

deccanherald.com

Agriculture, waste and industries are the hidden air polluting sectors in Bengaluru

DH Contributor, Bengaluru, Karnataka, Apr 22 2020, 19:32 ist updated: Apr 22 2020, 19:54 ist 6-8 minutes

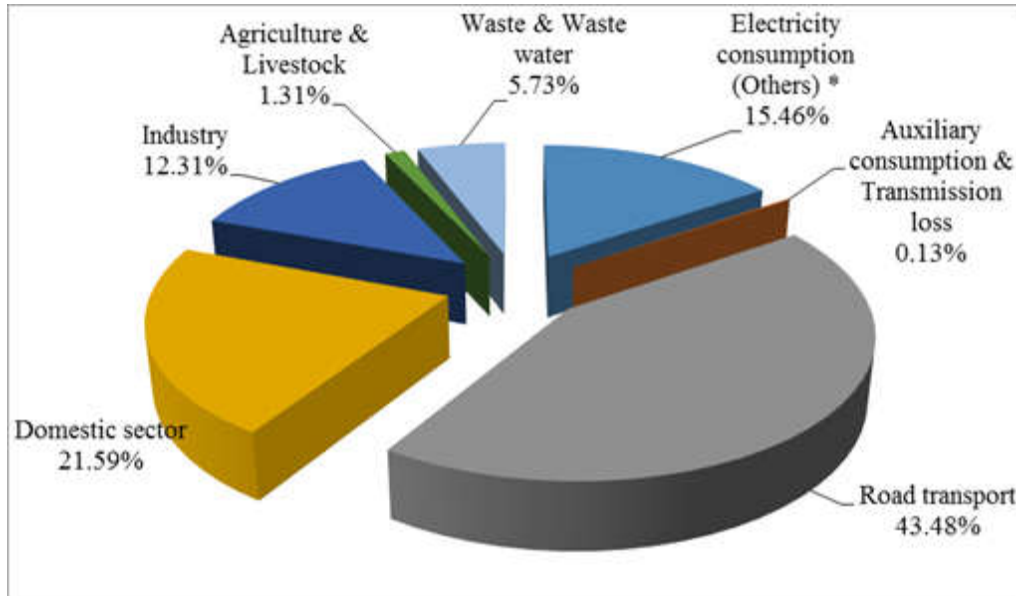


c

By Kapil Kajal

While Bengaluru's infamous road traffic contributes majorly to the air pollution in the city, a large portion of the city's air pollution comes from other sectors. Domestic households, electricity consumption sector, industries, waste sector, and agriculture and livestock also add significantly to the city's air pollution levels, a study says.

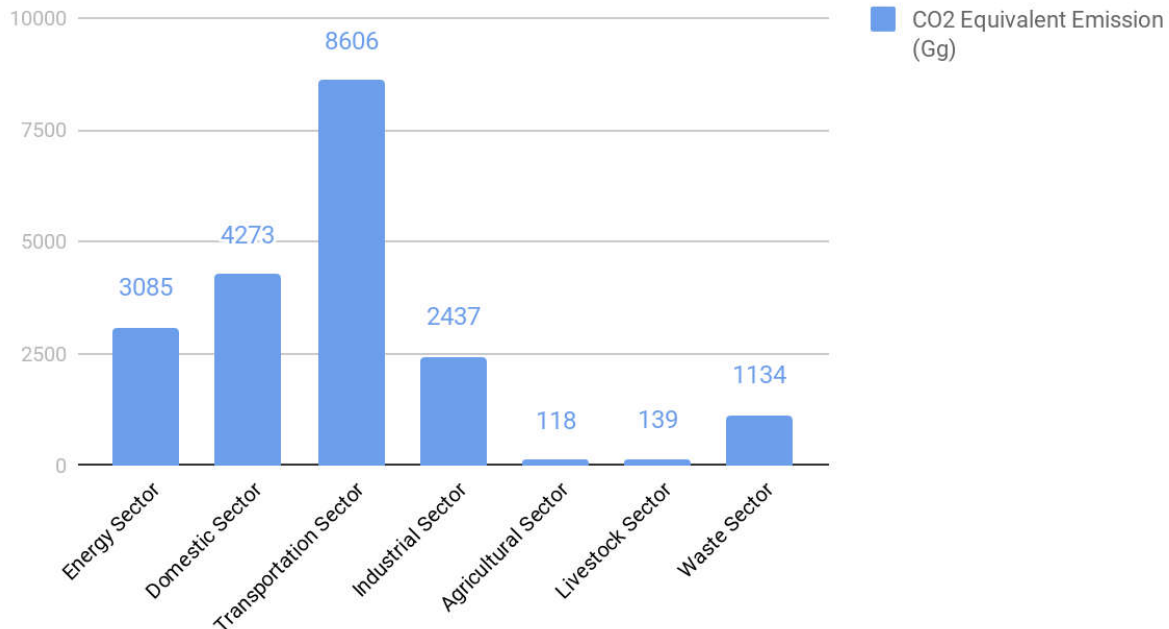
According to a study by the Indian Institute of Science (IISc), the road transport sector contributes 43.48% of the total carbon dioxide equivalent emissions, used for describing the effect of different greenhouse gases in a common unit. However, the domestic sector contributes 21.59%, the electricity consumption sector is at 15.46%, while the industries contribute 12.31%, the waste sector contributes 5.73%, and agriculture and livestock contribute 1.31%, it added.



