

# **42<sup>nd</sup> TFIAM-meeting**

**22-23 April 2013**

**Copenhagen, Denmark**

**<http://gains.iiasa.ac.at/TFIAM>**

- Part 1: Changes in GAINS
- Part 2: New policy questions
- Part 3: Work plan
- Part 4: TFIAM/TFRN workshop  
***Green Economy***, Copenhagen,  
24-25 April

# Part 1

## **Changes in GAINS**

# Recent changes

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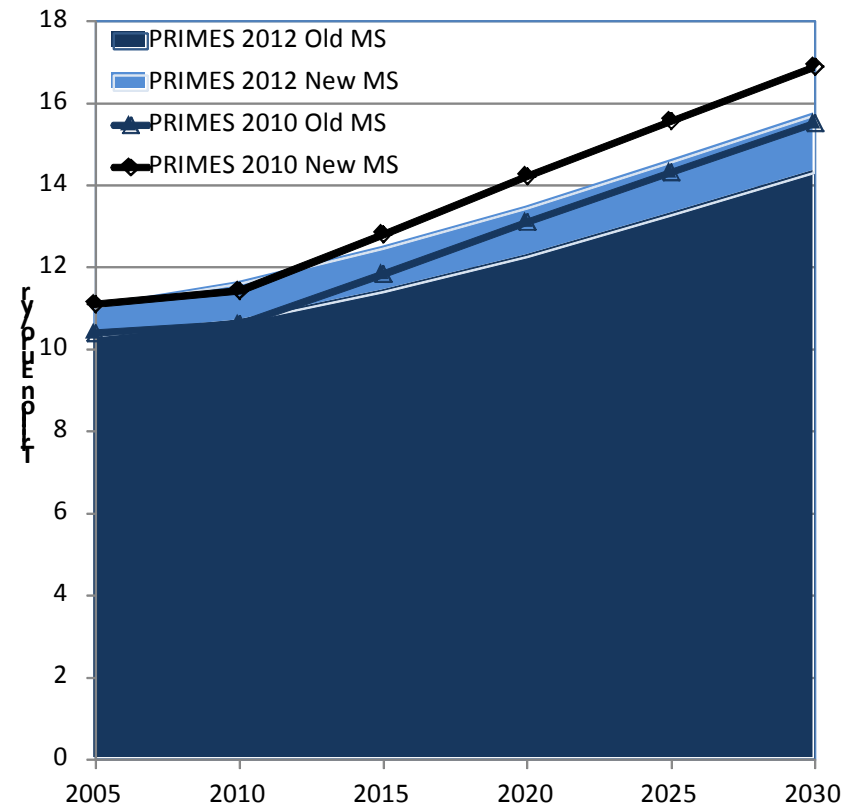


- Bilateral consultations with 15 Member States:
  - Improved emission inventories, etc.
  - Amended TSAP-2012 Baseline (based on PRIMES-2010)
- Addition of BC, Particle Numbers, Ultrafines, Mercury
- Secondary organic particles
- 28km grid → 7km grid
- Ozone flux approach
- Health impact assessment based on WHO recommendations:
  - Mortality from chronic exposure to PM<sub>2.5</sub>:
    - RR: 1.062/10µg (instead of 1.06)
    - only from anthropogenic sources, no threshold (as before)
  - Ozone:
    - Acute mortality: RR: 1.0029/10µg (instead of 1.003) - SOMO35
    - Chronic exposure as sensitivity case for benefits assessment

