



Greenhouse Gas Emissions in Peru

Peru Numbers at a Glance (2012)

159 MtCO₂e*

Total GHG emissions
(0.34% of world total)

World: 47,599 MtCO₂e

29,987,800

Population

World: 7,043,181,414

5.32

tCO₂e per capita

World: 6.76 tCO₂e

US\$118,005 Million

GDP**

World: US\$55,261 Billion

1,352

tCO₂e/million US\$ GDP

World: 861 tCO₂e/million US\$ GDP

+49 MtCO₂e (+44%)

Change in GHG

emissions (1990–2012)

World: +13,661 MtCO₂e
(+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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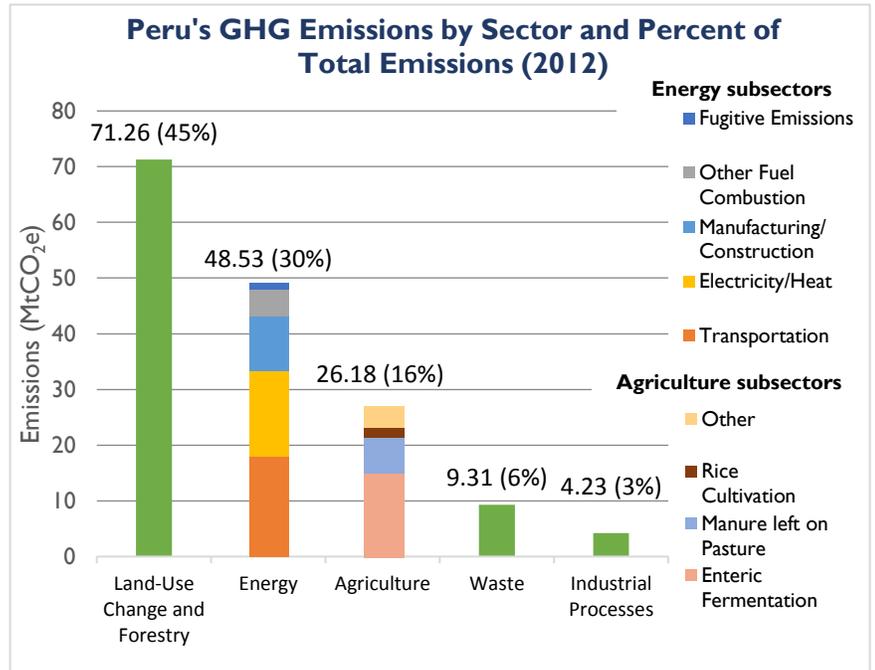
Greenhouse Gas (GHG) Emissions by Sector

Peru's GHG emissions profile is shown in the bar chart for the most recent year for which data are available. Land-use change and forestry (LUCF) was the leading source of emissions in 2012, followed by energy and agriculture emissions, respectively.

Change in GHG Emissions in Peru (1990-2012)

Peru's GHG emissions increased 44% from 1990 to 2012.¹ The average annual change of total emissions was 2%, with sector-specific annual change as follows: LUCF (0%), energy (4%), agriculture (2%), waste (2%), and industrial processes (5%).

LUCF: As of 2011, 58% of Peru's land was forested.² In its [Second National Communication \(SNC\)](#), Peru noted that deforestation is the single largest source of the country's GHG emissions, accounting for 47% of national emissions in 2000. In response, Peru aims to preserve 54 million hectares of forest and eliminate deforestation by 2021. The main direct causes of deforestation are conversion of land for agriculture and livestock production, followed by urban development, communications infrastructure, mining and oil exploitation, and illegal coca plantations.³ Part of the challenge remains that the government prioritizes mining, oil, and agriculture and the country's legal framework favors investment in these activities, often at the expense of forest harvesting regulations.⁴ These drivers are exacerbated by the precarious land tenure system and inadequate law enforcement and monitoring of forest concessions that is insufficient to prevent illegal logging. Peru has established incentives for forest preservation, and environmental crimes include illegal logging, the misuse of farmland, and habitat or landscape alteration.⁵



Sources: WRI CAIT 2.0, 2015; FAOSTAT, 2015

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

² Food and Agriculture Organization of the United Nations Statistics Division (FAOSTAT), viewed October 16, 2015: http://faostat3.fao.org/browse/area/*E.

³ Peru's Second National Communication (SNC) Report to the UNFCCC, 2010: <http://unfccc.int/resource/docs/natc/pernc2s.pdf>.

⁴ Dourojeanni, M. Amazonía peruana en 2021. Lima, 2010. Cited in The REDD Desk, Peru country profile: <http://theredddesk.org/countries/peru>.

⁵ Peru's SNC, 2010.

