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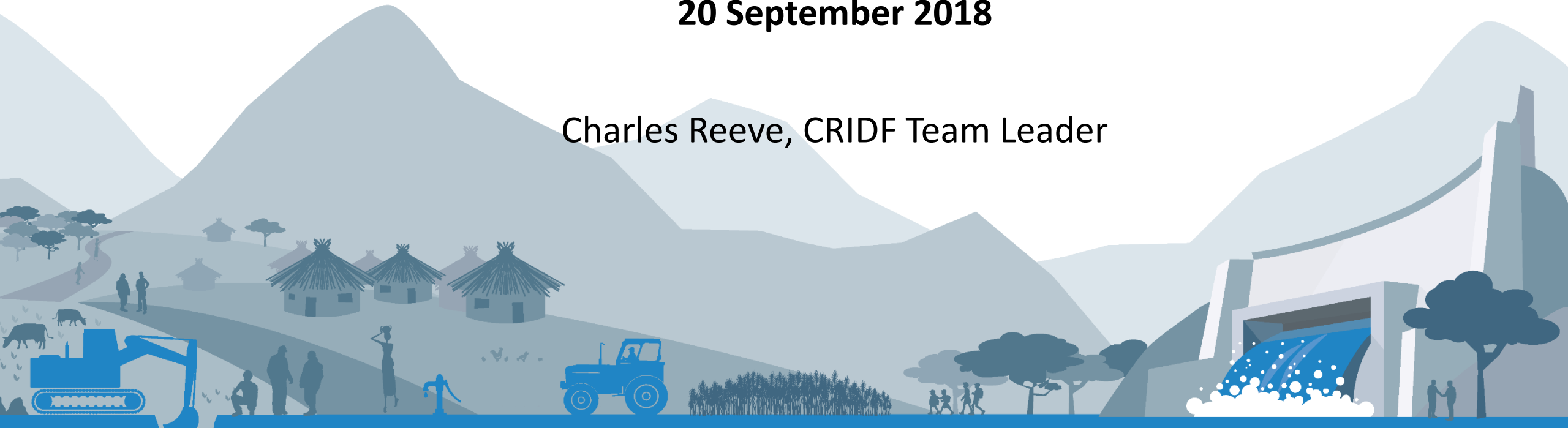


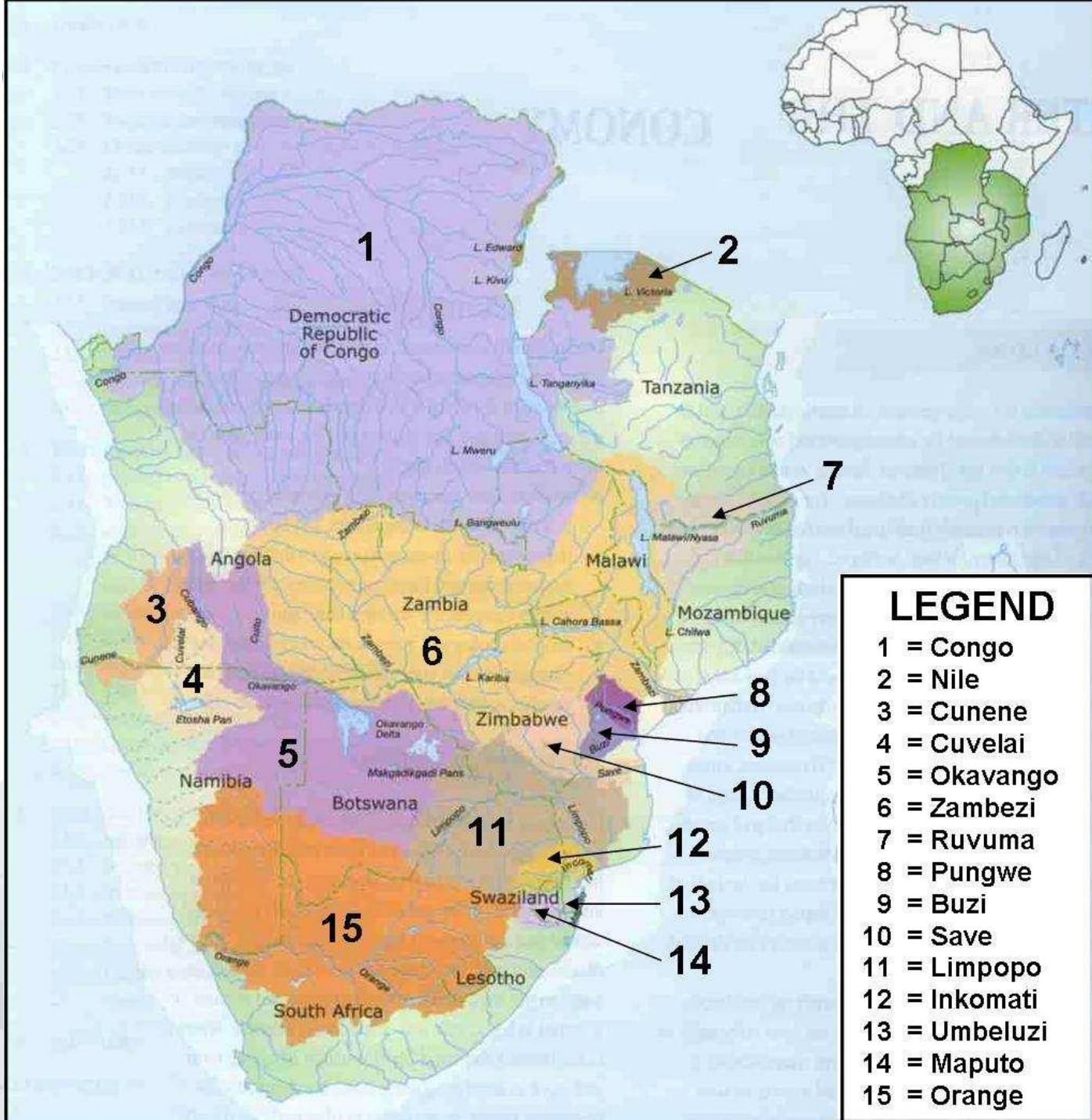
Climate impacts on water in Southern Africa

