Italian Agency for New Technology
Energy and the Environment

Health impacts of ozone and PM from integrated assessment models: a comparison between national and international analysis

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Health impact comparison analysis

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In this presentation

Brief description of the analysis modelling tool

Comparison between Health Impact national and EU-wide scenarios, developed within the NEC review process

Analysis of the differences between national and EU analyses and the reasons behind

Introduction of the uncertainty in the scenario analysis

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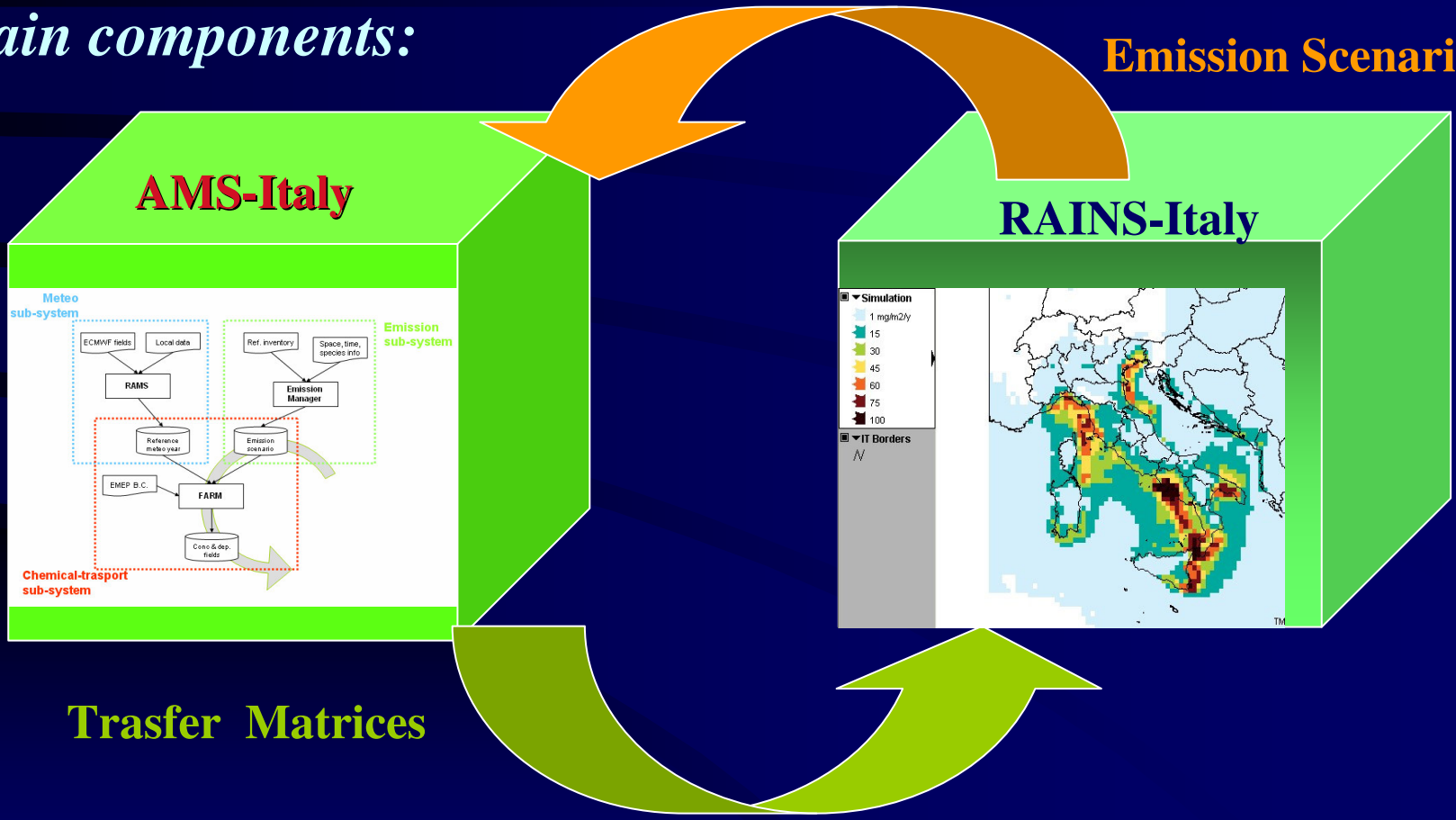
Two main components:



