

# AFRICAN ECONOMIC CONFERENCE

## *Perspectives on a Green Revolution in Africa*

*Sam Muradzikwa*

29 October 2010



# SETTING THE SCENE...!!

*Points of Departure.....*

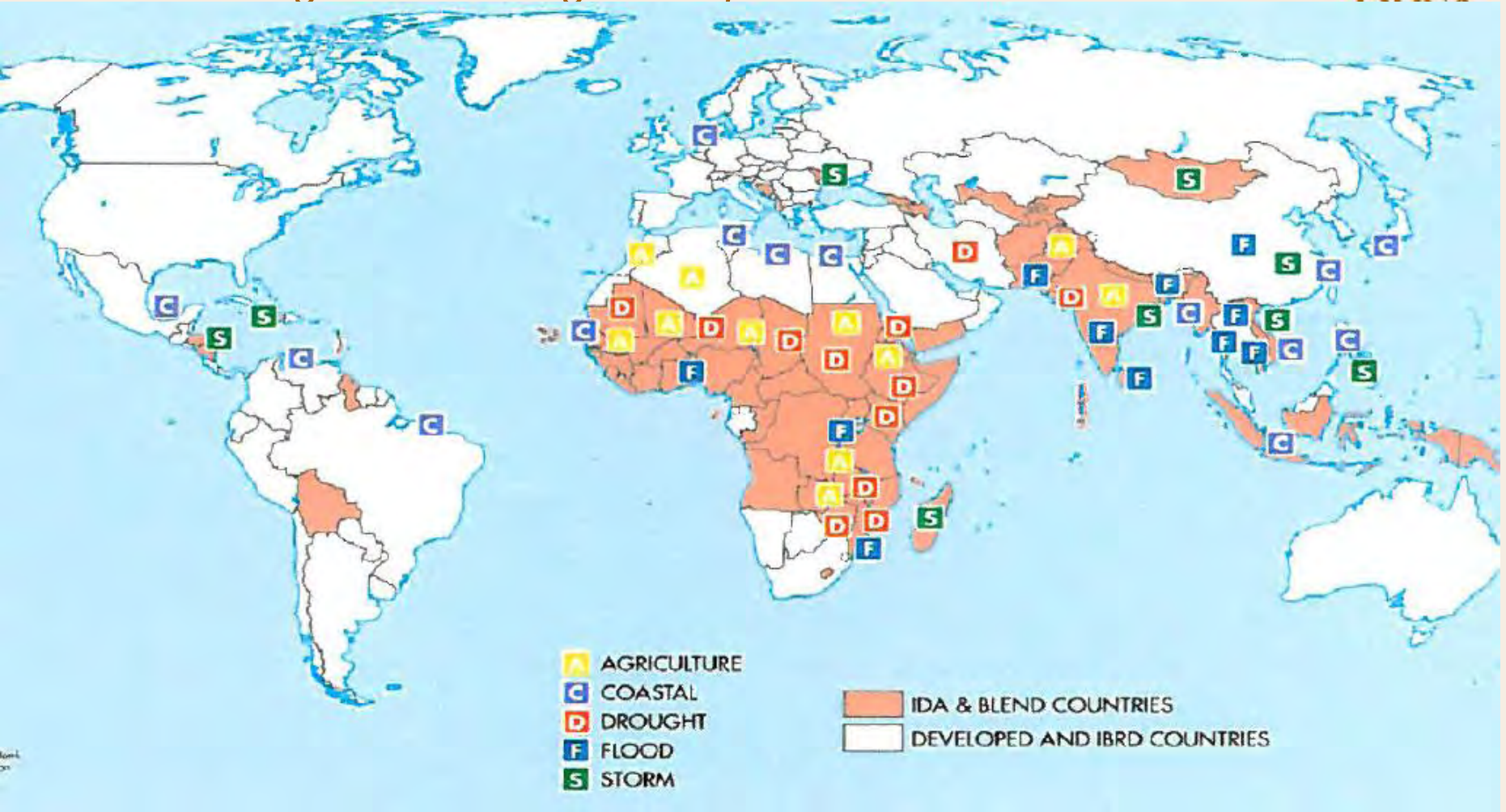
# The Context for a 'Green Revolution' in Africa [1]



- Although with less than 4% of global GHG emissions, Africa, and its most vulnerable population will continue to be hit hard by climate change consequences:
  - Droughts, changes in agricultural productivity
  - Endemic diseases
  - Extreme climatic events
  - Population displacement
- Achieving an international agreement has been crucial for Africa:
  - Africa could drain important volumes of climate financing (adaptation & mitigation)
  - Africa has a great potential for GHG emissions reduction still to be tapped: renewable energy (solar, hydro), primary forest, etc.

# The Context for a 'Green Revolution' in Africa [2]

*Climate change risks are highest in poor countries*



# The Context for a 'Green Revolution' in Africa [3]



- Almost all Sub-Saharan African countries have sufficient renewable resources, exploitable with current technologies, to satisfy many times their current energy demand – and the private sector is increasingly aware of the enormous opportunities involved.
- Some examples:
  - Africa's first landfill gas CDM plant in Durban is now operational generating has been commissioned
  - Kenya is seeing the construction of Africa's first privately financed geo-thermal plant. Efforts are underway to replicate this success up and down the Greater Rift Valley.
  - Ethiopia has signed a \$284 million agreement for the installation of 120 wind turbines; Uganda is installing its first hydro plant and South Africa has announced sharp increases in feed-in-tariffs that may propel the country in renewables development.
  - And many more things are happening! Initiatives around solar parks, wind farms, etc.

# The Context for a 'Green Revolution' in Africa [4]



- UNCTAD estimates that in 2009 low-carbon FDI flows into three low-carbon business areas (renewables, recycling, and low-carbon technology manufacturing) alone amount to US\$90 billion (Africa accounted for less than 3%)
- In it's totality such investment is much larger, taking into account embedded low-carbon investments in other industries
- For 2010-2015, one estimate indicates that \$440 billion of recurring additional global investments per year are required to limit GHG emissions to the level need for a 2 °C target to be met (as referred to in Copenhagen Accord)
- **Assisting Africa to make a real push to get on a carbon-free path of power generation and general economic growth is as much a business opportunity as a development imperative!**



# GOING GREEN....??

*The Pressure Points in Africa.....*

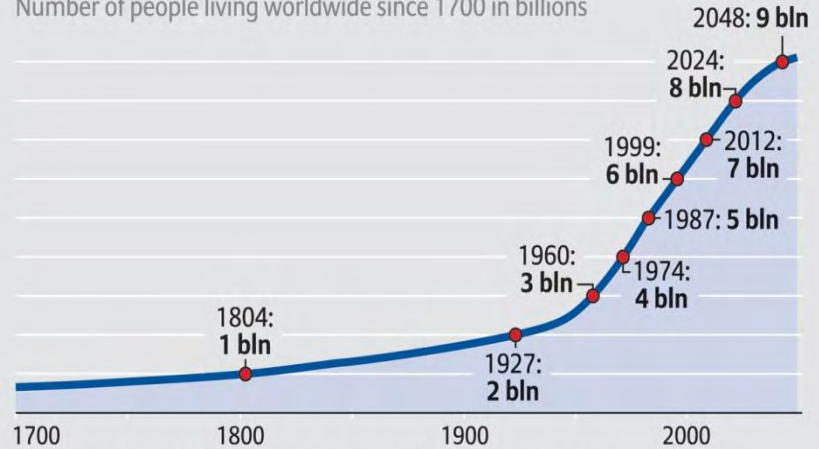
# Population growth projected to reach 9 billion by 2050



