



# Greenhouse Gas Emissions in Egypt

## Egypt Numbers at a Glance (2012)

**288 MtCO<sub>2</sub>e\***

Total GHG emissions  
(0.61% of world total)  
World: 47,599 MtCO<sub>2</sub>e

**80,721,874**

Population  
World: 7,043,181,414

**3.57**

tCO<sub>2</sub>e per capita  
World: 6.76 tCO<sub>2</sub>e

**US\$125,900 Million**  
GDP\*\*

World: US\$55,261 Billion

**2,287**

tCO<sub>2</sub>e/million US\$ GDP  
World: 861 tCO<sub>2</sub>e/million US\$ GDP

**+164 MtCO<sub>2</sub>e (+133%)**  
Change in annual GHG emissions (1990–2012)

World: +13,661 MtCO<sub>2</sub>e (+40%)

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

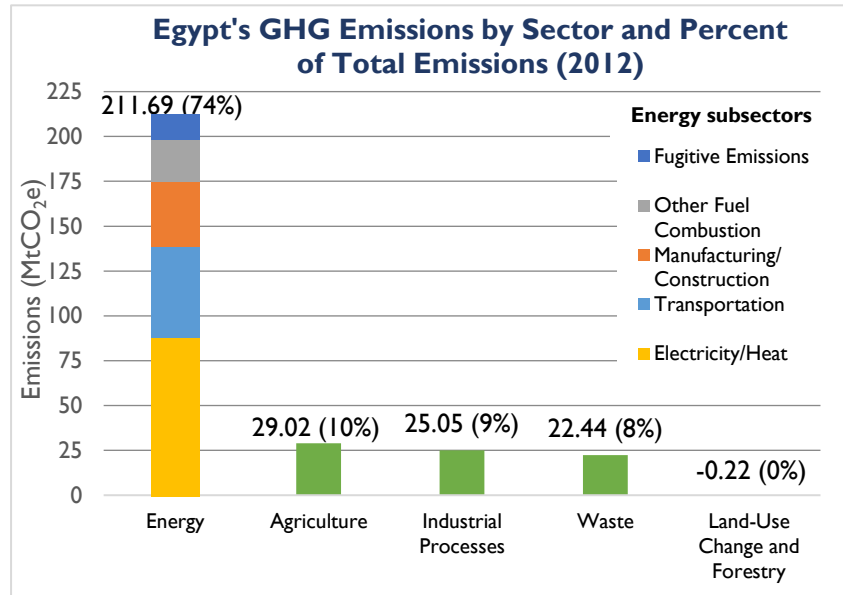
Egypt's GHG profile is dominated by the energy sector. Within the sector, electricity and heat production is responsible for 41%, transportation 24%, manufacturing and construction 17%, other fuel combustion 11%, and fugitive emissions 7% of energy sector GHG emissions.<sup>1</sup>

## Change in GHG Emissions in Egypt (1990-2012)

Egypt's emissions grew 133% from 1990-2012.<sup>2</sup> As illustrated on the graph on the next page, the average annual change during this time was 4%, with sector-specific annual change as follows: energy (4%), agriculture (2%), industrial processes (5%), and waste (7%). LUCF is a net sink during this period, with a slight increase in the rate of removals in 2001 and a slight decrease in removals in 2006.

According to International Energy Agency (IEA) data, Egypt's total primary energy supply more than doubled from 1990-2012, with fossil fuels accounting for 94% and renewables 4% in 2012.<sup>3</sup> Egypt's heavy reliance on hydrocarbons is expected to continue to increase with continued social and economic development.<sup>4</sup> Rapid growth in energy demand is driven by urbanization, increased industrial output, energy-intensive industries, motor vehicle sales, and energy subsidies.<sup>5</sup> Emissions from the transportation sector are the fastest growing, due to heavy reliance on roads and motor vehicles as the primary means of transport.<sup>6</sup>

Demand for natural gas has been increasing quickly at 8% per year,<sup>7</sup> with 76% of electricity generated by natural gas.<sup>8</sup> Egypt needs to add additional generation capacity of 2.7 gigawatts annually through 2020 to meet demand.<sup>9</sup>



Source: WRI CAIT 2.0, 2015

Note: Percentages do not add up to 100% due to rounding

<sup>1</sup> World Resources Institute Climate Analysis Indicators Tool (WRI CAIT) 2.0, 2015.

<sup>2</sup> WRI CAIT.

<sup>3</sup> IEA, 2015. Egypt Energy Balances data. See <http://www.iea.org/countries/non-membercountries/egypt/>.

<sup>4</sup> UNFCCC, 2014. National Economic, Environment and Development Study (NEEDS) for Climate Change Project.

<sup>5</sup> Grantham Research Institute on Climate Change and the Environment, 2015. The 2015 Global Climate Legislation Study – Egypt.

<sup>6</sup> Ibid.

<sup>7</sup> IEA, 2011. Facts on Egypt. See [http://www.iea.org/media/news/facts\\_egypt.pdf](http://www.iea.org/media/news/facts_egypt.pdf).

<sup>8</sup> IEA, 2015. Egypt Electricity / Heat data. See <http://www.iea.org/countries/non-membercountries/egypt/>.

