The Greening of Infrastructure

G20 Development Conference
Infrastructure for Inclusive Growth

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Presentation Outline

1 – The infrastructure-sustainable development nexus in Africa

2 – Setting course for a climate resilient economy

3 – Coordination of funding for climate change/ Green in SA

4 – Execution of strategies

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Infrastructure-sustainable development nexus





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SSA is one of the fastest growing economic regions in the world…

SADC Countries Growth Performance and Outlook: Real GDP growth

Year-to-year % change. IMF WEO October 2010 (January 2010 WEO update in parenthesis)	2007	2008	2009	2010	2011
Angola	20.3	13.2	0.7	*5.9*	*7.1*
Botswana	4.8	3.1	-3.7	*8.4*	*4.8*
DRC	6.3	6.2	2.8	*5.4*	*7.0*
Lesotho	2.4	4.5	0.9	*5.6*	*3.8*
Madagascar	6.2	7.1	-3.7	*-2.0*	*2.8*
Malawi	5.8	8.8	7.5	*6.0*	*6.2*
Mauritius	5.4	5.0	2.5	*3.6*	*4.1*
Mozambique	7.3	6.7	6.3	*6.5*	*7.5*
Namibia	5.4	4.3	-0.8	*4.4*	*4.8*
Seychelles	19.7	-1.3	0.7	*4.0*	*5.0*
South Africa	*5.5*	*3.7*	-1.8	*2.9*	*3.4*
Swaziland	3.5	2.4	1.2	*2.0*	*2.5*
Tanzania	7.1	7.4	6.0	*6.5*	*6.7*
Zambia	6.2	5.7	6.3	*6.6*	*6.4*
Zimbabwe	-3.7	-18.9	5.7	*5.9*	*4.5*
Sub-Saharan Africa	7.0	5.5 (5.6)	2.6 (2.2)	*5.0 (4.3)*	*5.5 (5.5)*

Source: IMF WEO Country forecasts October 2010. In parenthesis WEO January 2010 update. South Africa forecast DBSA September 2010

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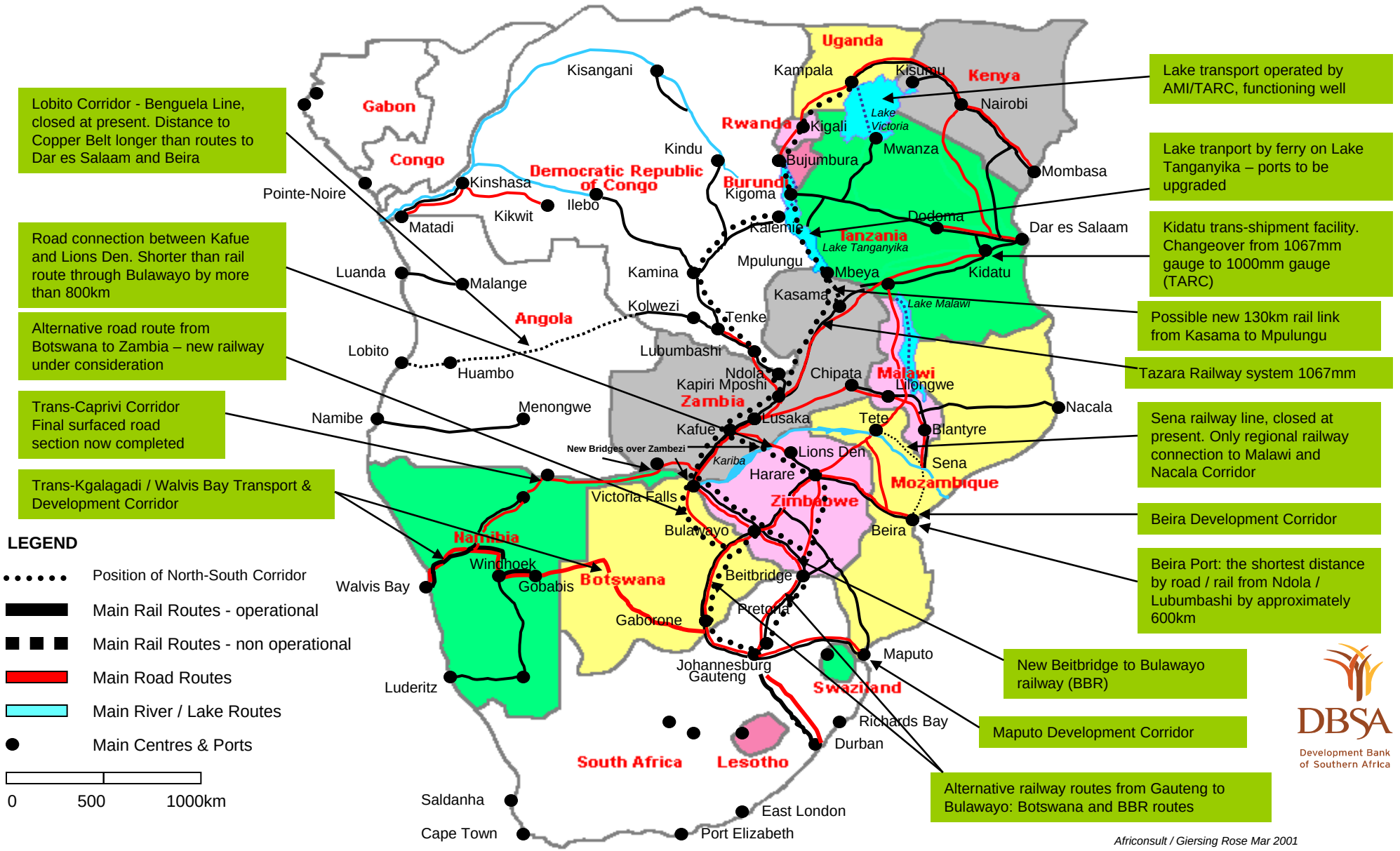
Sustained growth is constrained by lack of connective infrastructure. Region must therefore focus on infrastructure priorities