## POPULATION OF THE EARTH

Allianz

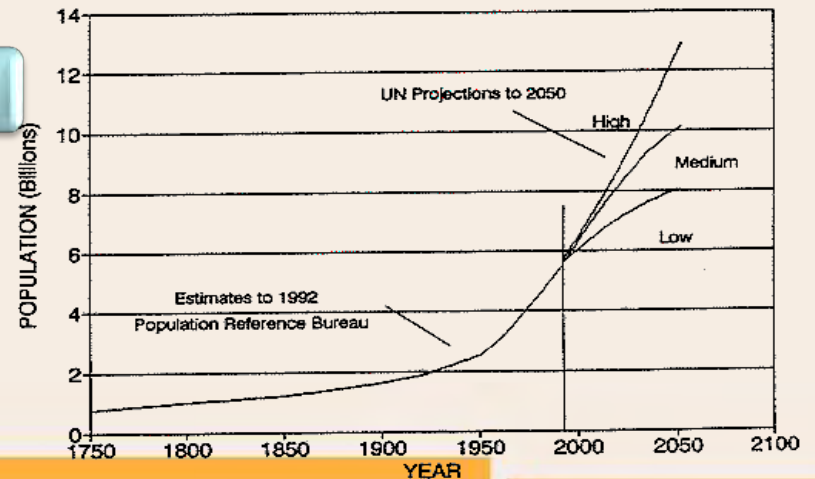
Number of people living worldwide since 1700 in billions



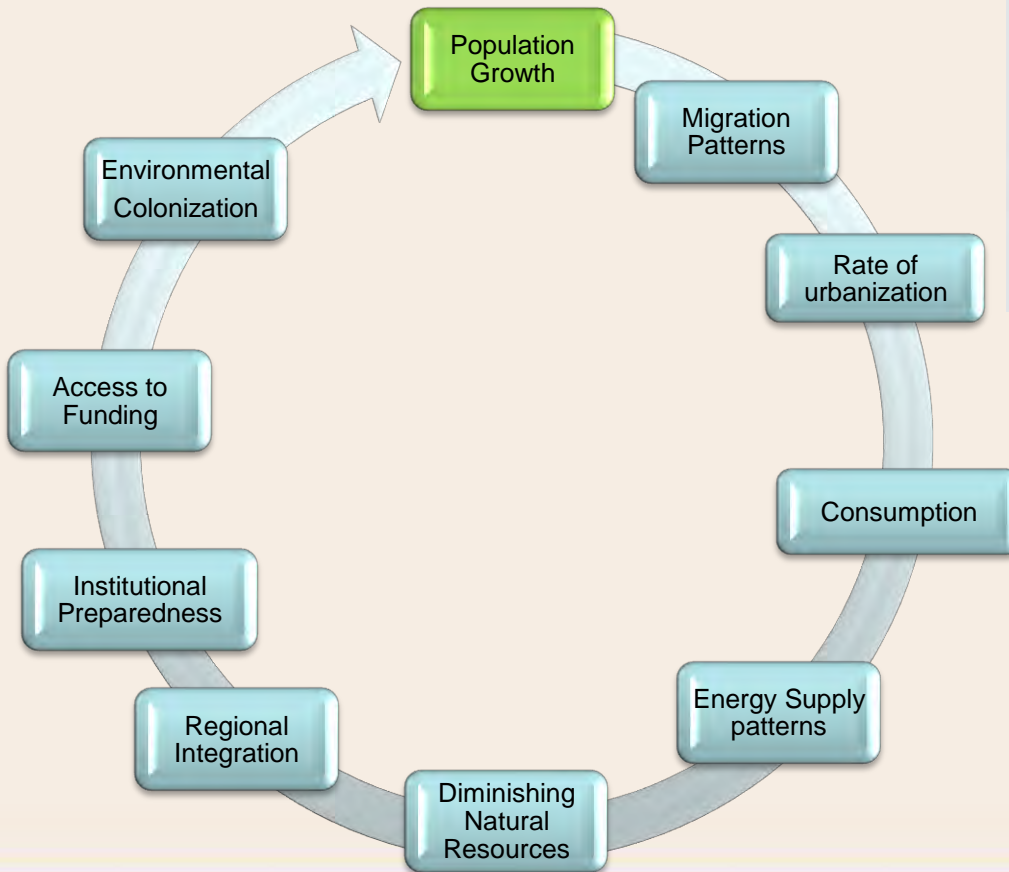
Source: United Nations World Population Prospects, Deutsche Stiftung Weltbevölkerung  
For further information please visit: [www.knowledge.allianz.com](http://www.knowledge.allianz.com)

Figure 1. World population to 1992, projections to 2050.

## ESTIMATES OF POPULATION



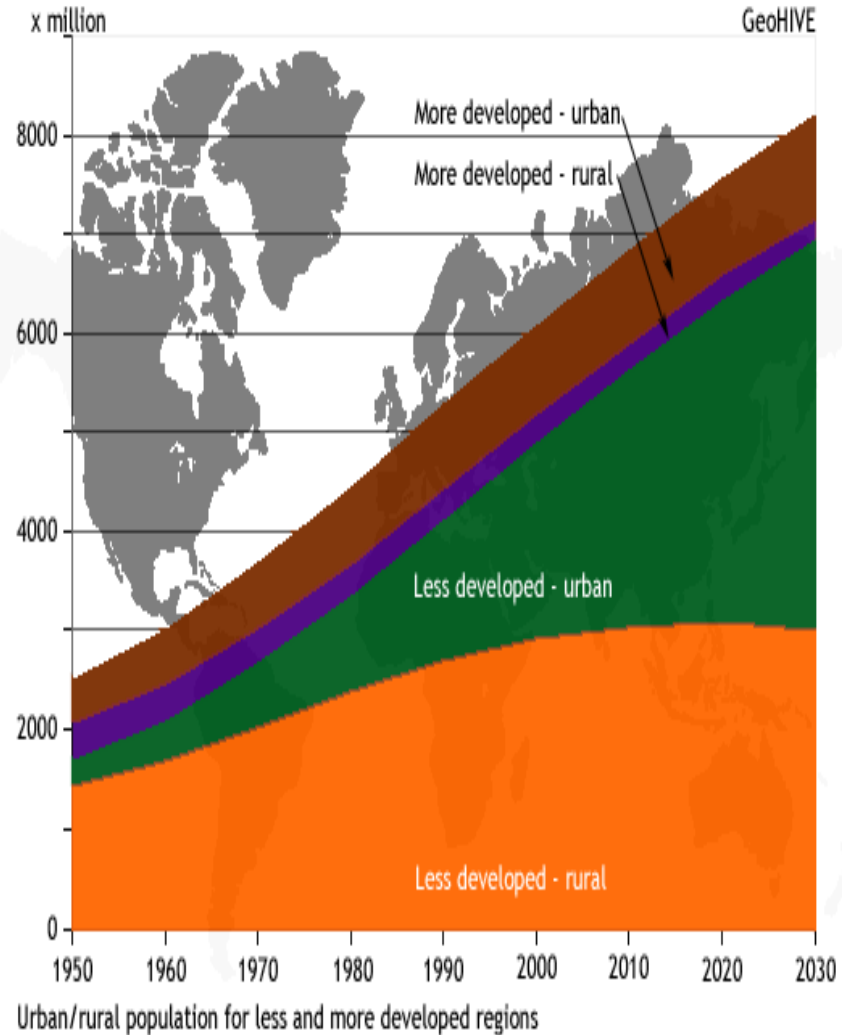
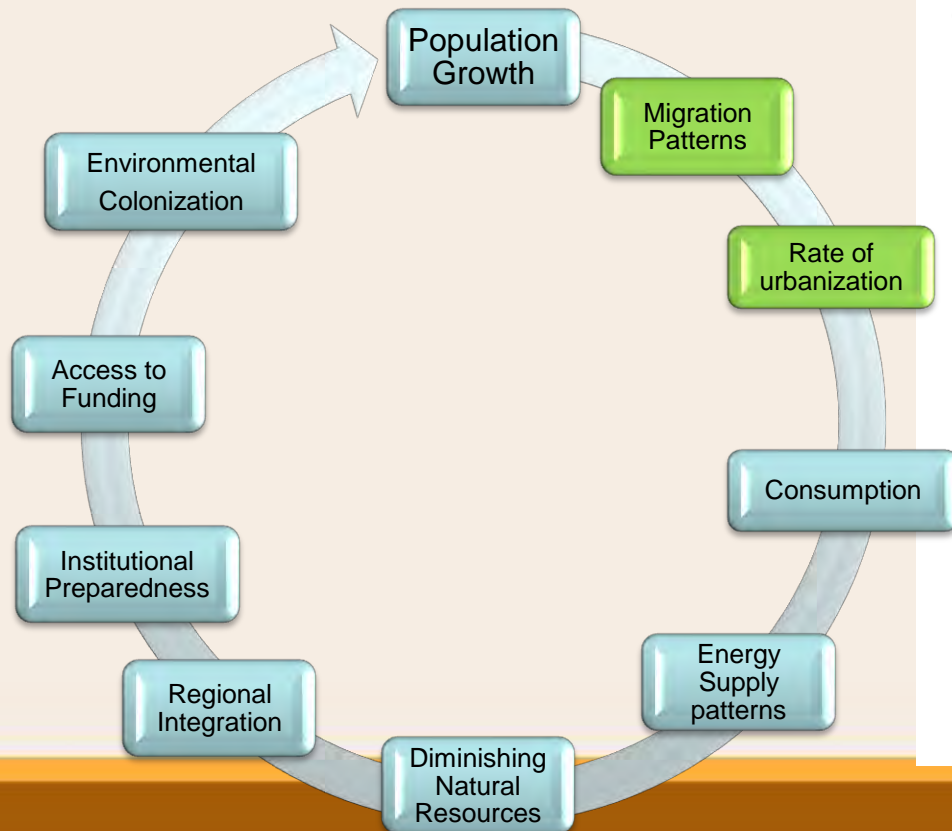
- Africa reached 1 billion projected to reach 2bn by 2050
- Every two out of three persons are under age of 25 years
- Major developmental and economic needs



