



Greenhouse Gas Emissions in Tunisia

Tunisia Numbers at a Glance (2011)

33 MtCO₂e*

Total GHG emissions
(0.07% of world total)
World: 46,906 MtCO₂e

10,673,800

Population
World: 6,964,618,177

3.13

tCO₂e per capita
World: 6.73 tCO₂e

US\$40,388 Million
GDP**

World: US\$54,034 Billion

827

tCO₂e/million US\$ GDP
World: 868 tCO₂e/million US\$ GDP

+14 MtCO₂e (+73%)
Change in annual GHG emissions (1990–2011)
World: +12,969 MtCO₂e (+38%)

Source: WRI CAIT 2.0, 2015
Emissions including Land-Use Change and Forestry

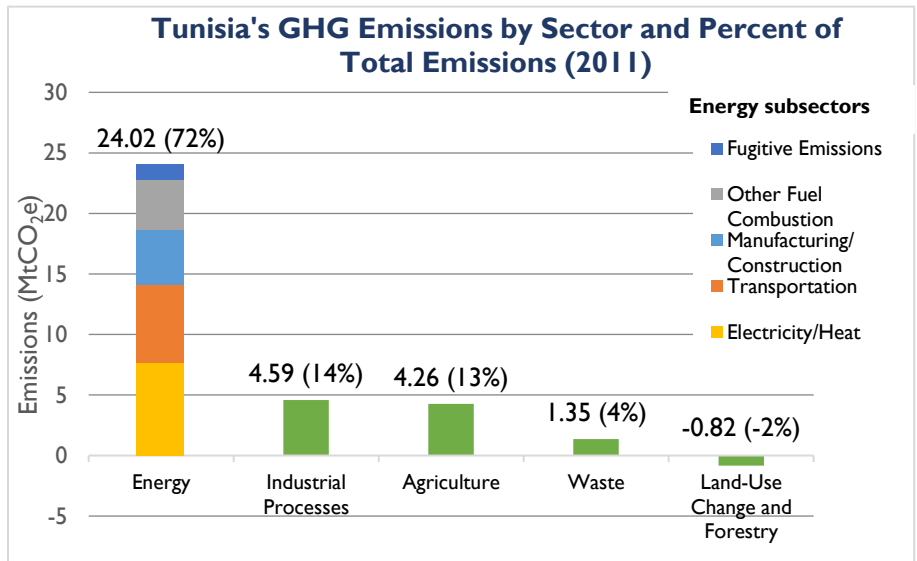
*Million metric tons of carbon dioxide equivalent

**Gross Domestic Product (GDP) in constant 2005 US\$

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Greenhouse Gas (GHG) Emissions by Sector

Tunisia's GHG profile is dominated by emissions from the energy sector.¹ Within the sector, electricity and heat production and transportation comprise the majority of energy emissions. The land-use change and forestry (LUCF) sector was a net sink.



Source: WRI CAIT 2.0, 2015

The Biennial Update Report (BUR) shows that energy sector emissions took an even greater share of emissions in 2010 (84%). Industrial processes (IP) represented 15% of emissions, overtaking agriculture, forestry and other land uses (AFOLU) as the second most significant sector in 2010. AFOLU observed a net 2.4 million tons of CO₂e to nearly offset emissions from the waste sector in 2010.²

Change in GHG Emissions in Tunisia (1990-2011)

Tunisia's GHG emissions grew 73% from 1990-2011.³ The average annual change in Tunisia's GHG emissions was 3%, with sector-specific annual change as follows: energy (3%), agriculture (1%), IP (5%), and waste (1%). The LUCF sector became a net sink in 1991 and removals continued to exceed emissions from the sector for the remainder of this period.⁴

Emissions from the energy sector started from a high baseline in 1990 and continued to grow through 2011. However, the energy sector is becoming less carbon intensive. Electricity generation from oil decreased dramatically from 1990 to 2011, and was compensated for and overtaken by generation from natural gas. In 1990, the only renewable source of power generation was from hydro, which grew modestly while wind, which was non-existent in 1990, contributed to generation by 2011.

Industrial process emissions showed the highest rate of growth, from a low baseline. Mineral industries represent over 87% of IP emissions, dominated by the cement industry with 73%,

¹World Resources Institute Climate Analysis Indicators Tool (WRI CAIT) 2.0, 2015. Emissions including LUCF.

² Republic of Tunisia, 2014. Biennial Update Report (BUR) of Tunisia

³ WRI CAIT

⁴ WRI CAIT

followed by ceramics, with 14%. Emissions from the production of nitric acid are the second most significant IP activity, responsible for 5.3% of IP emissions.

