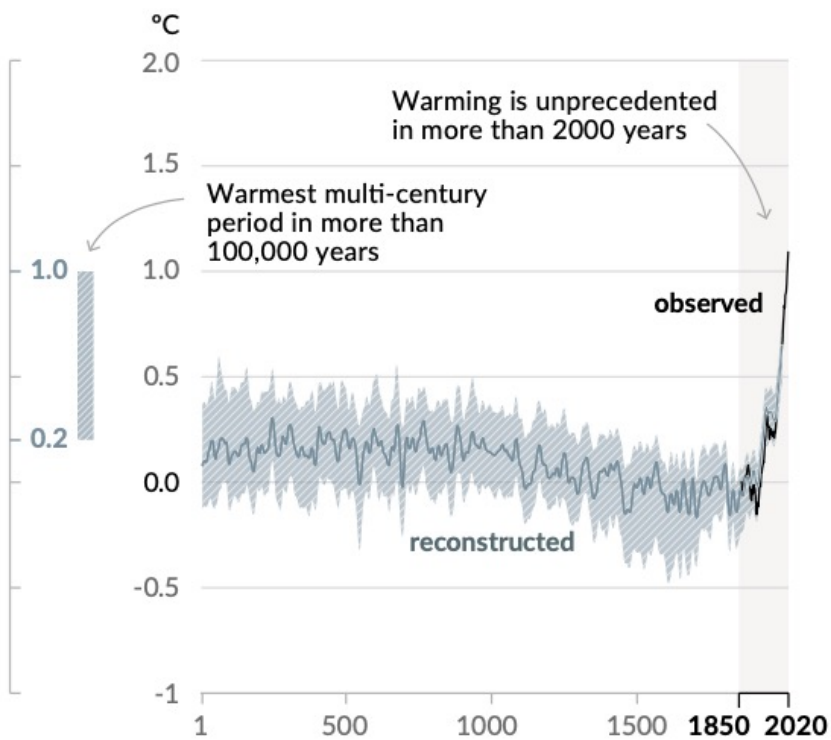


# COP26@Framlingham

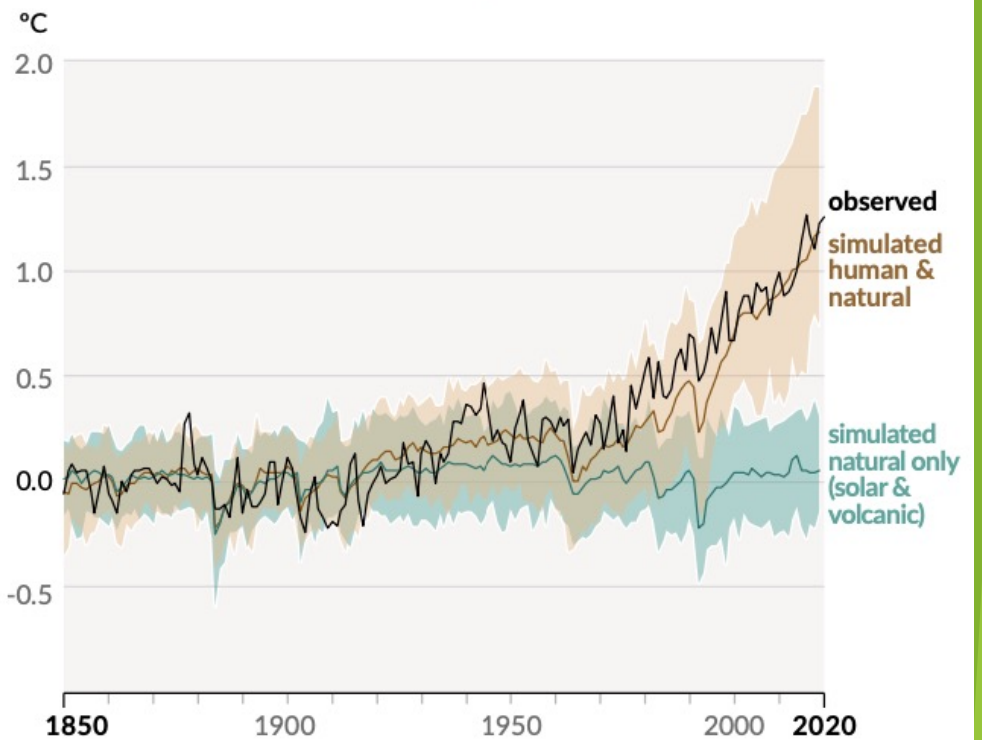
A3 sized 'posters'