# Migration towards major cities to secure livelihoods

The primary function of the world energy system is to provide urban settlements with massive quantities of electricity, petrol and heat for use in commercial, transport and residential sectors. Over three quarters of the world's commercial energy is consumed in cities, emitting over 75% of CO<sub>2</sub>e.

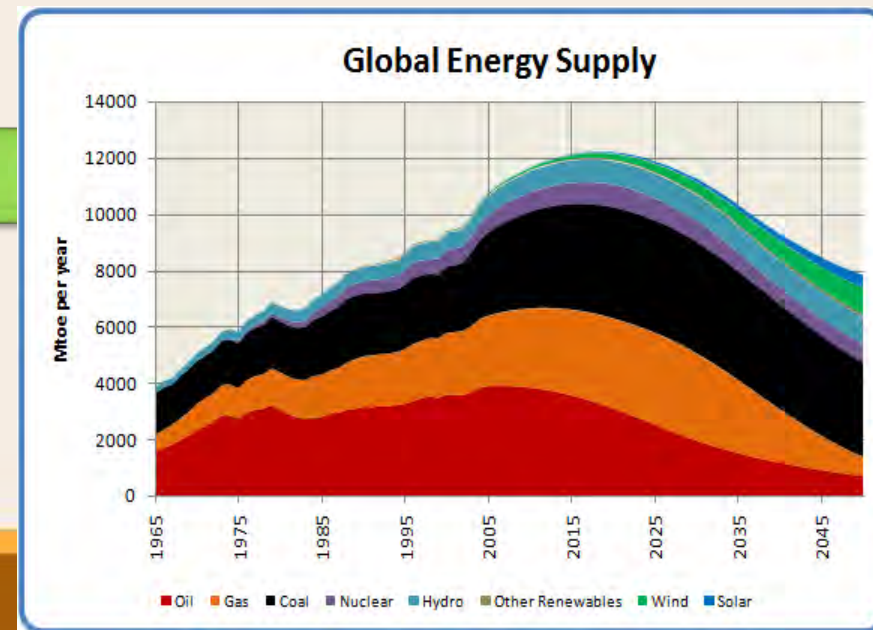
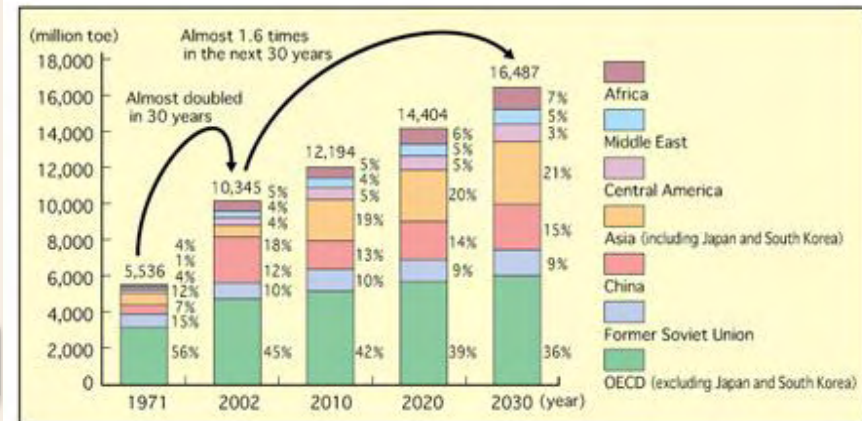
(Opportunities for investment are abound)