# Draft TSAP-2013 Baseline

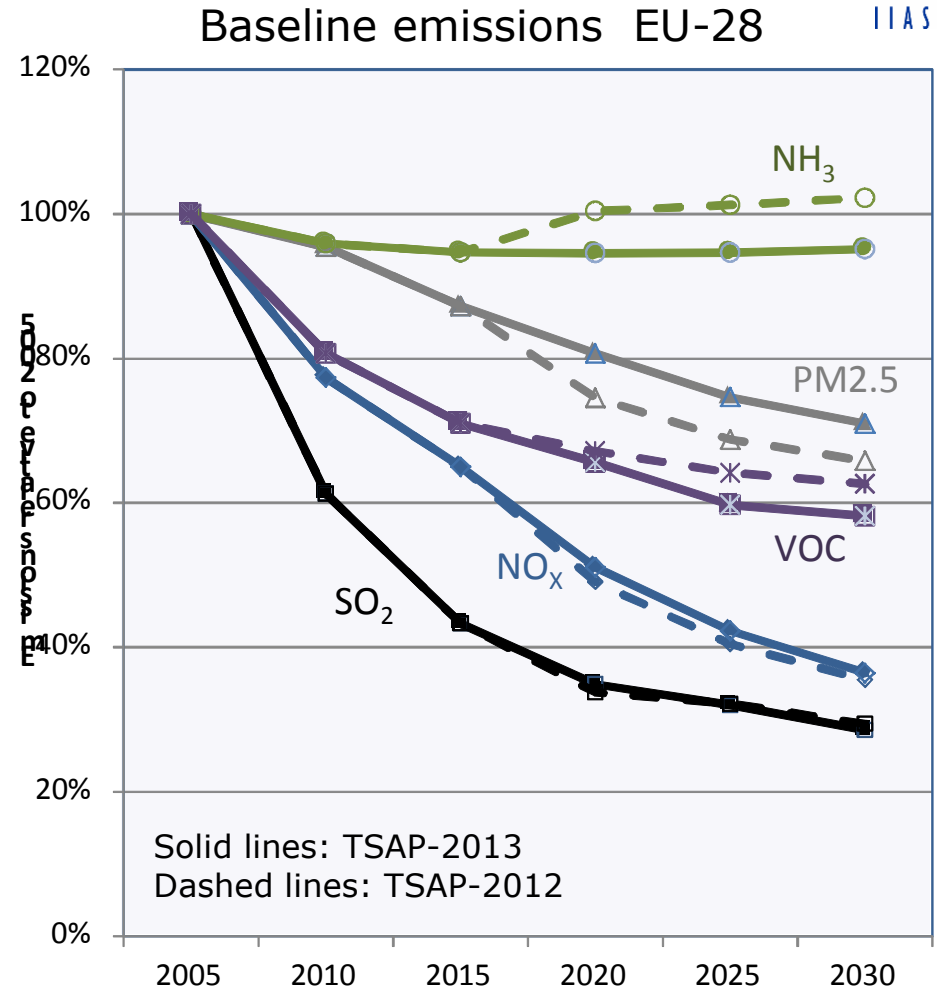
## GDP projection EU-28

- Draft PRIMES-2012 Reference scenario, consulted with MS (DG-ENER/CLIMA)
- Strong economic growth, although GDP in 2030 7.5% lower than in PRIMES-2010
- Assumes adopted EU energy, transport and climate policies
- Euro-6 for diesel LDV:  
310 mg NO<sub>x</sub>/km 2014-2017,  
120 mg NO<sub>x</sub>/km 2018-



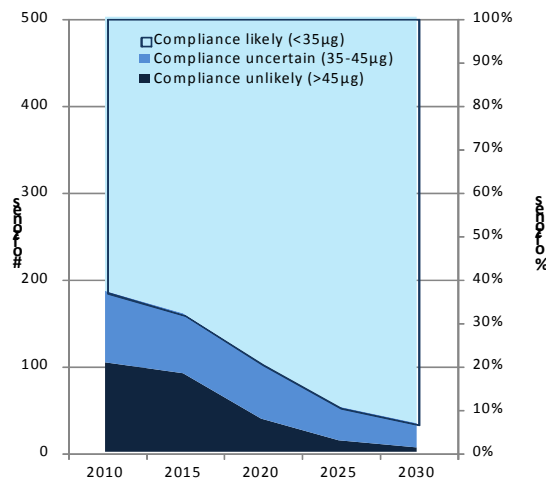
# Baseline emissions

- SO<sub>2</sub>: Stabilization at -70% after 2020
- NO<sub>x</sub>: continuous decline, -60% in 2030
- VOC: -40% in 2030
- PM: TSAP-2013 less optimistic (-30%) than TSAP-2012, due to more renewable energy
- NH<sub>3</sub>: No rebound after 2015 in TSAP-2013



