Lists of the data sources used to compile estimates.

Note: Some sources include original data from sampling, and some do not include original data but rather include aggregated data, depending on policies for data sharing that vary from country to country. Because the links to data shown in the table may change over time, the authors cannot guarantee that these links will still be working. In this case, we recommend contacting the responsible authors directly to get updated information about sources of data.

Canada:

- Canada's 2023 National GHG Inventory Report (NIR) – Main Document
- Canada's 2023 NIR – Additional Information Documents
- Canada's 2023 NIR – Common Reporting Format (CRF) Table
- https://data-donnees.az.ec.gc.ca/data/substances/monitor/canada-s-official-greenhouse-gas-inventory/E-LULUCF/?lang=en: Forest land full time series (EN_Ch6_Tables_FullTimeSeries.xlsx); Underlying data for figures (EN_Ch6_Figures_UnderlyingData.xlsx)

Note: the raw data are the properties of 13 jurisdictions, some are proprietary while others are open access.

Russia:

- Mukhortova L., Shchepashchenko D., Shvidenko A. 2020. Soil respiration database. https://doi.org/10.22022/ESM%2F10-2020.107
- Schepaschenko D., Chave J., Phillips O.L., Lewis S.L., Davies S.J., et al. 2019. A global reference dataset for remote sensing of forest biomass. The Forest Observation System approach. https://doi.org/10.22022/ESM%2F03-2019.38
- Schepaschenko D., Shvidenko A., Usoltsev V.A., Lakyda P., Luo Y., et al. 2017. A database of forest biomass structure for Eurasia. https://doi.org/10.1594/PANGAEA.871492
- Schepaschenko D., Shvidenko A., Moltchanova E. 2018. Map of Russian forest for the year 2009 [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6056054
- Shvidenko A., Mukhortova L., Kapitsa E., Pyzhev A., Gordeev R., Fedorov S., Schepaschenko D. 2022. Dead wood in the forests of Northern Eurasia: field measurements database [Data set]. Zenodo. https://doi.org/10.5281/zenodo.7455327
- Schepaschenko D., Moltchanova E., Fedorov S., Karminov V., Ontikov P., Santoro M. 2020. Map of growing stock volume of Russian forests for the year 2014 [Data set]. Zenodo. https://doi.org/10.5281/zenodo.3981198

Northern European countries:

- Data are included in the data archive: https://doi.org/10.2737/RDS-2023-0051
- Finland: https://statdb.luke.fi/PXWeb/pxweb/en/LUKE/LUKE%2004%20Metsa%2006%20Metsavarat/
- Norway: The National Forest Inventory - https://www.ssb.no/en/jord-skog-jakt-og-fiskeri/skogbruk/statistikk/landsskogtakseringen
- Sweden: The Swedish National Forest Inventory - https://www.slu.se/en/Collaborative-Centres-and-Projects/the-swedish-national-forest-inventory/
- Kauppi, P. E., Stål, G., Arnesson-Ceder, L., Sramek, I. H., Hoen, H. F., Svensson, A., ... & Nordin, A. 2022. Managing existing forests can mitigate climate change. Forest Ecology and Management, 513, 120186. https://doi.org/10.1016/j.foreco.2022.120186

The continental US and Alaska Interior:

- https://www.fs.usda.gov/research/programs/fia#data-and-tools
- https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021

Temperate Europe (EU):

Open access NFI data:

- France: https://inventaire-forestier.ign.fr/dataIFN/
- Germany: https://bwi.info/Download/de/
- Italy: https://www.inventarioforestale.org/en/accesso-ai-dati/
- Netherlands: https://www.probos.nl/publicaties/overige/1094-bosinventarisaties
- Spain: https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-forestal-nacional/cuarto_inventario.html

Aggregated data:

- Albania: https://akpyje.gov.al/
- Austria: https://waldinventur.at/#/
- Belgium (Flanders): https://www.natuurenbos.be/beleid-wetgeving/natuurbeheer/bosinventaris
- Belgium (Wallonia): http://iprfw.spw.wallonie.be/summary.php
- Bulgaria: https://fri.bas.bg/en/#
- Croatia: https://www.sumins.hr/en/projekti/motrenje-ostecenosti-sumskih-ekosustava-icp-forests-hr/
- Republic of Cyprus: https://www.moa.gov.cy/moa/fd/fd.nsf/index_en/index_en?OpenDocument
- Czech Republic: https://www.uhul.cz/portfolio/nil/?lang=en
- Denmark: https://research.ku.dk/search/result/?pure=en/publications/danish-national-forest-inventory(1b6fa271-2ca6-4eac-8bb3-666c7edacecc).html
- Estonia: https://www.stat.ee/en/find-statistics/statistics-theme/environment/forest
- Hungary: https://nfi.nfk.gov.hu/
- Ireland: https://www.gov.ie/en/publication/53ac8-national-forest-inventory-results-data-2022/
- Latvia: https://www.silava.lv/en/research/active-projects/national-forest-inventory
- Lithuania: https://www.silava.lv/en/research/active-projects/national-forest-inventory
- Lithuania: https://amvmt.lrv.lt/lt/veiklos-sritys/nacionaline-misku-inventorizacija/
- Luxembourg: https://environnement.public.lu/fr/natur/forets/L_Inventaire_Forestier_National.html
- Poland: https://www.bdl.lasy.gov.pl/portal/wisl-en
- Portugal: https://www.icnf.pt/noticias/inventarioflorestalnacional
- Romania: https://roifn.ro/site/
- Serbia: http://www.srpskosumarskoudruzenje.org.rs/index.php?option=com_content&task=view&id=219
- Slovakia: https://www.forestportal.sk/odborna-sekcia-i/ekologia-a-monitoring/niml/
- Slovenia: https://www.gozdis.si/Nacionalna-gozdna-inventura_1/
- Switzerland: https://www.lfi.ch/index-en.php?lang=en
- United Kingdom: https://www.forestresearch.gov.uk/tools-and-resources/national-forest-inventory/

