

The Global Methane Budget 2000â€“2017

Earth System Science Data

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Citation Report

#	ARTICLE	IF	CITATIONS
1	A Remote Sensing Technique to Upscale Methane Emission Flux in a Subtropical Peatland. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2020JG006002.	1.3	6
2	Plant species determine tidal wetland methane response to sea level rise. <i>Nature Communications</i> , 2020, 11, 5154.	5.8	24
3	The Isotopic Imprint of Life on an Evolving Planet. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	3
5	Soil Is a Net Source of Methane in Tropical African Forests. <i>Forests</i> , 2020, 11, 1157.	0.9	2
6	Detection of fossil-fuel CO ₂ plume in China due to COVID-19 by observation at Hateruma. <i>Scientific Reports</i> , 2020, 10, 18688.	1.6	22
7	A New Approach to LCA Evaluation of Lamb Meat Production in Two Different Breeding Systems in Northern Italy. <i>Frontiers in Veterinary Science</i> , 2020, 7, 651.	0.9	13
8	Hydrometeorological sensitivities of net ecosystem carbon dioxide and methane exchange of an Amazonian palm swamp peatland. <i>Agricultural and Forest Meteorology</i> , 2020, 295, 108167.	1.9	25
9	Moving toward Net-Zero Emissions Requires New Alliances for Carbon Dioxide Removal. <i>One Earth</i> , 2020, 3, 145-149.	3.6	61
10	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2020GB006678.	1.9	34
11	Bottom-up evaluation of the regional methane budget of northern lands from 1980 to 2015. <i>Polar Science</i> , 2021, 27, 100558.	0.5	5
12	Advances and Fundamental Understanding of Electrocatalytic Methane Oxidation. <i>ChemCatChem</i> , 2021, 13, 787-805.	1.8	13
13	Estimation of CH ₄ emissions from the East Siberian Arctic Shelf based on atmospheric observations aboard the R/V Mirai during fall cruises from 2012 to 2017. <i>Polar Science</i> , 2021, 27, 100571.	0.5	11
14	Pricing Methane Emissions from Oil and Gas Production. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
15	Basic Information About Tropical Peatland Ecosystems. , 2021, , 3-62.		6
16	Gridded fossil CO ₂ emissions and related O ₂ combustion consistent with national inventories 1959–2018. <i>Scientific Data</i> , 2021, 8, 2.	2.4	56
17	Carbon sequestration: counterintuitive feedback of plant growth. <i>Quantitative Plant Biology</i> , 2021, 2, .	0.8	0
18	Natural Capital-Based Societies in the Tropics. , 2021, , 197-245.		1
19	A future perspective of historical contributions to climate change. <i>Climatic Change</i> , 2021, 164, 1.	1.7	6

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20	Emissions from the Oil and Gas Sectors, Coal Mining and Ruminant Farming Drive Methane Growth over the Past Three Decades. <i>Journal of the Meteorological Society of Japan</i> , 2021, 99, 309-337.	0.7	38
21	Methane retrieved from TROPOMI: improvement of the data product and validation of the first 2 years of measurements. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 665-684.	1.2	104
22	The neglected contribution of mound-building termites on CH ₄ emissions in Brazilian pastures. <i>Revista Brasileira De Zootecnia</i> , 2021, 50, .	0.3	3
23	Soil carbon flux research in the Asian region: Review and future perspectives. <i>J Agricultural Meteorology</i> , 2021, 77, 24-51.	0.8	8
24	Mobile autonomous methane monitoring stations for emission measurement. <i>APPEA Journal</i> , 2021, 61, 425.	0.4	0
25	Ecosystem Collapse and Climate Change: An Introduction. <i>Ecological Studies</i> , 2021, , 1-9.	0.4	4
26	Reduction of Non-CO ₂ Greenhouse Gas Emissions by Catalytic Processes. , 2021, , 1-44.		0
27	Effects of thallium exposure on intestinal microbial community and organ functions in zebrafish (<i>Danio rerio</i>). <i>Elementa</i> , 2021, 9, .	1.1	10
28	Unmanned aerial systems for trace gases. , 2021, , 321-343.		1
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30	Phytoplankton photosynthesis: an unexplored source of biogenic methane emission from oxic environments. <i>Journal of Plankton Research</i> , 2021, 43, 822-830.	0.8	15
31	Investigating methane emissions from geologic microseepage in Western New York State, United States. <i>Elementa</i> , 2021, 9, .	1.1	0
32	Detection and quantification of CH ₄ plumes using the WFM-DOAS retrieval on AVIRIS-NG hyperspectral data. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 1267-1291.	1.2	16
33	New Catastrophic Gas Blowout and Giant Crater on the Yamal Peninsula in 2020: Results of the Expedition and Data Processing. <i>Geosciences (Switzerland)</i> , 2021, 11, 71.	1.0	34
34	Digging deeper into cutting methane emissions from the oil and gas industry in the era of volatile prices. <i>Mitigation and Adaptation Strategies for Global Change</i> , 2021, 26, 1.	1.0	5
35	Lower oceanic ¹³ C during the last interglacial period compared to the Holocene. <i>Climate of the Past</i> , 2021, 17, 507-528.	1.3	3
36	Microbial Functional Responses Explain Alpine Soil Carbon Fluxes under Future Climate Scenarios. <i>MBio</i> , 2021, 12, .	1.8	10
37	Rain-fed pulses of methane from East Africa during 2018–2019 contributed to atmospheric growth rate. <i>Environmental Research Letters</i> , 2021, 16, 024021.	2.2	28

