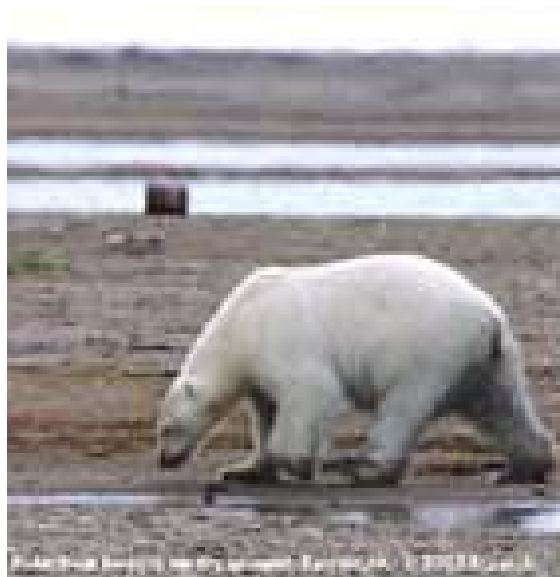


# FOCUS

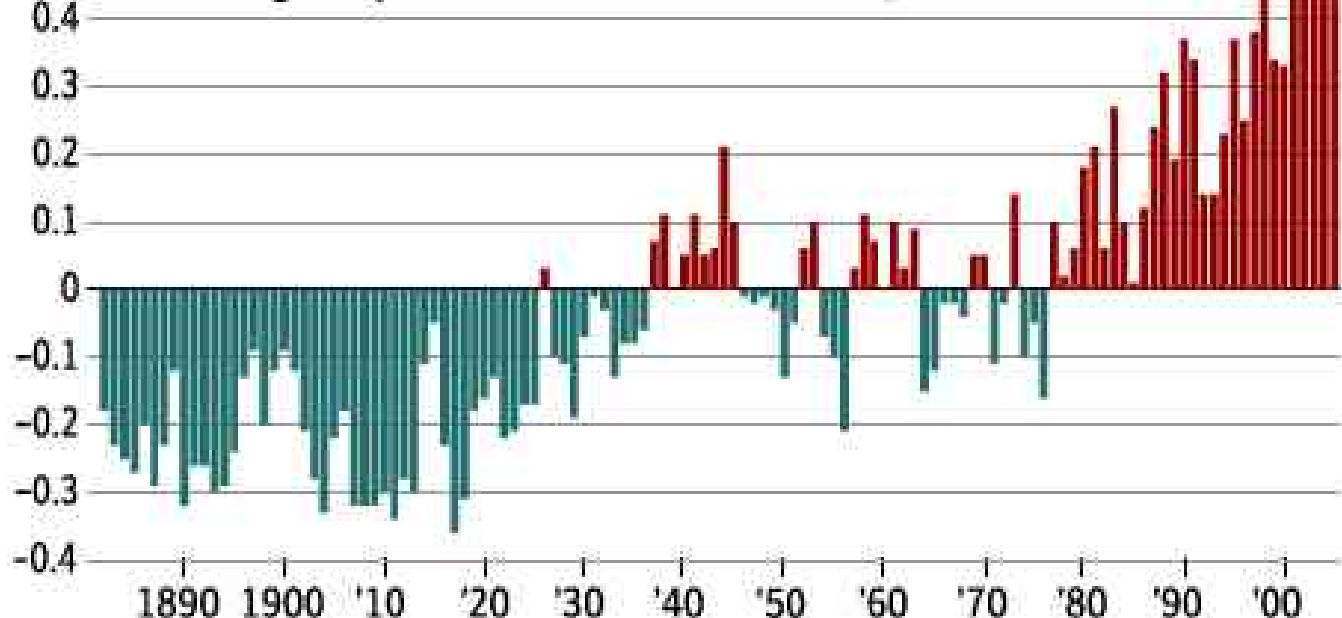
## THE NATION

## Global Warming Solutions for America



Dr. Eban Goodstein, Lewis & Clark College, Portland, Oregon

**0.6 – Differences in global land-sea temperature, in Celsius**  
(How much warmer or colder a year was compared with the average temperature between 1951 and 1980)



**Hottest Years on Record**

1. 2005
2. 1998
3. 2002
4. 2004
5. 2003
6. 2001
7. 1997

A NASA study concluded that 2005 was the warmest year on record. Two other studies differed slightly but indicated the Earth's temperature is rapidly warming.

