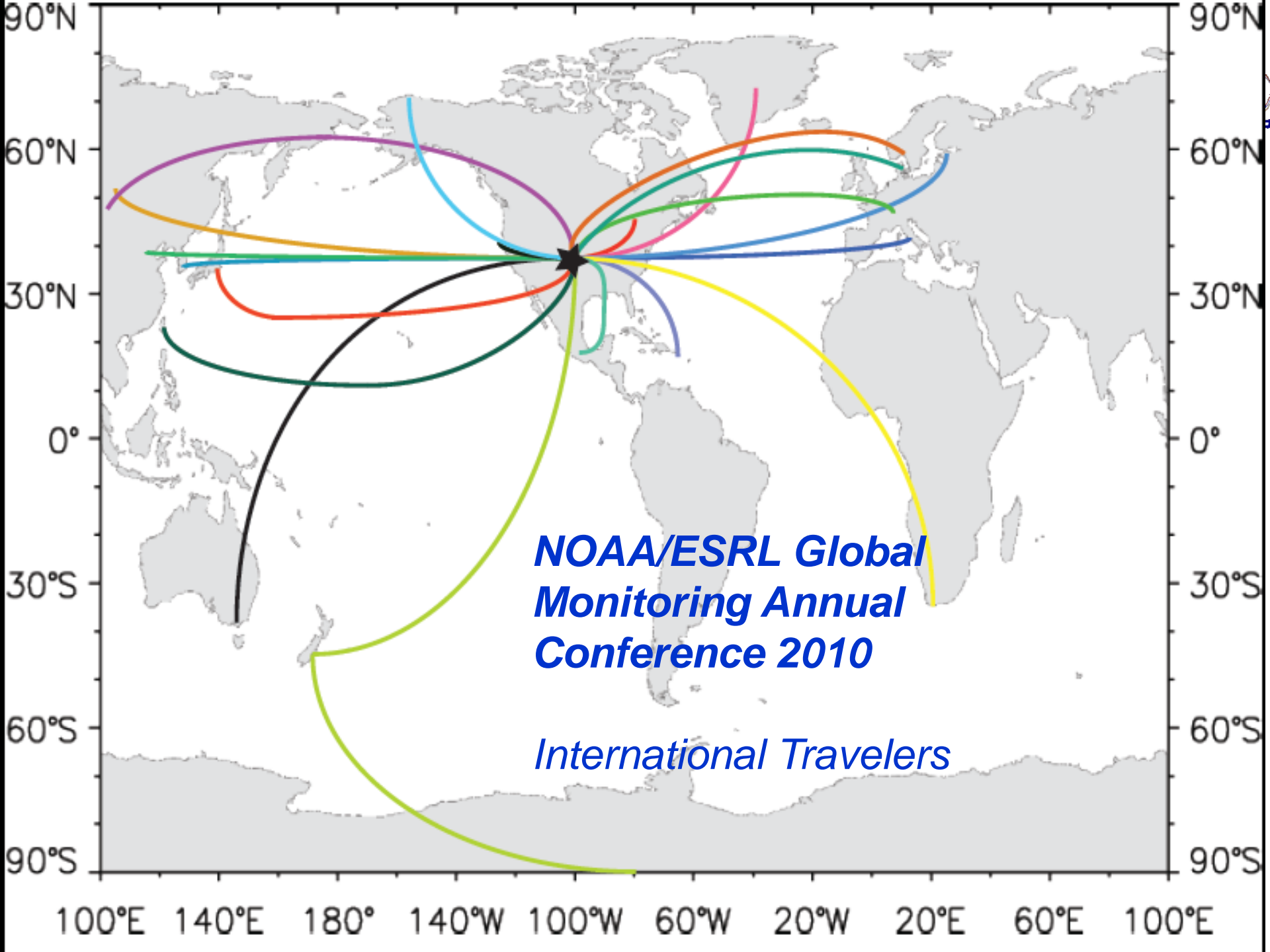




# NOAA Earth System Research Laboratory Global Monitoring Annual Conference

*“Observational Contributions for Climate Services”*

May 19-20, 2010





# David J. Hofmann



Director of Long-Term Global  
Monitoring for NOAA 1996-2007



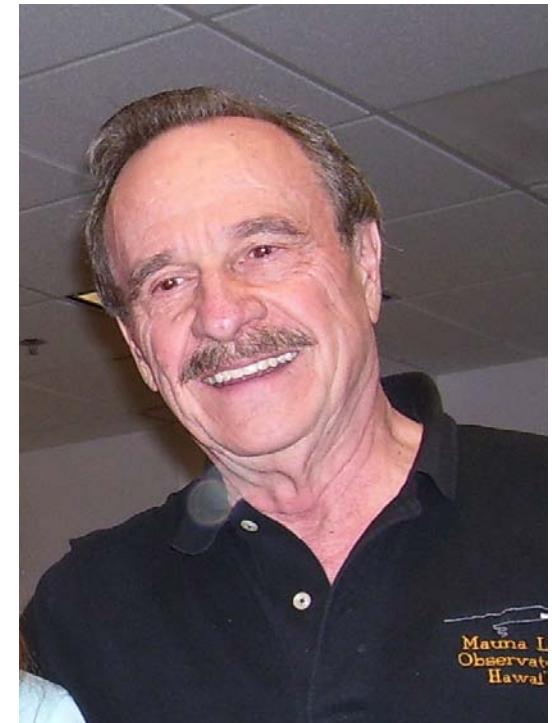
Scientist

Leader

Colleague

Mentor

Friend







