

Global Mapping of Ozone Surface Concentration for Global Burden of Disease

- A first global map has been delivered to the GBD team.
- 1 paper submitted (Chang, GMD).

→ Owen Cooper presentation

Global Air Quality and Health Co-benefits of the Paris Agreement Pledges

- Simulations to start this summer.

→ Kathleen Mulvaney poster

Tiger Team: Efficacy of Environmental Regulations in the Eastern US

Trends in US air pollution-related deaths since 1990

- 1 paper submitted (Zhang, ACPD)
- 1 paper in preparation.

→ Omar Nawaz poster

Health Benefits of Decreases in PM_{2.5} and Ozone in the United States, 1990-2015

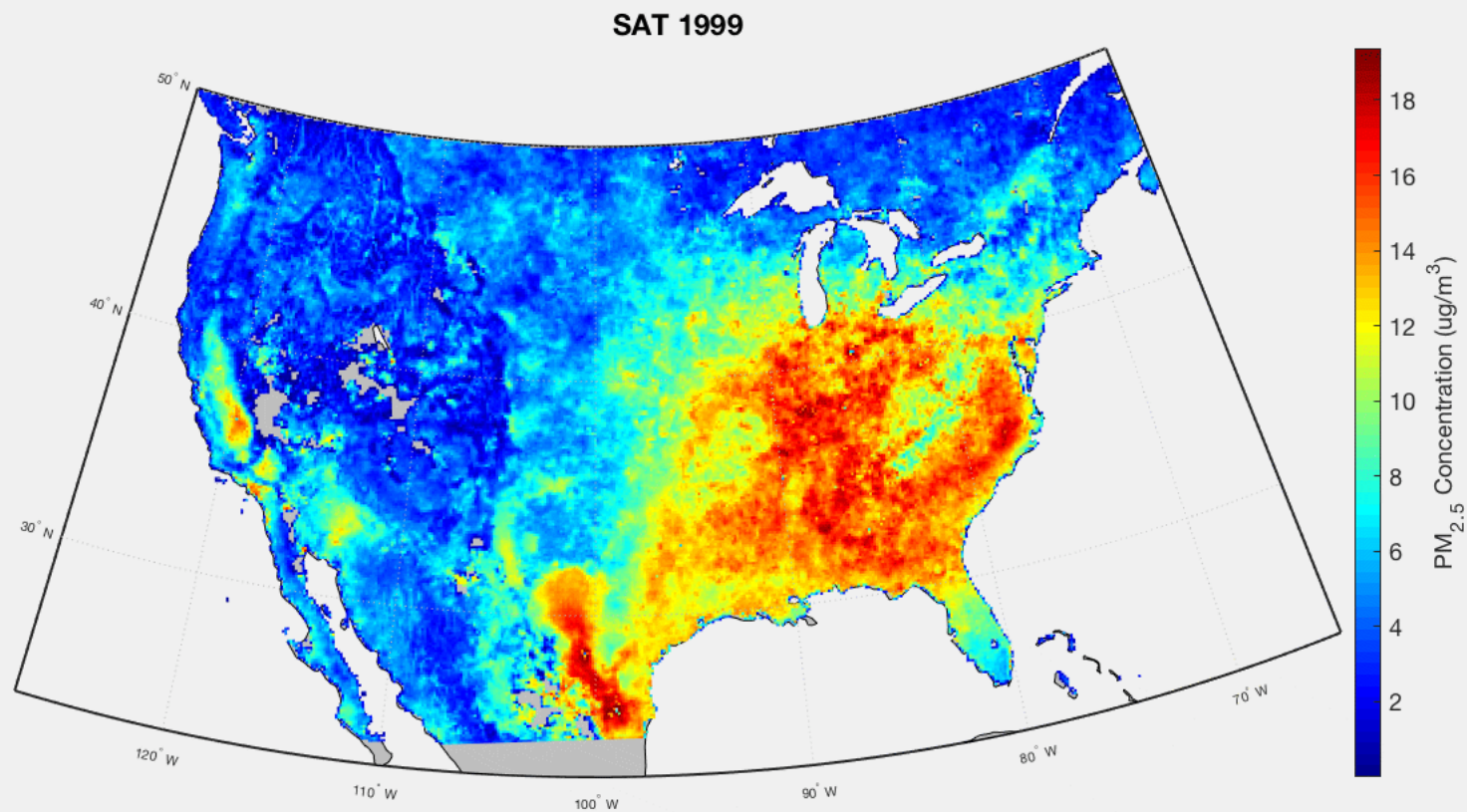
Omar Nawaz, Yuqiang Zhang, Daniel Q. Tong, Aaron van Donkelaar, Randall Martin, J. Jason West