SOURCE: Goddard Institute for Space Studies

GRAPHIC: The Washington Post - December 16, 2005

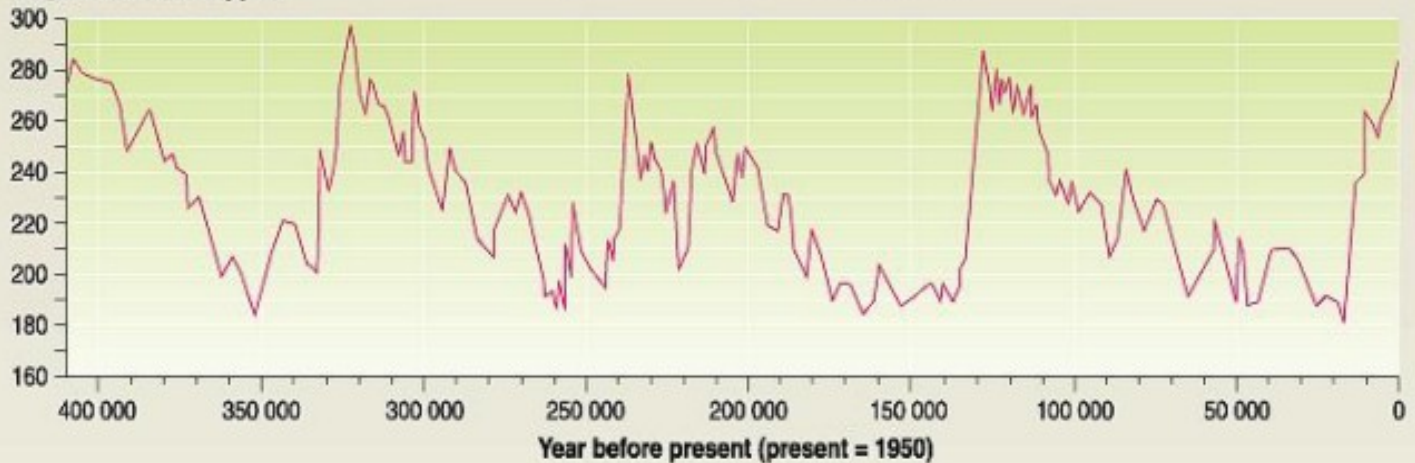


# The Next Century

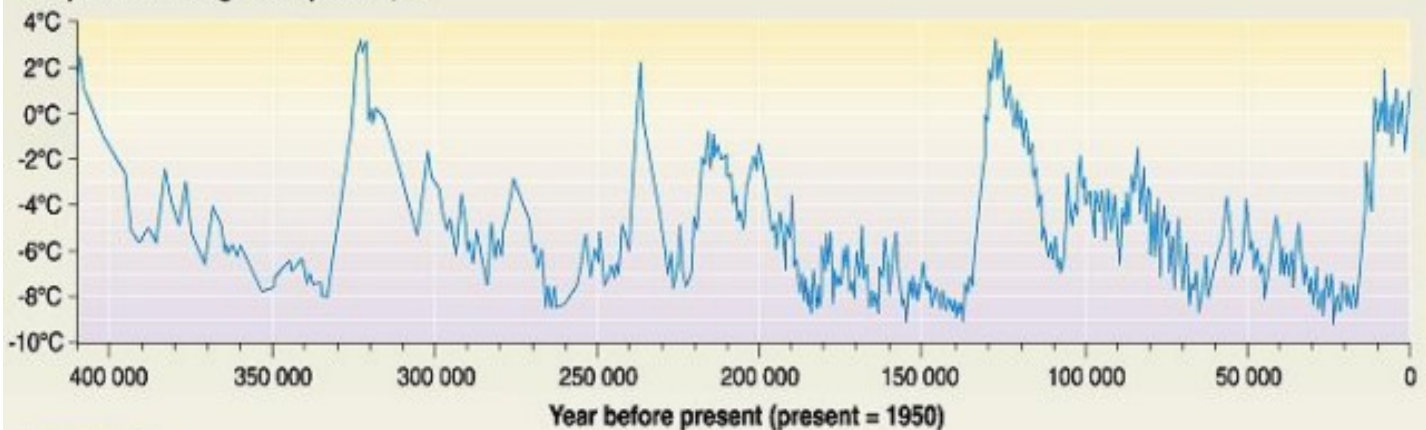
- Warming of 2.5-10.5 degrees F
- Low end impacts: serious but manageable
- High end impacts: catastrophic

## Temperature and CO<sub>2</sub> concentration in the atmosphere over the past 400 000 years (from the Vostok ice core)

CO<sub>2</sub> concentration, ppmv



Temperature change from present, °C



GRID  
Arendal UNEP

GRAPHIC DESIGN : PHILIPPE REKACZEWCZ

Source: J.R. Petit, J. Jouzel, et al. Climate and atmospheric history of the past 420 000 years from the Vostok ice core in Antarctica, *Nature* 399 (3/June), pp 429-436, 1999.

