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Model Inter-Comparison Study for Asia (MICS-Asia) phase III: multimodel comparison of reactive nitrogen deposition over China

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Table S1. Observation site over China

Region	id	Site Name	Type	lon	lat	Source	Time Resolution
NC	NC1	Baoding	Urban	115.50	38.85	CREN	Monthly
	NC2	Beijing	Urban	116.36	39.97	CREN	Monthly
	NC3	Cangzhou	Urban	116.87	38.30	CREN	Monthly
	NC4	Luancheng	Rural	114.69	37.89	CREN	Monthly
	NC5	Tanggu	Urban	117.72	39.04	CREN	Monthly
	NC6	Tangshan	Urban	118.20	39.60	CREN	Monthly
	NC7	Tianjin	Urban	117.21	39.08	CREN	Monthly
	NC8	Xinglong	Rural	117.58	40.39	CREN	Monthly
	NC9	Yangfang	Urban	116.10	40.15	CREN	Monthly
	NC10	Yucheng	Rural	116.60	36.95	CREN	Monthly
	NC11	Huimin	Rural	117.51	37.49	NNDMN	Yearly
	NC12	Linshandao	Urban	120.15	35.75	NNDMN	Yearly
	NC13	Qingdao	Urban	120.40	36.32	NNDMN	Yearly
	NC14	Quzhou	Rural	115.02	36.86	NNDMN	Yearly
	NC15	Shanyin	Urban	112.80	39.52	NNDMN	Yearly
	NC16	Zhumadian	Rural	114.08	32.97	NNDMN	Yearly
NE	NE1	Genhe	Rural	121.52	50.78	NNDMN	Yearly
	NE2	Lishu	Rural	124.17	43.36	NNDMN	Yearly
	NE3	Wuyin	Rural	129.25	48.11	NNDMN	Yearly
	NE4	Shenyang1	Urban	123.44	41.78	EPA	Monthly
	NE5	Shenyang2	Rural	123.55	41.75	EPA	Monthly
	NE6	Dalian1	Urban	121.62	38.97	EPA	Monthly
	NE7	Dalian2	Rural	121.26	38.81	EPA	Monthly
	NE8	Anshan1	Urban	122.95	41.09	EPA	Monthly
	NE9	Anshan2	Rural	122.93	41.08	EPA	Monthly
	NE10	Fushun1	Urban	124.04	41.86	EPA	Monthly
	NE11	Fushun2	Rural	124.22	41.92	EPA	Monthly
	NE12	Benxi1	Urban	123.75	41.28	EPA	Monthly
	NE13	Benxi2	Rural	123.85	41.37	EPA	Monthly
	NE14	Dandong1	Urban	124.35	40.11	EPA	Monthly
	NE15	Dandong2	Rural	124.34	40.05	EPA	Monthly
	NE16	Jingzhou1	Urban	121.12	41.12	EPA	Monthly
	NE17	Jingzhou2	Rural	121.10	41.08	EPA	Monthly
	NE18	Yingkou1	Urban	122.23	40.53	EPA	Monthly
	NE19	Yingkou2	Rural	122.37	40.68	EPA	Monthly
	NE20	Fuxin1	Urban	121.67	42.02	EPA	Monthly
	NE21	Fuxin2	Rural	121.69	42.05	EPA	Monthly
	NE22	Liaoyang1	Urban	123.16	41.27	EPA	Monthly
	NE23	Liaoyang2	Rural	123.16	41.32	EPA	Monthly
	NE24	Panjing1	Urban	122.07	41.12	EPA	Monthly
	NE25	Panjing2	Rural	122.02	41.09	EPA	Monthly
	NE26	Tieling1	Urban	123.85	42.29	EPA	Monthly

