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# Growth and Development Policy: New Data, New Approaches, and New Evidence

Part II: Southern Africa

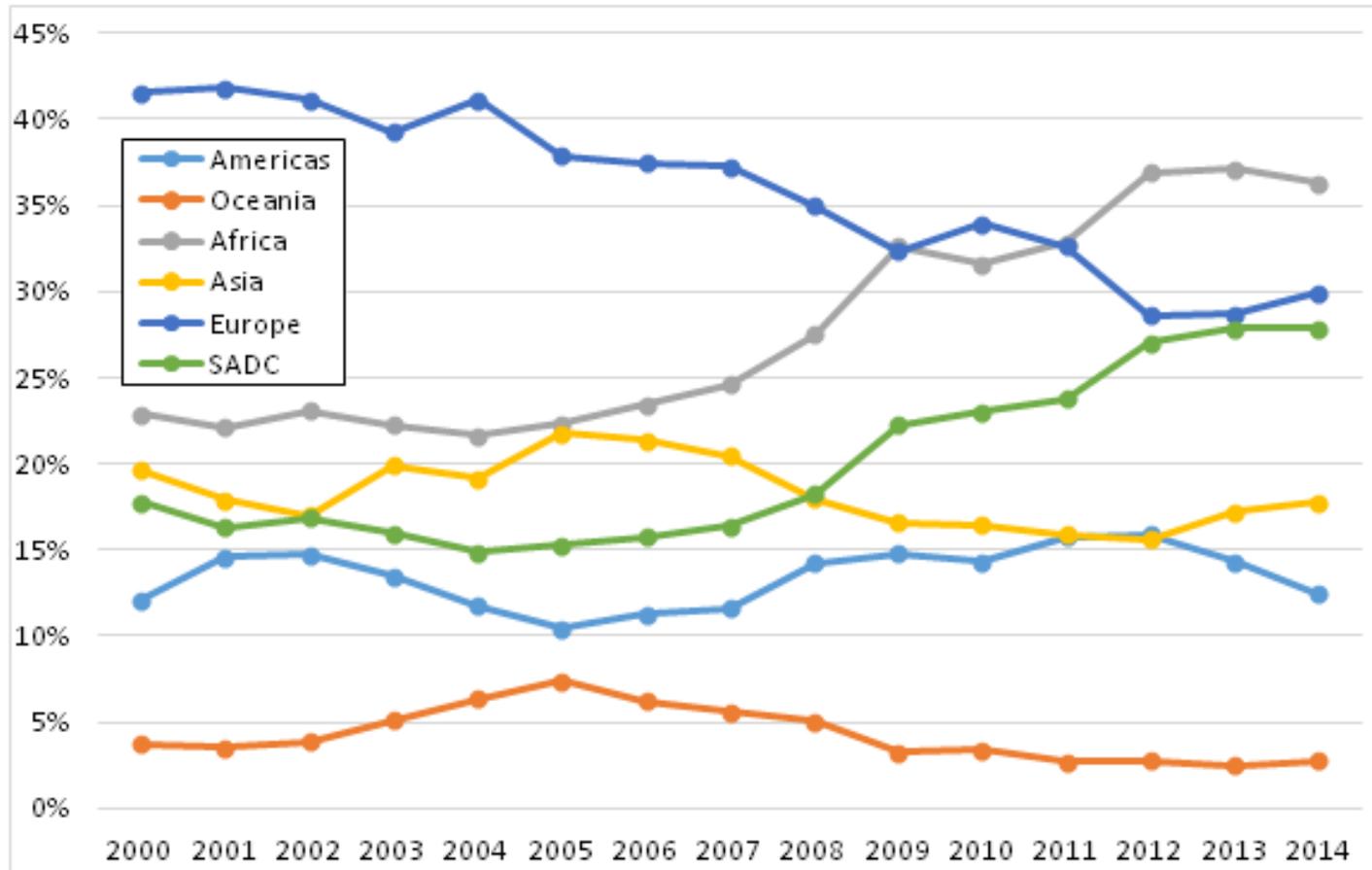


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# African Growth Renaissance

- Much better economic performance in sub-Saharan Africa in the past two decades.
- South Africa not a strong (nor weak) growth performer
- Volatility in growth performance across countries and through time

# Intra-African Trade Growing



- Shares of South Africa's diversified manufacturing exports (excluding basic metals and chemicals) by destination.

