

# CLIMATE CHANGE REPOSSES AS A STIMULUS FOR ECONOMIC DEVELOPMENT

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# Background

- The world is groaning under the pressure of a widespread financial crisis- how susceptible the global economic system is
- But the crisis is also an opportunity.
- And hear the experts:
- Studies (Potsdam Institute for Climate Impact Research & British Grantham Research Institute) show that, the fight against climate change would contribute greatly to the recovery of the present economic downturn.
- Ottmar Edenhofer, co-chairman of the IPCC opines that, “A green economic stimulus package would have immediate and sustainable advantages while simultaneously protecting our climate and conserving increasingly scarce natural resources.
- If we miss the chance to create a global energy system that minimizes CO<sub>2</sub> emissions, the next economic crisis will be basically pre-programmed to take place – on top of the fact that there will be unpredictable consequences for our environment



# Catch 22 Issue

- Public debate on relationship b/w climate change impact management & economic dev is still alive.
- With a an enormous coal reserves and energy-intensive industries, absolute greening of the economy in SA becomes tricky
- In a growth orientated approach to development maximising GDP becomes imperative
- In a capital-scarce country higher return on investment in industrial sector
- Although the SA govt sees the Env as an asset- a win-win approach becomes necessary
- Scenario analysis show that opportunities in doing Climate Change business could be worth million Rand per annum.



# FOOD FOR THOUGHTS.....

- Economic development and poverty alleviation are top priorities of developing countries, while maintenance of prosperity and of quality of life, through economic stability and environmental protection, is the primary concern of developed countries.
- A **2% to 3%** growth rate is considered an accomplishment among OECD countries,
- Growth rates of **5% to 10%** are aspired to by all developing countries  
High growth rates remain a priority especially in sub-Saharan Africa
- Developing countries are unlikely to give high priority to env protection unless it is seen as an effective means of **escaping stagnation** and of achieving **high rates of economic growth..**



## FOOD FOR THOUGHTS

Env Policy using **market-based instruments** originated from developed countries after having achieved high levels of economic development with unrestricted access to resources and unhindered by env concerns

Hence developing countries thus see **environmental regulation as a means to restrict their development.**

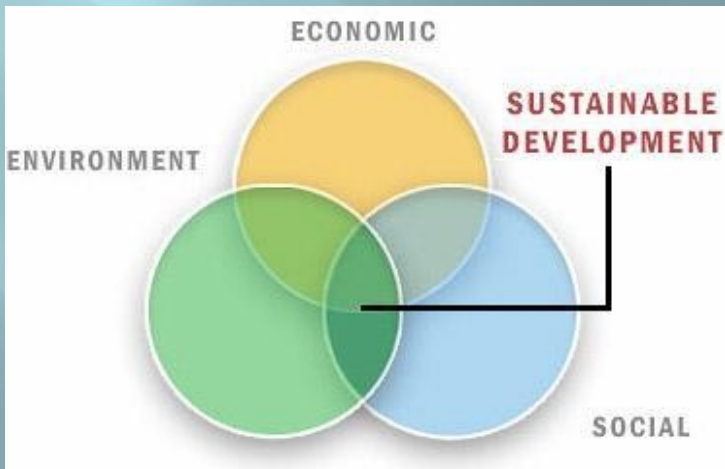
Conversely, reports abound of some companies being pulled back from the brink of bankruptcy by **environmental efficiency** and stories about the growth of **green companies** continue to proliferate

These seem to buttress the argument that environmentalism actually spurs economic growth



# FINDING COMMON GROUND- SUSTAINABILITY

- **The application of sustainability to lifestyle is a choice and decision!**
- Sustainability is meeting present ecological, societal, and economical needs without compromising these factors for future generations.
- Sustainable living is operating within the innate carrying capacities defined by these factors.
- Change of lifestyle and doing business is an evolutionary partnership
- All nations agree that we need innovative and promote new technologies for producing, storing and transporting energy





# AND THE POT OF MONEY

- \$750 billion – or one percent of the worldwide gross national product – would be enough to initiate a transformation in sustainability and simultaneously jump-start the global economy (UNEP),
- The stimulus programs are to create a resource-efficient society with sustainably low CO<sub>2</sub> emissions, (Achim Steiner, UNEP)
- The G20 are planning a total of over \$2.8 trillion in stimulus packages to combat the downturn out of which Germany alone will be setting aside around €107 billion.