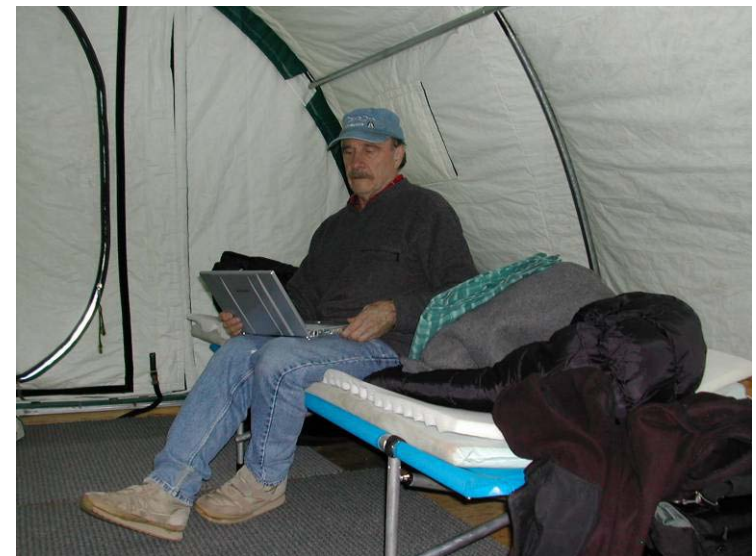
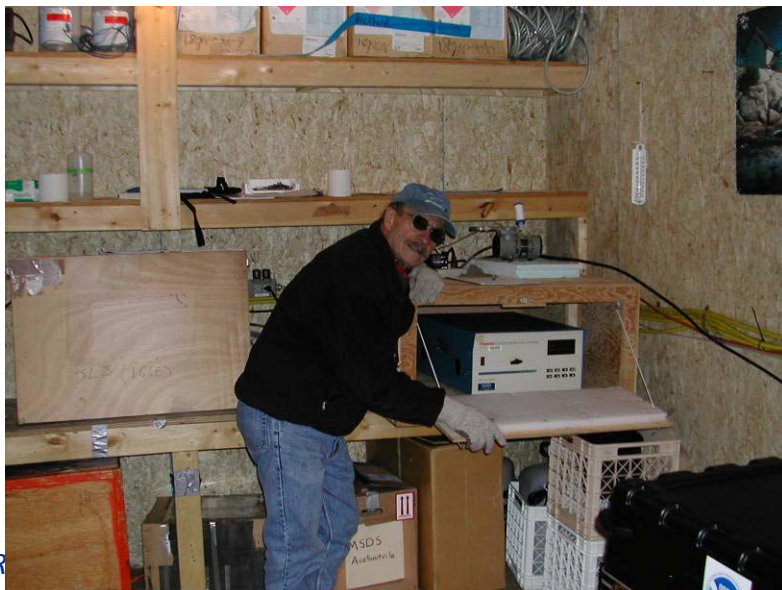
# First and foremost – a scientist

Inquisitive nature

Love for adventure

Skill with numbers

Attention to detail





# Doing What it Takes . . .







# James T. Peterson



Director of Long-Term Global  
Monitoring for NOAA 1981-1990

... a great  
family man, a  
friend, a  
scientist, and  
so much more

...

