

# Climate Change and Health Impacts

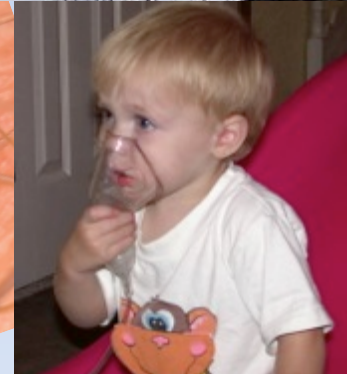
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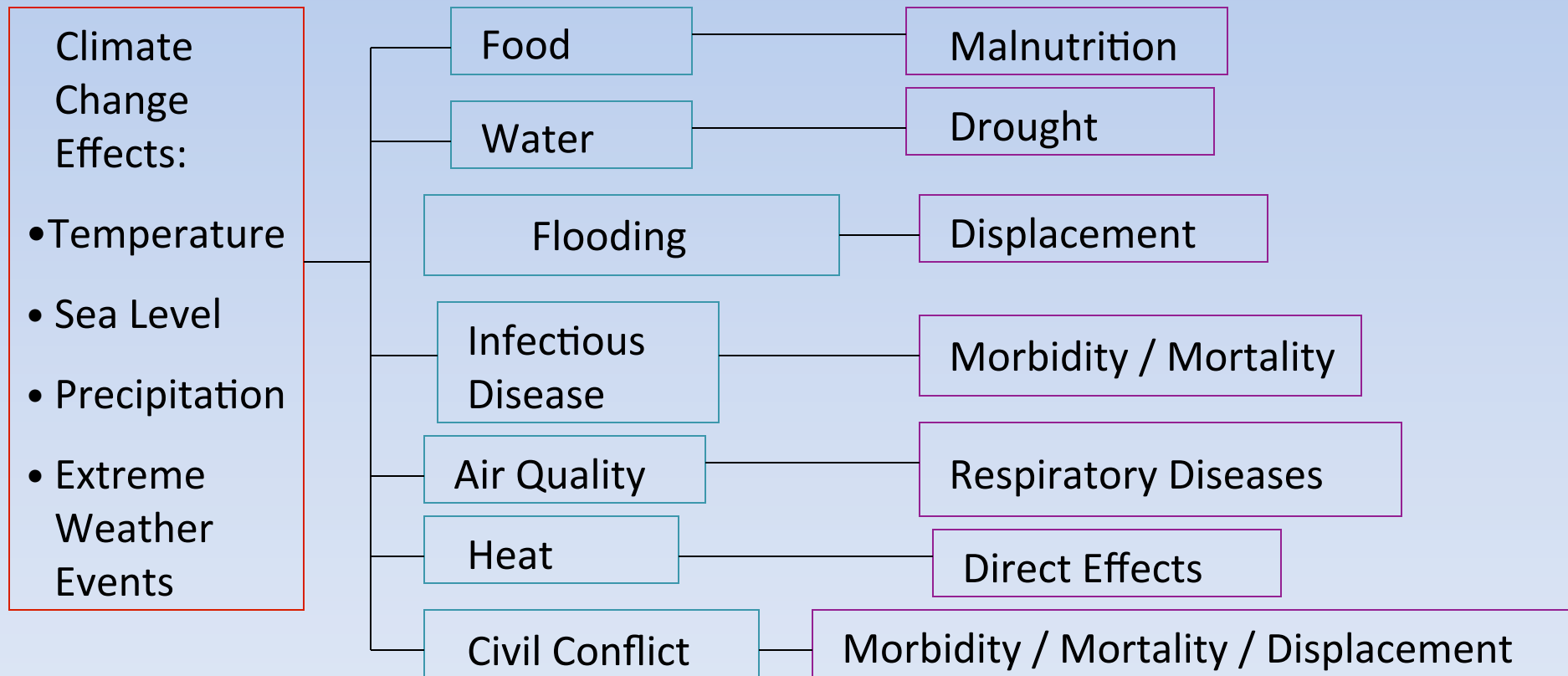


