Sources and Sinks of CO_2

(Calculated from IPCC, 1995;2001;2007)

Parameter	Sources/Sinks (Gt/yr) 1980's	1990's	2000's
I. Sources			
(i) Fossil Fuel Emission	**5.5**	**6.3**	**7.6**
(ii) Land Use Change	**1.6**	*1.6*	**1.8**
TOTAL	7.1	7.9	9.4
II. Known sinks			
(i) Atmosphere	**3.3**	**3.3**	**4.1**
(ii) Ocean	2.0	2.3	2.2
(iii) Land	**0.5**	**0.7**	**0.7**
TOTAL	5.8	6.3	7.0
III. Unknown Terrestrial Sink	1.3	1.6	2.1
IV. Total Natural Sink (% of emission)	53.5	58.2	53.2

Estimates of Soil Carbon Sink Capacity and Impact on Global Food Production

(Lal, 2001,2002,2004,2006; Lal et al., 2003; Schimel et al., 2000; Vagen et al., 2005)

Regional Sink	Capacity (Mt/yr)
1. U.S. Soils	144-432
2. U.S. Ecosystems	300
3. World Cropland Soils	400-1200
4. Tropics	478-1038
5. Desertification Control	900-1900
6. Sub-Saharan Africa	3-105
7. Central Asia	10-22
8. India	39-49
9. China	105-198

+ Food Production in Developing Countries (Mt/yr/1tC/ha)	
1. Food Grains	21-43
2. Roots & Tubers	7-11
TOTAL	28-54

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