

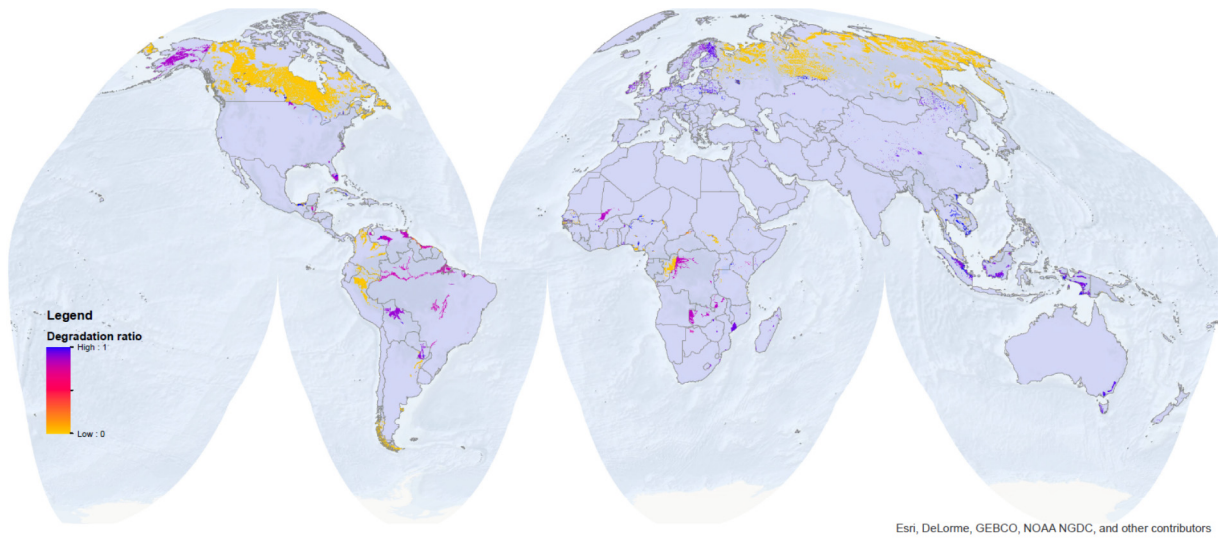
Supplementary Information to 'The underappreciated potential of peatlands in global climate change mitigation strategies'

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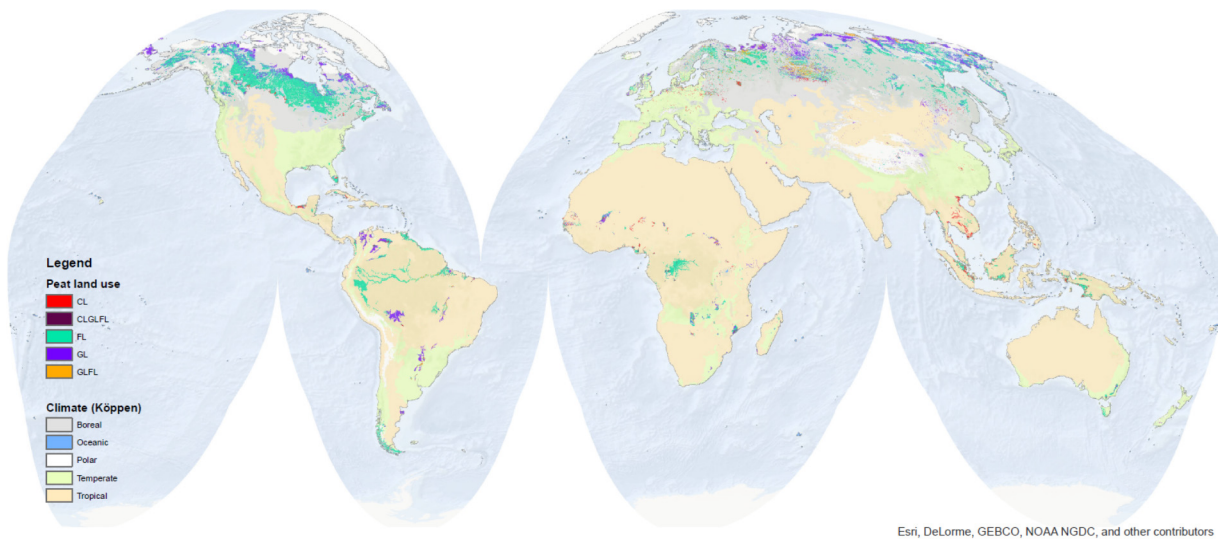
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Supplementary Fig. 1. Degradation ratio of peatlands worldwide. Ratio 1 = fully degrading, ratio 0 = fully intact.



