

1 Supplementary data to

2 **Mercury Pollution in China: Implications on Implementation of Minamata**  
3 **Convention**

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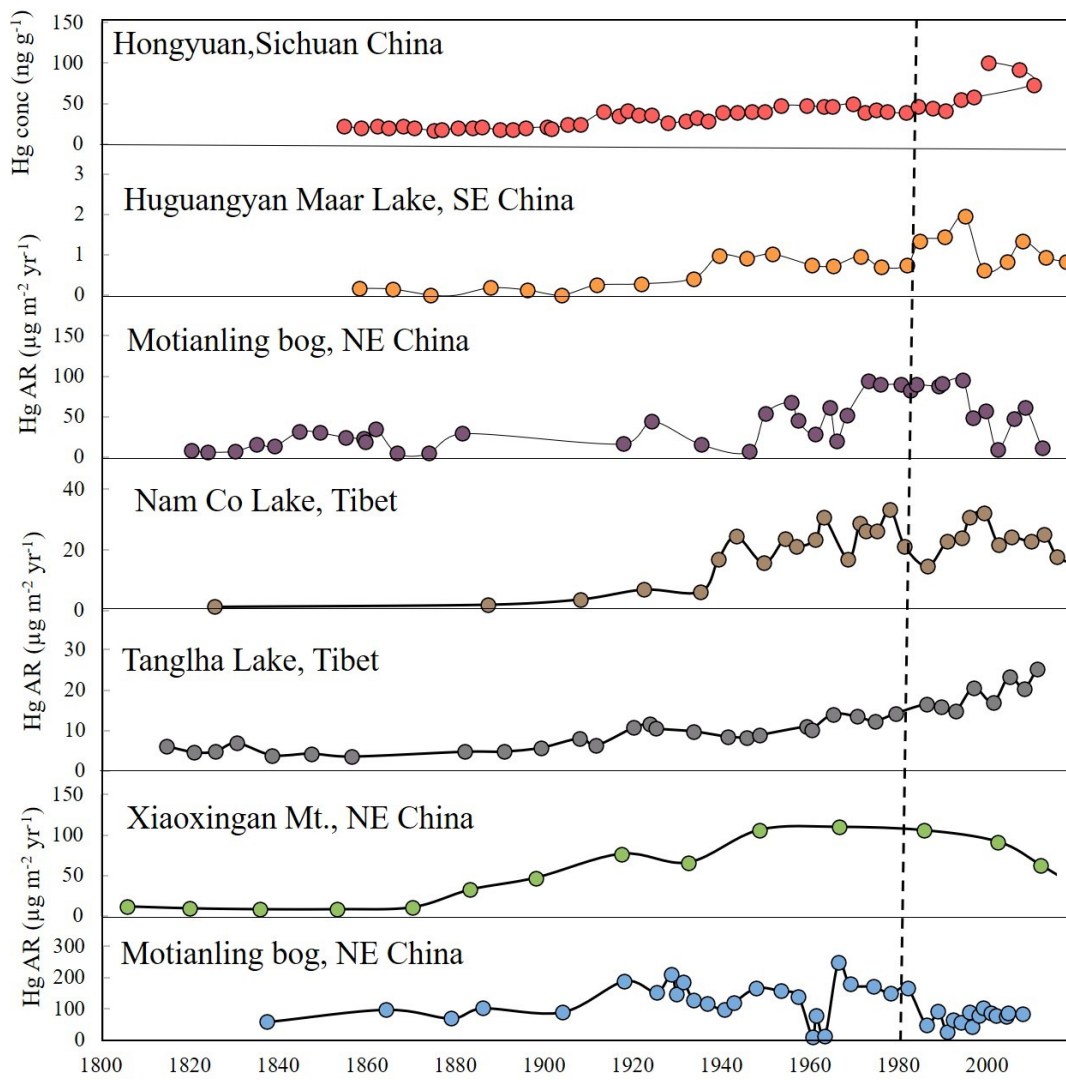
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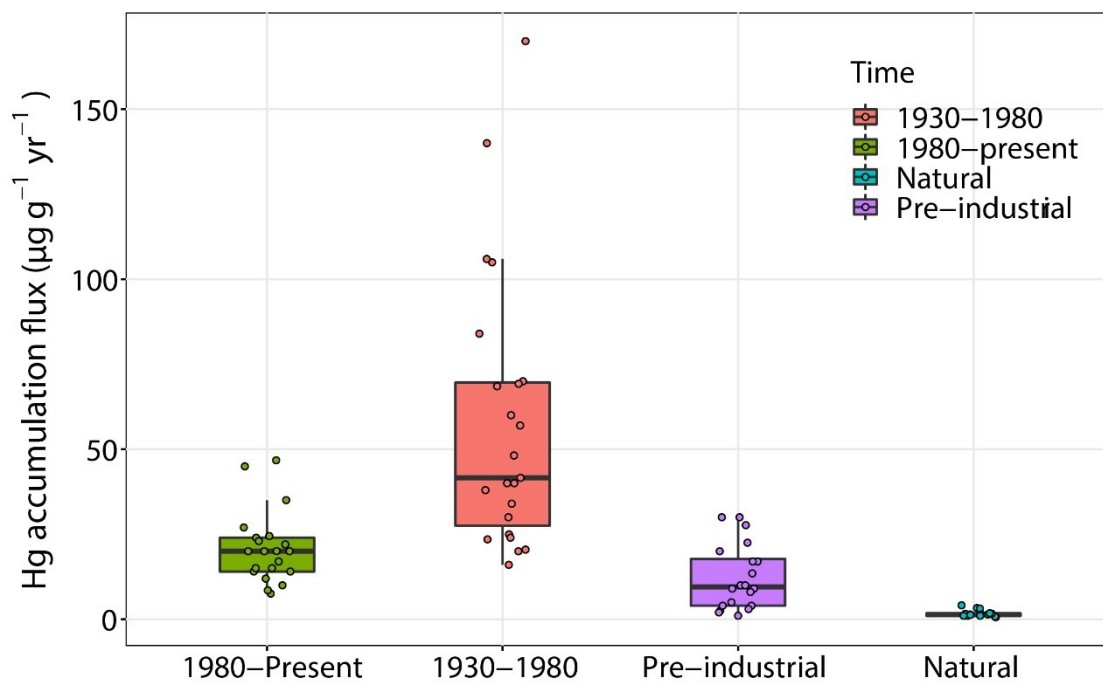