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39	Seasonal Variations of SF ₆ , CO ₂ , CH ₄ , and N ₂ O in the UT/LS Region due to Emissions, Transport, and Chemistry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033541.	1.2	13
40	Interannual variability on methane emissions in monsoon Asia derived from GOSAT and surface observations. <i>Environmental Research Letters</i> , 2021, 16, 024040.	2.2	14
41	Verrucomicrobial methanotrophs: ecophysiology of metabolically versatile acidophiles. <i>FEMS Microbiology Reviews</i> , 2021, 45, .	3.9	49
42	Microbial production and consumption of hydrocarbons in the global ocean. <i>Nature Microbiology</i> , 2021, 6, 489-498.	5.9	56
43	Methane and Nitrous Oxide Emissions Complicate Coastal Blue Carbon Assessments. <i>Global Biogeochemical Cycles</i> , 2021, 35, e2020GB006858.	1.9	86
44	Diverging responses of high-latitude CO ₂ and CH ₄ emissions in idealized climate change scenarios. <i>Cryosphere</i> , 2021, 15, 1097-1130.	1.5	13
45	Continuous Dynamics of Dissolved Methane Over 2 Years and its Carbon Isotopes ($\delta^{13}C$). <i>Biogeosciences</i> , 2021, 126, e2020JG006038.	1.3	12
46	Global methane budget and trend, 2010–2017: complementarity of inverse analyses using in situ (GLOBALVIEWplus CH ₄ ; ObsPack) and satellite (GOSAT) observations. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4637-4657.	1.9	55
47	Methane dynamics in three different Siberian water bodies under winter and summer conditions. <i>Biogeosciences</i> , 2021, 18, 2047-2061.	1.3	5
48	Critical inundation level for methane emissions from wetlands. <i>Environmental Research Letters</i> , 2021, 16, 044038.	2.2	17
49	Metagenomic insights into the metabolism of microbial communities that mediate iron and methane cycling in Lake Kinneret iron-rich methanic sediments. <i>Biogeosciences</i> , 2021, 18, 2091-2106.	1.3	10
50	Dissolved methane in the water column of the Saguenay Fjord. <i>Marine Chemistry</i> , 2021, 230, 103926.	0.9	8
51	Studies of SLCPs, greenhouse gases, and their interaction with the terrestrial ecosystem during the ArCS project. <i>Polar Science</i> , 2021, 27, 100635.	0.5	1
52	Carbon cycle inverse modeling suggests large changes in fractional organic burial are consistent with the carbon isotope record and may have contributed to the rise of oxygen. <i>Geobiology</i> , 2021, 19, 342-363.	1.1	23
53	2010–2015 North American methane emissions, sectoral contributions, and trends: a high-resolution inversion of GOSAT observations of atmospheric methane. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4339-4356.	1.9	45
54	Effects of Using High Resolution Satellite-Based Inundation Time Series to Estimate Methane Fluxes From Forested Wetlands. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092556.	1.5	20
55	A comparative study of anthropogenic CH ₄ emissions over China based on the ensembles of bottom-up inventories. <i>Earth System Science Data</i> , 2021, 13, 1073-1088.	3.7	20
56	Observations of greenhouse gases as climate indicators. <i>Climatic Change</i> , 2021, 165, 12.	1.7	30