	NE27	Tieling2	Rural	123.69	42.16	EPA	Monthly
	NE28	Chaoyangshi1	Urban	120.46	41.57	EPA	Monthly
	NE29	Chaoyangshi2	Rural	120.41	41.50	EPA	Monthly
	NE30	Huludao1	Urban	120.92	40.72	EPA	Monthly
	NE31	Huludao2	Rural	120.95	40.79	EPA	Monthly
NW	NW1	Jiwozi	Rural	108.80	33.83	EANET*	Monthly
	NW2	Shizhan	Urban	108.95	34.23	EANET*	Monthly
	NW3	Duolun	Rural	116.49	42.20	NNDMN	Yearly
	NW4	Bayinbuluke	Rural	83.71	42.88	NNDMN	Yearly
	NW5	Shengdisuo	Urban	87.57	43.87	NNDMN	Yearly
	NW6	Tufeisuo	Urban	87.58	43.82	NNDMN	Yearly
	NW7	Wuwei	Rural	102.60	38.07	NNDMN	Yearly
	NW8	Changji	Urban	87.3089	44.0105	EPA	Monthly
	NW9	Dianba	Urban	87.2528	44.0456	EPA	Monthly
SE	SE1	Hongwen	Urban	118.13	24.47	EANET*	Monthly
	SE2	XiangZhou	Urban	113.57	22.27	EANET*	Monthly
	SE3	Xiaoping	Rural	118.03	24.85	EANET*	Monthly
	SE4	Zhuxiandong	Urban	113.52	22.20	EANET*	Monthly
	SE5	Dongguan	Urban	113.78	23.05	EPA	Monthly
	SE6	Foshan	Urban	113.13	23.00	EPA	Monthly
	SE7	Guangzhou1	Urban	113.24	23.14	EPA	Monthly
	SE8	Huizhou	Urban	114.42	23.05	EPA	Monthly
	SE9	Jiangmen	Urban	113.10	22.61	EPA	Monthly
	SE10	Shenzhen	Urban	114.10	22.55	EPA	Monthly
	SE11	Zhaoqing	Urban	112.43	23.07	EPA	Monthly
	SE12	Zhongshan	Urban	113.38	22.52	EPA	Monthly
	SE13	Zhuhai	Urban	113.52	22.30	EPA	Monthly
	SE14	Changding	Urban	116.27	25.55	NNDMN	Yearly
	SE15	Fenghua	Rural	121.53	29.61	NNDMN	Yearly
	SE16	Fuzhou	Rural	119.03	25.87	NNDMN	Yearly
	SE17	Guangzhou2	Urban	113.28	23.19	NNDMN	Yearly
	SE18	Nanjing	Urban	118.85	31.84	NNDMN	Yearly
	SE19	Shanghang	Rural	116.48	25.30	NNDMN	Yearly
	SE20	Taining	Urban	117.08	26.80	NNDMN	Yearly
	SE21	Wuyishan	Rural	118.00	27.52	NNDMN	Yearly
	SE22	Shanghai	Urban	121.47	31.23	EPA	Monthly
SW	SW1	Haifu	Urban	106.50	29.62	EANET*	Monthly
	SW2	Jinyunshan	Rural	106.37	29.82	EANET*	Monthly
	SW3	Kunming	Urban	102.73	25.12	NNDMN	Yearly
	TP1	Xining	Urban	101.79	36.62	NNDMN	Yearly
	TP2	Linzi	Rural	94.36	29.65	NNDMN	Yearly

*EANET sites in China.

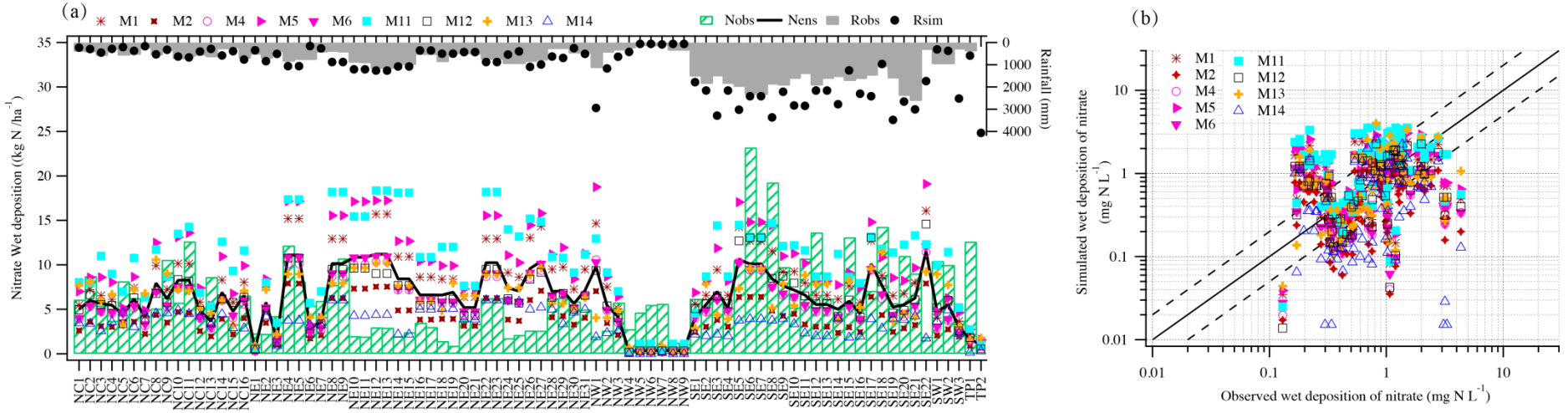

Figure S1. Yearly flux of N_{ox} wet deposition simulated by participant models in MICS-Asia III and observation in China (a) and scatter plot of simulated N_{ox} VWA concentrations in rainfall (b).