# Is the planet warming?

a) Change in global surface temperature (decadal average) as **reconstructed** (1-2000) and **observed** (1850-2020)



b) Change in global surface temperature (annual average) as **observed** and simulated using **human & natural** and **only natural** factors (both 1850-2020)

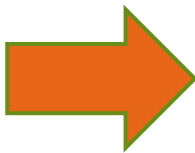


- The world has not been this warm for over 100,000 years

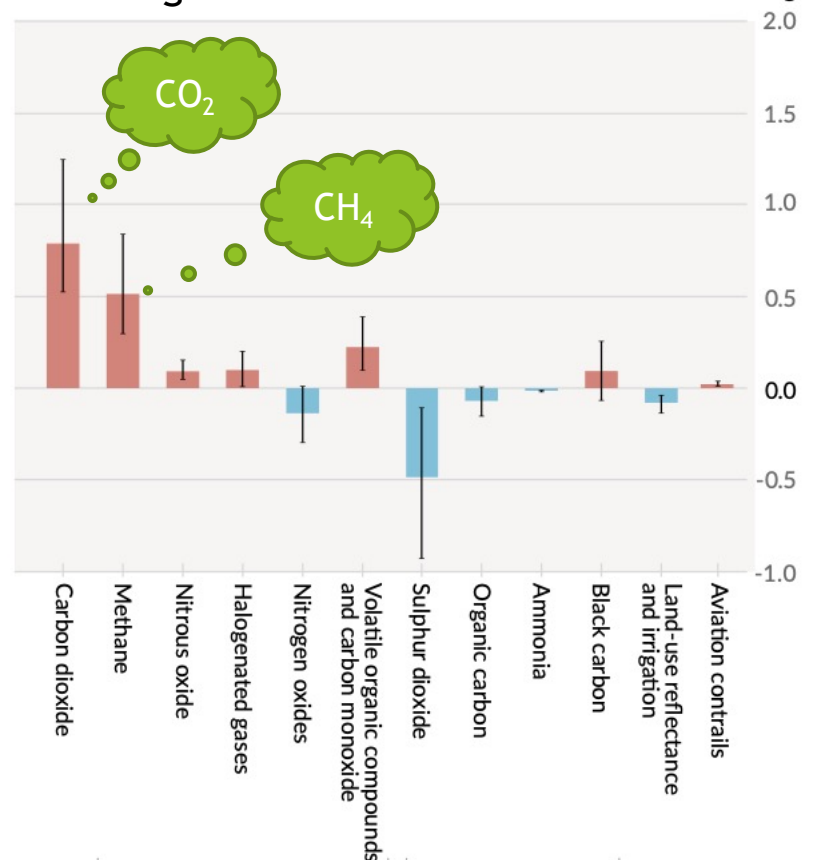
## What is causing it?

- Seven gases have global warming effects:

- Carbon dioxide ( $\text{CO}_2$ )
- Methane ( $\text{CH}_4$ )
- Nitrous Oxide ( $\text{N}_2\text{O}$ )
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride ( $\text{SF}_6$ )
- Nitrogen trifluoride ( $\text{NF}_3$ )