# A Credit to SADC

- Success in reducing tariff barriers as part of the free trade area (FTA) and concomitant growth in trade in goods.
- Expansion in services trade
- Expansion in FDI, notably in services
- Despite these successes, there are clear concerns

# Concerns

- Limited appetite for continued **across-the-board steps** towards greater integration
  - SADC customs union appears to be delayed indefinitely
- Frequent incoherence between national policies and the regional integration agenda
  - Growing importance of NTBs
- South Africa experiencing more success in exporting to the region than vice versa, particularly with respect to non-minerals
- **Two way growth dynamics not yet in place**

# Approach

- Focus on six potential "win-win" options for realizing growth potentials and for confronting regional challenges
  1. Supermarkets
  2. Value chains with poultry as the case study
  3. Trucking
  4. Mining
  5. Energy including bioenergy
  6. Climate change

# 1. Supermarkets: Shaping routes to market

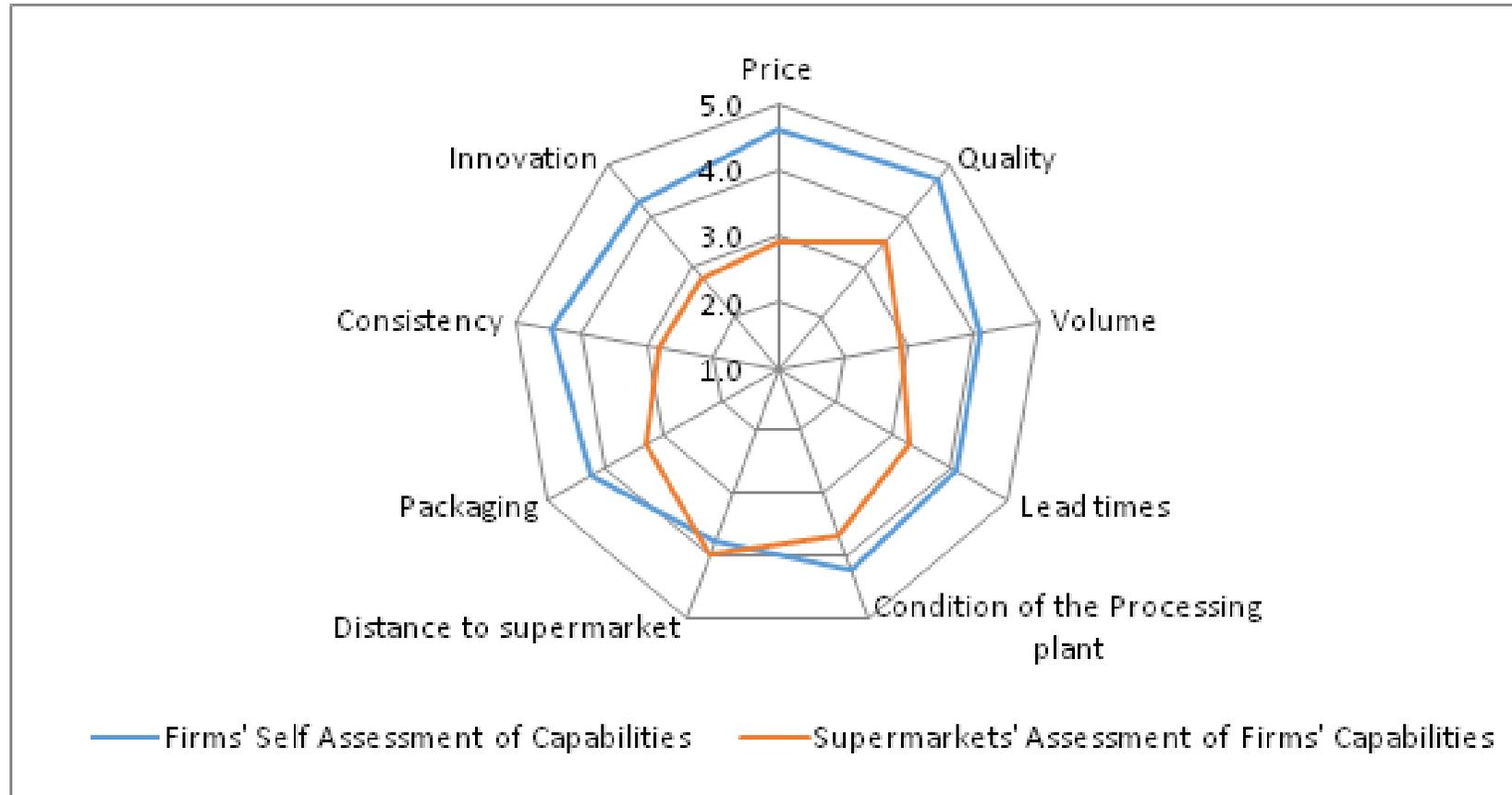
- Strong growth in the number and spread of supermarkets over the past two decades.
- Shoprite and Pick n Pay alone account for 366 stores across 16 African countries, all but three of which are SADC countries.
- Expansion of clientele to lower income consumers and smaller towns serving rural zones.
- Dominated by South African companies that benefit from first-mover advantages in most countries
- Conduits for South African products and deep sea imports to consumers in the region.

