The Conningarth Infrastructure Database (CID)

A comprehensive database of various sectors and their outlook in the South African economy

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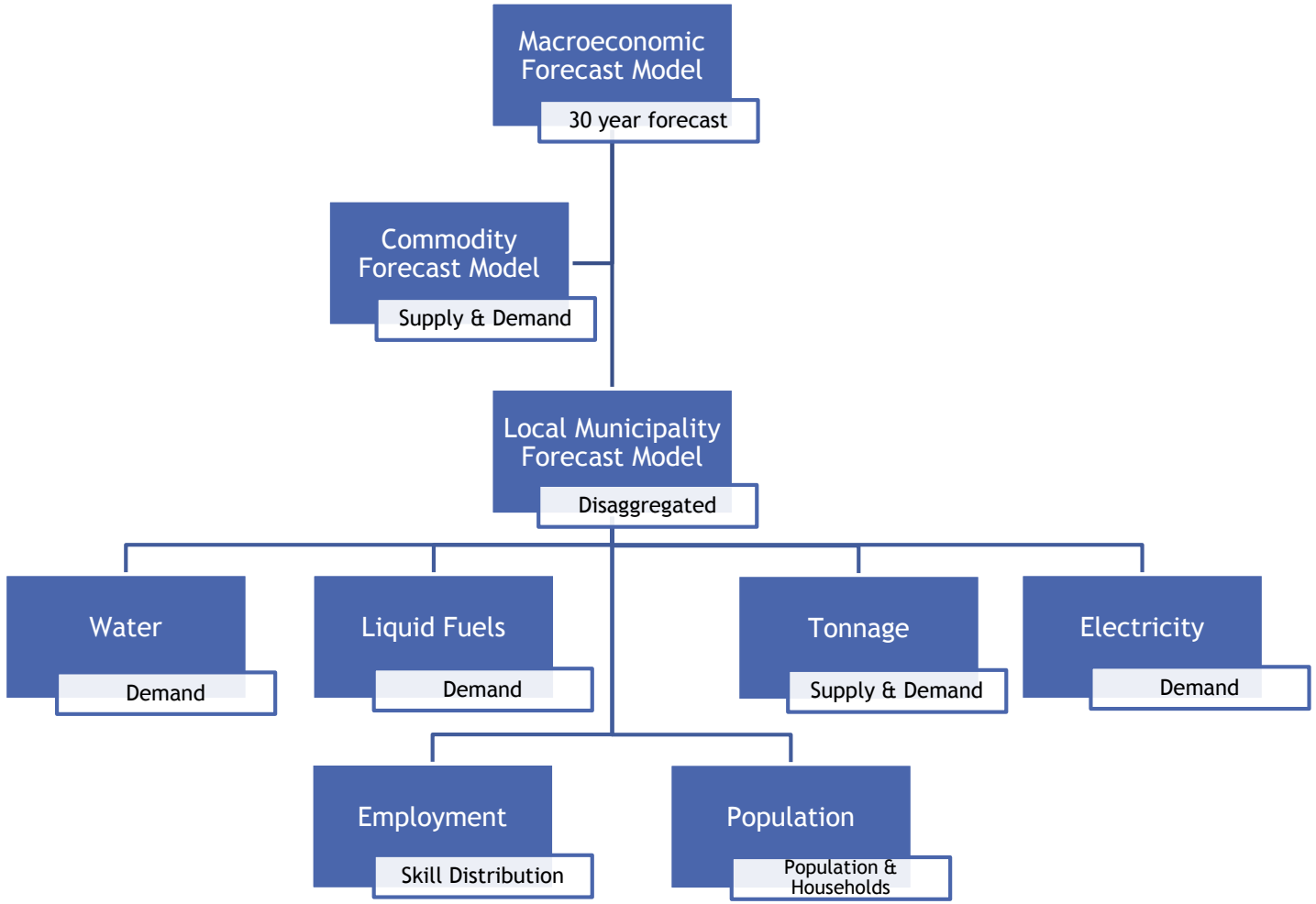
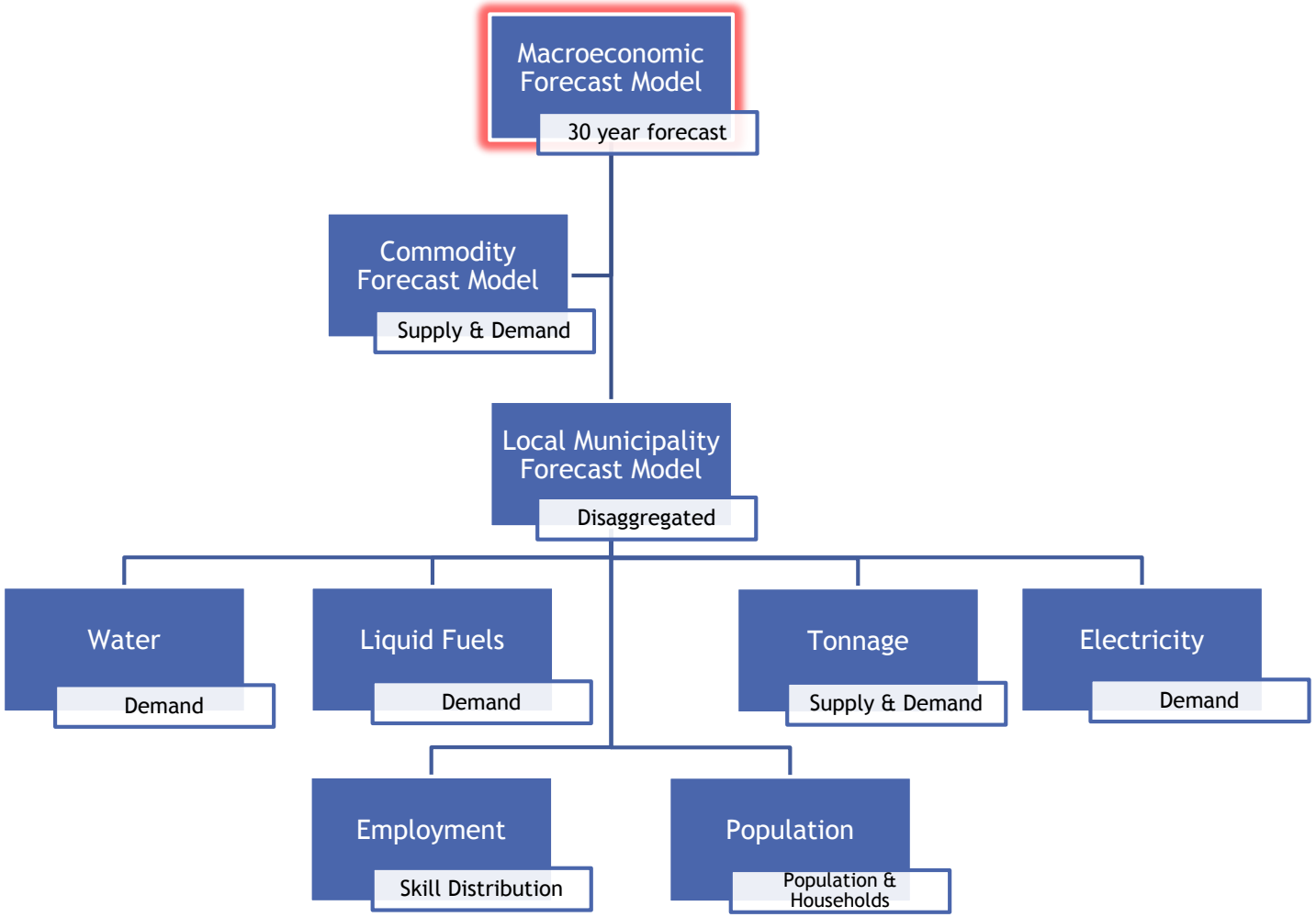
Conningarth Economists

