

Multi-gas Emissions Inventory of India:

Disaggregated Region & Sector Trends till 2008



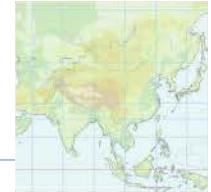
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Ahmedabad, India

Presented in the
'14th AIM International Workshop'
Tsukuba, Japan, February 15-16, 2009



Indian Institute of Management, Ahmedabad, India

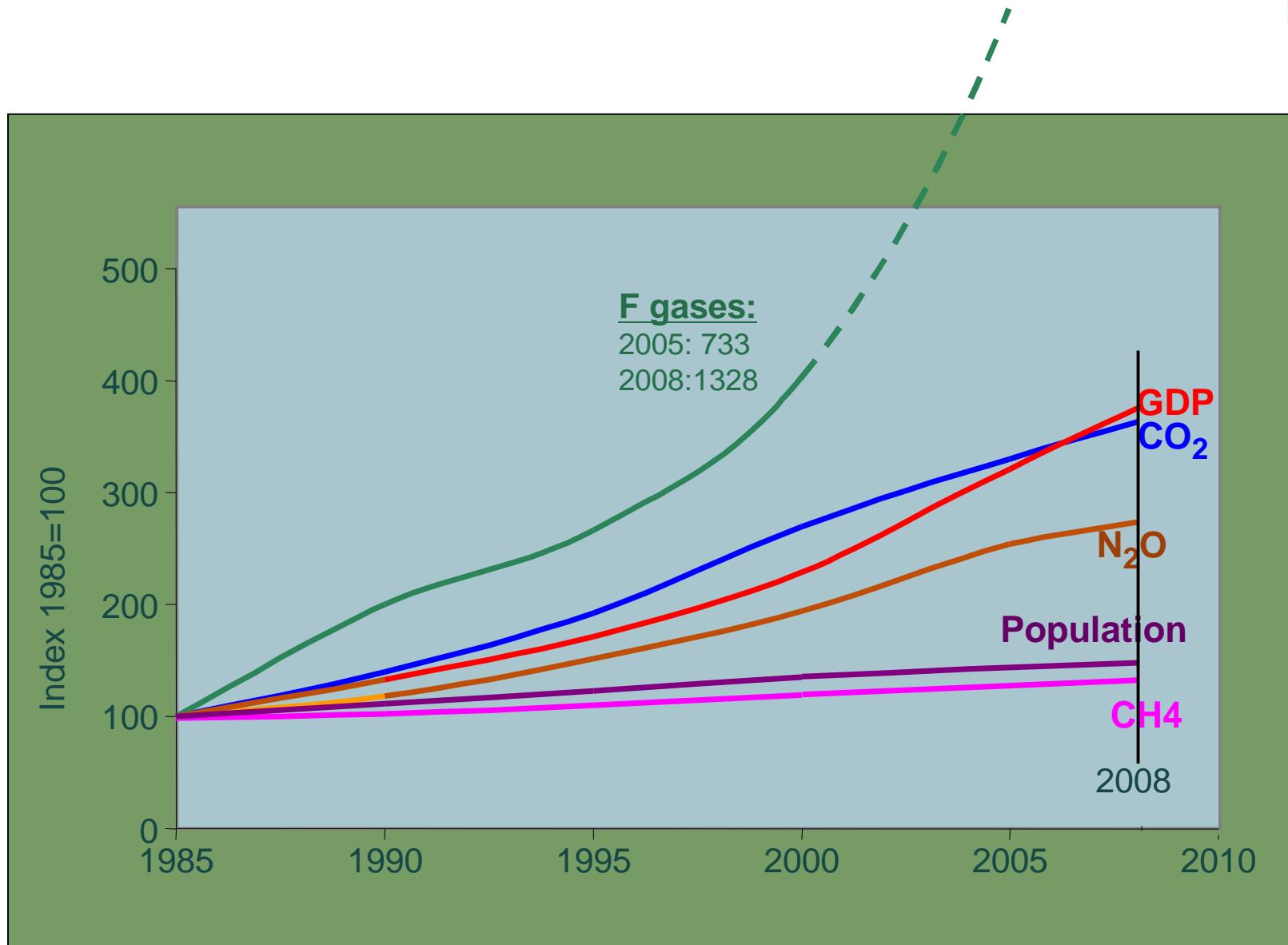
GHG Emissions (Gg)



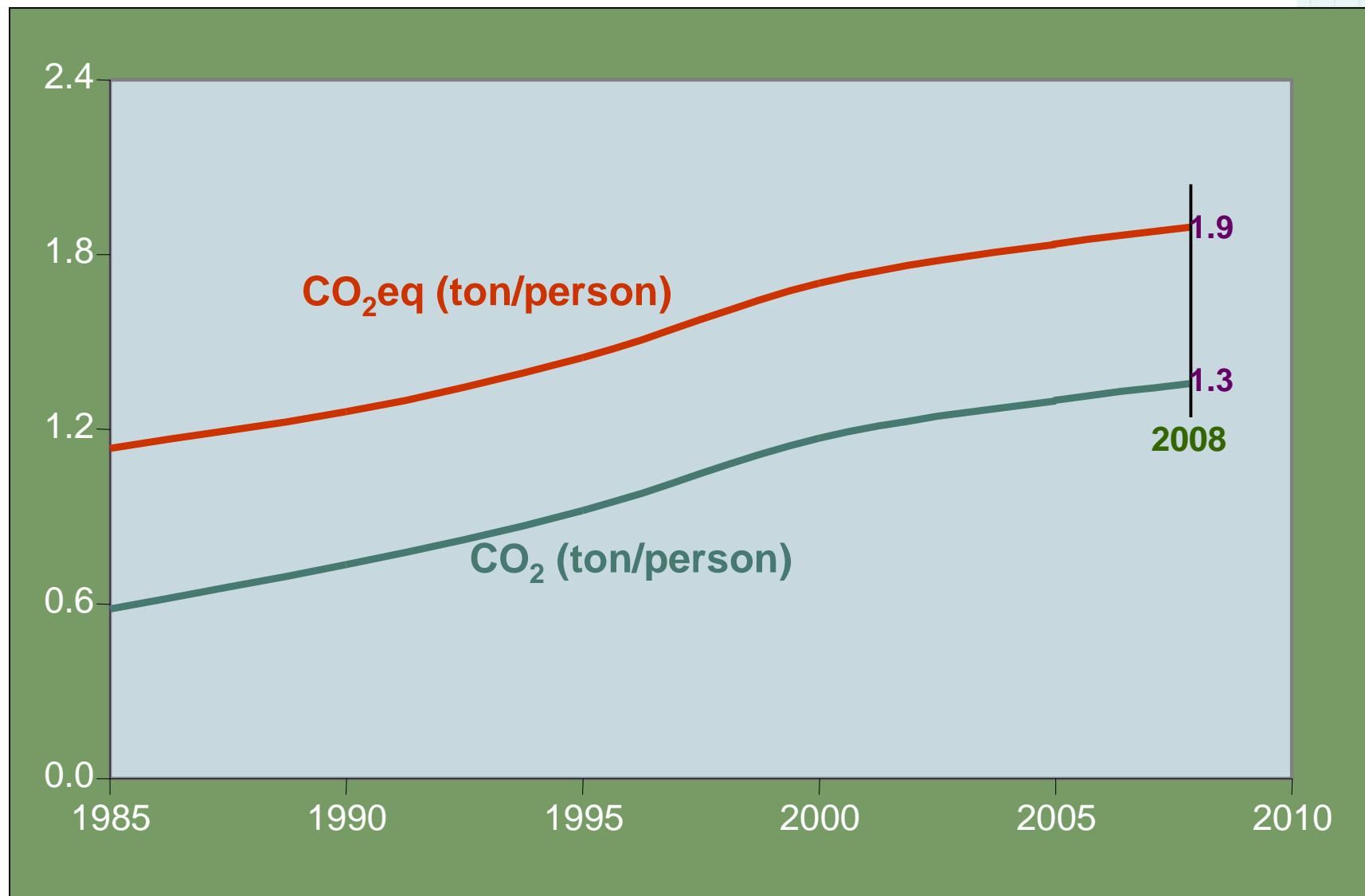
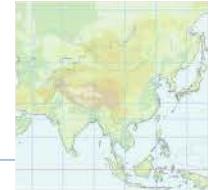
	2000	2008
CO ₂ emissions	1,186,000	1,639,029
CH ₄ emissions	20,800	23,228
N ₂ O emissions	260	395
HFC emissions (CO ₂ Eq.)	5	18
PFC emissions (CO ₂ Eq.)	7	10
SF ₆ emissions (CO ₂ Eq.)	0.1	12

