

Air Pollution, Climate Change, and Policy

Gretchen Goldman

ACPAC Meeting

17 June 2013



Characterization and Impact of Ambient Air Pollutant Measurement Error in Time-series Epidemiologic Studies

Gretchen Tanner Goldman

Ph.D. Defense

From Sources to Health Impacts



Emissions



Atmospheric concentrations



External exposure



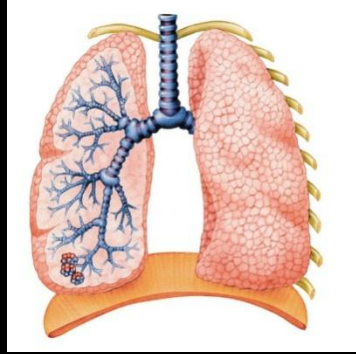
Internal dosage



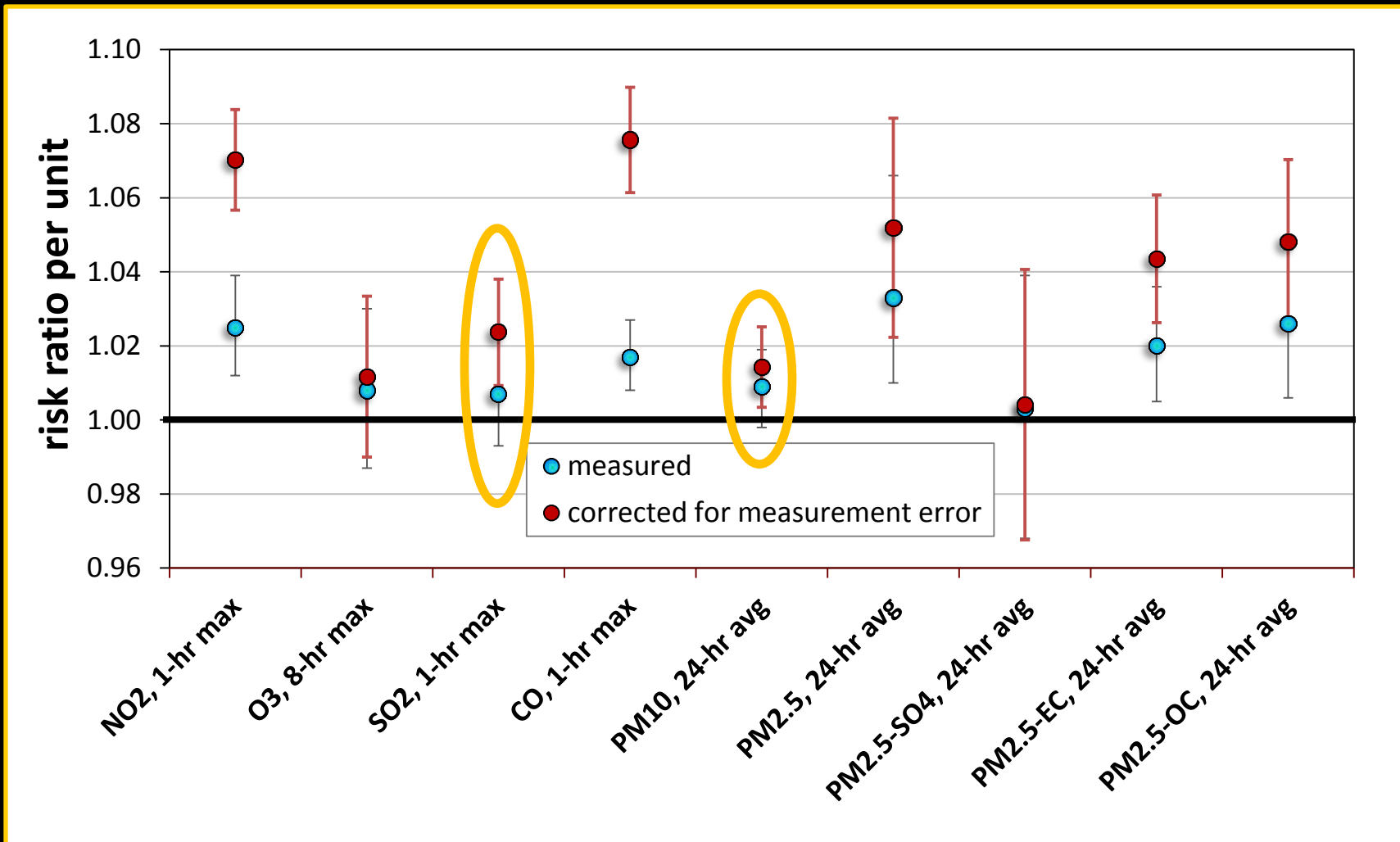
Toxicity



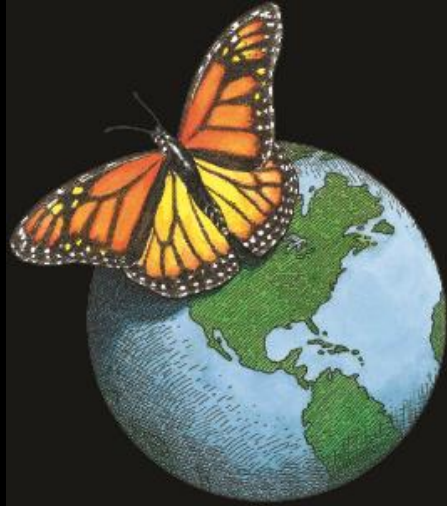
Biological response



Risk estimates corrected for measurement error associated with central monitor measurement