Africonsult / Giersing Rose Mar 2001

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Setting course for climate resilient economy





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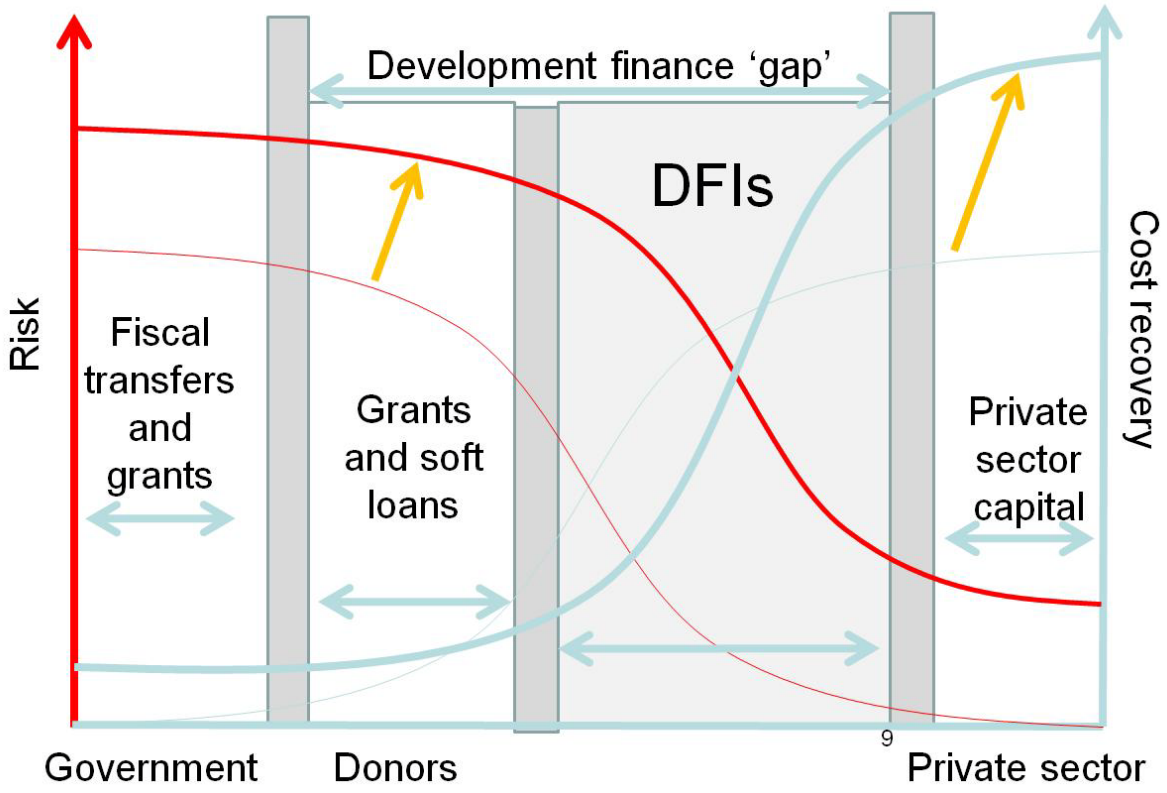
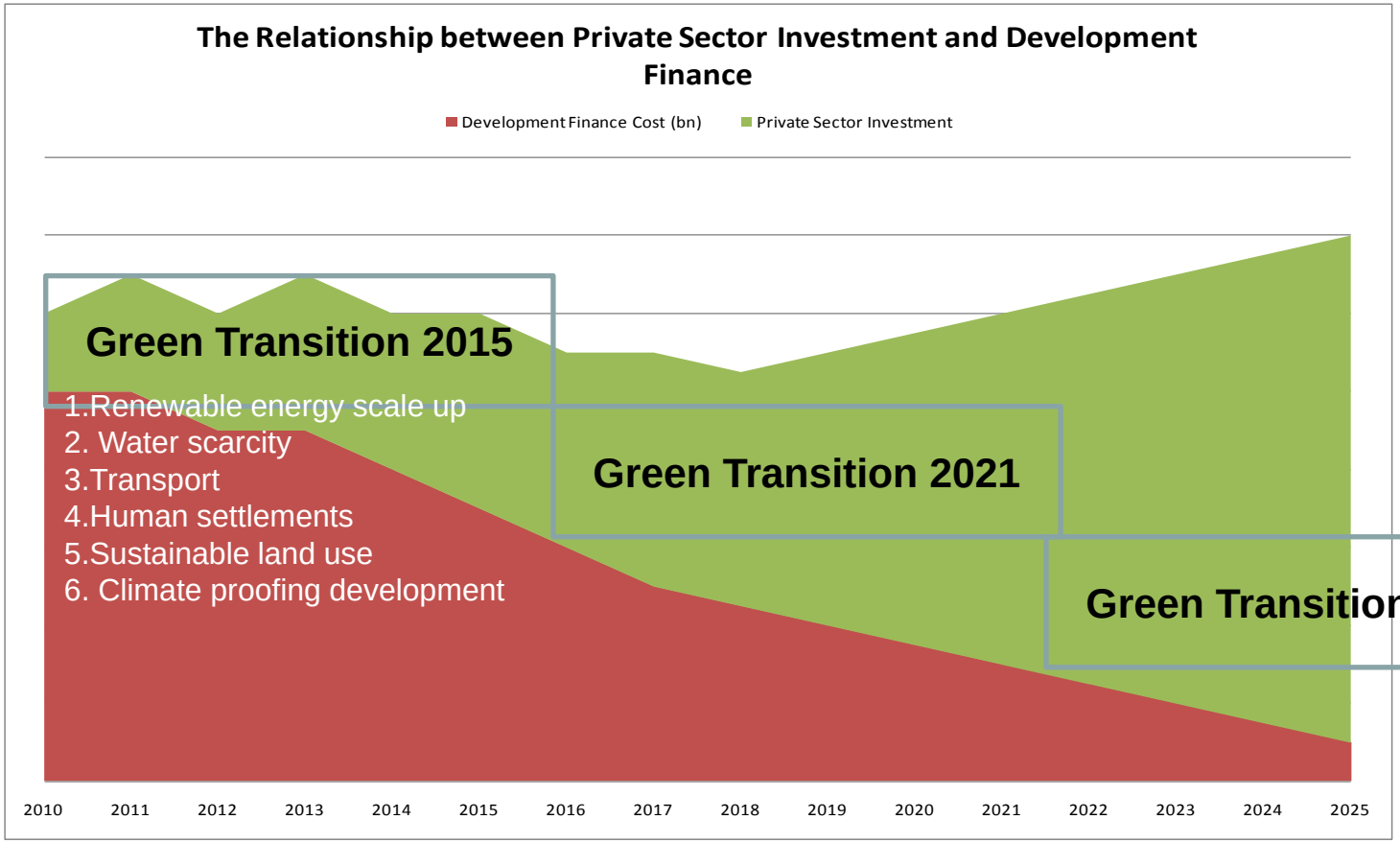
Development Banks (DFIs) are key to a financial system that can allocate risk in a manner that supports infrastructure impetus