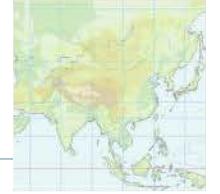


INDIA: Emissions Trends 1985-2008



INDIA: Per Capita Emissions

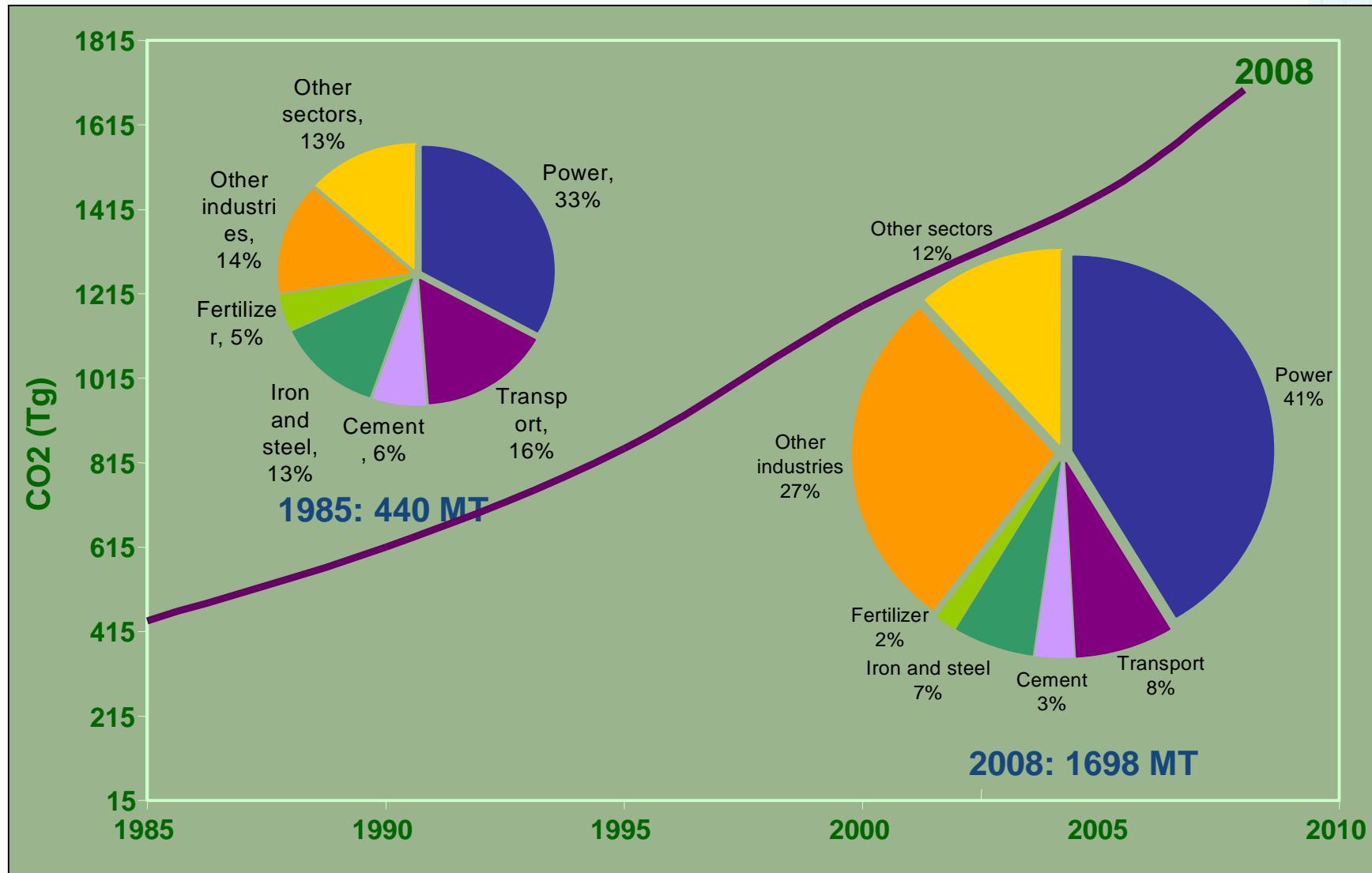




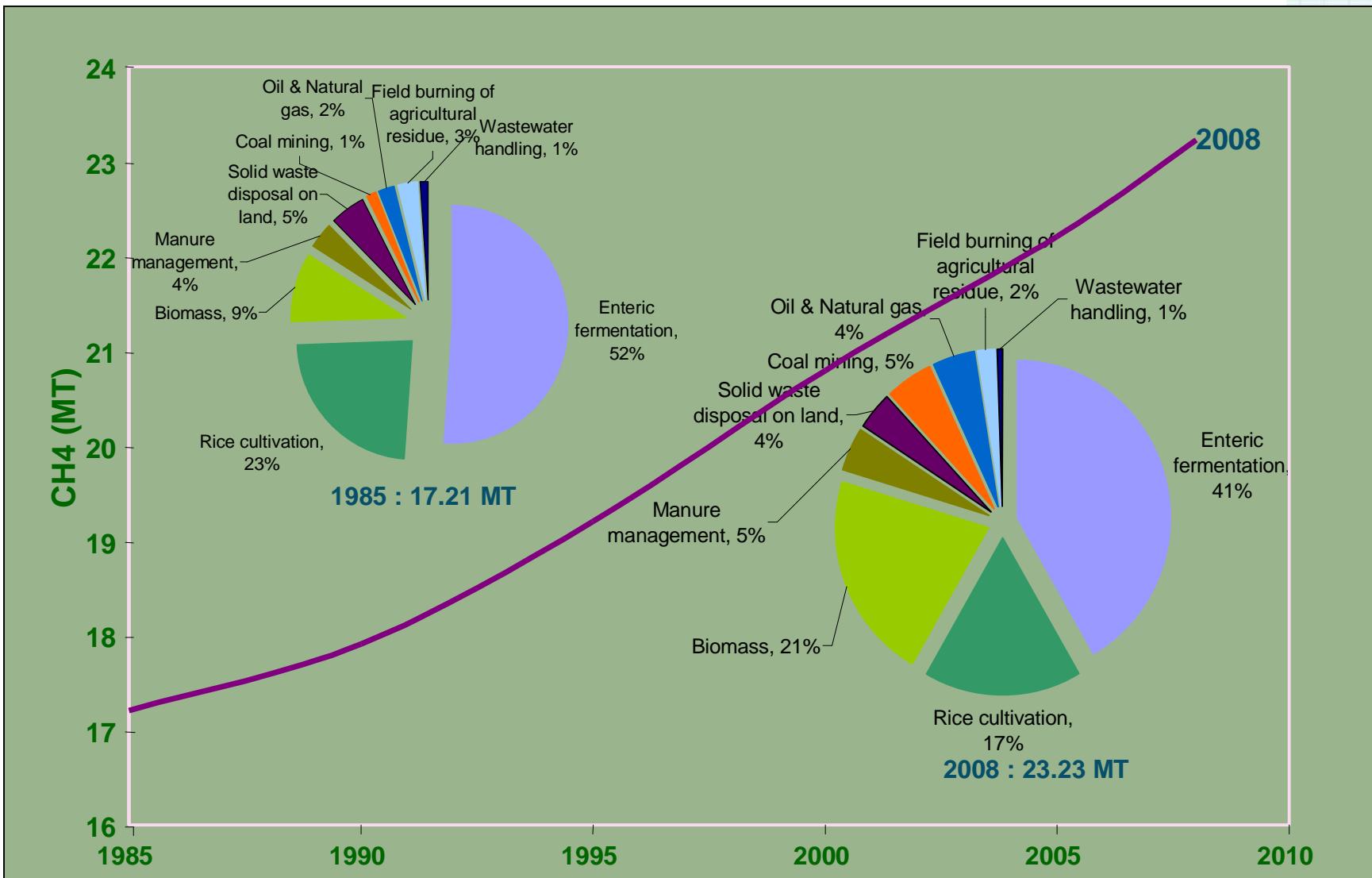
Fuel and Sector Emissions



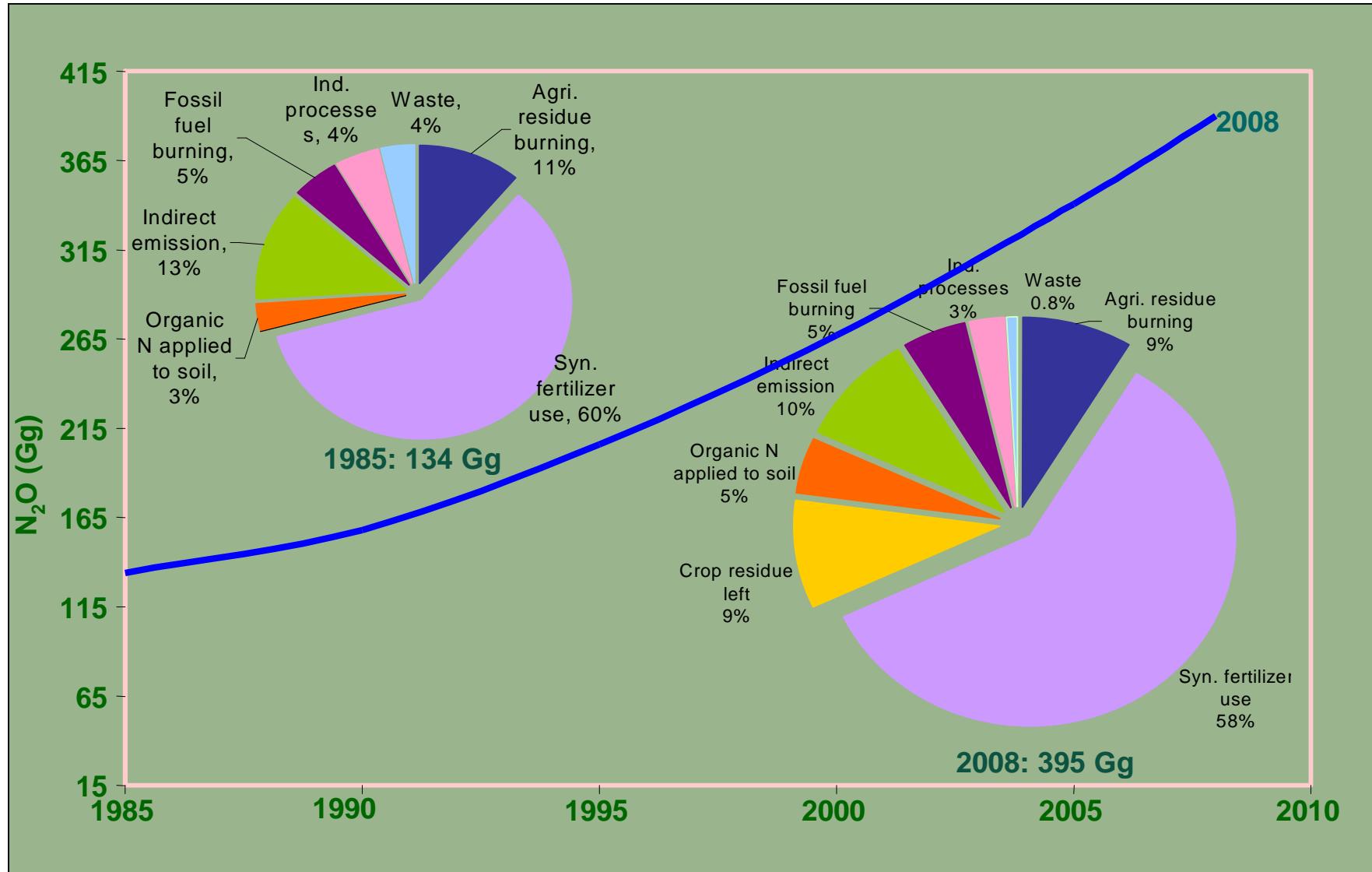