# The Tool-Economic Instruments

- Economic Instruments as a Source of Revenue
  - Economic instruments raise large amounts of revenue that can be spent either on public goods that improve environmental quality or can be used to reduce distortionary taxes such as income taxes, which reduce the incentive for work, or sale taxes which distort consumption decision
  - It promotes Efficiency, Cost Effectiveness and Equity
  - It realigns resource allocation towards achieving sustainable development



# Philippines

- The 90's heralded a dramatic shift in the Philippine environmental policies, development strategies and regulatory reforms.
- Belief was that successful environmental governance would mean allowing industries to achieve profitability while at the same time meeting environmental regulations in a practical manner,
- A new mechanisms that capitalize on the industry's initiative to self-regulate as opposed to previous command-and-control attitude, is one that delicately balances enforcement and encouragement – a right mix of carrots and sticks



# Uganda

- Between 1991 to 1994 the Government of Uganda developed a National Environment Action to integrate environment into the national socio-economic development.
- The use of economic and social incentives as an approach to environmental regulation has provided a basis for payment of fees, levies and charges under env permit and license system.
- The disincentives approach was also used in the 2002-2003 National Budget to impose tax of 50 % (later reduced to 20%), on polythene carrier bags.
- It was equally used in the 2006-2007 National Budget to impose an environmental tax on imports of second hand motor vehicles of more than 10 years from the date of manufacture.
- It ensures compliance with env law and harmonizes development objectives, poverty alleviation and conservation interests for well informed trade-offs



## India

- India requires a high growth rate to ensure the livelihood of its population. The huge population burden also brings with it a whole spectrum of social issues that have environmental implications.
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- A review of the following statistics from the McKinsey Global Institute published in 2010 observes that while the recent growth in India's economy was spurred by the superhot software sector, infrastructure and manufacturing seem to be the key growth areas now.
- Many multinational companies that are setting up shop in India are creating a sort of precedent by taking environmental issues seriously, probably from the lessons learned in the West, where environmental issues that were initially ignored later required significant cost and time commitments to resolve.
- The increasing desire of Indian companies to meet world class standards has caused established companies in India to take on sustainability initiatives as a means of improving their global brand and reputation



# Germany

- Pursuance of energy efficiency system, modernizing energy networks and greening public transportation systems create jobs,
- The renewable energy sector is an industry of the future that will provide a lot of jobs. In 2009, 280,000 people are already employed in that sector in Germany.
- Germany's climate protection policies will generate up to 500,000 jobs by 2020 rising to 800,000 new jobs by 2030
- Commercialization of special project such as the CO<sub>2</sub> capture and storage will create jobs in research and development sector



# Canada

With over  
**120,000**  
employees in solar,  
there are now more  
people employed to  
create solar than to  
mine coal.

MOSAIC

**Number of jobs created for every \$1 million invested**

**OIL & GAS**

**2**

**CLEAN ENERGY** (wind, solar, hydro and biomass)

**15**

**Where do you want Canada to invest?**

\*Blue Green Canada. (2012, November 22).  
More Bang For Our Buck: How Canada can create more jobs and less pollution.



# Denmark



This coastal municipality in Denmark moved from unemployment figure of 97% to 3% within 5 years after investing in RE-solar, wind, hydrogen fuel, biogas, etc. The system is connected to the grid and sold to the Danish Energy Board



# KZN Agriculture, Environmental Affairs and Rural Development





## SOME KEY OPPORTUNITIES...

### ❖ Provision of Knowledge

The information services industry is one of growing potential. the provision of climate change related knowledge and services to Government, organisations and stakeholders wanting access to climate change information.

- ❖ Research and Development
- ❖ Publishing
- ❖ Networking

### ❖ Provision of Services

- ❖ participating in international carbon markets
- ❖ begin to understand the carbon markets and the opportunities it may present to individual businesses through energy efficiency projects
- ❖ quantify and report on the reductions in emissions from energy efficiency projects



## SOME KEY OPPORTUNITIES...

- ❖ Provision of Services (contd)
  - ❖ selling the carbon offset either RSA or to the international carbon market.
  - ❖ facilitating energy audit and implementing the resulting recommendations,
  - ❖ Carbon accounting and Carbon Sinks facilitation.
  - ❖ Energy & emissions Consulting
  - ❖ Domestic and international research and consulting
  - ❖ Research commercialisation
  
