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Supplement of

Mapping global forest age from forest inventories, biomass and climate data

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Table S1 List of covariates considered in this study.

Long variable name	Short variable name	Unit	Source
Above-ground biomass	agb	Mg ha-1	Forest inventory datasets
Tree cover intensity	Tree cover intensity	-	Hansen et al. (2013)
Last time since tree cover – standard deviation	Last time since tree cover – standard deviation	year	Hansen et al. (2013)
Annual Mean Temperature	AnnualMeanTemperature	degC	WorldClim version2 (Fick and Hijmans, 2017)
Temperature Seasonality (standard deviation *100)	TemperatureSeasonality	degC	WorldClim version2 (Fick and Hijmans, 2017)
Mean Diurnal Range (Mean of monthly (max temp - min temp))	MeanDiurnalRange	degC	WorldClim version2 (Fick and Hijmans, 2017)
Temperature Annual Range (MaxTemperatureofWarmestMonth - MinTemperatureofColdestMonth)	TemperatureAnnualRange	degC	WorldClim version2 (Fick and Hijmans, 2017)
Isothermality (MeanDiurnalRange - TemperatureAnnualRange) *100	Isothermality	degC	WorldClim version2 (Fick and Hijmans, 2017)
Max Temperature of Warmest Month	MaxTemperatureofWarmestMonth	degC	WorldClim version2 (Fick and Hijmans, 2017)
Mean Temperature of Coldest Quarter	MeanTemperatureofColdestQuarter	degC	WorldClim version2 (Fick and Hijmans, 2017)
Mean Temperature of Driest Quarter	MeanTemperatureofDriestQuarter	degC	WorldClim version2 (Fick and Hijmans, 2017)
Mean Temperature of Warmest Quarter	MeanTemperatureofWarmestQuarter	degC	WorldClim version2 (Fick and Hijmans, 2017)
Mean Temperature of Wettest Quarter	MeanTemperatureofWettestQuarter	degC	WorldClim version2 (Fick and Hijmans, 2017)
Min Temperature of Coldest Month	MinTemperatureofColdestMonth	degC	WorldClim version2 (Fick and Hijmans, 2017)
Annual Precipitation	AnnualPrecipitation	mm	WorldClim version2 (Fick and Hijmans, 2017)

Mean Temperature of Coldest Quarter	PrecipitationofColdestQuarter	degC	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation of Driest Month	PrecipitationofDriestMonth	mm	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation of Driest Quarter	PrecipitationofDriestQuarter	mm	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation of Warmest Quarter	PrecipitationofWarmestQuarter	mm	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation of Wettest Month	PrecipitationofWettestMonth	mm	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation Seasonality (Coefficient of Variation)	PrecipitationSeasonality	-	WorldClim version2 (Fick and Hijmans, 2017)
Precipitation of Wettest Quarter	PrecipitationofWettestQuarter	mm	WorldClim version2 (Fick and Hijmans, 2017)
Annual Mean solar radiation	srad	W m-2	WorldClim version2 (Fick and Hijmans, 2017)
Annual Mean wind speed	wind	m s-1	WorldClim version2 (Fick and Hijmans, 2017)
Annual Mean water vapor pressure	vapr	hPa	WorldClim version2 (Fick and Hijmans, 2017)