- Financial innovation is needed
- Pre investment capital shortages
- Risk mitigation and absorption support
- Project development assistance
- Technology transfer vs. R&D for high localisation
- Using local and international aid effectively
- New climate finance instruments
- Green / clean bonds
- Property markets as investment class
- Insurance and reinsurance – risk absorbers of last resort?
- Significant private capital needed



Source: DBSA, 2010

New infrastructure programmes (to 2030+) can be climate resilient and create optimal space for private sector investment



- Each **transition window** has priority actions based on a portfolio approach for risk with a defined '**transition impact**' and estimated **transition cost** is applied
- **National transition programmes** will offer international and local 'investors' clarity on country priorities and attract incremental resources to catalyse actions within the window

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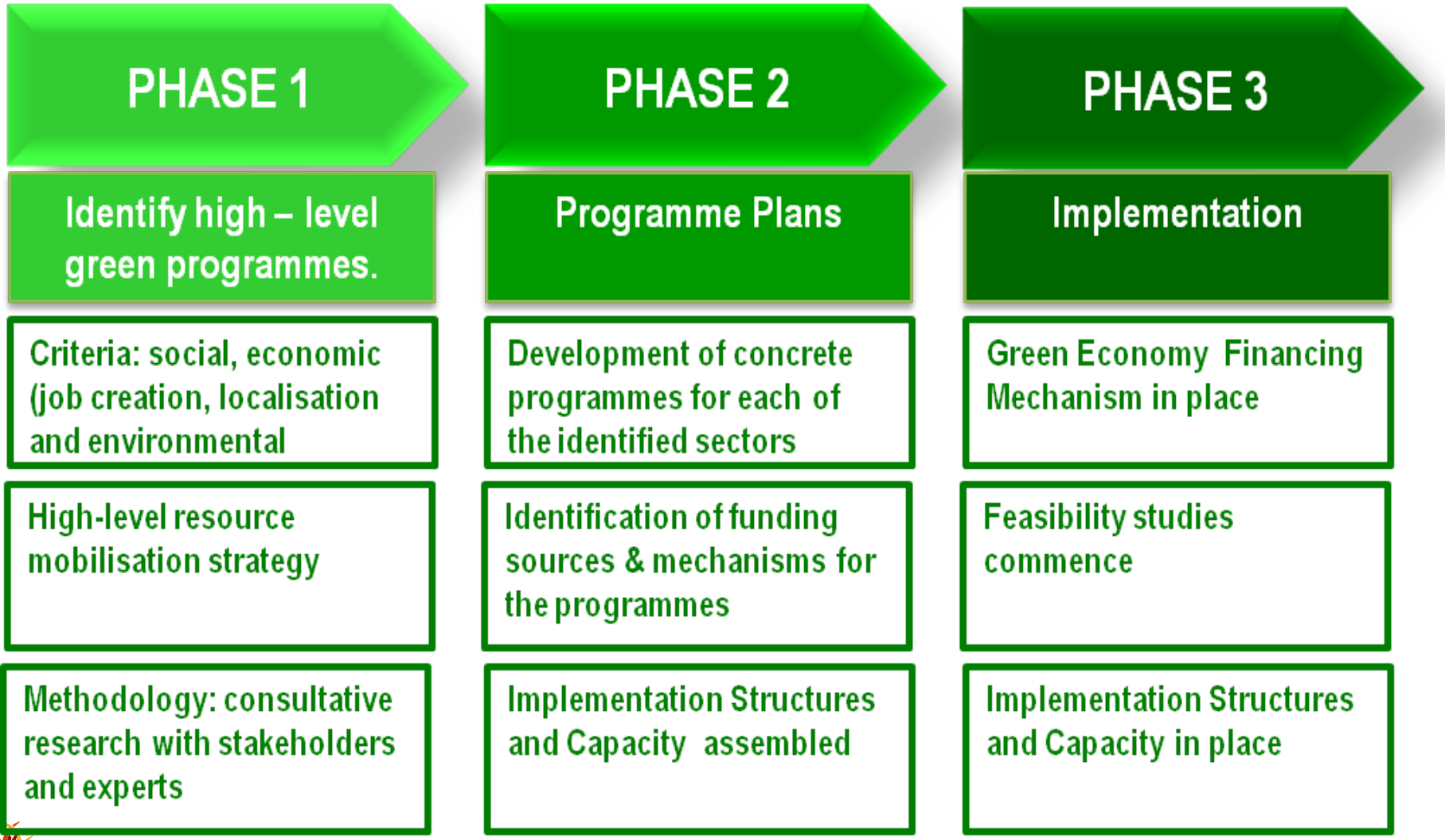
SA Government process identified win-win programmes



