LSE Public Lecture

Cool It: global warming and getting our priorities straight

Professor Bjørn Lomborg
Copenhagen Business School

Professor Gwyn Prins
LSE, Chair

Dr Simon Dietz
LSE, Discussant

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?

1

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^{O}C (4.7^{O}F)
- Total cost of $15 trillion
  - 0.5% of 21st 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

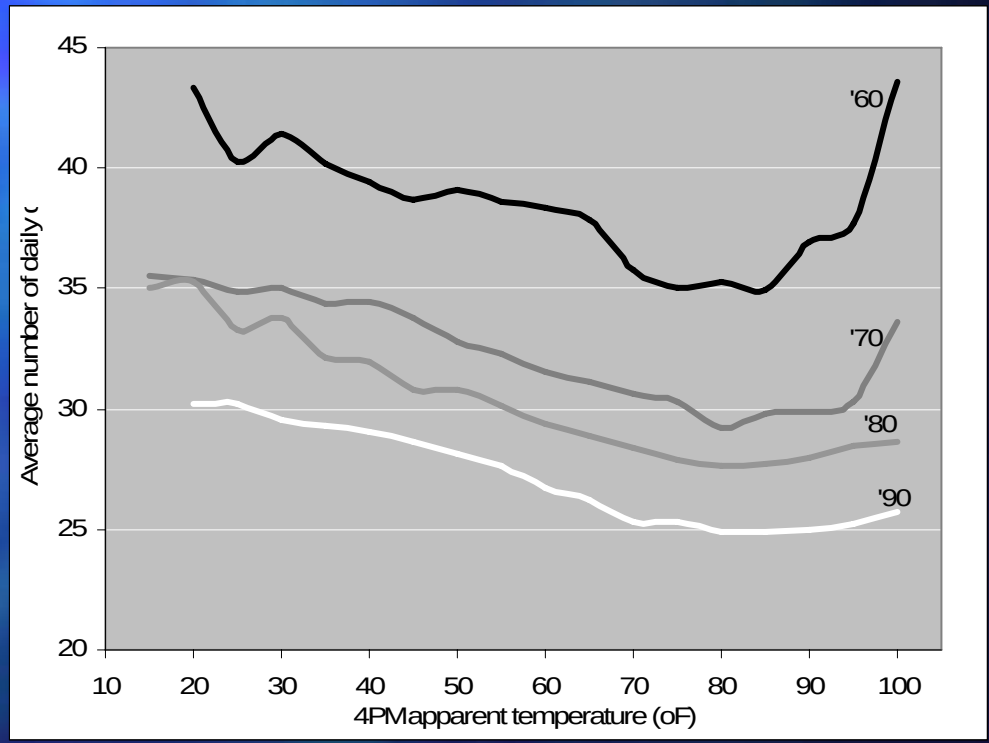
1 Higher mortality with heat?

