Supplement Information of

Comparison and evaluation of anthropogenic emissions of SO$_2$ and NO$_x$ over China

Meng Li[1,3,a], Zbigniew Klimont[2], Qiang Zhang[1], Randall V. Martin[4], Bo Zheng[3], Chris Heyes[2], Janusz Cofala[2], and Kebin He[3]

[1]Ministry of Education Key Laboratory for Earth System Modeling, Department for Earth System Science, Tsinghua University, Beijing, China

[2]International Institute for Applied Systems Analysis (IIASA), Laxenburg, 2361, Austria

[3]State Key Joint Laboratory of Environment Simulation and Pollution Control, School of Environment, Tsinghua University, Beijing, China

[4]Department of Physics and Atmospheric Science, Dalhousie University, Halifax, Canada

[a]now at Max-Planck Institute for Chemistry, Mainz, Germany

Correspondence to: Meng Li (M.Li@mpic.de)

Table S1. Fuel distribution among sectors in ECLIPSE and MIX emission inventories, 2010

Inventories	ECLIPSE	MIX
Coal[a], Mt coal		
Power	1743	1576
Industry	747	968
Heating	n/a[b]	259
Residential	301	222
Coal sum	2792	3025
Gasoline, Mt gasoline		
On-road	71	69
Diesel, Mt diesel		
On-road	72	92
Off-road	26	42
Diesel sum	98	134

[a] Including coal and derived coal (coke, briquettes).
[b] Coal consumptions for heating are distributed into "Power" and "Industry" sectors in ECLIPSE.

Table S2. Abbreviations of provinces of mainland, China

Abbreviation	Province	Abbreviation	Province
ANHU	Anhui	JIAX	Jiangxi
BEIJ	Beijing	JILN	Jilin
CHOQ	Chongqing	LIAO	Liaoning
FUJN	Fujian	NINX	Ningxia
GANS	Gansu	QINH	Qinghai
GUAD	Guangdong	SHAA	Shaanxi
GUAX	Guangxi	SHDG	Shandong
GUIZ	Guizhou	SHAH	Shanghai
HAIN	Hainan	SHXI	Shanxi
HEBE	Hebei	SICH	Sichuan
HELJ	Heilongjiang	TIAJ	Tianjin
HENA	Henan	TIBT	Tibet
HUBE	Hubei	XINJ	Xinjiang
HUNA	Hunan	YUNA	Yunnan
INMO	Inner Mongolia	ZHEJ	Zhejiang
JIAS	Jiangsu		

