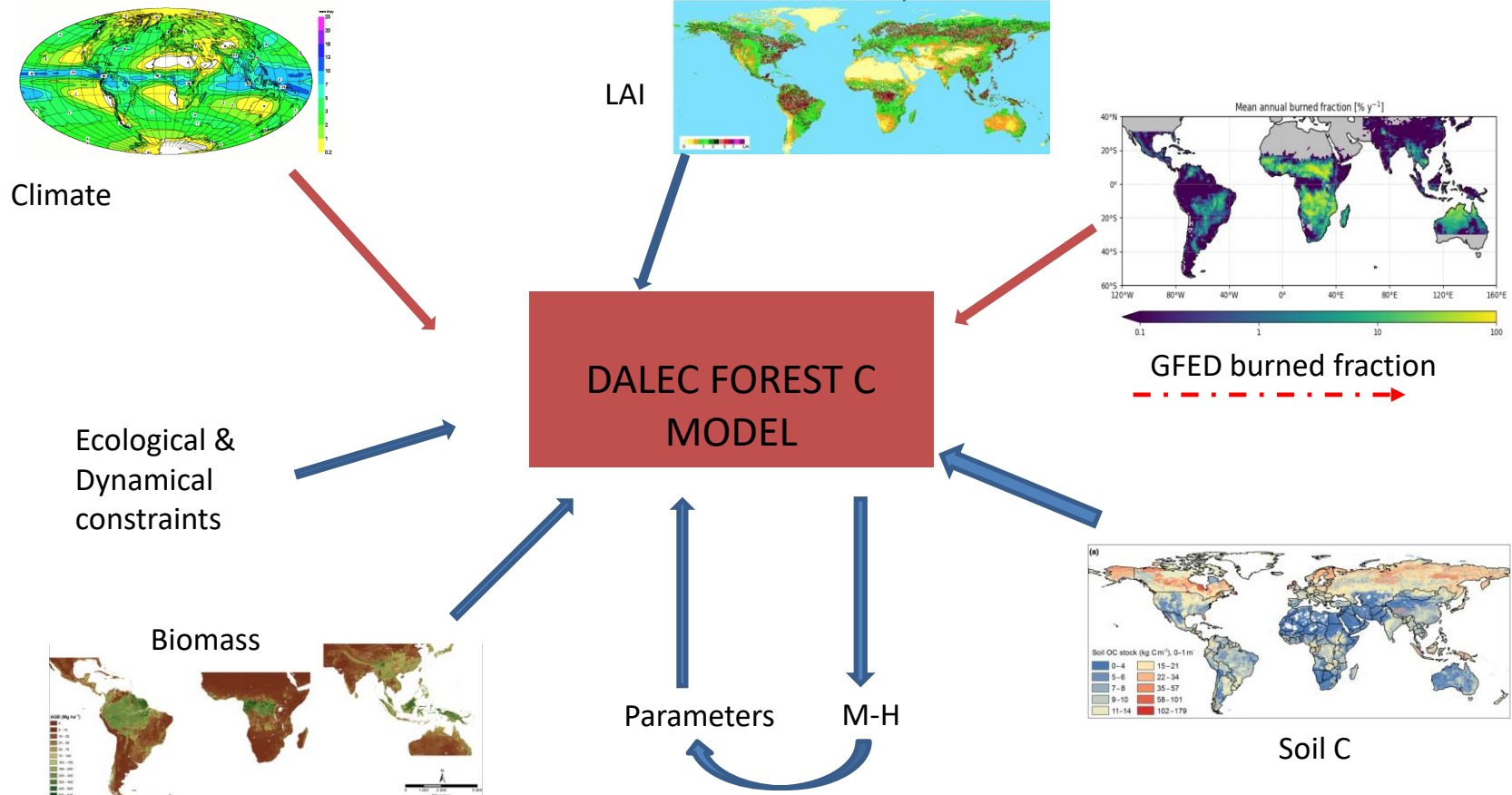


R = respiration

GPP = gross
primary production



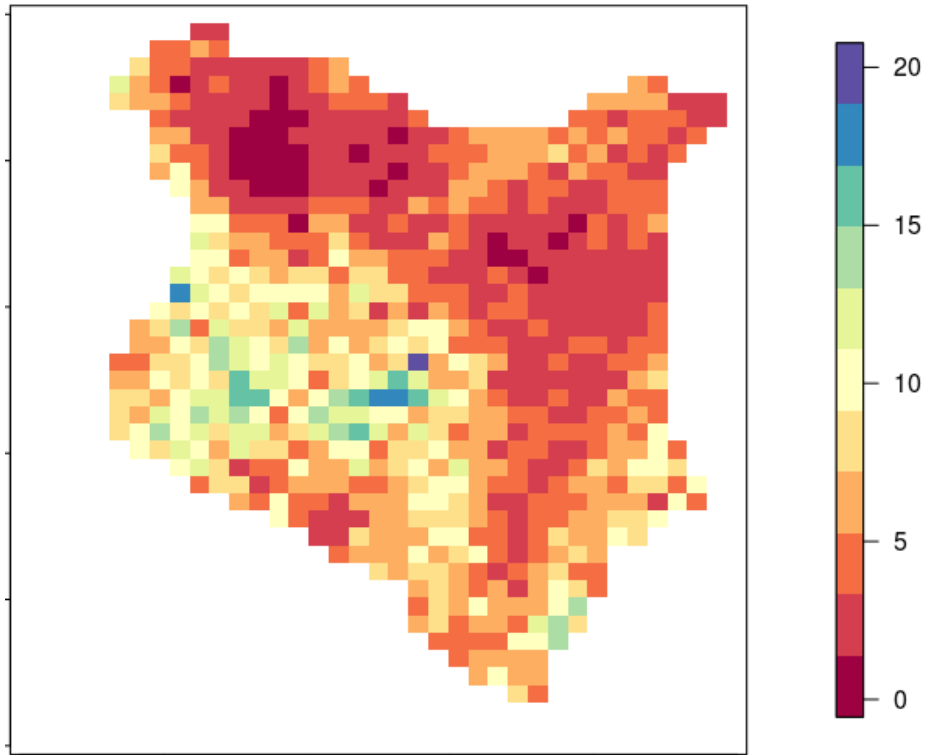
