

### LSE Public Lecture

# Cool It: global warming and getting our priorities straight

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### **Cool It** How we should tackle global warming and do good in the world

### Bjørn Lomborg

www.lomborg.com

### Two important points

Need sense of proportion - Doomsday is not nigh - We don't have to act in desperation If we only hear one – and exaggerated – side, we're unlike to make good policies Many problems Not enough money Prioritization

## **Global** warming

### What to do?



Global warming is real and man-made

### Climate change is real

On the agenda, thanks to Al Gore The best information from the UN **Climate Panel**, IPCC Likely temperature rise by 2100  $-2.6^{\circ}C$  (4.7°F) Total cost of \$15 trillion -0.5% of 21<sup>st</sup> century \$3,000 trillion Need *smart* strategy

2

Consequences vastly exaggerated Leading to bad judgment

### Al Gore and the standard story

### Gore and many others tell us

- Planetary emergency
  - "we have just ten years to avert a major catastrophe that could send our entire planet into a tail-spin of epic destruction involving extreme weather, floods, droughts, epidemics and killer heat waves beyond anything we have ever experienced."

### Four central issues

- Heat deaths
- Sea level rise
- Hurricanes
- Malaria

### 1 Higher mortality with heat?

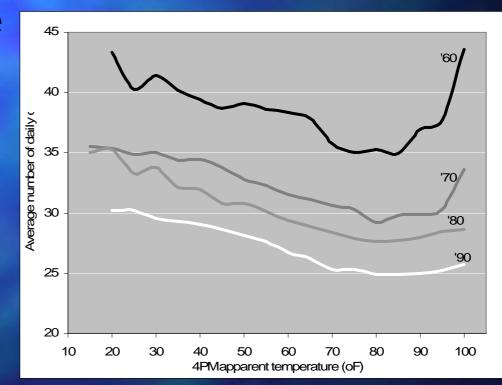
Heat and cold deaths – In the UK 2,000 more heat deaths by 2050 But fewer cold deaths ■ 20,000 fewer This also holds true globally Net more than 1.4 million *fewer* deaths by 2050

Bosello, Roson, & Tol, 2006; Keatinge & Donaldson, 2004; Keatinge et al., 2000

## 1 Higher mortality with heat?

Should we not help people the best possible way?

- Kyoto?
- Airconditioning in Philadelphia



Davis et al., 2002

### 2 Sea level rise

Sea levels will rise
 But not a catastrophe

 1 foot (30cm) over the next 100 years
 Not Al Gores' 20 feet (6 meters)
 1 foot the last 150 years
 Did we worry?

### 2 Impact of sea level rise

Getting flooded now

 10 million people

 1 foot sea level rise in 2100 (no change)

 100 million people
 1 foot sea level rise in 2100 (richer)
 1 million people

Nicholls, 2004; Nicholls & Tol, 2006

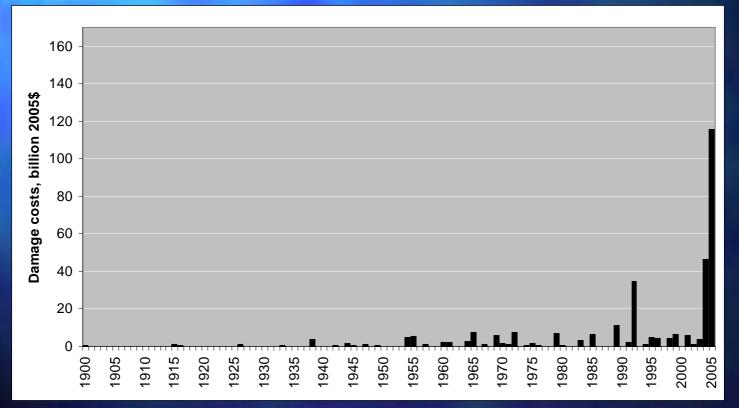
### 2 Saving the Maldives

If we just look at 1 foot increase – Flood 77% of the Maldives at 121% GDP – Yet at 0.04% of GDP they can safeguard everything but 0.0015% of dry land At lower emissions Lower sea level rise but also lower wealth About three times more dry land loss

Nicholls, 2004; Nicholls & Tol, 2006

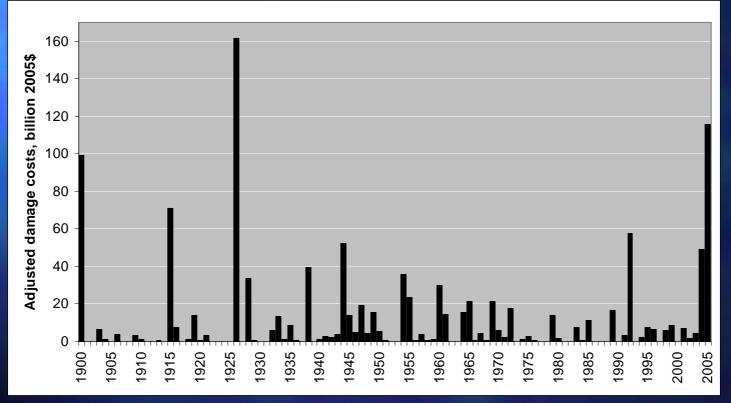
# 3 Hurricanes: ever costlier in the US

Damage costs from hurricanes in the US



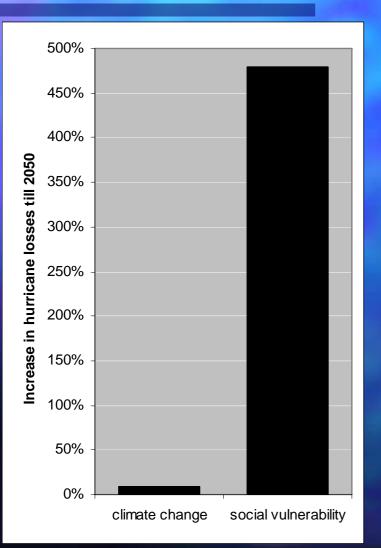
## More people with more goods in exposed areas

# Damage costs if all hurricanes had hit the US in 2007



Pielke et al. 2007

# Hurricanes: Fix climate or social vulnerability



If we stop climate change – Prevent 10% damage increase If we end social vulnerability – Prevent 480% damage increase Which knob should we focus on?

