

Update on benefits analysis, CBA and NEBEI

TFIAM 39, February 2011

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Activities

- Research activities
 - Health
 - Ecosystems
- Updated CBA of EU NEC Directive positions
- Potential for CBA of Gothenburg revision
- Guidance document on Economic Instruments...
- Future of NEBEI

Research activities

- Review of health functions under HEIMTSA, INTARESE, NEC-CBA
- Combining benefits analysis with ecosystem services approach under Defra contract, possible DG Research contract

Health impact functions

- Mortality
 - Updated country specific functions
 - Inclusion of chronic ozone exposure
 - Possible move to analysis based on cause specific mortality rather than all-cause mortality
- Chronic bronchitis
 - Integration of EU research (SAPALDIA study)
- Possibility to discuss with TFH

Ecosystems

The background of the slide is a faded, light blue-tinted photograph of a rural landscape. In the middle ground, there is a large, multi-story house with a complex roofline featuring several gables and chimneys. The house is partially obscured by a white fence in the foreground. To the right of the house, there are several smaller structures, possibly sheds or outbuildings. The background is filled with trees, some of which appear to be evergreens. The overall scene is misty or overcast, giving it a soft, ethereal quality.

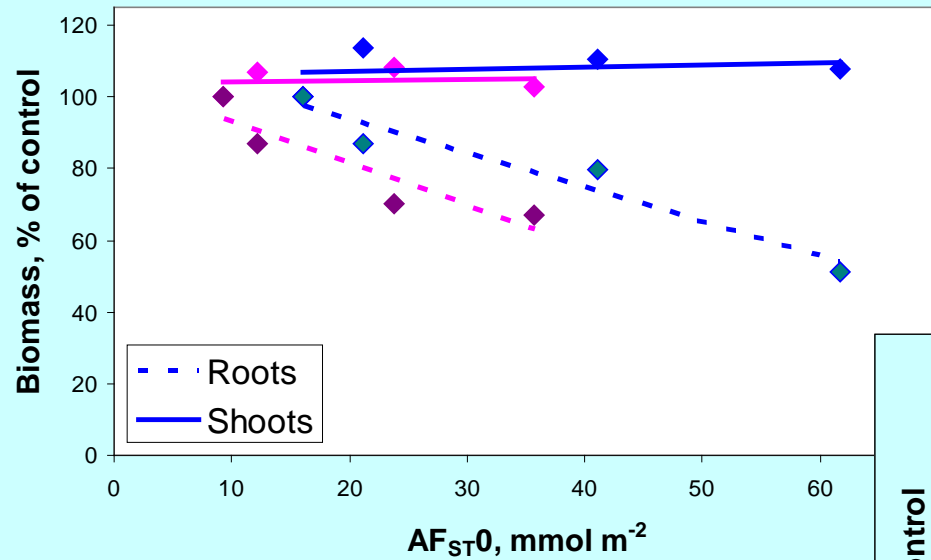
- Defra study on ecosystem services and air pollution impacts
 - Provisioning
 - Supporting
 - Regulating
 - Cultural

Defra ecosystem services study

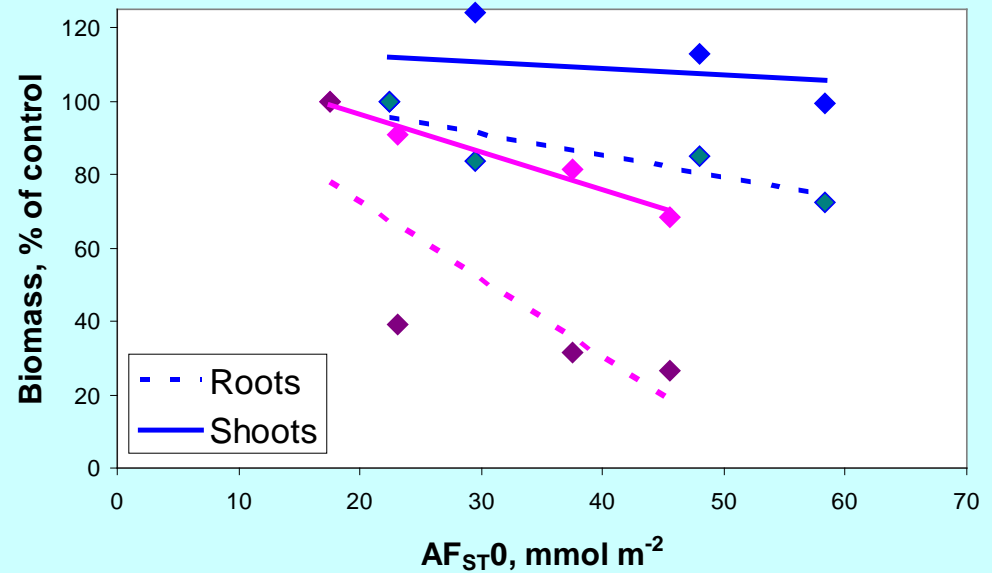
- Ecosystem services under consideration
 - Meat and dairy production
 - Timber production
 - Carbon sequestration
 - Emissions of non-CO₂ GHGs
 - Clean water
 - Recreational fishing
 - Appreciation of biodiversity

