

# Sustainability Development and Poverty

(A University's Response to Climate Change)



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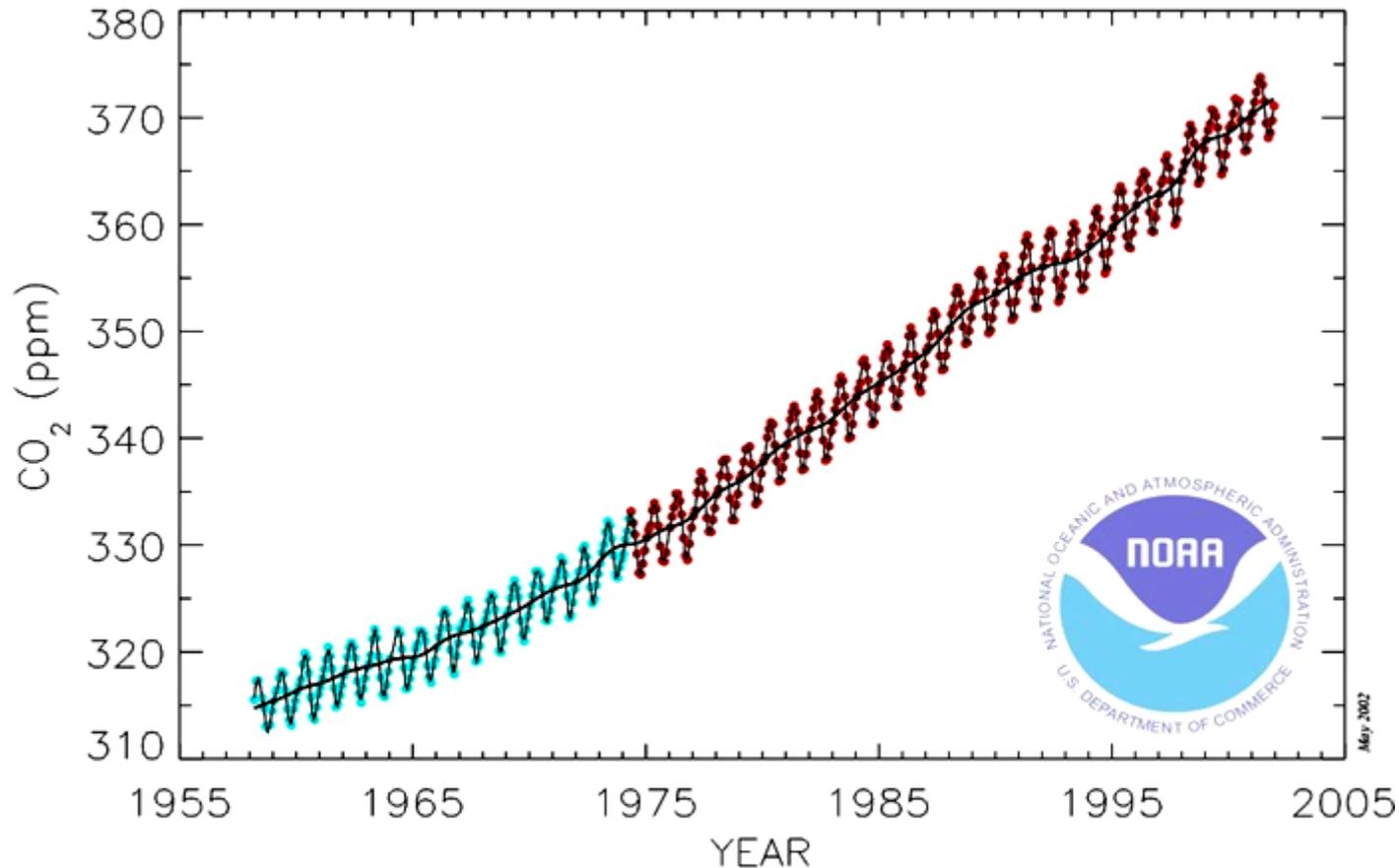
HSRC Seminar: Climate Change and Pro Poor Energy Policy  
in South Africa, HSRC, Pretoria, 23 February 2012



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# The paradox of climate change: Too much carbon, or too little?