* Air pollutant datasets:

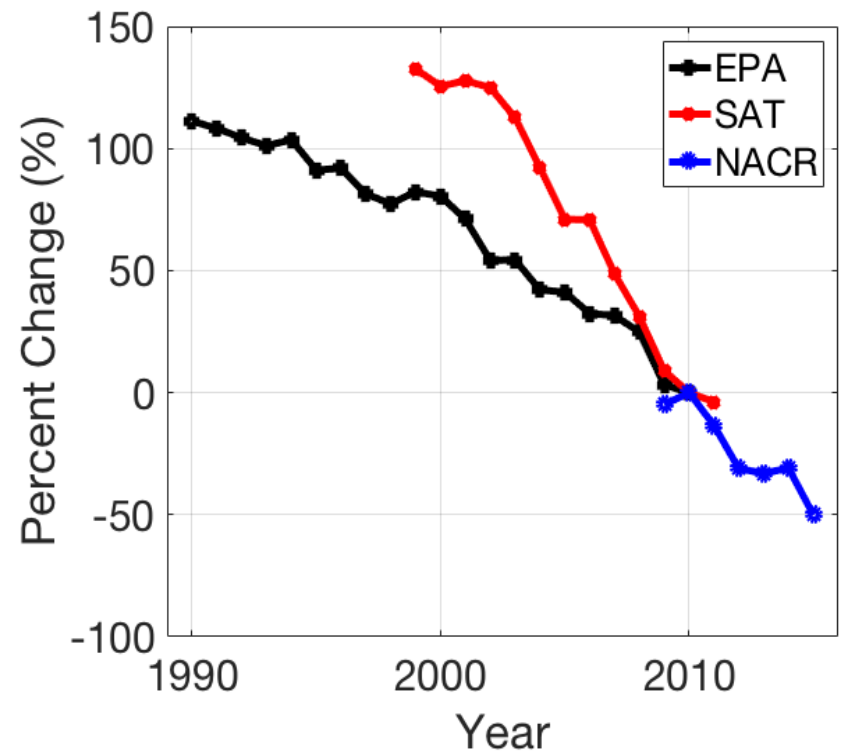
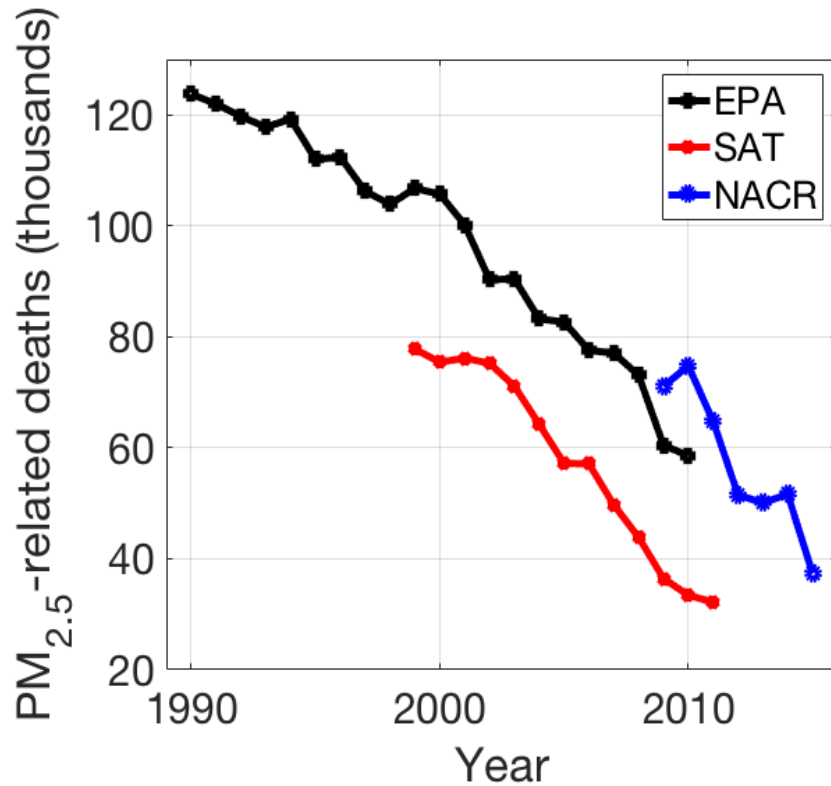
- A 21-year CMAQ simulation (1990-2011) [EPA](#)
- The North American Chemical Reanalysis (2009-2015) [NACR](#)
- N. America PM_{2.5} satellite-derived data combined with a model and surface observations (1999-2012) [SAT](#)