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57	Attribution of the accelerating increase in atmospheric methane during 2010–2018 by inverse analysis of GOSAT observations. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 3643-3666.	1.9	68
58	High-frequency monitoring of anomalous methane point sources with multispectral Sentinel-2 satellite observations. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 2771-2785.	1.2	57
59	Substantial hysteresis in emergent temperature sensitivity of global wetland CH ₄ emissions. <i>Nature Communications</i> , 2021, 12, 2266.	5.8	34
60	GOSAT CH ₄ Vertical Profiles over the Indian Subcontinent: Effect of a Priori and Averaging Kernels for Climate Applications. <i>Remote Sensing</i> , 2021, 13, 1677.	1.8	4
61	Uncertainties in the Emissions Database for Global Atmospheric Research (EDGAR) emission inventory of greenhouse gases. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 5655-5683.	1.9	64
62	Greenhouse gas emissions associated with urban water infrastructure: What we have learnt from China's practice. <i>Wiley Interdisciplinary Reviews: Water</i> , 2021, 8, e1529.	2.8	28
63	Juxtaposing the spatiotemporal drivers of sediment CO ₂ , CH ₄ , and N ₂ O effluxes along ecoregional, wet-dry, and diurnal gradients. <i>Atmospheric Pollution Research</i> , 2021, 12, 160-171.	1.8	2
64	Half of global methane emissions come from highly variable aquatic ecosystem sources. <i>Nature Geoscience</i> , 2021, 14, 225-230.	5.4	388
69	The role of termite CH ₄ emissions on the ecosystem scale: a case study in the Amazon rainforest. <i>Biogeosciences</i> , 2021, 18, 2609-2625.	1.3	5
70	Controlling Factors of Methane in Tropical Lakes of Different Depths. <i>Journal of Geophysical Research C: Biogeosciences</i> , 2021, 126, e2020JG005828.	1.3	4
71	Global Warming Potential Is Not an Ecosystem Property. <i>Ecosystems</i> , 2021, 24, 2079-2089.	1.6	24
73	Spatiotemporal Assessment of GHG Emissions and Nutrient Sequestration Linked to Agronutrient Runoff in Global Wetlands. <i>Global Biogeochemical Cycles</i> , 2021, 35, e2020GB006816.	1.9	18
75	Estimate greenhouse gas emissions from water-saving and drought-resistance rice paddies by deNitrification-deComposition model. <i>Clean Technologies and Environmental Policy</i> , 2022, 24, 161-171.	2.1	9
76	A Computational Framework for Identifying Promoter Sequences in Nonmodel Organisms Using RNA-seq Data Sets. <i>ACS Synthetic Biology</i> , 2021, 10, 1394-1405.	1.9	15
77	Spatial Distribution of Dissolved Methane Over Extreme Oceanographic Gradients in the Subtropical Eastern South Pacific (17° to 37°S). <i>Journal of Geophysical Research: Oceans</i> , 2021, 126, e2020JC016925.	1.0	3
78	The Facility Level and Area Methane Emissions inventory for the Greater Toronto Area (FLAME-GTA). <i>Atmospheric Environment</i> , 2021, 252, 118319.	1.9	4
79	Methanogenesis exceeds CH ₄ consumption in eutrophic lake sediments. <i>Limnology and Oceanography Letters</i> , 2021, 6, 173-181.	1.6	23
80	Acting rapidly to deploy readily available methane mitigation measures by sector can immediately slow global warming. <i>Environmental Research Letters</i> , 2021, 16, 054042.	2.2	128