Sectoral CO₂ Emissions in India



Sectoral CH₄ Emissions

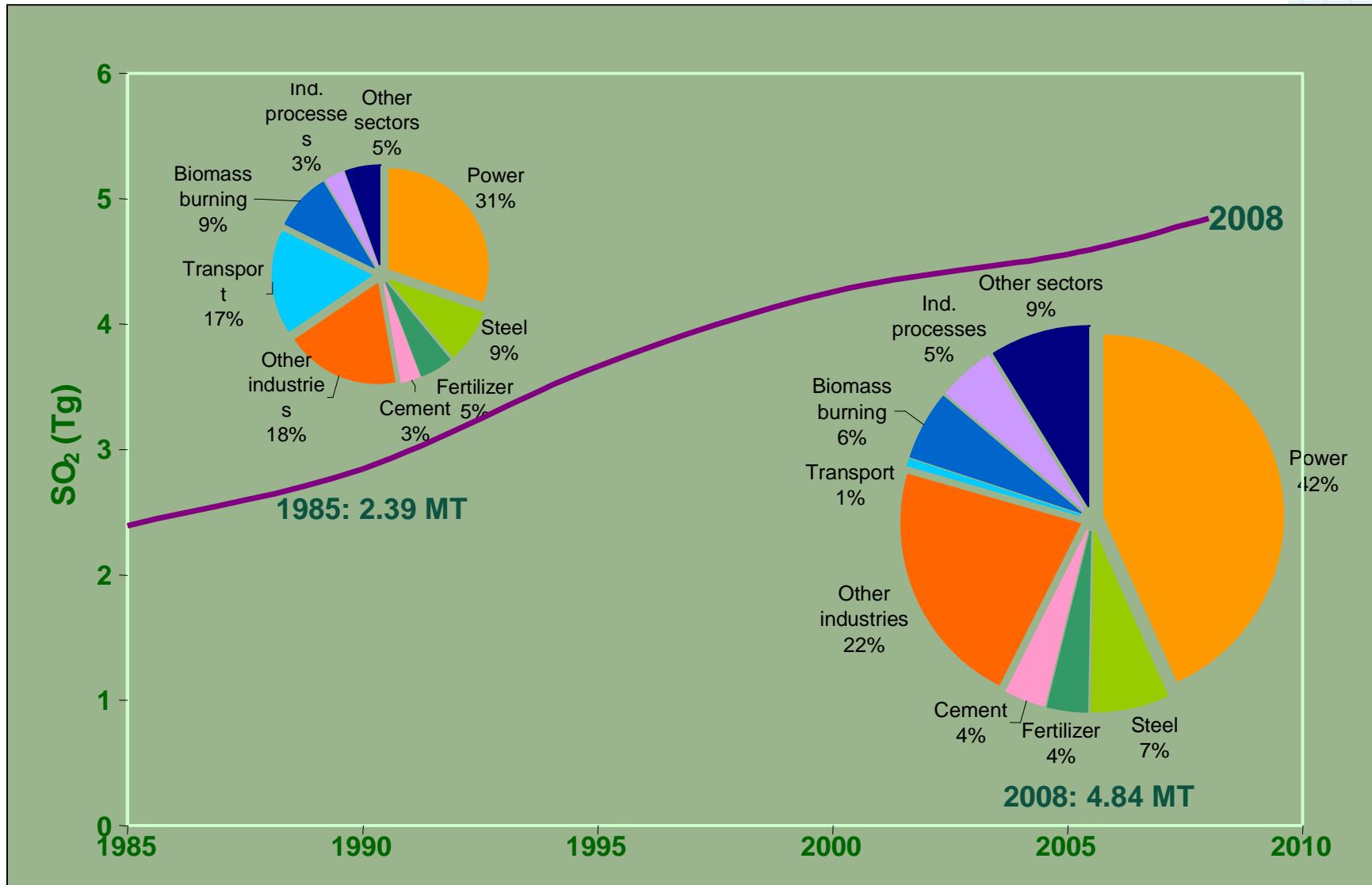


Sectoral N₂O Emissions in India

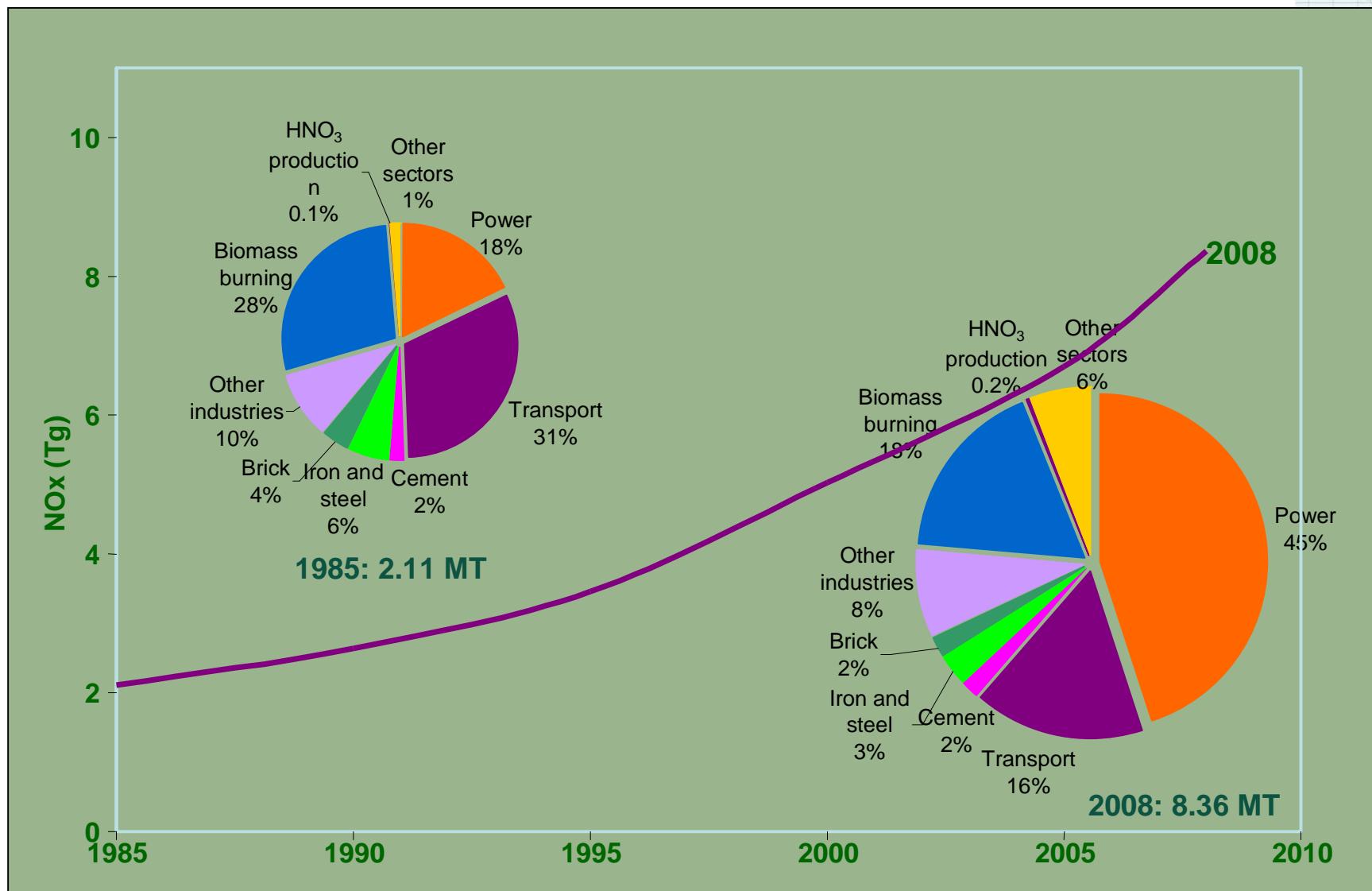




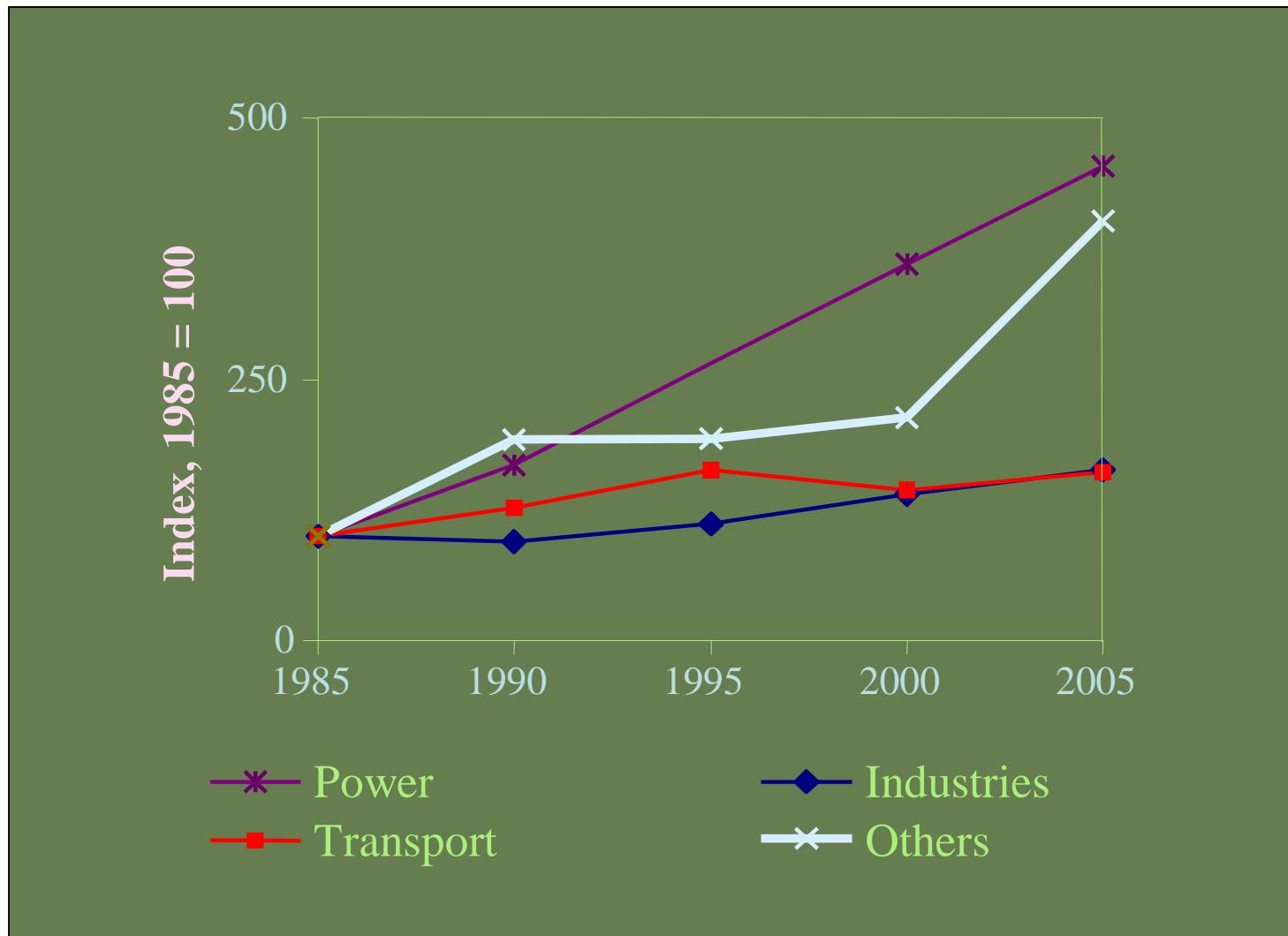
Sectoral SO₂ Emissions



