Updated Table S1. Data inputs used in the forest GHG flux model, in 2023 (model version 1.2.3, covering the years 2001-2022).

Updates Table S3 in Harris et al. 2021 *Nature Climate Change*
Changed or new inputs are in *green italics*. For more information, refer to
https://www.globalforestwatch.org/blog/data-and-research/whats-new-carbon-flux-monitoring or
https://github.com/wri/carbon-budget

Model Component	Source
Forest Extent 2000	
Tree Cover Extent	Hansen et al. 2013
Mangrove Forest Extent	Giri et al. 2011
Tropical Humid Primary Forest Extent	Turubanova et al. 2018
Intact Forest Landscapes (Boreal/Temperate)	Potapov et al. 2017
Plantations / Tree Crops	Harris et al. 2019
Peatland Extent	Miettinen et al. 2016 (Indonesia+Malaysia)
	Crezee et al. 2022 (Congo Basin)
	Hastie et al. 2022 (Amazonian Peru)
	Gumbricht et al. 2017 (<40 degrees North)
	Xu et al. 2018 (>40 degrees North)
Oil Palm Extent 2000	Austin et al. 2017 (Indonesia)
(areas excluded from model)	Gaveau et al. 2014 (Borneo)
	Miettinen et al. 2016 (Sumatra, Borneo)
	Gunarso et al. 2013 (peninsular Malaysia)
Carbon Density 2000	
Aboveground live woody biomass density	Updated from Zarin et al. 2016 (non-mangrove)
	Simard et al. 2018 (mangrove)
Belowground biomass density ratio	*Huang et al. 2021 (root:shoot ratio for non-mangrove forests)*
Soil organic carbon density	Hengl et al. 2017 (non-mangrove)
	Sanderman et al. 2018 (mangrove)
Ecological Zone (for deadwood & litter)	FAO 2012
Elevation (for deadwood & litter)	Farr et al. 2007
Mean Annual Precipitation (for deadwood & litter)	Fick and Hijmans 2017 (WORLDCLIM)
Activity Data	
Tree Cover Loss	*Hansen et al. 2013 (v.1.8, 2001-2022)*
Tree Cover Gain	*Potapov et al. 2022 (2000-2020)*
Burned Areas	*Tyukavina et al. 2022 (tree cover loss from fires)*
Emission Factors	
Drivers of Forest Loss	*Curtis et al. 2018 (updated through year 2022)*
Climate Zone	FAO 2012
Fire combustion and emission factors	IPCC 2019 Refinement, Table 2.5 and 2.6
Removal Factors	
Ecological Zone	FAO 2012
Mangrove Removal Factors	IPCC 2013 Wetlands Supplement, Tables 4.4 and 4.5
US Forest Type	Ruefenacht et al. 2008
US Stand Age	Pan et al. 2011
US Removal Factors (by region x type x age class)	Forest Inventory and Analysis Program

Europe Forest Type	Brus et al. 2011
Europe Removal Factors (by forest type)	IPCC 2019 Refinement, Table 4.11*
	FAO Planted Forest Thematic Study^
	Portugal's National GHG inventory[#]
Plantation Removal Factors	IPCC 2019 Refinement, Table 4.11
	Harris et al. 2019
Agroforestry Removal Factors	IPCC 2019 Refinement, Tables 5.1 and 5.3
Natural Regrowth Removal Factors (<20 yrs)	Cook-Patton et al. 2020
Primary Forest Removal Factors	IPCC 2019 Refinement, Table 4.9
Old Secondary Forest Removal Factors (>20 yrs)	IPCC 2019 Refinement, Table 4.9
Sensitivity Analysis	
Aboveground live woody biomass density	Saatchi et al. 2011
Drivers of Forest Loss	Curtis et al. 2018
Brazil deforestation data	INPE (PRODES)

[*] *Betula*, *Fagus*, *Larix*, *Pinus spp.*, *Picea*, *Pinus sylvestris*, *Pinus pinaster* (outside Portugal), *Populus*, *Quercus robur*, *Quercus petraea*

[^] *Abies*, *Alnus*, *Carpinus*, *Castanea*, *Fraxinus*, *Pseudotusga*, *Robinia*

[#] *Eucalyptus*, *Quercus spp. Pinus pinaster* (Portugal), other broadleaved, other coniferous

Non-data set changes:

- *Global Warming Potentials for methane and nitrous oxide were updated to use the IPCC's Sixth Assessment Report.*