

# Environmental Defense Fund

A leading national nonprofit organization, Environmental Defense Fund represents more than 500,000 members. Since 1967, Environmental Defense Fund has linked science, economics, law and innovative private-sector partnerships to create breakthrough solutions to the most serious environmental problems. For more information, visit [www.edf.org](http://www.edf.org).

Nine regional offices with more than 300 scientists, economists, attorneys and other professionals nationwide.





Climate & Air



Land, Water & Wildlife



Health



Environmental Justice



Oceans

# Since the Beginning

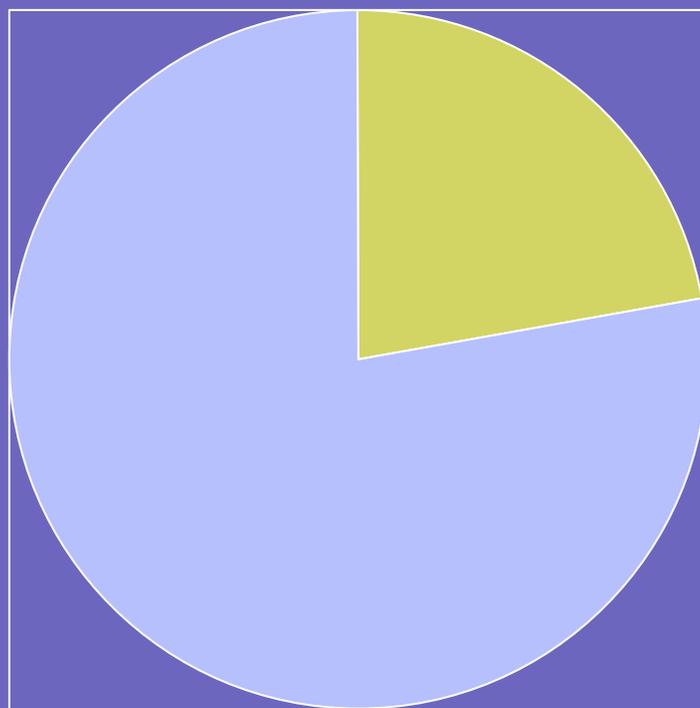
1. Science-based
2. Constructive alternatives
3. Putting solutions in place

The Power of Positive Solutions

# Environmental Defense Fund

- New / Different
- Cooperative / Non-confrontational
- Businesses / Uncommon allies
- Finding solutions / Getting results
- Bottom-line / Economy / Markets
- **Strong Science**

# Environmental Defense Fund



■ Attorneys

■ Scientists,  
economists, and  
policy specialists

- "...America's most economically literate green campaigners"  
- *The Economist*
- Michael Oppenheimer