# Challenge and Opportunity (from a two way trade perspective)

- Local suppliers are challenged by:
  - Competition from imports
  - Growing dominance of supermarkets in retail
  - Difficulties in meeting standards to supply these supermarkets
  - Potential market power of supermarkets catering to multinational brands
- Local suppliers have the opportunity to:
  - Serve national markets easily and efficiently
  - Break into regional markets using the supermarket network

# Assessment of Capabilities

- Source:  
Ziba and  
Phiri (2016)



# Justifications for Policy Interventions

- Market failure
  - Individual supermarket chains are likely to substantially underinvest in supplier development given that the benefit that the supplier accrues cannot be appropriated by that supermarket.
- Market power
  - Local suppliers (even competitive ones) may be shut out or relegated to the less desirable shelf space within the store

# Policy Mix

- Supplier development initiatives
  - targets for regional sourcing
  - onus for supplier development on supermarkets or their association.
- A regional code of conduct for supermarkets
- Monitor supermarkets as key routes to market

# 2. Poultry Value Chain

- Feed conversion ratio (kg feed/kg live weight)
  - Poultry 1.7
  - Pork 3.0
  - Beef 10.0+
- Efficiency of poultry underpins rapid demand growth
  - In South Africa, poultry meat consumption increased by nearly 80 percent between 2000 and 2014
  - Now, the most important source of protein in the diet of South Africans
  - Similar dynamics in the rest of SADC and globally

# Poultry Value Chain: An Opportunity for Regional Suppliers

- South Africa imports about USD 500 million per year in poultry and feed from deepwater sources.
- Land and water constraints limit expansion of production in South Africa
- Regional producers, such as Zambia, are potentially competitive with deepwater sources
- Rapid production growth leading to exports of feed from Zambia

# Poultry Value Chain: An Opportunity for Regional Suppliers

- Regionalisation of investment flows is already in process
  - Vertical coordination
  - Linked investments
- Rainbow (RCL Foods), Astral and Country Bird Holdings have already invested
  - Alliances
  - Joint ventures
- Transport is also key

# 3. Regional Transport

- A barrier to growth of value chains in regional production
  - High costs (about double the level benchmarking would suggest)
  - Delays
    - contribute to cost
    - add uncertainty to supply
    - Particularly harmful for perishable products
  - Competition hampered by regulatory restrictions
- Empty backhauls add substantially to total transport costs barriers

# Poultry as a policy case?

- Common external tariffs on poultry and feed
- Harmonized regional standards
- Expedited border clearance
- Pro-competitive transport policies
- Supermarkets as conduits to regional markets for the most efficient suppliers

# 4. Mining and related services

- South Africa: mining capabilities very well developed but mineral resources depleted.
- Rest of SADC: mining capabilities in need of development but mineral resources relatively plentiful.
- SADC as a whole: capable and endowed
- But, mining policies are mainly nationally rather than regionally focused.
- Regional partnerships focused on building capabilities and innovation are recommended.