Sectoral NOx Emissions

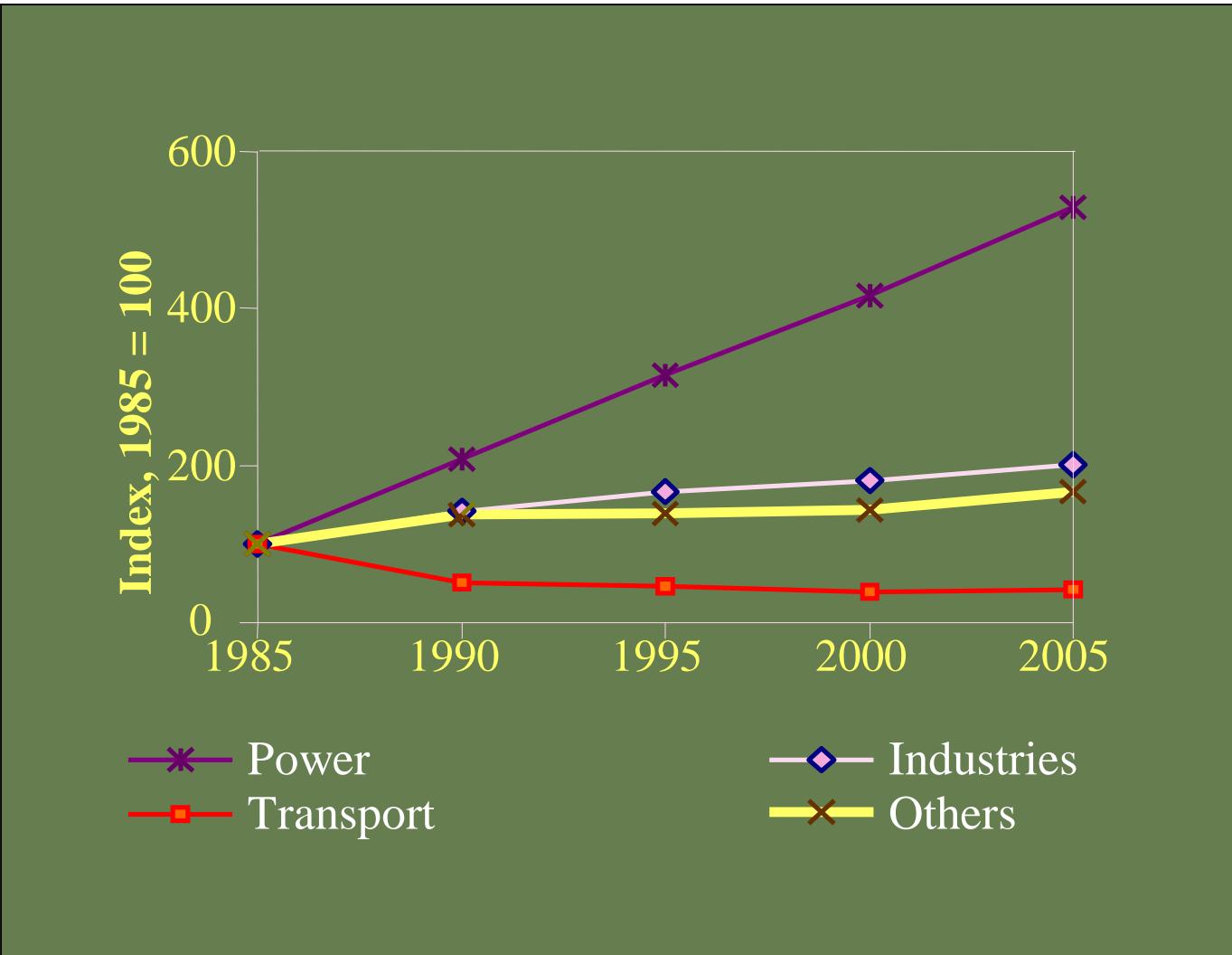


Sectoral CO2 Emission Trends of India



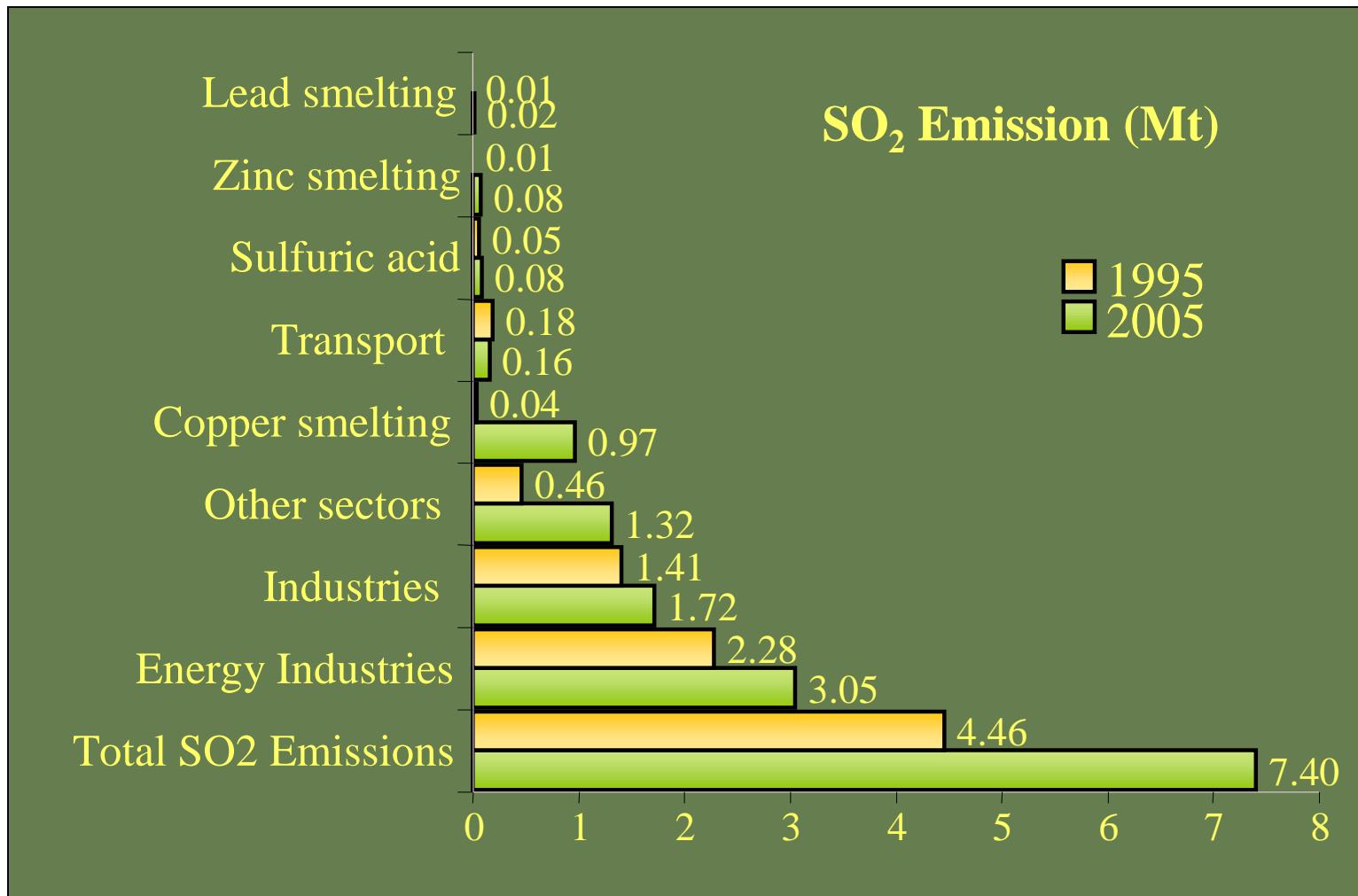


Sectoral SO₂ Emission Trends

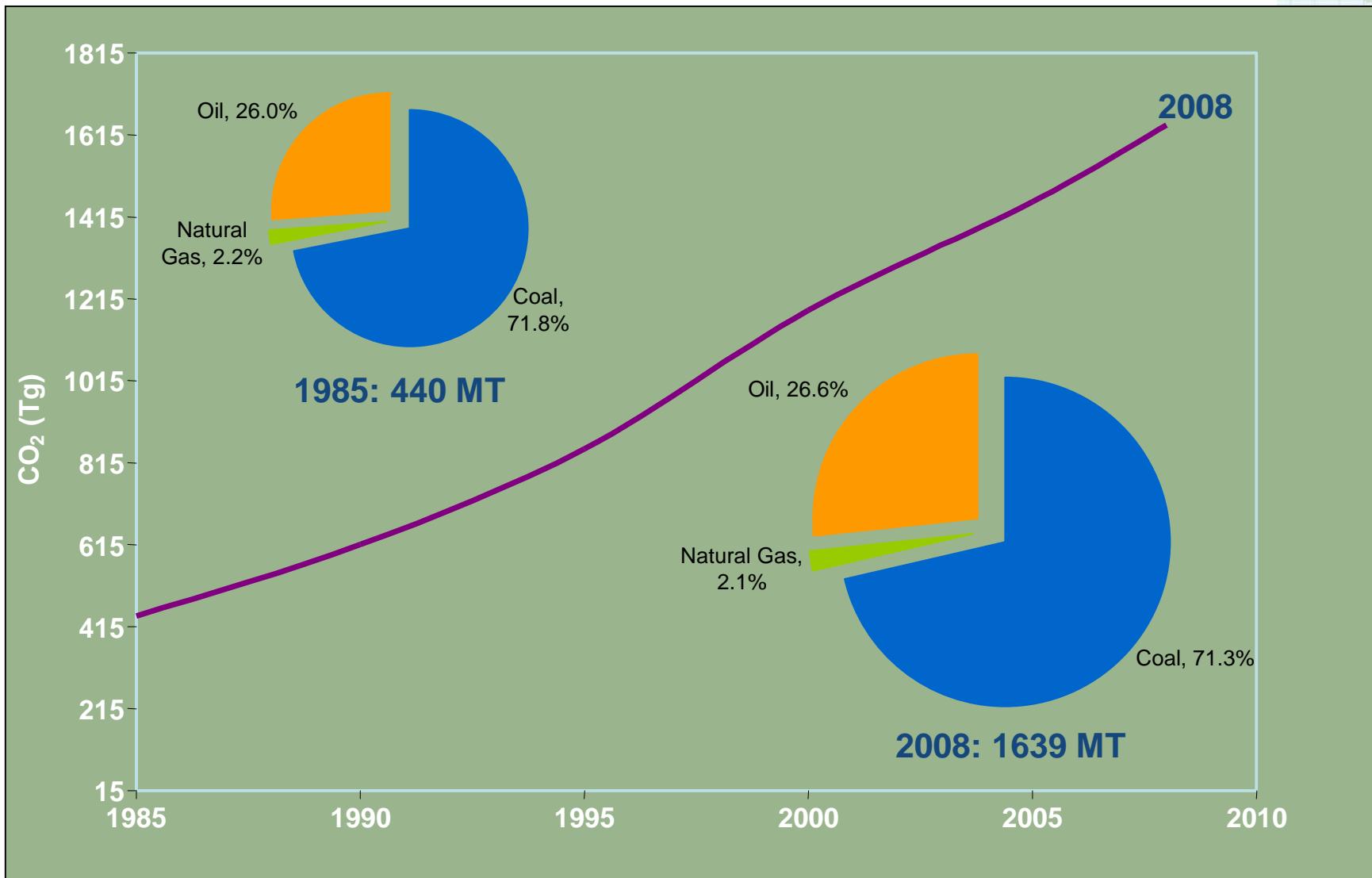
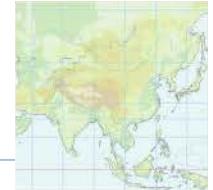