* We use annual county-level population and baseline cause-specific mortality rates from the CDC to assess air pollution mortality in each year.

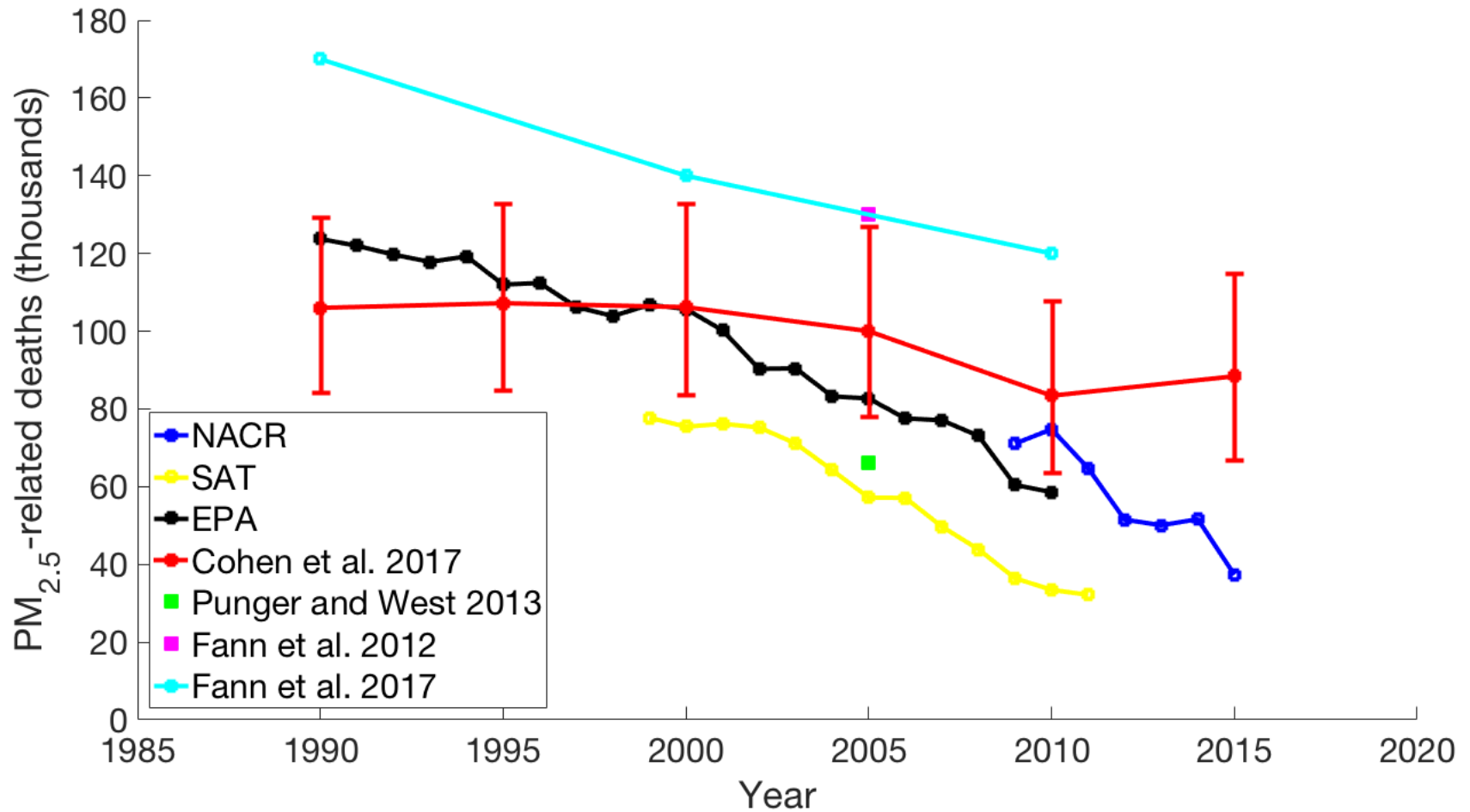
Trends in PM_{2.5} (SAT)