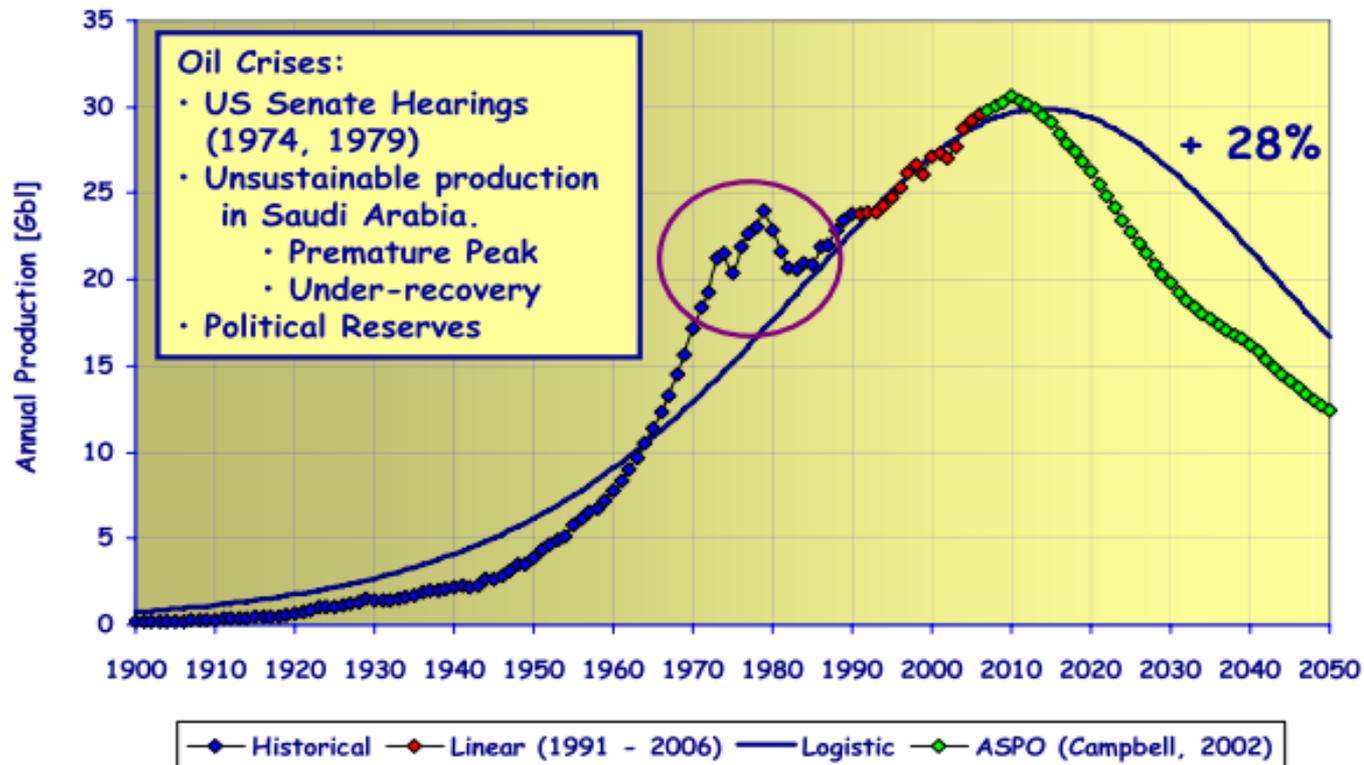
## Mauna Loa Monthly Mean Carbon Dioxide



Atmospheric carbon dioxide monthly mean mixing ratios. Data prior to May 1974 are from the Scripps Institution of Oceanography (SIO, blue), data since May 1974 are from the National Oceanic and Atmospheric Administration (NOAA, red). A long-term trend curve is fitted to the monthly mean values. Principal investigators: Dr. Pieter Tans, NOAA CMDL Carbon Cycle Greenhouse Gases, Boulder, Colorado, (303) 497-6678, ptans@cmdl.noaa.gov, and Dr. Charles D. Keeling, SIO, La Jolla, California, (616) 534-6001, cdkeeling@ucsd.edu.

