

The Greenhouse Gas Inventory (GHGI)

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Overview

- **Emissions trends in the 1990-2006 GHGI**

- Progress towards the Kyoto Protocol target
- Trends in key sectors

- **Work this year**

- Method improvements
- One-to-one meetings
- Reviews
- Mapping

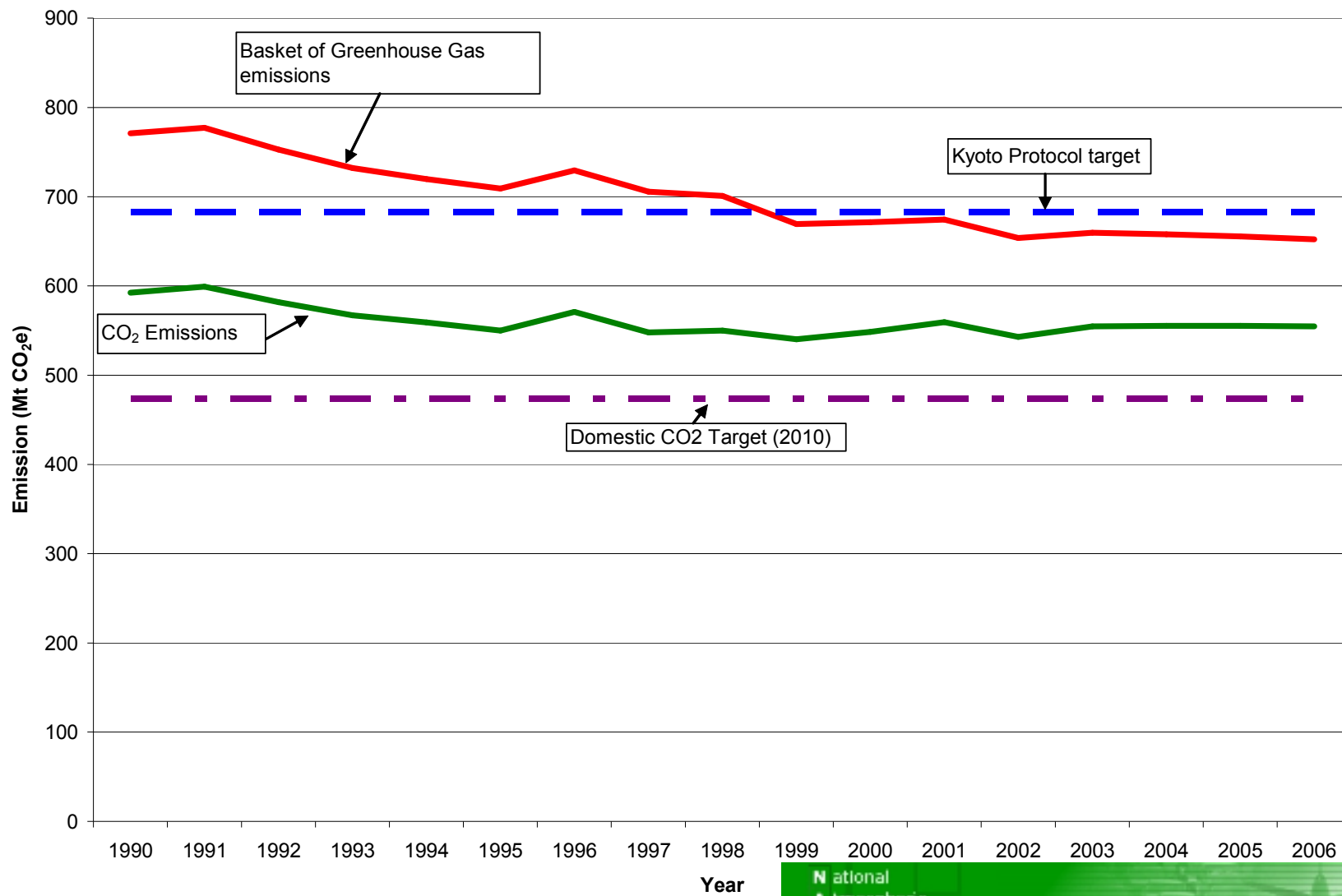
- **Improvements**

- F-gas update
- Overseas Territories work
- Landfill methane update

- **What Next?**



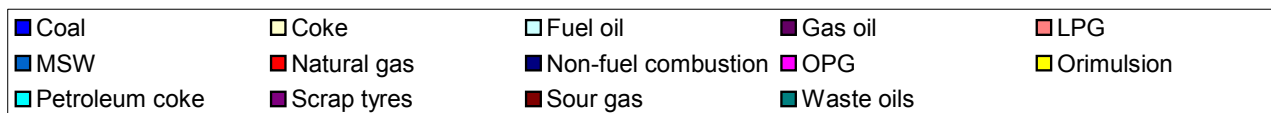
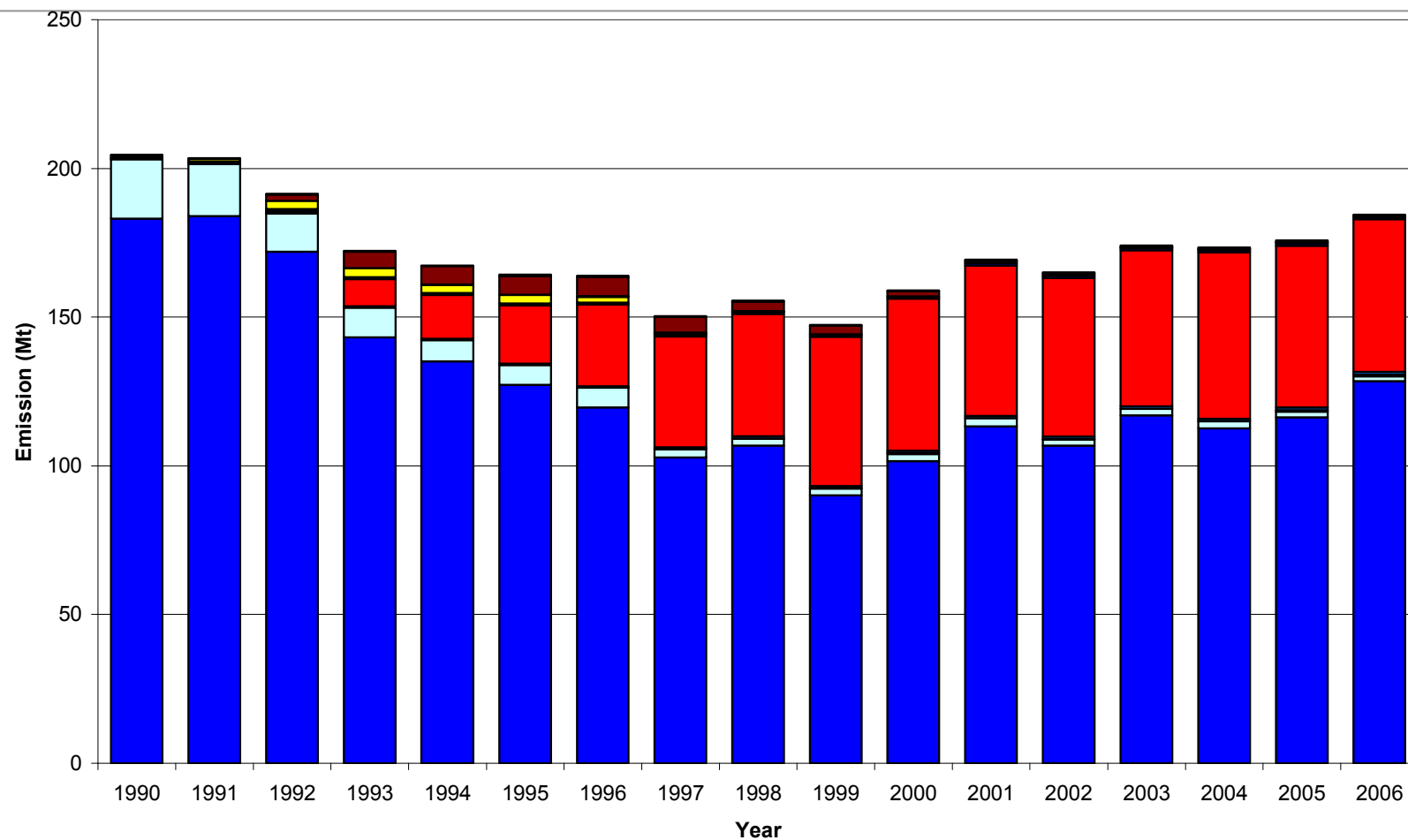
Progress towards targets