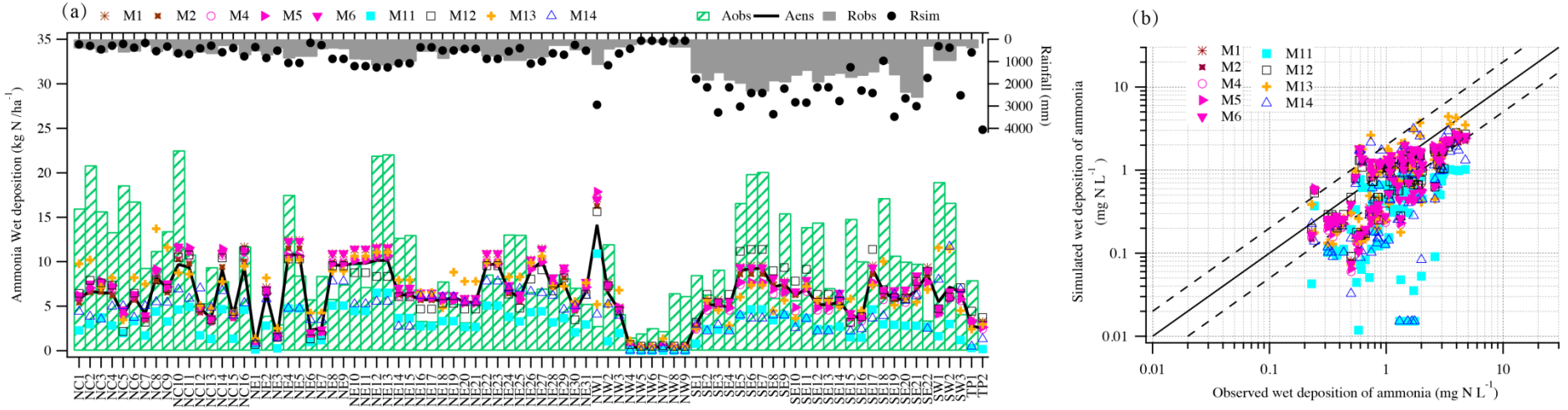

Figure S2. Same as Figure S1 but for N_{rd} wet deposition

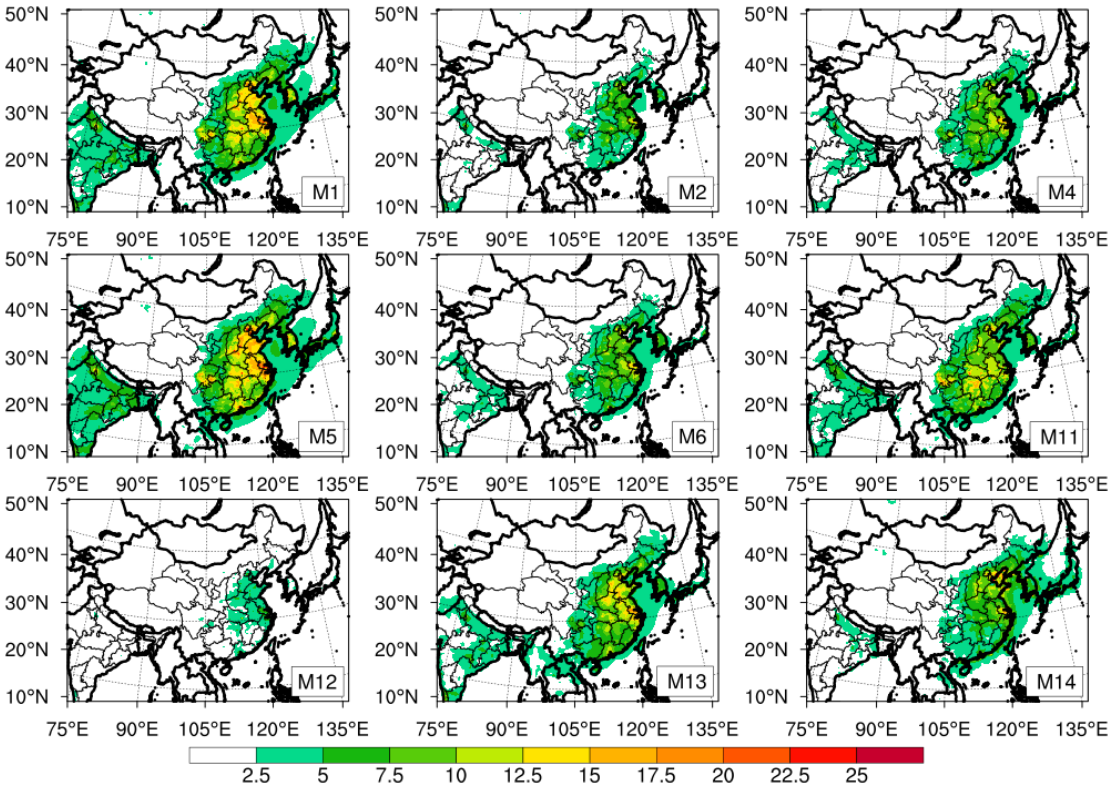

Figure S3. Distributions of the dry depositions of N_{ox} simulated by each participant model in MICS-Asia III