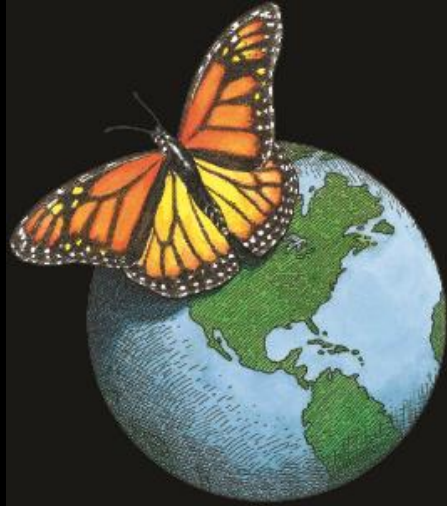


Cardiovascular disease emergency department visits assessed against ambient pollutant measurements at the Atlanta downtown monitor (Metzger et al., *Epidemiology*, 2004)



Union of Concerned Scientists

*The Union of Concerned Scientists puts **rigorous, independent science** to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical **analysis** and effective **advocacy** to create innovative, practical solutions for a healthy, safe, and sustainable future.*



Union of Concerned Scientists

**Food &
Agriculture**

**Nuclear Power &
Global Security**

**Global Warming
& Clean Energy**

**Center for Science
and Democracy**

**Clean
Vehicles**

Food & Agriculture

THE HEALTHY FARM: A VISION FOR U.S. AGRICULTURE

Industrial food production, which currently dominates U.S. agriculture, is a dead end. It damages air, water and soil, harms rural communities, and limits future productivity.

But there's a better way. Scientists call it agro-ecological agriculture. We call it **healthy farms**. Healthy farms can be just as productive as industrial farms—and a lot more sustainable.

Interact with our healthy farm to **learn more**—and then **take action** to help make our vision reality!