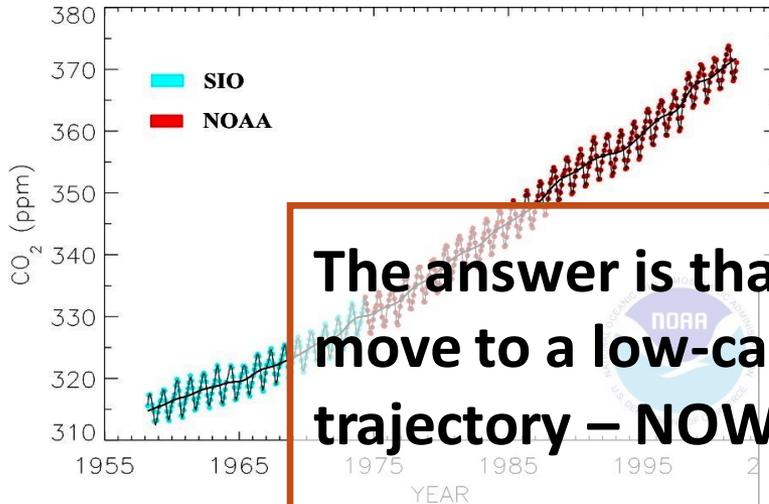
# The paradox of climate change: Too much carbon, or too little?

## ERC: Global Oil



# The paradox of climate change: Too much carbon, or too little?

Mauna Loa Monthly Mean Carbon Dioxide

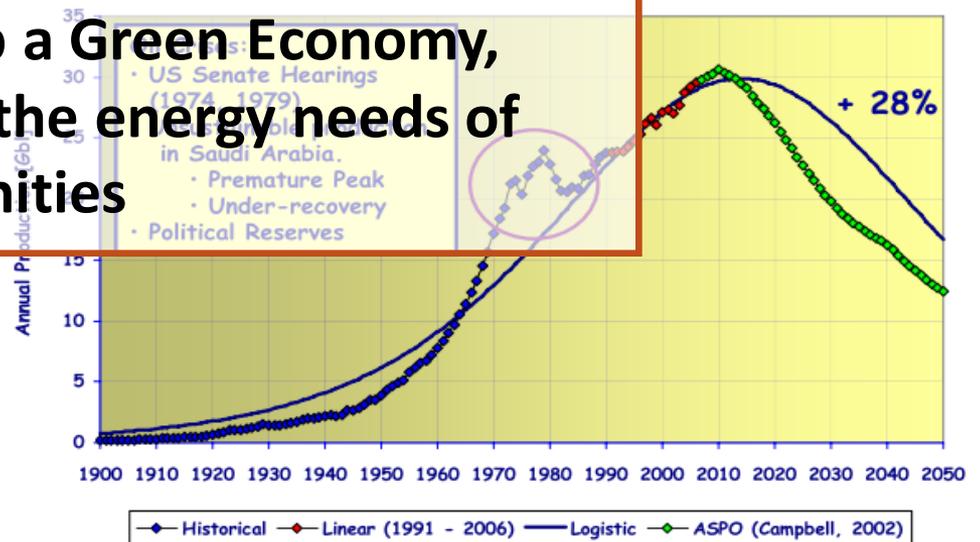


The answer is that either way we need to move to a low-carbon development trajectory – NOW!

