



# Ecological Change: implications for future decisions

Saliem Fakir

Center for renewable and sustainable energy

Stellenbosch University

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# Outline of paper

- Main thesis
- Assumptions of the Stern Report
- Two scenarios
- Scenario one
- Scenario two
- Conclusions

# Main Thesis

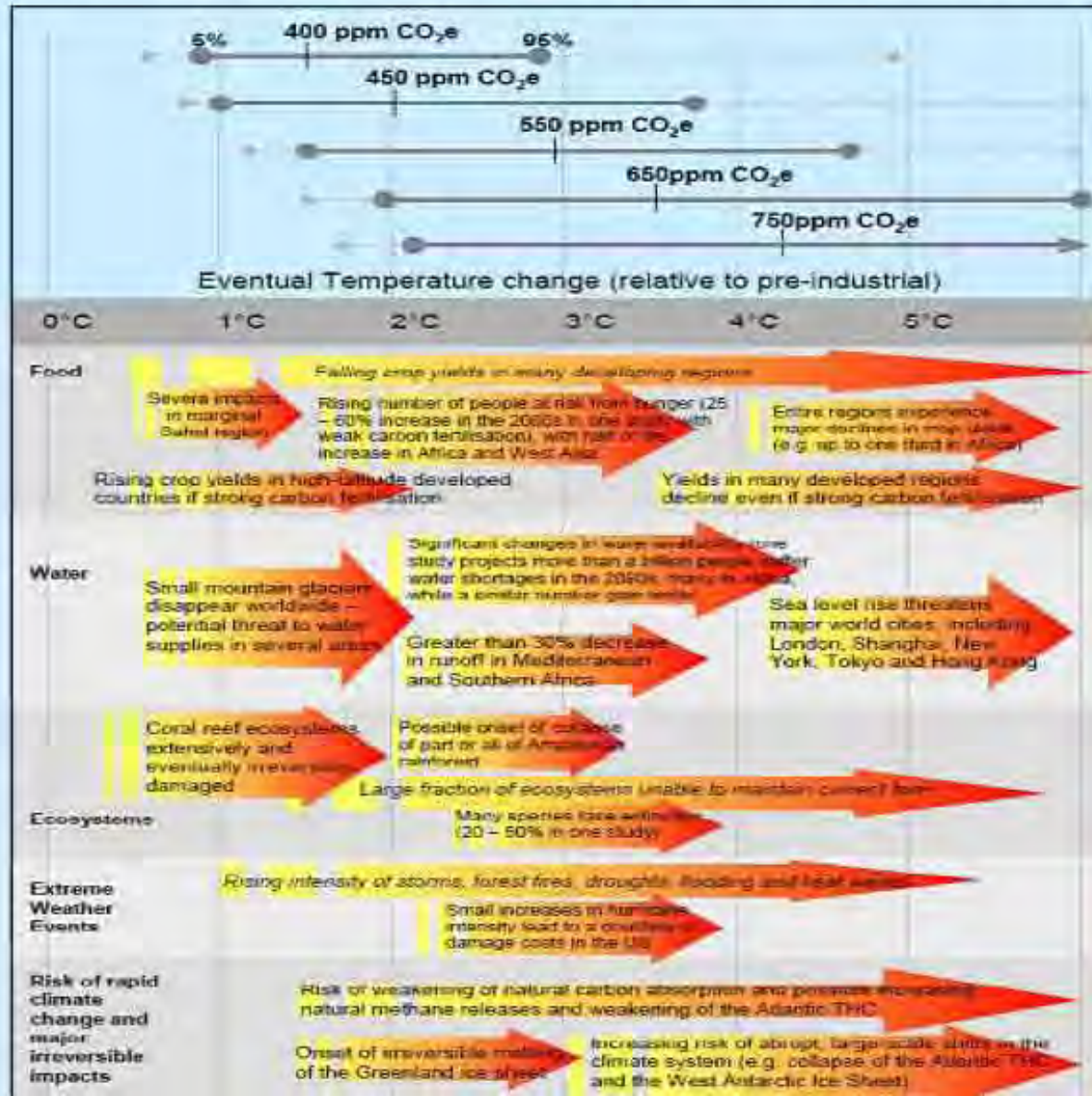
- Climate Change is indisputable
- Our civilization is highly sedentary
- Unprecedented growth in knowledge & economic
- Technology and science driven society

