Impact of Climate Change on Public Health

September 23, 2004

Air Resources Board

California Environmental Protection Agency

Health Impacts of Fossil Fuels

Burning Fossil Fuels

Air Pollution

Greenhouse Gas Emissions

Climate Change

Asthma Attacks

Other Respiratory Illnesses

Premature Death from Heart and Lung Diseases

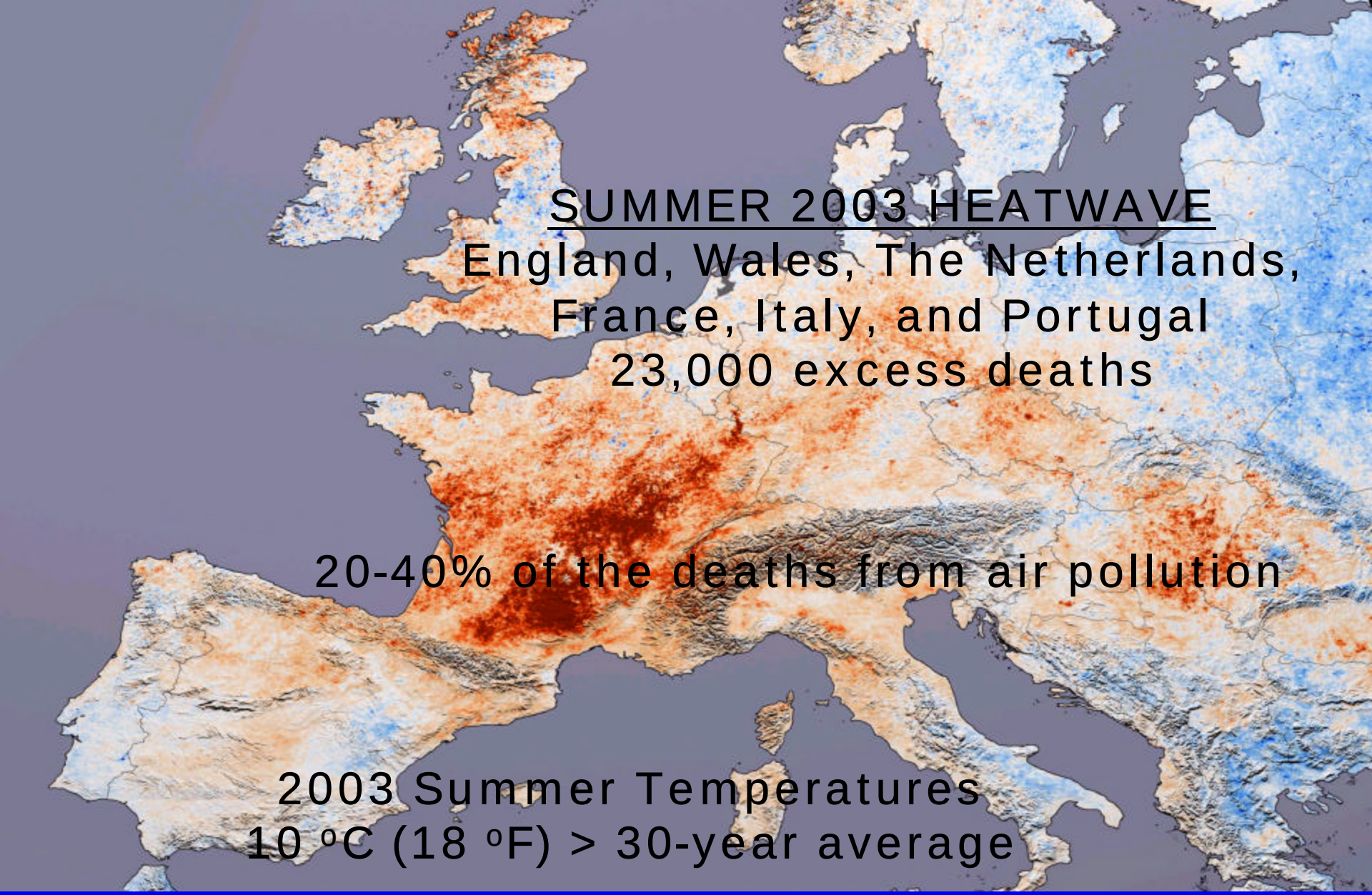
Heat-related Deaths

Injuries from Extreme Weather Events

Allergies

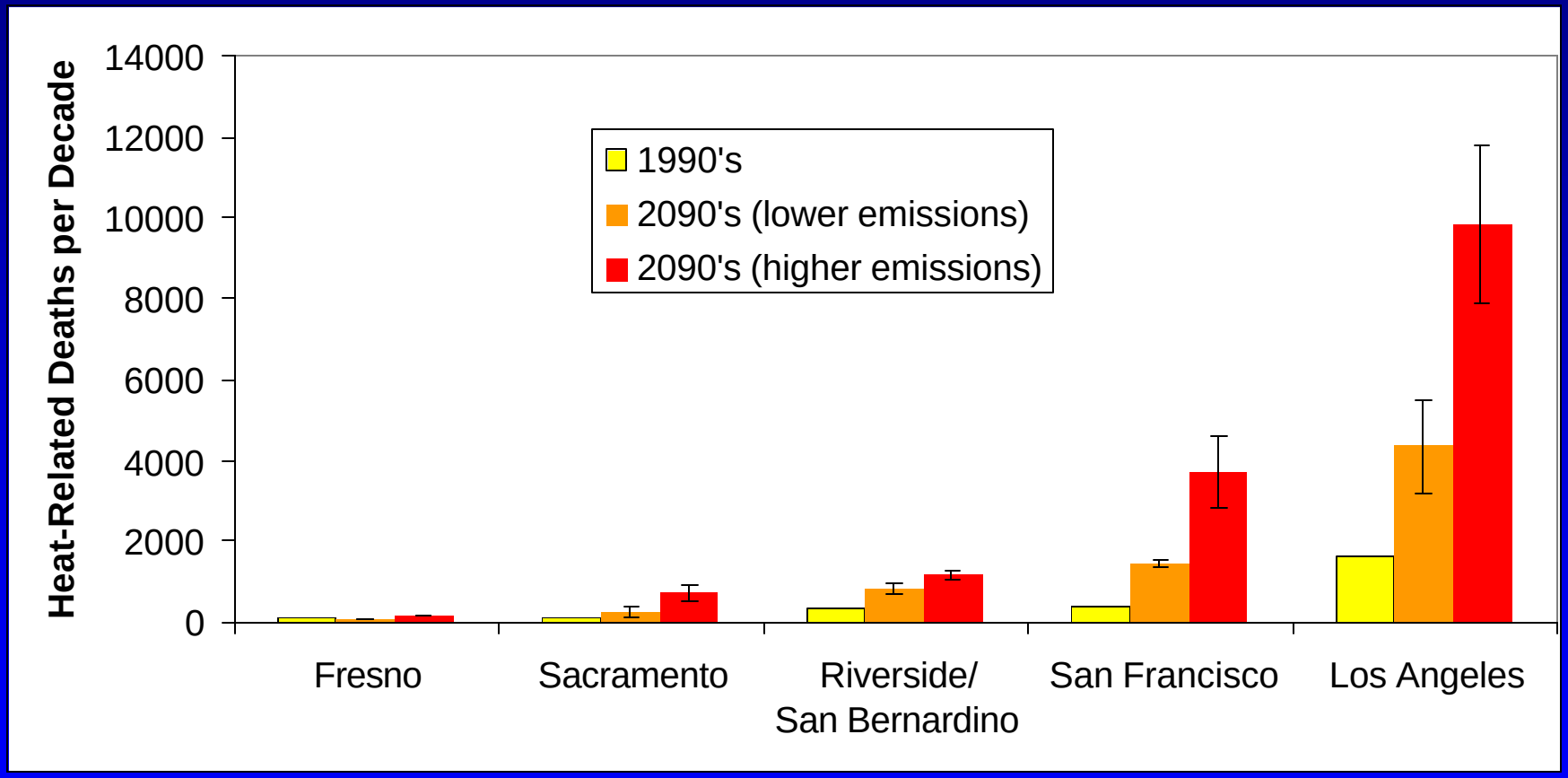
Infectious Diseases

Source: Harvard Medical School (2004)