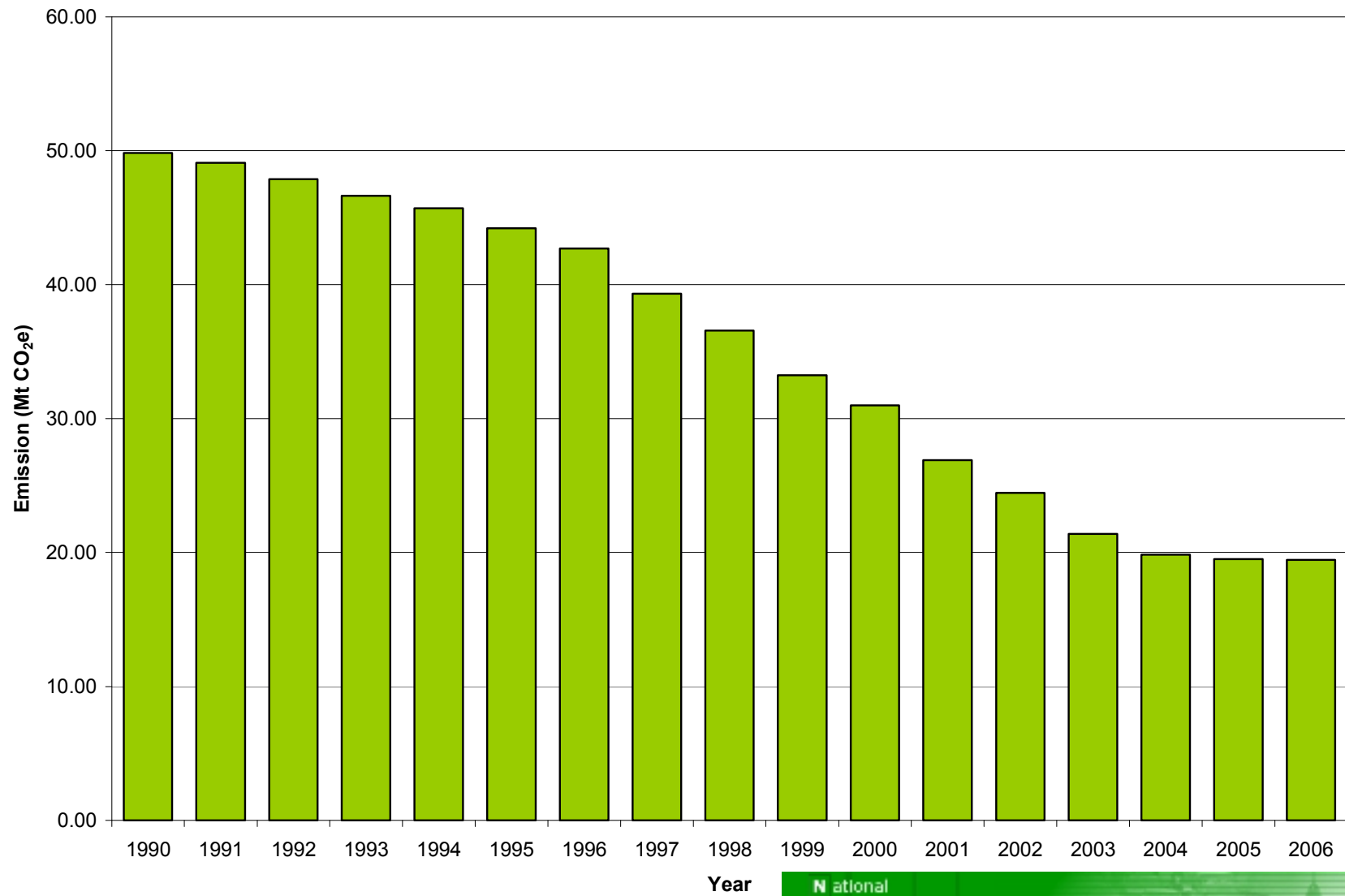
Key Statistics

- Net emissions of CO₂ decreased **6.4%** from 1990 to 2006
- Against the fixed base year, emissions of the basket of GHGs are down **16%**