# Challenges in forecasting

## TENSIONS IN FUTURES ASSUMPTIONS

<b>STATUS QUO</b>	<b>VS</b>	<b>NON-STATUS QUO</b>
STABILITY		MOVEMENT/MOBILITY
ORDER		DISORDER
SCIENCE AND TECHNOLOGY		SOCIAL CAPITAL AND TRUST
INDIVIDUAL		INSTITUTIONAL
NATIONAL/GLOBAL		DE-NATIONALISED/LOCAL
CENTRALISED		DECENTRALISED
DISCIPLINARY		TRANSDISCIPLINARY
INDIVIDUAL SECURITY		COMMUNITY SECURITY

The figure below illustrates the types of impacts that could be experienced as the world comes into equilibrium with more greenhouse gases. The top panel shows the range of temperatures projected at stabilisation levels between 400ppm and 750ppm CO<sub>2</sub>e at equilibrium. The solid horizontal lines indicate the 5 - 95% range based on climate sensitivity estimates from the IPCC 2001<sup>2</sup> and a recent Hadley Centre ensemble study<sup>3</sup>. The vertical line indicates the mean of the 50<sup>th</sup> percentile point. The dashed lines show the 5 - 95% range based on eleven recent studies<sup>4</sup>. The bottom panel illustrates the range of impacts expected at different levels of warming. The relationship between global average temperature changes and regional climate changes is very uncertain, especially with regard to changes in precipitation (see Box 4.2). This figure shows potential changes based on current scientific literature.



