

PROJECTIONS - AGRICULTURE



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Overview

- **Current inventory methodology**
- **Inventory improvement plan**
- **Activity data projections**
- **NH₃ and GHG emission projections**
- **Conclusions**

Current methodology

Ammonia

- Spreadsheet-based model
- N flow, mass balance
- detailed: specific sources and EF
- DA-level resolution

GHG

- Spreadsheet-based model
- IPCC methodology (Tier 1 and 2)
- less detailed than NH₃ model
- DA-level resolution

Inventory improvement plan

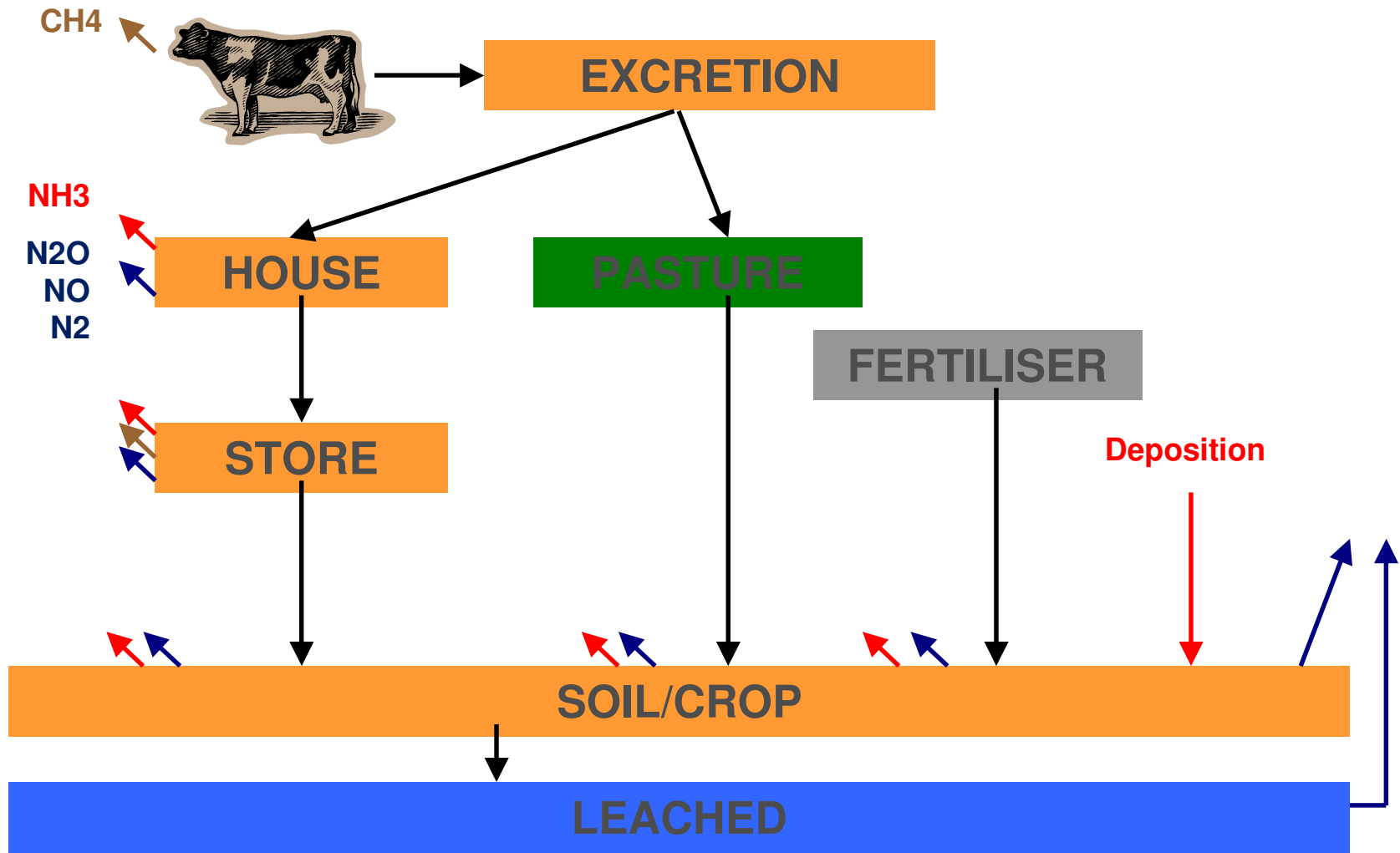
Defra Project AC0112

- **Model structure**
 - combined NH₃ and GHG model
 - move to Tier 2 GHG methodology for all cattle
 - inclusion of mitigation options