*Bernard  
Mendonca 2010*





# Welcome, Observatory Staff!!




- SUM – (Sonya Wolter)
- BRW – Steve Grove
- THD – Michael Ives
- MLO – (Russ Schnell)
- SMO – (Brian Vasel)
- SPO – Mark Weekly,  
Christine Schultz




<b>Data Products</b>
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<a href="#">Ozone Depleting Gas Index (ODGI)</a>
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## Data Products and Visualization

 **Annual Greenhouse Gas Index**  
The AGGI index that provides an easily understood and scientifically unambiguous point of comparison for tracking annual changes in levels of atmospheric greenhouse gases.

 **CarbonTracker**  
CarbonTracker is a tool designed to keep track of time dependent emissions and uptake of atmospheric carbon dioxide (CO<sub>2</sub>), both natural and manmade.


 **GLOBALVIEW**  
The GLOBALVIEW data products are designed to enhance the spatial and temporal distribution of atmospheric observations of CO<sub>2</sub>, CH<sub>4</sub> and other related greenhouse gases.

 **Ozone and Water Vapor**  
View data of the South Pole Ozone hole, plus profiles of ozone from Greenland, and water vapor from Boulder.


 **Radiation**  
View plots of various types of solar radiation measurements from around the globe.

 **Atmospheric Transport**  
View recent trajectories from some of the global GMD observations sites.

 **Observation Sites**  
Information and maps of sites where GMD makes measurements.

 **Ozone Depleting Gas Index**  
The ODGI is an index that relates changes in atmospheric amounts of ozone depleting gases and the recovery of the stratospheric ozone layer.

 **Interactive Atmospheric Data Visualization**  
A data exploration tool for carbon cycle trace gas measurements.

 **Current Trends in CO<sub>2</sub>**  
View graphs and get data for the most recent CO<sub>2</sub> atmospheric data at Mauna Loa, Hawaii and for global averages.

 **Trace Gases**  
View graphs from the CATS trace gas measurement system.

 **Aerosols**  
Plots of measured aerosol properties.

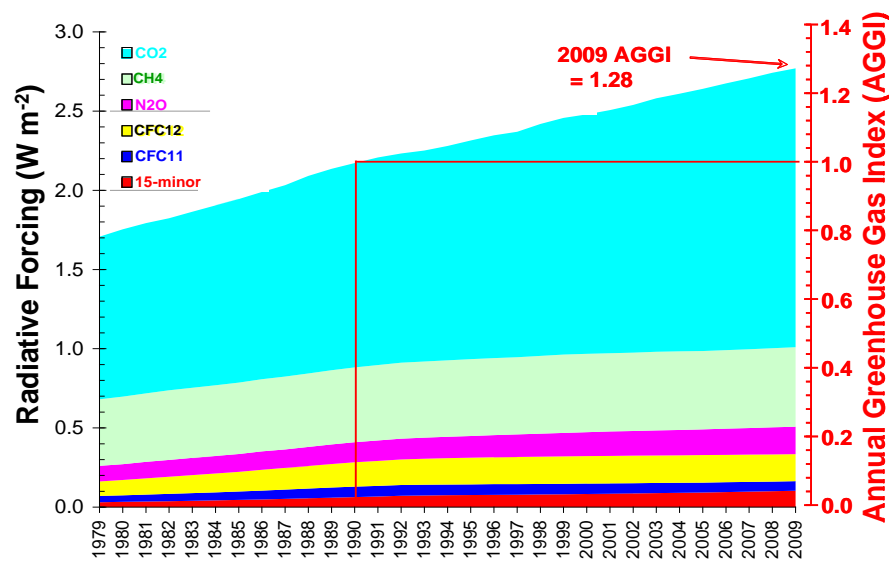
 **Calibrations of Reference Gases**  
Results of CO<sub>2</sub> and CH<sub>4</sub> calibrations on reference gas tanks used for atmospheric measurements.