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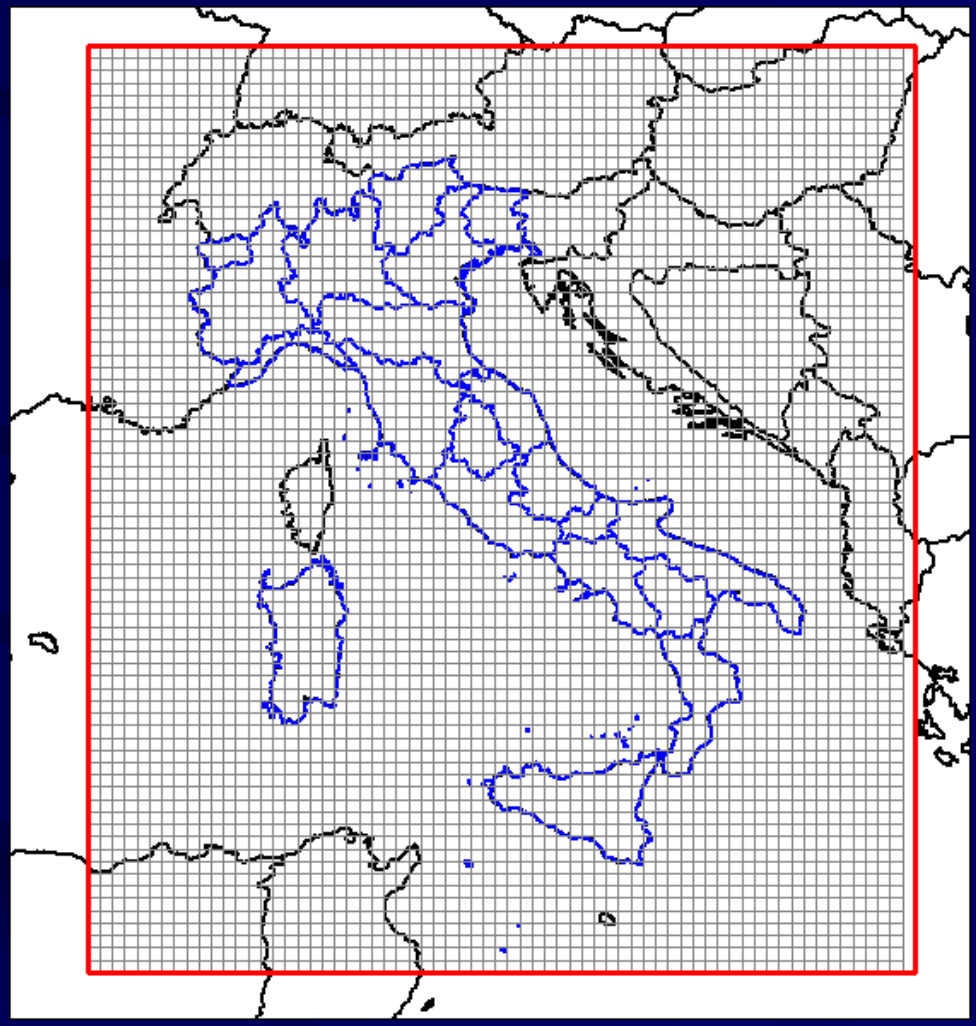
Computational domain and spatial resolution