Defra ecosystem services study

Dactylis

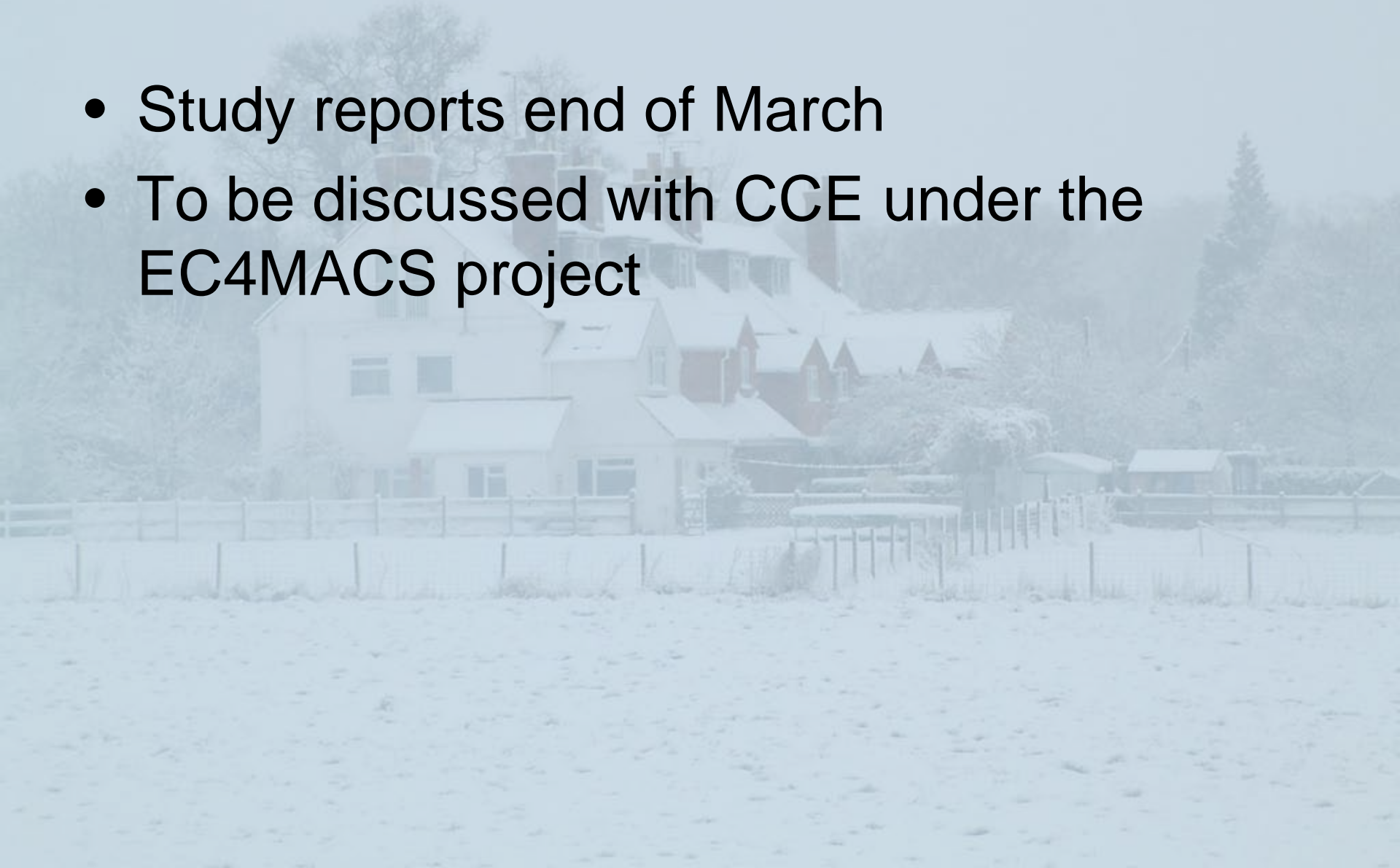


Ranunculus



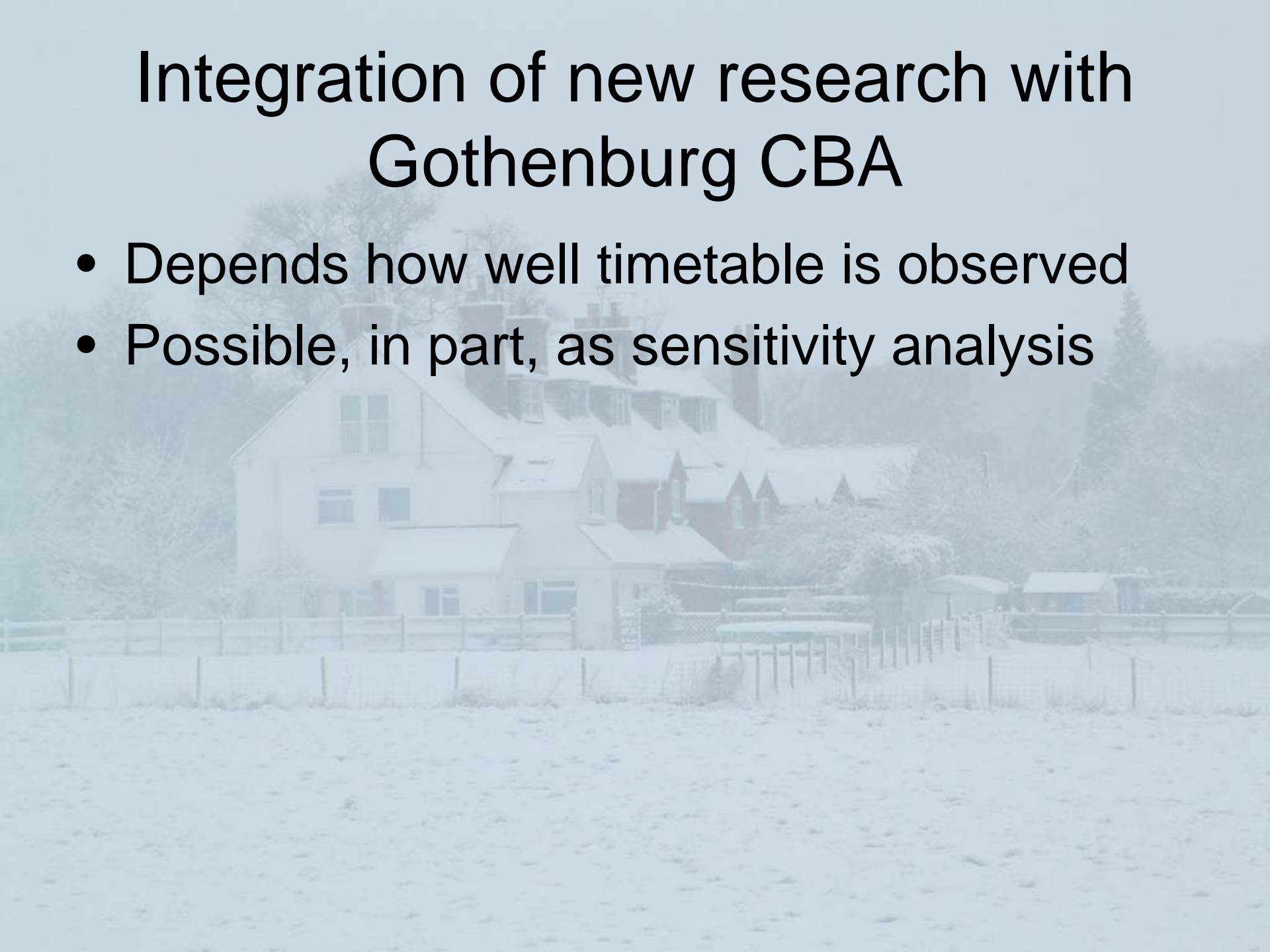
Defra ecosystem services study

- Study reports end of March
- To be discussed with CCE under the EC4MACS project



Integration of new research with Gothenburg CBA

- Depends how well timetable is observed
- Possible, in part, as sensitivity analysis



Further CBA of the NEC Directive

