

Online Supplementary for

Anthropogenic CH₄ Emissions in the Yangtze River Delta Based on A “Top-Down” Method

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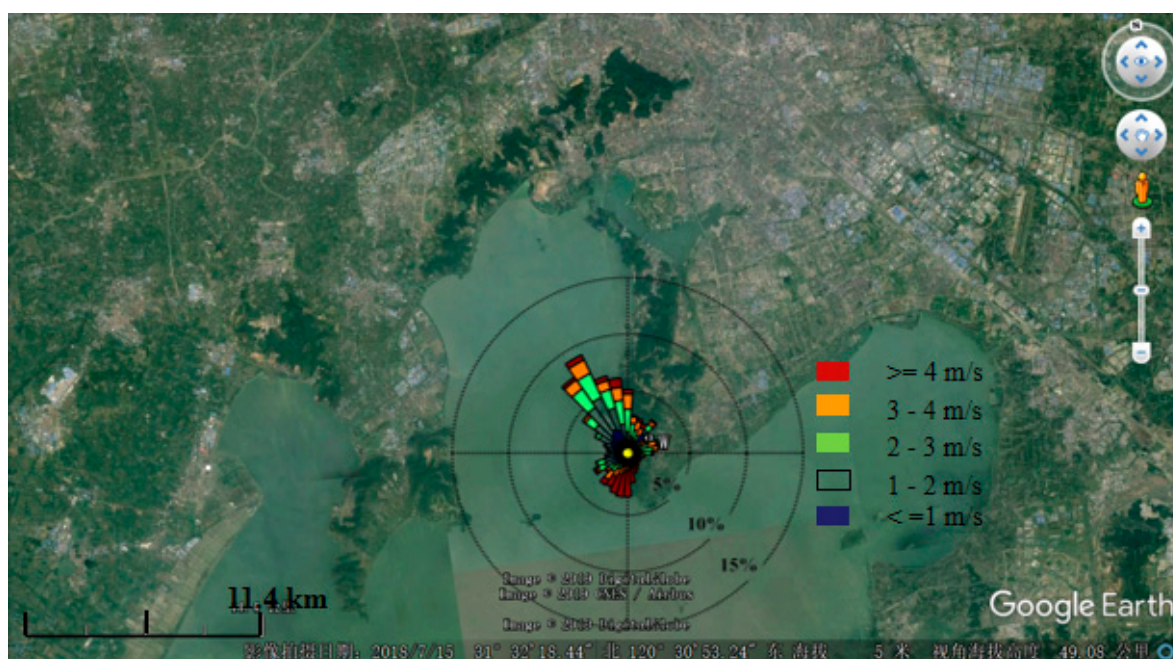


Figure S1. Prevailing wind direction measured at the Taihu Lake Ecosystem Observatory of the Chinese Academy of Sciences (site id MLW) in the winter.

