

FAIRMODE WG4 – Planning Intercomparison

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Abatement Scenarios

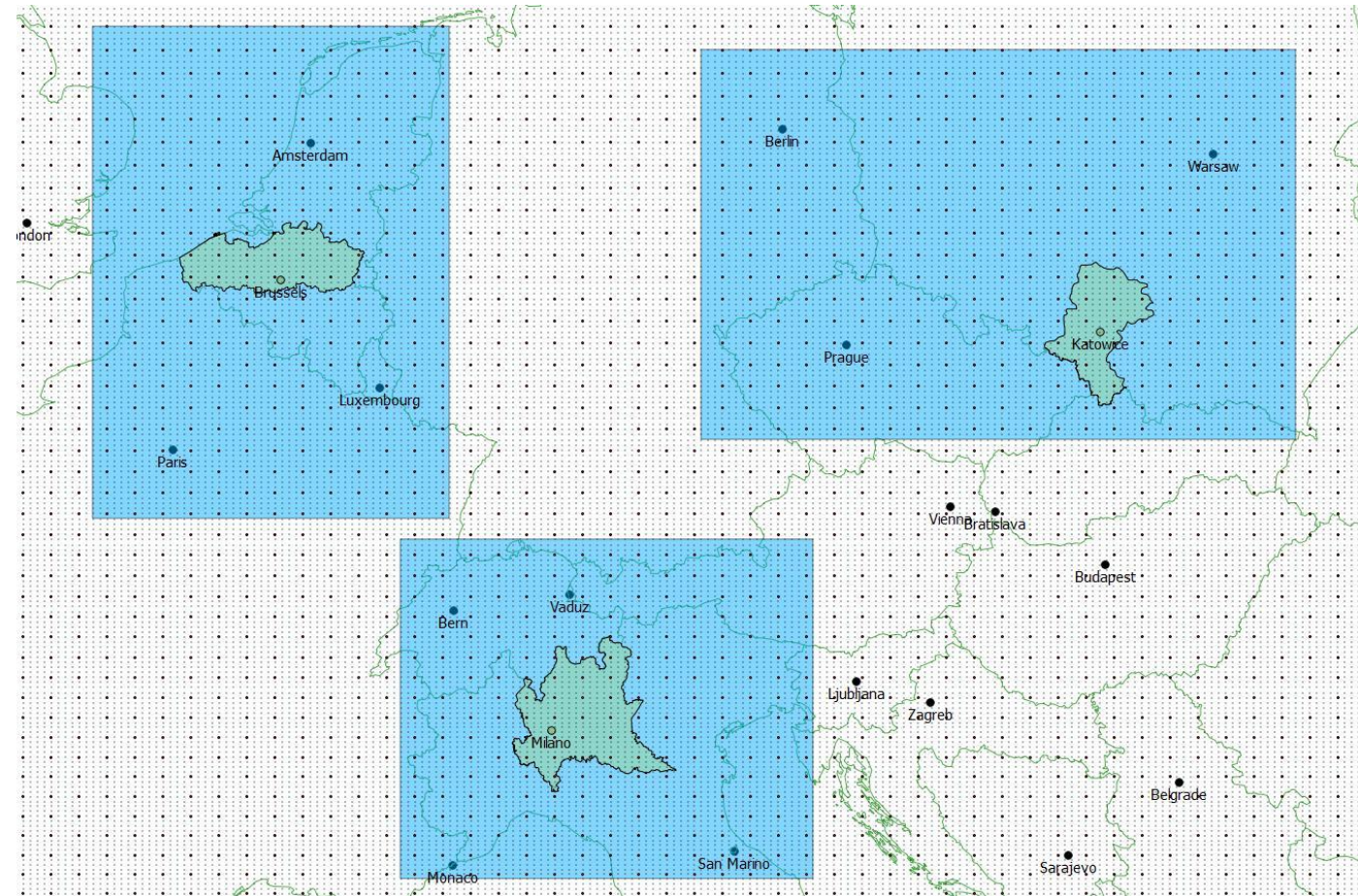
LOTOS model

1 domain: 28 km resolution

3 domains: 7 km resolution

3 reduction areas:

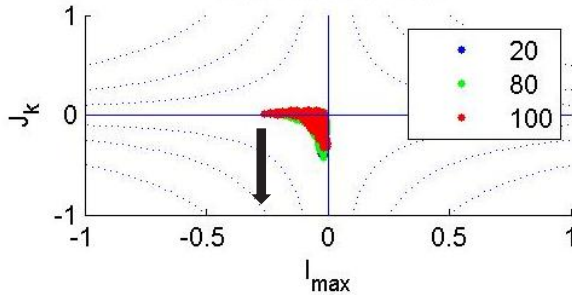
- North Belgium
- South Poland
- Po Valley