- Analysis completed in 2010, taking updated emission scenarios compared to CAFE
- Focused on impacts to human health
 - Following figures do not include benefits to:
 - Ecosystems
 - Building materials
 - Agriculture, forestry

Annual benefits of moving beyond baseline to TSAP target for the EU

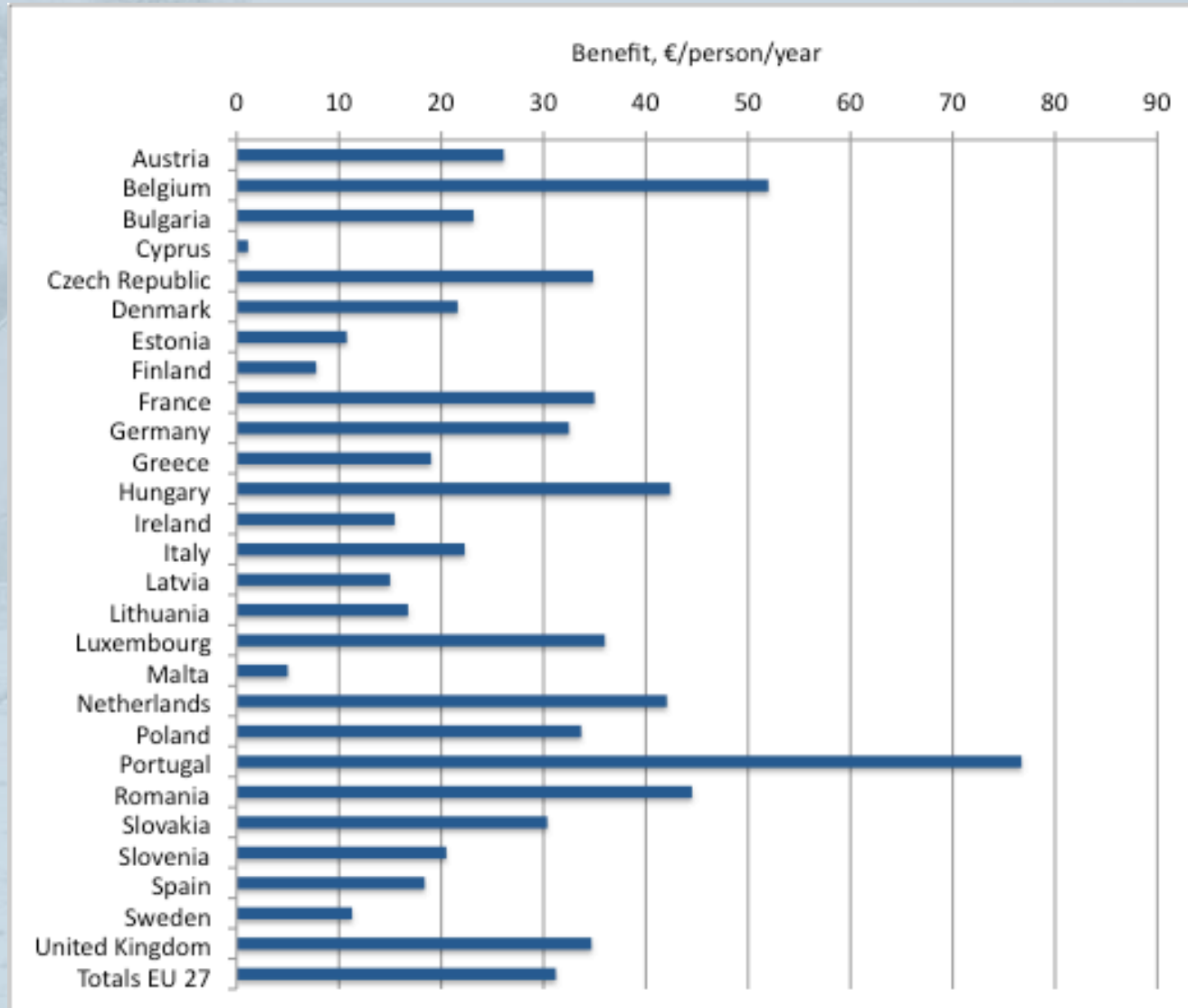
End point	Unit	Poll	TSAP
Acute Mortality	Deaths	O ₃	300
Respiratory Hospital Admissions	Cases	O ₃	300
Minor Restricted Activity Days	Days	O ₃	710,000
Respiratory medication use	Days	O ₃	140,000
Chronic Mortality, adults	LYL	PM	200,000
Infant Mortality	Deaths	PM	32
Chronic Bronchitis	Cases	PM	9,900
Hospital Admissions (resp, cardio)	Cases	PM	5,500
Restricted Activity Days (RADs)	Days	PM	17,000,000
Respiratory medication use	Days	PM	1,800,000
LRS symptom days	Days	PM	23,000,000