 **Station Meteorology**  
Most recent weather information from the GMD observatories and a few other locations.



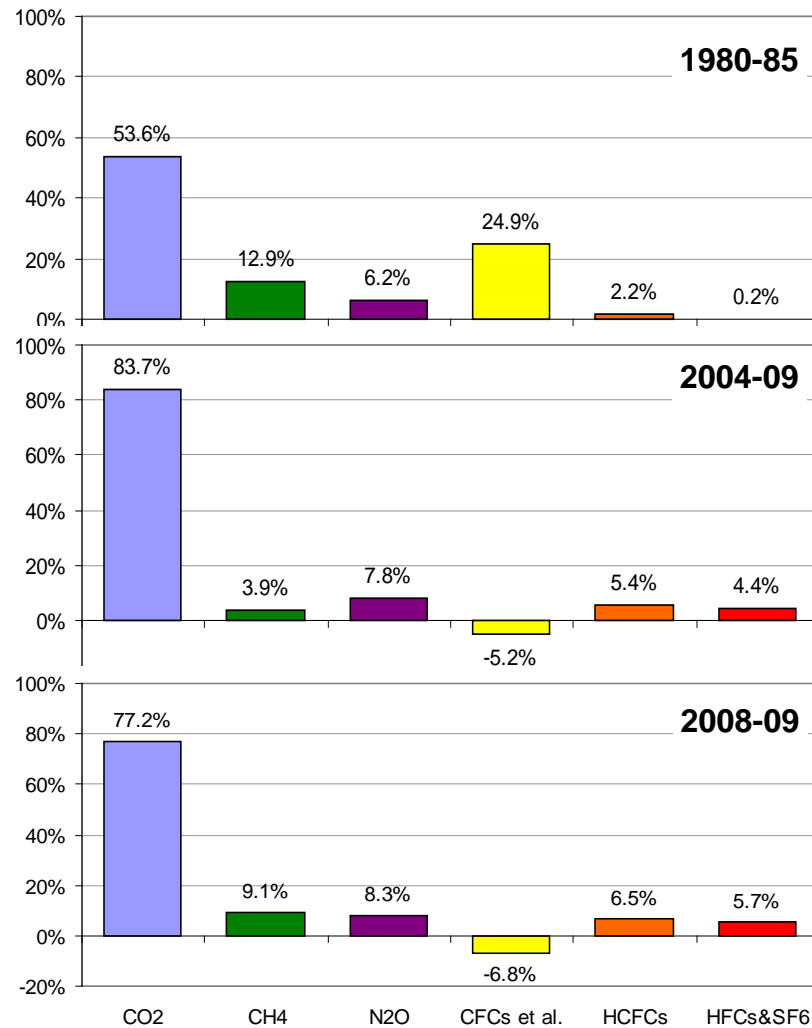
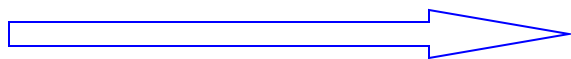


# Updated Annual Greenhouse Gas Index – Radiative forcing up by 28% since 1990.



(CO<sub>2</sub> + N<sub>2</sub>O + CH<sub>4</sub> = 88% of radiative forcing by long lived GHGs)

Increases in CH<sub>4</sub> and other gases taking a larger share of the annual increase in recent years.