We need to develop a Green Economy, while providing for the energy needs of developing communities

EKC: Global Oil

Atmospheric carbon dioxide monthly mean mixing ratio (ppm) from the Mauna Loa Observatory (SIO) and from the National Oceanic and Atmospheric Administration (NOAA) are shown. Principal investigators: Dr. Pieter Tans, NOAA CMDL Carbon Cycle Greenhouse Gases, Boulder, Colorado, (303) 497-6678, ptans@cmdl.noaa.gov, and Dr. Charles D. Keeling, SIO, La Jolla, California, (616) 534-2114, cdkeeling@ucsd.edu.





~~Climate~~ Change

# Baseline: Pent up demand for basic services



# Baseline: negative externalities - defective housing and energy systems



Annegam & Guy



*Photos by Susan Cook*

# Central message of WSSD: President Thabo Mbeki



... emphasised that poverty alleviation is a necessary pre-condition for sustainable development to be effected, saying ***"...a global human society based on poverty for many and prosperity for a few, characterised by islands of wealth, surrounded by a sea of poverty, is unsustainable"*** (WSSD, 2002).

He made explicit the fact that the marginalised poor, on the edge of survival, are not concerned with sustainable development.

MMF Ferraz, PhD Thesis, UJ, 2011

# University of Johannesburg response to climate change – an *Engaged University*



Government – University Interactions

UJ and SeTAR Centre Research Projects

University and Community

University, Community, Industry in partnership for a **Green Economy**

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# Energy poverty and climate change



We need alternative energy and renewable environmental solutions to help address the issues that hold communities in poverty.

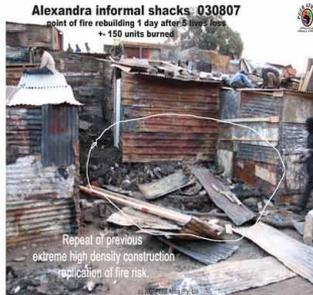
**It is our view that a focus on climate change is the wrong message for developing communities – climate protection will rather happen as a consequence of local action to provide safe, efficient, affordable energy services**

SOUTH AFRICAN ENERGY SUMMIT  
SEPTEMBER 2007

# THE **END** OF POOR ENERGY SERVICE DELIVERY

Understanding the externality cost of maintaining the status quo

## HOW WE CAN MAKE IT HAPPEN IN OUR LIFETIME



FOREWORD BY



SOUTH AFRICAN ENERGY SUMMIT  
SEPTEMBER 2007

# THE **END** OF INFORMAL SETTLEMENTS

Safe and healthy, basic energy services for all

## HOW WE CAN MAKE IT HAPPEN IN OUR LIFETIME



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SOUTH AFRICAN ENERGY SUMMIT  
SEPTEMBER 2007

# THE **END** OF

**IGNORING THE LINK BETWEEN  
ENERGY USE, SHACK FIRES &  
POVERTY**

Understanding the externality cost of maintaining the status quo

## HOW WE CAN MAKE IT HAPPEN IN OUR LIFETIME



**FOREWORD BY**



Strategy must take the entire human settlement condition in to account and not just look at energy as a standalone service delivery issue

# Energy for Sustainable and Shared Economic Growth for All

**P R E A**  
PROMOTING RENEWABLE  
ENERGY AFRICA

# THE **END** OF

Renewable Energy Solutions  
that Exclude the Basic  
Services Needs of the Poor!

Understanding the externality cost of maintaining the status quo

## HOW WE CAN MAKE IT HAPPEN IN OUR LIFETIME



**FOREWORD BY**

**P R E A**  
PROMOTING RENEWABLE  
ENERGY AFRICA  
1991 L.L.M.  
Since 1995



# Take home message

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The University retains the role to **lead change** by research, by training and engagement with government, community and industry .

Integrated energy planning is needed to meet environmental risks, social, economic and political factors, also in the **non-electrified sectors** of the energy economy.

Need for safe, healthy, affordable energy services for developing communities as the key contribution to Climate Protection at the local level.



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