# Rising demands for energy, water, shelter, jobs, education, ...

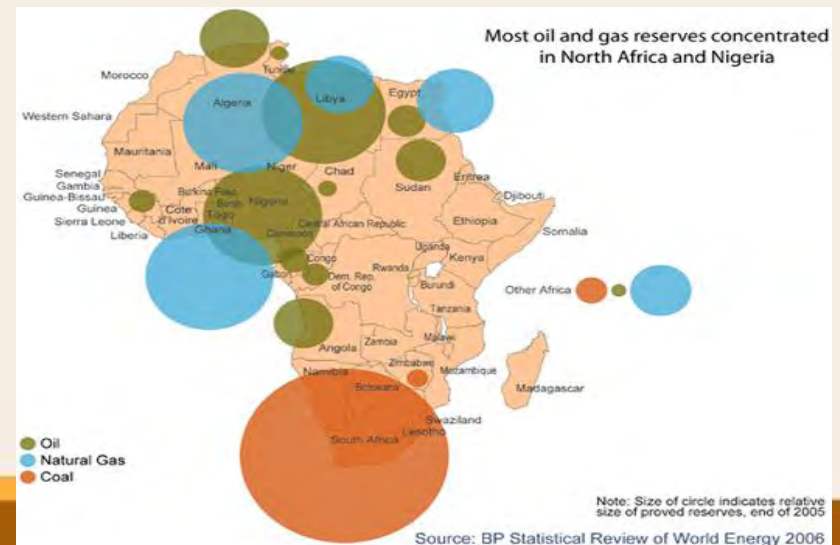
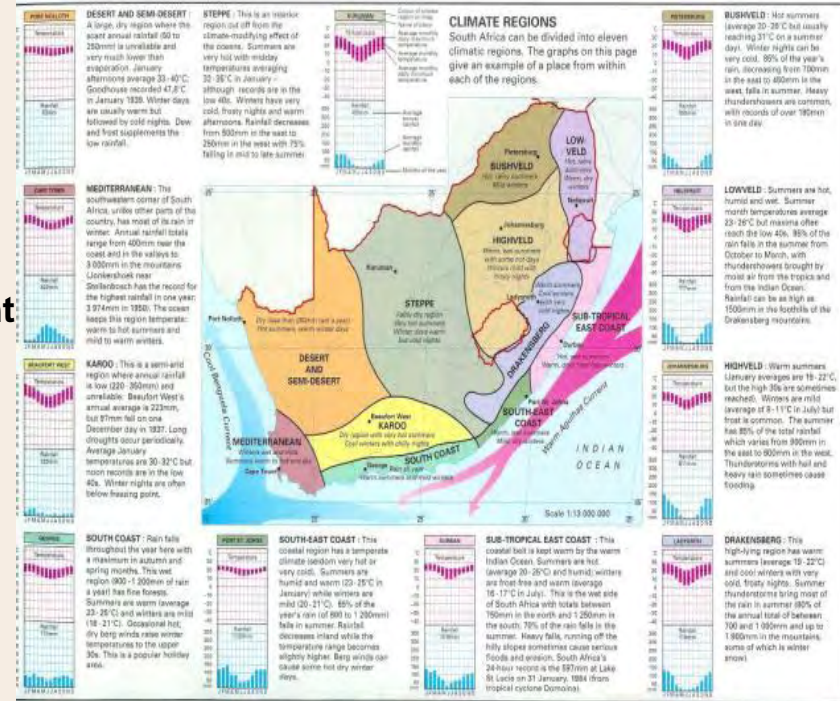
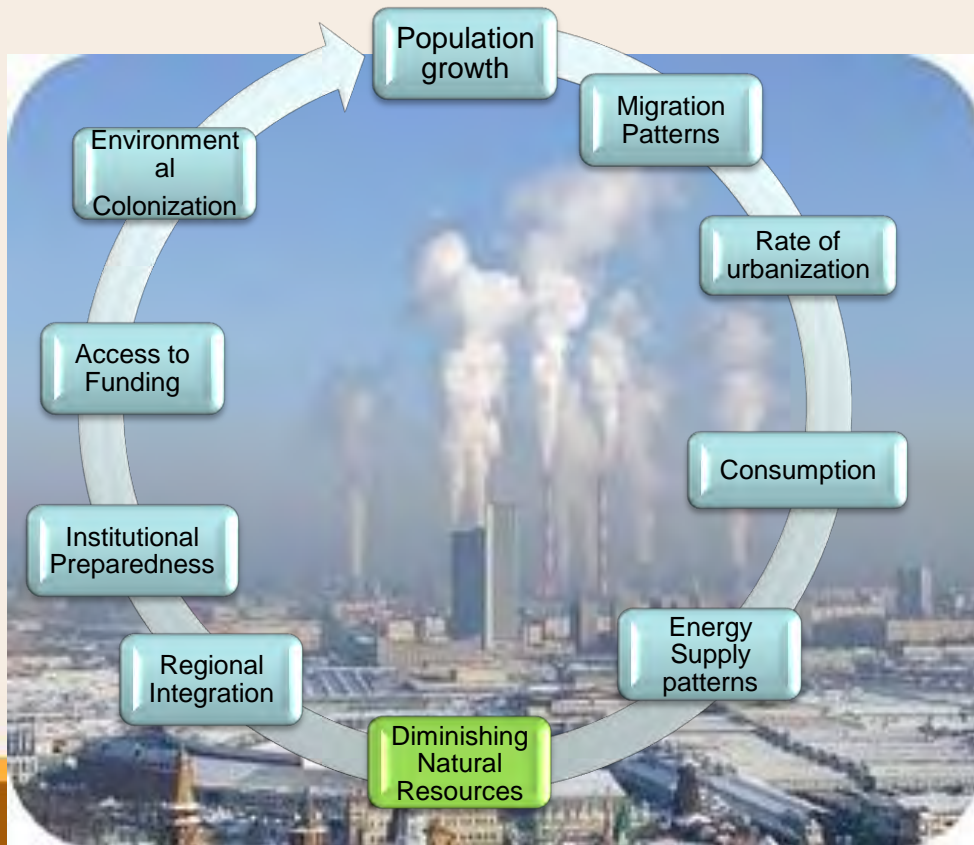


**\$500bn needed for Africa energy investment in foreseeable future and rising ...**



# Africa among most vulnerable to changing environment

Water scarcity, arable land degradation through overgrazing and increased agriculture activity exacerbated by rising global temperatures negatively impact economic and social development. Development has to incorporate improved infrastructure solutions to revitalize natural resources.



# Africa to fast track growth through regional interdependencies.....

Regional cooperation and creating continental demand will enable Africans to benefit from stimulating local demand for products and services as in the case of India and China. Cooperation depends on effective institutional structures and governance to promote and harness trade advantages.

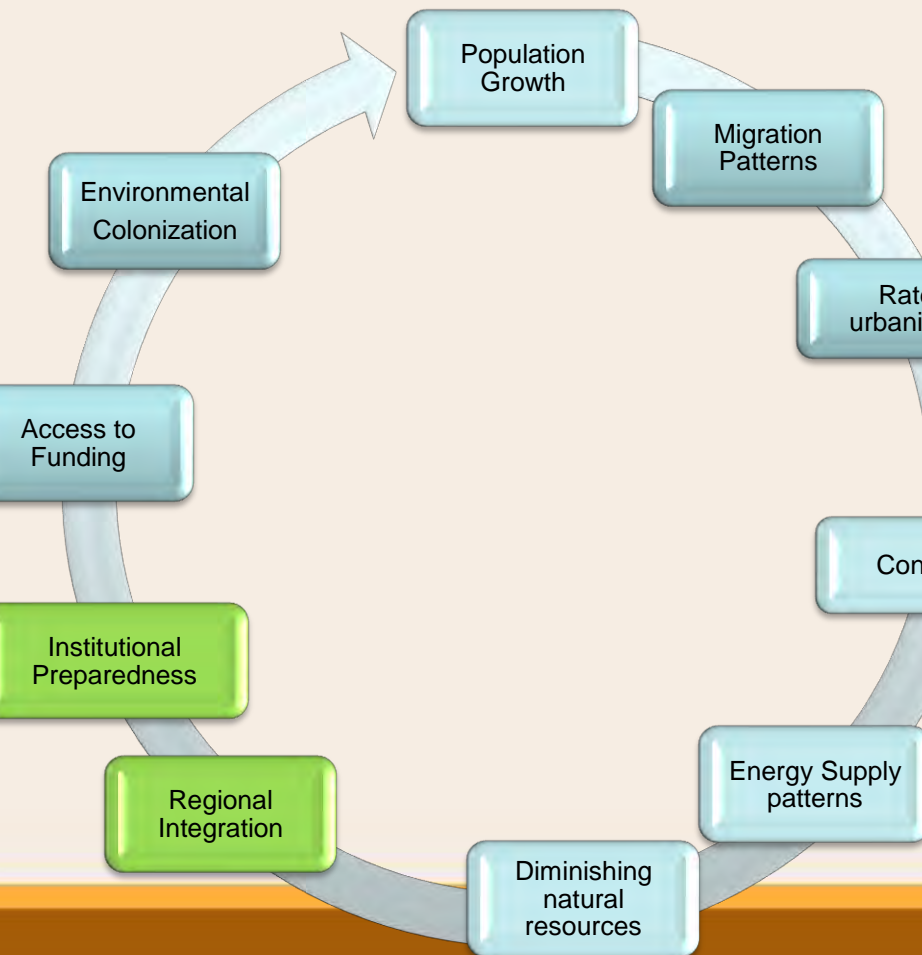
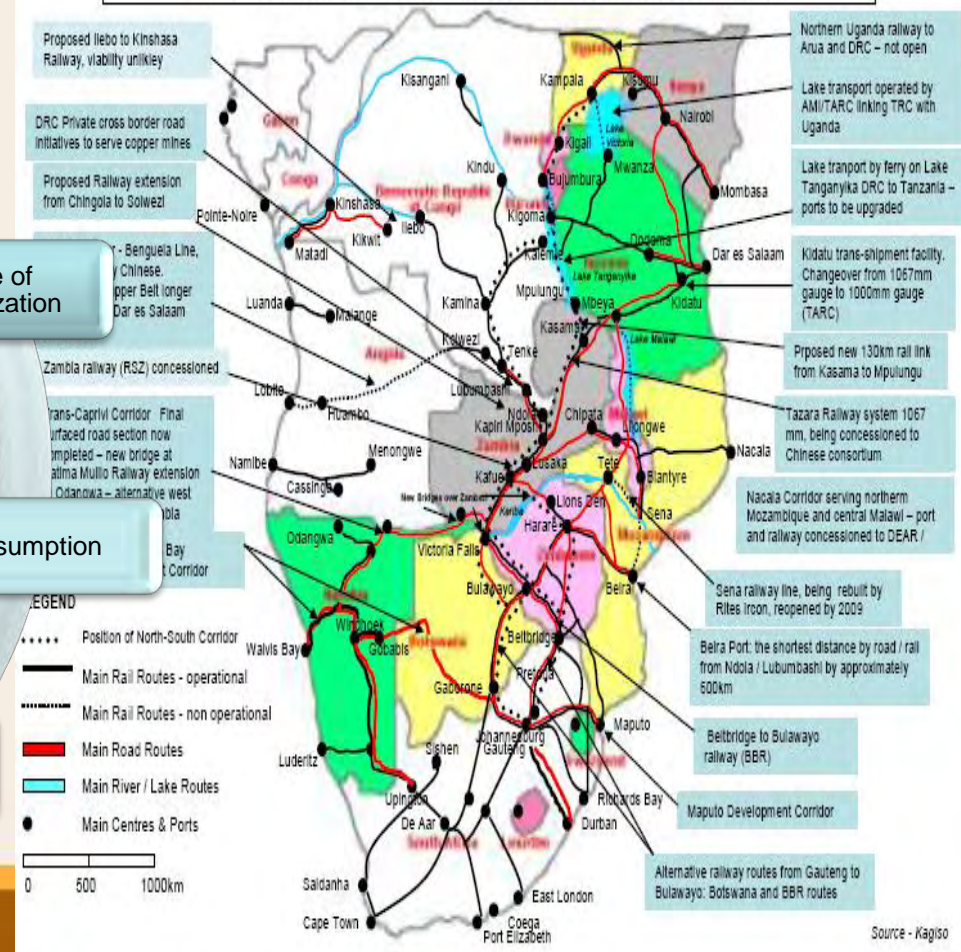