# Compliance with NO<sub>2</sub> limit values

## Compliance of 500 AQM zones

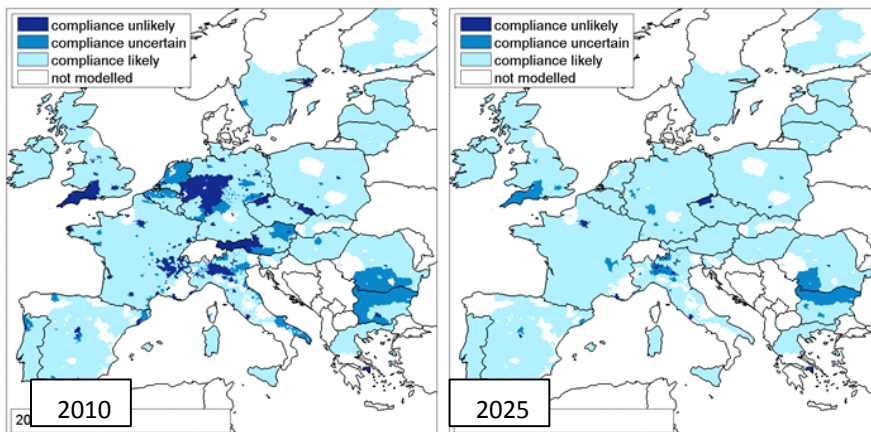


2000+ stations modelled:

- Effective Euro-6 standards should eliminate almost all strong non-compliance cases/zones

- Rate depends on assumed introduction schedule;  
TSAP baseline anticipates for 2020 still 10% of all zones in non-compliance

- Remaining problem areas should have realistic chance to achieve compliance with additional local measures



# Impacts addressed in Benefits valuation

- Health
  - Updates for PM<sub>2.5</sub> and ozone mortality
  - No updates for morbidity
- Materials
- Crops
- No valuation of ecological impacts

