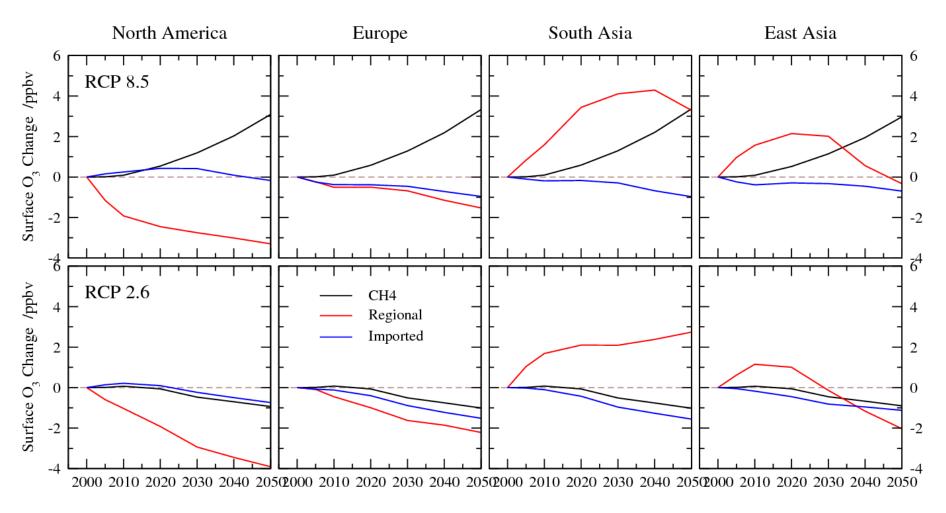
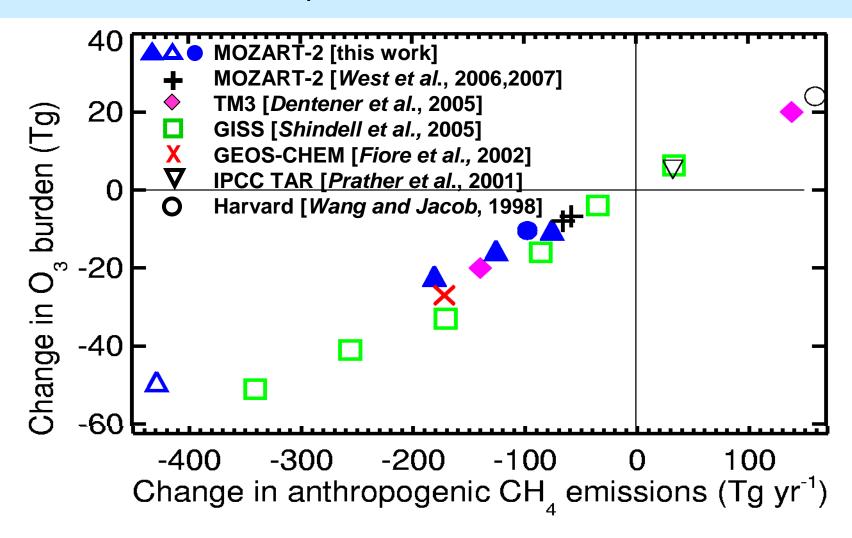
## Importance of Methane for Ozone



 Global methane trends can offset reductions of other ozone precursors at the regional scale