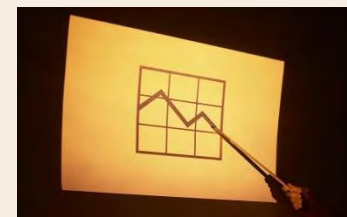
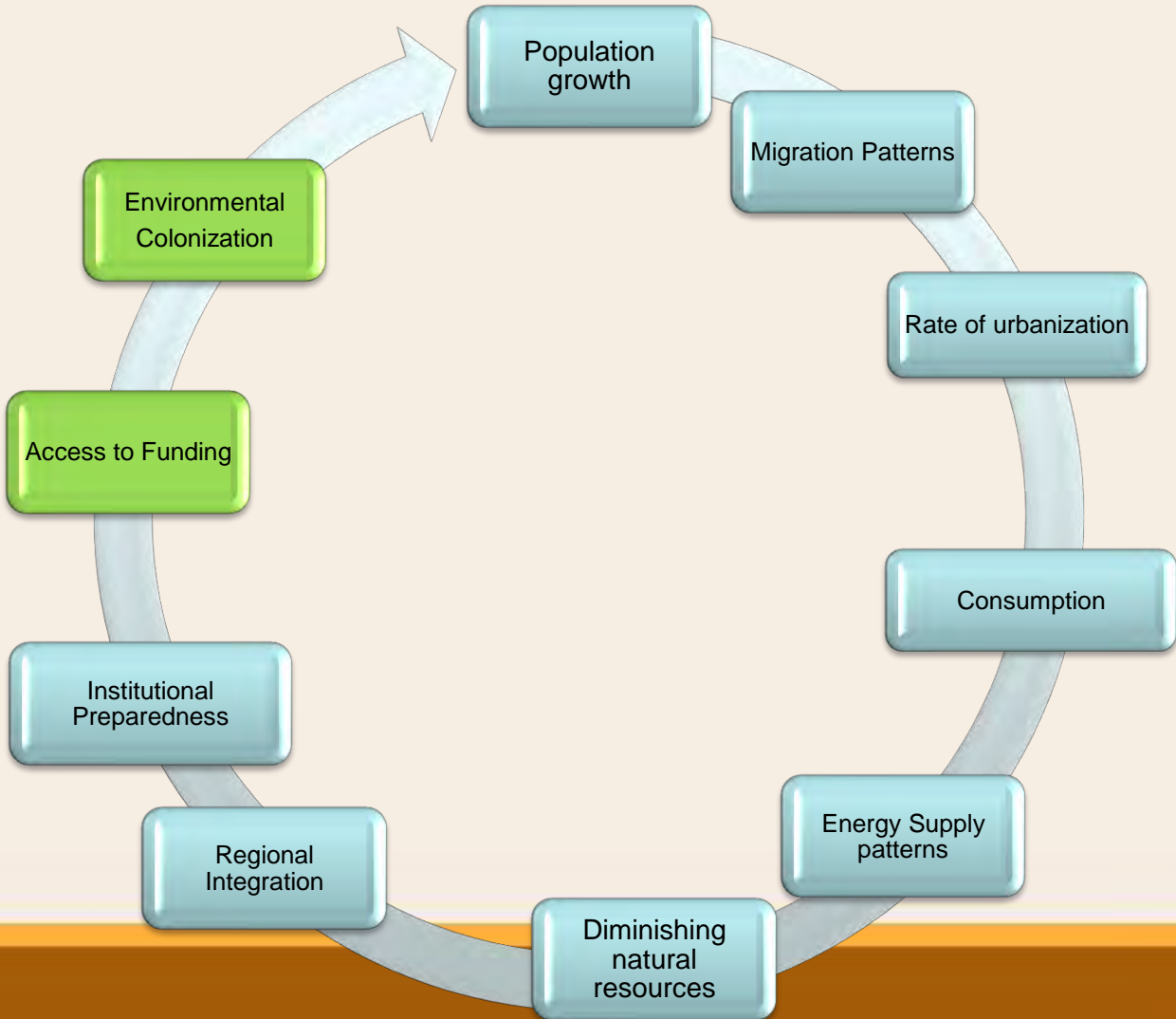
Fig 1: Southern and Eastern African Transport Corridors and Ports



# Significant capital needs by developing countries



Africa's growth and environmental sustainability will be fueled by development capital raised on capital markets and donor communities from around the world. China's increasing financial footprint on the continent is shifting the landscape of development interventions, and is providing much needed alternative financing models





# GETTING RESULTS...??

*Towards a 'Development Finance'  
Programme Design.....*

# The Copenhagen Accord.....



– Countries confirmed body of scientific evidence and agreed to:

- Work towards a common, long-term goal to limit global temperature rise to below 2 degrees C
- Review this commitment in 2015
- Establish and implement targets for GHG
- Implement Nationally Appropriate Mitigation Actions (NAMAs) and communicate their efforts every two years
- Provide coping support to the most vulnerable countries
- Establish the Copenhagen Green Climate Fund
- **Countries pledged \$30 billion a year between 2010 and 2012 to be disbursed through Copenhagen Green Climate Fund**
- Countries backed the goal of mobilising \$100 billion by 2020 for developing countries

# Partnership approach required



- Components of a partnership should include:
  - Establishing clean-green investment promotion strategies (frameworks, market mechanisms, inward & outward investment promotion)
  - Harmonising corporate GHG emissions disclosure (single global standard, improving disclosures, mainstreaming best practices)
  - Enabling the dissemination of clean technology (enhancing local firms capacities to be part of global green value chains, strengthening developing countries absorptive capacity for clean technology)
  - Scaling up of technical assistance (project preparation and development funds to accelerate green projects through to bankability).