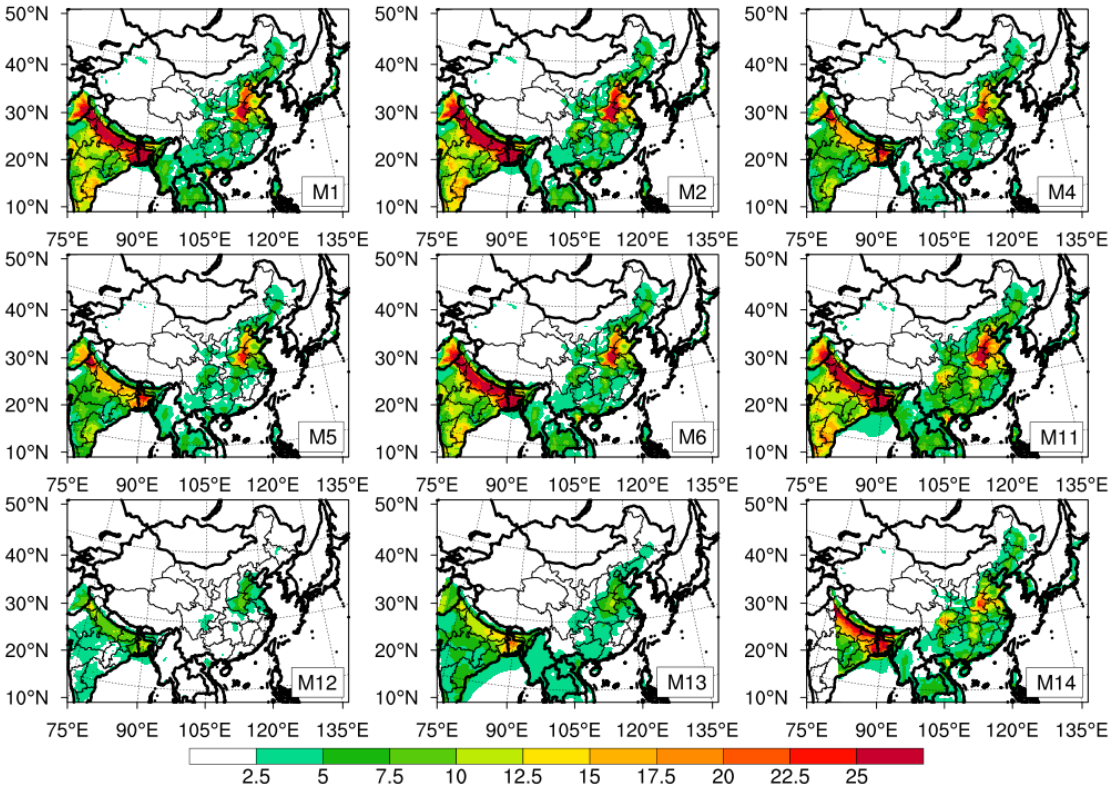

Figure S4. Same as Figure S3 but for N_{rd} dry deposition

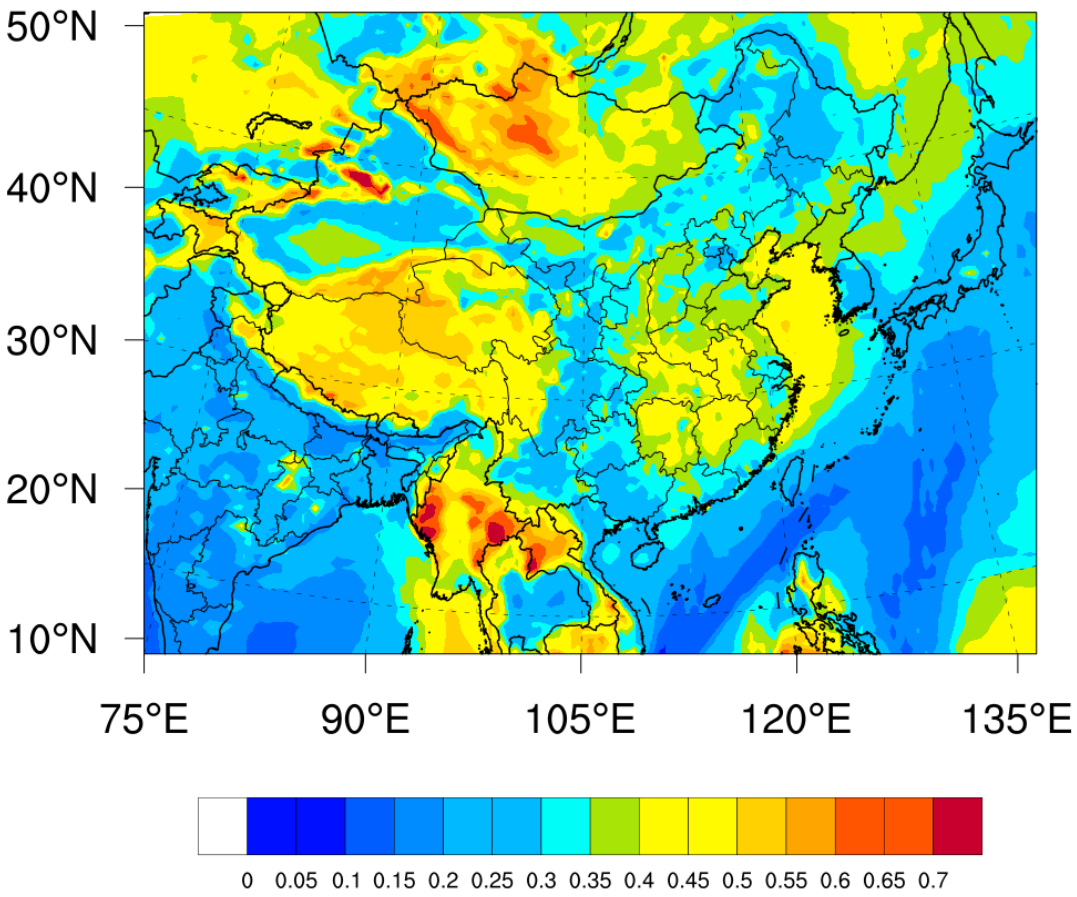

Figure S5. Distribution of CV of NO_2 vertical column density for annual.