Coordination of funding sources





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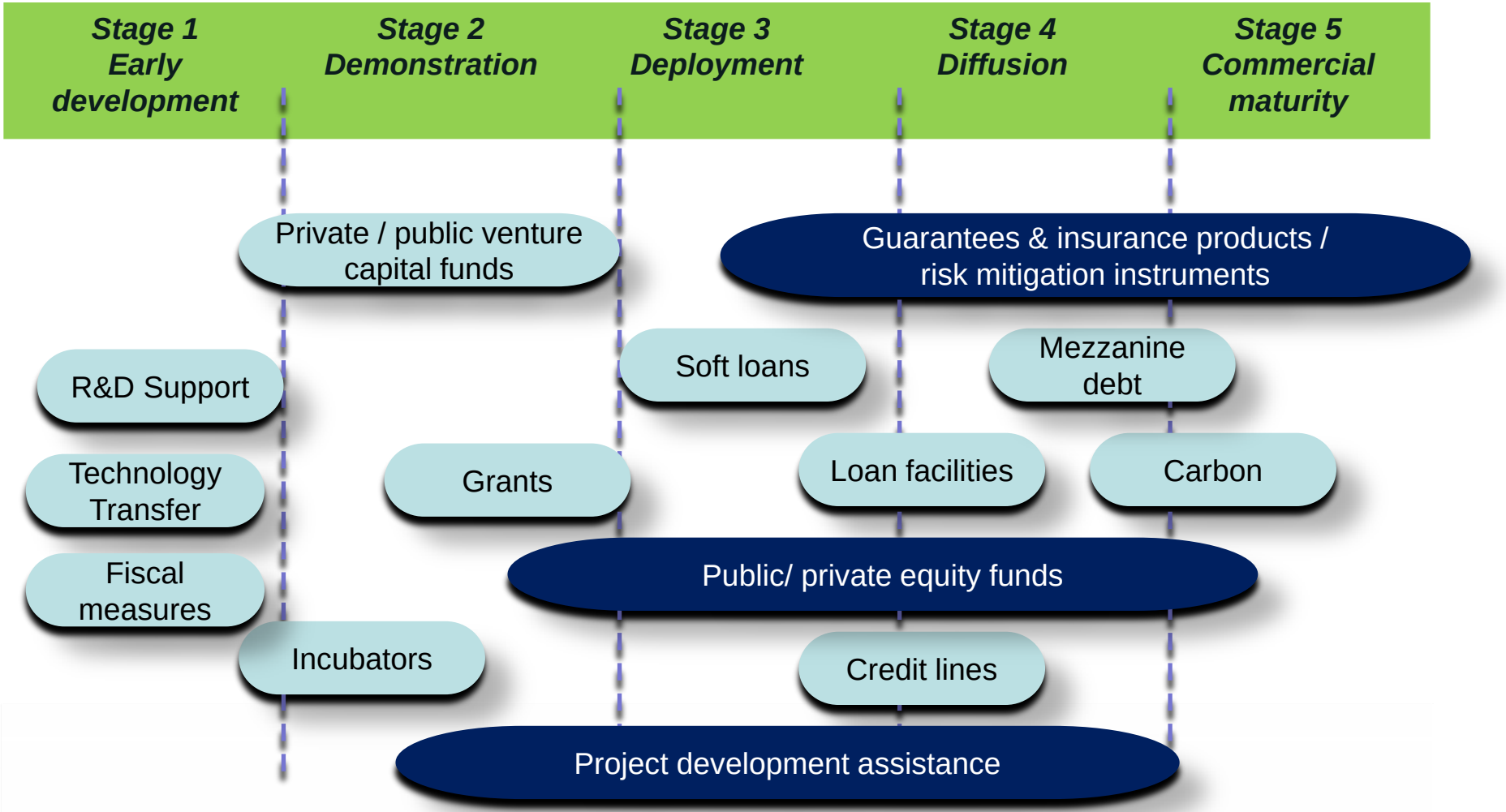
Different funding sources are needed based on the risk profile from early development through to mass uptake



Source: Adapted from UNEP-FI, 2009

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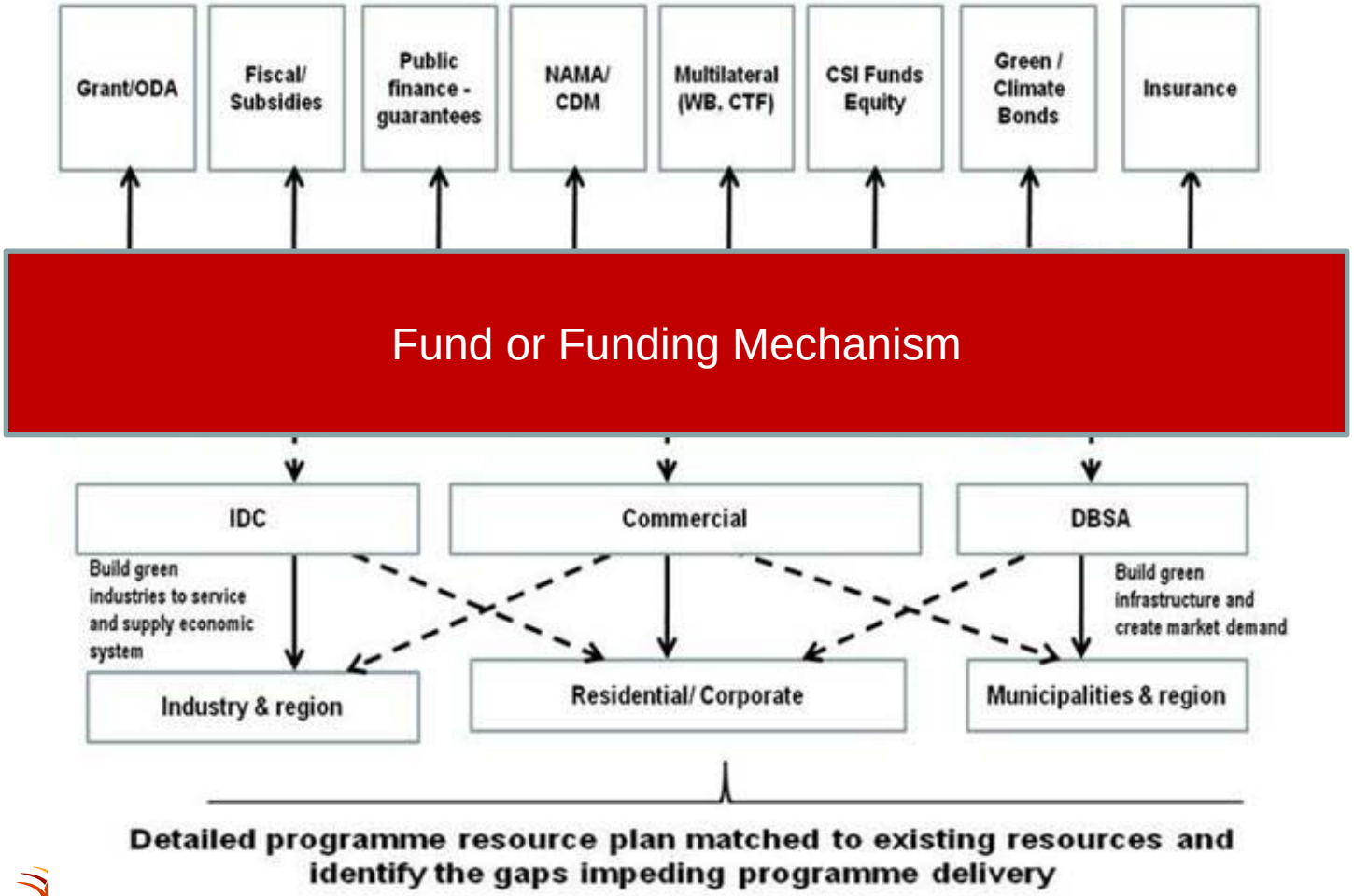
South African DFIs can utilize national coordinating mechanism to jointly drive demand for Green projects and programmes