Supplementary Fig. 2. Compilation of land use types and climate zones used for assignment of emission factors of degrading peatlands per pixel.

Supplementary Table 1. Data mapping for reconciliation of the ESA-GLCM data with IPCC based data.

ESA-GCLM code	ESA-GCLM label	Assigned IPCC land-use class¹
11	Post-flooding or irrigated croplands (or aquatic)	CL
14	Rainfed croplands	CL
20	Mosaic cropland (50–70%) / vegetation (grassland/shrubland/forest) (20–50%)	CL
30	Mosaic vegetation (grassland/shrubland/forest) (50–70%) / cropland (20–50%)	Average GL, FL and CL
40	Closed to open (>15%) broadleaved evergreen or semi-deciduous forest (>5 m)	FL
50	Closed (>40%) broadleaved deciduous forest (>5 m)	FL
60	Open (15–40%) broadleaved deciduous forest/woodland (>5 m)	FL
70	Closed (>40%) needleleaved evergreen forest (>5 m)	FL
90	Open (15–40%) needleleaved deciduous or evergreen forest (>5 m)	FL
100	Closed to open (>15%) mixed broadleaved and needleleaved forest (>5 m)	FL
110	Mosaic forest or shrubland (50–70%) / grassland (20–50%)	FL
120	Mosaic grassland (50–70%) / forest or shrubland (20–50%)	GL
130	Closed to open (>15%) (broadleaved or needleleaved, evergreen or deciduous) shrubland (<5 m)	FL
140	Closed to open (>15%) herbaceous vegetation (grassland, savannas or lichens/mosses)	GL
150	Sparse (<15%) vegetation	GL
160	Closed to open (>15%) broadleaved forest regularly flooded (semi-permanently or temporarily) – Fresh or brackish water	FL
170	Closed (>40%) broadleaved forest or shrubland permanently flooded – Saline or brackish water	FL
180	Closed to open (>15%) grassland or woody vegetation on regularly flooded or waterlogged soil – Fresh, brackish or saline water	Average FL and GL
190	Artificial surfaces and associated areas (urban areas >50%)	GL
200	Bare areas	not applicable
210	Water bodies	not applicable
220	Permanent snow and ice	not applicable
230	No data (burnt areas, clouds, etc.)	not applicable

¹ CL, cropland; FL, forest land; GL, grassland.

Supplementary Table 2. Emission factors (mean and range, aggregated from ¹)

Climate	Land use	GHG emission factor (t CO ₂ -eq. ha ⁻¹ a ⁻¹)
Boreal and Polar	CL	33.4 (26.5-40.6)
	CL+GL+FL	20.2 (-0.6-40.8)
	FL	2.9 (-0.6-7.1)
	GL	24.3 (12.2-36.5)
	GL+FL	13.6 (-0.6-36.7)
Temperate	CL	33.4 (27.4-42.9)
	CL+GL+FL	21.7 (7.5-43.6)
	FL	11 (8.3-17.1)
	GL	20.7 (7.8-33.8)
	GL+FL	15.8 (7.5-33.8)
Tropical	CL	52.1 (1.3-107.5)
	CL+GL+FL	51.8 (-0.6-107.5)
	FL	60.6 (-0.2-93.5)
	GL	42.7 (19.3-69.2)
	GL+FL	51.7 (-0.2-94.9)

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