Greenhouse Gas emissions from Agriculture

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Exploring the Benefits of SRC Willow Planting for Water Quality Protection and Waste Water Management
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Presentation Overview

- What we do and why
- Data providers and stakeholders
- Agriculture GHG emissions
- Emission Drivers
- Current and Future trends
- Actions required

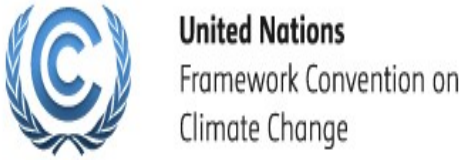
What do we report?

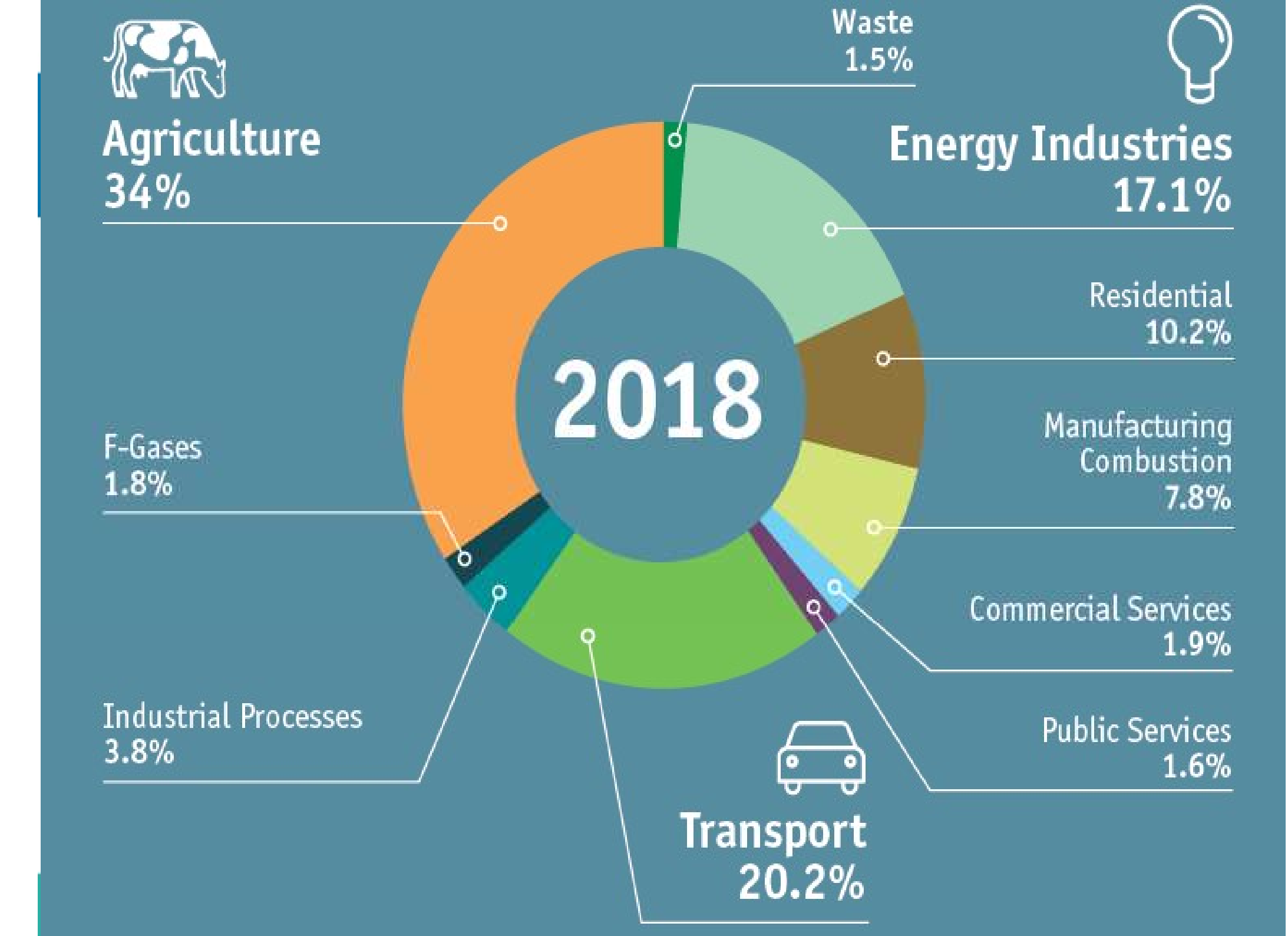
- Greenhouse Gas Inventories
- Inventories on CO_2, CH_4, N_2O, HFCs, PFCs and SF_6, NF_3 annually (15th Jan & 15th March to EU and 15th April UNFCCC)
- National Inventory Report (UNFCCC 15th April)
- Emission projections under the MMR