Green Climate Fund workshop

20 September 2018

Charles Reeve, CRIDF Team Leader





LEGEND

- 1 = Congo
- 2 = Nile
- 3 = Cunene
- 4 = Cuvelai
- 5 = Okavango
- 6 = Zambezi
- 7 = Ruvuma
- 8 = Pungwe
- 9 = Buzi
- 10 = Save
- 11 = Limpopo
- 12 = Inkomati
- 13 = Umbeluzi
- 14 = Maputo
- 15 = Orange



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Water risks in SADC



High levels of water insecurity



Vulnerability to climate shocks



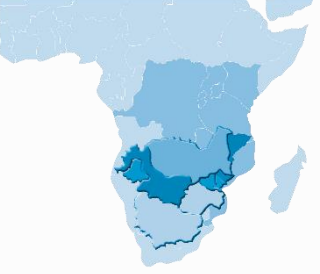
Tremendous temporal and spatial variability in available water resources exacerbated by impact of climate variability



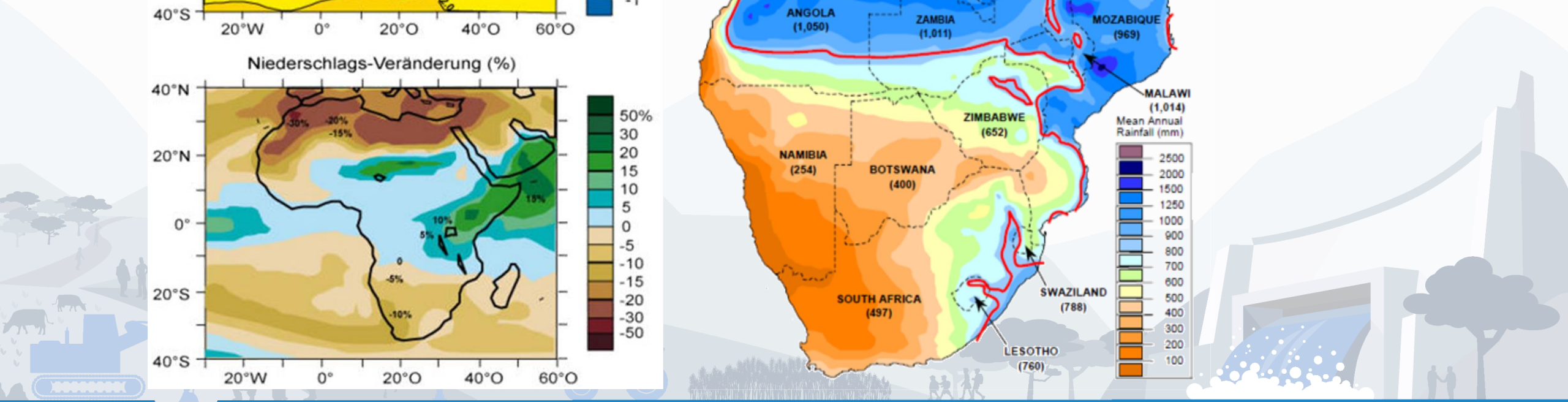
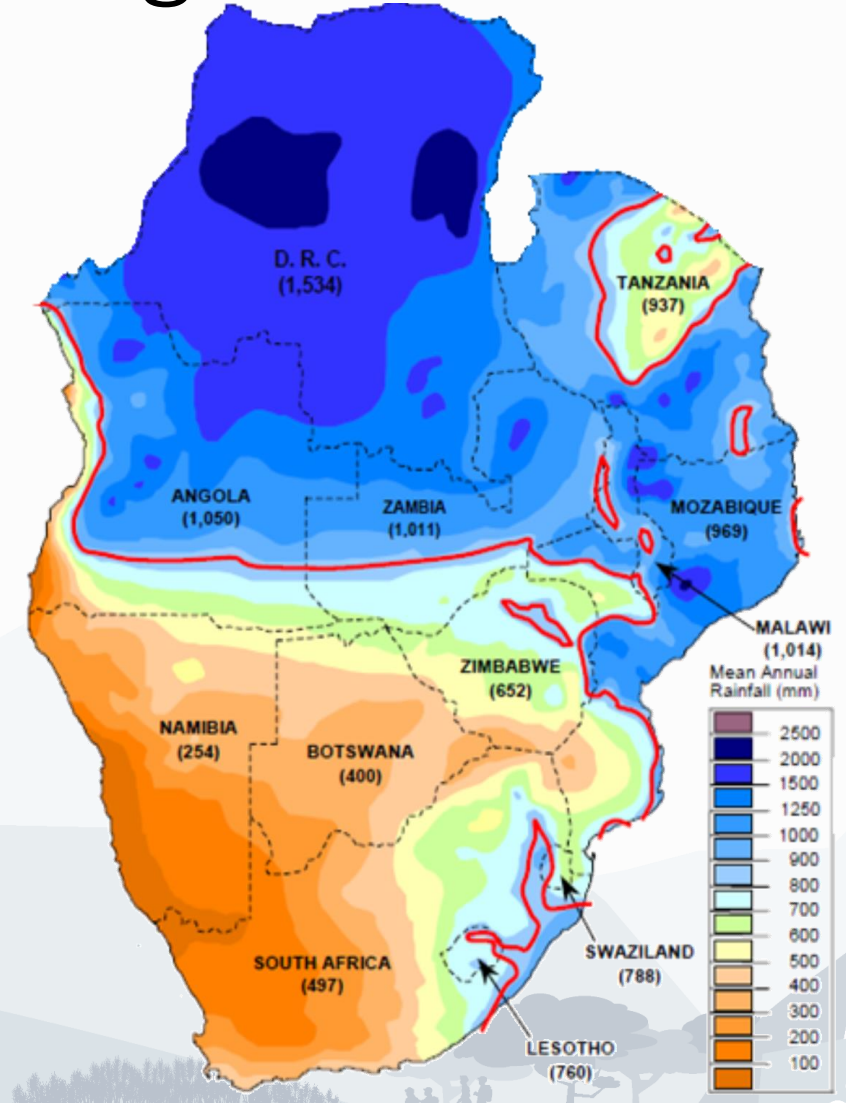
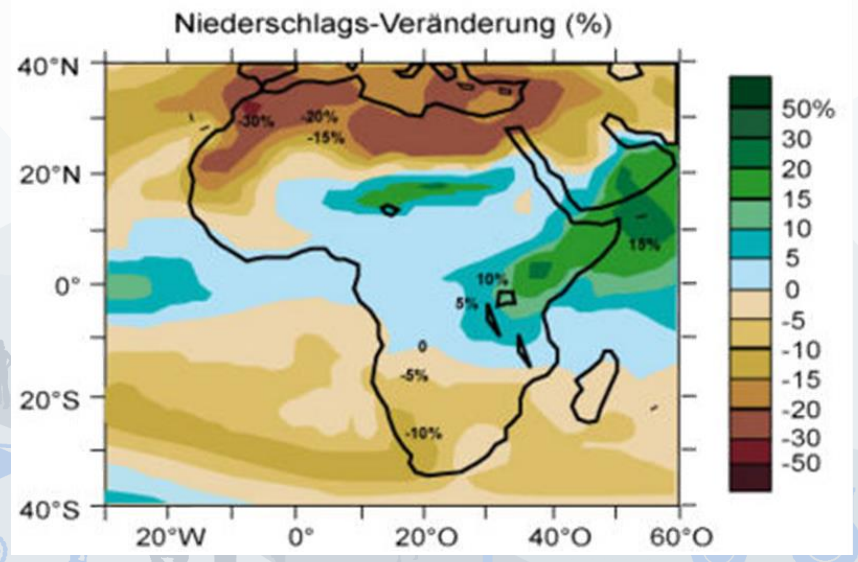
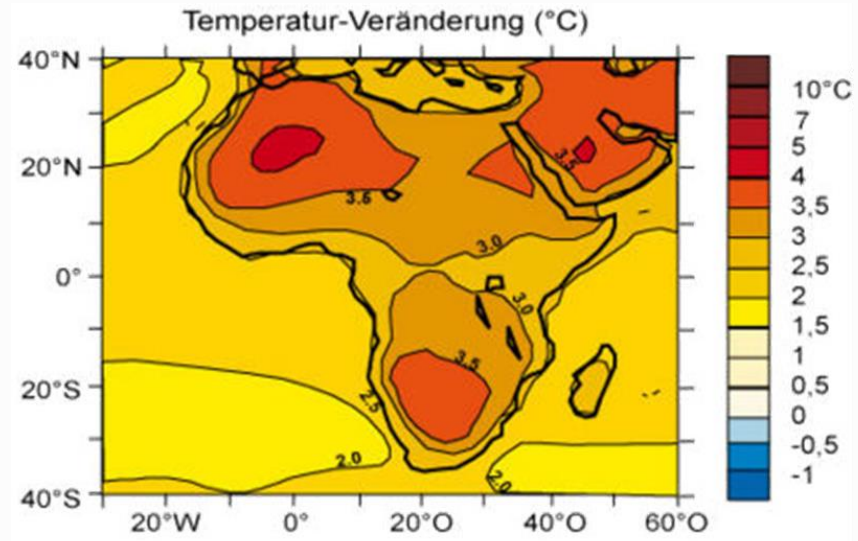
Major shared river basins – multi-country regional response to climate change challenging