- 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

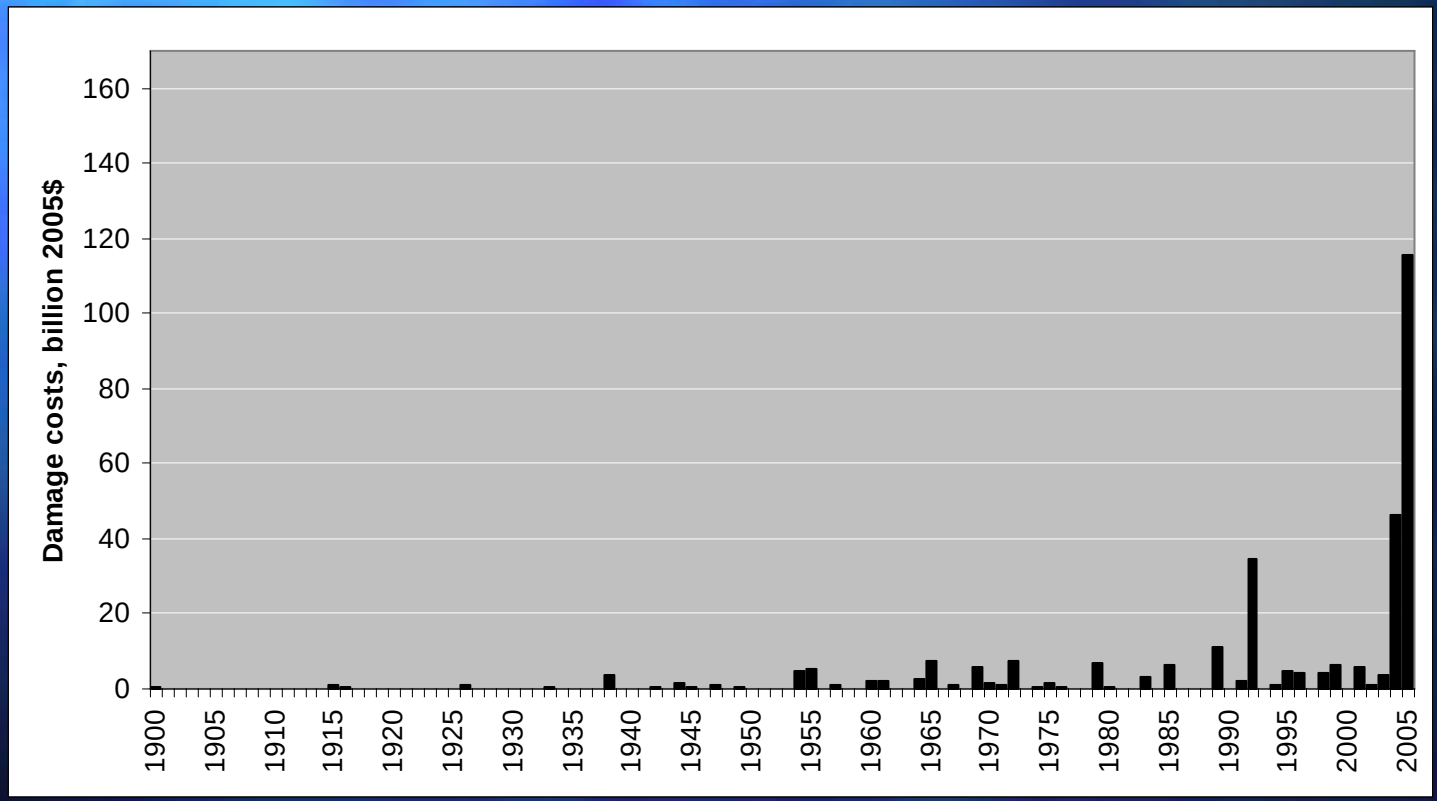
2 Saving the Maldives

- 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

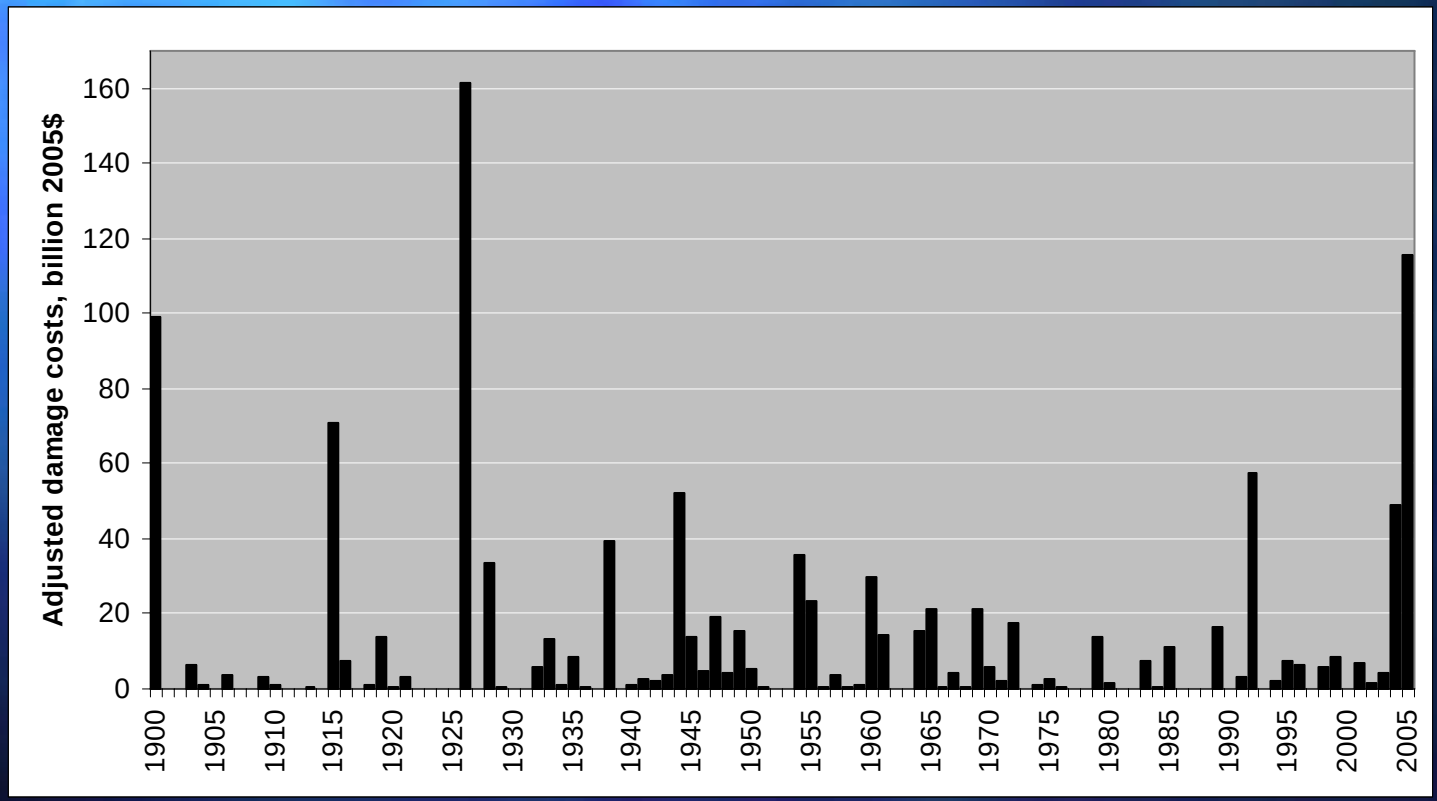