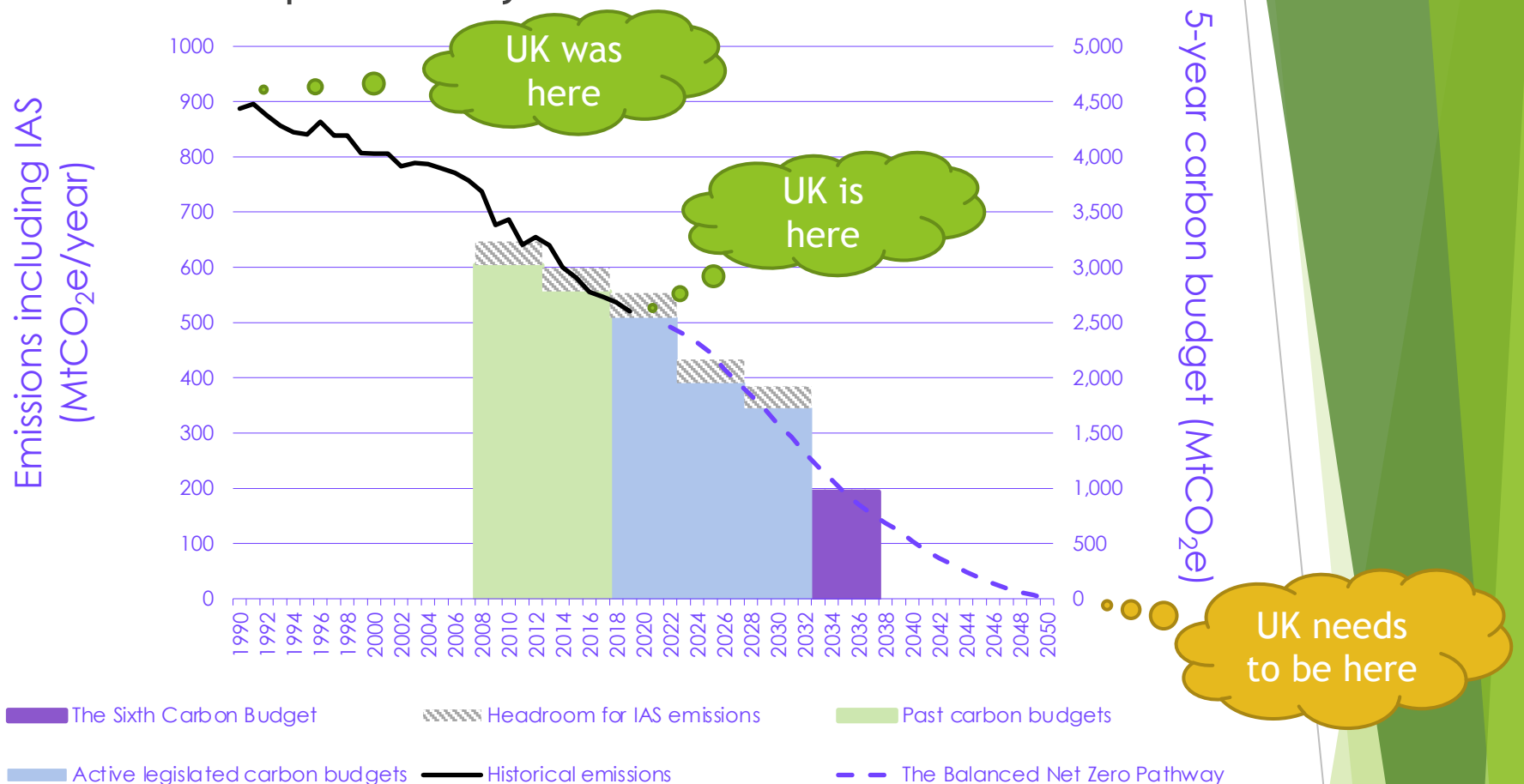
Which gases are doing the most warming?



- $\text{CO}_2$  levels are higher than at any time in at least 2 million years
- $\text{CH}_4$  and  $\text{N}_2\text{O}$  levels are higher than at any time in at least 800,000 years

# What do we need to do?

- By 2050 we need to have (net) zero emissions of all greenhouse gases if we want to limit global warming to 1.5C above pre-industry levels