<sup>9</sup> UNFCCC, 2014, cited in Grantham Research Institute on Climate Change and the Environment, 2015. The 2015 Global Climate Legislation Study – Egypt: <http://www.lse.ac.uk/GranthamInstitute/legislation/countries/egypt/>.

The [Second National Communication \(SNC\)](#)<sup>10</sup> to the UNFCCC identified energy intensive industries (cement and fertilizer production) as the primary growing industries and noted the country's industrial strategy to achieve higher growth in industrial production through aggressive export development and by attracting foreign direct investment. With exports dominated by natural resource-based, low technology products, Egypt aims to gradually shift to medium- and high-technology industries.<sup>11</sup>

## Carbon Intensity: GHG Emissions Relative to Gross Domestic Product (GDP) (2012)

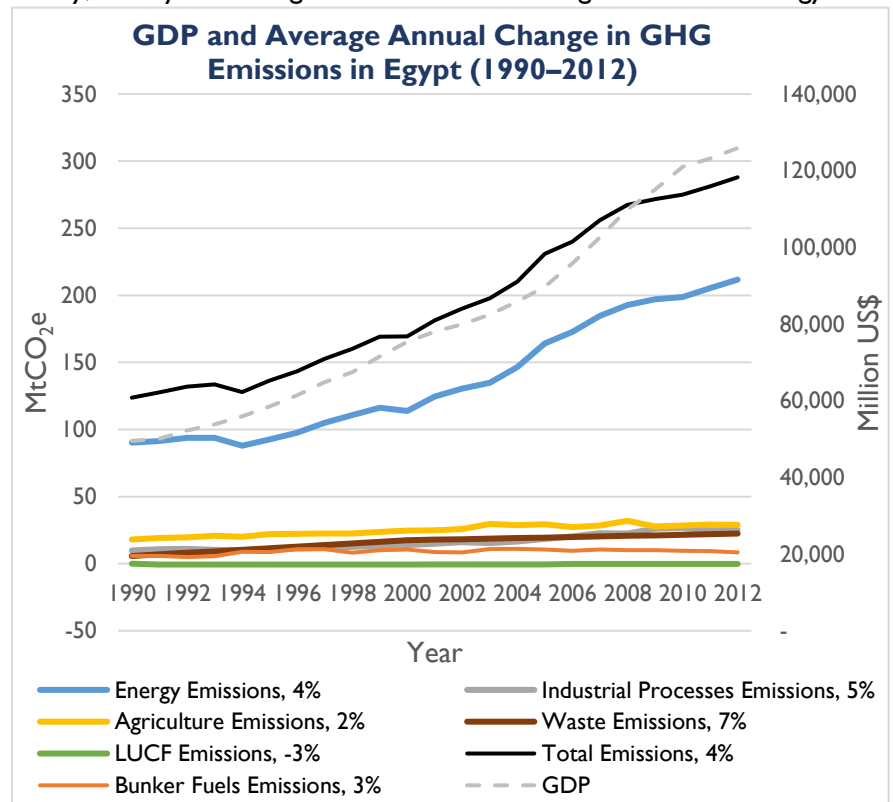
Egypt's GDP grew from US\$49.5 billion to US\$125.9 billion from 1990-2012. GDP over this period increased at a faster rate than total GHG emissions, suggesting that carbon intensity of the economy in 2012 had decreased relative to 1990.<sup>12</sup>

The Climate Change Risk Management Programme asserts that Egypt "is moving towards a less GHG intensive path mainly by becoming a more energy efficient economy, and by increasing the utilization of its large renewable energy potential".<sup>13</sup>

## Climate Change Mitigation Targets and Plans

Egypt has not yet submitted its Intended Nationally Determined Contribution and has not expressed national GHG mitigation targets. The SNC notes that reducing GHGs by promoting renewable energy resources and energy efficiency is consistent with Egypt's long-term development goals.<sup>14</sup> Although Egypt lacks a significant legal framework for climate change mitigation measures, many of the country's national initiatives, together create a national GHG mitigation portfolio to support sustainable development:<sup>15</sup>

- Climate Change Risk Management Programme (2008) – One of the three central objectives is the integration of GHG mitigation into national policy and investment frameworks.
- New National Renewable Energy Strategy (2008) – Establishes a target of generating 20% of electricity from renewable sources by 2020, 12% of which (or 7,200 megawatts) will be generated by wind farms.
- National Environmental, Economic and Development Study for Climate Change (2010) – Recognizes the importance of including a National Low Carbon Economy Plan in the next phases of climate change planning.
- National Energy Efficiency Action Plan for Egypt: 2012-2015 (2012) – Establishes a target of achieving a cumulative energy savings of 5% between 2012 and 2015 (compared to the average of the previous five years of consumption).



Source: WRI CAIT 2.0, 2015

<sup>10</sup> Egypt. Second National Communication Under the United Nations Framework Convention on Climate Change, May 2010.

<sup>11</sup> Egyptian Environmental Affairs Agency, 2010.

<sup>12</sup> Grantham Research Institute on Climate Change and the Environment, 2015.

<sup>13</sup> Grantham Research Institute on Climate Change and the Environment, 2015.

<sup>14</sup> Egyptian Environmental Affairs Agency, 2010.

<sup>15</sup> Grantham Research Institute on Climate Change and the Environment, 2015.