Carbon dioxide equivalent emissions of Greater Bangalore, Chart- IISc

According to a study by the Centre for Ecological Sciences (CES), IISc, out of the total carbon dioxide equivalent emissions, the energy sector emits 3085 Gg (1Gg = 10 lakh kilogramme). However, the domestic sector emits 4273.81 Gg, and the transportation sector emits 8606 Gg, the industrial sector emits 2437 Gg, agricultural sector emits 118.96 Gg, livestock sector emits 139.66 Gg and waste sector emits 1134.52 Gg of carbon dioxide equivalent emissions, the study added.

CO2 equivalent emissions (Gg) in Different Sectors



Electricity consumption

According to the study by CES, IISc, the major energy-related emissions considered in this sector are emissions from electricity consumption.

The consumption of fuel in the domestic sector for the cooking and industrial sector for the functioning of various machines release major greenhouse gases in the environment. The industries like iron and steel industry, cement industry, fertiliser plants and chemical manufacturing also release a huge amount of greenhouse gases into the atmosphere during the process.

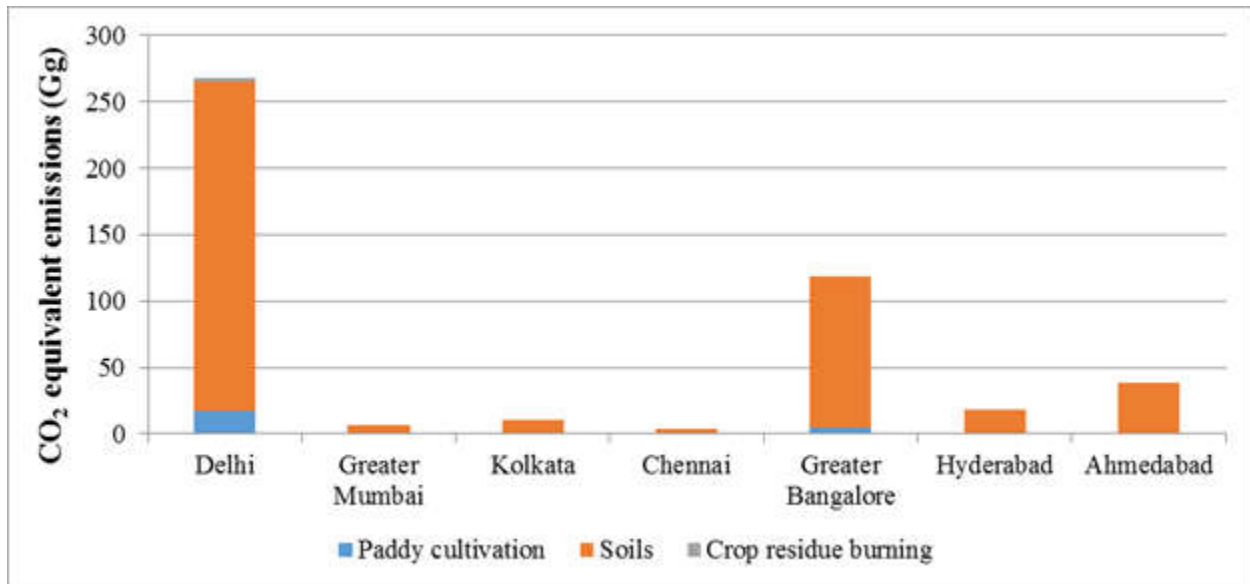
Dr T V Ramachandra, a professor with CES, IISc, stated that the building architecture in domestic and industrial sectors also plays a huge role in increasing electricity consumption. Glass facades are in trend these days but in such buildings, people tend to use 10 times higher electricity compared to normal buildings, he added.