- Air Pollutant Inventories (15th February annually CLRTAP & NECD)
- Main pollutants; NO_x, SO_2, NMVOC, NH_3 and CO
- Particulate matter; TSP, PM_{10} and $PM_{2.5}$
- Heavy metals; Pb, Cd, Hg (priority) As, Cr, Cu, Ni, Se and Zn (additional)
- Persistent Organic Pollutants; Dioxins (PCDD/PCDF), PAHs, HCB (mandatory) PCBs (voluntary)
- Informative Inventory Report (15th March annually)
- Emission projections also reported

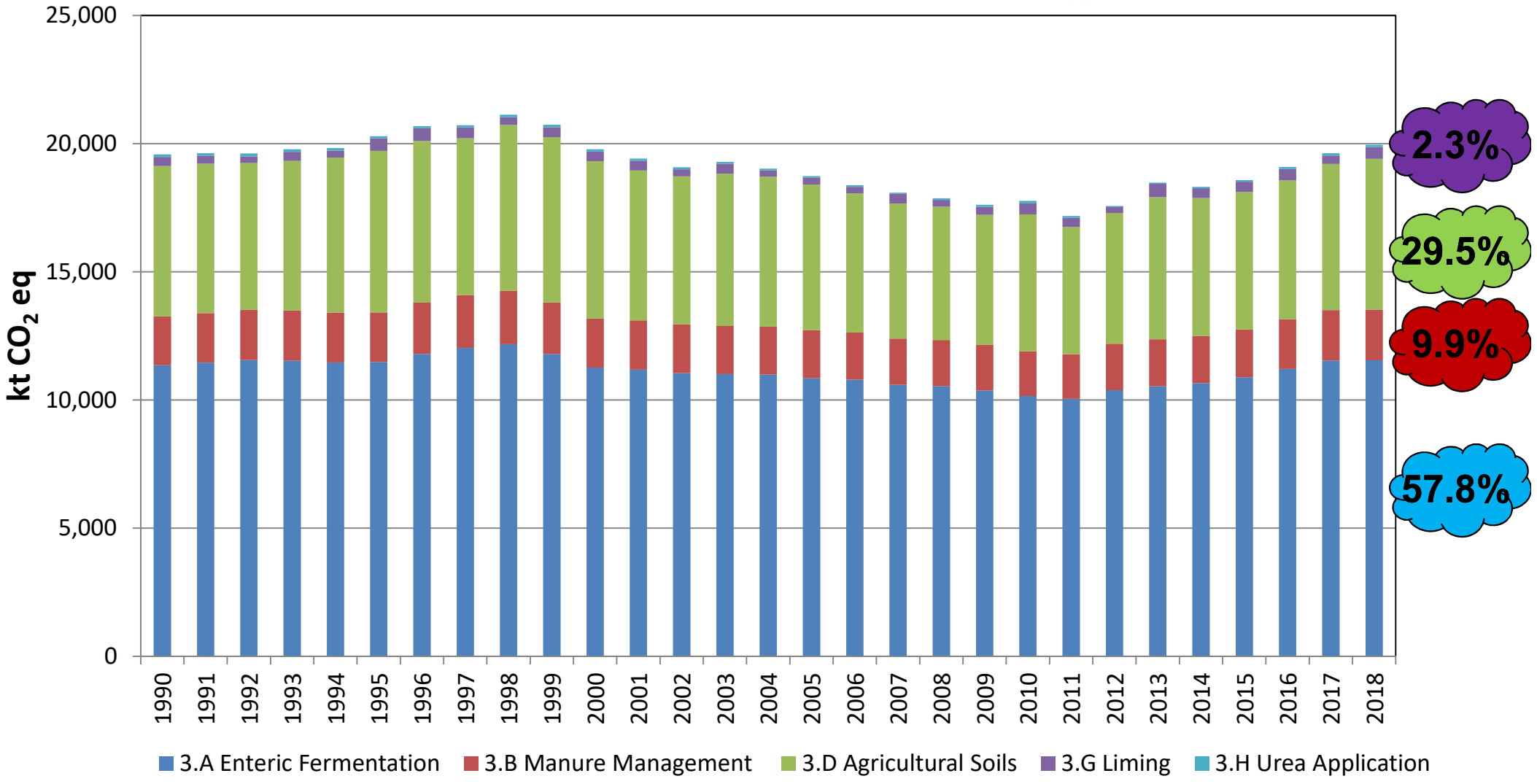
Data Providers

Stakeholders

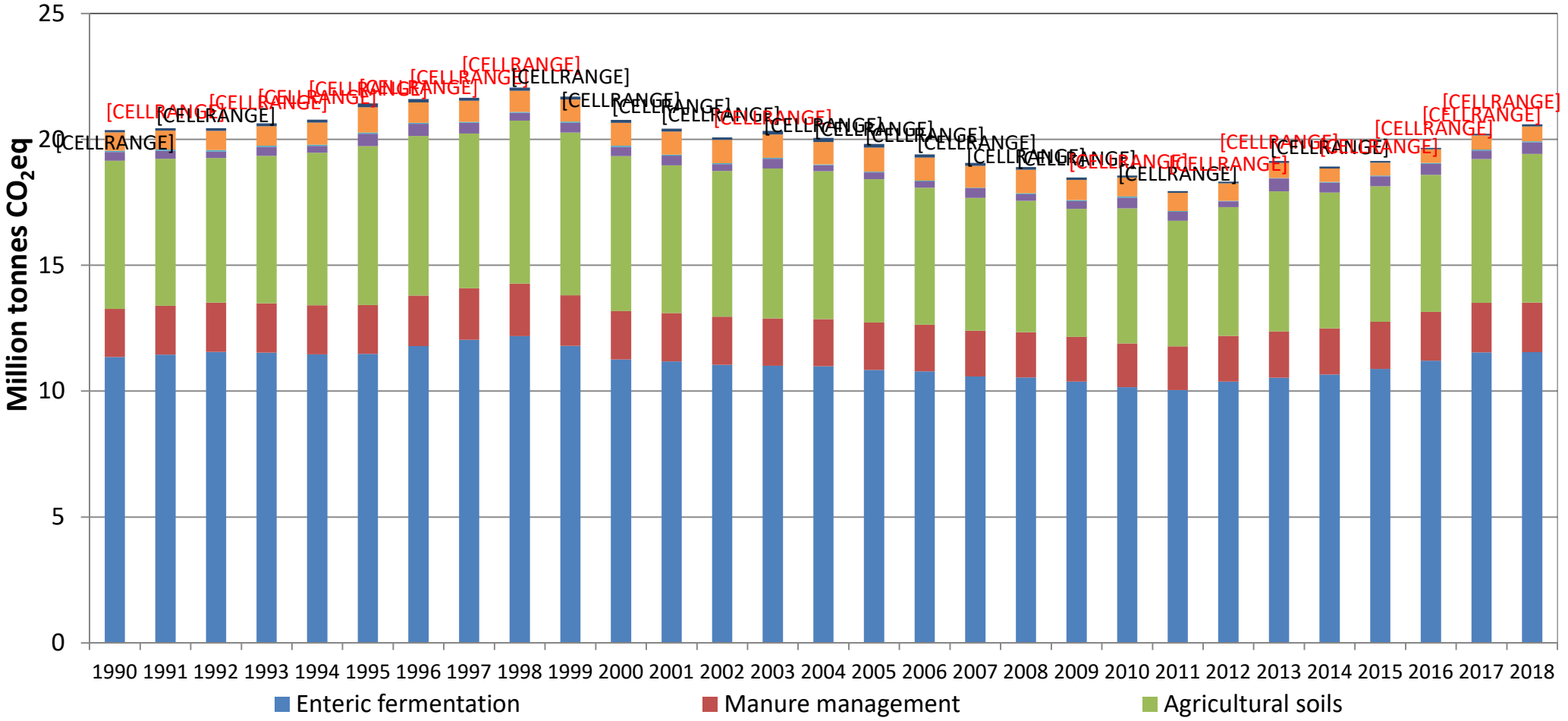



Waste
1.5%
Agriculture
34%
Energy Industries
17.1%
Residential
10.2%
2018
F-Gases
1.8%
Manufacturing
Combustion
7.8%
Commercial Services
1.9%
Industrial Processes
3.8%
Public Services
1.6%
Transport
20.2%