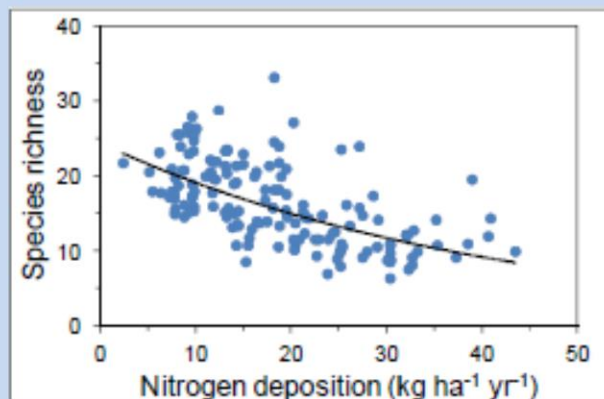


# Part 2

**New policy questions**

# Benefits for biodiversity

## Decreasing nitrogen deposition enhances plant species diversity ...

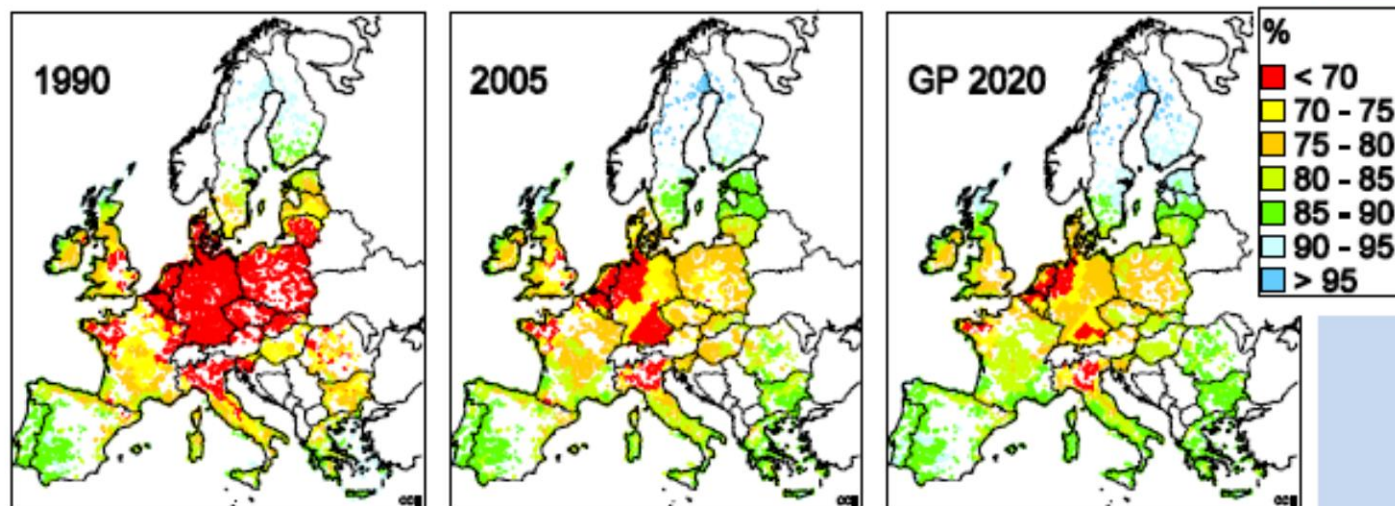


Stevens et al. 2010.  
Env. Pollution.

**Acid grasslands  
Europe**



## ... and relative species richness (%) in Natura2000 grasslands



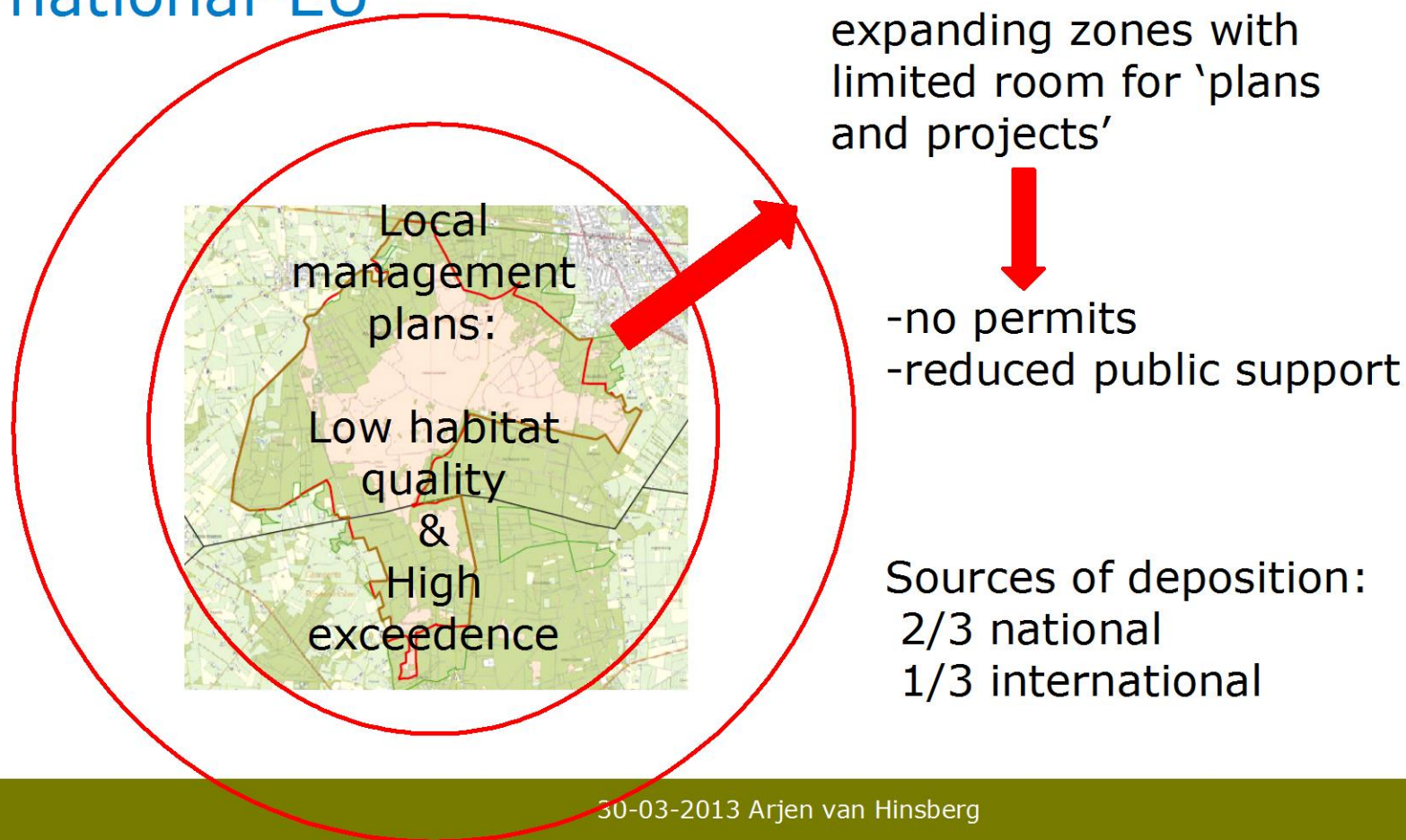
**Average species  
richness  
(E1, E2, E3):**