China:

- Yang C, Shi Y, Sun WJ, Zhu JL, Ji CJ, Feng YH, Ma SH, Guo ZD, Fang JY. 2022. Updated estimation of forest biomass carbon pools in China, 1977-2018. Biogeosciences, 19: 2989-2999. https://doi.org/10.5194/bg-19- 2989-2022
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- Tang XL, Zhao X, Bai YF, Tang ZY, Wang WT, Zhao YC, Wan HW, Xie ZQ, Shi XZ, Wu BF, Wang GX, Yan JH, Ma KP, Du S, Li SG, Han SJ, Ma YX, Hu HF, He NP, Yang YH, Han WX, He HL, Yu GR, Fang JY, Zhou GY. 2018. Carbon pools in China's terrestrial ecosystems: New estimates based on an intensive field survey. Proceedings of the National Academy of Sciences of the United States of America, 115: 4021-4026. https://www.pnas.org/cgi/doi/10.1073/pnas.1700291115
- Fang JY, Yu GR, Liu LL, Hu SJ, Chapin FS. 2018. Climate change, human impacts, and carbon sequestration in China. Proceedings of the National Academy of Sciences of the United States of America, 115: 4015-4020. https://www.pnas.org/cgi/doi/10.1073/pnas.1700304115
- Zhu JX, Hu HF, Tao SL, Chi XL, Li P, Jiang L, Ji CY, Zhu JL, Tang ZY, Pan YD, Birdsey RA, He XH, Fang JY. 2017. Carbon stocks and changes of dead organic matter in China's forests. Nature Communications, 8: 151. http://www.nature.com/naturecommunications/ https://doi.org/10.1038/s41467-017-00207-1

Japan:

- https://www.rinya.maff.go.jp/j/keikaku/tayouseichousa/
- https://www.ffpri.affrc.go.jp/pubs/bulletin/425/documents/425-2.pdf
- https://www.maff.go.jp/j/tokei/kouhyou/mokuzai_zyukyu/
- https://www.maff.go.jp/e/data/stat/96th/index.html

Australia:

- https://greenhouseaccounts.climatechange.gov.au/
- https://www.dcceew.gov.au/climate-change/publications/national-inventory-reports

New Zealand:

- https://environment.govt.nz/publications/new-zealands-greenhouse-gas-inventory-1990-2021/

Korea, other Europe countries (Ukraine, Belarus, Georgia, Armenia, Azerbaijan, Turkey), other temperate countries (Mongolia, Kazakhstan):

- FRA country reports: https://www.fao.org/forest-resources-assessment/fra-2020/country-reports/en/
- Turkey: https://www.ogm.gov.tr/tr

Note: except Turkey, other countries used FRA data.

India:

- https://fsi.nic.in/

Tropics (Southeast Asia, Africa, and South America):

- Brienen, R.J.W. et al. 2015. Long-term decline of the Amazon carbon sink. Nature 519, 344-348 (2015). https://doi.org/10.1038/nature14283 Data package: https://forestplots.net/data-packages/brienen-et-al-2015
- Duque, A., Peña, M.A., Cuesta, F. et al. 2021. Mature Andean forests as globally important carbon sinks and future carbon refuges. Nat Commun 12, 2138. https://doi.org/10.1038/s41467-021-22459-8 Data package: https://datadryad.org/stash/dataset/doi:10.5061/dryad.59zw3r26f
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- FRA country reports: https://www.fao.org/forest-resources-assessment/fra-2020/country-reports/en/

Mexico:

- FRA country reports: https://www.fao.org/forest-resources-assessment/fra-2020/country-reports/en/
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- Cook-Patton. S. et al. 2020. Mapping potential carbon capture from global natural forest regrowth. *Nature* 585, 545–550. https://www.nature.com/articles/s41586-020-2686-x

Central America:

- FRA country reports: https://www.fao.org/forest-resources-assessment/fra-2020/country-reports/en/
- IPCC. 2019. *Refinement to the 2006 IPCC guidelines for national greenhouse gas inventories.* https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/
- Cook-Patton. S. et al. 2020. Mapping potential carbon capture from global natural forest regrowth. *Nature* 585, 545–550. https://www.nature.com/articles/s41586-020-2686-x
- Potapov, P. et al. 2017. The last frontiers of wilderness: Tracking loss of intact forest landscapes from 2000 to 2013. *Sci Adv.* 13 3(1), e1600821. https://www.science.org/doi/10.1126/sciadv.1600821

Tropical deforestation emissions:

- Houghton, R. and Castanho, A.: Annual emissions of carbon from land use, land-use change, and forestry 1850– 2020 (V1), Harvard Dataverse [data set], https://doi.org/10.7910/DVN/U7GHRH (2023).

Note: More detailed information can be available upon request.

Other South Asia countries (Afghanistan, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka):

- FRA country reports: https://www.fao.org/forest-resources-assessment/fra-2020/country-reports/en/