Grid square cells :
20 x 20 Km^2



Health impact comparison analysis

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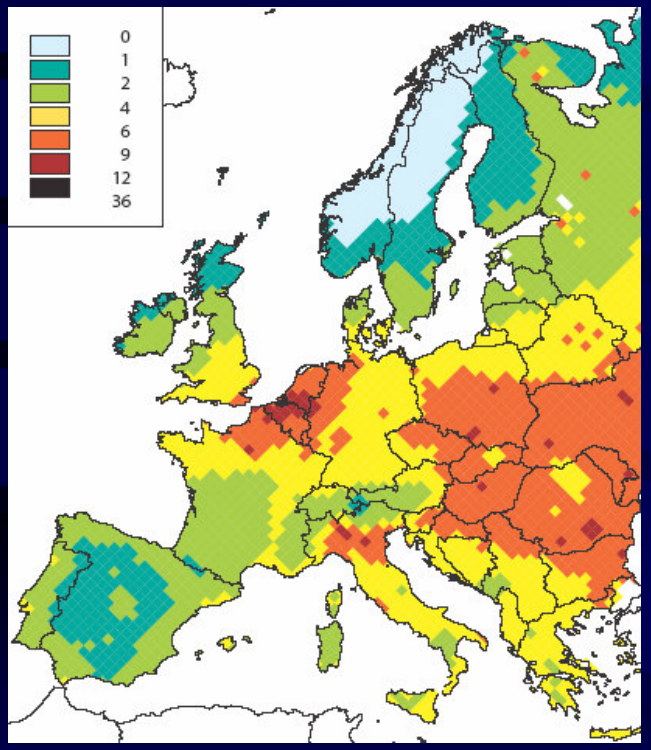
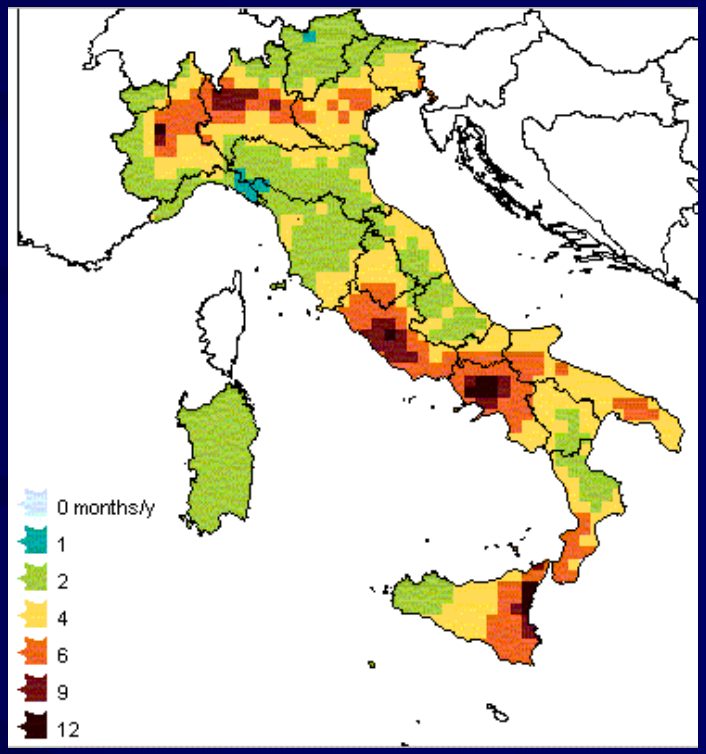
Nec review baseline scenarios with energy national projections