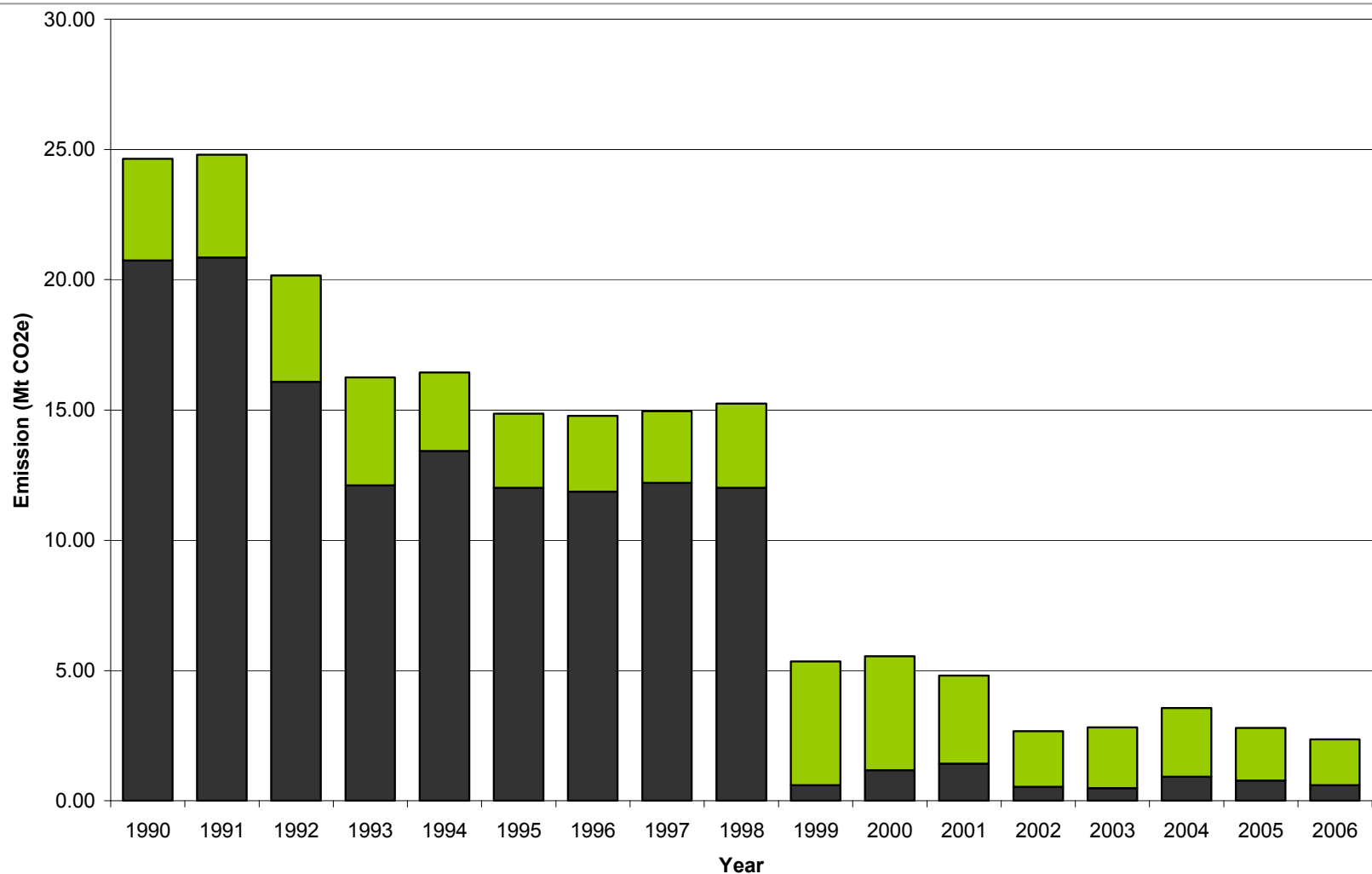
Key Sector Trends – CO₂ from power generation



