



Supplement of

African anthropogenic emissions inventory for gases and particles from 1990 to 2015

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Table S1: List of African countries by region

Southern Africa

- 1- Lesotho
- 2- Eswatini
- 3- Botswana
- 4- Namibia
- 5- South Africa

Middle Africa

- 1- Angola
- 2- Cameroon
- 3- Equatorial Guinea
- 4- Gabon
- 5- Congo
- 6- Chad
- 7- Central African Republic
- 8- Congo, the Democratic Republic
- 9- Sao Tome and Principe

Eastern Africa

- 1- Burundi
- 2- Eritrea
- 3- Madagascar
- 4- Reunion
- 5- Somalia
- 6- Comoros
- 7- Ethiopia
- 8- Rwanda
- 9- Djibouti
- 10- Kenya
- 11- Mayotte
- 12- Seychelles
- 13- Uganda
- 14- Mozambique
- 15- Zambia
- 16- Malawi
- 17- Tanzania,
- 18- Zimbabwe

Western Africa

- 1- Benin
- 2- Liberia
- 3- Saint Helena
- 4- Burkina Faso
- 5- Gambia
- 6- Mali
- 7- Ghana
- 8- Mauritania

- 9- Senegal
- 10- Cape Verde
- 11- Cote D'ivoire
- 12- Guinea
- 13- Niger
- 14- Sierra Leone
- 15- Guinea-Bissau
- 16- Nigeria
- 17- Togo

Northern Africa

- 1- Algeria
- 2- Egypt
- 3- Libyan Arab Jamahiriya
- 4- Morocco
- 5- Tunisia
- 6- Western Sahara
- 7- Sudan

Table S2: BC, OC, CO, NO_x, SO₂ and NMVOCs EFs for the main anthropogenic sources, for different fuels (DL: diesel, MO: motor gasoline, FW: wood, CH: charcoal and CHM: charcoal making), type of country (1: semi-developed, 2: developing) and activities sectors (ROAD: road traffic and D: residential combustion) used in this work and that of Marais and Wiedinmyer, 2016.

Fuel/country	Sector	BC		OC		CO		NO _x		SO ₂	
		gC/kg (dm)		gC/kg (dm)		gCO/kg (dm)		gNO ₂ /kg (dm)		gSO ₂ /kg (dm)	
		this work	Marais and Wiedinmyer, 2016	this work	Marais and Wiedinmyer, 2016	this work	Marais and Wiedinmyer, 2016	this work	Marais and Wiedinmyer, 2016	this work	Marais and Wiedinmyer, 2016
DL/1/2	ROAD	4.47/2.0	0.27	3.53/1.0	7.36	37/14.8	380**	34.4/13.76	6.25***	0.72/0.29	0.25**
MO/1/2	ROAD	0.52/0.15	-	0.906	-	300/300	-	19.5/19.5	-	2.36/2.36	-
FW/1/2	D	0.825/0.75	0.83	9.286/4.643	2.89	75.6/63	77.00	1.325/1.1046	1.43	0.2	0.50
CH/1/2	D	0.65	1.00	1.78	1.30	200	189.00	5.967	1.41*	0.4	nd
CHM/1/2	D	0.15	0.02	3.04	0.74	69	255.00	0.07	0.22*	0.01	nd
TW1/2	ROAD	2.275/1.53	2.31	37.76/10.46	30.56	558	290	2.2	0.155***	0.01	0.542