- **National coordinating mechanism** for access and leverage
- **Empower role players** to avoid gate keeping
- **Rapid response teams** to provide technical, financial and capacity support on tap

Source: Dept of Environment Affairs (SA), 2010

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Implementing Green strategies





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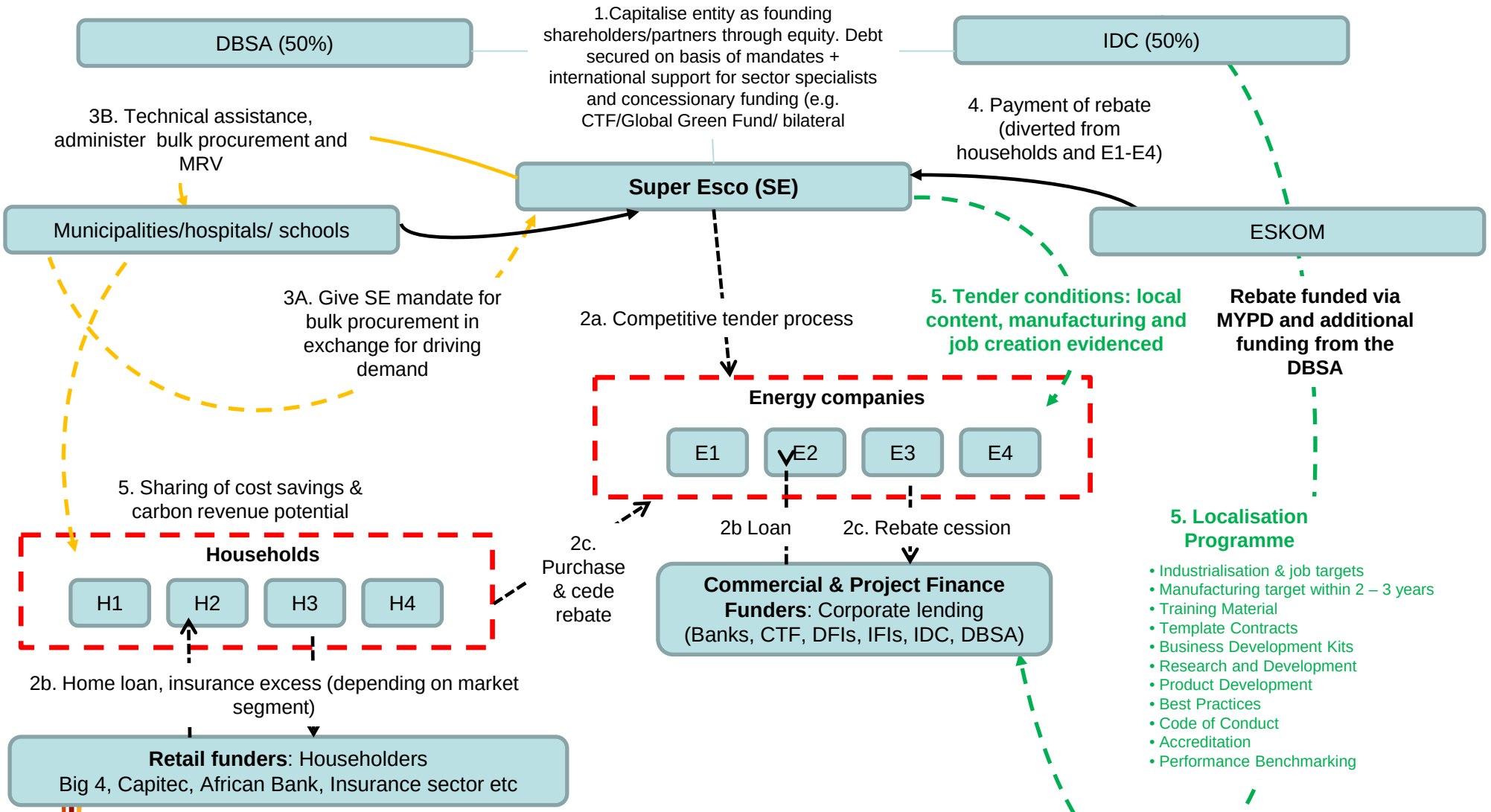
(1) Solar Water Heating roll out in SA has funding arrangements that will integrate using and scaling up new technologies