Restricted activity days

- Could strip out work days lost for comparison with IIASA estimates of costs expressed as equivalent in working time

Benefit, €/person/year

Mortality valued using NEWEXT median VOLY



EU27 headline results

€million/year

Annual benefit	Annual cost	Annual net benefit	Benefit : cost ratio
Baseline to TSAP targets			
16,000	1,300	14,000	12.0
Quasi-marginal analysis: TSAP to EP targets			
6,500	1,200	5,300	5.4

CBA of Gothenburg Revision

- Likely to show greater excess of benefit over cost (given N cost reductions), but obviously depends on ambition level
- May be covered under an existing contract with the EC (need to discuss)
- Timescales for analysis – as input to discussions or as a final check on outputs?

Guidance document on Economic Instruments to reduce nitrogen oxides, sulphur, VOCs and ammonia

- Comments received (thank you!) from:
 - Simone Schucht
 - Andrew Kelly
 - Marte Sollie



Guidance document on Economic Instruments to reduce nitrogen oxides, sulphur, VOCs and ammonia

- Agreement that it provides a useful summary
- Some specific comments, e.g.:
 - Need to add PM, black carbon, CO (perhaps ‘air pollution’ more generally?)
 - Role of tradable permits vs emissions charging for mobile sources
 - Link to www.policymeasures.com?
 - ...

Guidance document on Economic Instruments to reduce nitrogen oxides, sulphur, VOCs and ammonia

- Finalisation:
 - Integrate comments received so far
 - Process for adoption?
 - Agree by email amongst TFIAM/NEBEI members or does it need agreement at a meeting?

Future of NEBEI

Network of Experts on Benefits and Economic Instruments

- Merge into TFIAM?
 - Reasons for
 - Benefits analysis follows directly from IAM
 - Understanding of IAM uncertainty important to understanding confidence in CBA outputs
 - Non-IAM activities of several TFIAM members
 - Efficiency (?)
 - Reasons against
 - TFIAM focus on IAMs that do not yet include benefits analysis beyond inclusion of broad effect indicators
 - Different levels of impact assessment for IAM and CBA
 - Limited TFIAM debate on economic instruments (?)
 - TFIAM is already a large group
 - Non-TFIAM relevance of NEBEI (e.g. REACH)

Future of NEBEI

- Options
 - Absorb NEBEI into TFIAM
 - Retain NEBEI as a separate entity
 - Continue to develop links with TFIAM and attend TFIAM meetings, but...
 - Much enhanced web presence
 - Link to REACH Socio-Economic Assessment Committee, EAERE...
 - More frequent 'occasional' separate meetings e.g. via EAERE annual meeting