For normal buildings, the electricity is 750 to 1,450 units per person per year and for glass facade, people tend to use 14,000 to 16,000 units per person per year, he informed. The higher the electricity usage, the more is the amount of carbon emissions.

Glass facades cost the contractors less and also the glass occupies less area as compared to concrete walls. So, on the one hand, these contractors are using cheap material, and on the other hand, they are getting extra money for giving extra area.

Methane emissions in agriculture

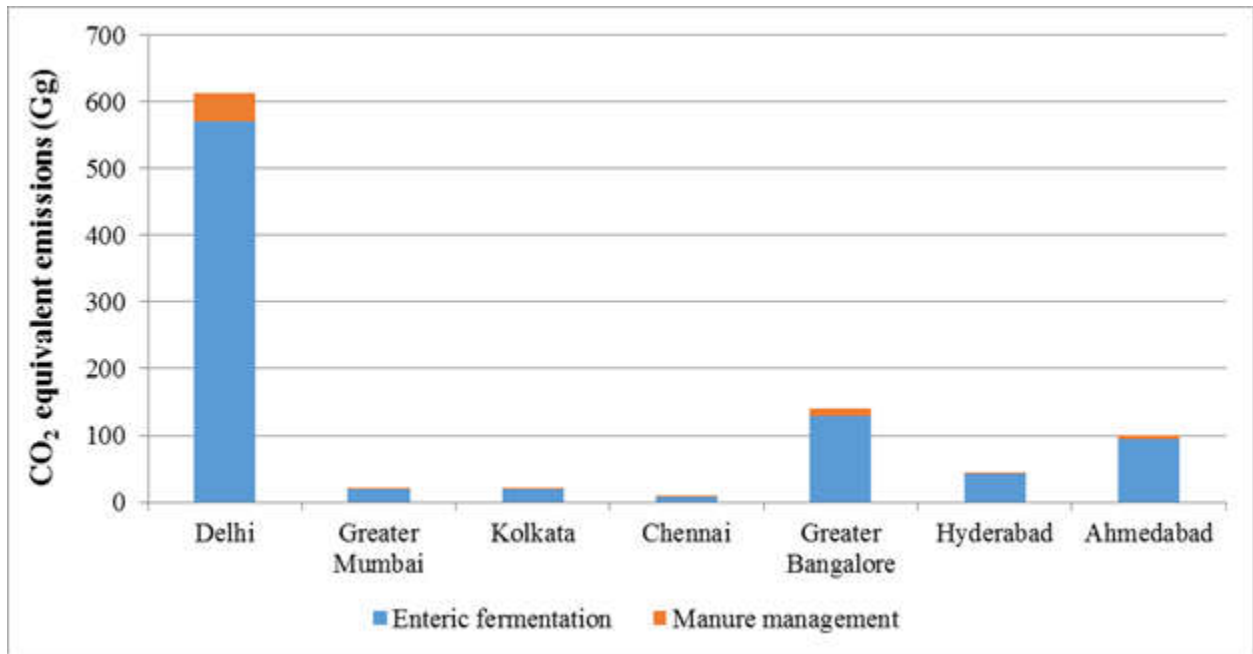
Bengaluru is the second top polluted city in India in terms of carbon dioxide equivalent emissions from agricultural-related activities. The study by CES highlighted that methane emissions from paddy cultivation and nitrous oxide emissions from soil management are responsible for greenhouse gas emissions from the agriculture sector.



CO₂ equivalent from agricultural related activities (Chart- IISc)

Dr Ramchandra stated that the carbon emission in agriculture is due to the organic materials in the field, and it is usually burnt after harvesting, causing the emission of pollutant gases. He added that when you leave stagnant water for the paddy or sugarcane cultivation, there is a methane generation in the field, because of that greenhouse gases are emitted from that.