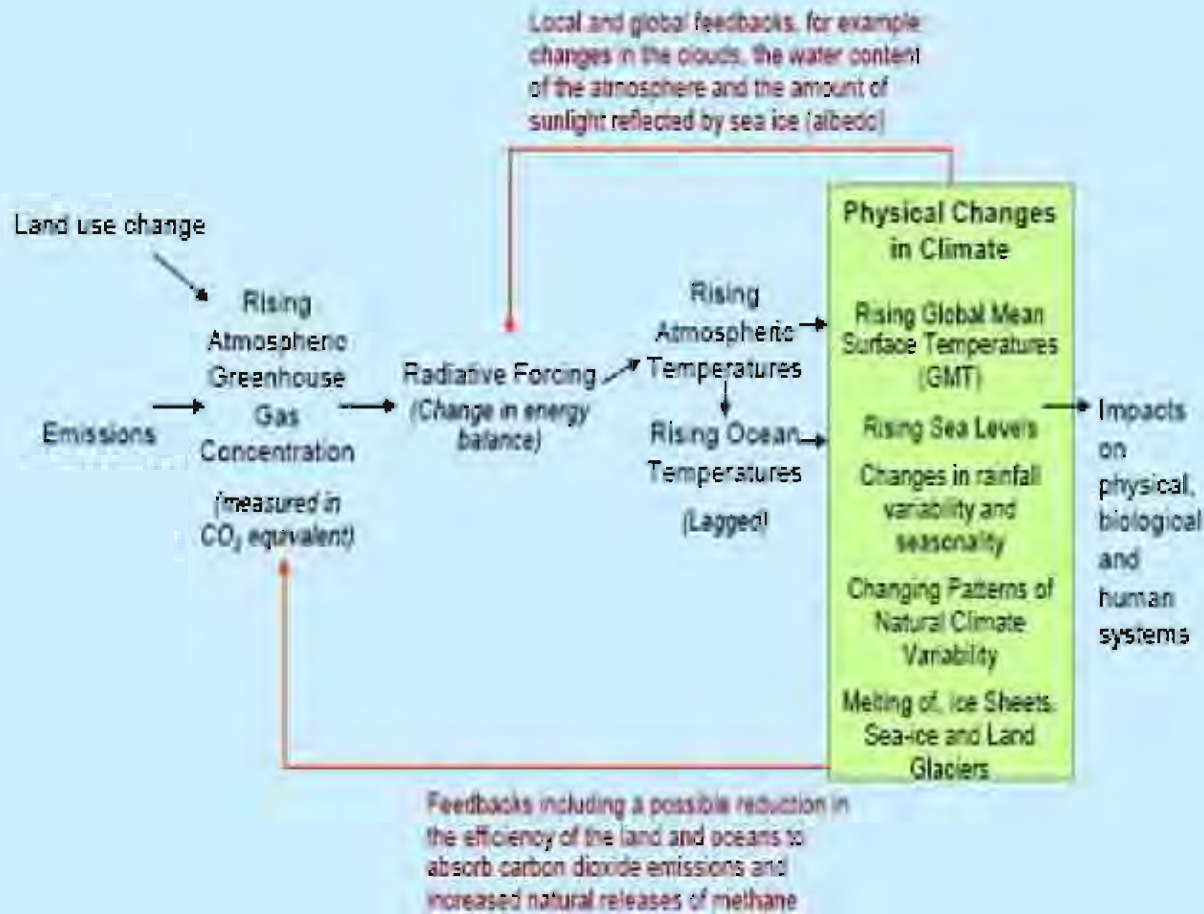
# The warning of Jared Diamond

- A group fails to anticipate a problem;
- When the problem does arrive they fail to perceive it;
- When they do perceive it they fail to try and solve it;
- And, when they try to solve it they fail.

# Stern review report

- Temperatures have risen last 30 years averaging 0.2 °C
- 5-6 °C predictions of abrupt change
- 5-10% loss of GDP globally
- Human induced – Green House gases
- Decarbonisation by 60% to 450-550 ppm
- Cost 1% of GDP if you act now

Figure 1.4 The link between greenhouse gases and climate change.





# Stern Proposals

- Dealing with green house gases (GHGs) as an externality by ensuring that this externality is correctly priced and reflected in the carbon price;
- Policies to support the transition to a low-carbon economy through a package of subsidies that will drive technological change;
- Removal of barriers to behavioural change through information, regulatory measures, and education.

# Stern Report Scenarios

Human  
Ecology



Climate Change Predictions

Scenario 1

Reduce  
GHGs

Scenario 2

Weather the  
Storm

# Critique

- Scenario One:
  - Genie is out of the bottle
  - Reliant on collective action in a troubled world
  - Always the markets
  - Technology and finance incentive focus

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<b>Stern Report</b>	<b>Missing dimension</b>
Dominance of western way of life	Multi-polar cultural universe and traditions where no single culture has absolute hegemony
Markets as a solution	No real exploration of non-market mechanisms
Techno-science emphasis	No emphasis on social capital and co-operative arrangements
Designed with multilateralism in mind	Multilateralism on the wane and global nationalism on the rise
State and corporations as drivers of change	Limits the role of non-state and non-corporate actors

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# Scenario Two

- Total collapse
- Importance of trust and co-operation
- Mobility
- Reinventing a new life
- The end of money

## Summary: Prospective Shifts from the present to the future

### Now

Dependence on State and Corporations

From City

From national currency

State protection and security

Technical skills

Homogeneity

### Then

Less dependence on state and corporations

To community/village or town

To local currency

To local army and security

To social skills

To heterogeneity

# Conclusions

- Stern's focus on maintaining status quo
- Emphasis on technology and markets
- No contemplation of worst case scenario