- Damage costs from hurricanes in the US



Pielke et al. 2007

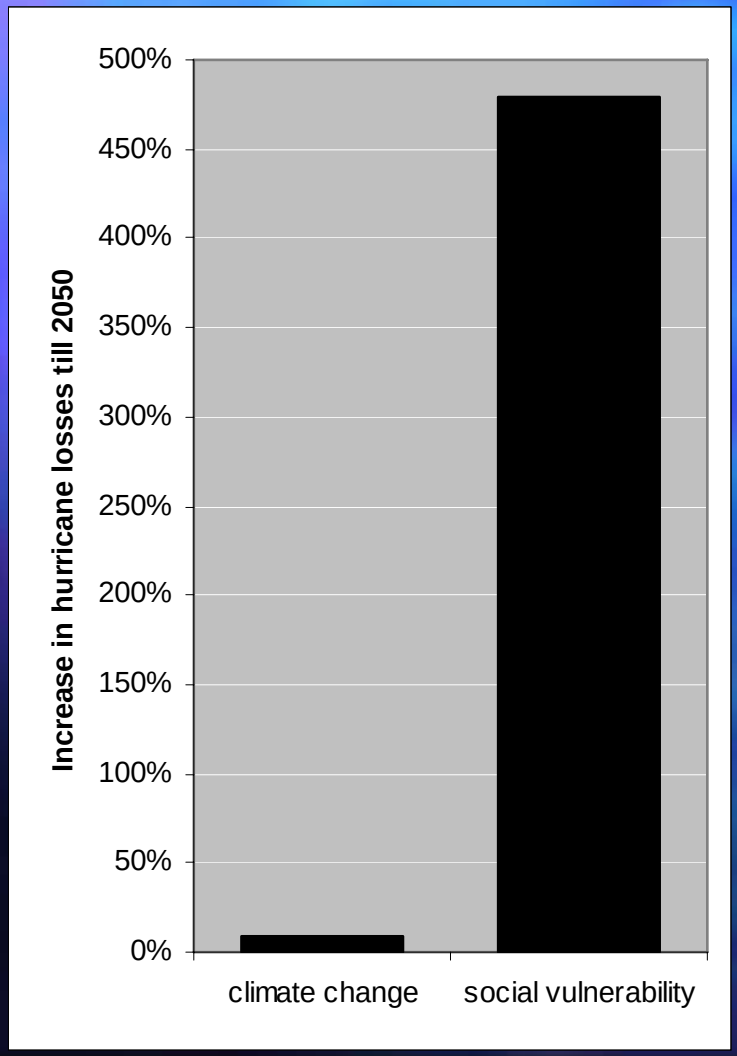
More people with more goods in exposed areas

- 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?