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16 **Figure S1.** The recorded of Hg accumulation rate ( $\mu\text{g m}^{-2} \text{yr}^{-1}$ ) in remote peat cores and lake  
 17 sediment cores of China. These data are from Tang et al.<sup>1</sup>, Shi et al.<sup>2</sup>, Kang et al.<sup>3</sup>, Bao et al.<sup>4</sup>, and  
 18 Zeng et al.<sup>5</sup>. It is noted that Shi et al.<sup>2</sup> mainly reported Hg concentration in peat cores of Hongyuan.

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22 **Figure S2.** The peat core recorded Hg accumulation rate in North America and Europe. Pre-industrial  
23 is the era of 1800-1850, and Natural is before 1300 AD. The average of atmospheric Hg deposition  
24 rate in North America and Europe peaks between 1970-1980. The dataset is from Amos et al.<sup>6</sup>.

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26 Table S1 Site information, sampling period, and speciated atmospheric mercury concentrations at urban and  
 27 remote sites in China

Site	Type	Long (°)	Lat (°)	Elevation (m a.s.l.)	Sampling period	$\Sigma$ Hg emission (kg 0.5 grid <sup>-1</sup> h <sup>-1</sup> )	GEM (ng m <sup>-3</sup> )		PBM (pg m <sup>-3</sup> )		GOM (pg m <sup>-3</sup> )		Reference
							Mean	1sd	Mean	1sd	Mean	1sd	
Beijing	Urban	116.338	40.008		Sep 2015 to Jul 2016	408.50	4.70	3.53	85.2	95.3	18.5	22.3	1
Shanghai	Urban	120.998	31.098	17	Jan 2014 to Dec 2012	440.81	4.19	9.13	197.0	877.0	21.0	100.0	2
Hefei	Urban	117.283	31.867	30	Jul 2013 to Jun 2014	340.52	4.07	1.91	30.0	100.0	3.7	5.1	3
Guiyang	Urban	106.720	26.570	1040	Aug to Dec 2009	124.70	9.72	10.20	368.0	276.0	35.7	43.9	4
Xiamen	Urban	118.094	24.434	7	March 2012 to Feb 2013	134.97	3.50	1.61	174.0	280.0	61.0	69.4	5
Suzhou	Urban	120.628	31.286		Jan to Dec 2018		2.57	2.09	16.0	15.7	5.3	15.7	6
Dianshan Lake	Urban	120.858	31.080		Jun 2015 to May 2016	370.84	2.77	1.36	60.8	67.4	82.1	115.4	7
Jinan	Urban	117.030	36.670		Oct 2015 to Jul 2016	274.32	4.91	3.66	452.0	433.0			8
Qingdao	Urban	120.414	36.076	9	Jan to Dec 2013		5.75	4.24	190.0	165.0			9
Lanzhou	Urban	103.858	36.050	1540	Oct 2016 to Oct 2017	429.89	4.48	2.32					10
Nanjing	Urban	118.780	32.050	100	Jan to Dec 2011	391.28	7.90	7.00					11
Ningbo	Urban	121.544	29.867	10	Oct 2007 to Jan 2008	287.90	3.79	1.29					12
Chongqing	Urban	106.500	29.600	350	Aug 2006 to Sep 2007		6.74	0.37					13
Guangzhou	Urban	113.355	23.124	60	Nov 2010 to Oct 2011	316.83	4.60	1.60					14
Chongming Island	Remote	121.908	31.522	11	Jul 2010 to March 2012	146.22	2.65	1.73	21.5	25.4	8.0	8.8	15
Mt. Changbai	Remote	128.113	42.400	741	Jul 2013 to Jul 2014	65.80	1.68	0.47	16.6	15.2	5.4	6.4	16
Mt. Waliguan	Remote	100.898	36.287	3816	Sep 2007 to Sep 2008	131.16	1.98	0.98	19.4	18.0	7.4	4.8	17
Miyun reservoir	Remote	116.775	40.481	220	Dec 2008 to Nov 2009	136.00	3.22	1.74	98.2	113.0	10.1	18.8	18
Mt. Damei	Remote	121.565	29.632	550	Apr 2011 to Apr 2013	325.50	3.31	1.44	180.0	114.0	6.7	4.3	19
Shangri-La	Remote	99.733	28.017	3580	Nov 2009 to Oct 2010	14.44	2.55	0.73	37.8	31.3	7.9	7.9	20
Mt. Gongga	Remote	102.117	29.649	1640	May 2005 to Jul 2007	159.92	3.98	1.62	30.7	32.1	6.2	3.9	21,22
Mt. Ailao	Remote	101.017	24.533	2450	May 2011 to May 2012	58.40	2.09	0.63	31.3	28.4	2.2	2.3	23
Nam Co	Remote	90.990	30.780	4730	Jan 2012 to Oct 2014	18.69	1.33	0.24	49.0	60.3	0.8	2.9	24,25
Qomolangma	Remote	86.950	28.370	4276	Apr to Aug 2016	21.96	1.42	0.37	25.6	19.1	21.4	13.4	26
Mt. Lulin	Remote	120.870	23.470	2862	Apr 2006 to Dec 2007	56.57	1.60	0.47	2.3	3.9	12.0	20.0	27
Huaniao Island	Remote	122.670	30.860	50	Oct 2013 to Jan 2014	128.00	2.25	1.03	26.0	38.0	8.0	10.0	28
Mt. Simian	Remote	106.474	28.602	1222	March 2012 to Feb 2013	186.88	2.88	1.54					29
Chengshantou	Remote	122.680	37.380	30	Jul 2007 to May 2009	134.52	2.31	0.74					30
Mt. Leigong	Remote	108.200	26.390	2178	May 2008 to May 2009	103.20	2.80	1.51					31
Mt. Dinghu	Remote	112.549	23.164		Sep 2009 to Apr 2010	237.79	5.07	2.89					14
Mt. Wuyi	Remote	117.725	28.590	1139	Jun 2017 to May 2018	295.54	1.70	0.43					32
Wanqingsha	Remote	113.550	22.700	3	Nov to Dec 2008	189.79	2.94						33
Nanling	Remote	112.899	24.699	1690	Jun 2012 to May 2013	410.66	2.56	0.93					34
Mt. Wuzhi	Remote	109.492	18.836	958	May 2011 to May 2012	106.15	1.58	0.71					29