Huge infrastructure investment backlog – impacts on disaster preparedness: call to action!



Understanding Climate Risk





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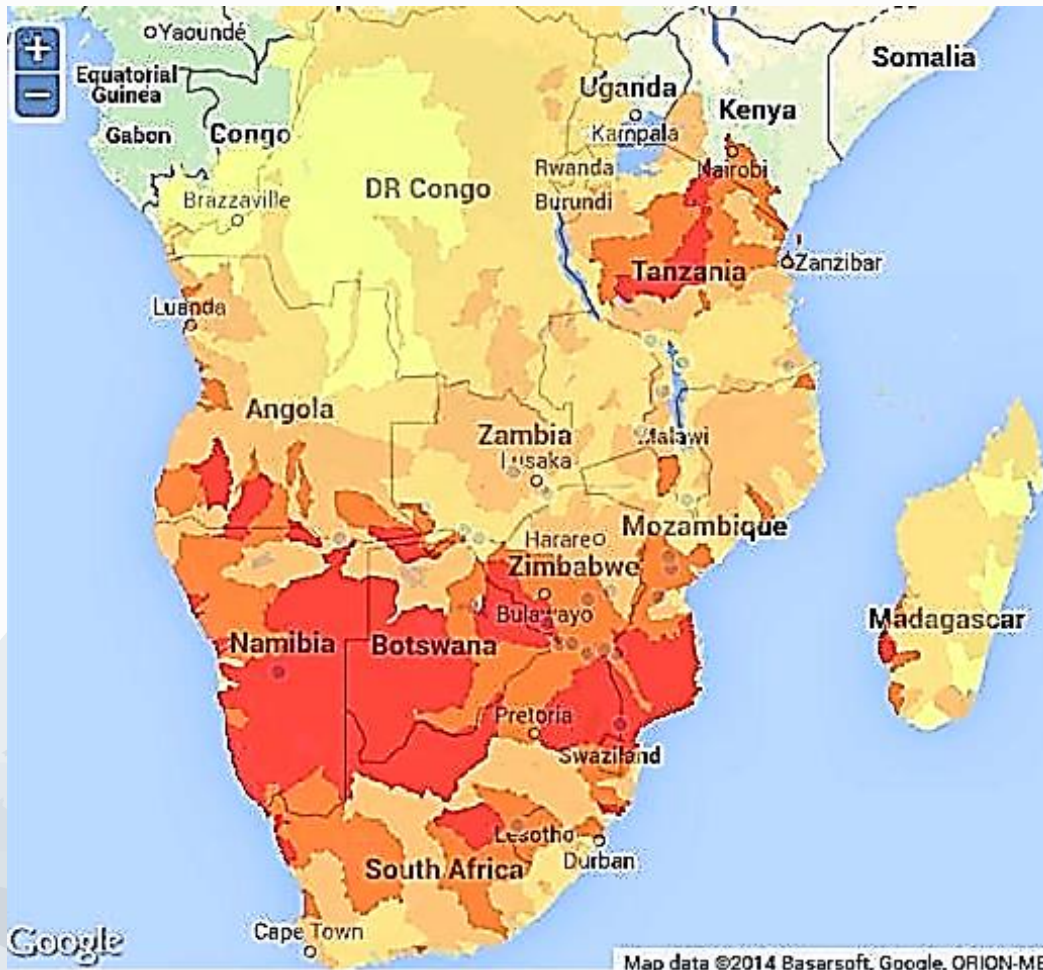
Inter-annual Variability