RAINS_Europe *RAINS_Italy*

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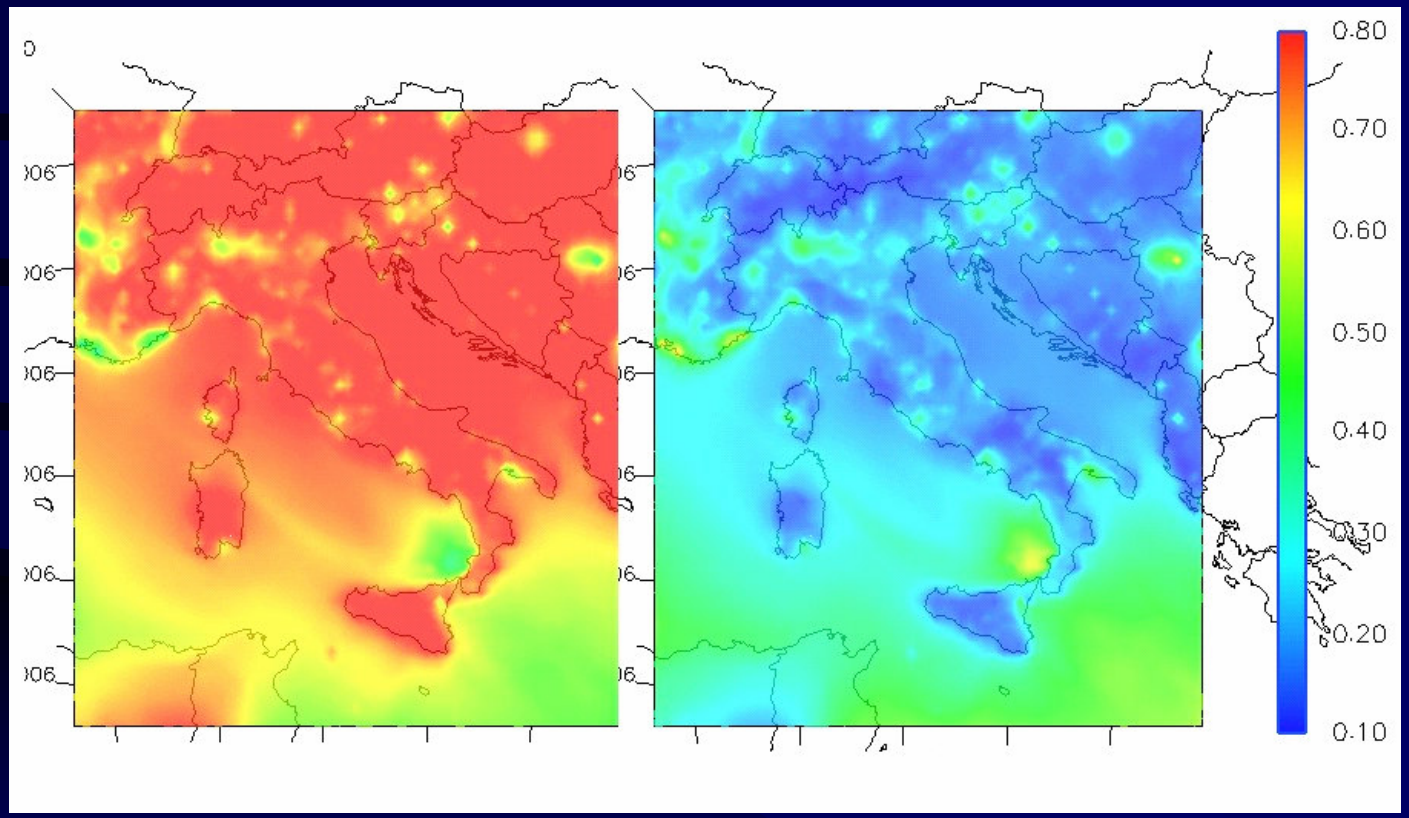
AMS – Atmospheric Modeling System

PM Concentration maps (primary & secondary contributions as fraction of total PM)



Secondary PM *Primary PM*

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Emission comparison analysis