Agricultural emissions - sources



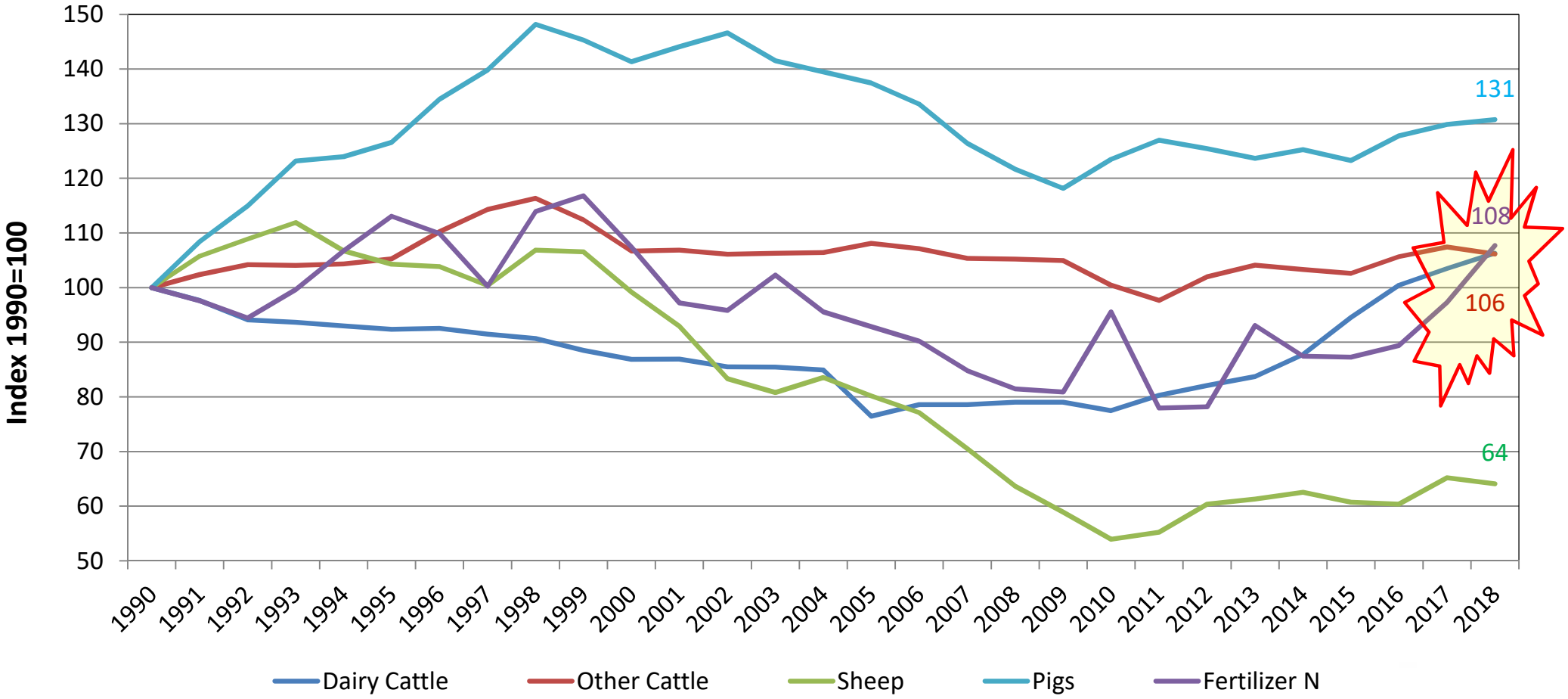
Agriculture Provisional GHG emissions 1990-2018