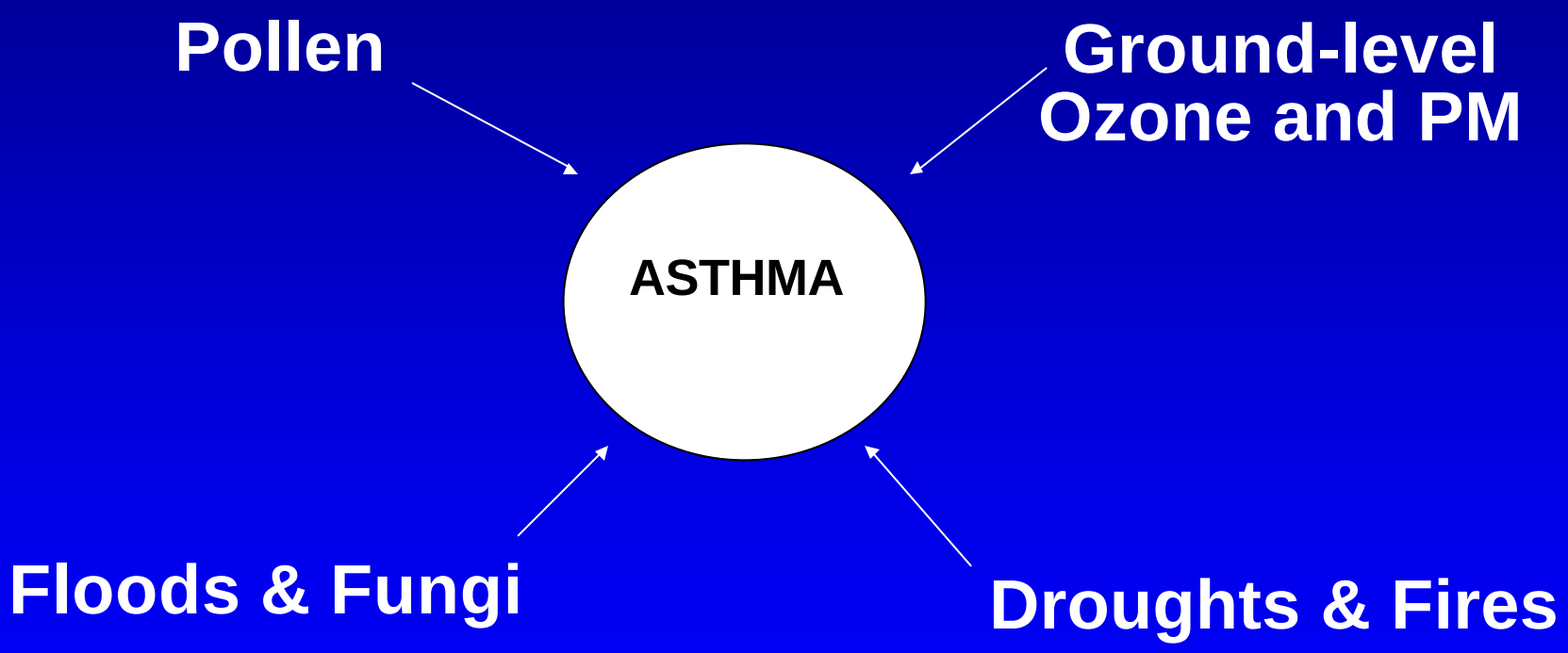
Sources: World Health Organization (2004), NASA (map),
Atmos. Environ., **38:** 1083-1085; 1087-1090 (2004)

Projected Deaths from Heatwaves



Sources: Proceedings of the National Academy of Sciences (2004),
Union of Concerned Scientists (2004)

Asthma and Climate Change



Source: Harvard Medical School (2004)