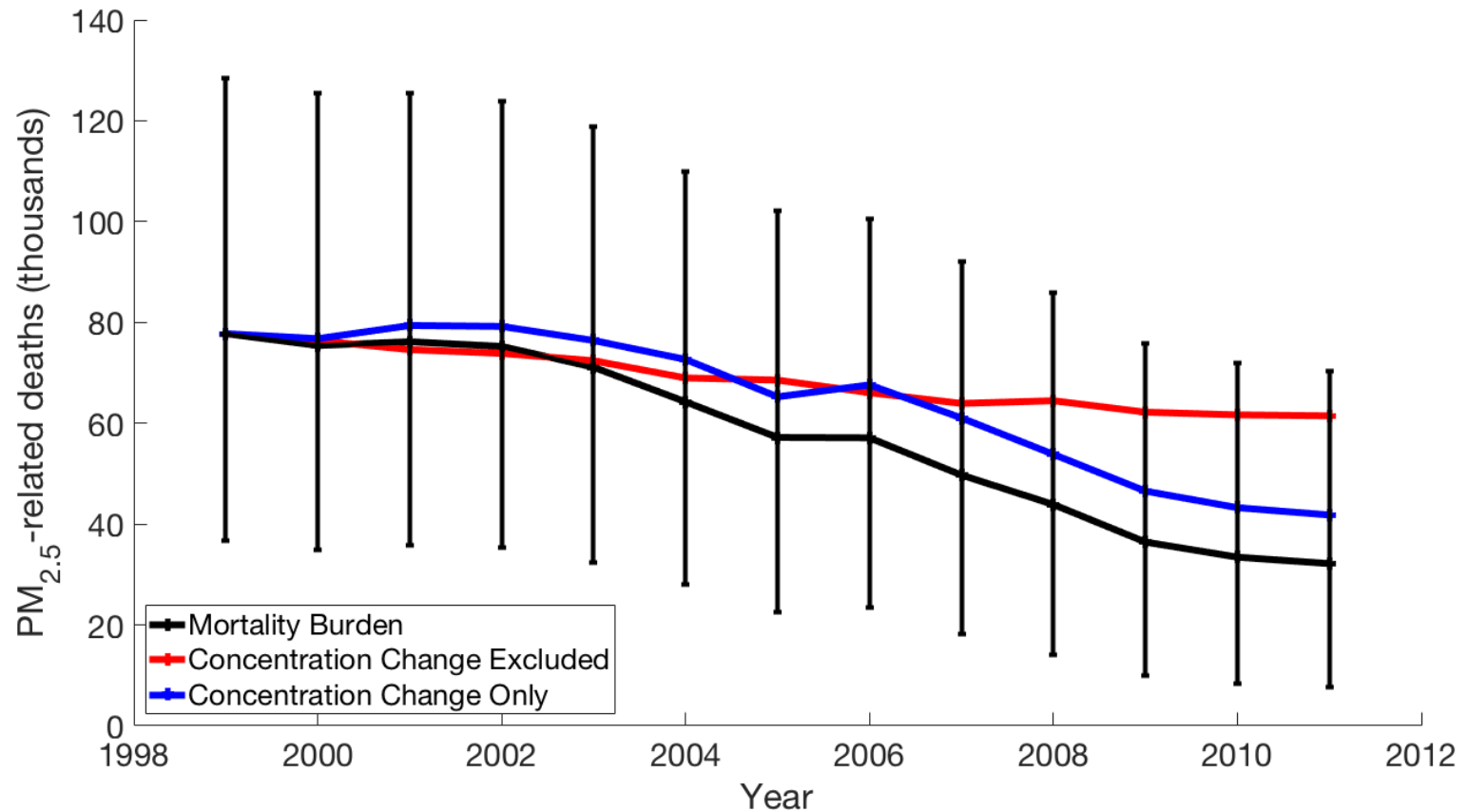
US PM_{2.5}-related deaths



Comparison with Other Studies (PM_{2.5})