Agricultural GHG emissions - the facts

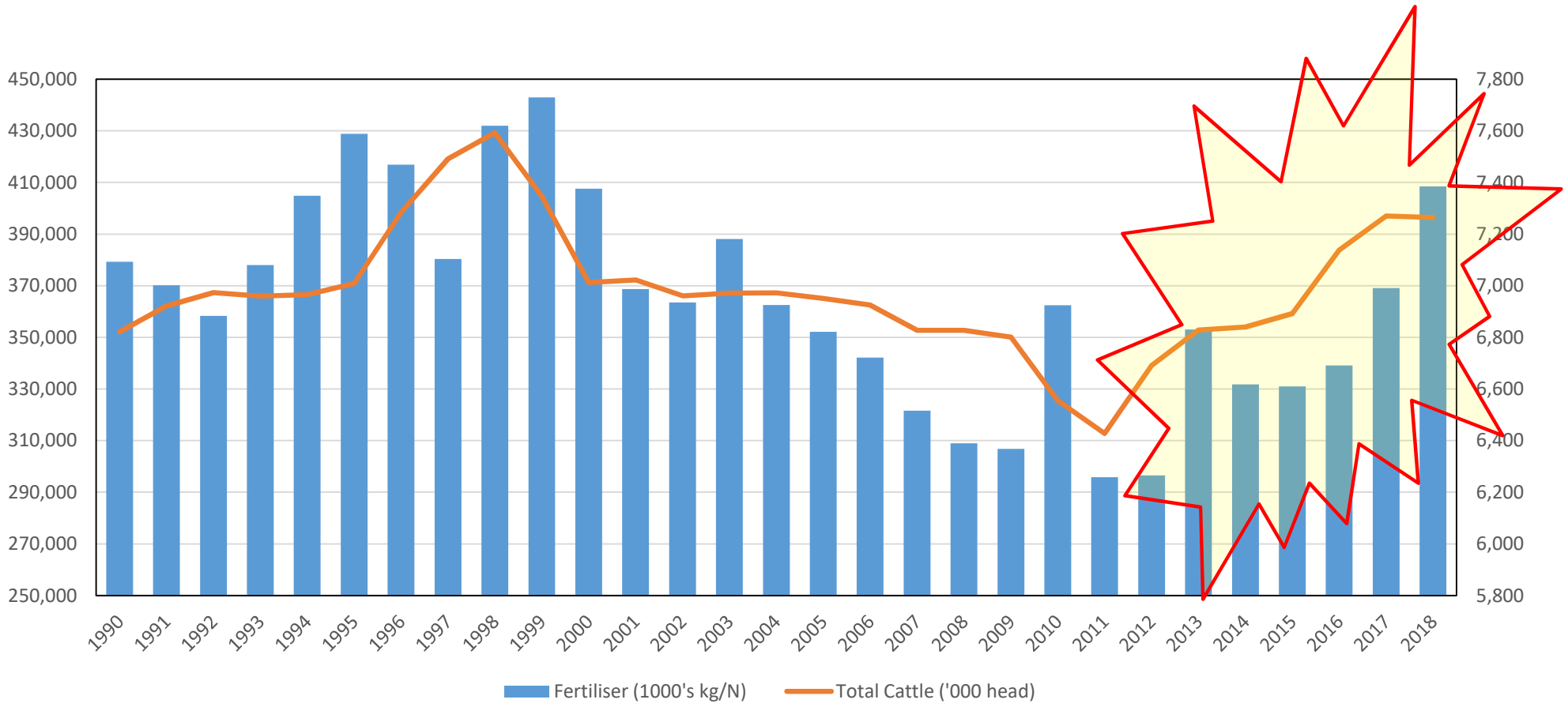
- Agricultural CH_4 = 93% of national CH_4
  - National Cattle herd = 90%
  - Dairy cows = 33% of cattle total
- Agricultural N_2O = 93% of national N_2O
  - N fertilizer = 45% of ag contribution
  - Grazing (urine & dung) = 25%
  - Landspreading = 14%
  - Management cultivation of organic soils = 13%
- Agriculture ~ one third of the key categories

Drivers in Agriculture
Livestock population (relative trend)