# Portland, Oregon





# Local Impacts

The Eugene Register-Guard, April 28, 2001

## FAMILIES OR FISH

### Farmers fight for water rights

**Courts, lawyers inside and protesters outside demand the feds leave Klamath water running.**

By BILL BISHOP  
The Register-Guard

A federal judge in Eugene sued dozens of farmers Friday from lawyers for Klamath Basin farmers and ranchers who are challenging a federal plan to withhold water by irrigation and demand use to protect endangered fish through this year's drought.

The new plan will shut off the waterline to 12,000 acres of farmland down river this year, farmers said.

The farmers are suing U.S. District Judge Ayo Aden in a court injunction asking the plan and restoring at least some of the irrigation water. Aden plans to rule next week.

Lawyers representing Indian tribes, conservationists and commercial fishermen are denouncing the federal government's plan. The government's lawyers contend that federal law requires

streambed and underground flow to get through the plan to the water.

About 100 demonstrators, mostly farmers and ranchers from Southern Oregon, gathered and carried signs outside the federal courthouse here to voice anxiety about losing their livelihoods if the federal plan is enforced.

Their suits were dismissed by a federal judge's ruling earlier this month that the U.S. Farmers of the Klamath violated the Endangered Species Act last year by ignoring the water needs of the reared and native salmon in the Klamath River. U.S. District Judge Richard Brown Armstrong barred release of water as irrigation for fish in its place to protect the fish.

The water plan will bring "the collapse of a whole community," said Loretta Harbo, whose family has farmed in the basin since she's getting a Spanish land grant generation ago.

More than 1,000 jobs and \$200 million in lost milk and revenue are at stake, but the economic impact will strike as it ripples through six towns and more people living in agricultural business in the area, she said.

Turn to WATER, Page 12



"Where am I going to get food for my kids? No work, we won't be able to eat."

RAJIBO RASCOA  
A young farm worker

Sharon -  
Sashel-Sabank, 9,  
a BAP member  
stands back  
through mask  
forming  
protesters in the  
Klamath Basin and  
the Salween  
participate in the  
protest Friday.



Río Rimac en temporada seca

# Darfur: Climate Change as a Factor

**BRITISH HOME SECRETARY JOHN REID:**

**"ENVIRONMENTAL CHANGES MAKE THE EMERGENCE OF VIOLENT CONFLICT MORE RATHER THAN LESS LIKELY. THE BLUNT TRUTH IS THAT THE LACK OF WATER AND AGRICULTURAL LAND IS A SIGNIFICANT CONTRIBUTORY FACTOR TO THE TRAGIC CONFLICT WE SEE UNFOLDING IN DARFUR. WE SHOULD SEE THIS AS A WARNING SIGN."**

# Global Impacts

- The BAD:  
(worse as it warms more)  
Water shortages from snowpack loss... Increased floods and droughts... Extinction of many species & ecosystems... Spread of pests & diseases... More heat related illnesses and deaths... More intense hurricanes and typhoons





# Global Impacts

- The GOOD (<4° F)  
Longer growing seasons...  
fewer cold-related deaths...  
more good golf days?
- The SCARY



# Catastrophic Impacts

- Ocean acidification: potential collapse of marine foodchains
- Fire-driven deforestation of Amazon: accelerated warming
- Methane release from tundra: accelerated warming
- Continental Ice Sheet Collapse: sea level rise of 35-40 feet  
(Sea-level rise of 3 feet would displace tens of millions)



**1979-2002  
Increase in Greenland Melt Zone**

[The Arctic Climate Impact Assessment 2004](#)

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

**Antarctica 2005**



[www.net.org/warming/stills.html](http://www.net.org/warming/stills.html)