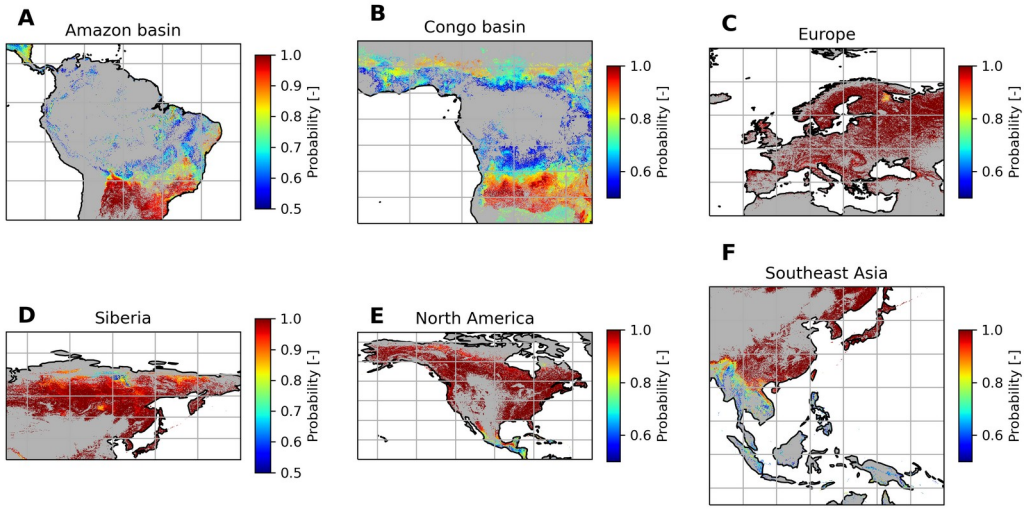


Figure S1 Probabilities of predicting non old-growth forests by the RFclassifier model.

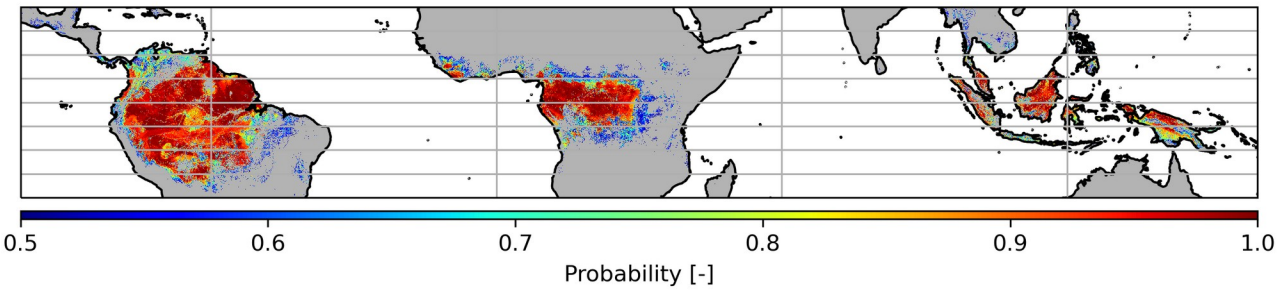


Figure S2 Probabilities of predicting tropical old-growth forests by the RFclassifier model.

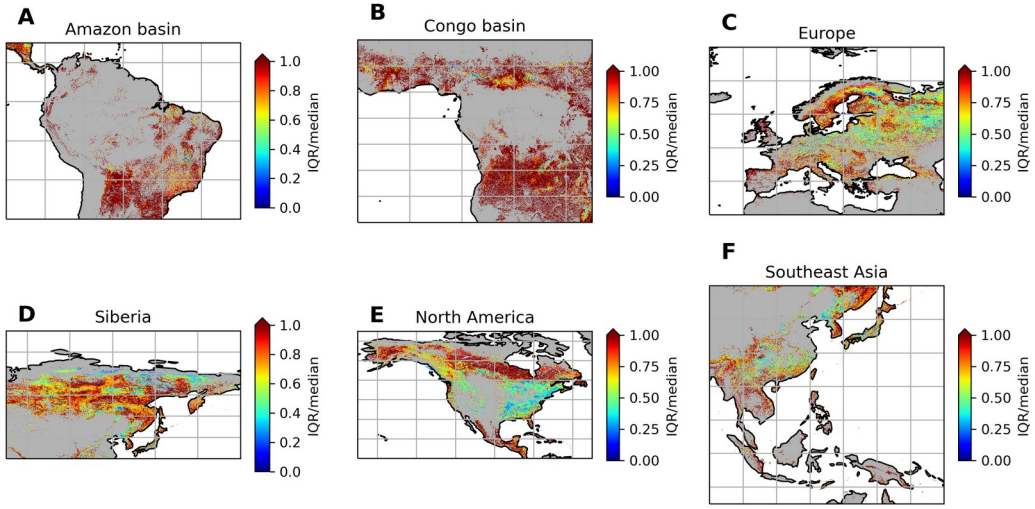


Figure S3 Interquantile range divided by the median of the forest age estimates for the classified non-old growth forests.

