

Supporting Information

DeFries and Rosenzweig 10.1073/pnas.1011163107

Table S1. Countries used to calculate greenhouse gas emissions in Table 1

ISO	Country name
Tropical Africa	
AGO	Angola
BEN	Benin
BWA	Botswana
BFA	Burkina Faso
BDI	Burundi
CMR	Cameroon
CAF	Central African Republic
TCD	Chad
CIV	Cote d'Ivoire
DJI	Djibouti
GNQ	Equatorial Guinea
ERI	Eritrea
ETH	Ethiopia
GAB	Gabon
GMB	Gambia
GHA	Ghana
GIN	Guinea
GNB	Guinea-Bissau
KEN	Kenya
LBR	Liberia
MDG	Madagascar
MWI	Malawi
MLI	Mali
MRT	Mauritania
NER	Niger
NGA	Nigeria
OMN	Oman
COG	Republic of Congo
MOZ	Mozambique
NAM	Namibia
RWA	Rwanda
SDN	Sudan
TZA	Tanzania
COD	Democratic Republic of the Congo
TGO	Togo
UGA	Uganda
ARE	United Arab Emirates
ESH	Western Sahara
YEM	Yemen
ZMB	Zambia
ZWE	Zimbabwe
SAU	Saudi Arabia
SEN	Senegal
SYC	Seychelles
SLE	Sierra Leone
SOM	Somalia
Tropical Asia	
BGD	Bangladesh
BRN	Brunei
KHM	Cambodia
IND	India
IDN	Indonesia
LAO	Laos
MYS	Malaysia
PNG	Papua New Guinea

Table S1. Cont.

ISO	Country name
PHL	Philippines
MMR	Myanmar
LKA	Sri Lanka
THA	Thailand
TLS	East Timor
VNM	Vietnam
SGP	Singapore
Tropical Latin America	
BLZ	Belize
BOL	Bolivia
BRA	Brazil
COL	Colombia
CRI	Costa Rica
CUB	Cuba
ECU	Ecuador
SLV	El Salvador
GTM	Guatemala
GUY	Guyana
GUF	French Guiana
HND	Honduras
MEX	Mexico
NIC	Nicaragua
PAN	Panama
PRY	Paraguay
PER	Peru
SUR	Suriname
VEN	Venezuela

Countries are those with the majority of land area between the Tropic of Cancer and the Tropic of Capricorn.

Table S2. Comparison of maximum land area gained for food production from deforestation (gross forest loss) and estimated carbon emissions for 2000–2005

	Change in gross forest area 2000–2005 from ref. 1, km ²		Agricultural area in 2000 based on ref. 2, km ² *		Estimated deforestation emissions (2000–2005), Pg CO ₂ [†]		CO ₂ emissions excluding organic sources from ref. 3 (2000–2005), Pg
	Dry tropical forest	Humid tropical forest	Crop area	Pasture area	Dry forest	Humid forest	
Tropical Latin America	53,959	159,427	1,187,396	3,797,626	0.98	7.52	7.44
Tropical Africa	94,088	14,494	1,820,616	6,470,506	1.00	0.52	3.70
Tropical Asia	8,766	72,194	2,928,100	187,070	0.21	6.43 [‡]	14.73
Total tropics	156,813	246,115	5,936,113	10,455,202	2.20	14.47	25.87

Countries included within each continent are listed in Table S1.

*The data set used is available at www.geog.mcgill.ca/landuse/pub/Data/Histlanduse/.

[†]Emissions were estimated from mean biomass values reported in Table 2 in ref. 4 for forest type and continent and a conservative estimate of 0.6 fraction of biomass lost from combustion and decay (5).

[‡]Includes 2.88 Pg CO₂ from peat using annual estimate of 0.12 Pg C/y from ref. 6.

- Hansen MC, Stehman SV, Potapov PV (2010) Quantification of global gross forest cover loss. *Proc Natl Acad Sci USA* 107:8650–8655.
- Ramankutty N, Foley J (1999) Estimating historical changes in global land cover: Croplands from 1700 to 1992. *Global Biogeochem Cycles* 13:997–1027.
- European Commission and Joint Research Center (JRC)/Netherlands Environmental Assessment Agency (PBL) (2009) Emission Database for Global Atmospheric Research (EDGAR), release version 4.9. Available at <http://edgar.jrc.ec.europa.eu>.
- Gibbs H, Brown S, Niles JO, Foley J (2007) Monitoring and estimating tropical forest carbon stocks: Making REDD a reality. *Environ Res Lett* 2:045023.
- van der Werf G, et al. (2010) Global fire emissions and contribution of deforestation, savanna, forest, agricultural, and peat fires (1997–2009). *Atmos Chem Phys* 10:16153–16230.
- van der Werf G, et al. (2009) CO₂ emissions from forest loss. *Nat Geosci* 2:1–2.