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82	Direct measurements from shut-in and other abandoned wells in the Permian Basin of Texas indicate some wells are a major source of methane emissions and produced water. <i>Environmental Research Letters</i> , 2021, 16, 054081.	2.2	23
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84	Hidden Processes During Seasonal Isolation of a High-Altitude Watershed. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	3
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86	Influence of permafrost thaw on an extreme geologic methane seep. <i>Permafrost and Periglacial Processes</i> , 2021, 32, 484-502.	1.5	8
87	Whole-lake methane emissions from two temperate shallow lakes with fluctuating water levels: Relevance of spatiotemporal patterns. <i>Limnology and Oceanography</i> , 2021, 66, 2455-2469.	1.6	15
88	New insight to the role of microbes in the methane exchange in trees: evidence from metagenomic sequencing. <i>New Phytologist</i> , 2021, 231, 524-536.	3.5	23
89	Regional variation in the effectiveness of methane-based and land-based climate mitigation options. <i>Earth System Dynamics</i> , 2021, 12, 513-544.	2.7	6
90	Methane dynamics of high-elevation lakes in the Sierra Nevada California: the role of elevation, temperature, and inorganic nutrients. <i>Inland Waters</i> , 2021, 11, 267-277.	1.1	3
91	Making farming more sustainable by helping farmers to decide rather than telling them what to do. <i>Environmental Research Letters</i> , 2021, 16, 055033.	2.2	7
92	Identifying dominant environmental predictors of freshwater wetland methane fluxes across diurnal to seasonal time scales. <i>Global Change Biology</i> , 2021, 27, 3582-3604.	4.2	59
93	Analysis of Oil and Gas Ethane and Methane Emissions in the Southcentral and Eastern United States Using Four Seasons of Continuous Aircraft Ethane Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034194.	1.2	16
94	Comparison of CMIP6 historical climate simulations and future projected warming to an empirical model of global climate. <i>Earth System Dynamics</i> , 2021, 12, 545-579.	2.7	14
95	A new automated method for high-throughput carbon and hydrogen isotope analysis of gaseous and dissolved methane at atmospheric concentrations. <i>Rapid Communications in Mass Spectrometry</i> , 2021, 35, e9086.	0.7	2
96	The Key Role of Production Efficiency Changes in Livestock Methane Emission Mitigation. <i>AGU Advances</i> , 2021, 2, e2021AV000391.	2.3	39
97	Development of the global dataset of Wetland Area and Dynamics for Methane Modeling (WAD2M). <i>Earth System Science Data</i> , 2021, 13, 2001-2023.	3.7	47
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101	Deciphering cryptic methane cycling: Coupling of methylotrophic methanogenesis and anaerobic oxidation of methane in hypersaline coastal wetland sediment. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 302, 160-174.	1.6	7
102	Interannual Variability of Atmospheric CH ₄ and Its Driver Over South Korea Captured by Integrated Data in 2019. <i>Remote Sensing</i> , 2021, 13, 2266.	1.8	7
103	Improved Constraints on Global Methane Emissions and Sinks Using ¹³ C-CH ₄ . <i>Global Biogeochemical Cycles</i> , 2021, 35, e2021GB007000.	1.9	50
105	Global and regional impacts of land cover changes on isoprene emissions derived from spaceborne data and the MEGAN model. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 8413-8436.	1.9	28
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107	Satellite-based survey of extreme methane emissions in the Permian basin. <i>Science Advances</i> , 2021, 7, .	4.7	66
108	Geographic variability in freshwater methane hydrogen isotope ratios and its implications for global isotopic source signatures. <i>Biogeosciences</i> , 2021, 18, 3505-3527.	1.3	6
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119	Temporal methane variability in the water column of an area of seasonal coastal upwelling: A study based on a 12-year time series. <i>Progress in Oceanography</i> , 2021, 195, 102589.	1.5	3
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123	Estimating Remaining Carbon Budgets Using Temperature Responses Informed by CMIP6. <i>Frontiers in Climate</i> , 2021, 3, .	1.3	0
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125	FLUXNET-CH ₄ : a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. <i>Earth System Science Data</i> , 2021, 13, 3607-3689.	3.7	79
126	Enzymes, <i>In Vivo</i> Biocatalysis, and Metabolic Engineering for Enabling a Circular Economy and Sustainability. <i>Chemical Reviews</i> , 2021, 121, 10367-10451.	23.0	111
127	Optimal drainage timing for mitigating methane emissions from rice paddy fields. <i>Geoderma</i> , 2021, 394, 114986.	2.3	15