# Mobilising Resources



**The assumptions underpinning the Green Economy work from a resource mobilization perspective acknowledges:**

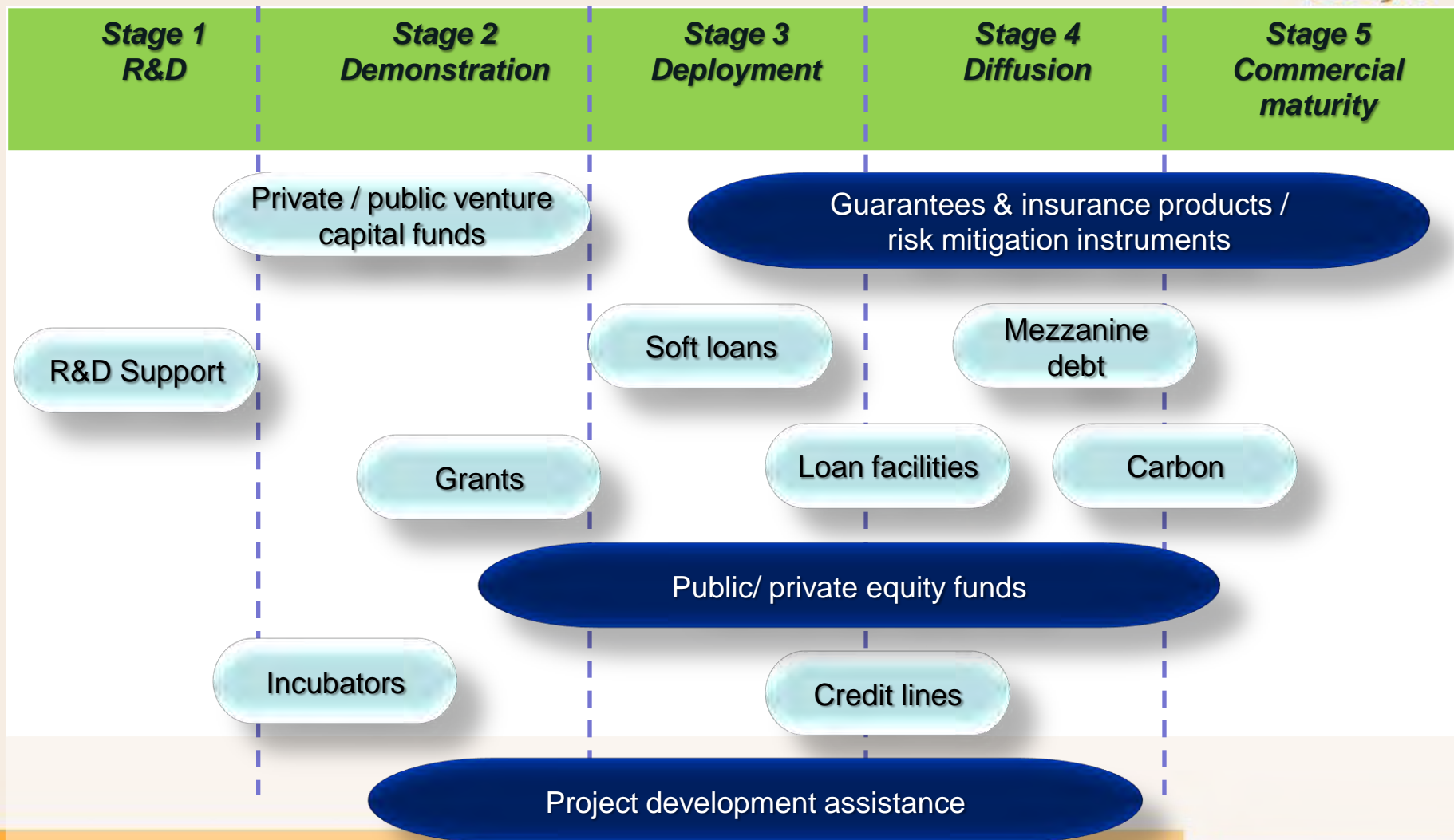
- National service delivery and the green economy programmes are complementary in focusing on sustainable technologies and environmental interventions in key infrastructure and social initiatives;
- Environmental externalities are not addressed in the conventional market based growth model and therefore the proposed programmes should be subjected to full cost accounting methodologies;
- Opportunity costs of action/inaction is a core determinant in shifting to a green economy at the least economic and ecological cost;
- Economic impacts of packaging and launching a suite of programmes should be determined to identify any potential unintended consequences;