Source: DBSA, 2011

(2)

‘Building human settlements’

Kuyasa CDM Project
1st Gold Standard & CDM registered project in Africa

2309 Low income households

- Solar Water Heaters
- Insulated ceilings
- Energy efficient lighting

What made this project so ahead of its time? It was not about carbon finance, it was about people, the poor …

Social

- Respiratory health burden reduced
- Provision of hot water – health / comfort
- Household cost savings due to energy efficiency
- Employment opportunities (EPWP)

Economic

- Peak demand reduced – defers new installed capacity
- Leadership for low cost housing / energy industry
- Entrepreneurial opportunities

Environmental

- Largest project of its kind in Africa - Leadership
- City SWH target – 10% by 2010 (ie 80 000 houses)
- Project assists this target
- Implementing global commitments

Governance

- Local participation and decision-making

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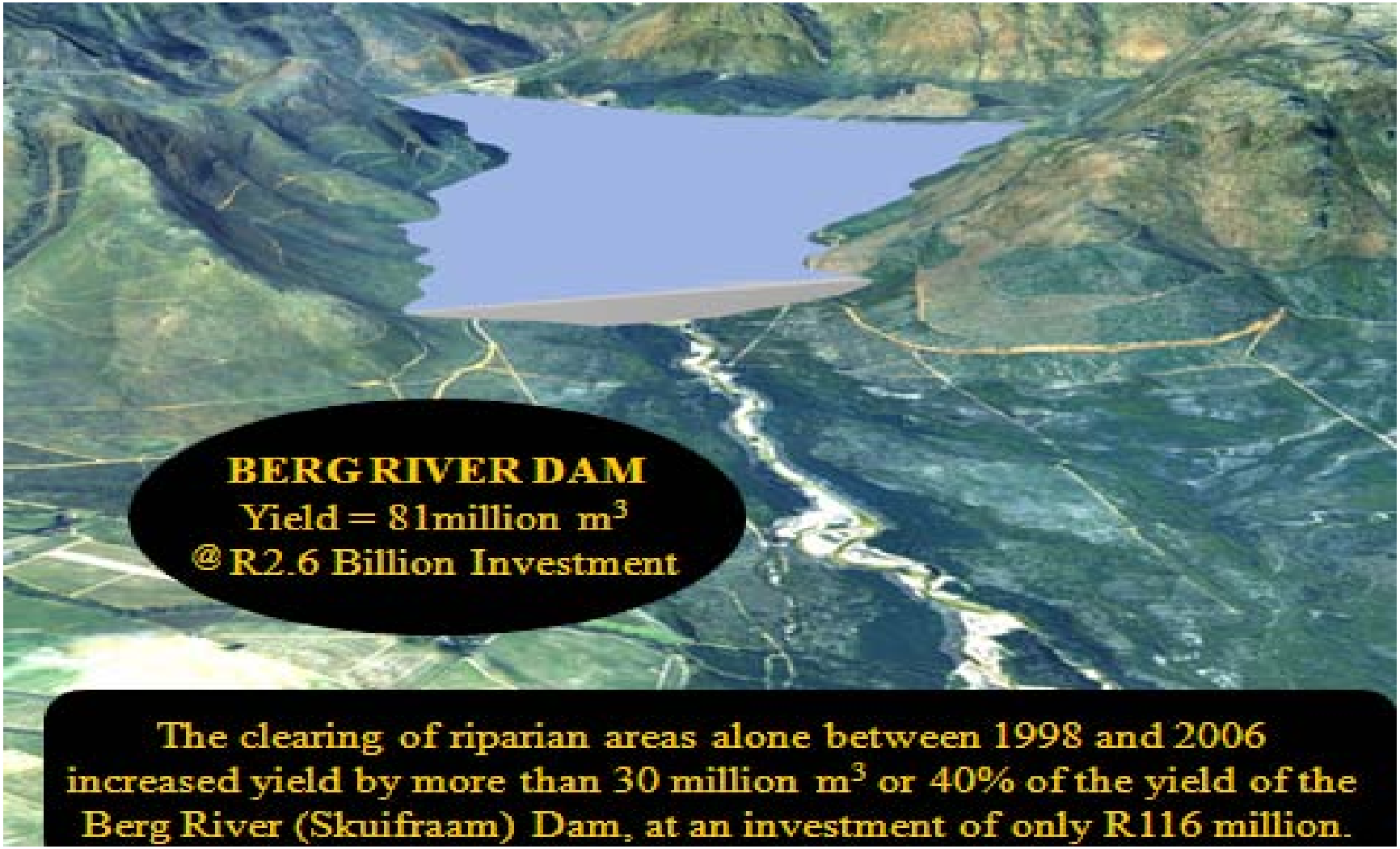
(3) Ecosystem services/ natural resource management offer potentially high return on public investment



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Absence of indigenous vegetation
(which would reduce erosion)

Serious erosion

Alien vegetation (which deflects
water and causes erosion)

Sediment and trees being washed away
and most likely will cause further erosion downstream