SO₂ emissions from Sectors



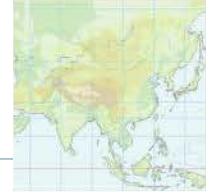
CO₂ Emissions: Fuel Shares





Contribution of Fuels to CO₂ Emissions



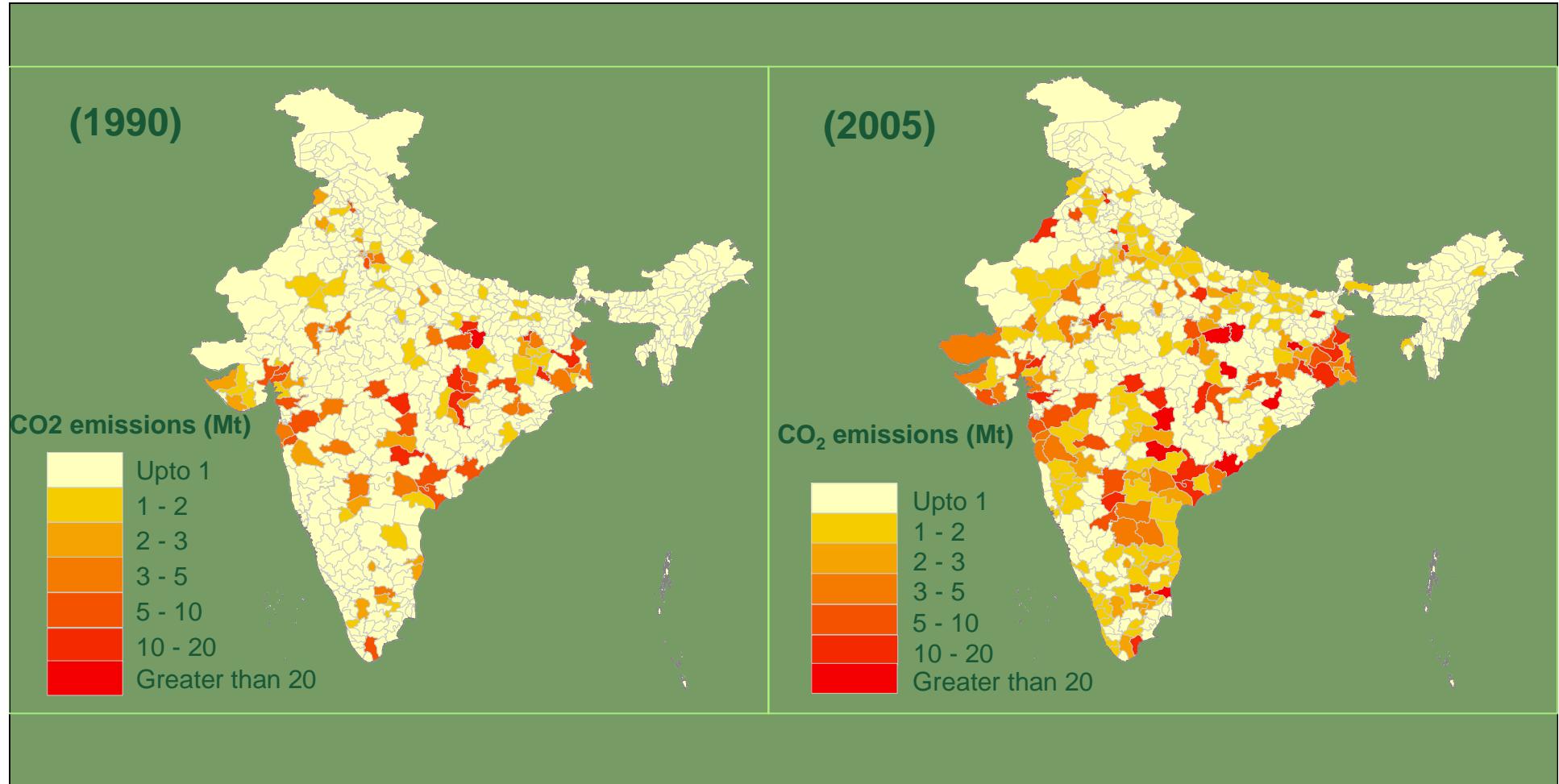


Regional Emissions Analysis with GIS

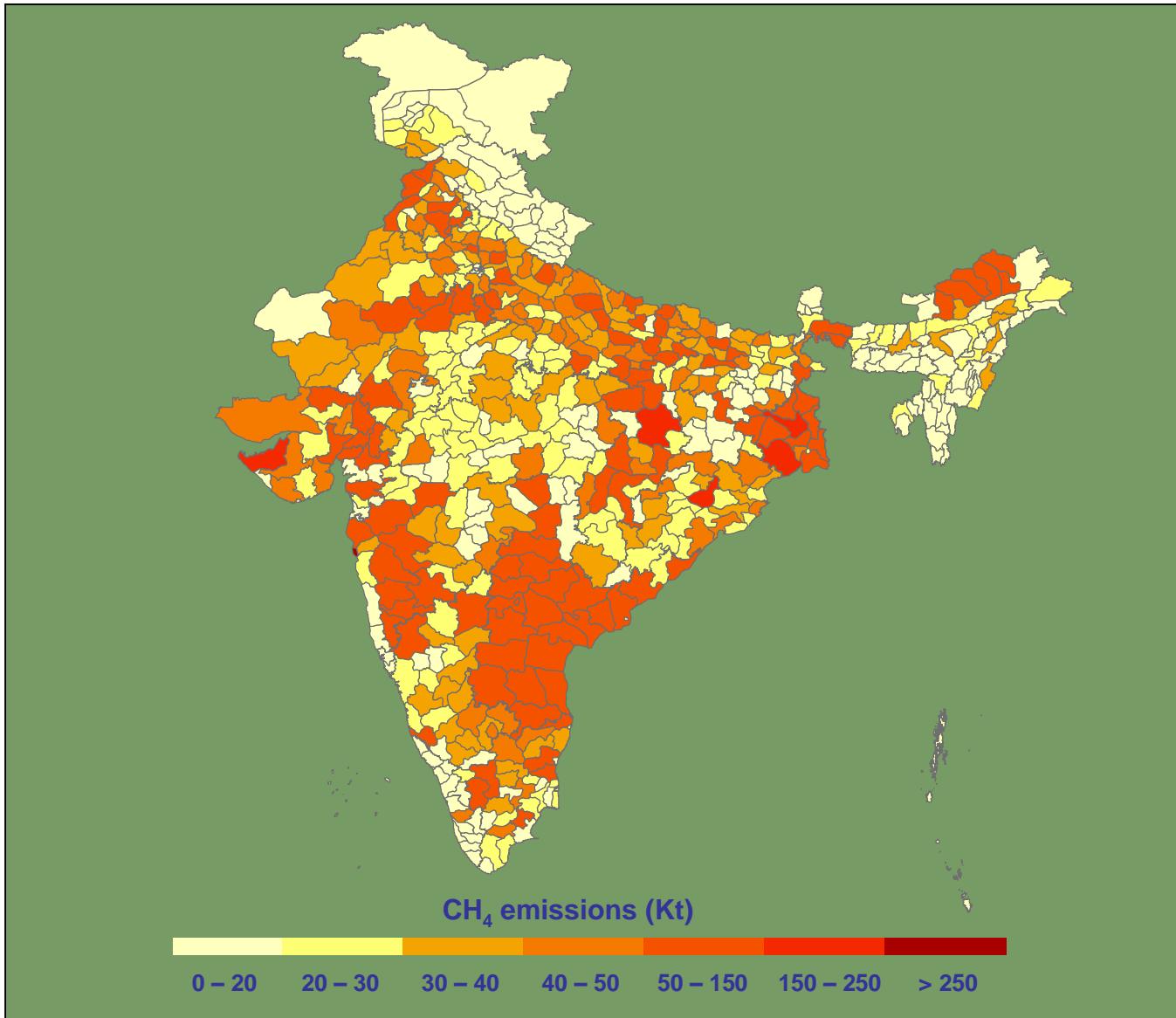




Regional CO₂ Emission Trends of India

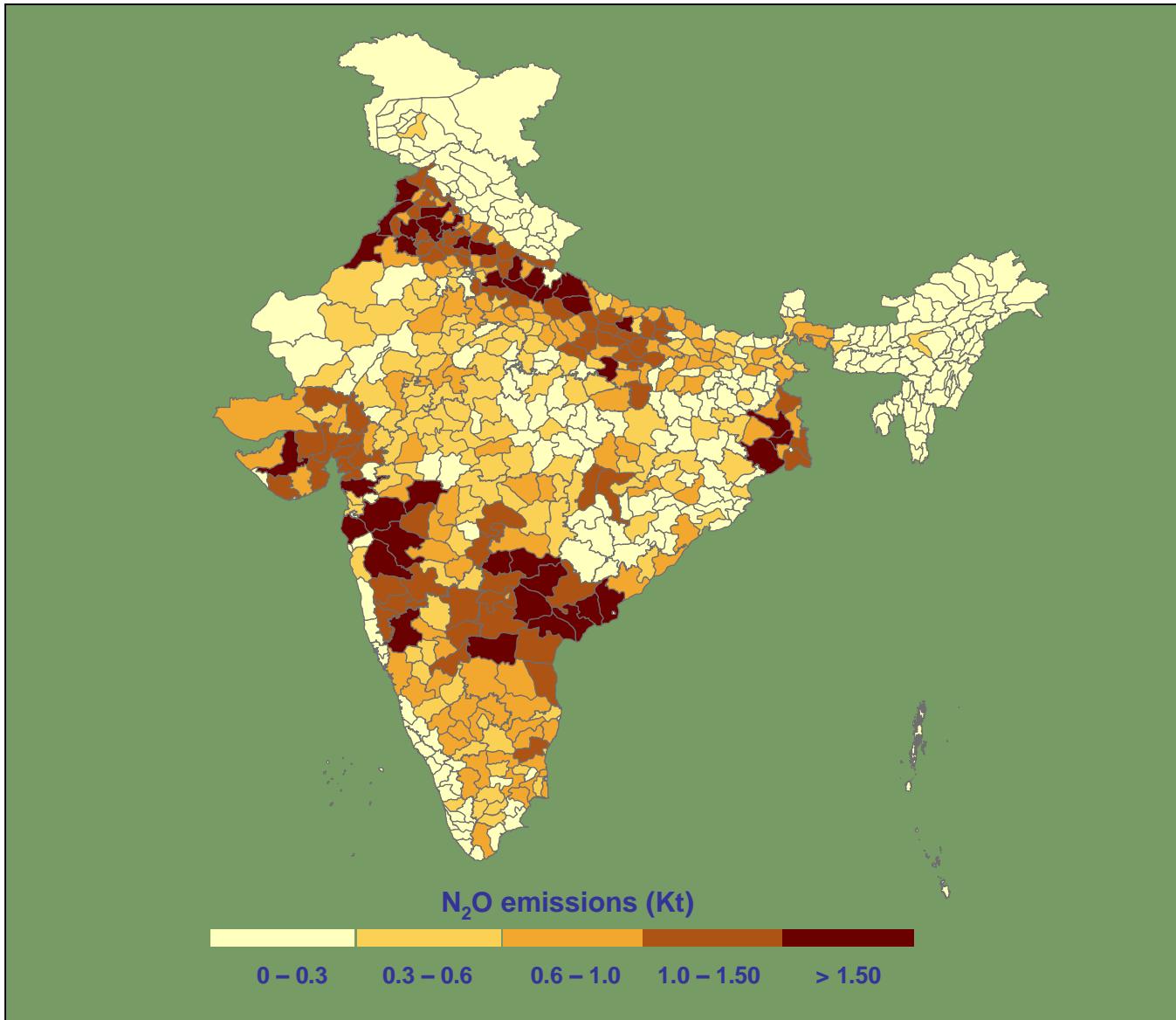


Regional CH₄ Emissions from India (2005)