# Mobilising Resources....(Contd.)

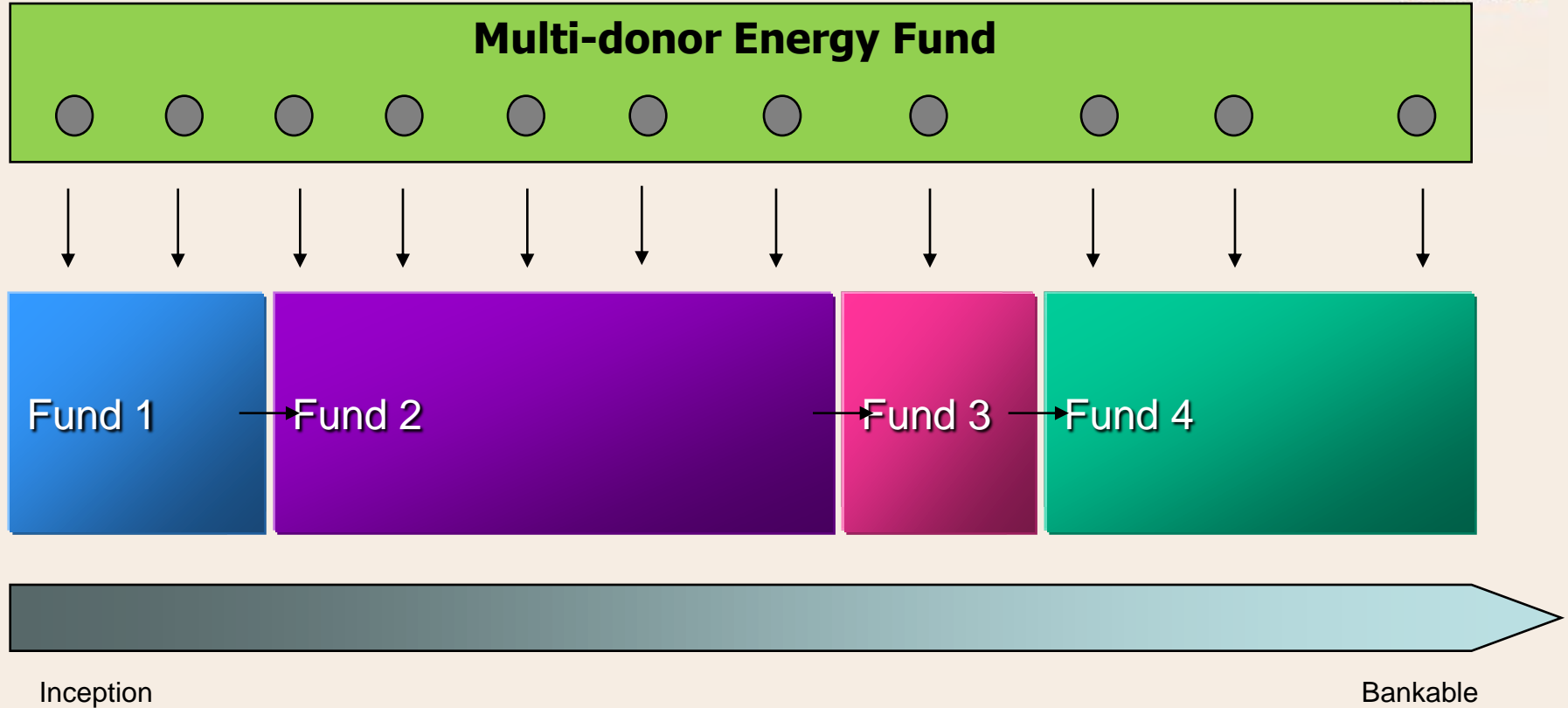


- Global negotiations impacting the mobilization of resources and its impact on regular aid and trade flows would be considered in order to consider African programme dependency on external funding and support;
- Required resources should be accessible in a fair, transparent and efficient manner to accelerate critical programmes that are also aligned with service delivery in key infrastructure areas;
- Regional linkages and global developments would form the backdrop of the resource mobilization given the wider climate change and global green economy shifts evident in bilateral negotiations, donor and multilateral finance institution mandates;
- Institutional mechanisms should be incremental to the existing resource delivery channels, provided that such channels are not distressed.

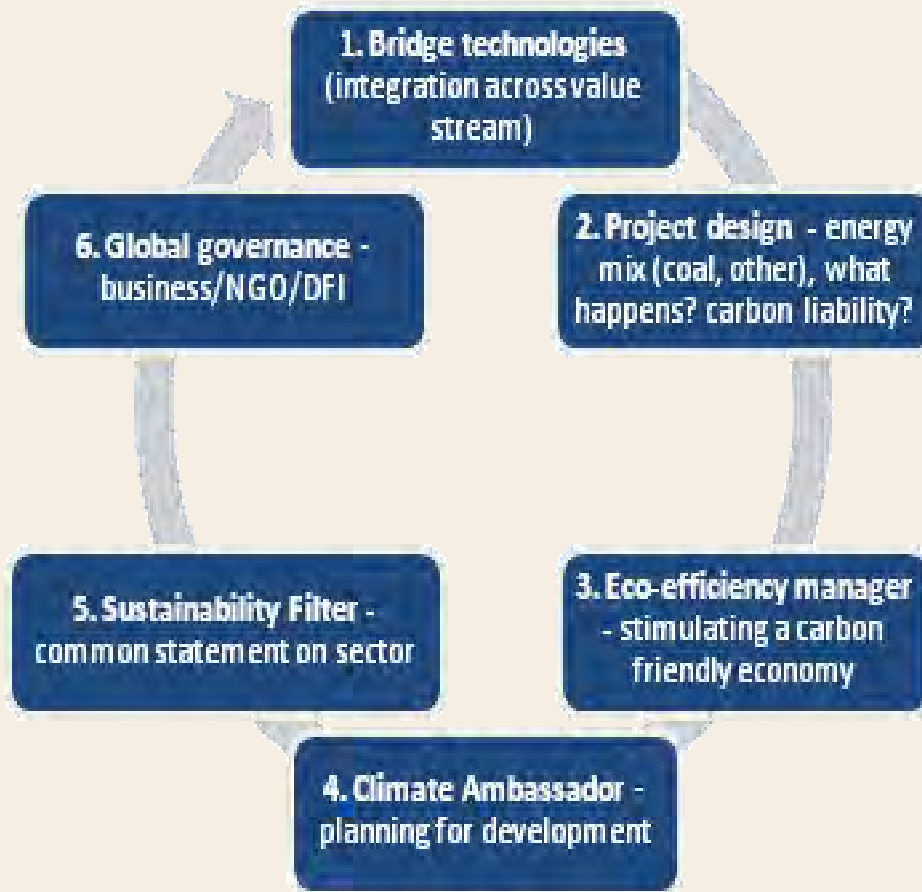
# Funding sources



# Resource mobilisation across project life cycle



# Design finance products with embedded sustainability



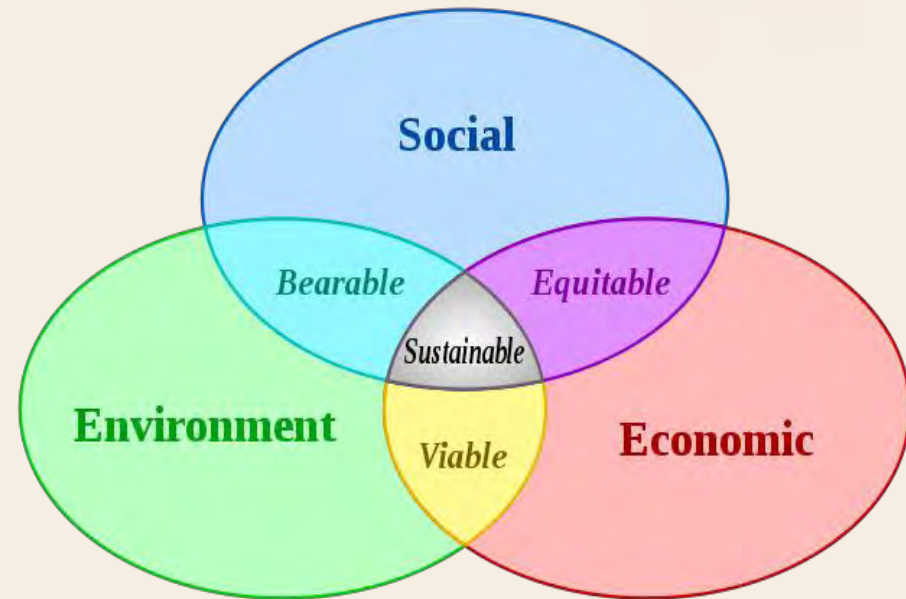
Embedding sustainability into the financial products and services of the development finance community will require:

- Policy and strategic direction
- Investment strategy reforms
- Investment assessment reforms
- Product and project development mechanisms

**Illustrative cycle of financial product creations in the energy sector**

# Achieving sustainability is dependent on cooperation

- There are perceived trade offs to achieve sustainability while pursuing economic growth, the primary concern being that the financial viability of projects will be compromised – translating into higher funding costs due to larger upfront capital costs and longer payback periods.
- Most DFIs have a strong track record of engaging in economic and social programmes that reflect equitable and bearable environmental impacts, while ensuring that projects remain financially viable.
- Greater effort and impetus is however required in terms of integrating sustainable environmental designs into the DFI lending and capacity building programmes beyond regulatory and policy issues.



# High level programme needs analysis

## INTERVENTION

**STRATEGY** Design underpinned by a vision to create sustainable renewable energy and energy efficiency sector – investment strategy targets by type of technology, MW and desired savings into the system. Projects assessed per environmentally friendly design criteria.



Sustainable Energy Programme



Technical assessment



Funding partners



Supplement existing DFI capacity on energy deals by additional access to technical energy/ engineering skills:

Funding partners crowded in across the spectrum of development finance to ensure that the DFIs can develop, pilot and invest in projects at different stages of the project cycle.

**Monitoring and evaluation** of outcomes taking a life cycle approach across all interventions by DFIs (by region and by product/service) Feedback loops of successes and ensuring efforts not duplicated but leapfrogged.