Pielke 2005

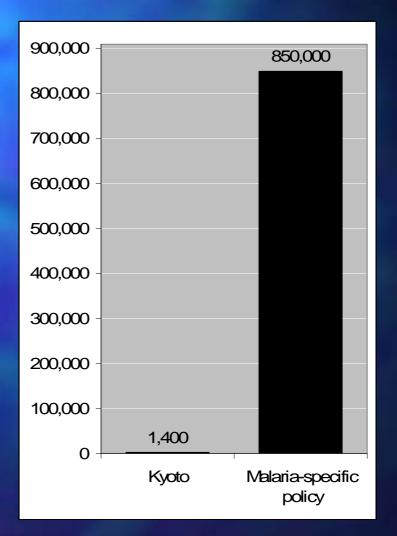
### More malaria from heat?

Malaria is weakly connected to heat

- But much more dependent on wealth and treatment
  - Malaria endemic in Europe & US in little ice age
    - Even malaria in the Arctic circle
    - 20% malaria in Moscow in the 1940s
  - As we got richer, we dealt with malaria
    - Even as temperatures increased
  - Thus, richer people will not have malaria
  - Is climate the right knob to turn?

### Which knob to tackle malaria?

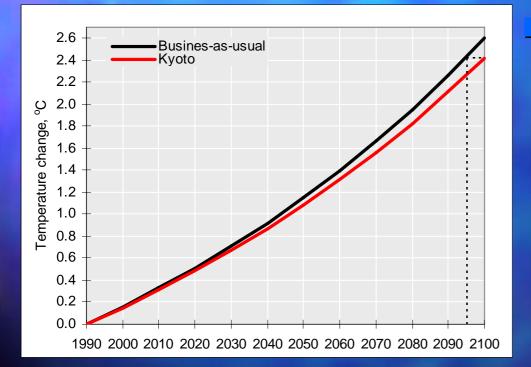
 Deaths avoided per year
 – Kyoto \$180b
 – Malaria \$3b





### Smarter options needed: Kyoto or EU 20% high cost-no gain

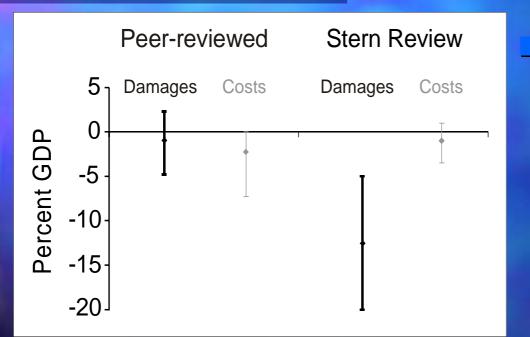
# Kyoto: Postpone warming by 5 years



Cost of Kyoto
 – \$180 billion per year

Wigley 1998

# All peer reviewed cost-benefit show little effort now



Only Stern review shows otherwise - Easily end up making policies that do more harm than climate change

Tol and Yohe 2006

### Lack of smart solutions

Take polar bears Yes, less Arctic ice means fewer polar bears 1960: about 5,000 Now: about 22,000 - But what can we do? – If we implement the Kyoto Protocol Save 1 polar bear each year But each year we shoot polar bears About a 1,000 each year

### Smarter way forward

Cost of cutting CO<sub>2</sub> is \$20/ton
 Benefit of cutting CO<sub>2</sub> is \$2/ton

 Maybe we need a better way forward?

### Smarter way forward

Long term problem, long term solution Invest 0.05% of GDP in RD&D of noncarbon emitting energy technologies – \$25 billion/year – a ten-fold increase Let each country focus on its own future renewables, fission, fusion, conservation, carbon storage - Will solve global warming in the medium term

### Many other problems where we can do much more good

4

# Gore: our generational mission

How do we want to be remembered?

 Spending \$180 billion/year doing virtually no good a hundred years from now? (Kyoto etc.)

Compare this to

- For \$75 billion/year the UN estimate we can solve all major basic problems
  - Clean drinking water
  - Sanitation
  - Basic healthcare
  - Education

**Copenhagen Consensus** Top economists: Most bang for the buck Social payback for each dollar **Prevent HIV/AIDS** \$40 1 Very good investments **Micronutrient** malnutrition 2 \$30 \$15 3 Ensure free trade Prevent malaria \$10 4 Bad investments . . . . . . **Kyoto Protocol** 16 ¢30

Copenhagen Consensus

# Summary: Getting our priorities right

Global warming is real But not top priority - Fix global warming in the long run CO<sub>2</sub> tax of \$2/ton **Dramatically increased R&D** Focus on smart solutions **Our generational mission?**  Do a little good at high cost Make a massive difference at half the cost



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