Energy: Peru's total primary energy supply doubled from 1990 to 2010, with fossil fuels (oil, natural gas, and coal) accounting for 75%, followed by bioenergy accounting for 15%, and large hydro for 9%. Other renewables including solar and wind accounted for 0.03%. By sector, energy consumption is dominated by the transportation and residential sectors, with transport being the fastest growing. Electrification in 2012 was 87% with the Energy Universal Access Plan aiming to achieve 95% by 2016.⁶

Total electricity generation capacity in 2010 was in the range of 7 GW, with hydro and other renewables providing over half as of 2012.⁷ According to the Renewables Readiness Assessment, high rates of economic growth drive growing energy demand, calculated at an average annual rate of almost 9% until 2017. This implies additional demand of 4.3 GW, with 2 GW expected from renewables. Peru has vast renewable energy resources that remain largely unexploited.

Agriculture: Around 17% of Peru's land is used for agriculture (14% for pasture and 3% for cultivation).⁸ Based on data from FAOSTAT, agricultural GHG emissions consisted of enteric fermentation (56%), manure left on pasture (24%), rice cultivation (7%), and other activities during the period 1990-2012. According to the World Bank, the most important crops including sugar cane, cotton, and rice, are grown on the coast employing mechanized irrigation methods, while agriculture in the highlands is mostly traditional and rainfed. Soil erosion is a very serious problem, especially in the highlands where 72% of land is affected. Soil erosion is caused by deforestation, overgrazing, and inadequate crop growing practices.

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

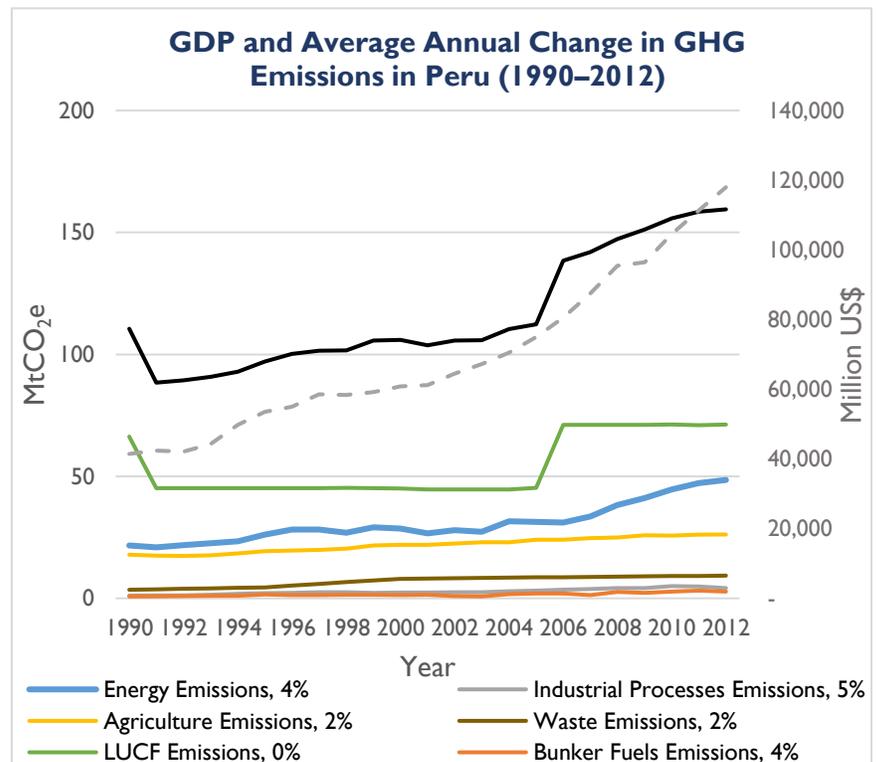
GDP grew 184% from 1990 to 2012 whereas total emissions grew 224% according to WRI CAIT, which suggests that the economy is becoming more carbon intensive.

Climate Change Mitigation Targets and Plans

In its [Intended Nationally Determined Contribution \(INDC\)](#),⁹ Peru envisages reducing GHG emissions equivalent to 30% relative to its projected business as usual scenario in 2030. Of this, a 20% reduction will be implemented unconditionally through domestic action, and the remaining 10% conditioned upon the availability of international financing and other favorable conditions.

Peru's mitigation plans also include the following¹⁰:

- Law to Promote Efficient Use of Energy (2000)
- Promotion for the Investment of Electricity from Renewable Energy (2008)
- Plan of Action for Adaptation and Mitigation of Climate Change (2010)
- National Programme for Forest Conservation for Mitigation of Climate Change (2010)
- Plan CC (2011)
- National Strategy for Climate Change (updated draft strategy published in July 2014)



Source: WRI CAIT 2.0, 2015

⁶ International Renewable Energy Agency (IRENA), Peru Renewables Readiness Assessment 2014. See http://www.irena.org/DocumentDownloads/Publications/RRA_Peru.pdf.

⁷ International Energy Agency, 2015. Energy Balances, viewed October 16, 2015: <https://www.iea.org/countries/non-membercountries/peru/>.

⁸ World Bank, December 2009. Peru Country Note on Climate Change Aspects in Agriculture.

⁹ Republic of Peru. Intended Nationally Determined Contribution from the Republic of Peru, September 2015.

¹⁰ Grantham Research Institute on Climate Change and the Environment, 2015. The 2015 Global Climate Legislation Study – Peru.