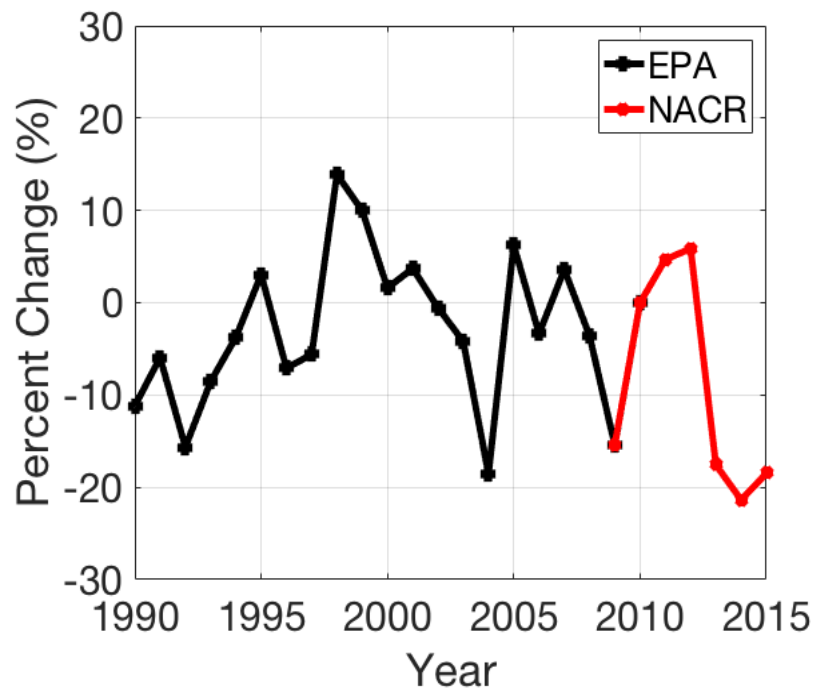
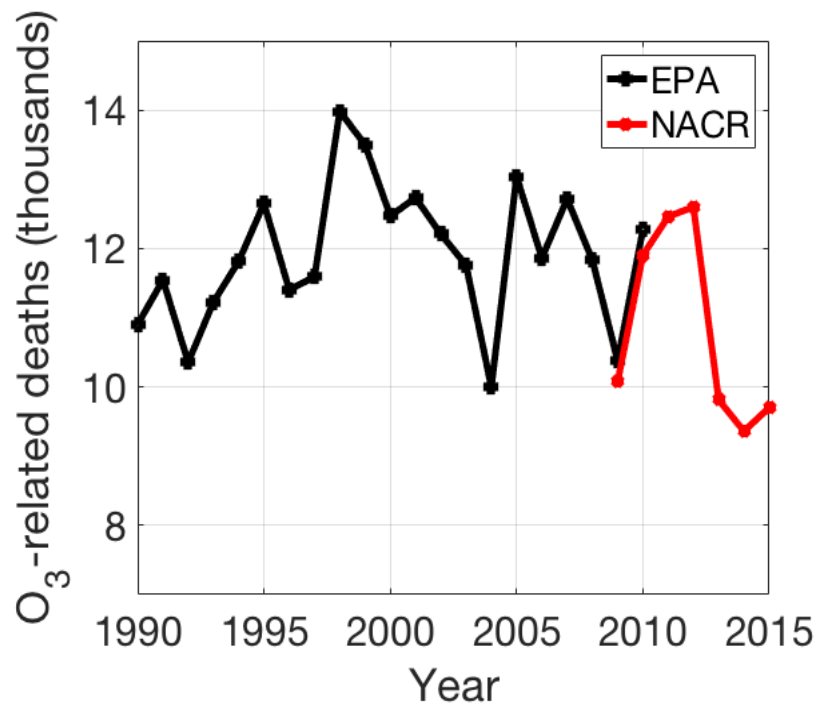