Maximum Potency

North Belgium

20% reduction NOX



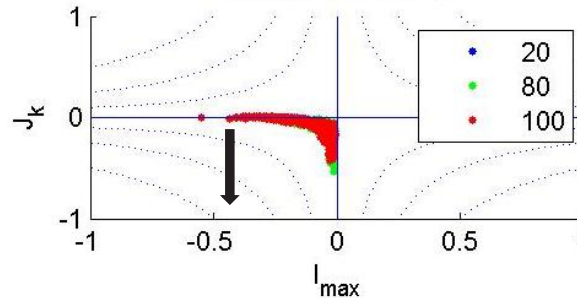
0.3

100% emission reduction

➔ 30% concentration reduction

South Poland

20% reduction NOX



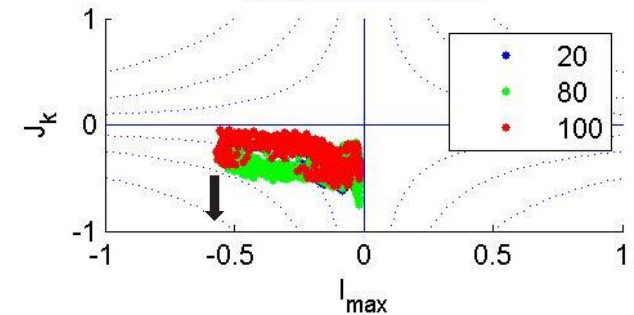
0.45

100% emission reduction

➔ 45% concentration reduction

Po Valley

20% reduction NOX



0.55

100% emission reduction

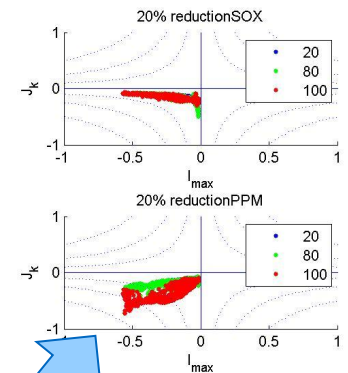
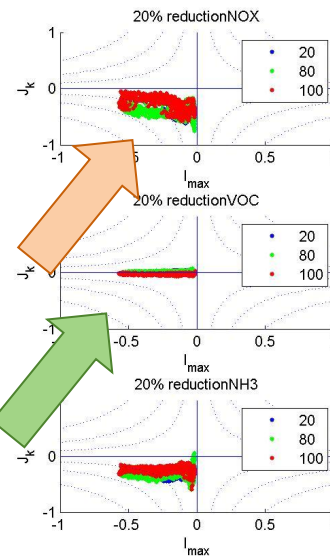
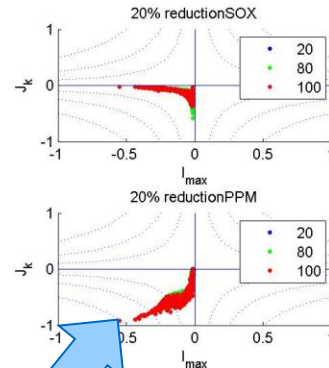
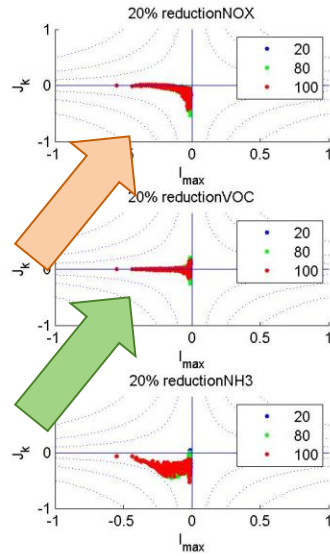
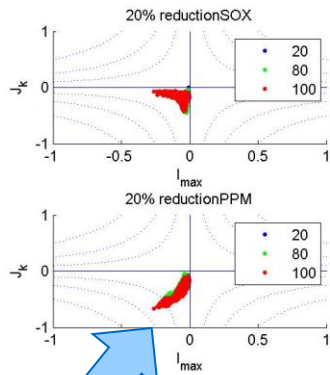
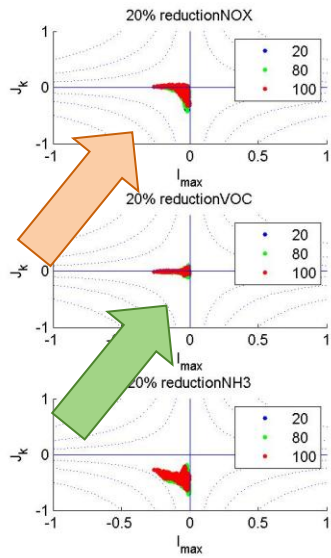
➔ 55% concentration reduction