Clean Vehicles

Where Your Gas Money Goes

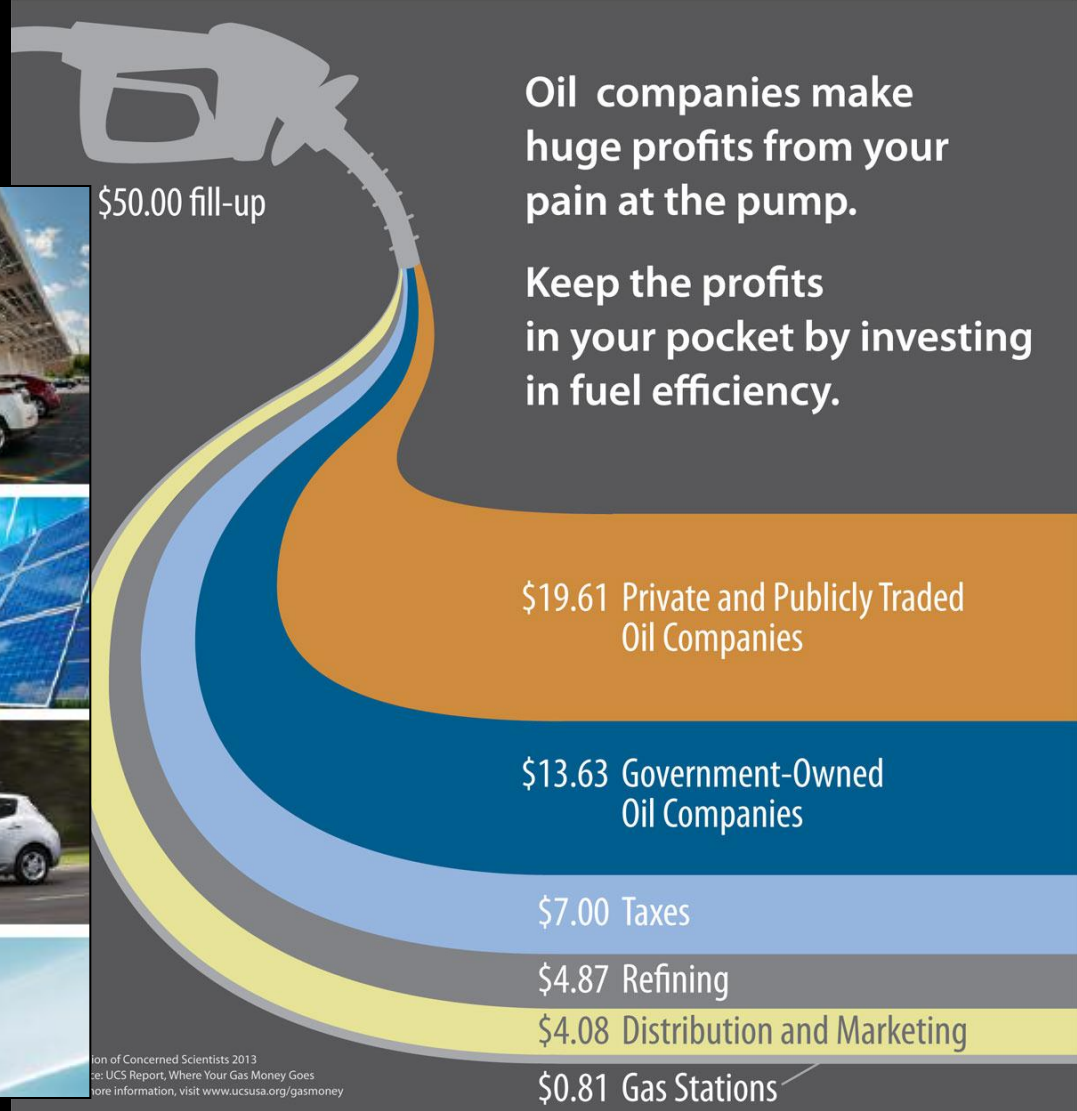
State of CHARGE



Electric Vehicles' Global Warming Emissions and Fuel-Cost Savings across the United States



\$50.00 fill-up



Oil companies make huge profits from your pain at the pump.

Keep the profits in your pocket by investing in fuel efficiency.

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Source: UCS Report, Where Your Gas Money Goes
For more information, visit www.ucsusa.org/gasmoney

Global Warming & Clean Energy



CLIMATE CHANGE
AND YOUR HEALTH

Rising Temperatures,
Worsening Ozone Pollution



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SCIENCE CONNECTIONS

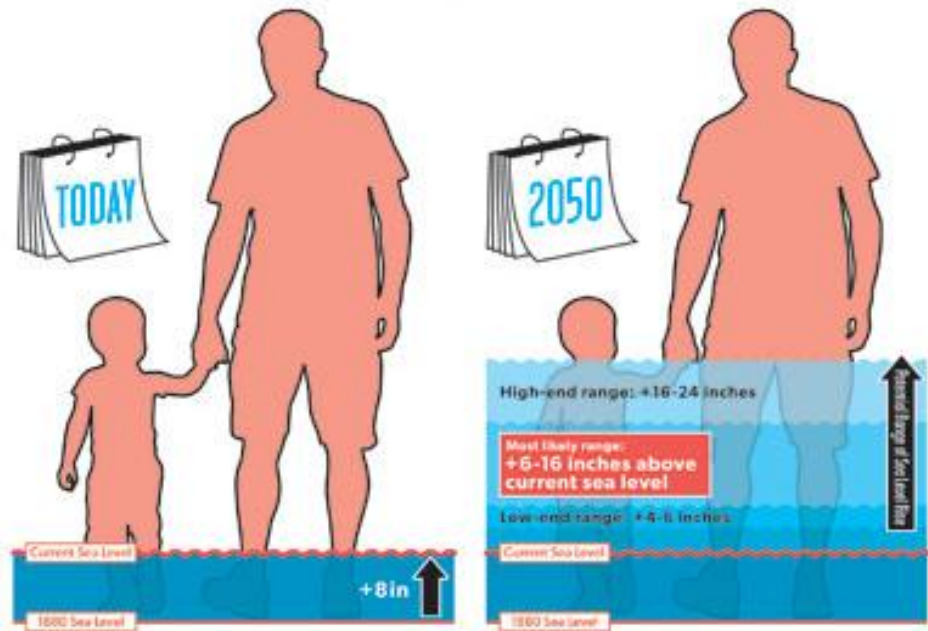
SEA LEVEL RISE & GLOBAL WARMING

FACT 3

Sea level rise is **accelerating**.



Global Average Sea Level Rise



Center for Science & Democracy

Science in an Age of Scrutiny

HOW SCIENTISTS CAN
RESPOND TO CRITICISM AND PERSECUTION



Union of Concerned
Citizens and Scientists for Environmental Solutions

A Climate of Corporate Control

How Corporations Have Influenced the
U.S. Dialogue on Climate Science and Policy

Improving Citizen Access to Government Scientific Information

Lewis M. Branscomb
Science & Democracy Forum

HOSTED BY
**The Center for Science and Democracy
at the Union of Concerned Scientists**
AND
The First Amendment Center

Tuesday, September 25, 2012 | 8:30 a.m. - noon
Newseum | 555 Pennsylvania Avenue NW | Washington, DC



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Citizens and Scientists for Environmental Solutions