Key Sector Trends – CH₄ from landfills



Key Sector Trends – N₂O from Industrial Processes



■ Adipic acid production ■ Nitric acid production

National
Atmospheric
Emissions
Inventory

Work this year – methodological improvements

- **Simple updates**
 - Revision of the methodology/estimates for consumption of petroleum coke
 - Revision/update of the consumption data for gas oil
 - Incorporation of new estimates for burning oil consumed by power stations
 - Revision to carbon emission factor for petroleum coke burnt at power stations
 - Revision to methane emission factors for petroleum coke burnt at refineries and cement works
 - Revision to carbon emission factor for scrap tyres burnt at cement works
- **Overall - Little change to UK totals**

Work this year– One-to-One meetings

Why are these important?

- Maintain good working relationships with key data providers
- Allow for discussion of any issues arising from inventory compilation
- Provide an opportunity to review assumptions and estimates with industry experts
- Collect significant background information which helps with expert judgements

Who have we met with this year?

- BERR
- UK Oil & Gas
- NG & EA
- Corus
- BCA
- UKPIA (Tuesday 30th)

Work this year– French/UK Bilateral Agriculture review (1)

Purpose

- To share good practice between UK-France
- Develop collaborative links
- QA-Peer Review (Assessing the adequacy of the French/UK Inventory (any important things missing)?
 - identify future actions (Collaboration)
- General UNFCCC review training and awareness

Work this year– French/UK Bilateral Agriculture review (2)

Conclusions

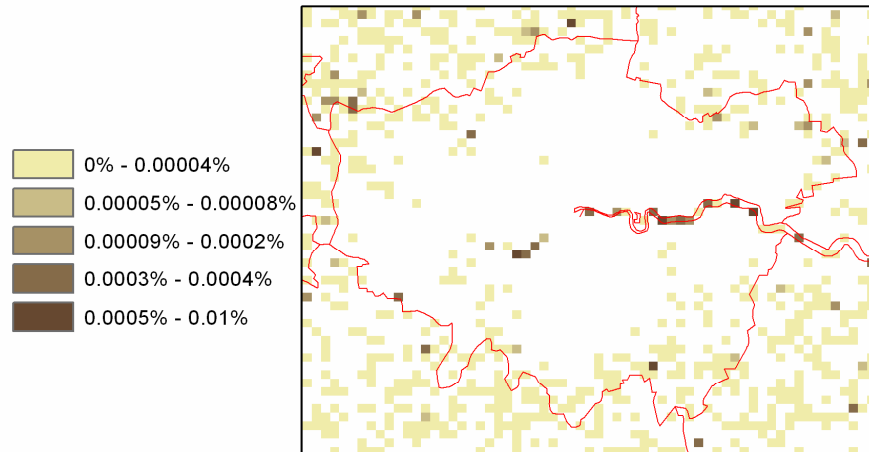
- Improve the integration between the calculation of the GHG and air quality emission estimates
- UK to look at how the French calculate emissions based on milk yield – simpler method – can it be used in the UK?
- Joint collaboration on how to better integrate mitigation options into the inventory (e.g. Different types of management)
- Joint collaboration on development of feed related emissions

Work this year – Mapping (1)

Method improvement

- Area source fuel estimates updated using ONS IDBR datasets – greatly improving spatial distribution of fuel use and hence pollutant estimates
- Greater London Area:
 - LAEI oil consumption numbers used to model oil in the smoke controlled areas
 - Improved spatial distribution as previously it was assumed there was no oil consumption inside smoke control areas (blank values)
 - Oil split into fuel oil and gas oil
- Good example of using local/regional inventories to develop the NAEI's estimates