Precursor Contributions

North Belgium

South Poland

Po Valley

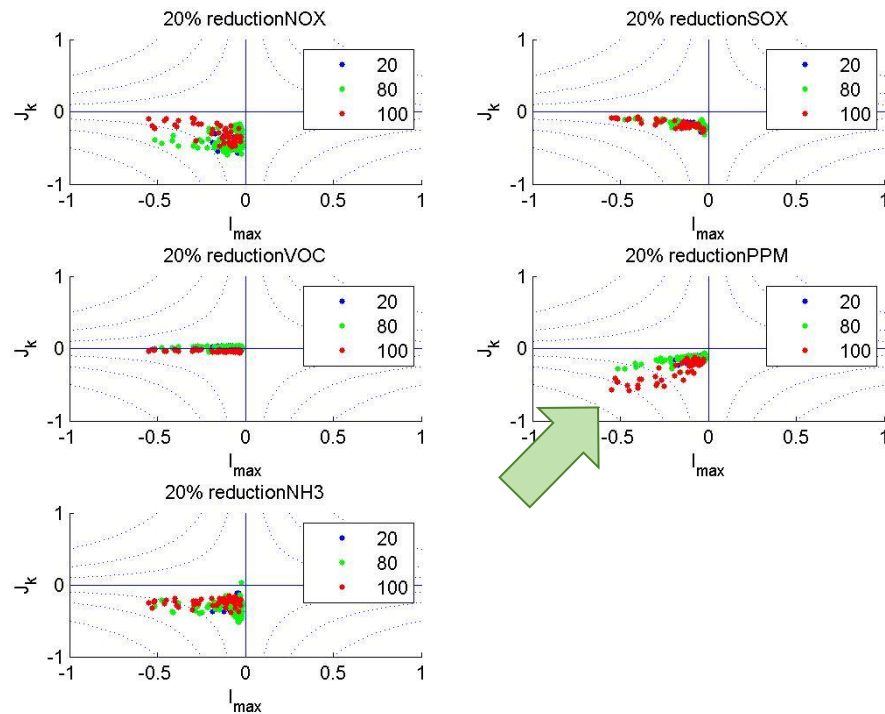
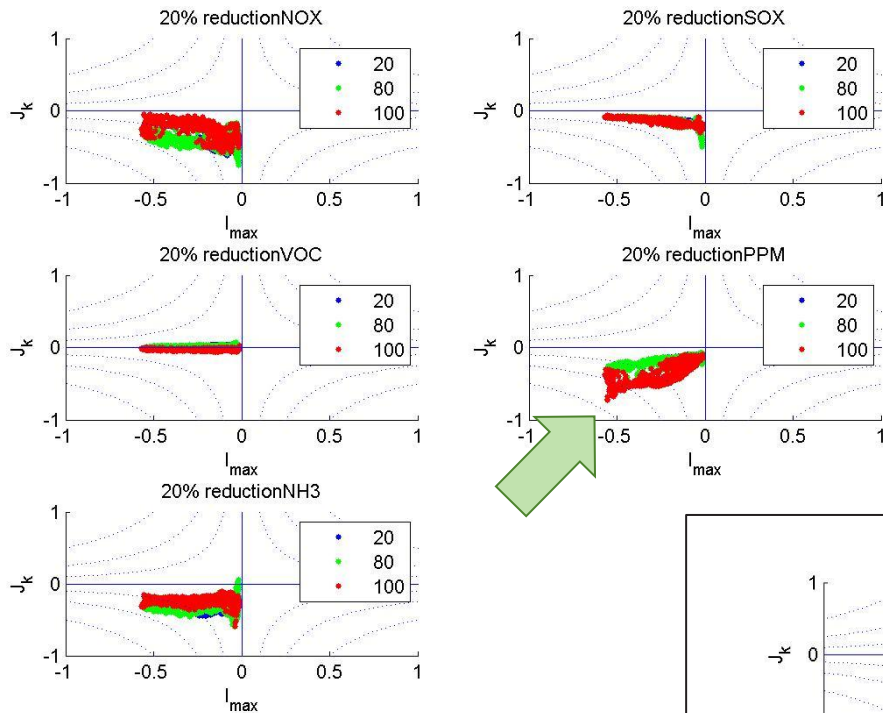


