

Below is a list of tentative topics for writing a review paper or for preparing a term project.

- ✓ You may refine the topic to become more concentrated. Discuss with me.
- ✓ You may choose topics not in this list, as long as your topic is within the scope of this course. Discuss with me.

Note: A review is NOT just a compilation of what people have done. You must have your own understanding of the topic, and construct the paper/ppt using findings from existing studies.

1. Global biogeochemical cycling and globalization of carbon. Choose CO, NMVOC, CH₄, or CO₂.
2. Global biogeochemical cycling and globalization of nitrogen. Choose NO_x, NH₃, or N₂O.
3. Global biogeochemical cycling and globalization of sulfur (SO₂ and SO₄ together).
4. Satellite remote sensing to study emissions and pollution transport. Choose a quantity (NO₂, AOD, etc.)
5. Recent trend of tropospheric oxidants (HO_x and Ox) and its relation to globalizing air pollution.
6. Regional transport of air pollutants within Asia. Focus on ozone, PM, and/or their precursors.
7. Outflow of air pollutants from Asia. Focus on ozone, PM, and/or their precursors.
8. Inflow of air pollutants to Asia. Focus on ozone, PM, and/or their precursors.
9. Global transport of air pollutants. Focus on ozone, PM, and/or their precursors.
10. Anthropogenic and/or natural dusts and their transboundary impacts on air quality, health and/or climate.
11. Fires and their transboundary impacts on air quality, health and/or climate.
12. Global transport of BC and its relation to climate change.
13. Past climate change and its impacts on pollution transport.
14. Future climate change and its impacts on pollution transport.
15. Uncertainties in current assessment of pollution transport.
16. Emerging pollution and its globalization (e.g., bioaerosols; discuss with me to define the pollutants).
17. International trade: impacts on global air quality, health, and/or climate.
18. Domestic pollution control strategies in light of trade and pollution transport.
19. International collaboration strategies in light of trade and pollution transport.
20. Pollution-climate interactions over the course of carbon neutrality.
21. Interconnections between economics, energy and environment.
22. Environment nexus (co-benefits and tradeoffs).
23. Game theory of sustainable development.