PM_{2.5} Mortality Burden (SAT)

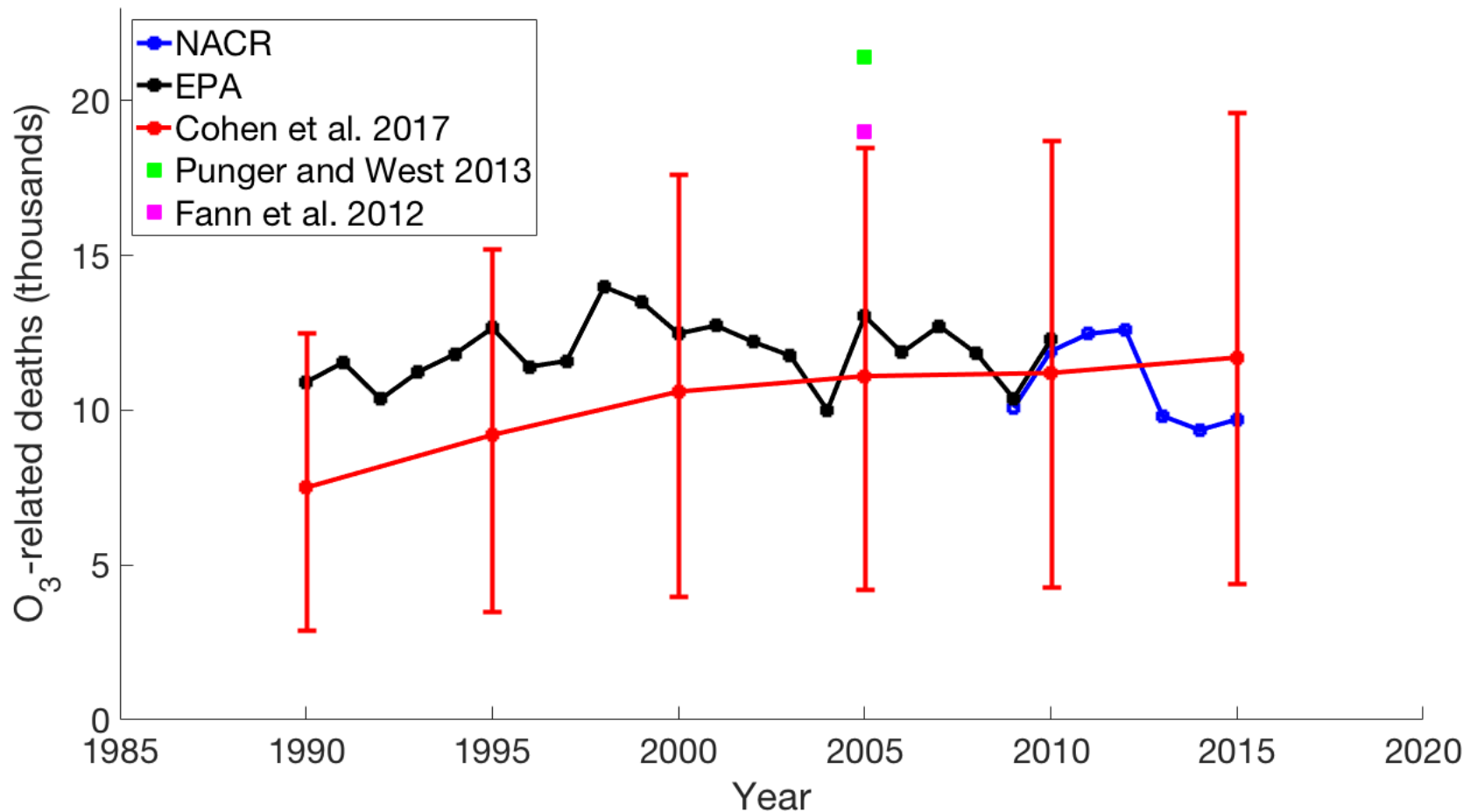


We estimate that **29400** deaths were avoided in **2011** from lower PM_{2.5} concentrations