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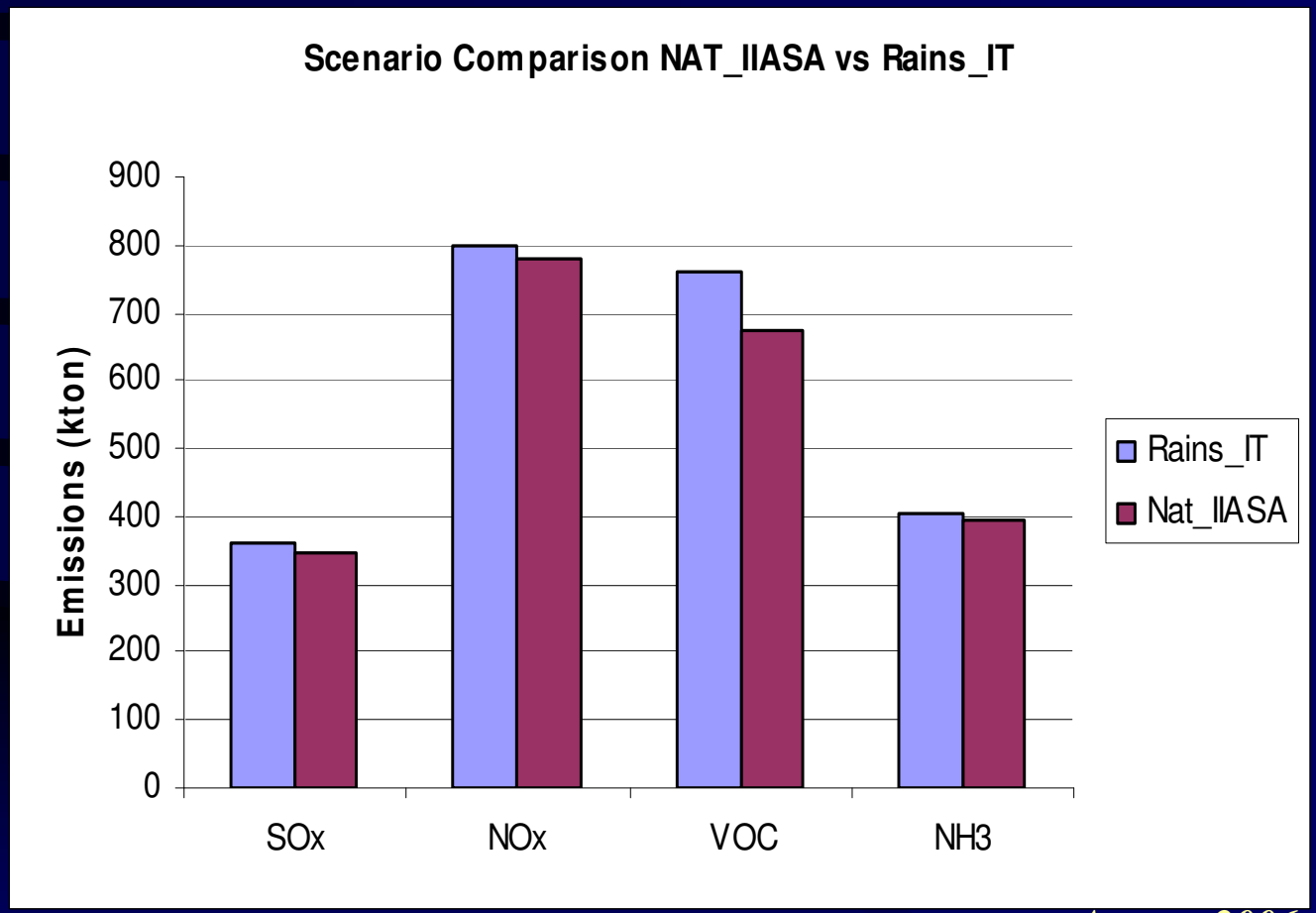
Baseline scenario 2020, national energy projections



August 2006 data

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Emission comparison analysis

Baseline scenario 2020, national energy projections

Absolute values and % differences

2020	Rains_it	Nat_IIASA	%
SOx	361.309	345.129	-4.68
NOx	797.744	779.475	-2.34
VOC	758.992	675.665	-12.33
NH3	403.678	396.077	-1.92