Founded in 1989 by Dr David Mullins, Conningarth Economists is a multi-disciplinary economic consulting firm that:

- Seeks economic solutions to contemporary practical problems
- Provides in-house economic services to clients
- Specialises in the analysis of emerging market economies
- Offers a base for longer-term strategic positioning of businesses and public entities
- Is well-versed in Sub-Saharan African economic matters, most notably South Africa
- Utilises high calibre professional staff
- Offers training courses for various economic tools and skills
- Is complemented by a number of international institutions and expert specialists
- Has a strong clientele base in Sub-Saharan African, especially South Africa
- Is a level 4 BEE contributor


Macroeconomic Forecast Model
30 year forecast
Commodity Forecast Model
Supply & Demand
Local Municipality Forecast Model
Disaggregated
Water
Demand
Liquid Fuels
Demand
Tonnage
Supply & Demand
Electricity
Demand
Employment
Skill Distribution
Population
Population & Households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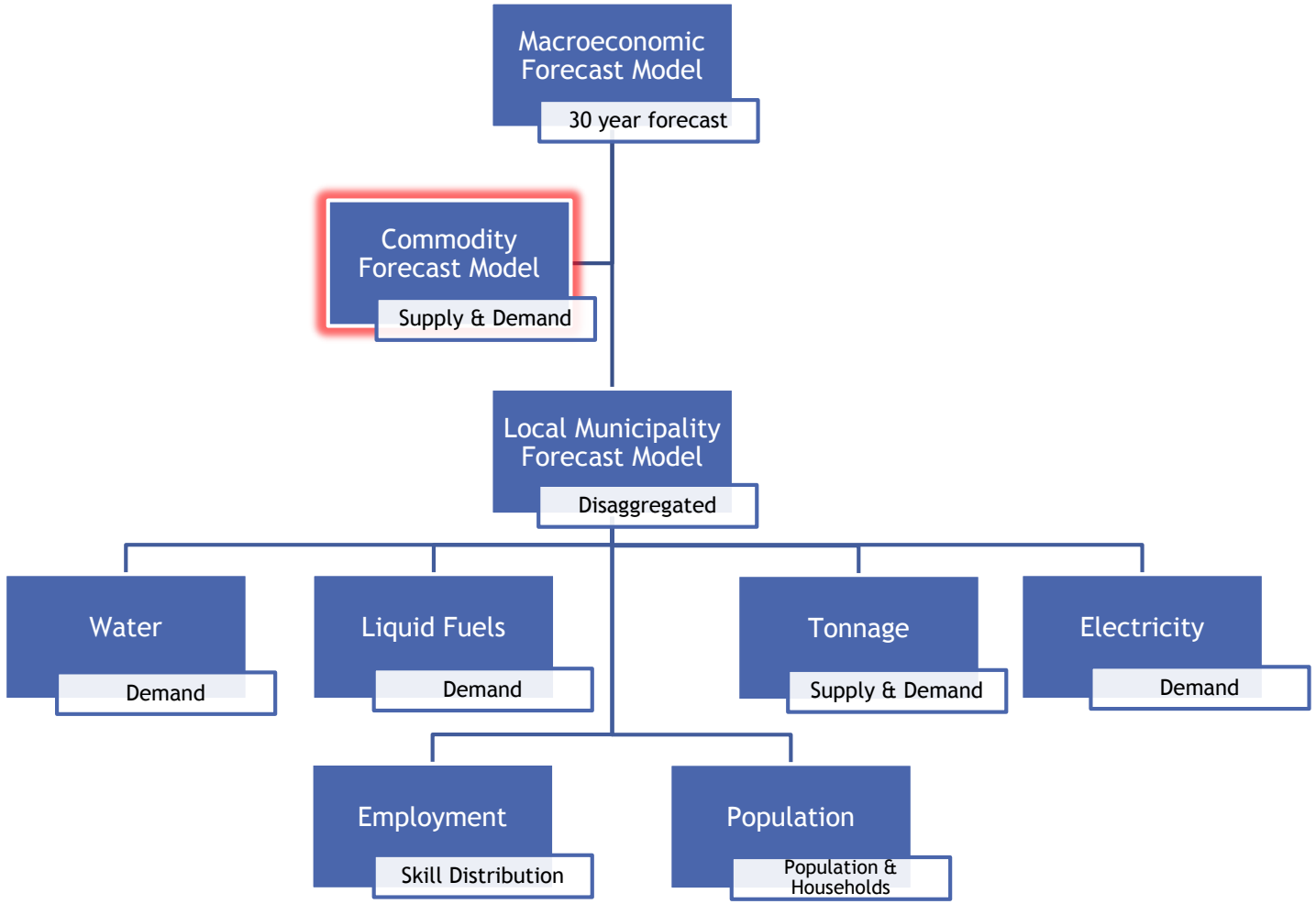
Macroeconomic Forecast Model