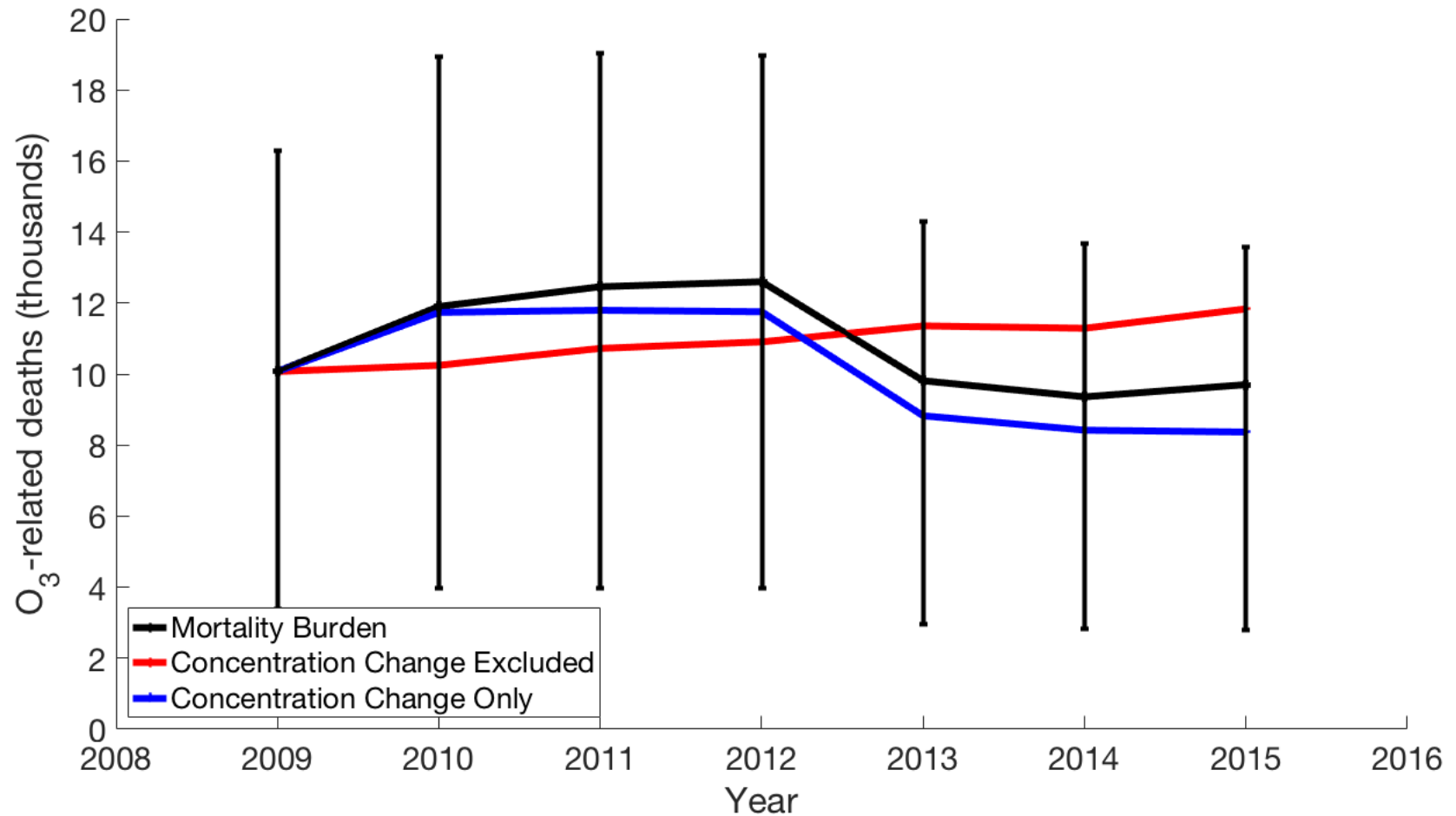
US O₃-related deaths



Comparison with Other Studies (O₃)



O₃ Mortality Burden



We estimate that **2100** deaths were avoided in **2015** from lower O₃ concentrations