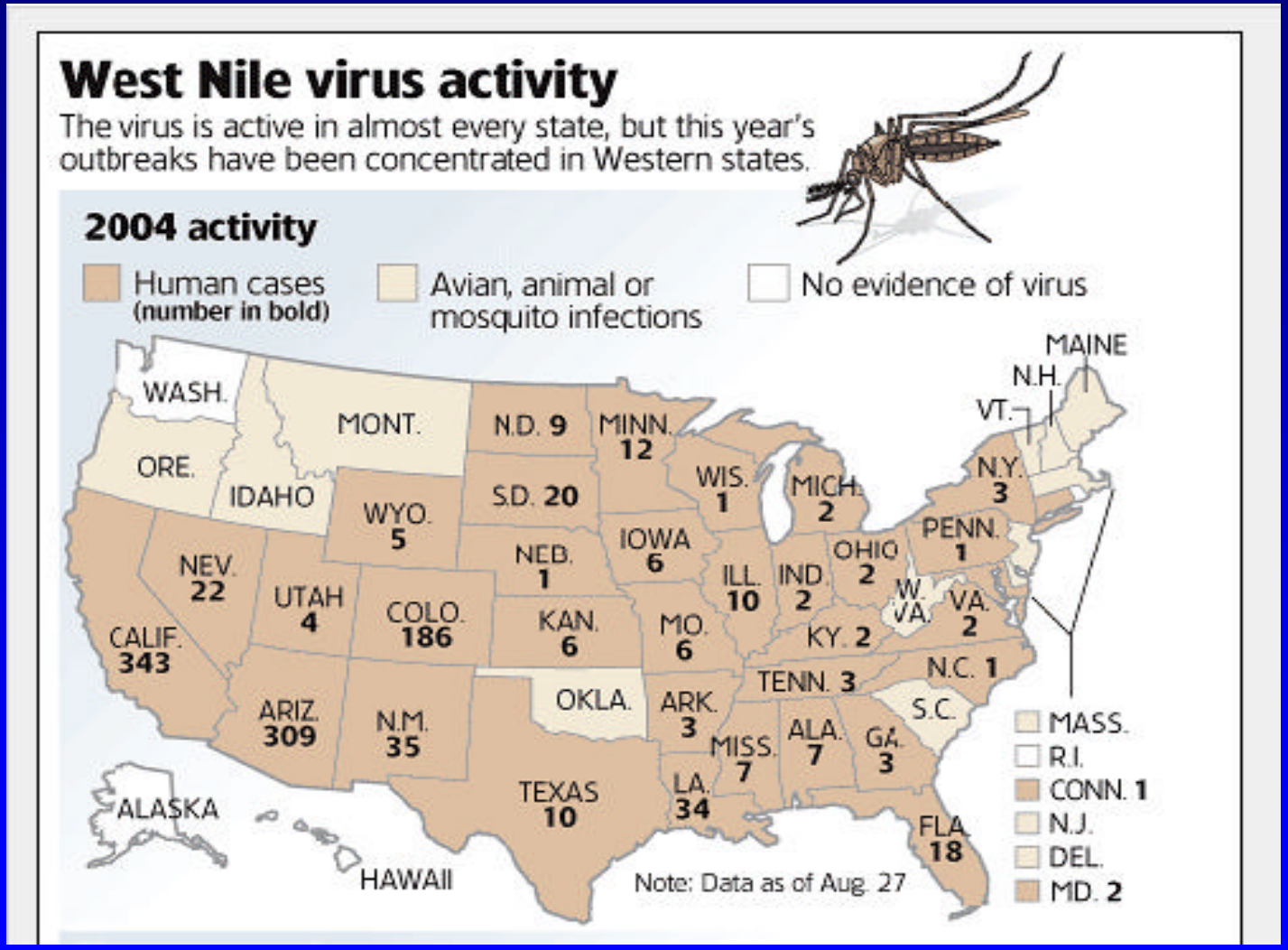
Ragweed and Climate Change

- Drought favors colonization
- Pollen increases with CO_2
- Common allergen in Eastern U.S.

Ambrosia artemisiifolia

Source: Harvard Medical School (2004)
Owen K. Davis (photo)

A Case Study: West Nile Virus



Source: Centers for Disease Control (2004)

Environmental Justice and Climate Change

- At greater risk to heatwave mortality
- More asthma attacks

Sources: New England Journal of Medicine **335**: 84-90 (1996)
Morbidity and Mortality Weekly Report, **53(7):** 145-148 (2004)
Harvard Medical School (2004)

Conclusions

- Climate change impacts
  - Heatwave-related deaths
  - Increased asthma effects
  - Increased allergen production
  - Increased infectious disease
  - Poor, minorities more affected