CRIDF's Climate Vulnerability Mapping Tool



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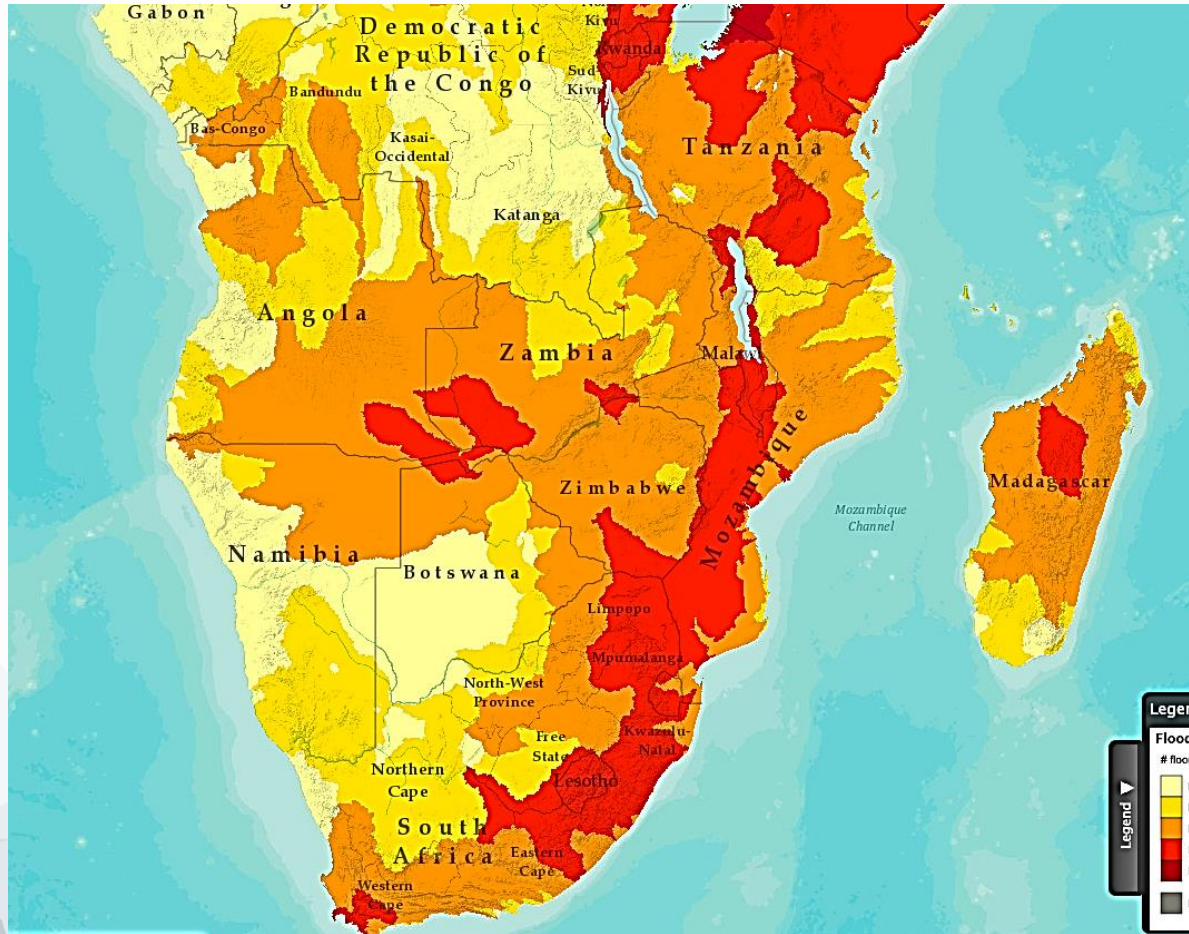


Inter-annual variability measures the variation in water supply between years.