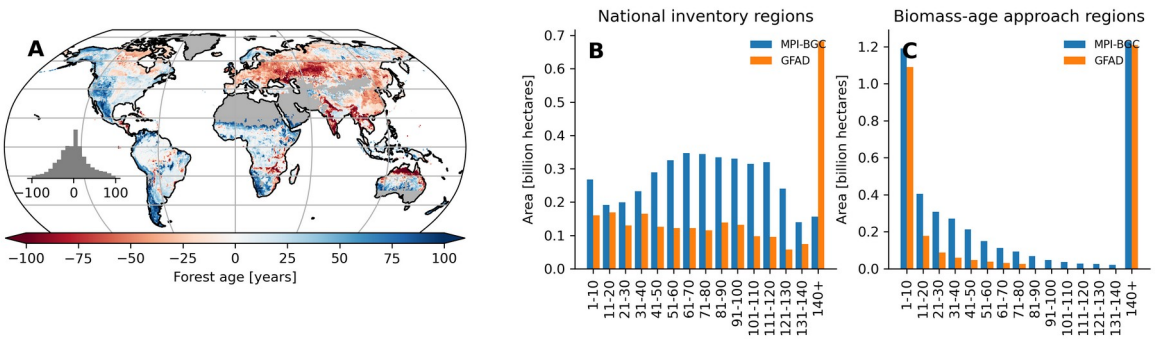
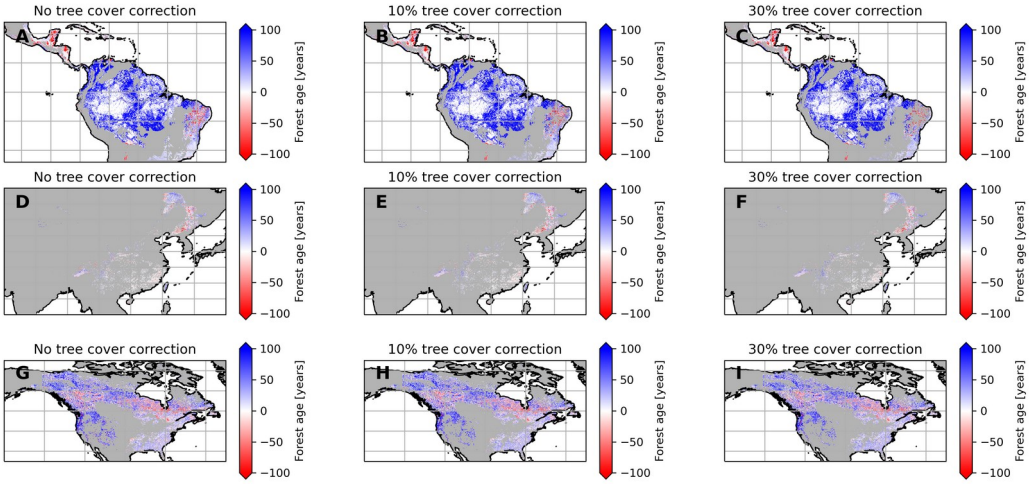


Figure S4 Difference between the forest age estimates derived from the MPI-BGC forest age product adjusted with MODIS fire and the GFAD product. Differences were computed using a weighted from fraction of the decadal age classes within each 0.5 degree grid cell resolution.



Figure

S5 Difference maps between the forest age estimates derived from the MPI-BGC forest age using different tree cover thresholds and independent forest age dataset: Amazon basin (A, B and C), China (D, E and F) and North America (G, H, and I).