- Primary economic components of GDP:
  - Private and Public Consumption
  - Investment (Capital Formation)
    - Buildings and Construction Works
    - Machinery and Equipment
    - Transport Equipment
  - Exports and Imports
- Rand value, 30 year forecast, performed at a national level
- Panel of internal and external experts, complemented with trend analysis
- Most Likely, High and Low Growth Scenarios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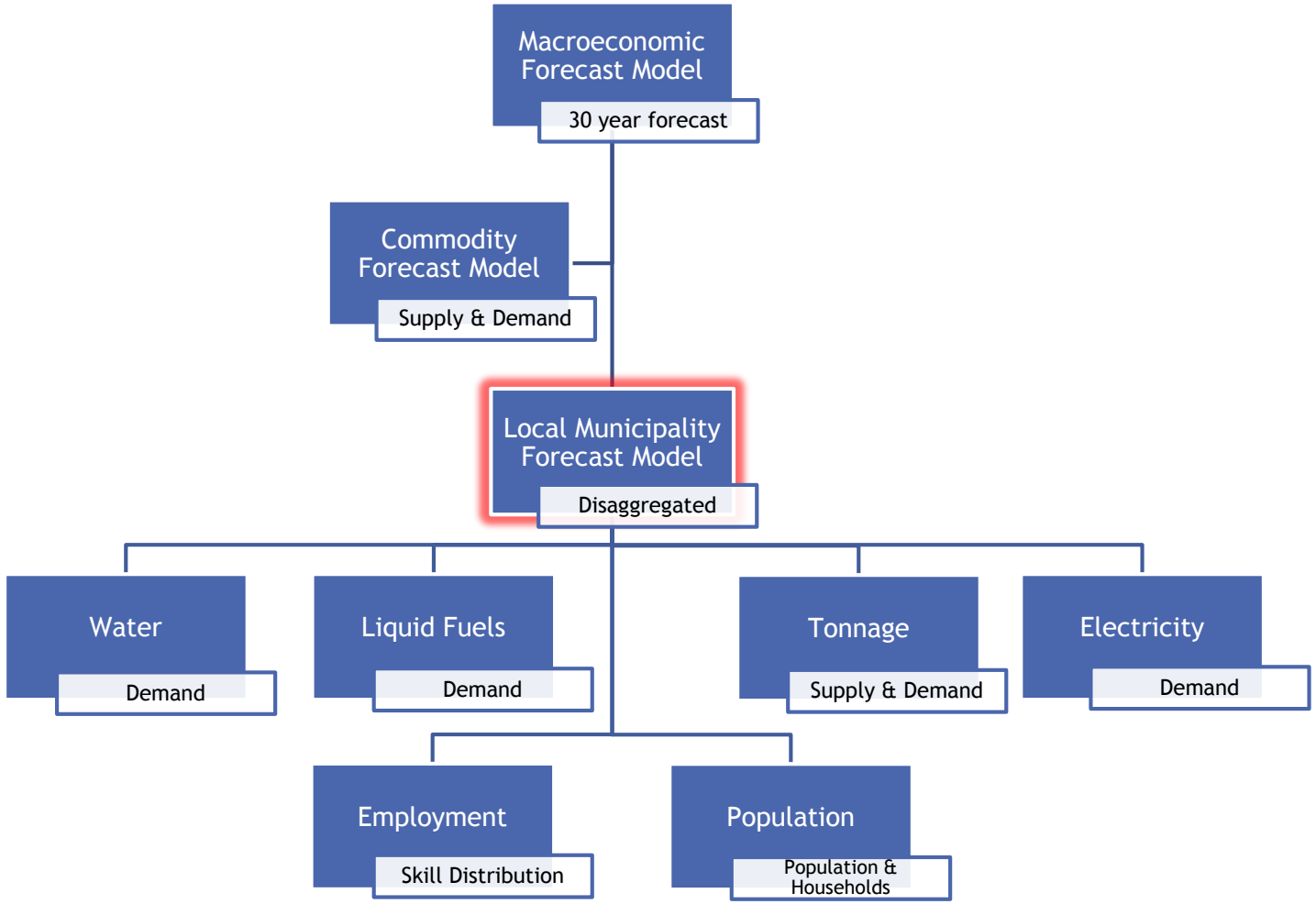
Commodity Forecast Model