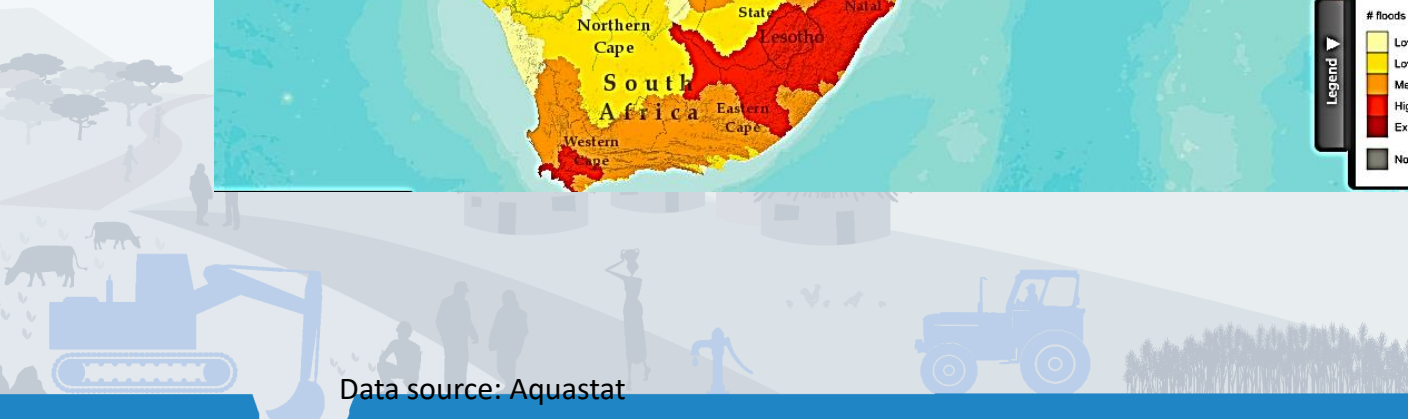
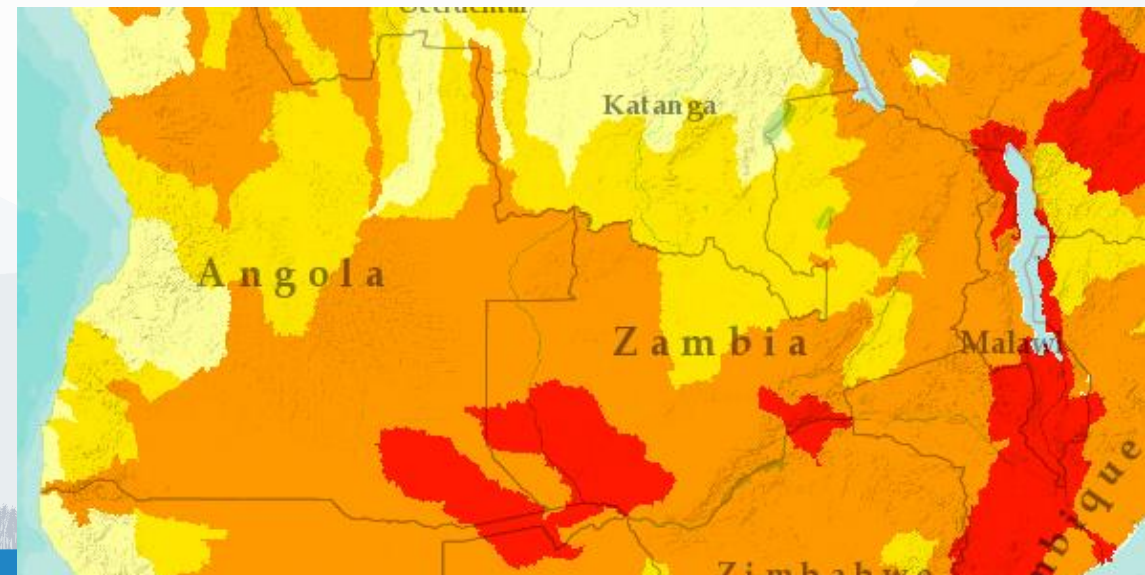
Interannual Variability

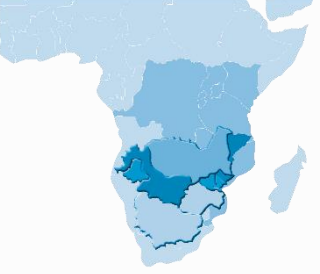
- 1. Low (<0.25)
- 2. Low to medium (0.25-0.5)
- 3. Medium to high (0.5-0.75)
- 4. High (0.75-1.0)
- 5. Extremely high (>1.0)
- No data

Map data ©2014 Basarsoft, Google, ORION-ME.



The probability that a flood will occur in a given year.