- **Country-specific emission factors**

- **Improved farm management practice data (at DA-level)**

Improved model structure

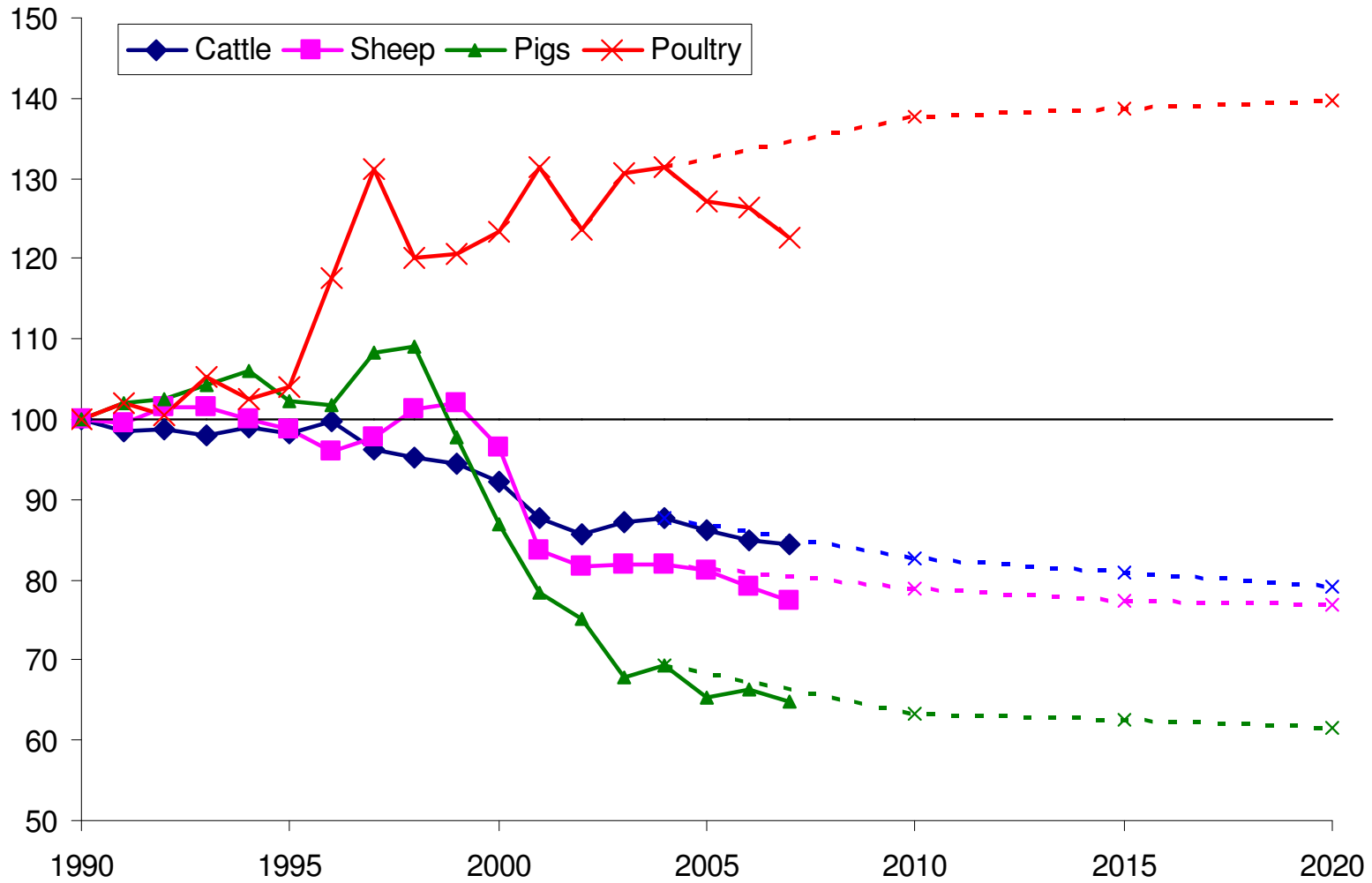


Activity data projections

- ‘Business as Usual 3’ project (SFF0601)
 - livestock numbers to 2025 (DA-level)
 - fertiliser use to 2025 (DA-level)
- N excretion by livestock category (WT0715NVZ)
- IPPC legislation – assumed implementation on large pig & poultry farms