## Critical outputs

- Renewable energy investments
- Energy efficiency investments
- Pilot programmes
- Diversified investment portfolio
- Carbon asset portfolio
- Seed capital and early stage project development initiatives
- Multi financing partners
- Expanded technical capacity
- Targeted training & capacity building
- Investment in local business
- New and permanent job creation
- Environmentally friendly project designs

# Potential Programmatic design

**Vision: Powering development through sustainable energy**

Programme components may include:

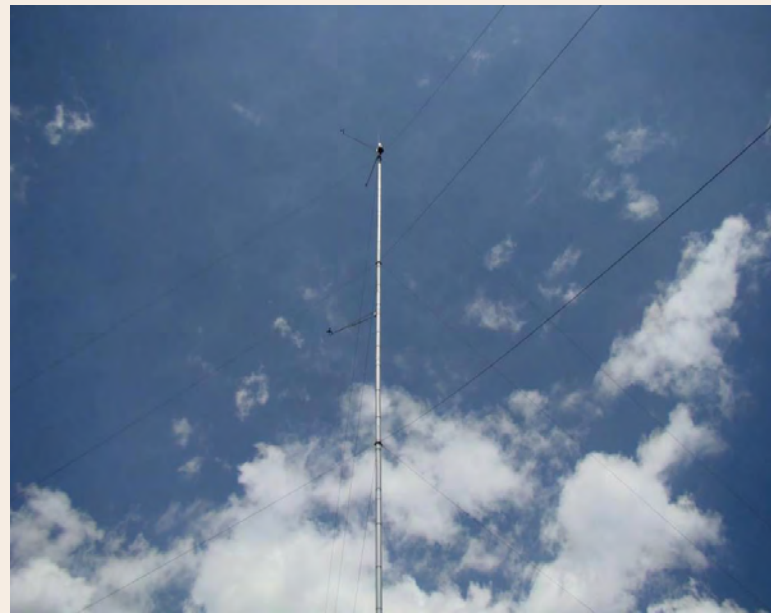
Policy and  
advocacy to  
create enabling  
environment for  
investment and  
mainstreaming

Supplementing  
and providing  
access to critical  
toolkits

Access to  
dedicated energy  
funding for project  
development,  
seed capital and  
investment

Projects focused  
on early stage to  
commercial  
maturity  
opportunities

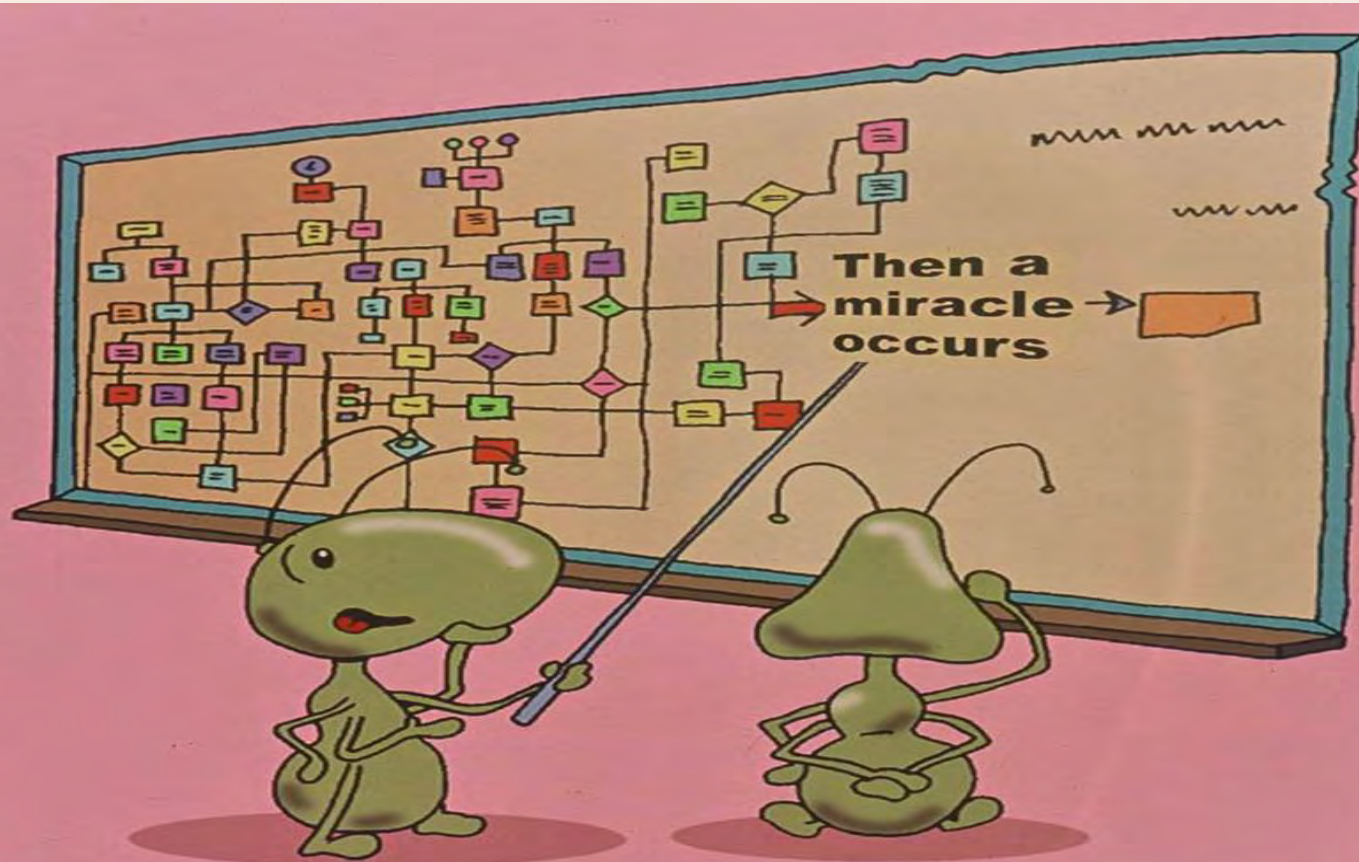
Targeted  
sub-programmes  
from specific  
government  
interventions



# THE END GAME....??

*In the Final Analysis.....*

# WE'RE STILL LEARNING



***GOOD WORK, BUT I THINK WE  
MIGHT NEED JUST A LITTLE  
MORE DETAIL RIGHT HERE***

# Conclusions [1]



- Partnership-based approach
  - That targets the ‘development imperative’ as well as the ‘business opportunity’
- Exploration of funding mechanisms/instruments
  - Green bond, green fund, green exchanges
  - Carbon markets/trading
- Working with and through Government’s, RECs and the AU
  - African economies have other competing priorities, and dedicated assistance, institutional development and policy frameworks need to be rendered
- DFIs and IFIs have significant roles to play
  - Reconfiguring funding investment strategies, embedding ‘green’
  - Resource mobilisation

# Conclusions [2]



- A major African challenge is energy availability in rural areas: current inefficient wood-based technologies should be considerably improved or replaced with modern, sustainable, renewable energy sources.
- Africa has enormous potential for energy production from renewable sources – solar, hydro, wind and geothermal. Almost all Sub-Saharan African countries have sufficient renewable resources, exploitable with current technologies.
- Access to affordable, reliable, sustainable and safe energy services is vitally connected to economic prosperity, social well-being, environmental sustainability and climate change issues.
- Africa's response to climate change is hampered by a fundamental shortage of relevant, useful information for African audiences.

# Conclusions [3]



- Extreme weather events and greater unpredictability in weather patterns are having serious consequences for people who rely on land, lakes and seas to feed themselves and to earn a living.
- As a result, Africa's engagement with the issue is evolving rapidly, presenting an opportunity to leapfrog the slow evolution of western public opinion and political action.
- Mixed feelings have welcomed Africa's fledgling carbon market, which observers believe is stuttering in the face of a massive potential.
- According to the United Nations Environment Programme (UNEP), the continent has over 120 carbon market projects up and running or in the pipeline, in areas ranging from wind power to forestry schemes.

Thank You Ladies and  
Gentlemen!

Merci!