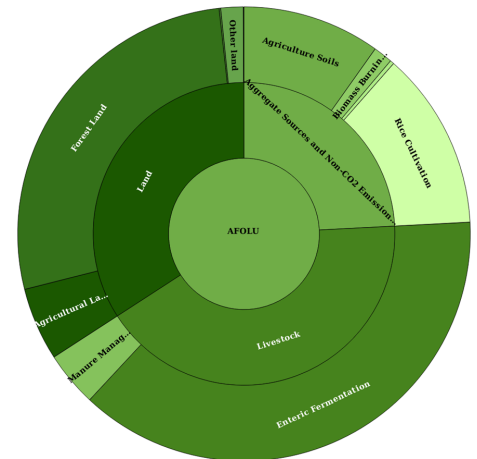


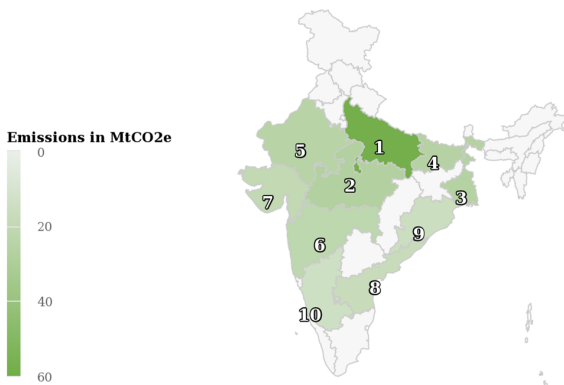
BIHAR'S AFOLU EMISSIONS

The AFOLU sector contributes approximately **10%** to India's total GHG emissions. The estimation of GHG emissions and removals from the **Agriculture, Forestry and Other Land Use (AFOLU)** Sector includes CO² emissions and removals resulting from Carbon stock changes in biomass, dead organic matter and mineral soils, for all managed lands; CO² and non-CO² emissions from fire on all managed land; N₂O emissions from all managed soils; CO² emissions associated with liming and urea application to managed soils; CH₄ emissions from rice cultivation; CO² and N₂O emissions from cultivated organic soils; CH₄ emission from livestock (enteric fermentation); and CH₄ and N₂O emissions from manure management systems.



Source: GHG Platform India. <https://www.ghgplatform-india.org/afolu-sector/>

Top 10 States in Gross AFOLU Emissions | 2018

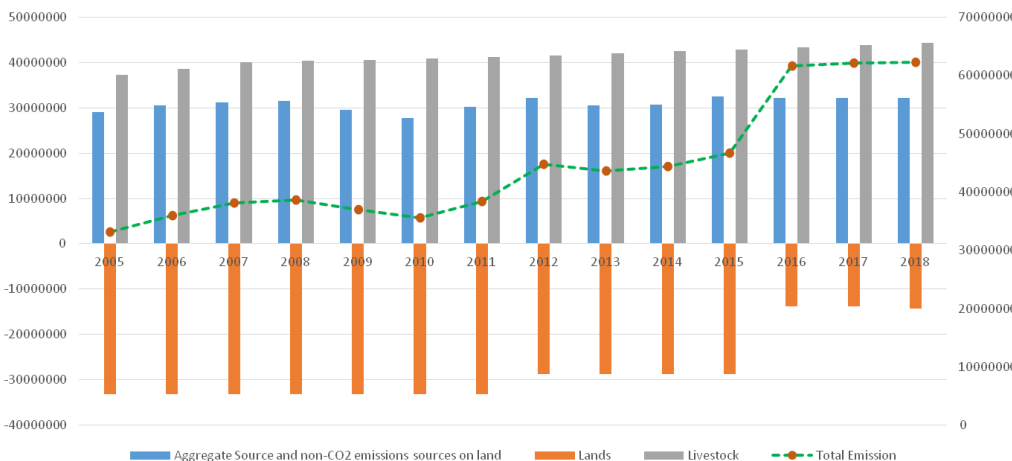


Source: GHG Platform India. <https://www.ghgplatform-india.org/afolu-sector/>

Bihar stands 4th among top ten states in gross AFOLU emission in 2018. Bihar generates total AFOLU emission of **25.91 Mt CO²**. Under which key categories of carbon emissions are enteric fermentation, rice cultivation and agriculture soils with 14, 6.57, 3.52 Mt CO² respectively.

As the graph shows that total carbon emission and total carbon stock. The aggregate sources and non-sources on land includes emission from agricultural soils, biomass burning in cropland and forest land and emissions from Rice cultivation. Land act as major source of carbon sink which includes Agricultural, Forest, Grassland and other land or settlements. Livestock also plays a major role in generation of harmful gases like Methane, Nitrous Oxide and Carbon Dioxide.