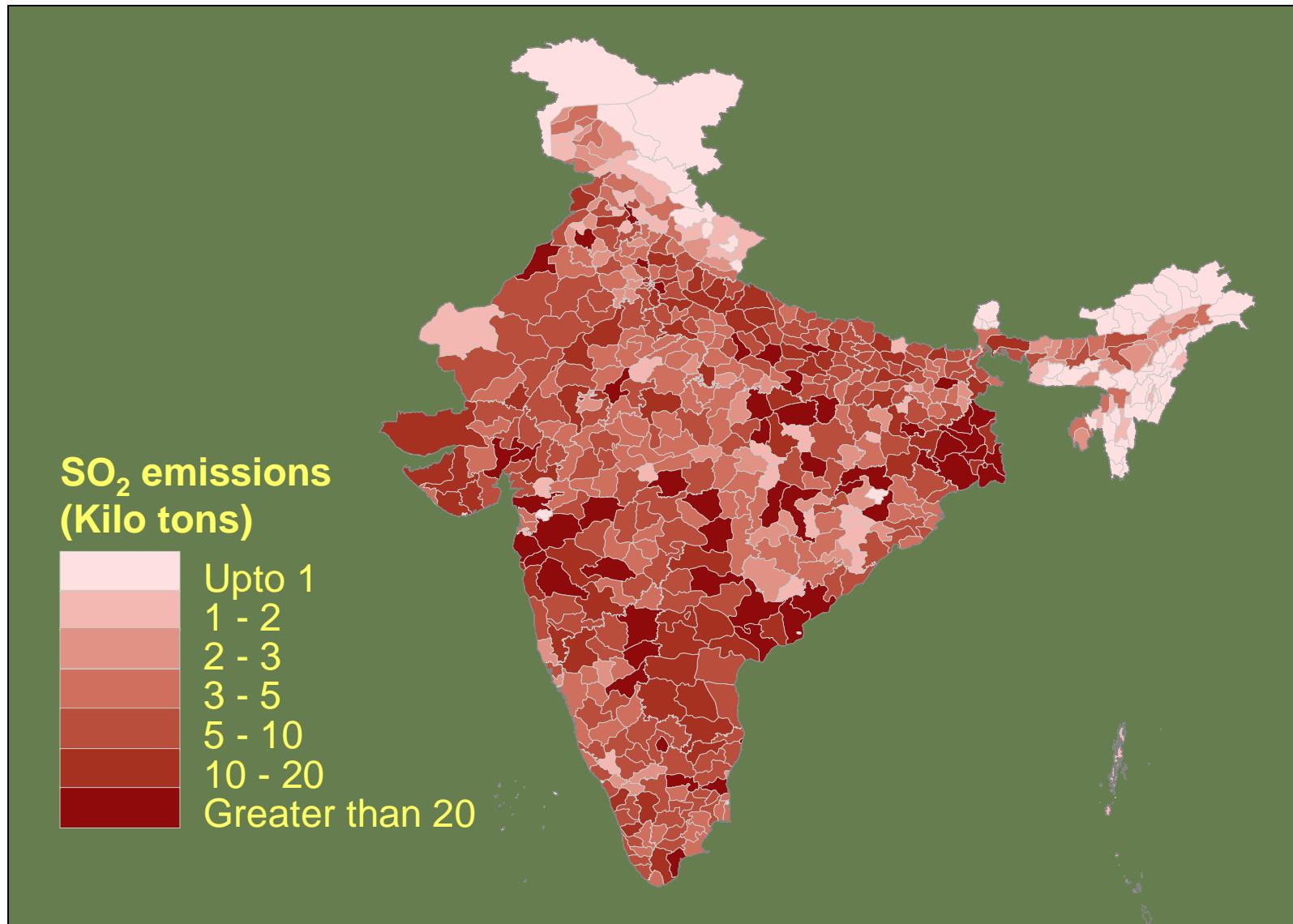
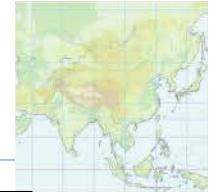


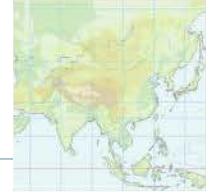


Regional N₂O Emissions from India (2005)



Regional SO₂ emissions (2005)

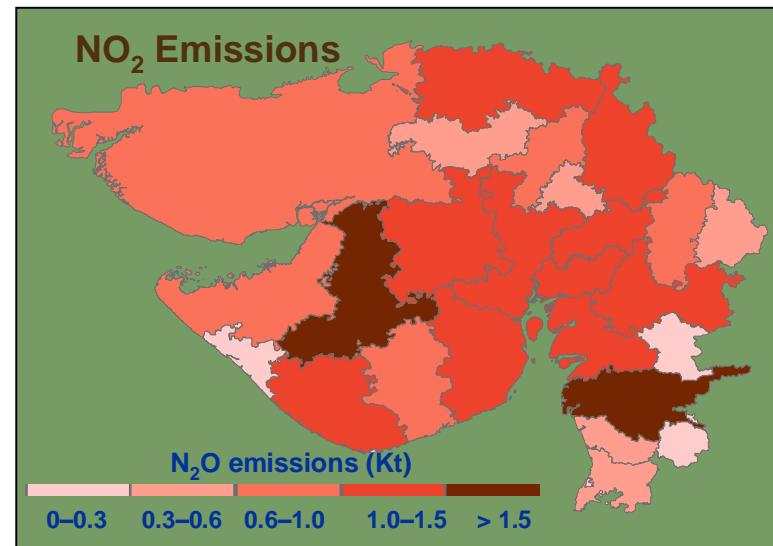
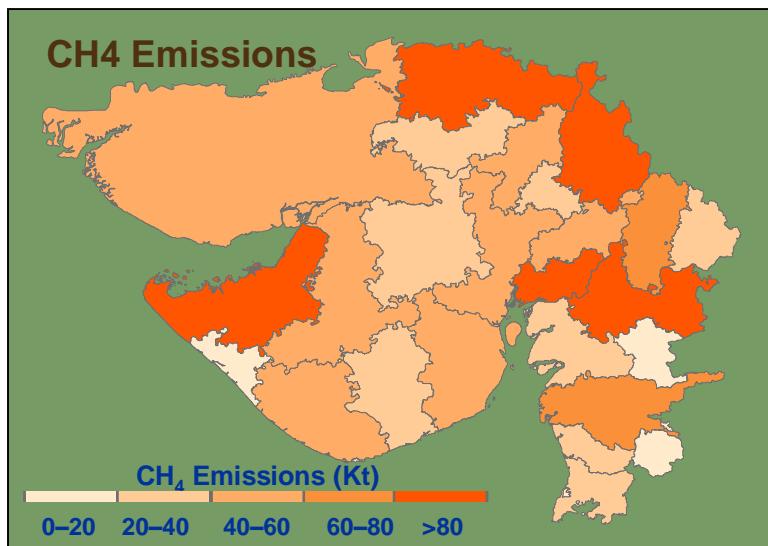
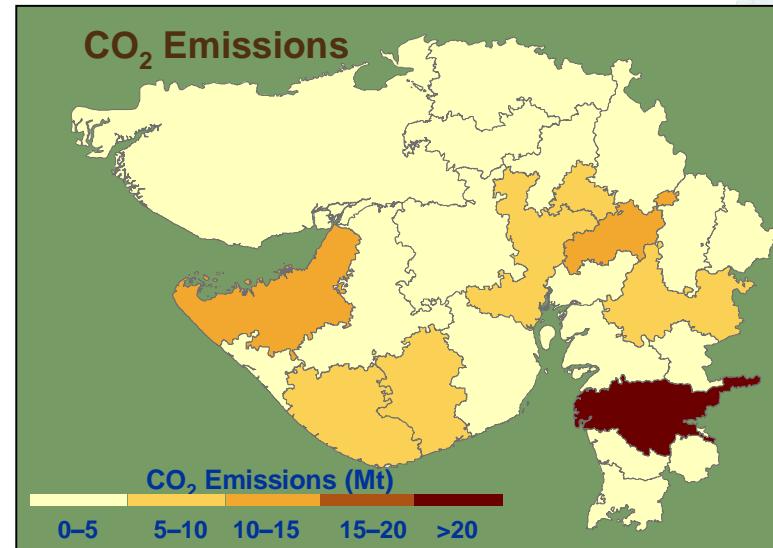
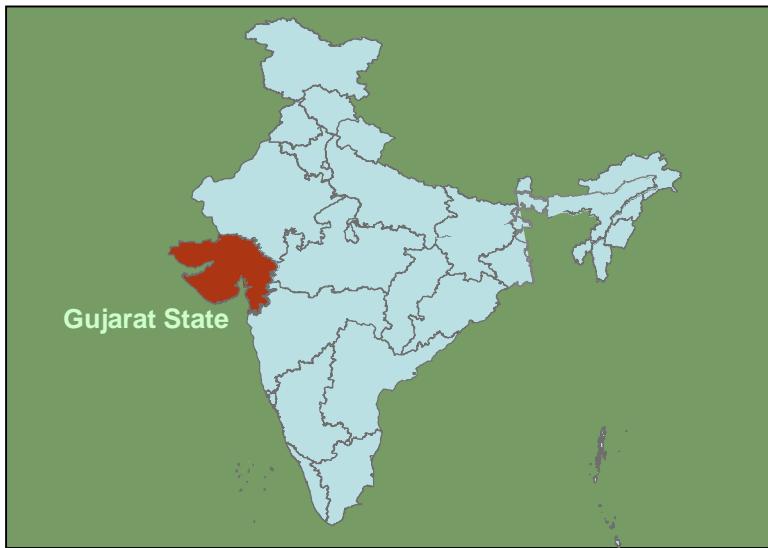
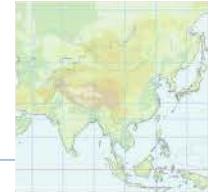