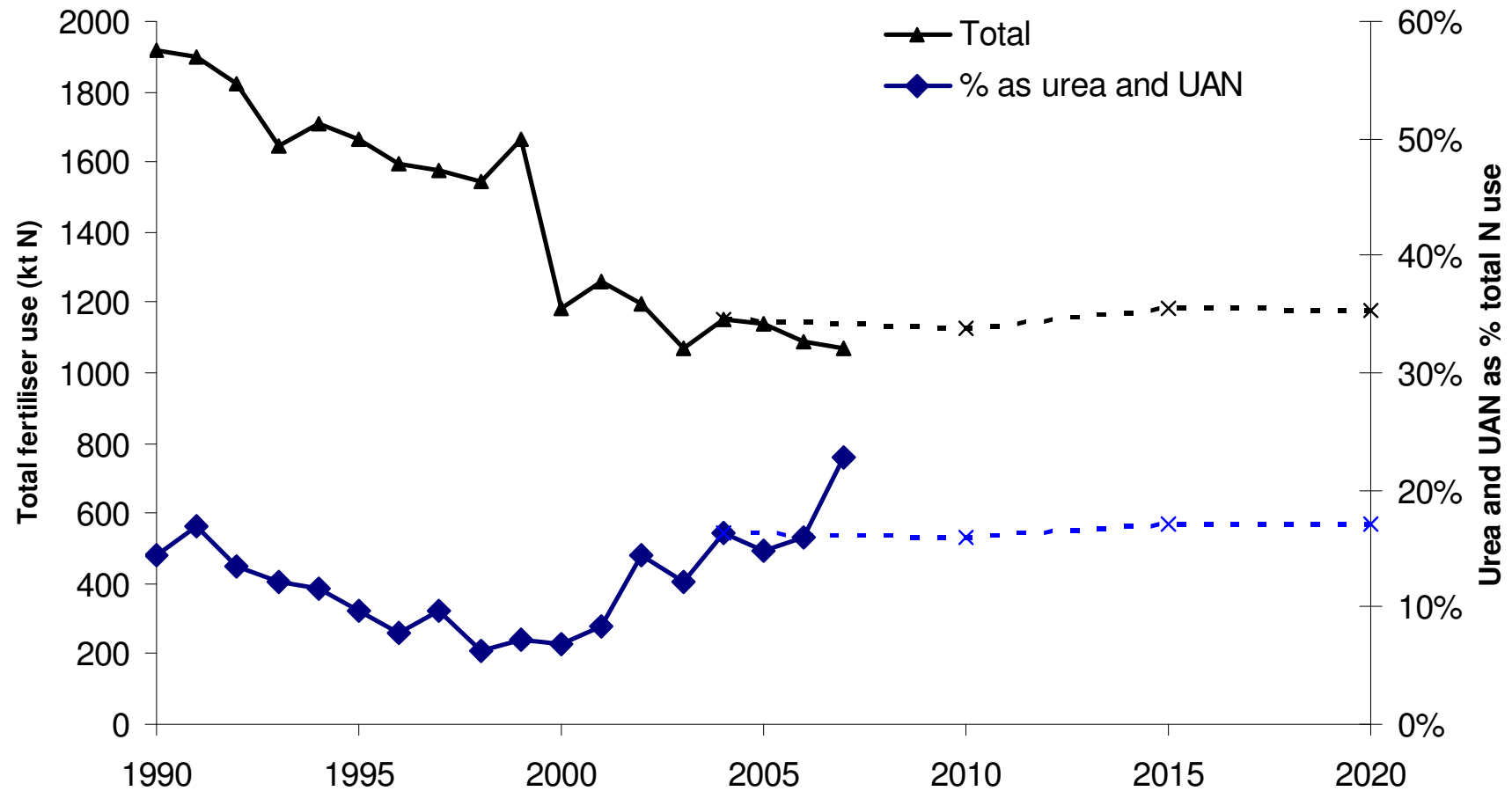
Projected livestock numbers



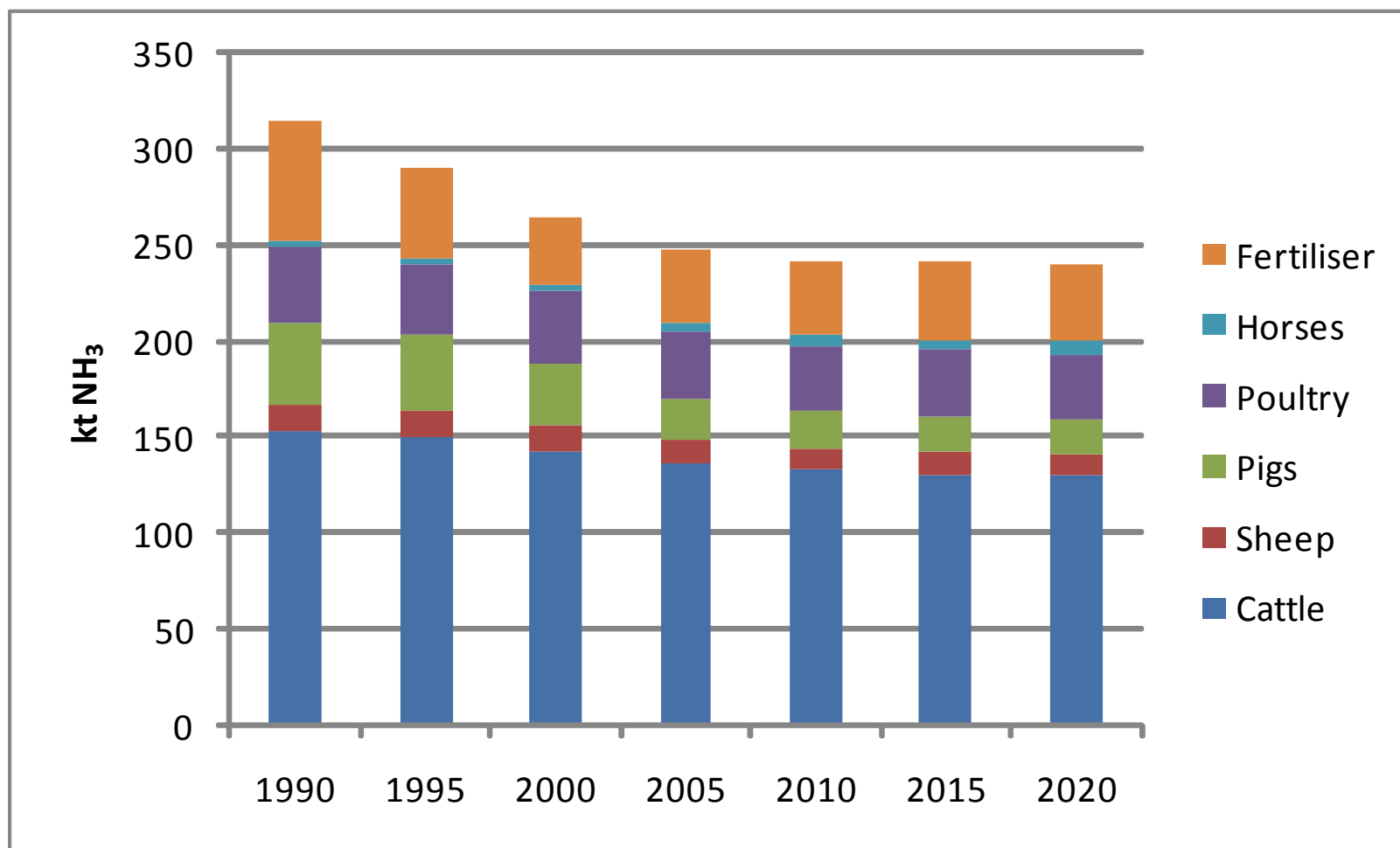
Projected N excretion

- Dairy cattle – increasing, with increasing milk yield and liveweight
- Beef cattle – constant, but needs reviewing with liveweight trend
- Pigs and poultry – decreasing, with improvements in feed utilisation
- Other livestock - constant