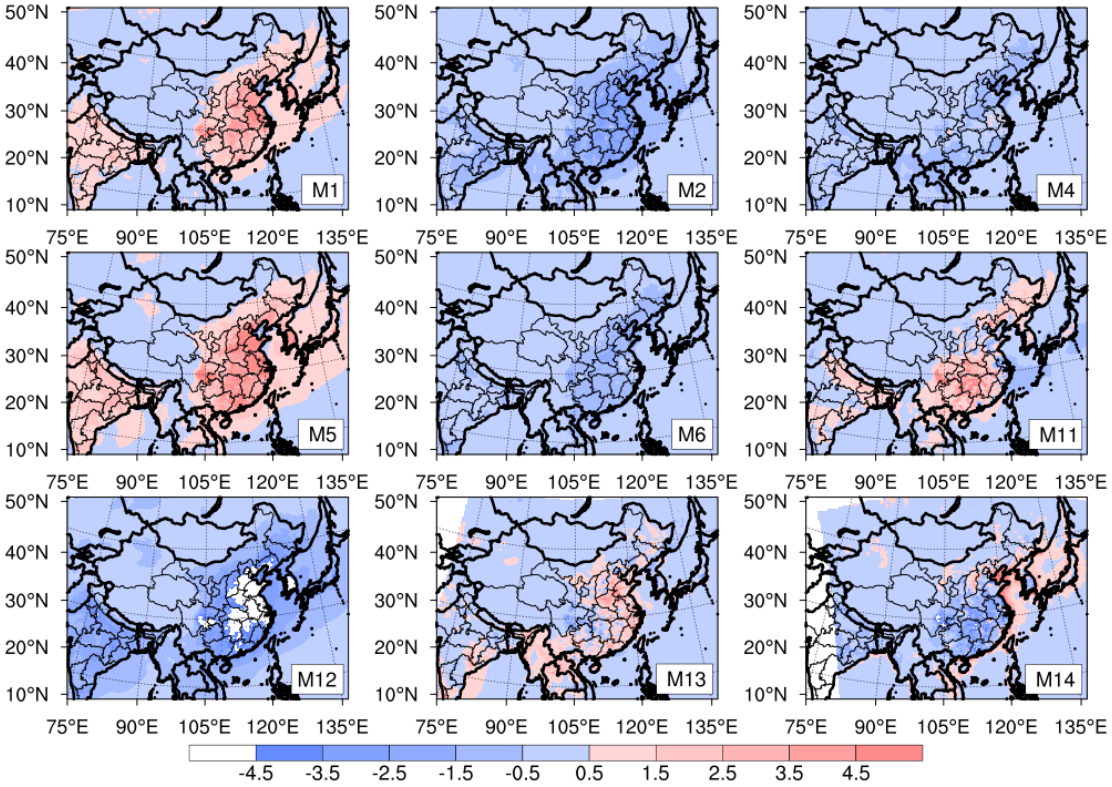

Figure S6. Anomalies of N_{ox} dry deposition in each model of MICS-Asia III

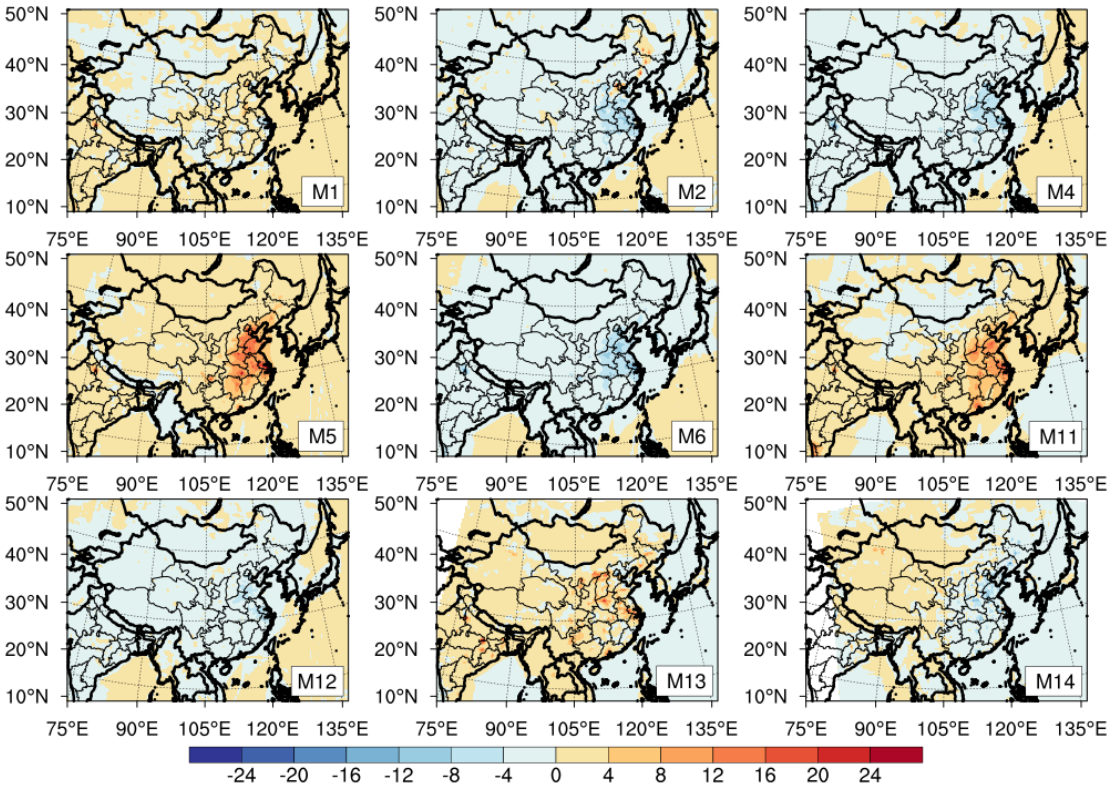

Figure S7. Anomalies of gaseous NO_X in the atmosphere in each model of MICS-Asia III