CARDAMOM





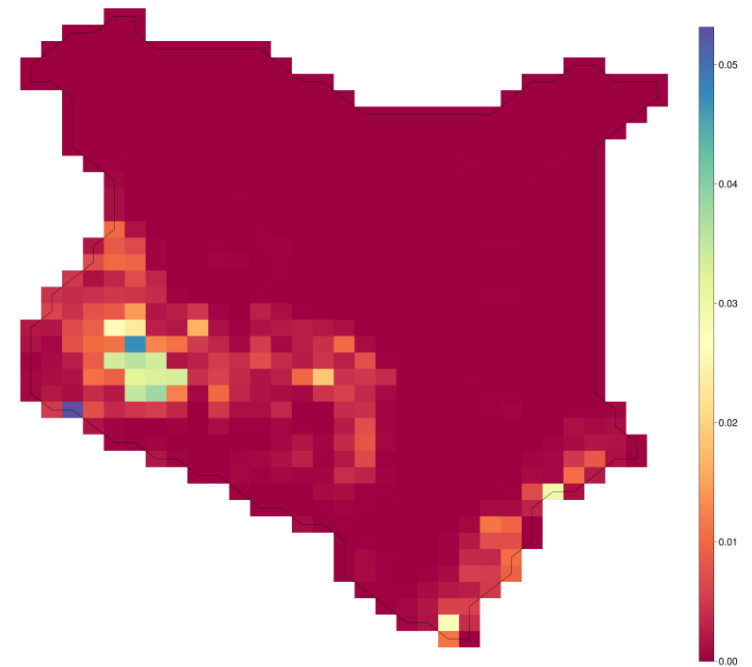
Kenyan C-cycle analysis (0.25°, 2005-2015)

NPP (MgC/ha/yr)