Together, the cement, ceramics, Enteric fermentation contributed the most to agriculture sector emissions. Enteric fermentation was responsible for 45% of GHG emissions from agriculture during 1990-2012, and manure left on pasture 38%, followed by synthetic fertilizers with 9%.⁵

Carbon Intensity: GHG Emissions Relative to Gross Domestic Product (GDP)

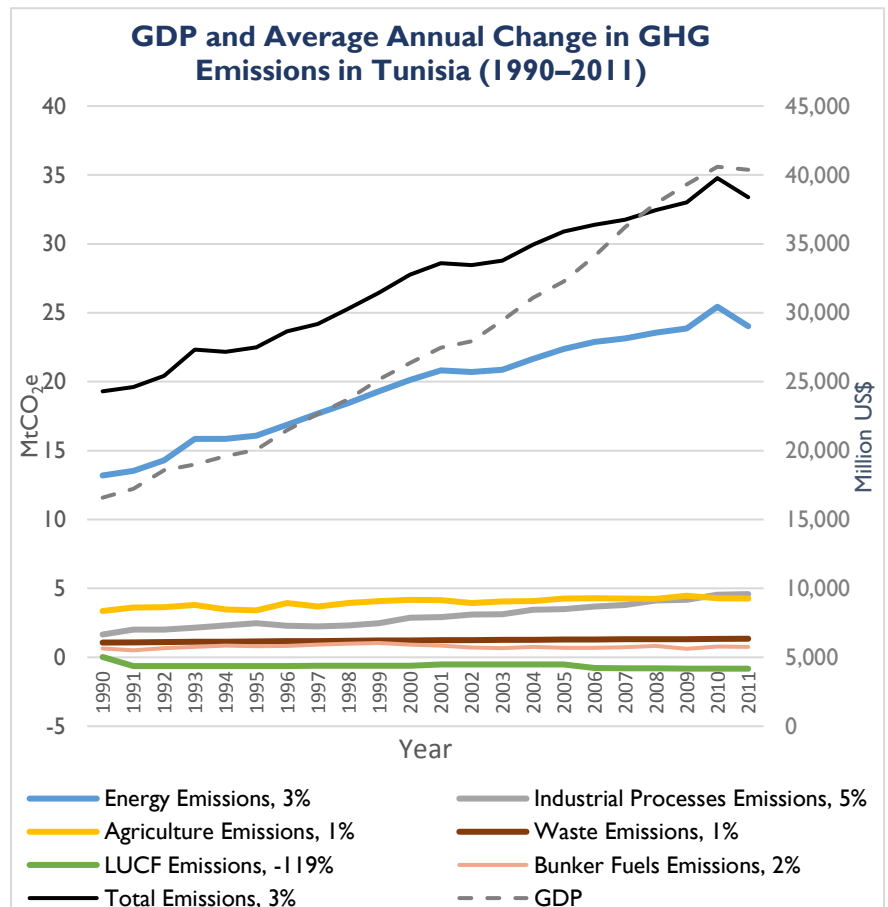
Tunisia's GDP over 1990-2011 increased considerably more than total GHG emissions, signaling that carbon intensity in 2011 had decreased relative to 1990.⁶

Tunisia's Second National Communication (SNC) observes the decoupling of economic growth and energy sector GHG emissions from 1990-2001, which becomes more pronounced between 2001 and 2007.⁷ The BUR attributes the decrease in carbon intensity to Tunisia's proactive energy efficiency policy and the orientation of economic activity towards non-emissions intensive sectors such as services and light industry.⁸

Climate Change Mitigation Targets and Plans

In its Intended Nationally Determined Contribution (INDC), Tunisia pledges to achieve an unconditional carbon intensity target to reduce its carbon intensity by 13% in 2030, compared to 2010 levels. It commits to a further 28% intensity reduction (total of 41%) below 2010 levels by 2030, contingent upon international funding, capacity building, and technology transfer. Tunisia plans to achieve the 13% goal exclusively through energy sector actions and welcomes international support across all sectors:

- **Energy efficiency** – Twenty actions in the industrial, building, transport, and agricultural sectors to allow primary energy demand to decrease by 30% by 2030, relative to the 2010 baseline.
- **Renewable energy** – Increase renewable energy in electricity production from 4% in 2015 to 14% in 2020 and 30% in 2030, and triple the solar water heater distribution rate by 2030.
- **IP** – Use nationally appropriate mitigation actions in the cement industry and access international carbon markets.
- **AFOLU** – Intensify removals from forestry and arboriculture through enhanced reforestation and enhancing carbon stock in forests and pastoral environments; reduce agriculture emissions through agricultural practices.
- **Waste** – Initiatives include installing facilities to convert solid waste into refuse derived fuel.⁹



Source: WRI CAIT 2.0, 2015

⁵ Food and Agriculture Organization of the United Nations Statistics Division (FAOSTAT), viewed October 16, 2015: http://faostat3.fao.org/browse/area/*E

⁶ WRI CAIT

⁷ Republic of Tunisia, 2014. Second National Communication of Tunisia to the United Nations Framework Convention on Climate Change

⁸ Republic of Tunisia, 2014. Second National Communication of Tunisia to the United Nations Framework Convention on Climate Change

⁹ Republic of Tunisia, 2015. Intended Nationally Determined Contribution (INDC) of Tunisia