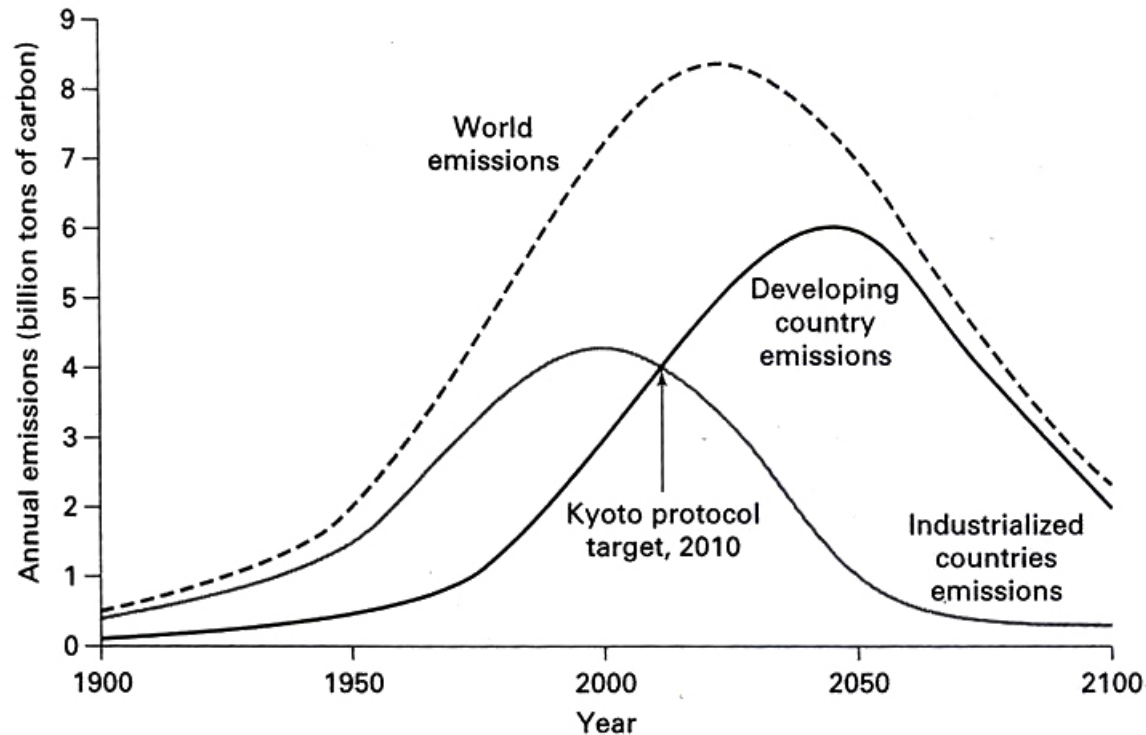
**“How far can it go?** The last time the world was three degrees warmer than today – which is what we expect later this century – sea levels were 25m higher. So that is what we can look forward to if we don't act soon...I think sea-level rise is going to be the big issue soon, more even than warming itself...

**How long have we got?** We have to stabilize emissions of carbon dioxide within a decade, or temperatures will warm by more than one degree. That will be warmer than it has been for half a million years, and many things could become unstoppable....We don't have much time left.”

**Dr. James Hansen**, Director, NASA Goddard Institute for Space Studies.

– *The Independent* 2/ 17/2006

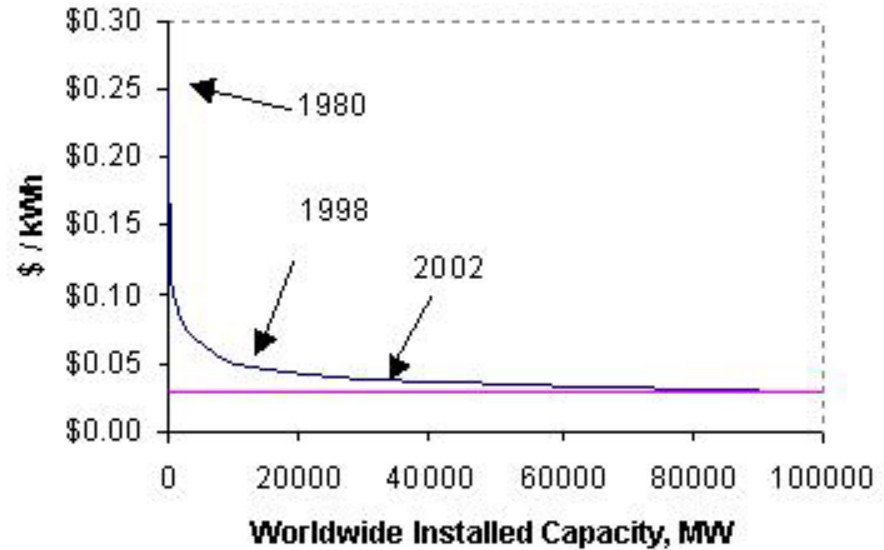
# Emission Reduction Profile to achieve 450 PPM



**FIGURE 23.1** Stabilizing CO<sub>2</sub> Concentrations at 450 ppm

*Source:* Bernow et al. (1999). Used with permission.

# The model for a clean energy revolution



Source: Goodstein 2004





# FOCUS

[www.focusthenation.org](http://www.focusthenation.org)





## Global Warming Solutions for America

### Advisory Board

Professor Bunyan Bryant  
Sen. Gary Hart (D-Co)  
Dennis Hayes  
Professor John Isham  
Hunter Lovins  
Professor William Moomaw  
Professor David Orr  
Billy Parish  
Hon. Claudine Schneider (R-RI)  
Professor James "Gus" Speth

### Participating Institutions (partial list)

Lewis & Clark College  
Catlin-Gable School  
Cornell University  
Middlebury College  
Oberlin College  
Linn Benton Community College  
San Francisco State University  
University of Central Florida  
University of Colorado, Denver  
University of Portland  
University of the South  
University of Texas  
Wellesley University

Focus the Nation's global warming travel emissions are offset by Cool Tags from Clif Bar