1990: 72%

2005: 78%

GP 2010: 81%

## Targets can only be reached by balancing actions at different spatial levels: local-national-EU



# **Policy implementation**

- Linkages with climate policy
- Increased attention to residential wood burning
- Challenges to realize emission reductions in Russia and Belarus

# Part 3

## **Workplan**

# WGSR decisions 14-9-2012

## Tasks for TFIAM/CIAM

- Address linkages between air and climate policy, consider long-term scenarios with a wider geographical scope
- Identify possible synergies with other environmental issues and energy, transport and agriculture policies
- Analyse efficient distribution of costs of local and European wide measures for reduced population exposure and the protection of nature areas
- Give technical assistance to countries in Eastern Europe, the Caucasus and Central Asia

Requested **parties** to submit data for 2030 for integrated assessment modelling and develop & report fine scale emission data (0,1x0,1) or less for use in GAINS

*Deliverables not yet prioritized → depending on available funding!*

# Workplan CIAM

- **Update & further develop GAINS → analyze policy strategies**
- **Increase linkages with global scale scenarios and issues (climate, nitrogen, energy, transport, food production) in cooperation with HTAP, IPCC. INI, UNEP, CACC**
- **Increase linkages with local scale air pollution and cost-effective local measures, including co-benefits (congestion, healthy lifestyles, reduced heat stress) → *recommendation Saltsjöbaden***
- **Support guidance documents, handbooks & assessment reports**
- **Interact with parties; stimulate capacity building in EECCA and Asia (funding ?)**

# **TFIAM activities**

- **Produce assessment report of the amended Gothenburg Protocol (draft December)**
- **Workshop on Valuation of damage to ecosystem services, Zagreb 24-25 October 2013**
- **43<sup>rd</sup> TFIAM meeting – April/May 2014**



# **Assessment report of the amended Gothenburg Protocol**

*Information needed for future evaluations*

1. Assumed trends in activities and emissions per country
  2. Impacts of the Revised Protocol
  3. Technological measures, remaining potential, long term outlook
- Annex: 2012/2013 methodologies

# Part 4

## **Green Economy** **- *focus on food***

Joint workshop TFRN & TFIAM  
Copenhagen, 24-25 April 2013



# Different perspectives

- Decoupling resource use from production and consumption
- Green taxation
- Ecosystem services
- Biobased economy
- Innovation: Technologies for greening agricultural production are available

## Main preconditions to greening the economy

- Vision
- Getting the prices right
- Abolish perverse incentives
- Dynamic regulations
- Sustainable innovation
- Alternative ways of measuring progress



# COMMUNICATION

- Lack of information and awareness at the level of farmers, retailers and consumers was identified is an important obstacle for greening the food system.
- In each country innovative ideas should be communicated to organisations that are responsible for advising farmers on green production methods.
- Information for retailers should focus on reducing the large amount of food that is wasted.
- Information to consumers on green diets should be linked to health benefits.