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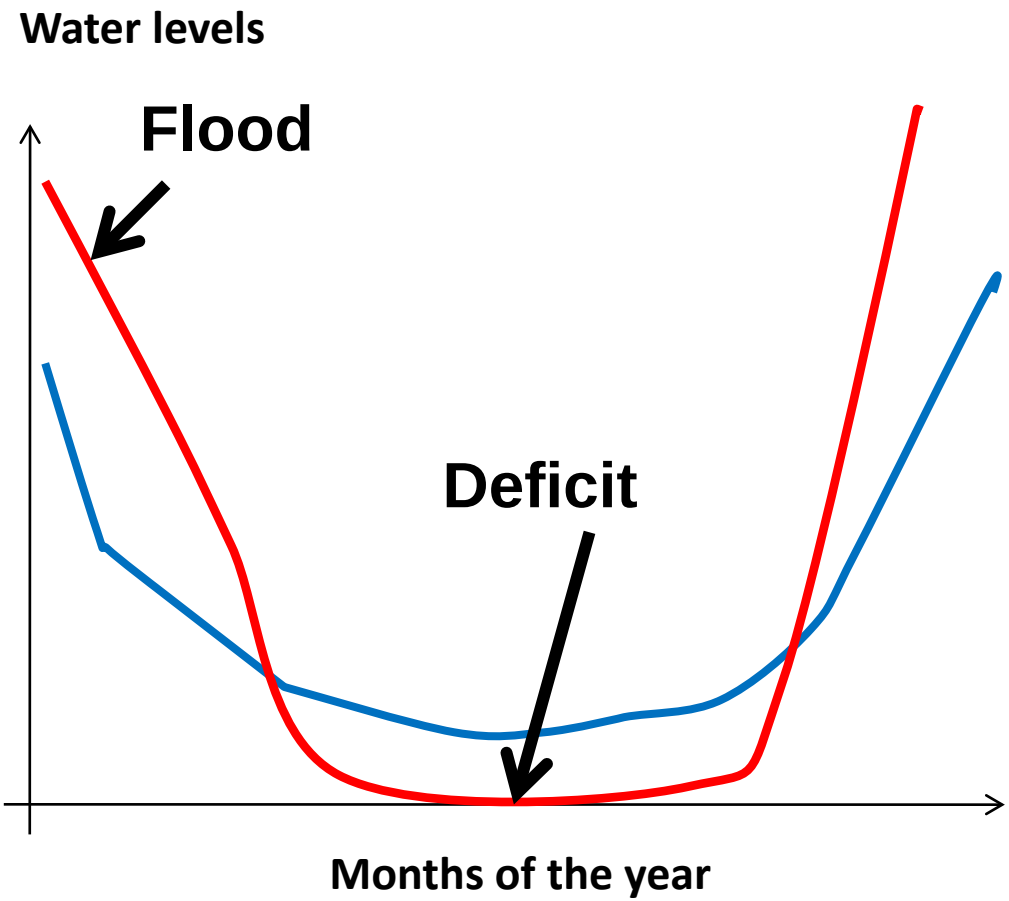
The damage caused by the lack of natural resource management requires expensive remedial strategies to regain water resources



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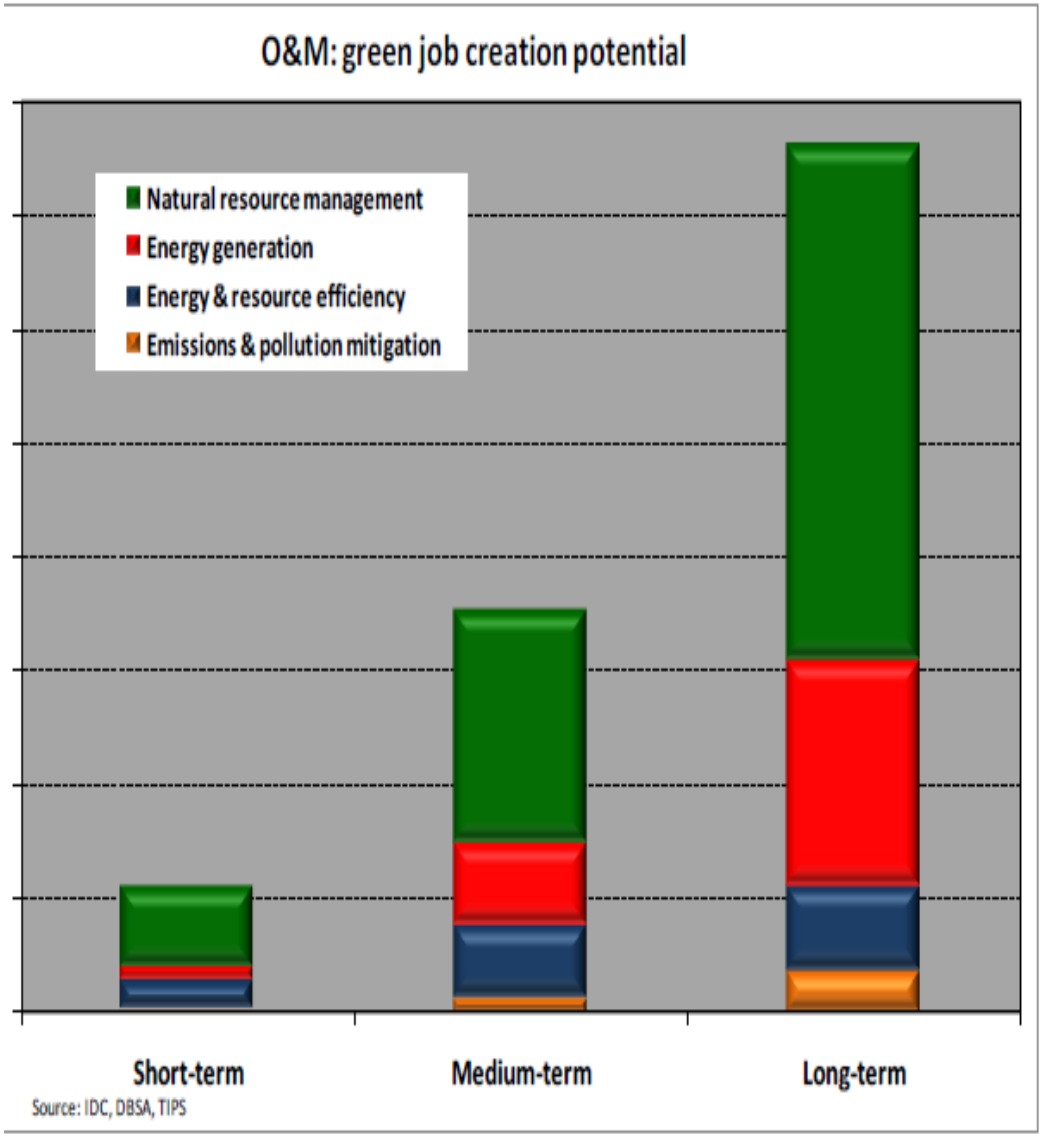
Green infrastructure programmes have huge employment potential whilst extending life of infrastructure assets