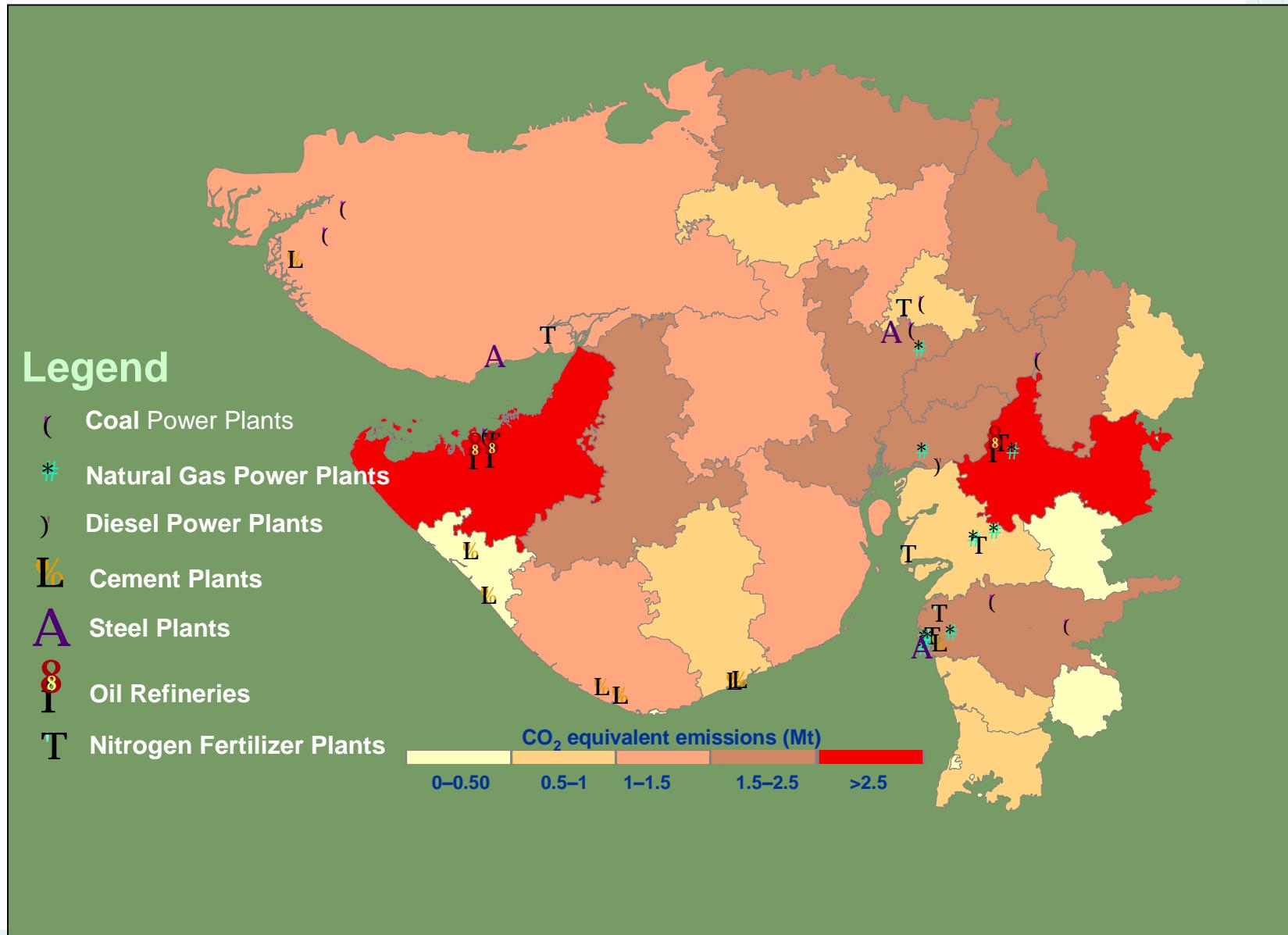
State Level Emissions Analysis with GIS

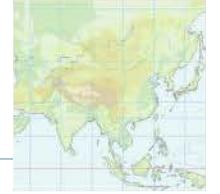


Gujarat State: GHG Emissions



CO₂e Emissions & LPS Locations: Gujarat

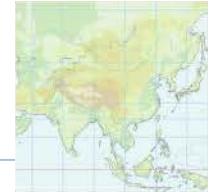




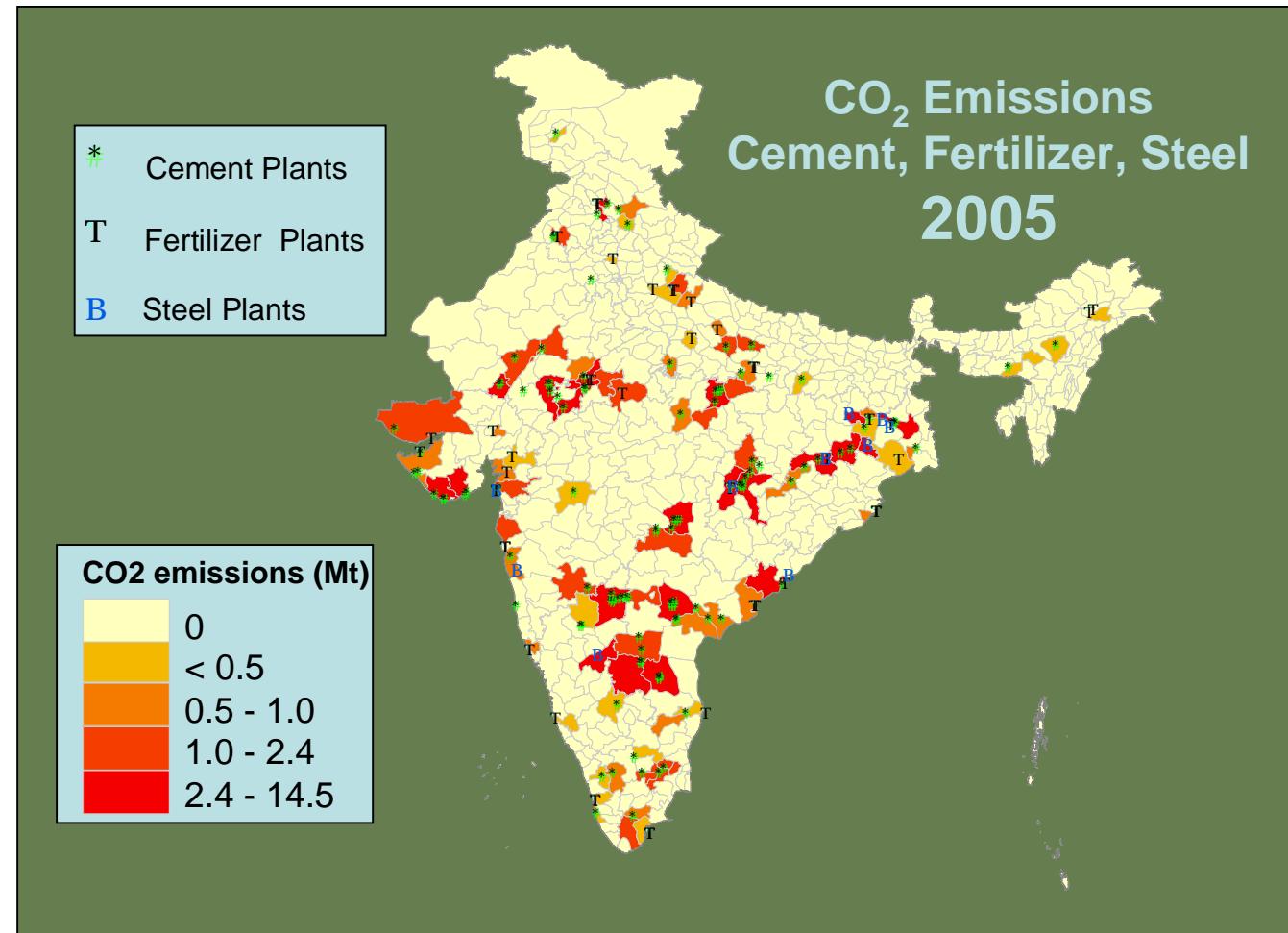
Emissions from Large Point Sources



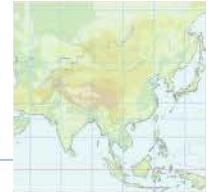
Industry Sector LPS: CO₂ Emissions



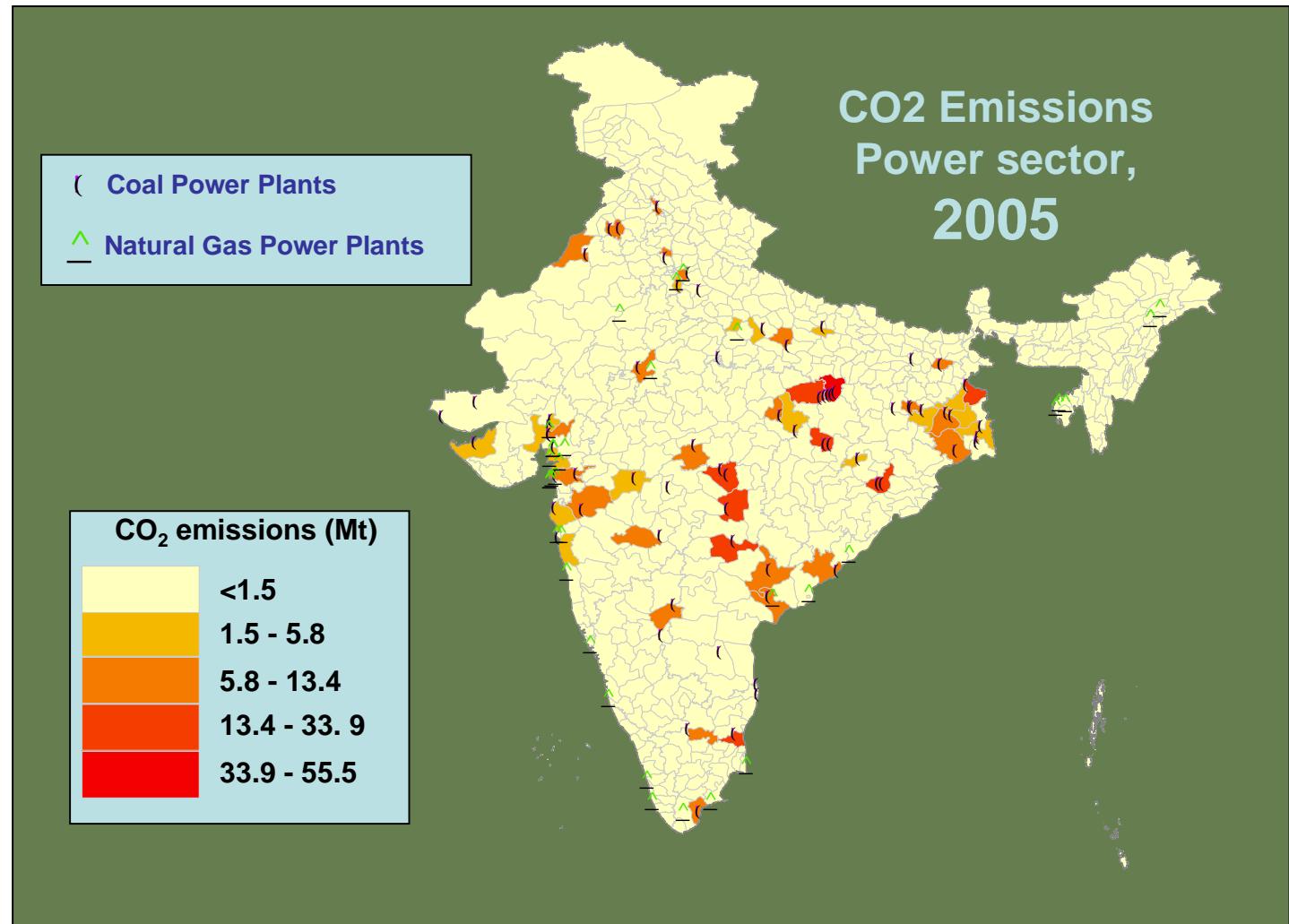
Industry	LPS
Aluminium	5
Caustic Soda	16
Cement	110
Dyes	10
Fertilizer (N-Units)	50
Paints & Varnish	17
Paper	83
Petroleum Refinery	20
Pharmaceutical	10
Soap & Detergent	5
Steel	265
Sugar	6
Sulfuric Acid	12
Textile	48
Process Industry	94
Ammonia production	50
Ferro alloys	44
Total	845

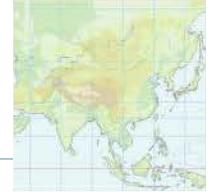


Power Sector LPS: CO₂ Emissions



POWER	LPS
Coal + Lignite	82
Liquid	9
Gas	32
Lignite	5
Oil	3
Utilities	126
Non-Utilities	262
Total	514



