water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

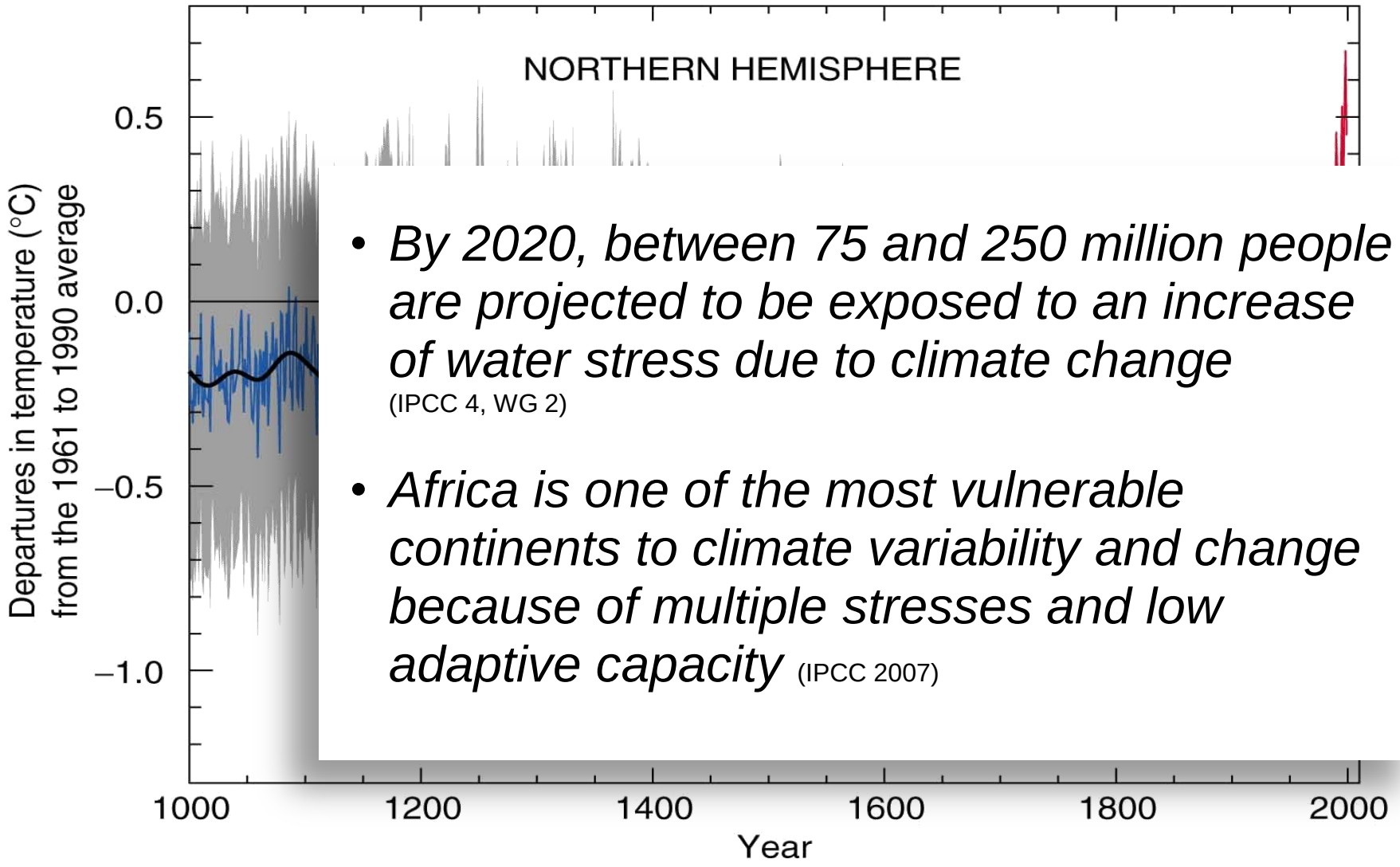
Continuation of the Reconciliation Strategy of the KZN Coastal Metropolitan Area: Phase 2

CLIMATE CHANGE

July 2014

Presented by:
Gerald de Jager

Context



- *By 2020, between 75 and 250 million people are projected to be exposed to an increase of water stress due to climate change* (IPCC 4, WG 2)
- *Africa is one of the most vulnerable continents to climate variability and change because of multiple stresses and low adaptive capacity* (IPCC 2007)