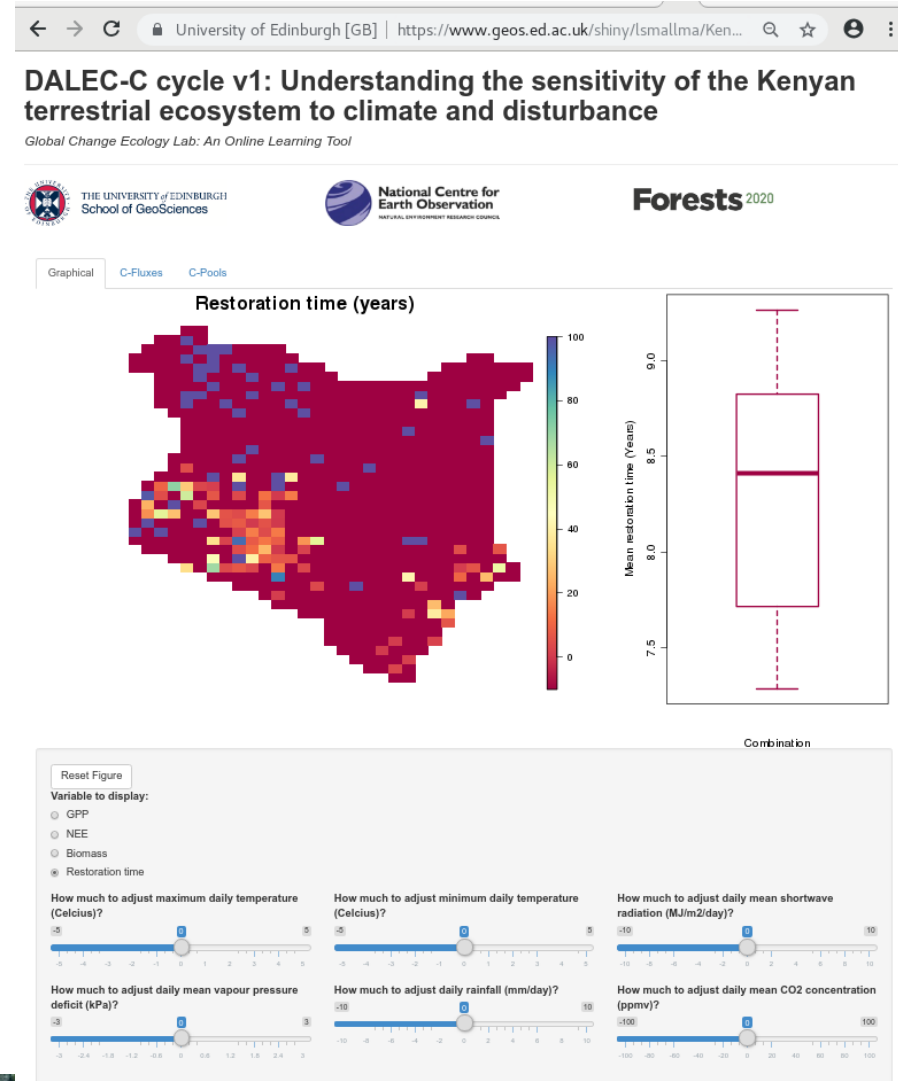
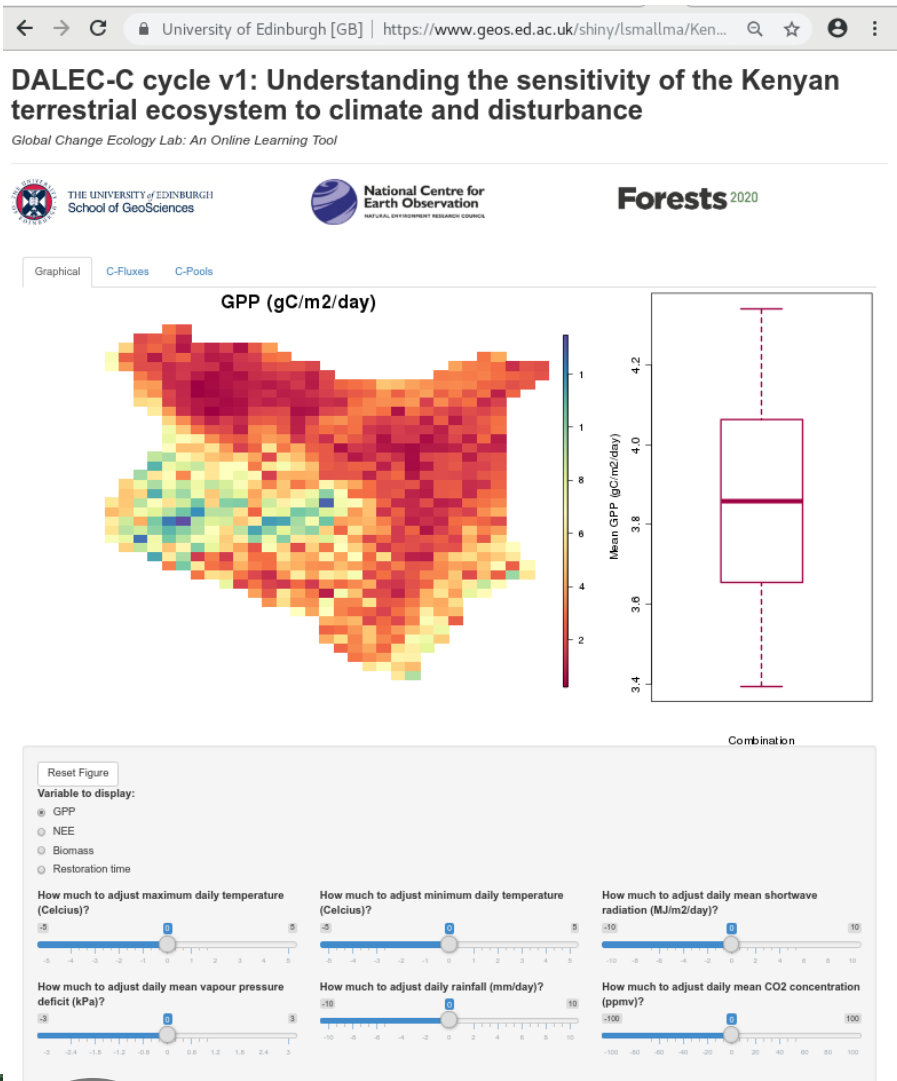
Mean Deforestation loss

Mean estimate: mean_harvest_gCm2day (97.5 % = 0; 75 % = 0; 50 % = 0; 25 % = 0; 2.5 % = 0)





A user interface for forest modelling under global change



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Summary



How are forests changing?

Monitoring system designed and deployed



What is the restoration potential of forests?

Mapped products available on Ecometrica platform



What is the fire risk for forests?

Novel algorithms under development



What is the restoration time of forests?

Decision support system ready for initial testing