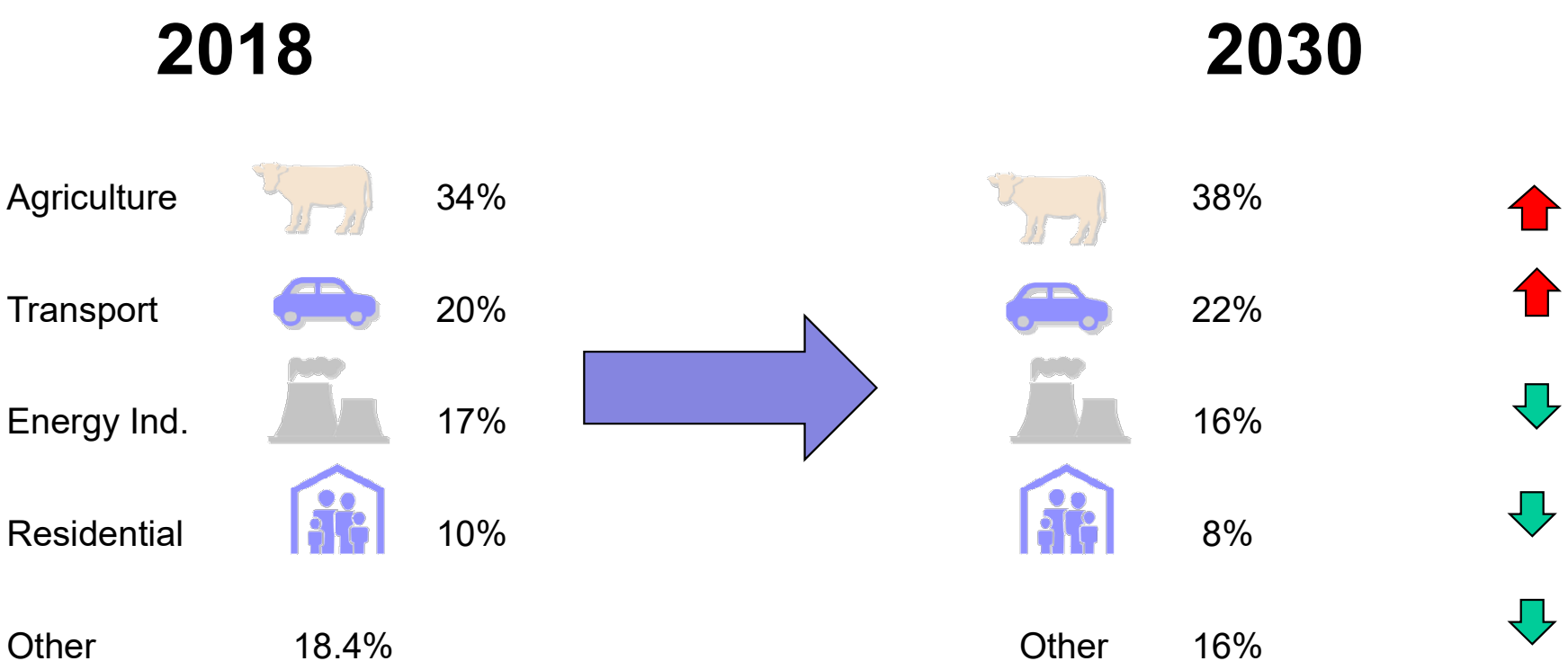
Dairy cow population and Fertilizer N increase in recent years

Fertilizer use and herd size



26% increase in dairy cow numbers between 2012-17, 27% to 2018
24% increase in fertilizer N use since 2012-17, 37% to 2018

Share of GHG emissions 2018 and 2030



Actions required

- Significant uptake of abatement options needed at farm level required
  - Climate Action Plan: 16.5-18.5 Mt CO_2 eq reduction in the period 2021-2030
  - Teagasc MACC, AgClimatise, CAP Reform
- Ability to capture nationally representative data
  - How can we capture abatement options in national inventories
- In breach of NECD – NH_3
  - 2010 NECD to 2020, FW2025 in the context of 2020 & 2030 targets
  - 2020 (1%) vs 2030 (5%) reduction on 2005 emission level
- LULUCF Regulations & Effort Sharing Regulation
  - Accounting for land use actions

http://www.epa.ie/ghg