# 5. Energy

# Global Trends (1)

- Global environmental change
  - Anthropogenic global warming broadly accepted
  - Paris 2015 agreement to limit emissions with substantial pledges received from 165 countries
  - Sum of existing pledges would drive renewable energy to 50% of supply by 2040 (IEA)
  - More ambitious pledges anticipated in order to maintain global temperature rise below two degrees Celsius

# Global Trends (2)

- Technology
  - Solar module price index has fallen by about 80% since 2008.
  - Rapid advances in wind power
  - Much improved systems integration to counter variability in electricity supply
  - Improved battery technology
  - Autonomous vehicles
  - Second and third generation bioenergy

# Global Implications

- Massive flux in energy markets
  - Potential for “Stranded” fossil fuel proven reserves with strong implications for prices.
  - In 2015, global investment in renewable power capacity was \$265.8 billion, more than double dollar allocations to new coal and gas generation, which were estimated at \$130 billion.
  - Institutional reform pressures.
- Environmental goals more easily attained

# Southern Africa

- A broad array of generation choices
  - Hydropower
    - Zambezi
    - Congo river
  - Solar and wind
  - Bioenergy
  - Natural gas and coal
- A consequent array of choices for systems integration across power generation sources and across space.
  - Portfolios of renewable generation across space
  - Linked hydropower and wind/solar generation