# Impacts to Communities & Businesses

- **Natural systems** (i.e. maple syrup, ski industry, coastal tourism, agriculture)
- **Human health** (i.e. heat stress, vector borne disease, allergies, emergency medicine)
- **Infrastructure** (i.e. flooding, power outages, transportation, public safety, water supply – quantity & quality)



# Potential Impacts of Climate Change on Human Health



# Heat



- Warmer average temperatures – hotter days
  - Increases in tick born diseases



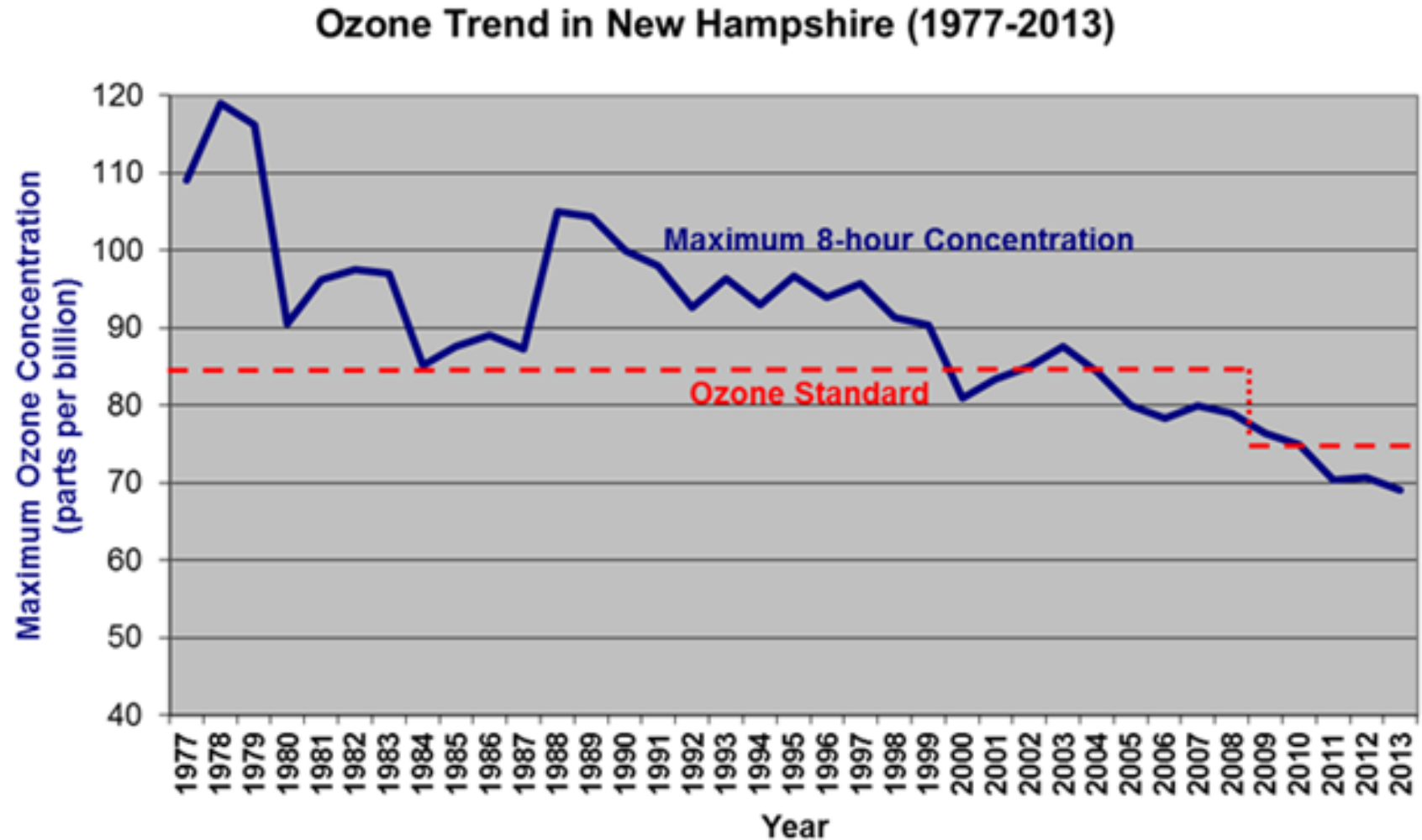
- More frequent and longer heat waves
  - Heat stroke and dehydration
  - Heat related illnesses and deaths