(4) Technology transfer for Green Infrastructure

- "Technology transfer" must be based on a technology partnership to co-identify and co-develop technology, to avoid the problem of "technology dumping".
- Build the global capacity to design and manufacture 'green' technologies --support manufacture of developed world technologies in developing countries, whilst, through regional centres, creating capacity for regions to design their own technologies in future
- Funding arrangements to cover costs of participation of developing countries in the partnership arrangements
  - Partnerships to look at the development, diffusion and deployment of technology on a sustainable and impactful basis
- Regional centres to act as technology hubs, connected to global network
  - Focus on mitigation and adaptation projects critical to that region
  - Sector-based mitigation and adaptation plans
  - Make licensing cheaper
  - Pay for additional costs (price difference) of adopting new technologies
- Where global funding is made available for agreed technology mechanisms , development financing can be mobilised to support regional programmes

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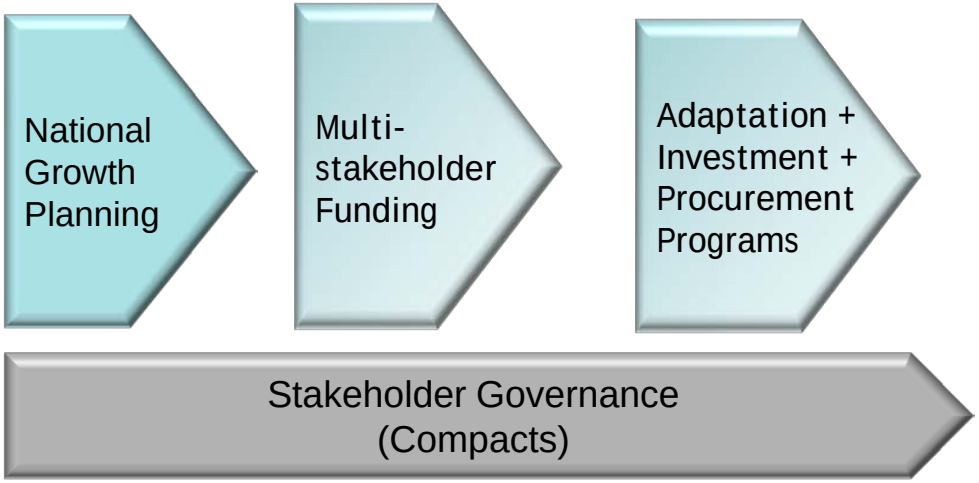
CONCLUSION: In a structural transformation of the economy, new possibilities to plan, fund and "climate proof" the life-cycle of infrastructure assets



Source: Adapted from DPE Growth Paradigm, 2011

Source: DPD, 2010

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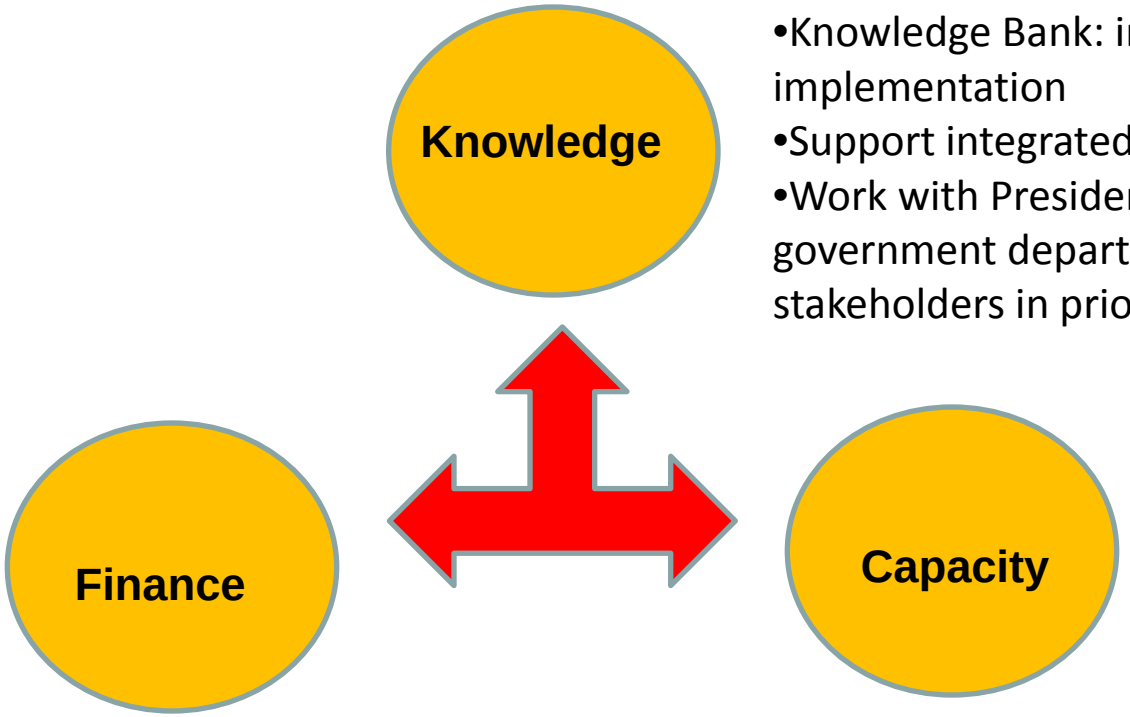
Annexure: Main activities of the Development Bank of Southern Africa

Development Bank of Southern Africa:

Centre of Excellence for Infrastructure



•Knowledge Bank: infrastructure and State implementation
•Support integrated infrastructure planning
•Work with Presidency, national government departments, DFIs, stakeholders in priority sectors

•Assets of R45.1 billion in 2009/10
•Disbursed R8,3 billion in 2009/10 with R18,8 billion of financing approved
•Potentially R100bn+ in new infrastructure investments by 2014

• Deployed ±300 engineers, finance experts and planners, 160 young professionals and 160 artisans into government to support implementation of infrastructure projects

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