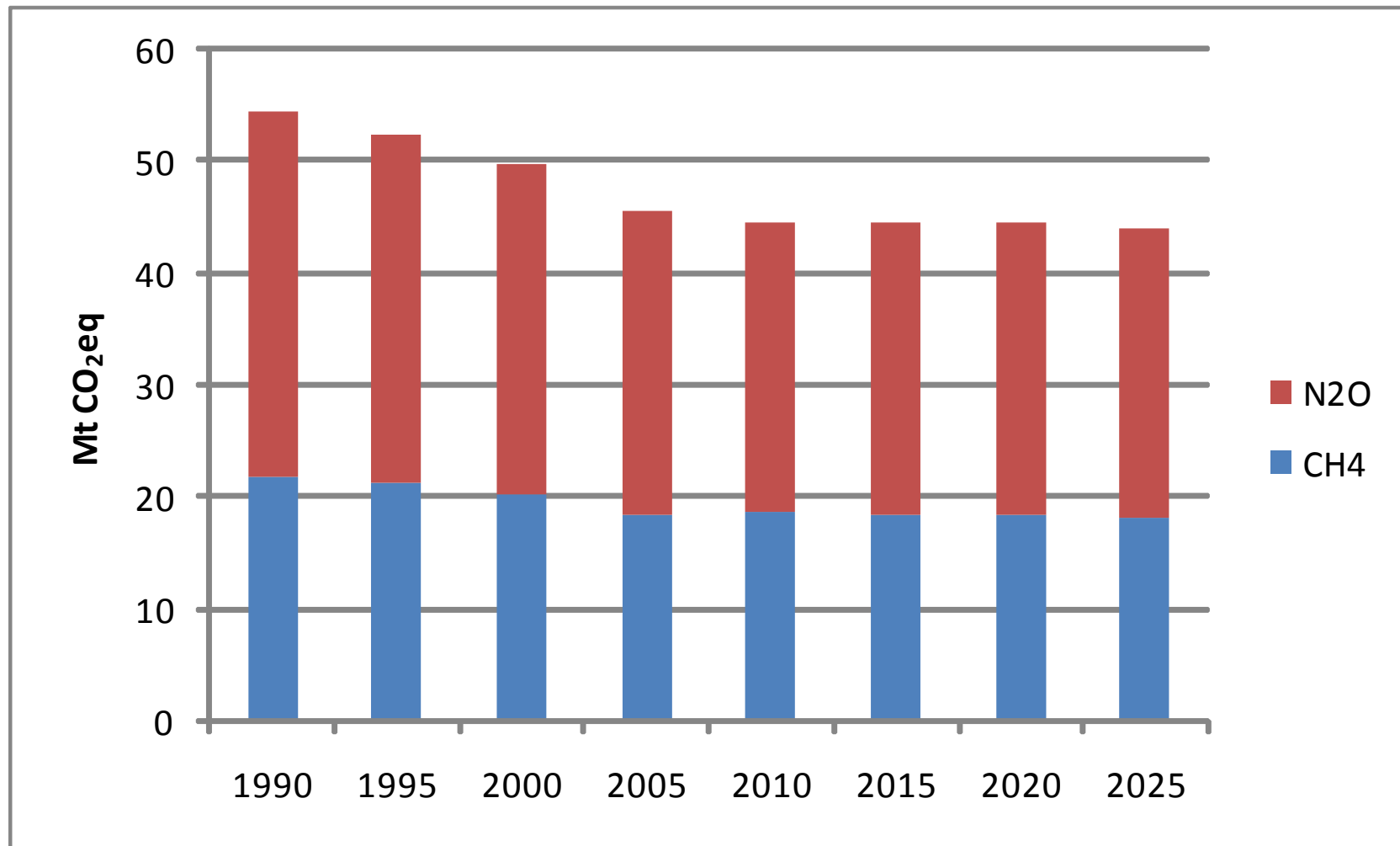
Projected fertiliser use



NH₃ emission projections



GHG emission projections



Uncertainties

- **Market prices (products and inputs)**
- **Bioenergy crops**
- **Food security issues**
- **Disease/extreme weather**
- **Consumer preference**
- **EU/other legislative drivers**

Conclusions

- **Significant declines in emissions seen since 1990**
- **Further significant declines not projected for business as usual**
- **Interventions likely to be required to meet internationally agreed targets**
- **Essential that inventory can act as both a reporting tool and projection/scenario testing tool**

Questions?