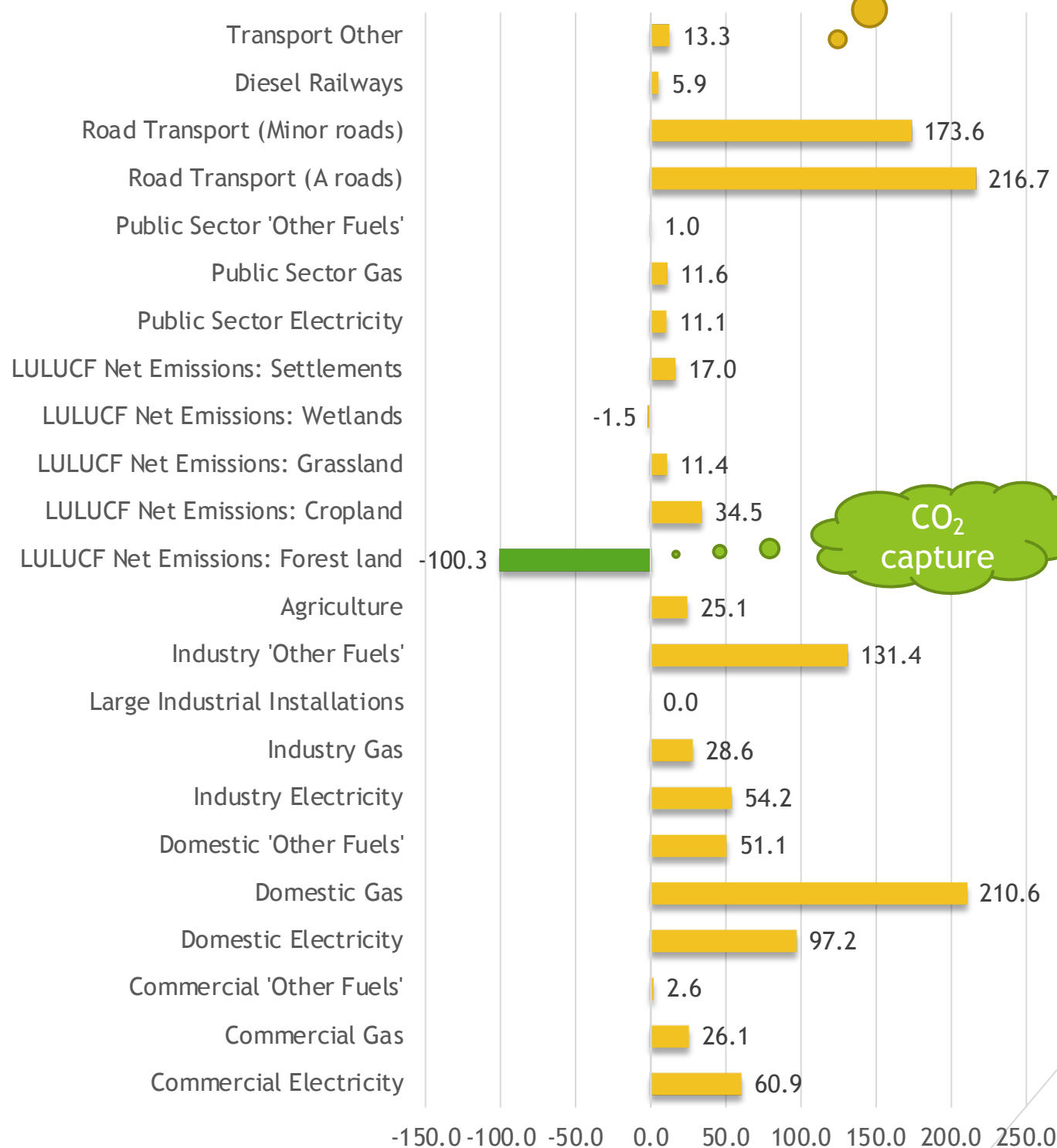


- Even if we do, we may still face risks:
  - To the supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks
  - To people and the economy from climate-related failure of the power system
  - To human health, wellbeing and productivity from increased exposure to heat in homes and other buildings
  - To soil health, buildings, transport and other infrastructure from increased flooding and drought
  - To crops, livestock and commercial trees
  - To the viability and diversity of terrestrial habitats and species
  - To natural carbon stores and sequestration leading to increased emissions
  - To the UK from climate change impacts overseas