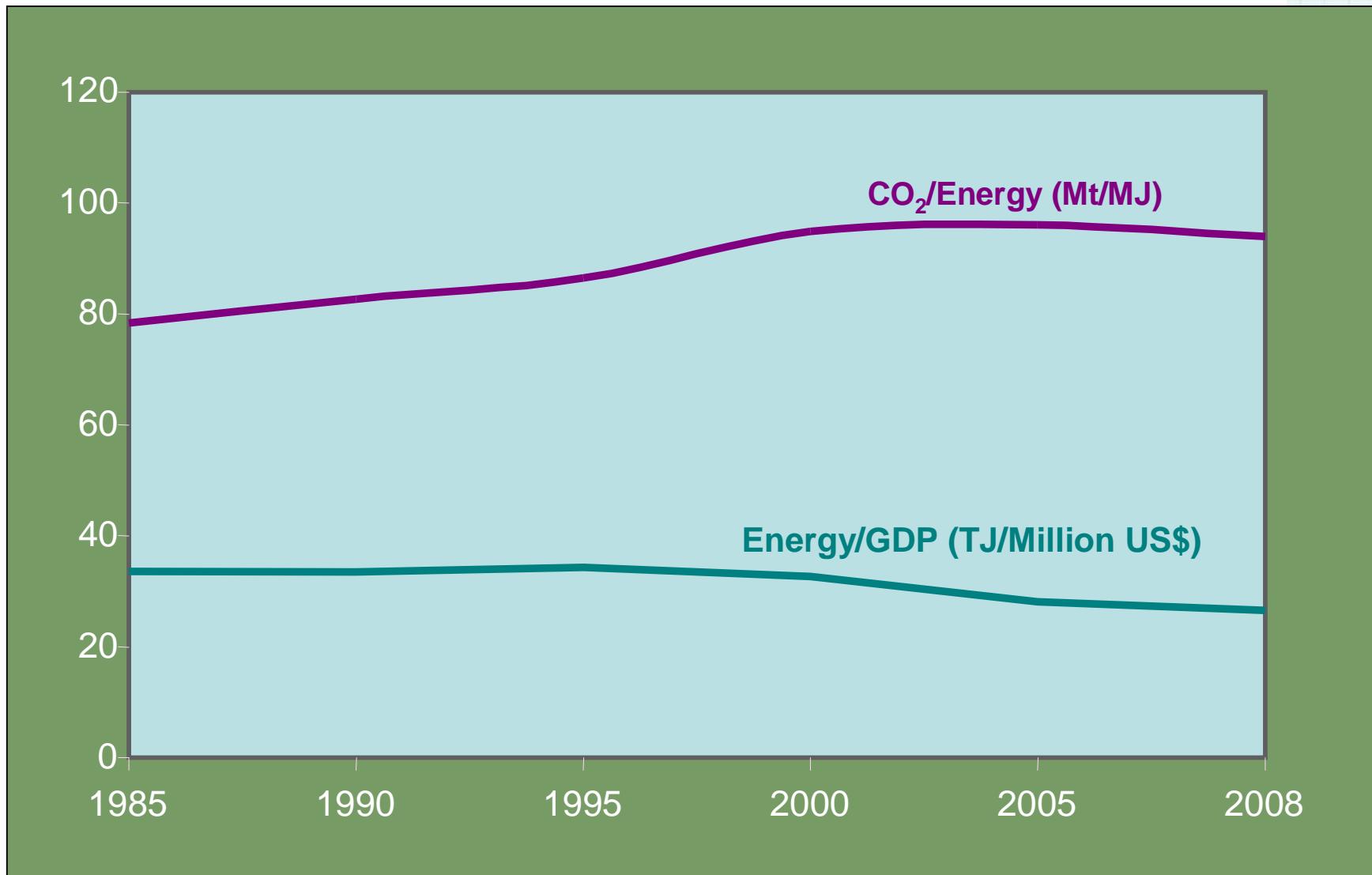


Use of Emissions Inventory for Policies

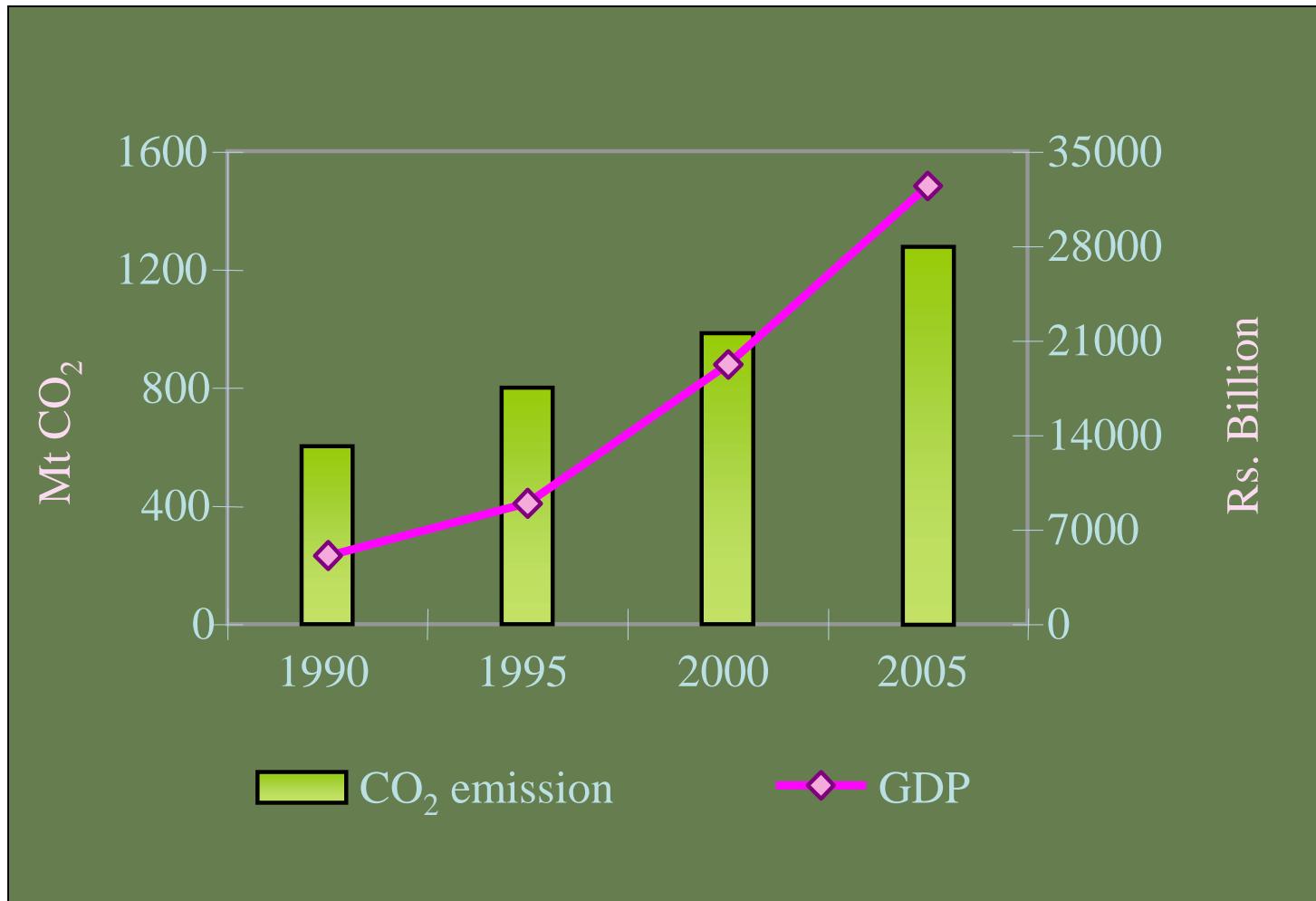




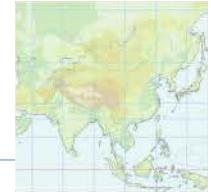
Emissions Intensities



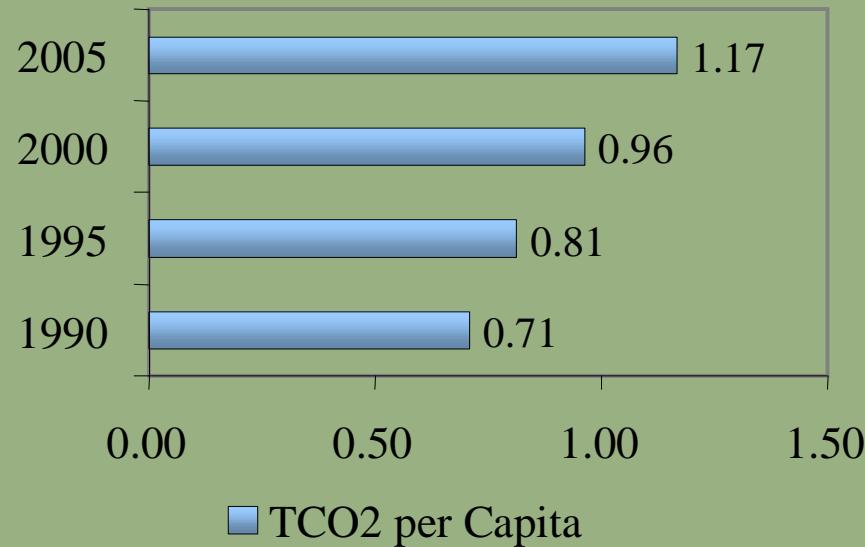
CO2 Emissions & GDP, 1990-2005



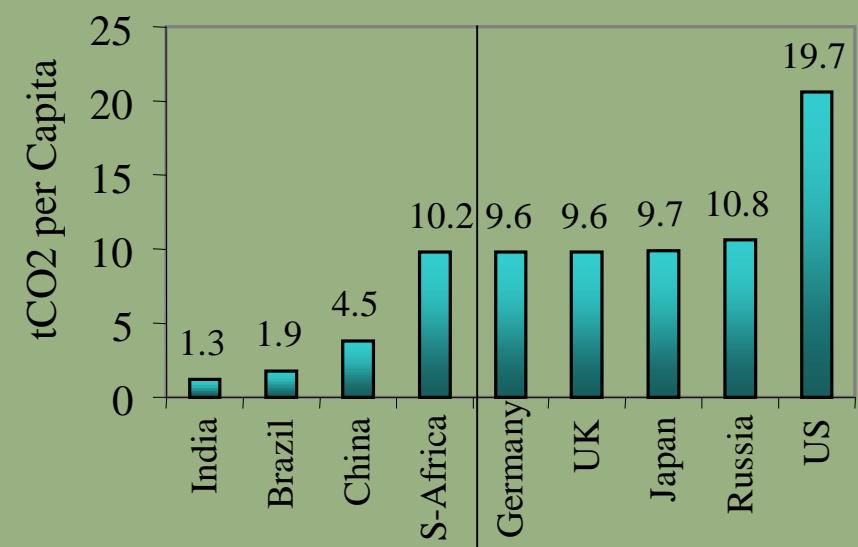
Per Capita CO₂ Emissions

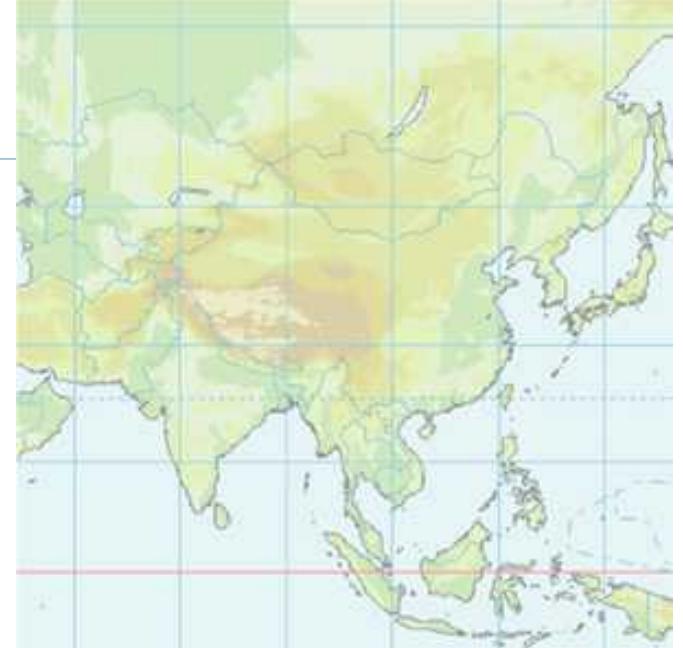


Per Capita CO₂ Emissions of India



Per Capita CO₂ Emissions (2008)





Thank you