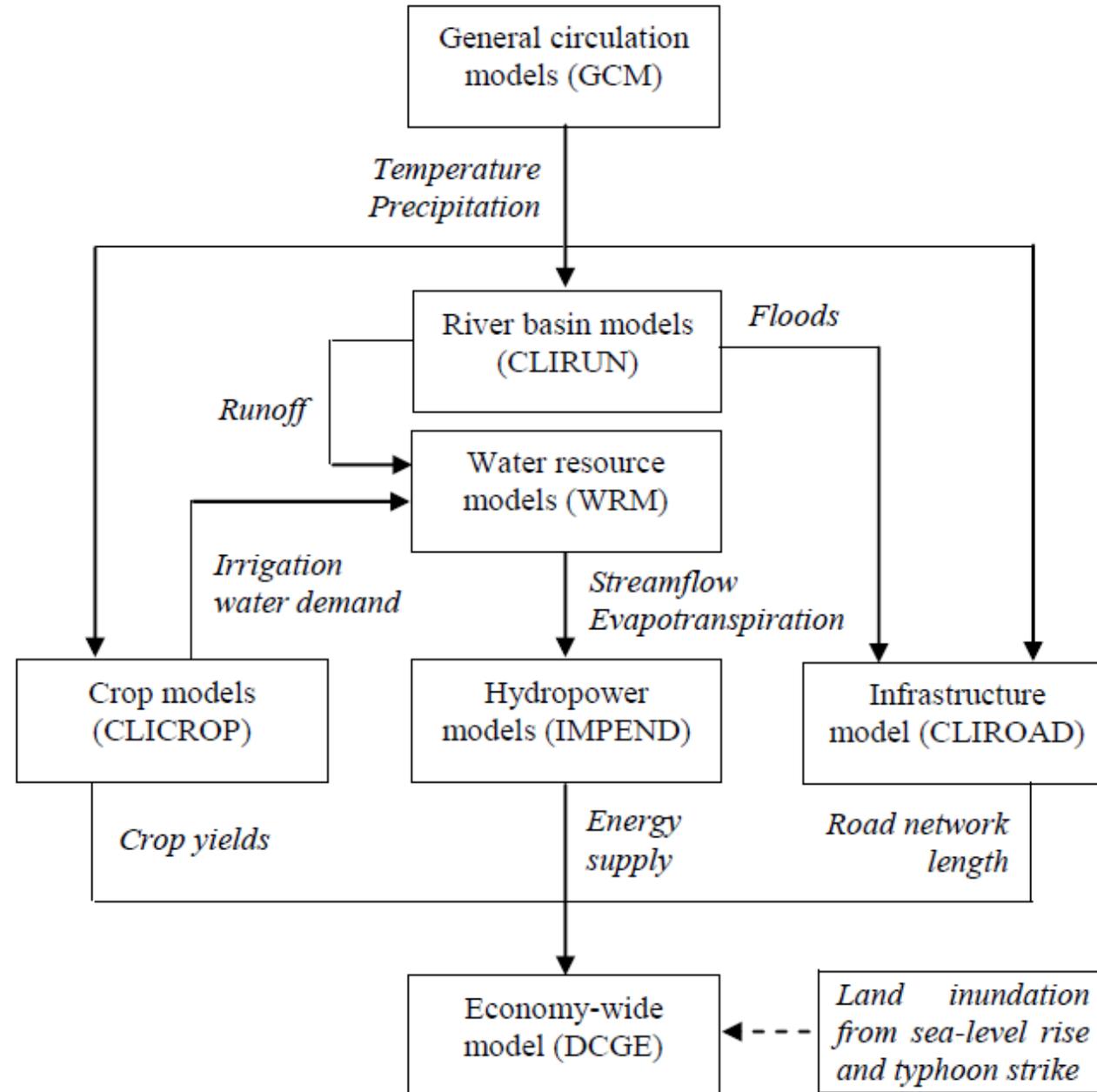
# Some Conclusions

- Energy strategies for southern Africa merit further study, but we are well positioned analytically:
  - Linked economic and energy choice model
  - Bioenergy analysis and more
- Institutional designs, particularly for power generation and distribution, are outdated and require reform.
- Regional approaches have the largest development potential by far.

# 6. Climate Change

- Integrated analyses of
  - South Africa by water management area (WMA)
  - Countries of Zambezi river valley
    - Malawi
    - Mozambique
    - Zambia
- Common framework