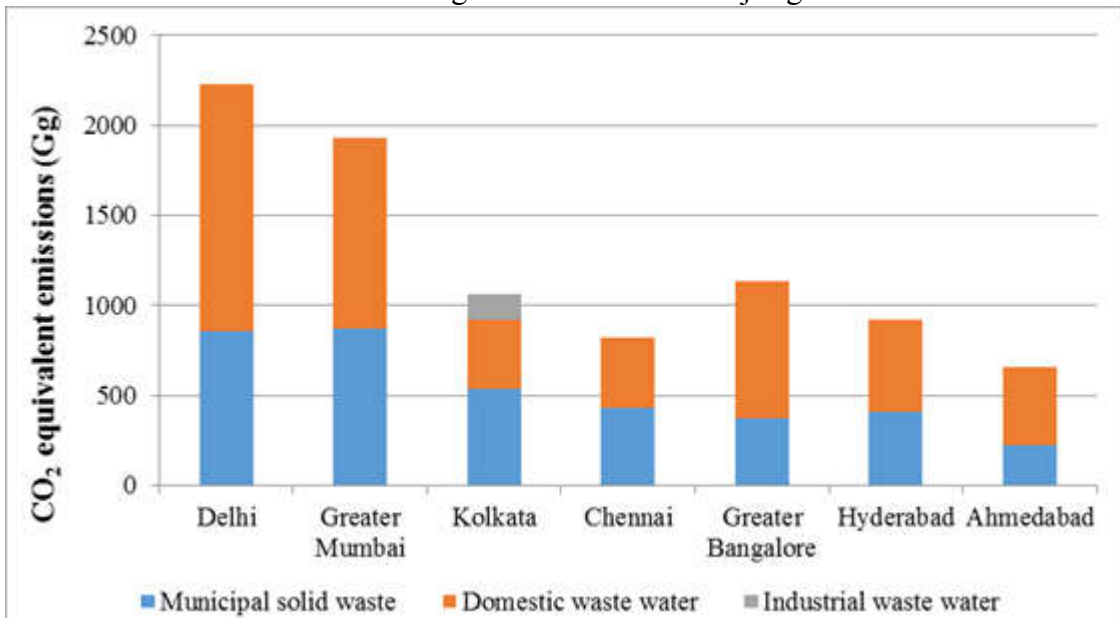
In the livestock sector, the cattle consume organic material and because of the digestive process, fermentation takes place known as enteric fermentation in which methane generation takes place. “When they discharge the dung and people make manure, again there is a methane generation, Dr Ramchandra mentioned.



CO₂ equivalent from livestock sector (Chart- IISc)

High consumption, more waste

From the waste sector. Bengaluru is the third-highest CO₂ equivalent emitter in the country, after Delhi and Mumbai. Methane and nitrogen dioxide are the major gases released from municipal



solid waste, domestic wastewater and industrial wastewater.

CO2 equivalent from Waste Sector (Chart- IISc)

The domestic and industrial sector discharges solid and liquid waste. Solid waste mainly consists of 70-80% of organic material, and when it is not managed there is a methane generation.

People discharge liquid waste into the water bodies in water bodies, and the anaerobic (oxygen-free) condition is where the methane and nitrogen dioxide generation take place, stated Dr Ramchandra.

Environmentalist Sandeep Anirudhan stated that all the pollution, which is increasing, is a part of industrialisation. “A high consumption lifestyle is leading to this mass production, which is further leading to the consumption of fossil fuels. The problem is the fundamental flaw of the paradigm, first of industrialisation, second of consumption or consumerism, and the third is of the market economy. The market economy is making us produce more and more because the companies need to grow more and more,” he mentioned.

We have to seek a new paradigm, but there is no other option because the solution is in natural farms, where you don't use fertilisers, he highlighted.

“There is no profit to these companies in natural farming, that is why they are creating a need for it. If we do not correct these, the same thing will continue, nobody is anyway going to promote natural farming,” he mentioned.

“Economics, ecology, including air pollution, and our health is connected to everything else,” he commented.

Dr H Lokeshwari, Chief Scientific Officer with the Karnataka State Pollution Control Board (KSPCB), stated that the KSPCB released a 44-point action plan to reduce the emissions from each sector.

“We are monitoring the emissions from each industry and the pollutants released by them, and if they are violating the norms, we take action against them like we have closed Graphite India,” she added.

(Author is Bengaluru - based freelance writer and a member of [101Reporters.com](https://www.101reporters.com/), a pan-India network of grassroots reporters.)