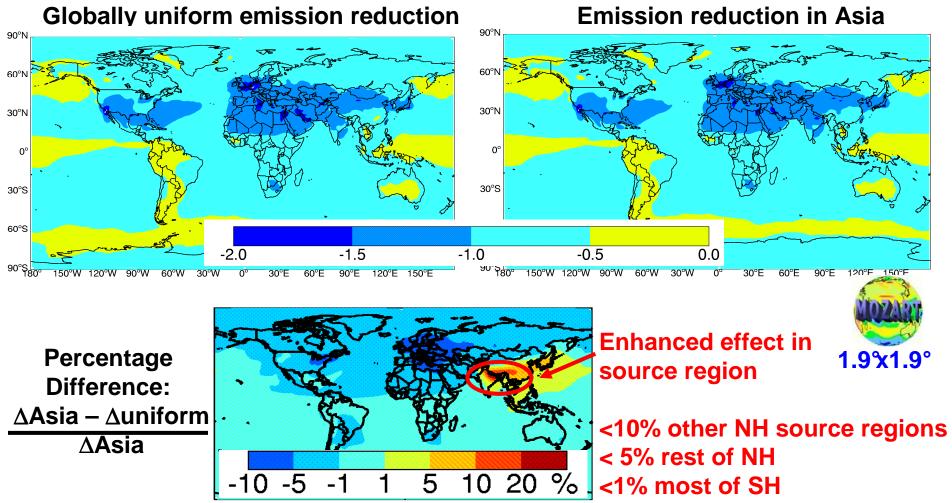
# Tropospheric O<sub>3</sub> responds approximately linearly to anthropogenic CH<sub>4</sub> emission changes across models



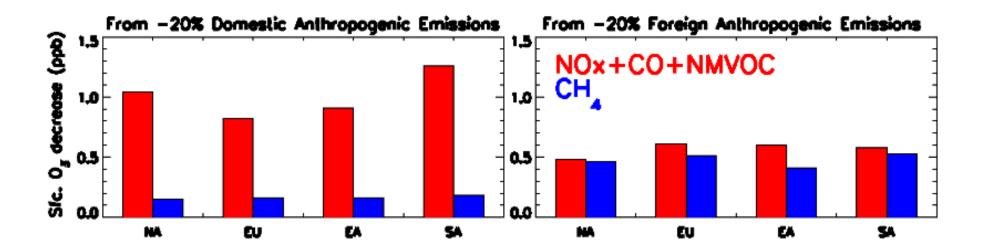
Anthropogenic CH<sub>4</sub> contributes ~50 Tg (~15%) to tropospheric O<sub>3</sub> burden ~5 ppbv to surface O<sub>3</sub>

# Global surface ozone response to CH<sub>4</sub> emission controls nearly independent of source location

Change in July MDA8 surface O<sub>3</sub> from 30% decrease in anthrop. CH<sub>4</sub> emissions



### Within Region Impacts v. Global Impacts



## Methane Message

- Methane is an important precursor for tropospheric ozone.
- The ozone benefits of methane reductions are global, do not depend on location of emissions, and take a decade to be fully realized.
- Globally, many methane emission reductions are available at a low cost or net savings.
  - The TF HTAP has not assessed the availability of methane controls within the UNECE.
- Recognizing that methane is being addressed under the UNFCCC, the LRTAP Convention should consider what could be gained by addressing methane within the context of the Convention as an ozone precursor.

### **Proposal for Note for from TF Chairs**

#### Gothenburg Protocol

- NOx & VOC
- CH4, CO
- Black Carbon
- Future Boundary Conditions
- Shipping & Aviation

#### HM Protocol

- Acknowledgement of Global Nature of Transport
- Importance of Hg from Coal Combustion
- Obligations for Reporting Speciated Emissions

#### POPs Protocol

- Confirmation of Global Transport
- Importance of Interlinkage with Stockholm Convention (& REACH)
- Specific Focus of LRTAP on Unintentional Releases of POPs (e.g. from combustion)

#### Long Term Strategy

- Inter-Regional Cooperation
- Leadership Role

#### EMEP Work Program

- Intercontinental Source
  Apportionment as an Intentional
  Objective
- Cooperative Work with TFs and Centers
  - Global Regional Modeling Linkages
  - Model and Inventory Evaluation
  - Integrated Assessment Modeling
  - Linkage to Effects Work
- Enhance Connection to Global Scientific Efforts
- Enhance Cooperation with Other Regions