# Integrated Modeling Framework



# Principal Results

# Principal Results (1)

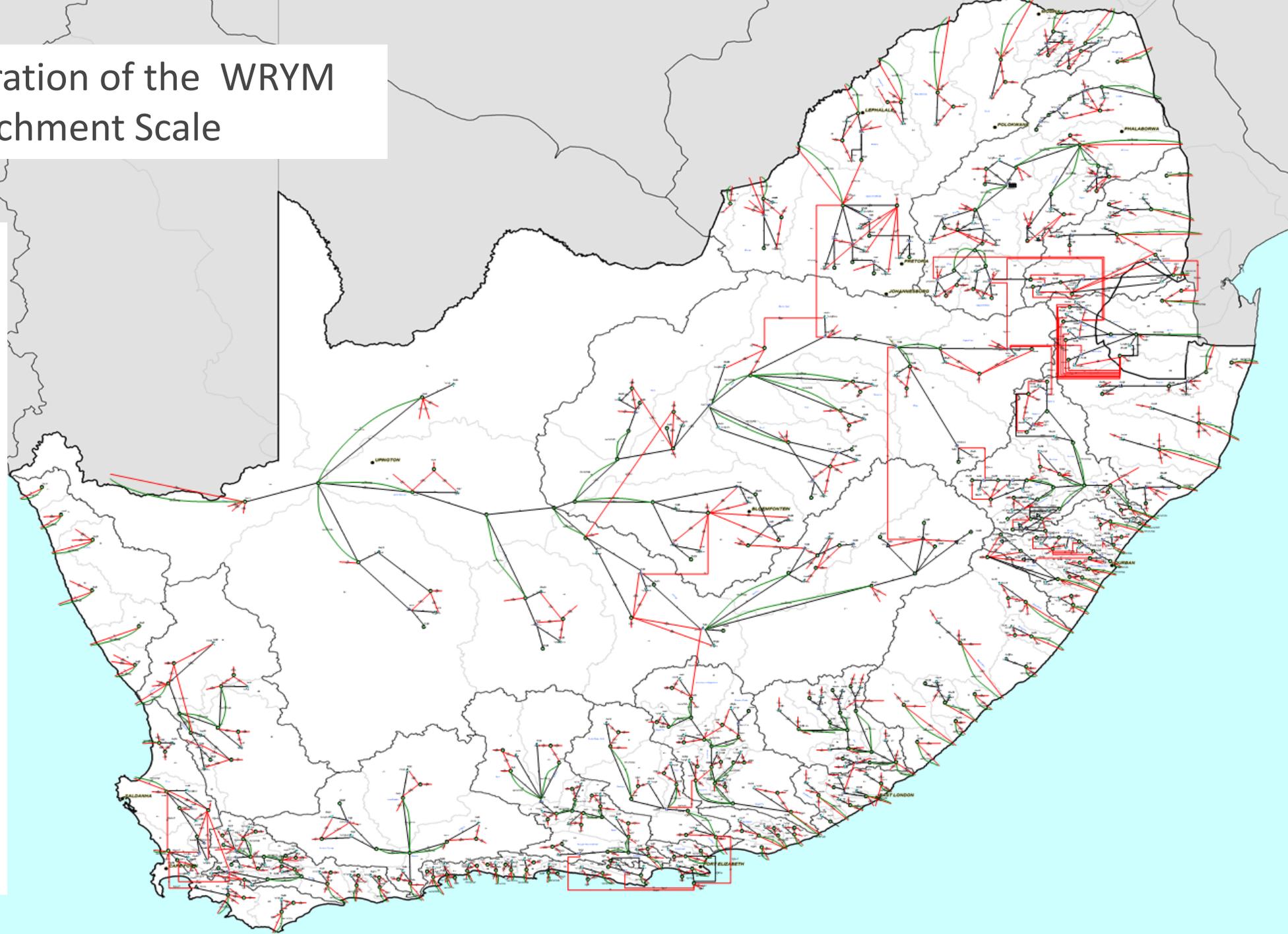
- The southern Africa region can expect higher temperatures by 2050. For example, for RSA:
  - Under ineffective global mitigation, temperature increase ranges from 1.0 to 3.0°C and is likely to be 1.5 to 2.0°C.
  - With strict global mitigation, the range is reduced the and the likely increase falls to around 1.0°C.
- Precipitation outcomes are far more uncertain

# Principal Results (2)

- Economic growth to 2050. GDP is typically one to four or five percent smaller compared with a no climate change scenario.
  - Mozambique presents the greatest range of potential outcomes due to flood vulnerability
  - Overall impacts for South Africa are less strong and confined to a smaller range.
- South Africa's relatively limited vulnerability is due to:
  - a lower concentration of economic activity in climate sensitive sectors
  - extensive water resource infrastructure

## National configuration of the WRYM at Secondary Catchment Scale

- Modelling  
Units = 147
- Large Dams  
=  $\pm 80$
- Dummy Dams  
=  $\pm 190$
- Demand  
Channels  
=  $\pm 300$
- EWR channels  
=  $\pm 150$
- Channel Links  
=  $\pm 940$



# Principal Results (3)

- Climate change can be expected to hamper regional growth and development prospects.
- But, climate change appears unlikely to derail development prospects by 2050.
- Impacts can be expected to be substantially larger in the latter half of the 21st century, especially in the absence of globally effective mitigation policies.

# Principal Results (4)

- Effective global mitigation policies reduce the range of likely economic impacts by 2050 and typically shift the distribution of outcomes towards less harmful ranges.
- The implications of global mitigation for fossil fuel prices over the next 35 years substantially shifts the incidence of mitigation policies between fossil fuel exporters and importers.

# Principal Results (5)

- Concentrated impacts can be expected in vulnerable sectors and regions.
- Localized impacts on some sectors and/or regions are likely to be intense strongly affecting vulnerable sub-populations

# Climate Change - Conclusions

- Because the exact impacts of climate change are uncertain, emphasize the capability to respond to challenges as they emerge:
  - Education
  - Flexible institutions
  - Options
- The region as a whole has incentives to see effective global mitigation policy emerge.



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