(a) SO₂

(b) NOₓ

Figure S1. Sectoral distribution by provinces in ECLIPSE and MIX, 2010.
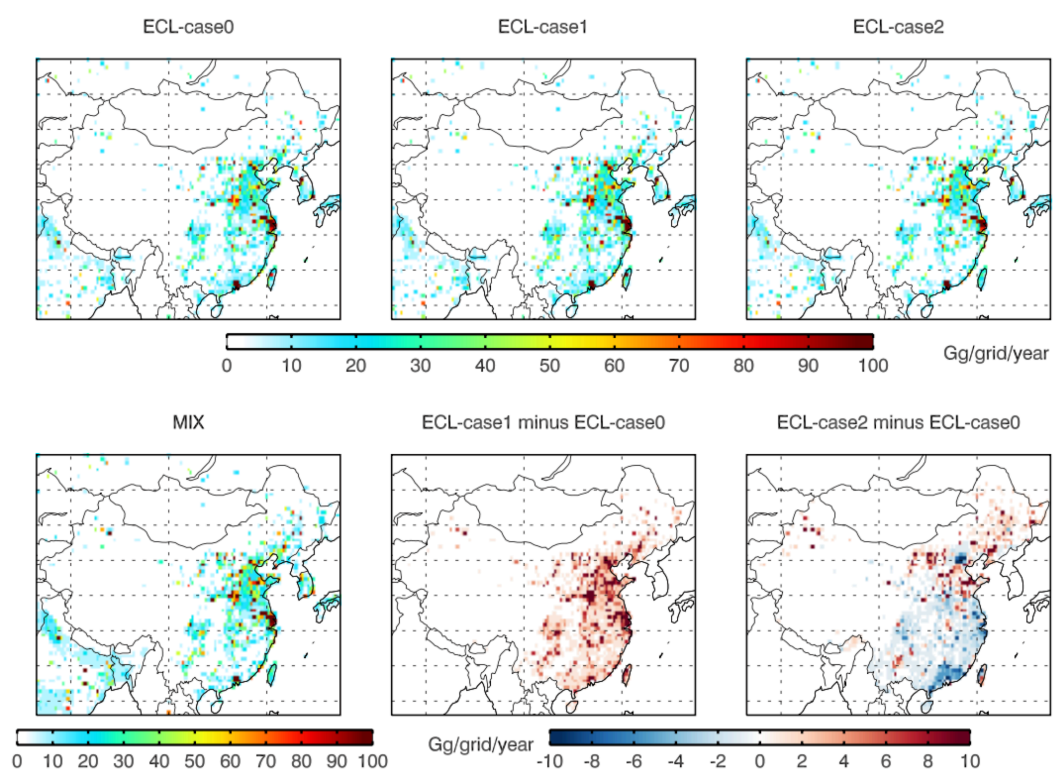
Figure S2. NO$_x$ emissions for sensitivity cases in 2010.
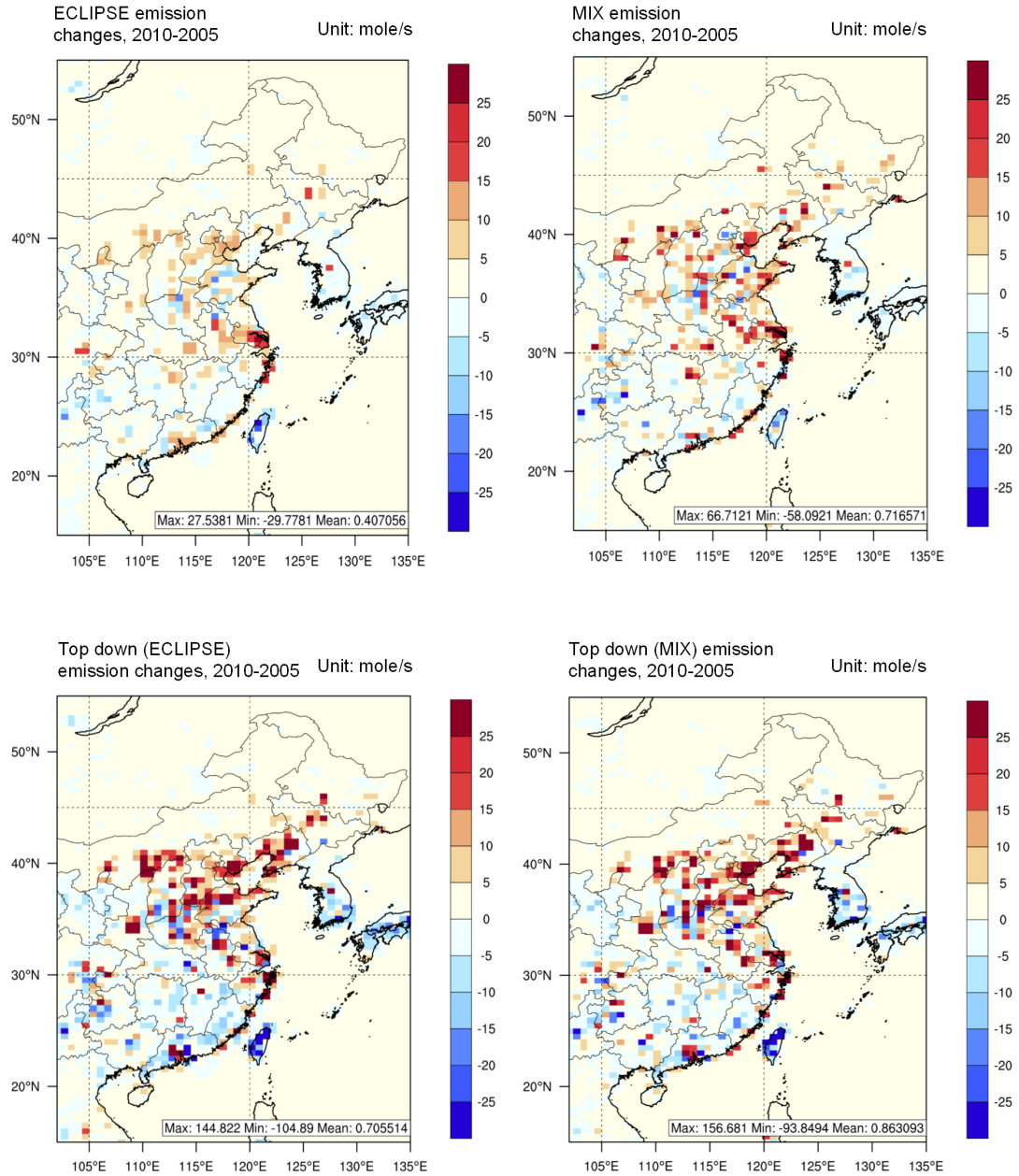
Figure S3. Emission changes from 2005 to 2010, estimated by ECLIPSE, MIX, and derived top-down emission inventories for each case, summer average (JJA).