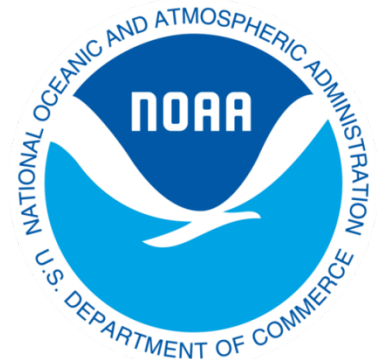


# (Top-down ) emissions research at NOAA

*Monika Kopacz* (UCAR & NOAA/CPO)

reporting on Climate Program Office and NOAA laboratories

- **ESRL/GMD (Global Monitoring Division)**
  - Quantify the distributions and magnitudes of sources and sinks for atmospheric nitrous oxide (N<sub>2</sub>O) and halogen containing compounds
  - Quantify and attribute methane emissions (from oil & gas extraction)
- **ESRL/CSD (Chemical Sciences Division)**
  - Quantify and attribute ozone precursor emissions from oil & gas extraction and power plants
  - Quantify and attribute regional emissions in US
  - Atmospheric model-based evaluation of regional and urban emissions (Greg Frost)
- **ARL (Air Resources Laboratory)**
  - Quantify and attribute nitrogen and mercury emissions
- **PMEL (Pacific Marine Environmental Laboratory)**
  - Quantify the sources of ocean derived aerosols



# (Top-down ) emissions research at NOAA

- **CPO (Climate Program Office)**
  - Funding research projects focused on observational constraints on emissions (chemistry and carbon; urban, Southeast US, reactive nitrogen, oil & gas etc.)

## From Emissions to Societal Challenges (at NOAA)

- Verification of emissions reductions
- Informing stakeholders decisions (e.g. city and state officials)
- Identification and understanding of new sources (e.g. oil & gas)
- Improved emissions inventory lead to improved air quality forecasts

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