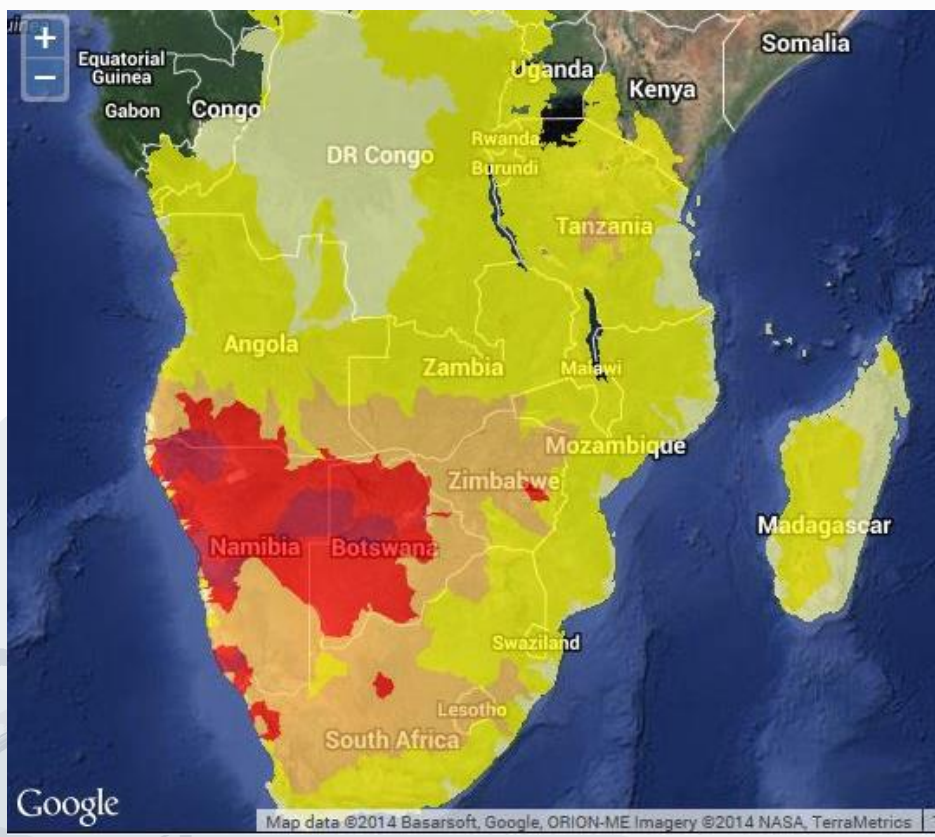




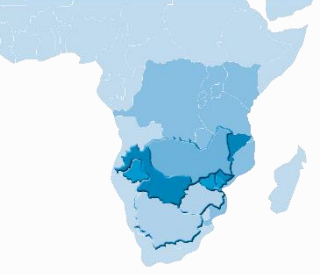
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Drought Severity

CRIDF's Climate Vulnerability Mapping Tool



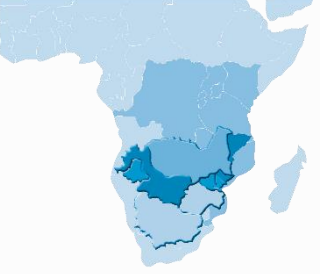
Drought is defined as a contiguous period when soil moisture remains below the 20th percentile. Length is measured in months, and dryness is the average number of percentage points by which soil moisture drops below the 20th percentile.



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Present day impacts of climate change