- Forecasted growth rates are produced at a national level for 114 commodities of:
  - Domestic production;
  - Domestic demand (intermediate and final);
  - Exports; and
  - Imports.
- Commodity growth rate forecasts are based on:
  - Trends derived from historical data; and
  - GDP component growth forecasts derived from the Macroeconomic Model.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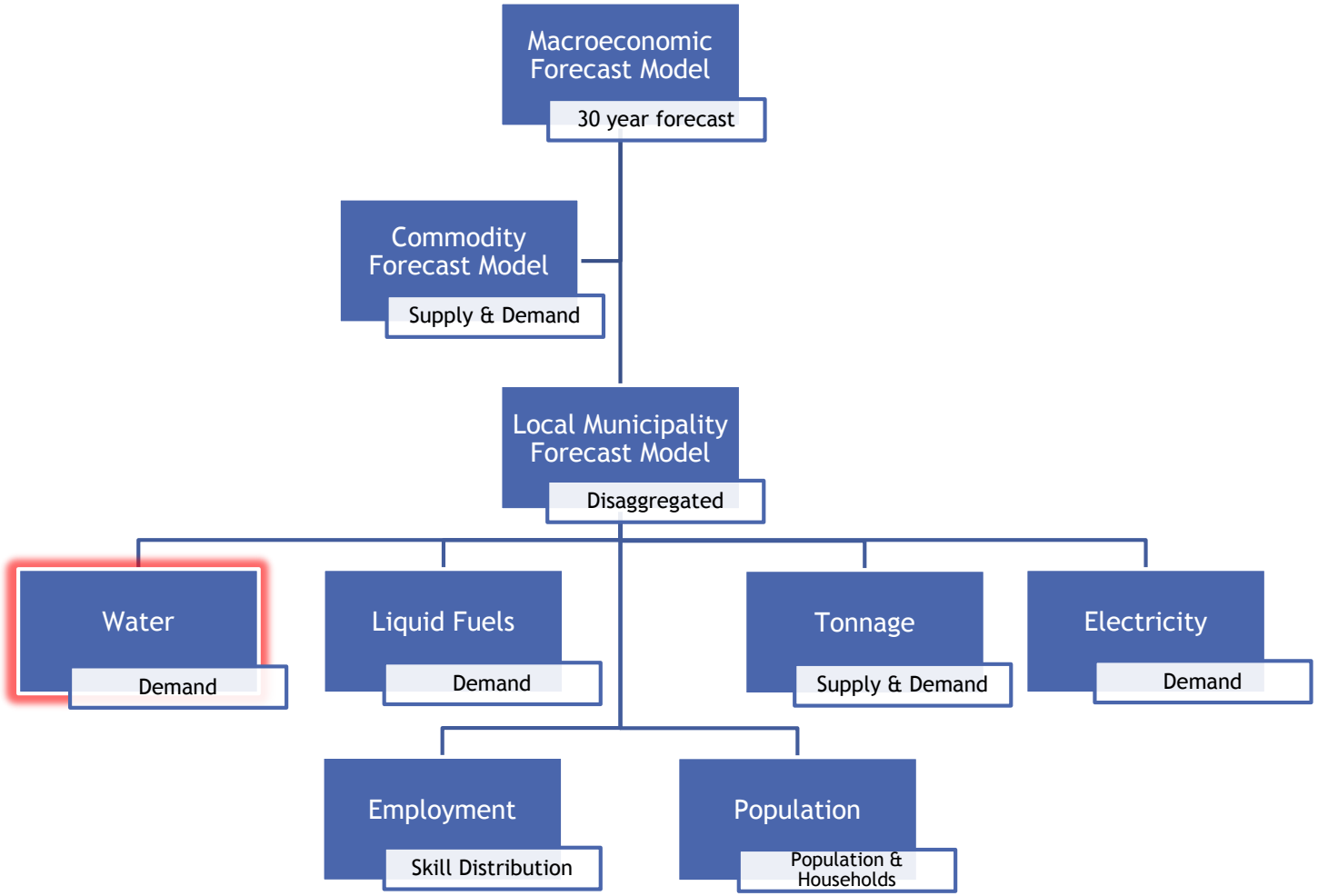
Local Municipality Forecast Model