Potential impacts

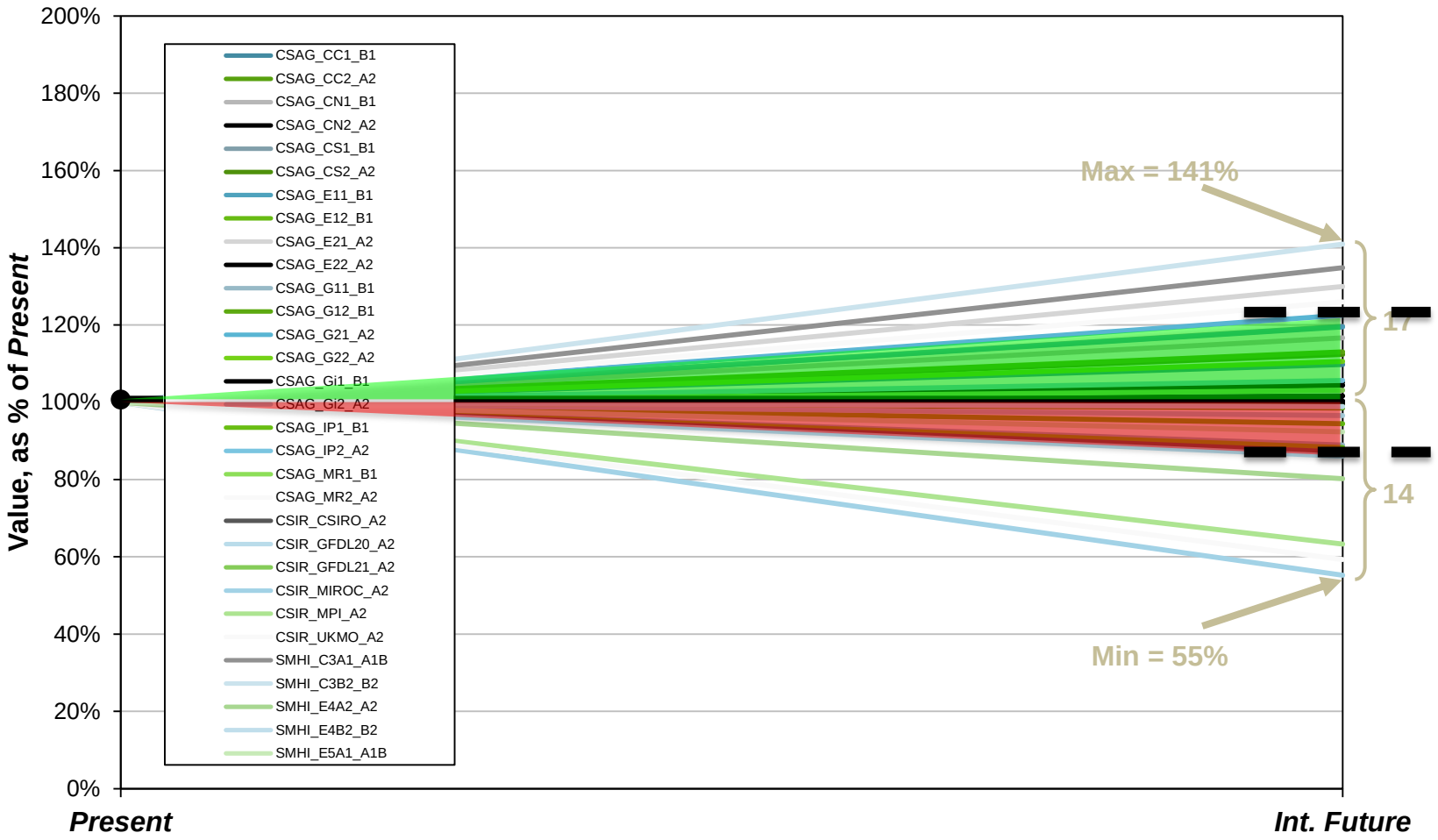
- Rainfall (magnitude, variability, extreme events)
- Evaporation
- Natural vegetation
- Runoff (magnitude, variability, flood events)
- Water use (e.g. irrigation)
- Land use (e.g. changes in crop types, economic activity)
- Sediment yields
- Available water resources

- **Interdependent**
- **Varies spatially**
- **Uncertain!**

Some recent studies

- *2nd Draft Climate Change Policy for Msunduzi Municipality* (Msundusi Municipality, 2014)
- *Impacts of Climate Change on Water Resources in the Orange-Senqu River Basin* (Knoesen, *et al*, 2009)
- *Development of a Practical Methodology for Assessing the Potential Impacts of Climate Change on the Yield Characteristics of Reservoirs* (WRC, K8/870/1, 2010)
- *Assessment of the Potential Impact of Climate Change on the Long-Term Yield of Major Dams in the Mgeni River System* (Umgeni Water, 2012)

Results: System yield (1:100)



Way forward

- Water governance
- Infrastructure development, operation and maintenance
- Water management

- Monitor
- Track improvements in climate modelling
- Select “credible” sample from climate models
- Refine modelling of impacts
- Incorporate results in reconciliation planning
- Avoid maladaptation!

Thank you