- ❖ Operational Efficiencies
  - ❖ implementing energy efficiency programs is lower operating costs through reduced energy bills,
  - ❖ energy efficient building (retrofitting or designing ones)



# Innovation and working smart

- ❖ **New technologies**
  - ❖ ruminant efficiency ,
  - ❖ Renewable energy systems
    - ❖ biomass,
    - ❖ Solar, wind. waves.ground
  - ❖ Energy efficiency solutions
  - ❖ Inventory data collection
  - ❖ Sustainable energy and energy efficiency projects
  - ❖ Fuel substitution, Materials blending
  - ❖ Alternative fuels e,g, fuel cells
  
- ❖ **Smart Business practices**
  - ❖ Working hours –daylight saving
    - ❖ Video conferencing
    - ❖ Teleconferencing
    - ❖ Freight consolidation



## UNLOCKING POTENTIALS - INSTITUTIONAL FRAMEWORK

Towards Green Economy	Items
Economic potential	Natural assets , (mountains, rivers and climate) Tourism Agric value adding
Sectors to promote Partnerships	Agric as carbon sinks Waste Mgt recycling, mulching, compost Biofuel Biomass
Social and economic infrastructure requirements	Human capacity Promotion of labour intensive programme
Promotion of local procurement	Promotion of local products and service providers Enabling policy environment
Improving governance and delivery capacity	Capacity building e.g. resource demand management Twinning with best practice municipality
Alignment and Integration	PGDS
Key interventions and flagship projects	Manufacturing of RE components Biofuel using animal dungs Soya beans plantations Harnessing Thukela River for irrigation and power, canalisation and waterways
Constraints on investments	Bye-laws compliance enforcement Cultural preferences and practices Striking a balance between economic development and social well-being of our people in a developing economy, Persuading industries and businesses to embrace low carbon economy in the face of global economic downturn Empowering community to make life style change is a challenge.



## UNLOCKING POTENTIALS-RE SYSTEMS

Target	Role players	Timeline
Promotion of RE through accelerated process	Govt and PPP	Long-term
Carbon Capture and Storage	Govt	Long-term
Carbon tax	Govt	Long-term
Switching to more efficient means of transportation	Govt and PPP	Short-term
Reducing emission from deforestation	Govt and PPP	Long-term
Increasing carbon sinks through afforestation	Govt and PPP	Long-term
Energy efficiency measures in buildings (public and private)	Govt	Immediate
Use of energy efficient appliances including bulbs	Govt and PPP	Immediate
Smart infrastructure	Govt	Long-term
Encouraging energy R&D		
Industrial energy efficiency	Govt and PPP	Long-term



# AND WHAT WE ARE UP TO IN KZN

- The development of a provincial Independent Power Producer/Renewable energy Programme and the establishment of a provincial Energy Office
  - This programme is to be modelled on the national REIPPP (Renewable Energy Independent Power Producer Programme) programme run by Treasury and Department of Energy
- Development of a Renewable Energy Zones Tool –
  - a web-enabled GIS tool which would contain layered information on solar radiation, wind data, available land, Eskom grid connectivity, major road networks as well as environmentally sensitive areas. This would be a tool to be used by investors to assist them in easy identification of potential sites for renewable energy projects
- Waste to energy Best Practice Guidelines and Technical Advisory service to Municipalities.
- Renewable Energy Manufacturing
  - an opportunity for exploring and setting up a manufacturing hub for the RE projects to service SADC and Africa markets. It is felt that these two areas need to be explored further and in the process a Sustainable Energy Investment



# Social Upliftment





## CONCLUSION

- ❑ The economic instrument used by the government has even resulted in increase in savings in industries due to waste minimisation, material substitution, material recycling and RE
- ❑ Several opportunities abound in doing business on Climate Change related projects
- ❖ New ways of doing things and thinking of what is yet to be
- ❖ Both government and private sector need to partner in doing all these
- ❖ Economic measures like carbon tax, licenses, etc are sources of revenue
- ❖ By drawing on its infrastructure, Institutional framework and natural resources, the country has the potential to evolve a green economy in the continent. This can be achieved through trans-sectoral partnership



**GREEN-COLLAR JOBS  
WON'T JUST STIMULATE  
THE ECONOMY**



# Thank You

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