VOC \Rightarrow no impact

PPM \Rightarrow highest impact

Main difference \Rightarrow impact of NOx in Po Valley

Resolution Effects

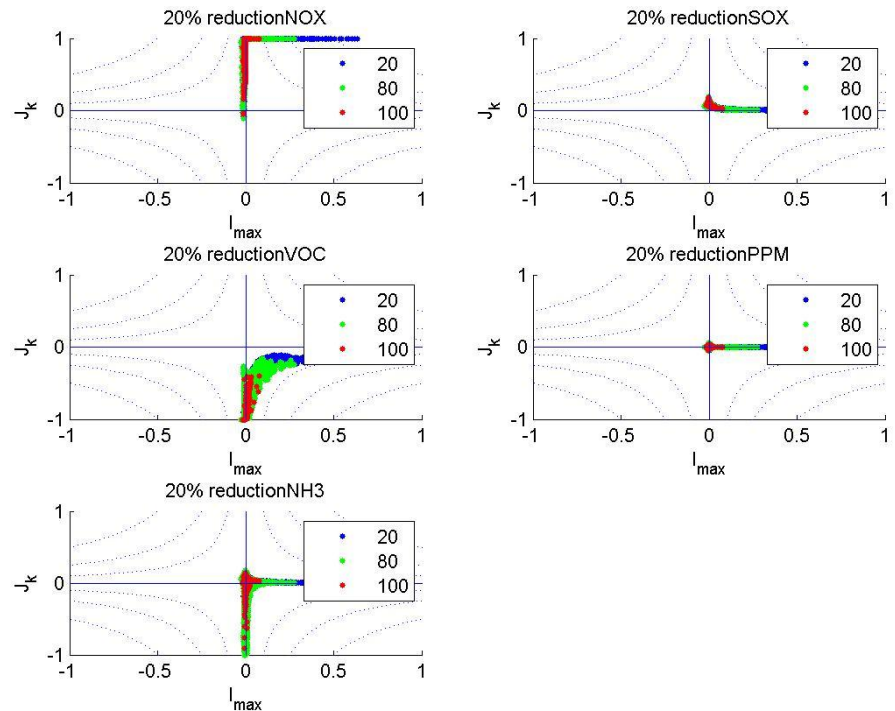
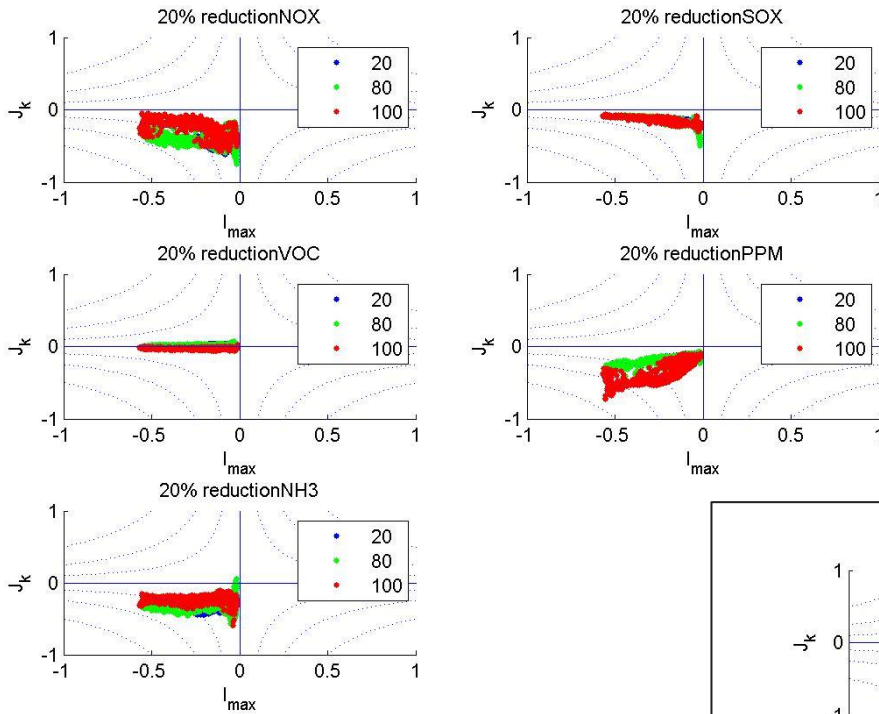


General pattern is not affected

The range of maximum potencies is not affected

The range of the percentage single precursor contribution can be slightly affected

PM and O₃



Impact on O₃ is very low (in all the tested domains)

Impact on O₃ is mainly due to NOx and is "positive"

Thank you