# Nitrogen problems



DYING  
REEFS



RED TIDES &  
DEAD ZONES



ACID RAIN &  
BIODIVERSIT  
Y



FISH KILLS

N



OZONE/PM  
2.5



ALGAL BLOOMS



GROUNDWATER



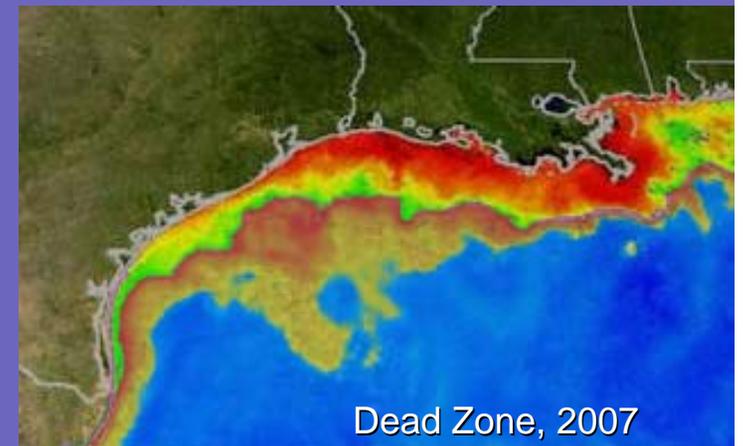
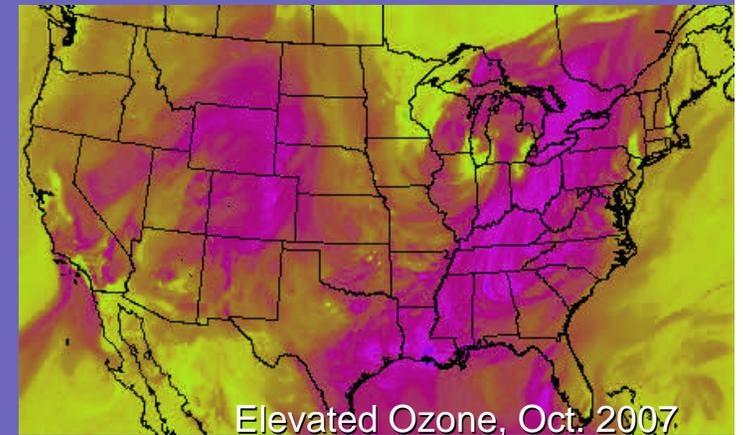
GLOBAL  
WARMING

# Environmental Defense Fund and Nitrogen

- Watershed pollution reduction trading
- Airborne delivery into estuaries
- Critical Loads designations
- Acid rain and NO<sub>x</sub>
- Hog waste management
- USDA incentive programs

# Everyone's problem

- Many lakes and estuaries
- Most large urban areas
- Most rural areas
- Most mountain areas
- Most coastal areas
- The biosphere



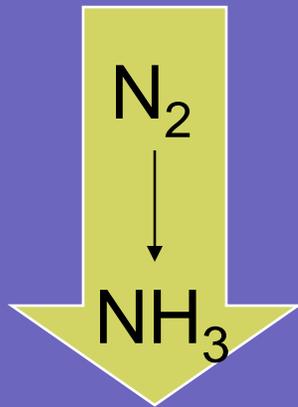
# Nitrogen Workshop

- Biogeochemistry
- Environmental economics / Policy
- Agricultural practices

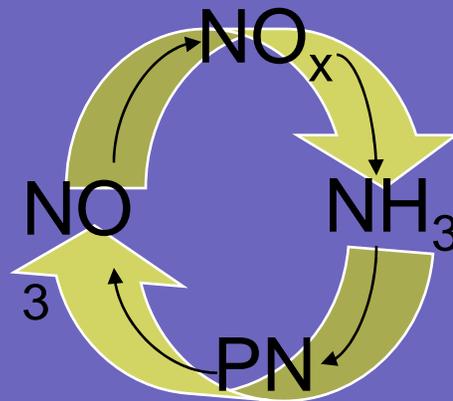
# Workshop recommendations

## -Principles-

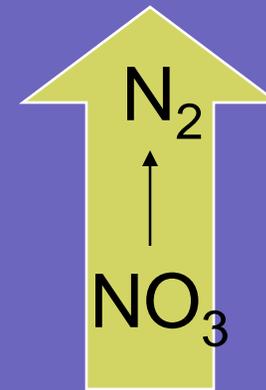
- Integrated management approach
  - All forms of N in air, water, soil