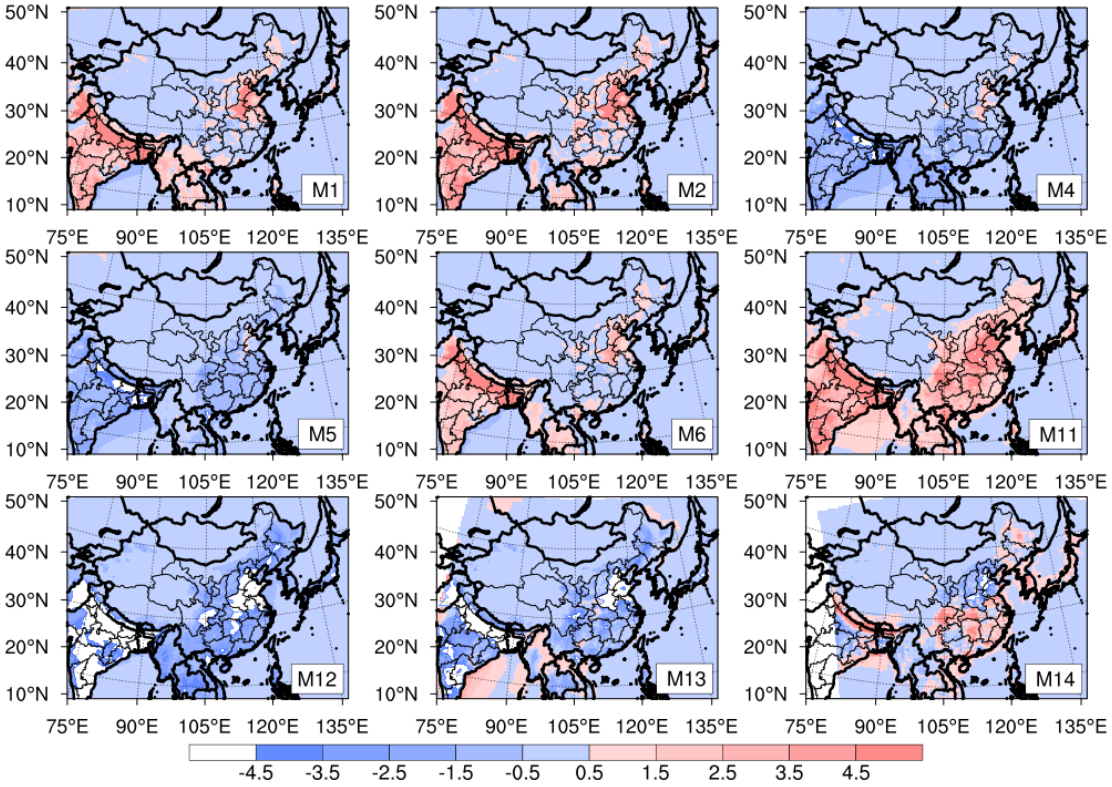

Figure S8. Anomalies of N_{rd} dry deposition in each model of MICS-Asia III

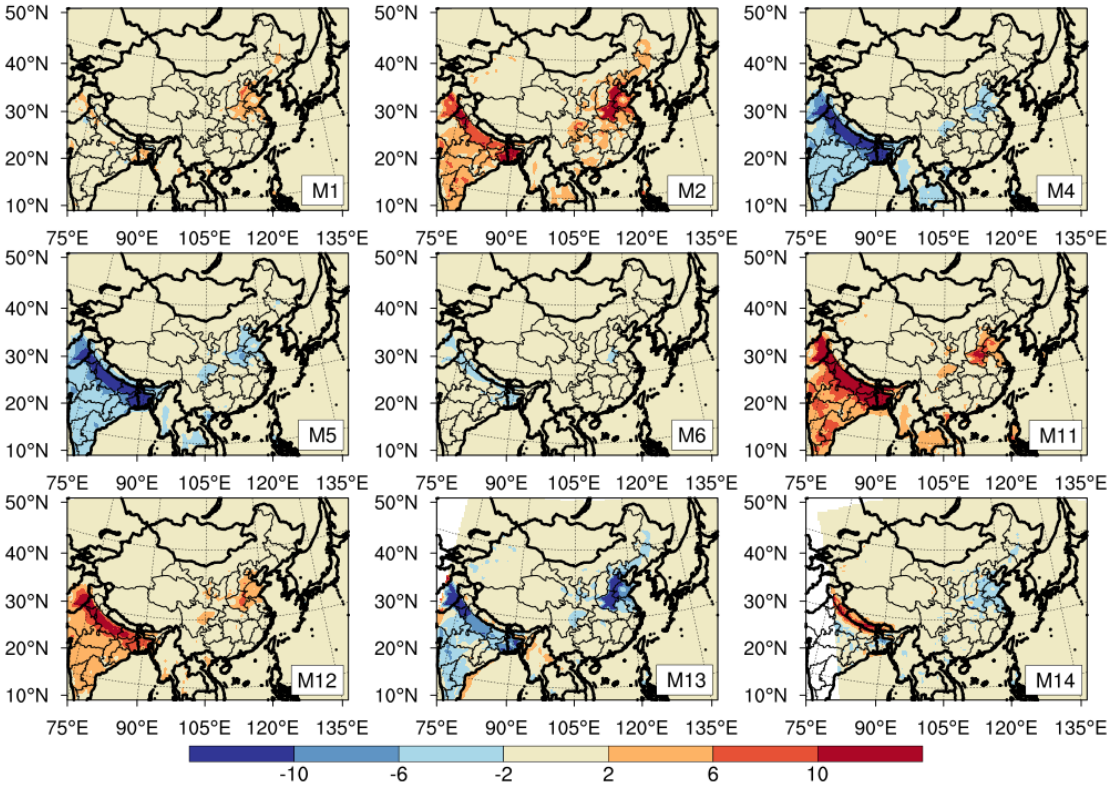

Figure S9. Anomalies of gaseous NH_3 in the atmosphere in each model of MICS-Asia III