August 2006 data

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The RAINS-Italy Model

Semplified flow-chart

Comparison analysis

The reasons behind the differences

Assuming the same activity levels (as in the given results)

1) **Different interpretation of the technology penetration rates, in the Control Strategy (as for VOC scenario -12.33%)**

2) **Adoption of country specific EFs in RAINS-IT**

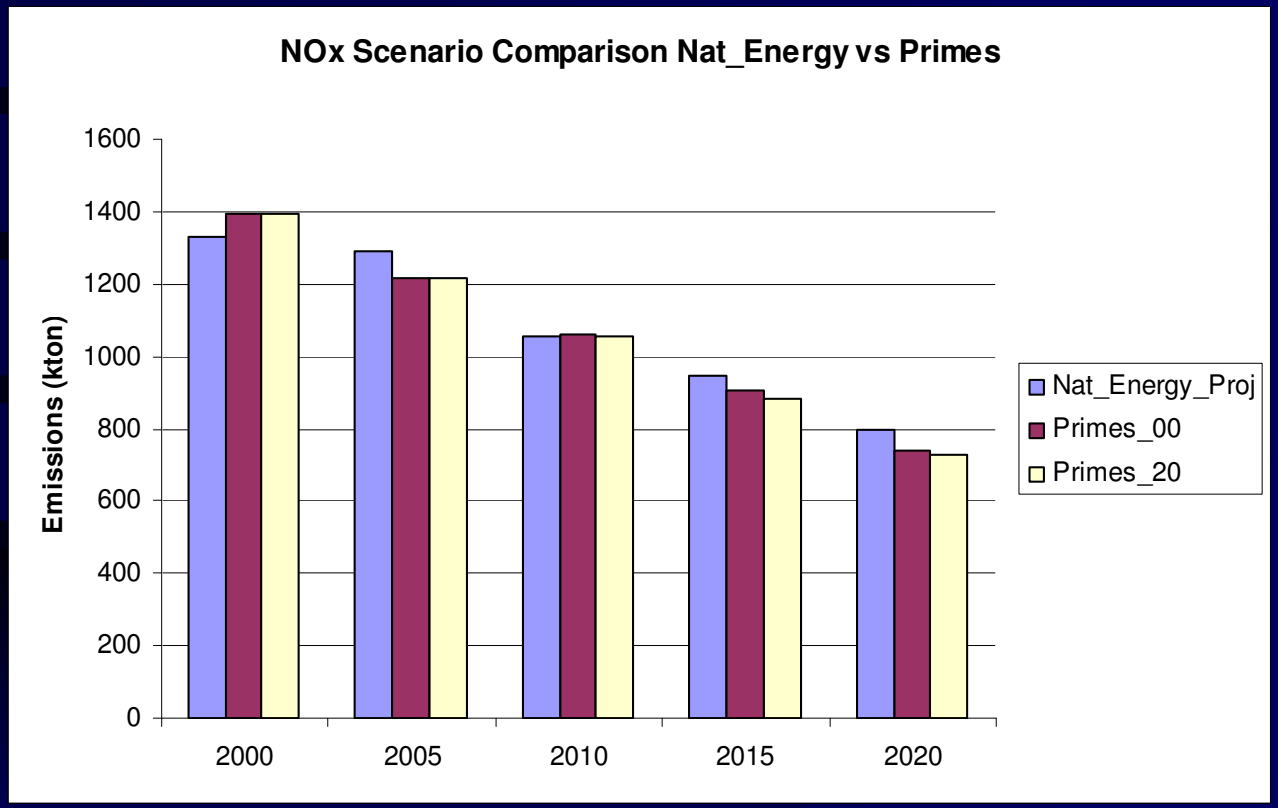
3) **New source structure in RAINS-EU (Aug 2006)**

NOx Scenario : same CS, same activity levels, same EF: -2.34 %

Comparison analysis

Differences due to different energy projections

NOx Emission scenario



Baseline scenario - August 2006 data

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The MINNI Project on the web:

http://www.minni.org