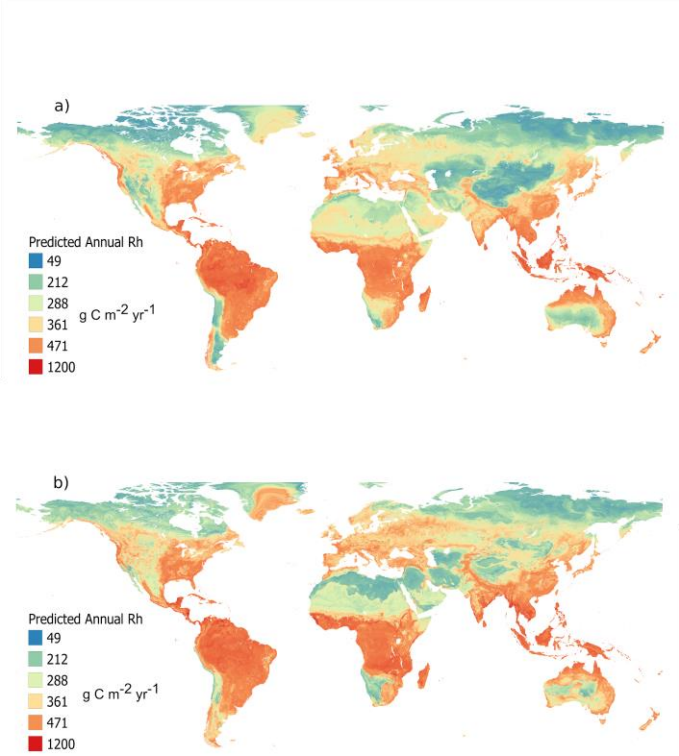
Supplementary Material

Table S1. Complete list of covariates evaluated by VSURF (Variable Selection Using Random Forests)

Abbreviation	Definition
AnnualMeanPrecip	Annual mean precipitation
AnnualMeanTemp	Annual mean temperature
evmmod3a	mean of the monthly MODIS Enhanced Vegetation Index time series data
g04esa3a	mosaic vegetation (grassland/shrubland/forest) (50-70%) / cropland (20-50%)
g19esa3a	artificial surfaces and associated areas (Urban areas >50%)
geaisg3a	geological ages based on the surface geology
glcesa3a	land cover classes based on the MERIS FR images
inmsre3a	mean potential incoming solar radiation derived in SAGA GIS
lammod3a	mean value of the 8-day MODIS LAI time series data
px1wcl3a	Long-term precipitation for period Nov/Dec/Jan based on WorldClim.org data
px2wcl3a	Long-term precipitation for period Feb/Mar/Apr based on WorldClim.org data
px3wcl3a	Long-term precipitation for period May/Jun/Jul based on WorldClim.org data
px4wcl3a	Long-term precipitation for period Aug/Sep/Oct based on WorldClim.org data
SLPSRT3a	Slope map in percent derived using the DEMSRE3
twisre3a	SAGA Topographic Wetness Index derived using the DEMSRE3

Figure S1. Visualization of v3 (a) and v5 (b) mean Rh calculated using the Bond-Lamberty 2004 method. Units are in g C m^{-2} yr^{-1}.


a)
Predicted Annual Rh
49
212
288
361
471
1200
g C m-2 yr-1
b)
Predicted Annual Rh
49
212
288
361
471
1200
g C m-2 yr-1

11
12