- National rand value commodity forecasts are disaggregated to a local municipality level (234).
- Disaggregation is achieved using municipal-level:
  - Commodity production locations;
  - Harbour and border post data for exports & imports; and
  - Population and production data for domestic demand.
- Provincial level commodity forecasts are derived by aggregating relevant local municipality data.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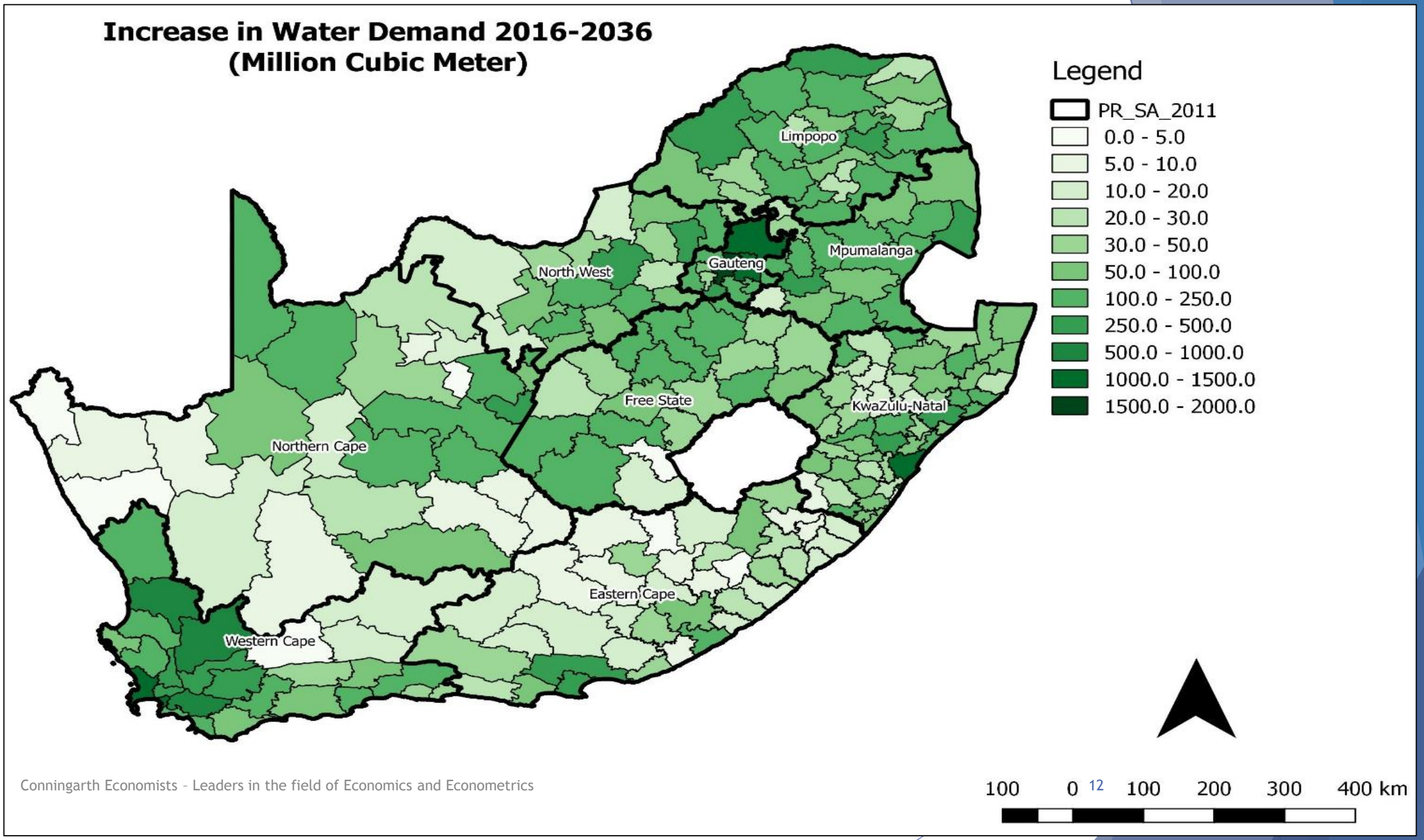
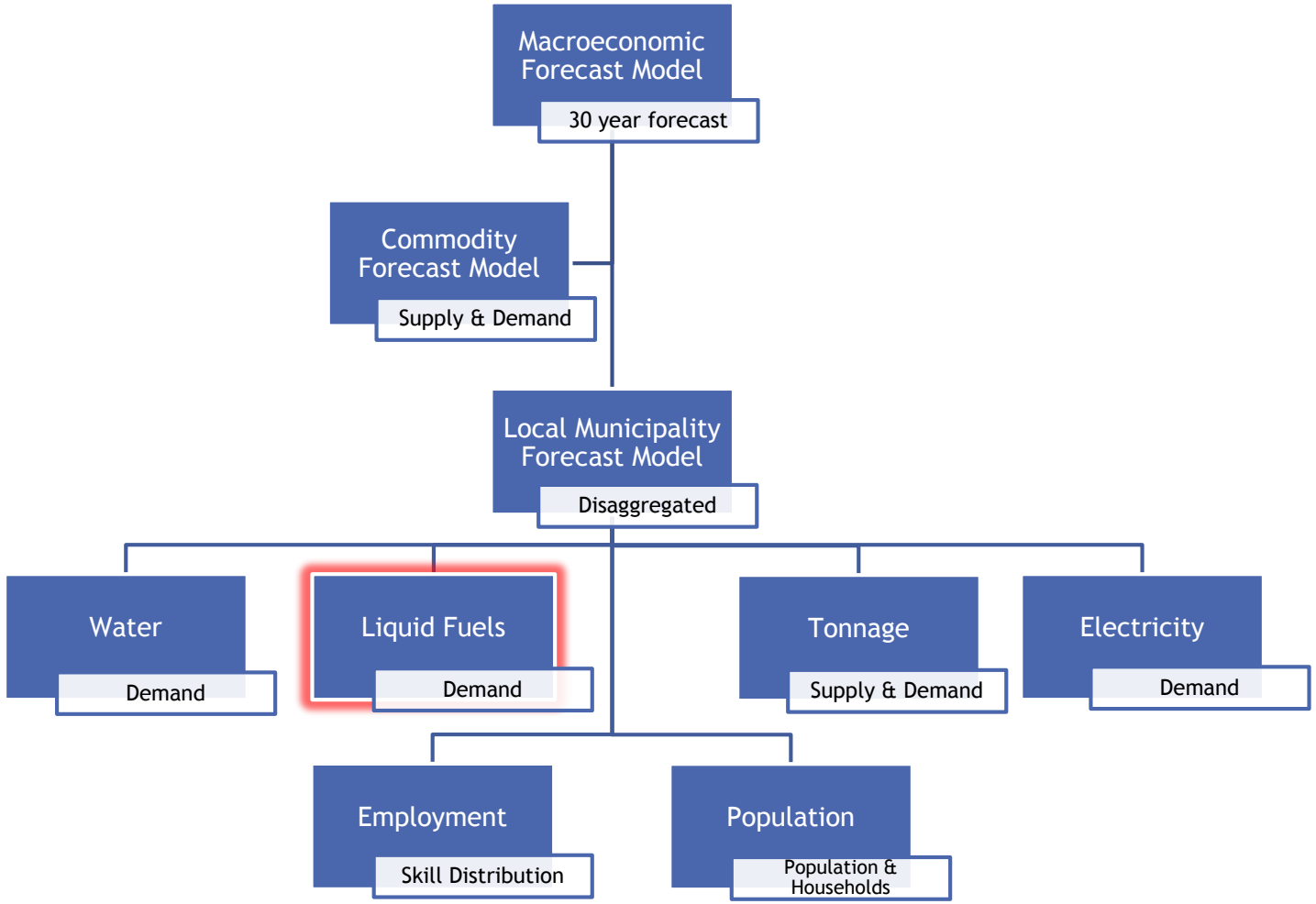
Water Demand Forecast Models