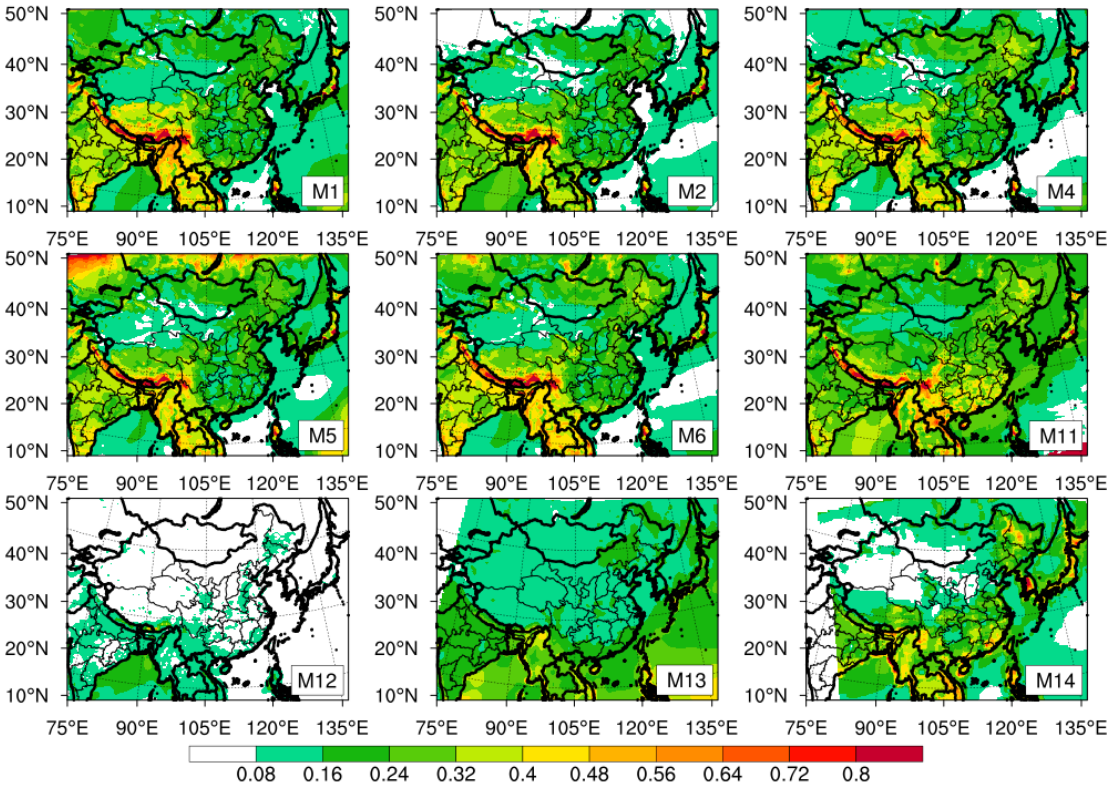

Figure S10. Dry deposition velocity of N_{rd} (cm/s) in each model of MICS-Asia III

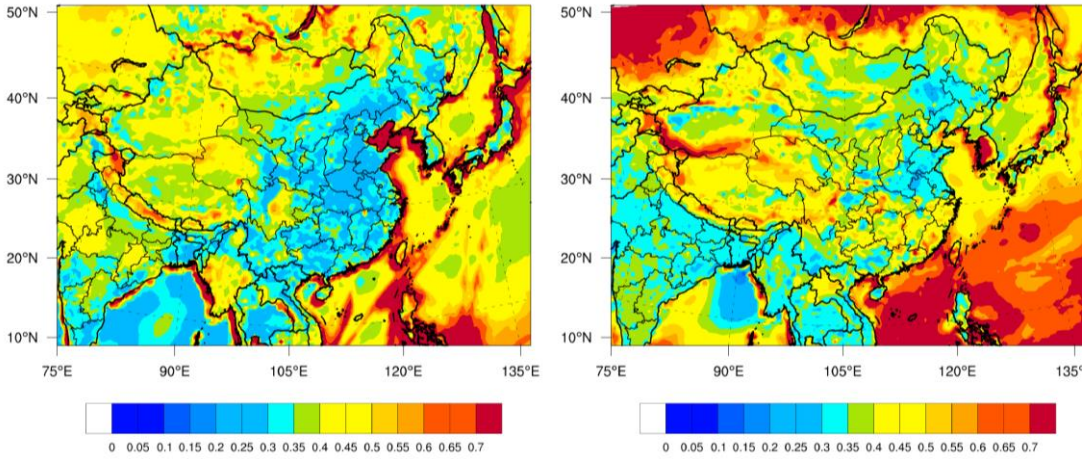