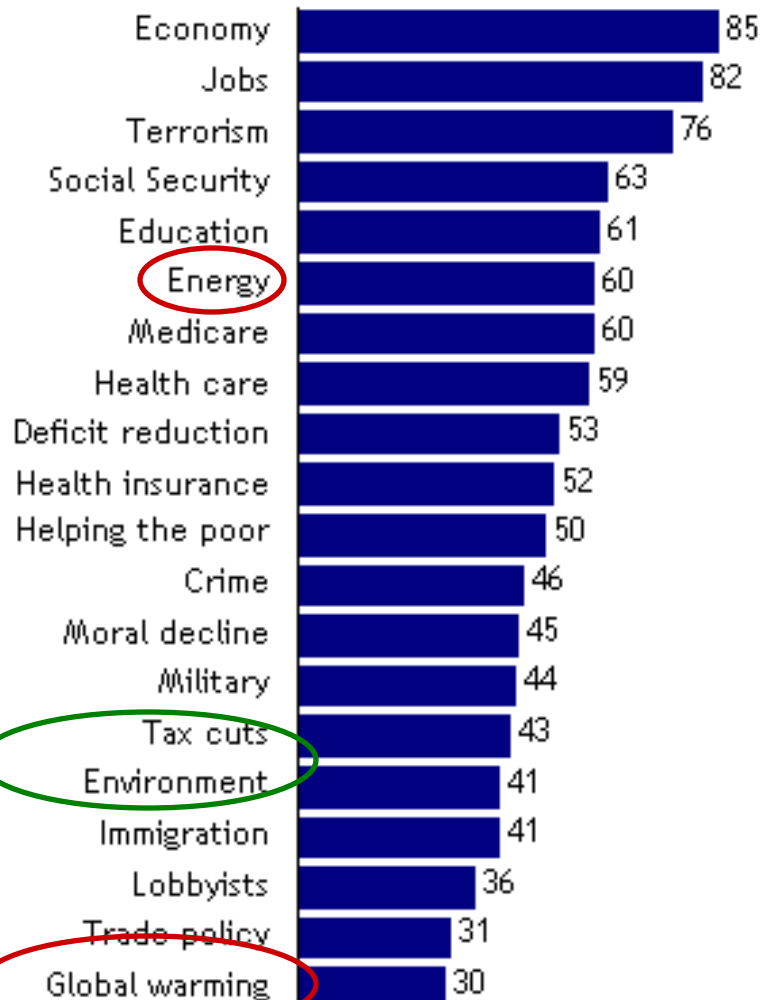
# But there are thorns among the roses

(Pew Research Center Polls)



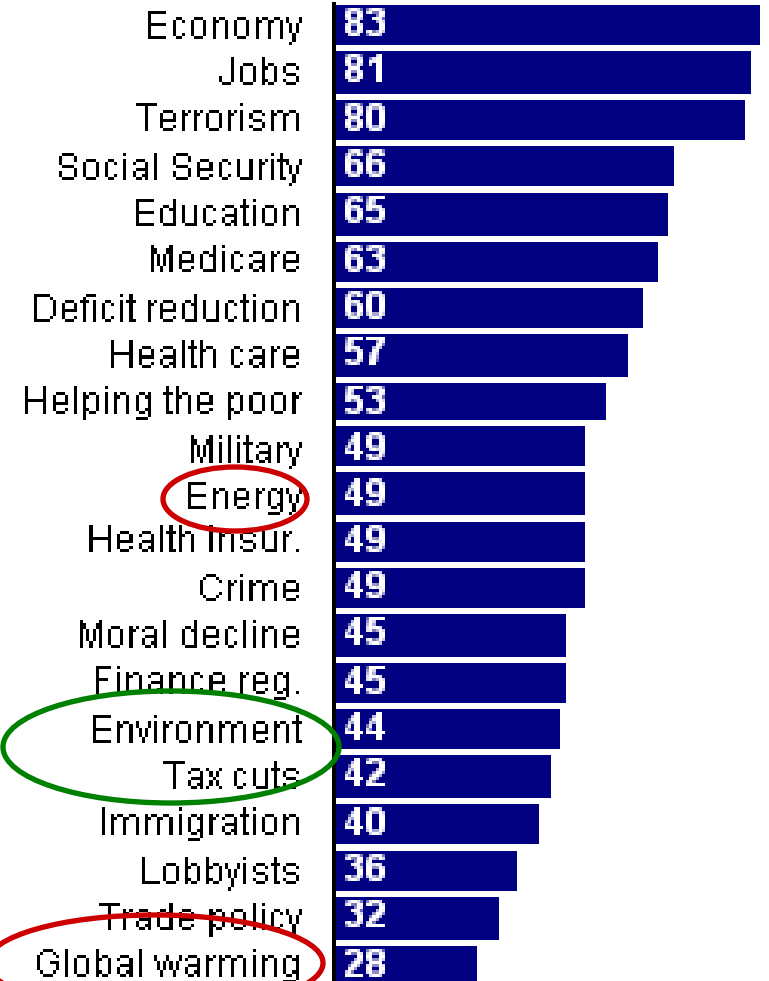
## Top Priorities for 2009

Percent rating each a "top priority"



## Top Priorities for 2010

% rating each a "top priority"



Q30a-w.



How can we best communicate our science?

How can we best use observational records to support services?