- Forecasts for water are calculated from national satellite accounts and municipality-level value data.
- Local Municipality-level intermediate demand is derived by applying:
  - Distribution of water usage by commodity and by sector, based on the StatsSA Use Table; and
  - Natural Resource Satellite Accounts sector totals.
- Local Municipality-level household demand is derived by multiplying:
  - Low, medium and high income household water consumption ratios (based on regression analysis of historical data); and
  - The number of low, medium and high income households in each local municipality.
- Both the intermediate demand and consumption figures are modified with water usage propensity figures, such that water usage growth varies year-on-year.


Increase in Water Demand 2016-2036
(Million Cubic Meter)
Legend
PR_SA_2011
0.0 - 5.0
5.0 - 10.0
10.0 - 20.0
20.0 - 30.0
30.0 - 50.0
50.0 - 100.0
100.0 - 250.0
250.0 - 500.0
500.0 - 1000.0
1000.0 - 1500.0
1500.0 - 2000.0
Limpopo
Mpumalanga
Gauteng
North West
Free State
KwaZulu-Natal
Northern Cape
Eastern Cape
Western Cape
100 0 100 200 300 400 km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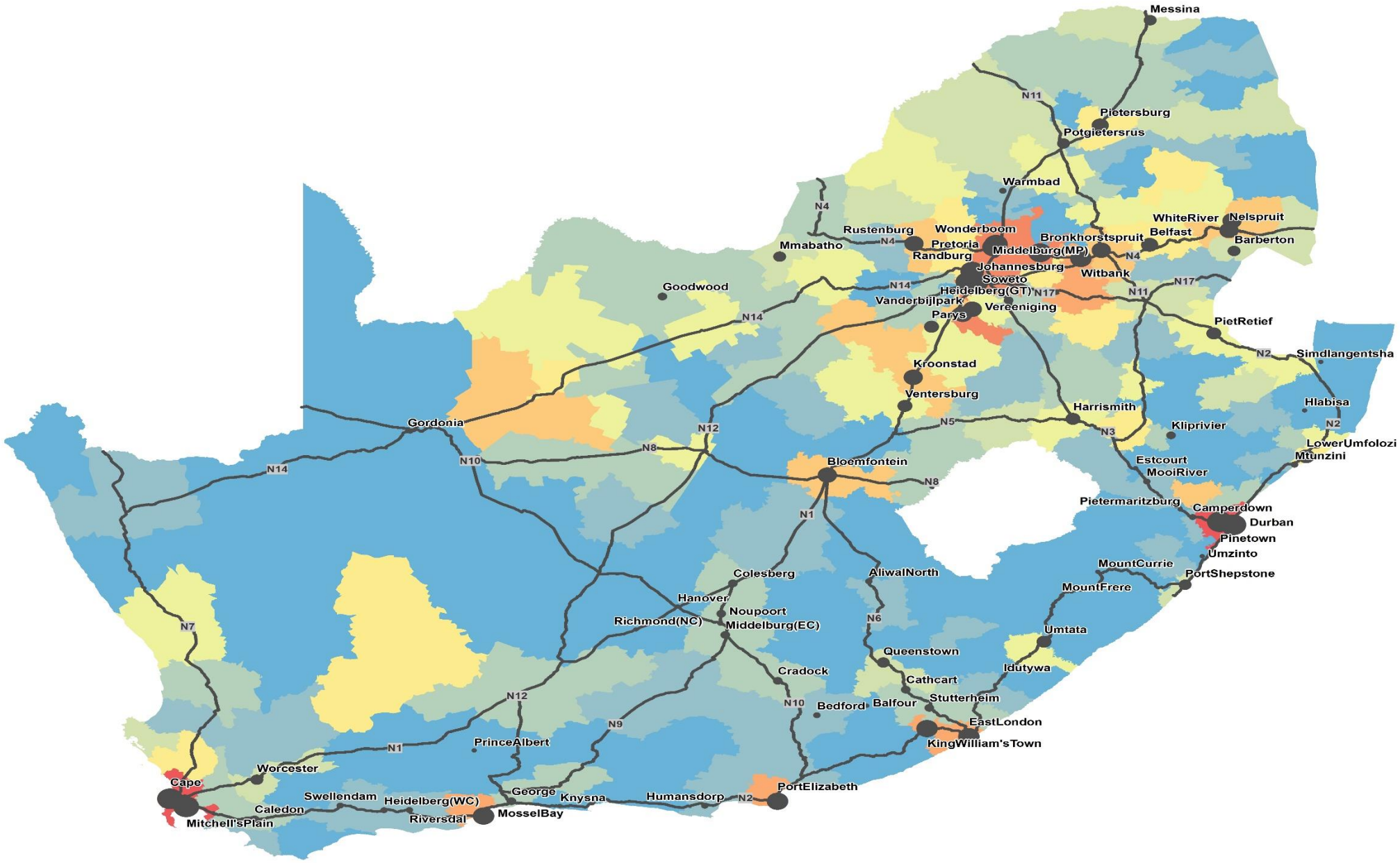
Liquid Fuels Demand Forecast Model

- Forecasts for diesel are calculated from commodity-level production and domestic demand data derived from the local municipality forecast model.
- Local Municipality-level intermediate demand is derived by multiplying:
  - Forecasted commodity-level production/diesel usage ratios (based on regression analysis of historical data); and
  - Forecasted production levels.
- Local Municipality-level household demand is derived by multiplying:
  - Low, medium and high income household diesel usage ratios (based on regression analysis of historical data); and
  - The number of low, medium and high income households in each local municipality.
- Petrol is derived using the same methodology.

Liquid Fuels Demand Forecast Model

- Demand for petrol and diesel by vehicles passing through local municipalities in the base year are determined by deducting local intermediate and household demand from total municipal-level sales as reported by the Department of Energy.
- Forecasts of demand for petrol and diesel by vehicles passing through local municipalities are calculated based on data derived from road freight studies regarding commodities moving along major national highways (e.g. N1, N2, N3).
- For local municipalities concentrated along these major national highways, the relevant growth rates have been applied; otherwise, a standardised growth rate has been applied.

Total Economy Diesel Usage: 2016



Legend

Total Economy Diesel Usage 2016

Unit: Million Litres of Diesel

5 10 20 30 50 100 250 500 1000 1500

National Roads

N

0 50 100 200 300

Kilometers

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aurecon

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