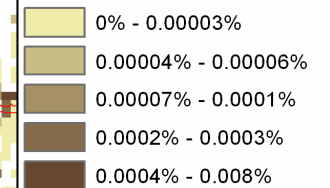
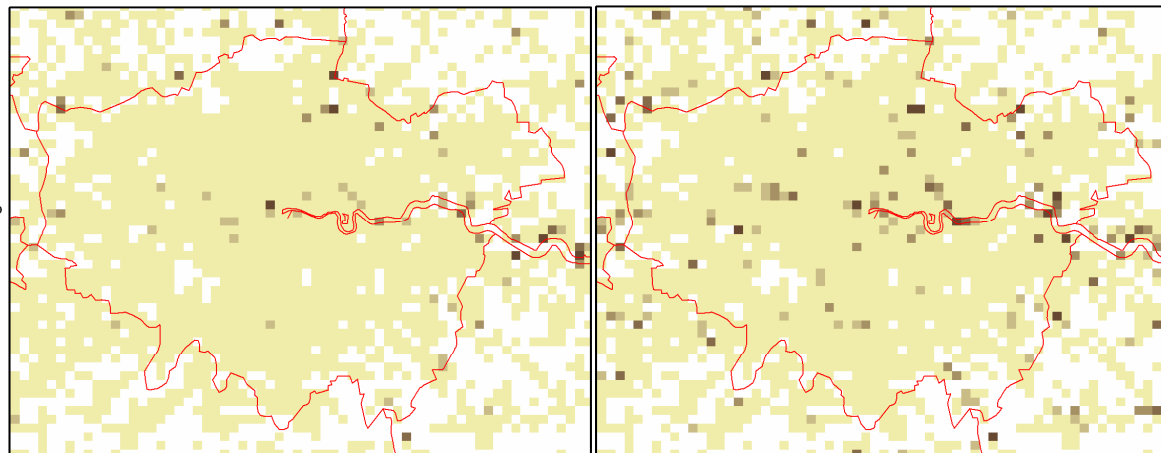
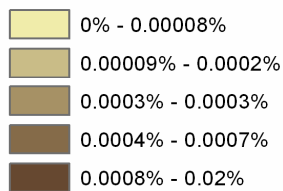
Work this year – Mapping (2)



Other Industry Oil Distribution 2005

Other Industry Fuel Oil Distribution 2006

Other Industry Gas Oil Distribution 2006



Work this year – Mapping (3)

