

CCGA: Emissions estimates

- Current status of uncertainty analysis of emission estimates.
- Differences between models & measurement: where and why.
- Uncertainty due to activity data or abatement efficiency.
- Agreement on key abatement methods.
- Potential for soft approaches.
- Forward look for mitigation measures.

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Current status of uncertainty analysis of emission estimates.

- Few countries currently consider uncertainty.
 - $\pm 20\%$ for UK
- Number increasing rapidly
 - CLRTAP demands.
- Method available (IPCC)
- Tier 3 – specialised software available.

Uncertainty due to activity data or abatement efficiency

- More sensitivity to activity data than emission factors.
 - Cattle diet, especially grass-fed.
 - Manure management.
 - EUROSTAT revising their census schemes.
- Confidence in abatement efficiencies.
 - Mainly from N and W Europe.
- Need more appropriate emission factors for S and E. Europe and for emerging technologies

Remaining discrepancies between atmospheric measurements and models

- Subject dealt with in detail by WG2

Agreement on key abatement methods

- Yes!
 - UNECE Guidance document.
 - Provides general guidance - has to be adapted to specific countries/regions.
- Impact on other emissions important (e.g. nitrate leaching, nitrous oxide)
 - Very site specific.
 - Beyond scope of Guidance document.
 - Systems approach.

Potential for 'soft' approaches

- 'Soft' approaches
 - e.g. nighttime field applications
- Variable efficiency
 - Only suitable if limited demand for abatement
- May be impractical
 - Time constraints on farmers.
- Conflict with odour problem?
- Beware of impact on other emissions.

Forward look - Mitigation options

- Emerging technologies
 - Woodchip corrals instead of animal housing.
 - Manure incineration.
 - Air scrubbers.
 - Slurry acidification (only Denmark)
 - Continued work on feeding practices (especially for ruminants)
- Past experience - costs and efficiencies over-estimated.

Forward look - Mitigation options

- Parallel developments:
 - Structural development (fewer, larger farms).
 - Specialised industry for manure application.
 - Urea fertiliser – more in future?
 - Animal health - sand as bedding.
 - Welfare - more straw-based system.
 - Phosphate surplus - slurry separation.

Assessing emerging technologies

- Costing emerging technologies difficult.
- Subgroup on costs within Expert Group on Ammonia Abatement.
- Need for co-ordination with Expert Group on Techno-Economic Issues

Ag & Nature Panel/ Expert Group on Ammonia Abatement

- Meeting in St Petersburg, Russia, autumn 2007 cancelled.
- Replaced by meeting in Braunschweig, Germany, April 25-27, 2007.
- Open to all (but you pay your own costs).