Figure S11. CV of dry deposition velocity of N_{ox} (left) and N_{rd} (right) in MICS-Asia III

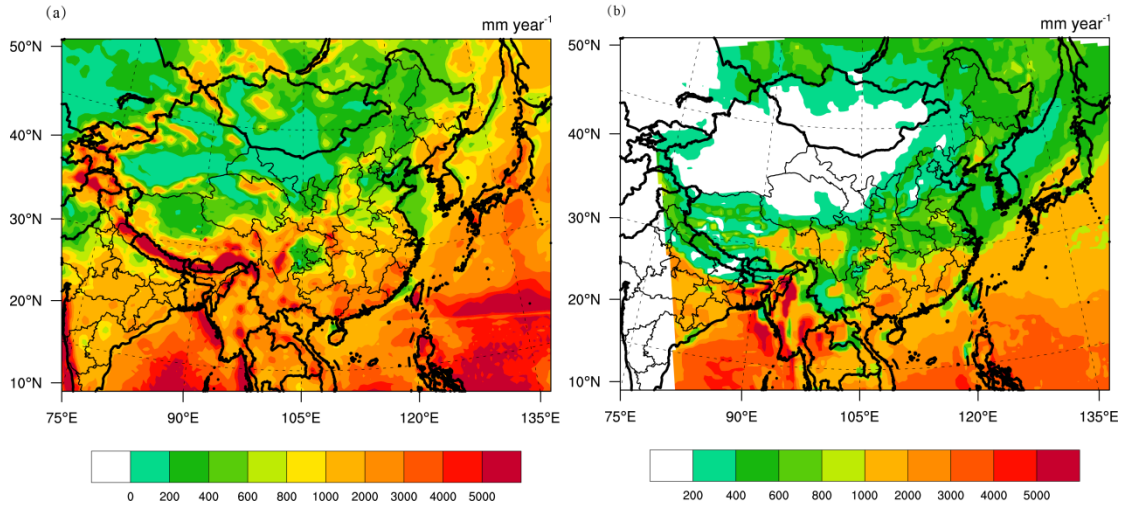

Figure S12. Annual rain volume simulated by WRF (a) and RAMS(b) during in MICS-Asia III