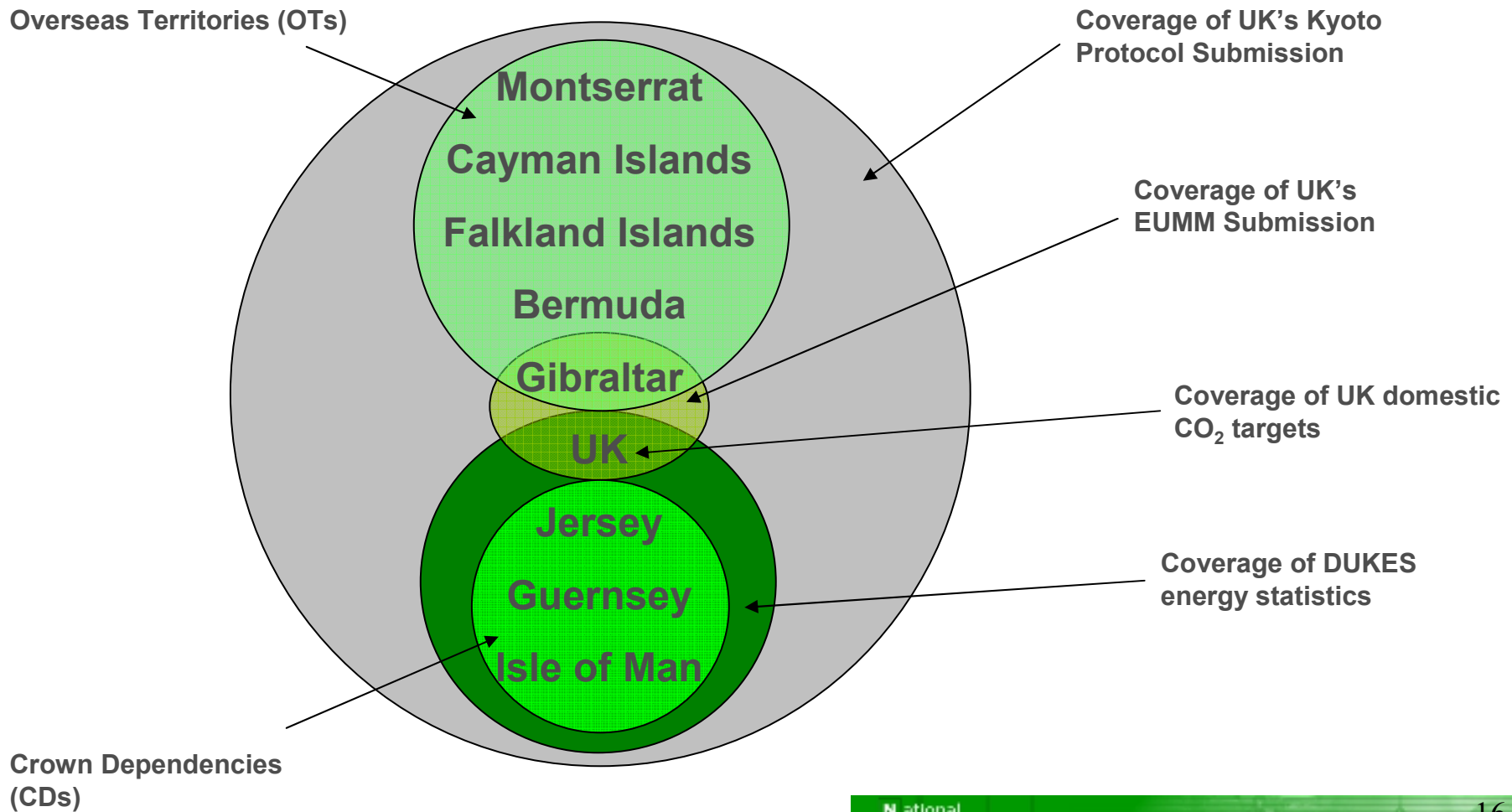
End user CO₂

- Local CO₂ dataset for 2005, 2006 published 2 weeks ago
- Significant improvements to methods this year (small industrial emissions and improvements in QA procedures)
- Start of a consistent time series of data that will underpin LA's monitoring of carbon emissions through the new Local Government Performance Framework

Work this year – Company Reporting Guidelines

- Updated carbon factors for Defra's GHG conversion factors for company reporting – Published June 2008
- Allow for companies and individuals to calculate GHG emissions from a range of activities (e.g. Energy, Transport)
- Consistent with latest GHGI
- Lots of advice to government, industry, public and other stakeholders

Planned Improvements – OTs and CDs



Planned Improvements – OTs and CDs

Current Structure

- UK fuel consumption from DUKES
- CD fuel consumption included in DUKES totals
- CD other sources are additional to UK data. Emissions are calculated and a total for the CDs is entered into the database
- OT fuel use and other sources are additional to UK sources. A total emission from all OTs for each source is entered into the database

Improvements

- UK fuel consumption totals adjusted to be UK Only
- Each CD fuel estimates to be entered into the database separately
- Other CD sources to be entered separately for each CD
- All OT sources to be entered separately by OT, Source and activity type

Planned Improvements – OTs and CDs

This will allow...

- Improved transparency in the NAEI database
- Full CRF submissions, covering the correct geographical coverage, for the EUMM
- Easier reporting of progress towards the UK's domestic CO₂ targets
- More efficiency in answering queries regarding emissions from individual OTs or CDs
- Improved reporting of emissions from individual fuels
- More consistent geographical coverage of the DA inventories

Planned Improvements – F gas emissions

- Projected and historic emissions of F gases are being updated as part of the Non-CO₂ Greenhouse Gas Emissions project
- This will ensure that the UK inventory accurately reflects the effect of recent legislation
- It will also allow fully speciated emissions to be reported

Planned Improvements – Landfill methane

Purpose

- Evaluate and assess the current landfill methane model
- Undertake improvements and deliver an updated model and user guide

Conclusions

- Upgraded model offers better transparency and ease of use
- Improved flexibility in terms of scenario analysis
- Allows the use of the updated modelling approach for estimating methane generation described in the 2006 IPCC Guidelines
- Revised estimates will be included in the next inventory cycle

What next?

- Next inventory cycle just started – 1990-2007 emissions
- New EUMM reporting
- Updates to the NAEI database
- IPCC 2006 Guidelines review and workshop

Finally....

- Thanks to Tony Bush, Ioannis Tsagatakis, Justin Goodwin, Katie King, Tim Murrells, Neil Passant, Glen Thistlethwaite
- Any Questions?.....