Control Input



Optimize Use



Maximize Output

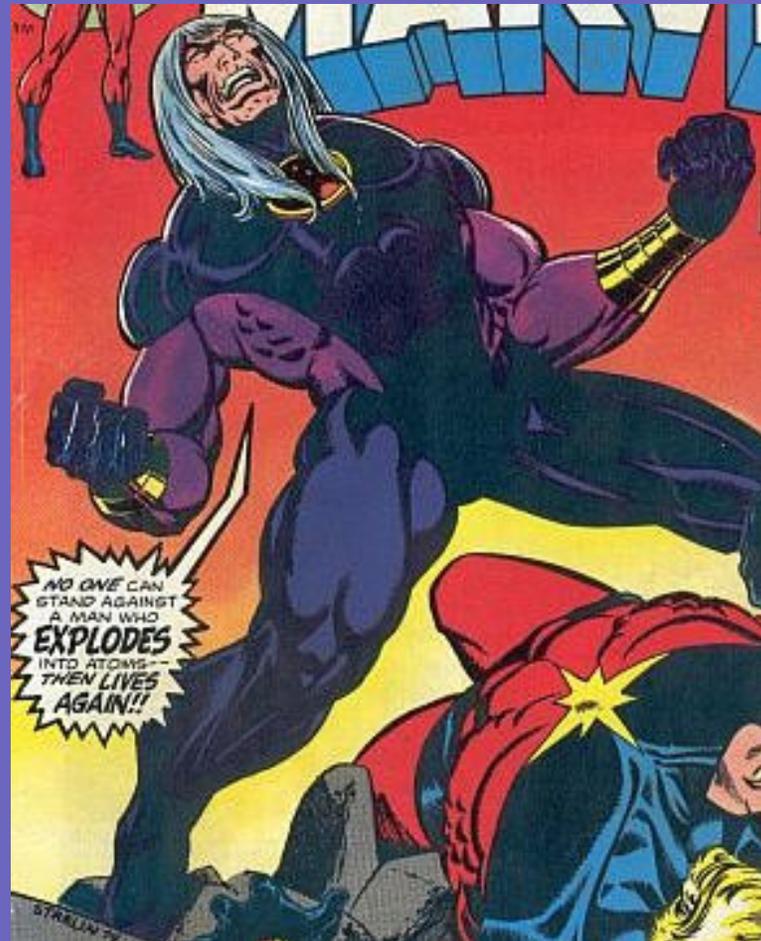
# Workshop recommendations

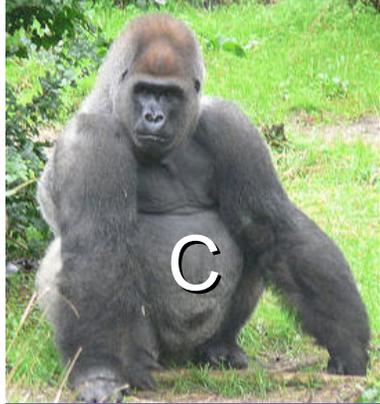
## - first targets -

1. Aggressive NGO leadership,
2. Increase public awareness,
3. Nitrogen inventory,
4. Integrated N pilot projects,
5. International scale

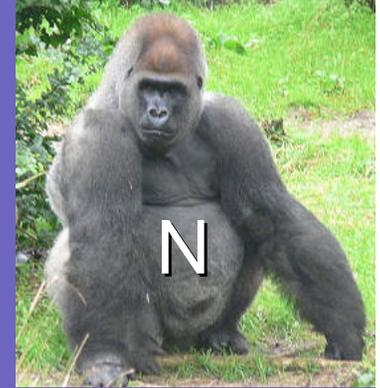
N-ovation

# Two faces of nitrogen





# EDF opportunities



- Leveraging the scientific consensus to lay the foundation for global nitrogen governance
- Campaign for nitrogen sustainability
- **Non-CO<sub>2</sub> greenhouse gas reduction programs**
- Expand conservation incentives programs
- Valuation of ecosystem services
- Double-dipping and double-teaming: using existing policies and programs to address nitrogen

# Actions . . .

1. Establish an expert advisory panel to build scientific consensus
2. Improve the national inventory of non-CO<sub>2</sub> greenhouse gases
3. Broaden public awareness about the health effects
4. Launch pilot projects
5. “Conservation Partnerships” and university collaborations to build the technological and economic case for reducing reactive nitrogen.
6. Coordinate emission reduction efforts