128	Large and increasing methane emissions from eastern Amazonia derived from satellite data, 2010–2018. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 10643-10669.	1.9	13
129	Spatiotemporal variability and origin of CO ₂ and CH ₄ tree stem fluxes in an upland forest. <i>Global Change Biology</i> , 2021, 27, 4879-4893.	4.2	16
130	Onshore Thermokarst Primes Subsea Permafrost Degradation. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093881.	1.5	12
131	Ethane measurement by Picarro CRDS G2201-i in laboratory and field conditions: potential and limitations. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 5049-5069.	1.2	8
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137	Methane-derived carbon flows into host-virus networks at different trophic levels in soil. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	38
138	Carbon isotopic characterisation and oxidation of UK landfill methane emissions by atmospheric measurements. <i>Waste Management</i> , 2021, 132, 162-175.	3.7	11
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143	Shipborne measurements of methane and carbon dioxide in the Middle East and Mediterranean areas and the contribution from oil and gas emissions. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 12443-12462.	1.9	16
144	The Community Inversion Framework v1.0: a unified system for atmospheric inversion studies. <i>Geoscientific Model Development</i> , 2021, 14, 5331-5354.	1.3	15
145	Seasonal and weather-related controls on methane emissions from the stems of mature trees in a cool-temperate forested wetland. <i>Biogeochemistry</i> , 2021, 156, 211-230.	1.7	8
146	Diel variation of CH ₄ emission fluxes in a small artificial lake: Toward more accurate methods of observation. <i>Science of the Total Environment</i> , 2021, 784, 147146.	3.9	8
147	Accelerating methane growth rate from 2010 to 2017: leading contributions from the tropics and East Asia. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 12631-12647.	1.9	23
148	Emerging reporting and verification needs under the Paris Agreement: How can the research community effectively contribute?. <i>Environmental Science and Policy</i> , 2021, 122, 116-126.	2.4	23
149	Reduced-cost construction of Jacobian matrices for high-resolution inversions of satellite observations of atmospheric composition. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 5521-5534.	1.2	5
150	Seasonal Variation of Methane Fluxes in a Mangrove Ecosystem in South India: An Eddy Covariance-Based Approach. <i>Estuaries and Coasts</i> , 2022, 45, 551-566.	1.0	4
151	Permanent Gas Emission from the Seyakha Crater of Gas Blowout, Yamal Peninsula, Russian Arctic. <i>Energies</i> , 2021, 14, 5345.	1.6	7
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153	Eutrophication decreased CO ₂ but increased CH ₄ emissions from lake: A case study of a shallow Lake Ulansuhai. <i>Water Research</i> , 2021, 201, 117363.	5.3	61
154	Reducing Global Greenhouse Gas Emissions to Meet Climate Targets – A Comprehensive Quantification and Reasonable Options. <i>Energies</i> , 2021, 14, 5260.	1.6	10
155	Variations and Drivers of Methane Fluxes from Double-Cropping Paddy Fields in Southern China at Diurnal, Seasonal and Inter-Seasonal Timescales. <i>Water (Switzerland)</i> , 2021, 13, 2171.	1.2	8
157	Density, Enthalpy of Vaporization and Local Structure of Neat N-Alkane Liquids. <i>Liquids</i> , 2021, 1, 47-59.	0.8	3
158	Spatiotemporal Methane Emission From Global Reservoirs. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006305.	1.3	23
159	Evaluation of comprehensive monthly-gridded methane emissions from natural and anthropogenic sources in China. <i>Science of the Total Environment</i> , 2021, 784, 147116.	3.9	28

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160	Adaptive Thinking, Feeling and Acting. , 2021, , 308-323.		0
161	Designing and Evaluating Adaptation Investments. , 2021, , 279-307.		0
162	Liveable and Sustainable Cities. , 2021, , 163-182.		0
163	Global greenhouse gas emissions from animal-based foods are twice those of plant-based foods. Nature Food, 2021, 2, 724-732.	6.2	298
164	Methylomonas albis sp. nov. and Methylomonas fluvii sp. nov.: Two cold-adapted methanotrophs from the river Elbe and emended description of the species Methylovulum psychrotolerans. Systematic and Applied Microbiology, 2021, 44, 126248.	1.2	18
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166	Observed Methane Uptake and Emissions at the Ecosystem Scale and Environmental Controls in a Subtropical Forest. Land, 2021, 10, 975.	1.2	3
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