29 Table S2 Precipitation Hg concentrations and Hg wet deposition flux at urban and remote sites in  
 30 China

Site	Type	LONG (°)	LAT (°)	Elevation (m a.s.l.)	Sampling period	Precipitation Hg (ng L <sup>-1</sup> )		Deposition flux (µg m <sup>-2</sup> yr <sup>-1</sup> )		Reference
						Mean	1sd	Mean	1sd	
Qingdao	Urban	120.34	36.06		March 2016 to Feb 2017	13.6		5.7		35
Guiyang	Urban	106.724	26.573	1040	Sep 2012 to Aug 2013	11.9	6.1	12.6	6.5	36
Lhasa	Urban	91.017	29.633	3640	Jan to Dec 2010	24.8	34.2	8.2	11.3	37
Xiamen	Urban	118.03	24.56		Jun 2012 to May 2013	12.3		14.0		38
Nanjing	Urban	118.78	32.05	100	Jun 2011 to Feb 2012	52.9		56.5		39
Ningbo	Urban	121.522	29.86		Jan 2015 to Aug 2018	23.3	3.1	23.6	3.1	40
Chongqing	Urban	106.478	29.619		Jun 2010 to Jul 2011	30.7		28.7	5.1	41
Chongming island	Remote	121.908	31.522	11	Jul 2014 to Jun 2015	8.13		8.7		42
Mt. Changbai	Remote	128.113	42.4	741	Aug 2011 to Aug 2014	7.4	6.1	5.6	4.6	36
Mt. Waliguan	Remote	100.898	36.287	3816	May 2012 to Aug 2014	6.9	8.6	2.0	2.4	36
Mt. Damei	Remote	121.565	29.632	550	Aug 2012 to Aug 2014	3.7	2.8	6.0	4.6	36
Mt. Ailao	Remote	101.017	24.533	2450	2011.05~2014.05	3.7	2.4	7.2	4.7	36
Bayinbuluk	Remote	83.717	42.893	2500	Dec 2013 to Dec 2014	7.7	6	2.0	1.6	36
Nam Co	Remote	90.99	30.78	4730	Jul 2009 to Jul 2011	4.8	5.9	1.8	2.2	43
SET station	Remote	94.733	29.767	3326	May 2010 to Oct 2012	4.0	2.7	3.9	2.6	44
Mt. Lulin	Remote	120.87	23.47	2862	Jan 2009 to Dec 2013	9.2		32.3		45
Mt. Simian	Remote	106.474	28.602	1222	Feb 2012 to Feb 2013	10.9	3.1	15.4	4.4	46
Mt. Leigong	Remote	108.2	26.39	2178	May 2008 to May 2009	4.0	2.8	6.1	4.2	31
Mt. Gongga	Remote	102.117	29.649	1640	May 2005 to Apr 2006	9.9	2.8	9.1	2.6	22
Tieshanping	Remote	104.68	29.63	500	March 2005 to Feb 2006	32.3		29.0		47
Puding reservoir	Remote	105.8	26.37	1145	Aug 2005 to Jul 2006	20.6		24.8		48
Hongjiadu reservoir	Remote	105.85	26.88	1130	Aug 2005 to Jul 2006	39.4		34.7		48
Yinzidu reservoir	Remote	106.12	26.57	1088	Aug 2005 to Jul 2006	35.7		38.1		48
Dongfeng reservoir	Remote	106.13	26.85	970	Aug 2005 to Jul 2006	37.4		36.3		48
Wujiangdu reservoir	Remote	106.77	27.32	780	Aug 2005 to Jul 2006	57.1		39.6		48

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