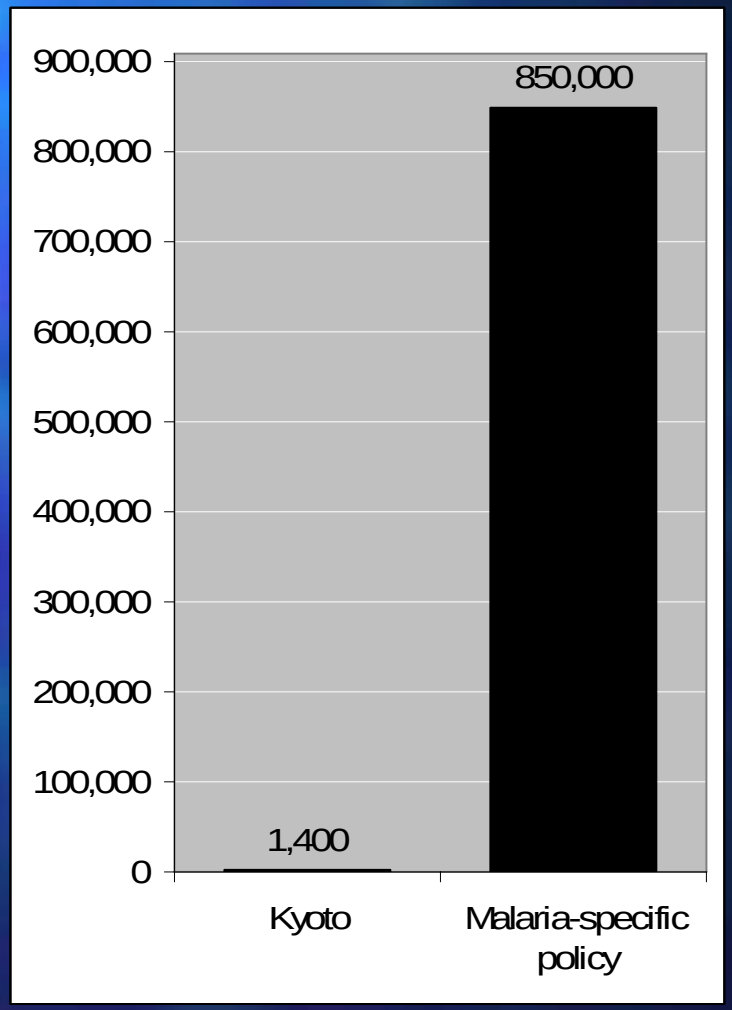
Pielke 2005

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

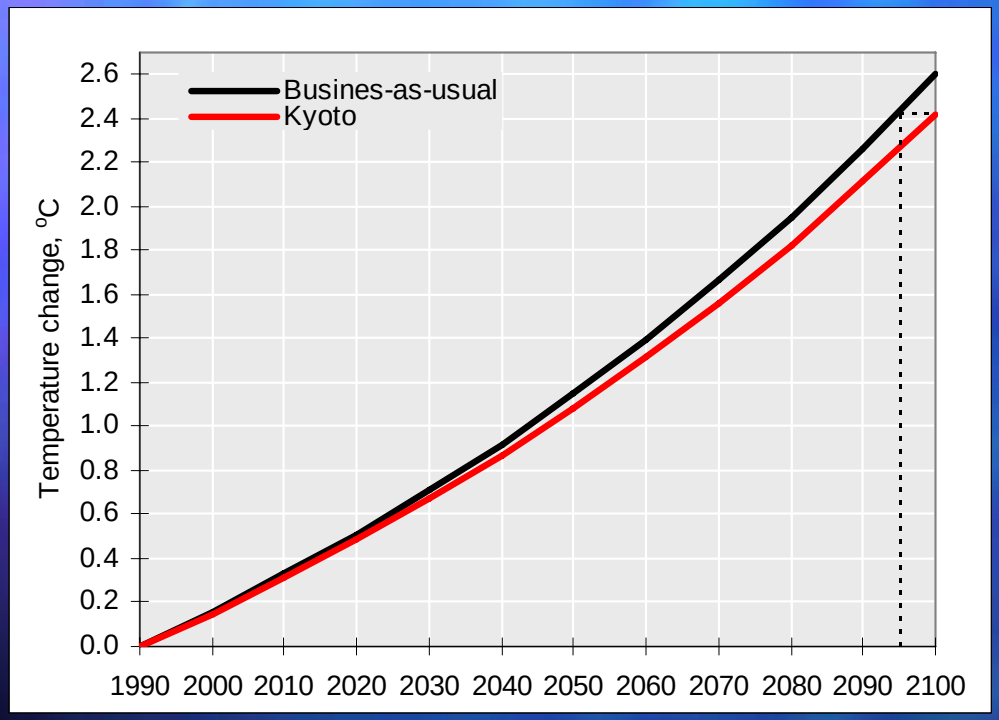


3

Smarter options needed:

Kyoto or EU 20% high cost-no gain

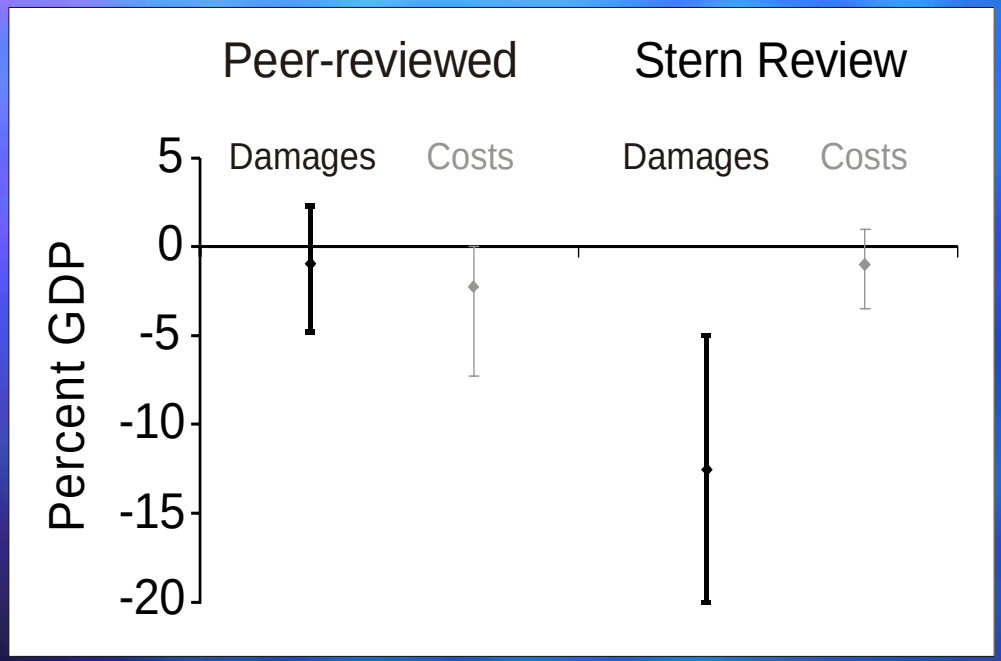
Kyoto: Postpone warming by 5 years



- 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_2 is $20/ton
- Benefit of cutting CO_2 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 non-carbon 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

4

Many other problems where we can do much more good

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
Very good investments	1	Prevent HIV/AIDS	$40
	2	Micronutrient malnutrition	$30
	3	Ensure free trade	$15
	4	Prevent malaria	$10
	...		...
Bad investments	...		...
	16	Kyoto Protocol	¢30

Summary: Getting our priorities right

- Global warming is real
- But not top priority
  - Fix global warming in the long run
    - CO_2 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

LSE Public Lecture

Cool It: global warming and getting our priorities straight

Professor Bjørn Lomborg
Copenhagen Business School

Professor Gwyn Prins
LSE, Chair

Dr Simon Dietz
LSE, Discussant