* NO only

** car fuel, DL and MO not specified

*** taking into account * and **

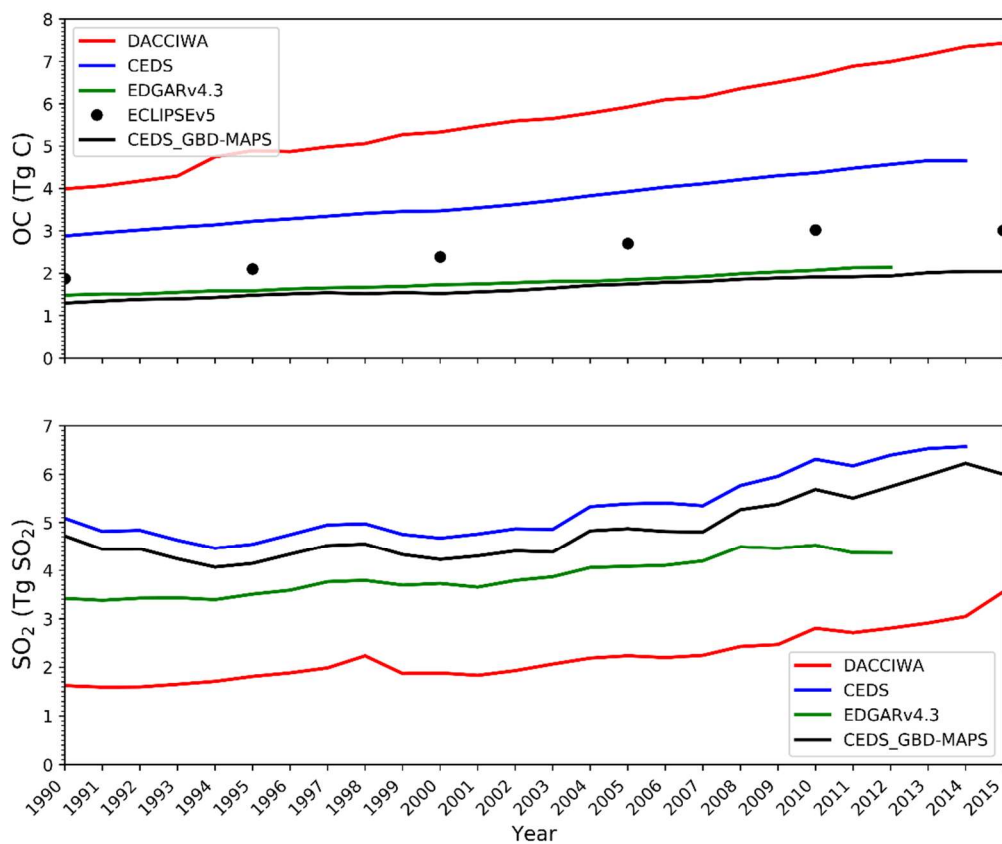


Figure S1: Comparison of OC (top) and SO₂ (bottom) between the DACCIWA inventory (this work) and global inventories (CEDS, EDGARv4.3, ECLIPSEv5 and CEDS_{GBD-MAPS} inventories).

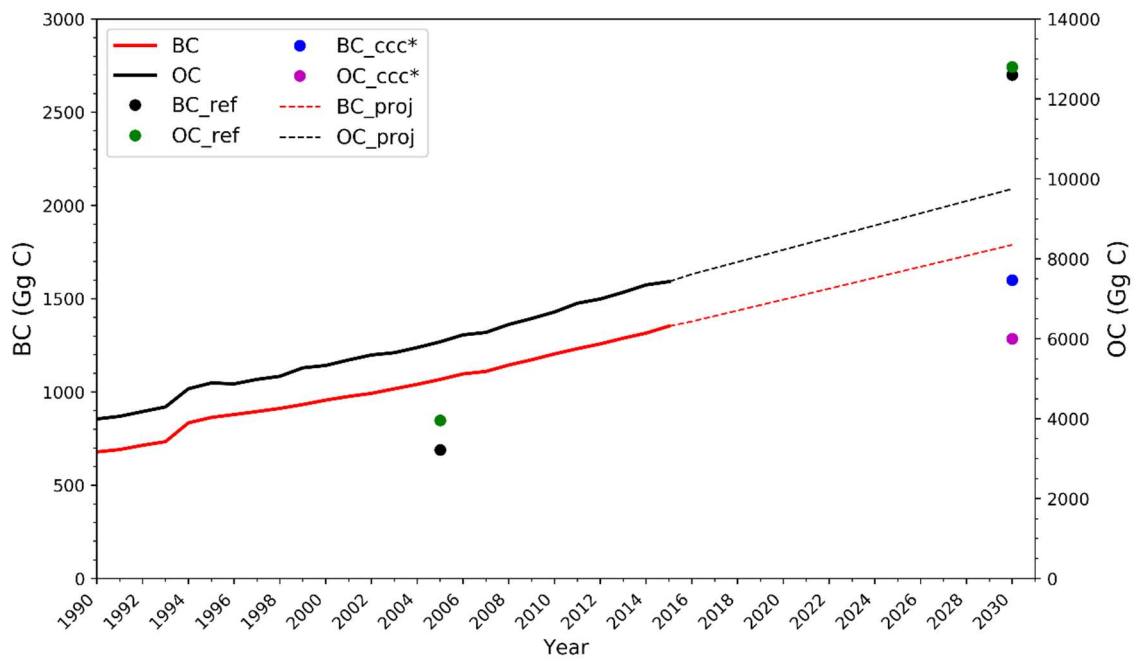


Figure S2: Comparison of OC and BC emissions between the DACCIWA inventory (this work in solid line and its projection in dash line) and Liousse et al. (2014) inventory (in dot). “ref scenario” is defined as the state of the world for “business and technical change as usual” conditions, driven solely by basic economics and “ccc* scenario” by the introduction of carbon penalties and African specific regulations.