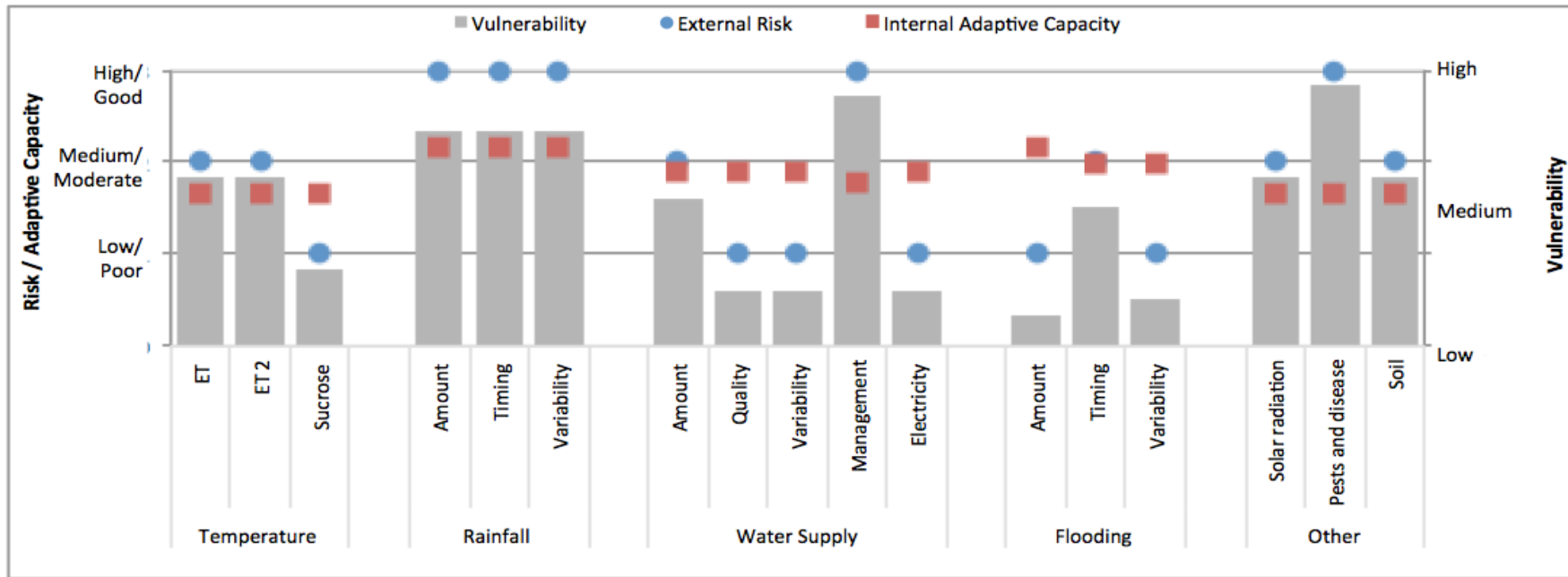
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Output Graphs



Detailed summary of current and future vulnerability

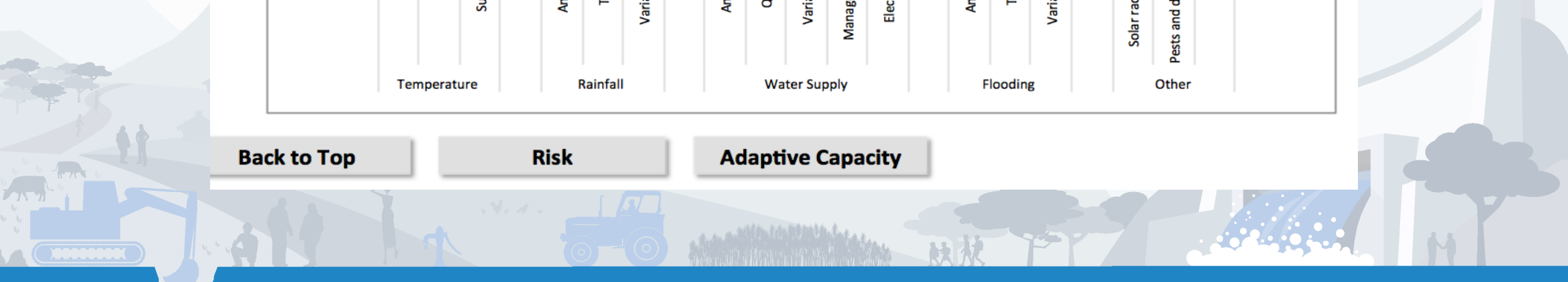
CURRENT VULNERABILITY

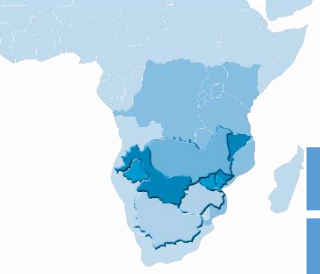


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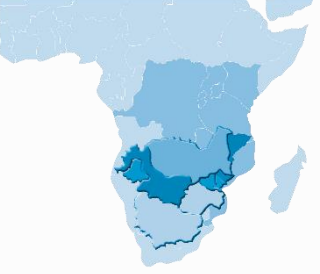




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CLIMATE RISK	ADAPTATION / RESPONSE Backbone
In-season Variability	Storage Irrigation
Annual Variability	Dams
Drought	Large dams
Floods	Flood warning Levees Dams
Low flows	Storage releases Water management (tech, ration, leakage)
	<i>Water Infrastructure is an adaptation backbone for agro based economies predominant in SADC</i>





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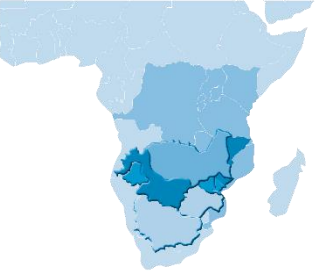
Small scale water infrastructure solutions






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Thank You