# Estimated territorial net carbon emissions (2019)

East Suffolk DC KTonnes CO<sub>2</sub>e/year

This excludes non CO<sub>2</sub> emissions - such as methane from livestock



Source: Department for Business, Employment and Industrial Strategy

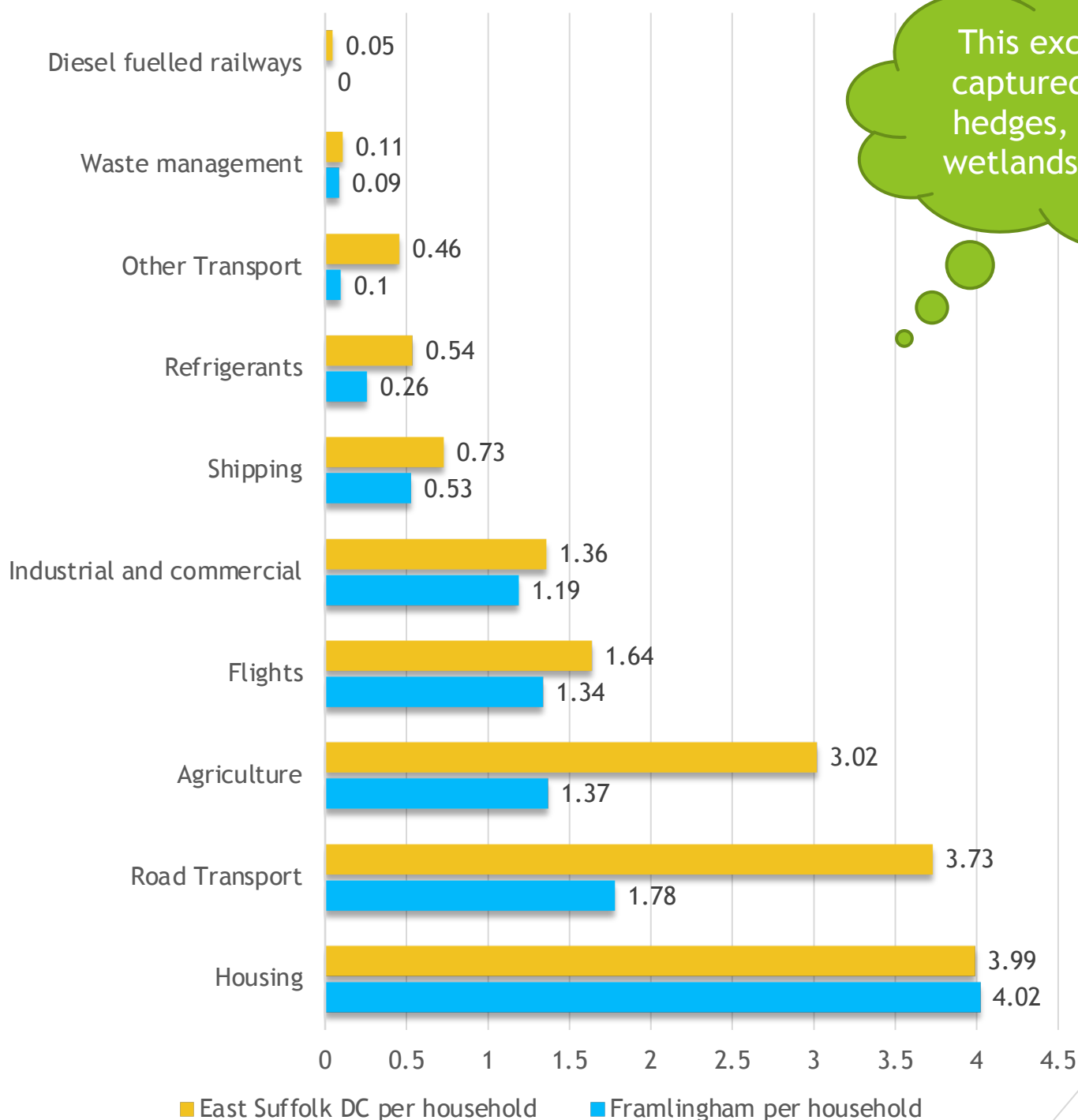
This method is useful for showing the net balance between CO<sub>2</sub> emitted and CO<sub>2</sub> captured. Unfortunately the data is only available for local authorities, not parishes like Framlingham. It also **only includes** CO<sub>2</sub> leaving out all the other greenhouse gases - such as methane and nitrous oxide.

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# Estimated 'territorial' emissions (2020)

Framlingham: 10.7 T CO<sub>2</sub>e/household/year

East Suffolk DC: 15.6 T CO<sub>2</sub>e/household/year



Source: Centre for Sustainable Energy

**Territorial - all emissions occurring within the area:**

*"A territorial carbon footprint includes all emissions that are generated within a defined geographical area, including those from industry, agriculture and transport activities."* (<https://impact-tool.org.uk/faq>)