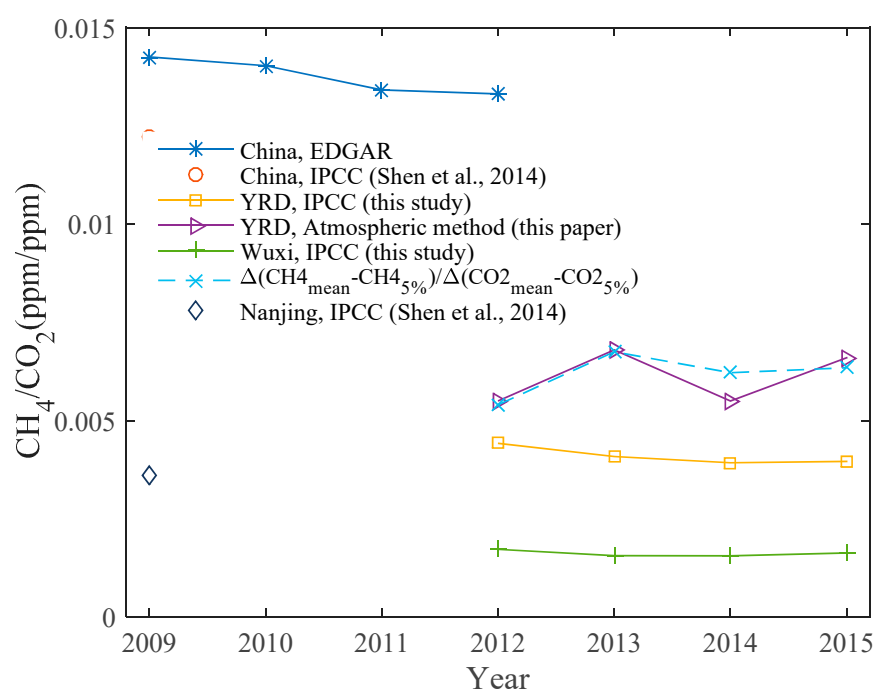


Figure S2. CH₄/CO₂ emissions ratio (ppm/ppm) estimated with different methods.

Table S1. Summary of CH₄:CO₂ emissions ratio (ppb:ppm) estimated with the atmospheric method found in the literature.

Location	Latitude and Longitude	Type	Time	CH ₄ /CO ₂	Reference
Boulder, Colorado		Surface, in situ	1985.12	7.6 ± 0.7	
Barrow, Alaska	71.32° N, 156.60° W	Surface, in situ	1986.03	21.2 ± 0.4	[1]
Barrow, Alaska	71.32° N, 156.62° W	Surface, in situ	1986.04	13.5 ± 0.9	
Arctic troposphere, lower stratosphere	-	Aircraft, flasks	1986.03–1986.04	17.5 ± 0.6	
Alert, North-West Territories, Canada	82.47° N, 62.50° W	Mountain, in situ	1986.04	20	[2]
Ocean Station "M"	66° N, 2° E	Surface, flasks	1983–1989, winter	9.3 ± 1.7 *	
Barrow, Alaska	71.32° N, 156.62° W	Surface, flasks	1989.03	11.0	[3]
Arctic troposphere, lower stratosphere	-	Aircraft, flasks	1989.03	13.5	
NOAA-Climate Monitoring and Diagnostics Lab Barrow Observatory	71.28° N, 156.78° W	Surface, in situ	1989–1990	9.14 ± 3.27	[4]
Alert, NWT, Canada	82.47° N, 62.50° W	Mountain, in situ	1992.01–1992.04, Black carbon > 100 ng/m ³	13.0 ± 2.2 *	[5]
Black Forest, Germany	48° N, 8° E	Mountain, in situ	1991–1995, winter (hourly & daily)	7.8 ± 1.0	[6]
			1991–1995, winter, monthly	6.5 ± 1.1	
Barrow, Alaska	71.32° N, 156.62° W	Surface, in situ	1986–1997, winter, midnight	12.8 ± 0.3	[7]
Tatra Mountains, southern Poland	49.17° N, 20.13° E	Mountain, in situ	1997, winter	10.7 ± 0.3	[8]
Pasadena, Los Angeles	34.2° N, 118.2° W	Aircraft, in situ	2007.082008.06	7.8 ± 0.8	[9]
Los Angeles	-	Aircraft, in situ	2008.06	6.74 ± 0.58	[10]
Los Angeles	-	Aircraft, in situ	2010.05–2010.06	6.55–6.7	[10,11]
Pasadena, Los Angeles	-	Surface, in situ	2012.02–2012.08	6.30 ± 0.01	
Pasadena, Los Angeles	34.14° N, 118.04° W	Surface, in situ	2011.09–2013.06	6.10 ± 0.10	[12]
Los Angeles	34.22° N, 118.06° W	Column (FTS)	2011.09–2013.10	6.40 ± 0.50	
Nanjing University of Information Science and Technology, Nanjing, China	32.20° N, 118.72° E	Building, in situ	2010, winter, midday	4.3 ± 0.7	[13]
Taihu Lake Ecosystem Observatory of the Chinese Academy of Sciences (site id MLW), Wuxi, China	31.42° N, 120.21° E	Surface, in situ	2012–2015, winter, midday	6.1 ± 0.5 *	This study

* The average among the period.

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