Carbon emission vs Carbon sink of Bihar

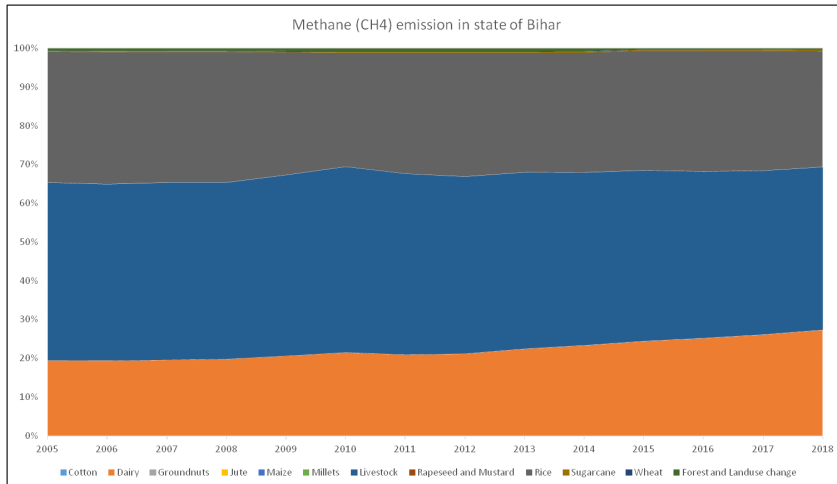


Source: AFOLU emission Vasudha Foundation

We can clearly see the trend of **87%** increase in carbon emission while **56%** decrease in carbon sink from 2005 to 2018. The graph shows the instant increase of carbon emission from 2005 to 2006, as there was decrease in total carbon sink.

BIHAR'S AFOLU EMISSIONS

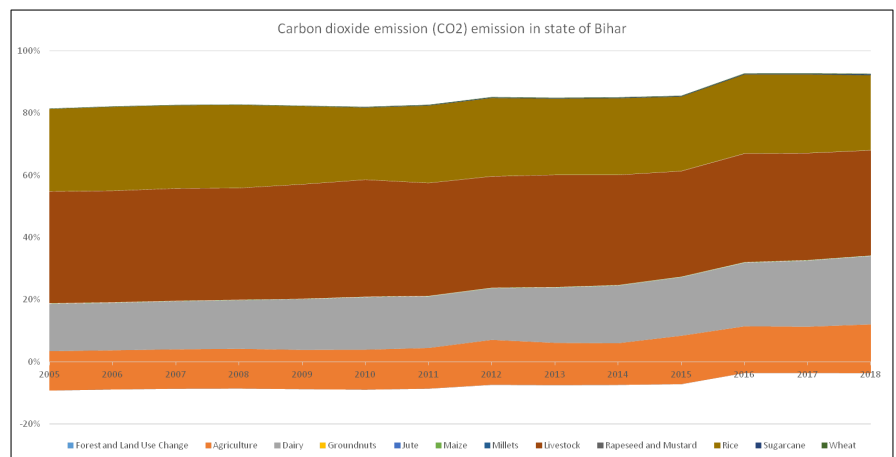
AFOLU sector consists of three sub-sectors, namely Livestock, Land and Aggregate Sources and Non-CO² emission sources on land. The three most important greenhouse gases for AFOLU sector are Methane (CH⁴), Nitrous Oxide (N²O), and Carbon Dioxide (CO²). AFOLU sector can be both a source as well as a net sink for carbon. India's emissions from this sector are around 8% of the total national GHG emissions, it can contribute significantly to the country's aspirations of reaching net-zero emissions by 2070.



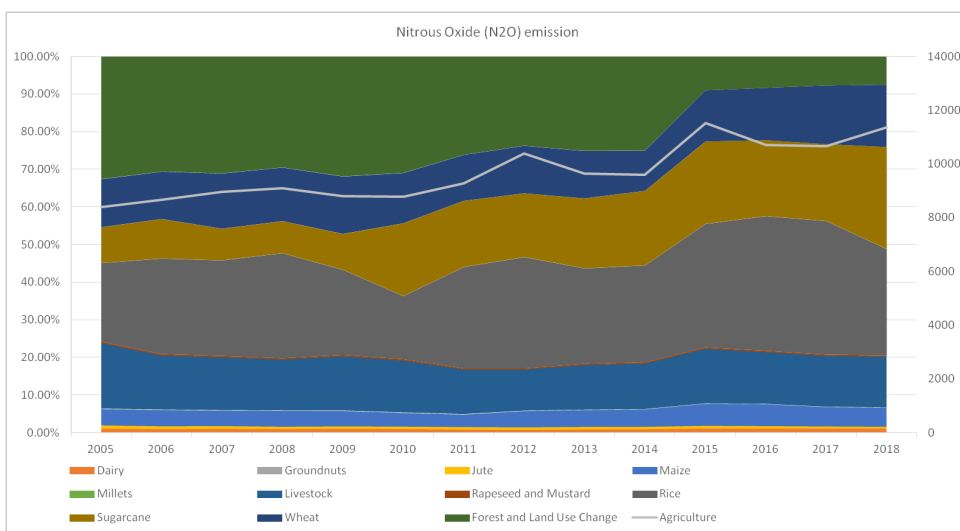
As the graph shows the total Methane (CH⁴) gas emitted from various sources of agriculture. While the graph show that, the major contributor of Methane (CH⁴) in Bihar are Dairy, Livestock and Rice cultivation. As we can observe that, methane emission from Dairy animals have increased while from Livestock (Non-Dairy) have decreased.

Source: AFOLU emission Vasudha Foundation

As the graph shows the total Carbon dioxide (CO²) emission from various sources. The major contributor of carbon dioxide are Dairy animals, Livestock (Non-Dairy), and Rice cultivation. Agriculture act as carbon sink while the agricultural carbon sink have decreased due to decrease in trend of Agricultural land fro 2015-2016.



Source: AFOLU emission Vasudha Foundation



Source: AFOLU emission Vasudha Foundation

As the graph shows the total Nitrous Oxide (N²O) emission from various sources. The major contributor of Nitrous Oxide are Agriculture, Maize cultivation, Livestock (Non-Dairy), Rice cultivation, Sugarcane, Wheat, and due to Forest and Land Use Change. Agriculture act as major contributor of Nitrous Oxide.