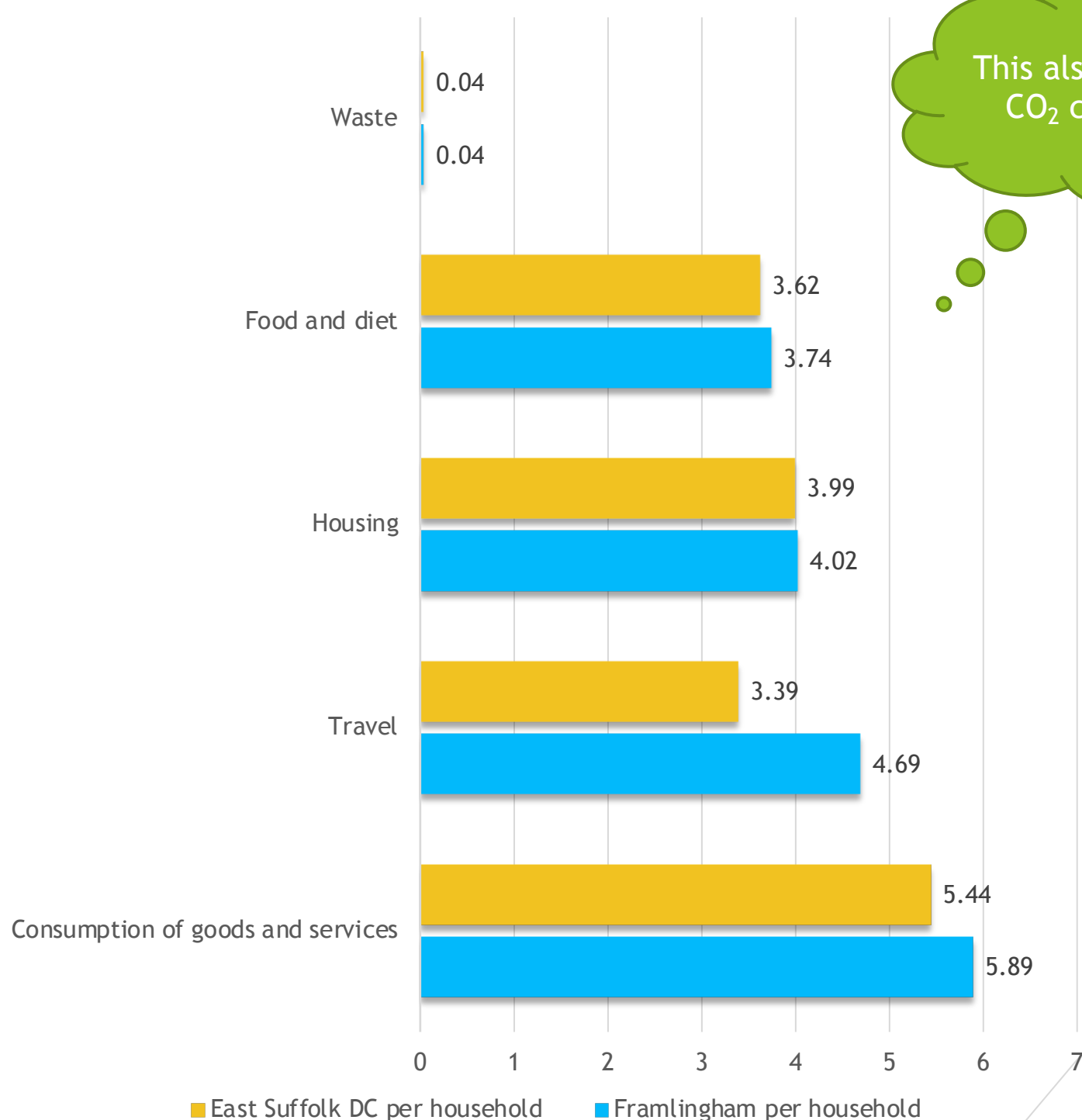
This is the method currently used at the national level by the Climate Change Committee (CCC) in their carbon budget reports.

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# Estimated 'consumption' emissions (2020)

Framlingham: 18.4 T CO<sub>2</sub>e/household/year

East Suffolk DC: 16.5 T CO<sub>2</sub>e/household/year



Source: Centre for Sustainable Energy

**Consumption-based** - all emissions caused by residents of the area, regardless of where geographically they occur:

*"Upstream (before we get them) and downstream (after we dispose of them) emissions from residents' consumption of manufactured goods, food and their own transport activity."* (<https://impact-tool.org.uk/faq>).

This method is useful for showing the emissions we are responsible for but which do not occur in Framlingham - such as our food and other things we buy that are made elsewhere.

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