- Increase in concentrations of unhealthy air and water pollutants
  - More cyanobacteria warnings
  - More air quality action days



# Ozone Concentrations





# Precipitation



- Increases in the frequency and severity of extreme weather events
- Increase the risk of dangerous flooding, high winds, coastal storm surge
  - Direct threats to people and property
  - Mold
  - Food & water contamination
  - Vector borne diseases (EEE, WNV, cyanobacteria)
  - Increase in shellfish bed closures
  - Impacts to water & waste water systems





# Additional Impacts

- Drought
  - More dust
  - Drinking water supply stress
  - Agricultural impacts
- Loss of electricity
  - Impacts those dependent on electricity (oxygen, dialysis...)
  - Lack of cooling on hot days
  - Lack of heating on cold days
  - Carbon monoxide poisoning
  - Interrupts communication and utilities
  - Interrupts health care services



# Sneezy and Itchy

Increases in pollens & other allergens

- Longer allergy season
- Observed increase of 13 to 27 days in the ragweed pollen season in the northeast



Poison Ivy loves CO<sub>2</sub>

- grows bigger
- has more toxic oils
- more abundant and more irritating





# Ready for Spring?

Climate change is worsening allergies.

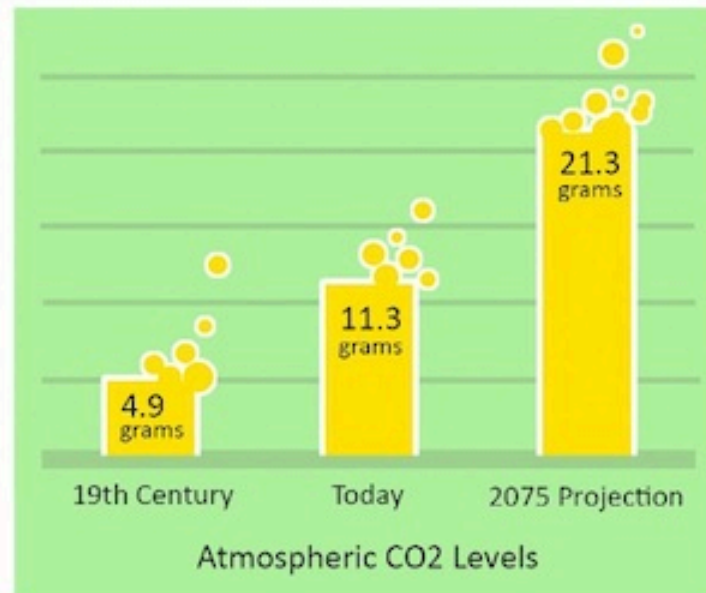
Ragweed flourishes in a high CO<sub>2</sub> environment

## Longer Allergy Seasons

● These circles represent the number of days ragweed season has lengthened in several midwestern locations since 1995.

## More Ragweed Pollen

■ These bars show how pollen per plant rises as we fill the air with more CO<sub>2</sub>.



Ragweed Season in N. America. Ziska, 2011

# Remember!

- The most vulnerable and disadvantaged populations (elders, children, poor, asthmatics, others with health issues) are most impacted
- Outdoor workers
- Social and Mental Stress
  - Anxiety about potential impacts
  - Fear during extreme storms
  - Hopelessness



# Community Support



- Empower yourselves to be part of the solution
  - Decrease your contribution to climate change
    - Use energy efficiently
    - Turn things off when not in use
  - Embrace adaptation efforts
    - Keep learning about what you can do to be more resilient
    - Support municipal efforts
    - Support national efforts
- Help each other – especially the most vulnerable

