GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

Republic of South Africa

Input to 2023 Livestock Research Group Meeting
Lyon, France

The climate change vulnerability of countries

drdar
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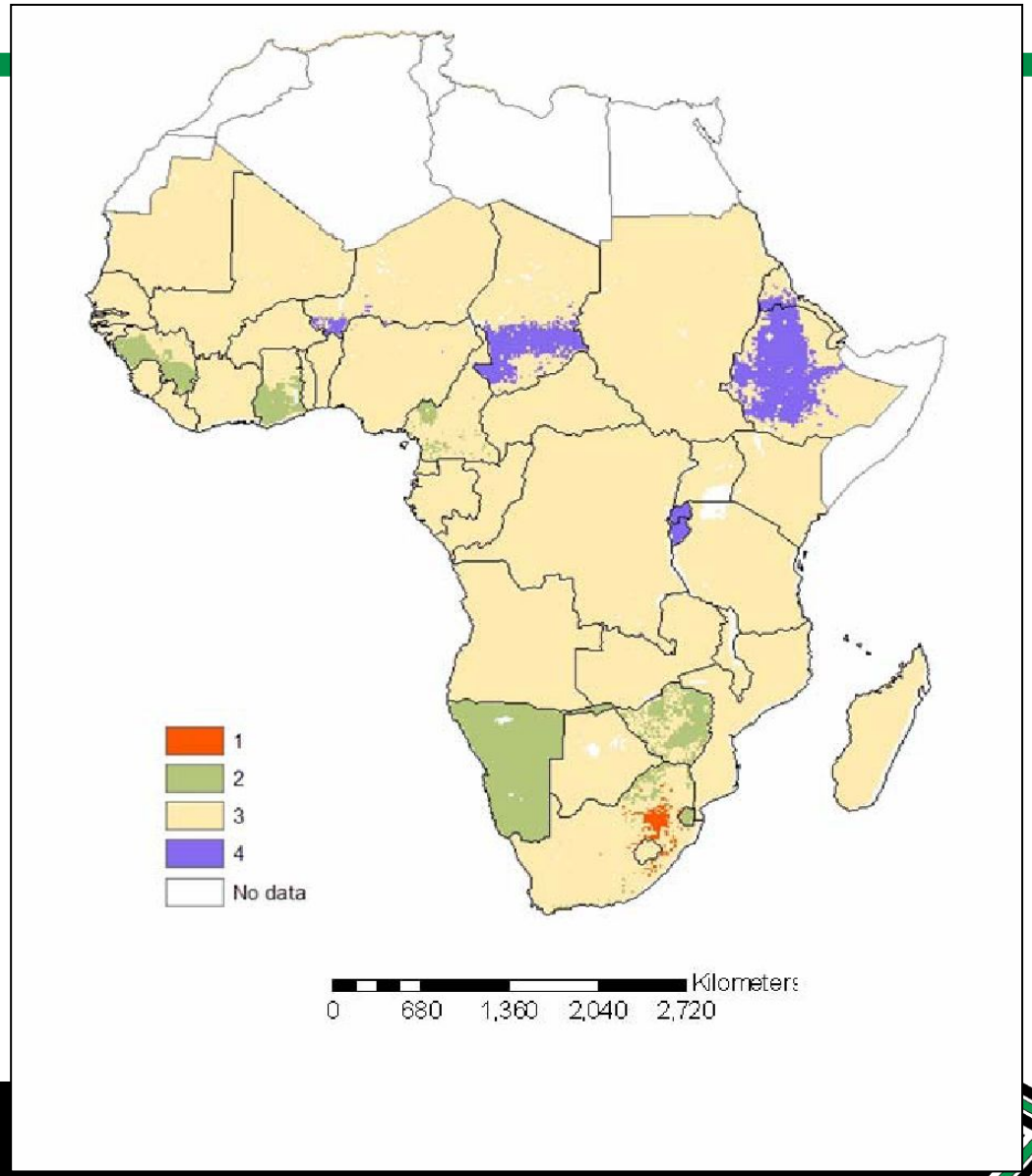
Rural Development & Agrarian Reform
PROVINCE OF THE EASTERN CAPE



Country-by-systems in sub-Saharan Africa, showing quartiles of an indicator of vulnerability to climate change (quartile 1, “less vulnerable” – quartile 4, “more vulnerable”)

South African Grazing capacity (ha/LSU)

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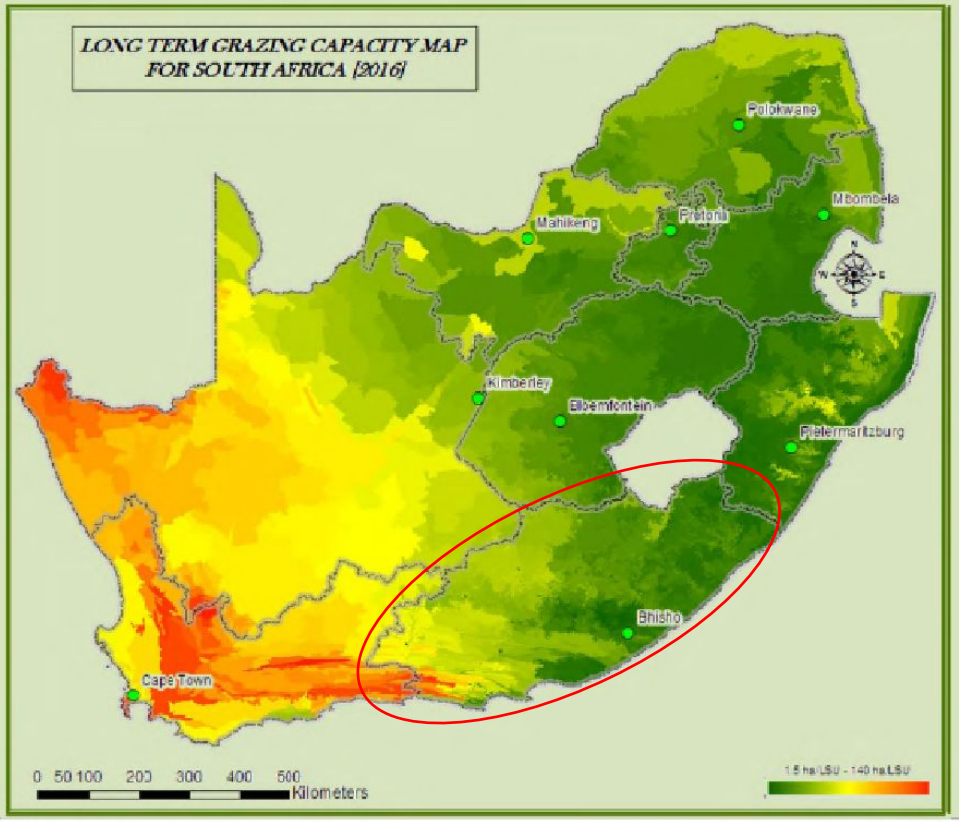
A number of animals a given area of grazing can carry without veld condition deterioration (Ha/Animal Unit or large stock unit)



Province	Long term grazing capacity (ha/LSU)			Available (ha)	
	Highest	Lowest	Mean	*Natural veld	% of Province
Eastern Cape	1.5	130	10.8	10 818 640	82.03
Free State	2.5	24	7.5	6 530 962	66.78
Gauteng	4	20	6.8	698 179	52.14
KwaZulu-Natal	2	23	6.4	4 493 616	63.16
Limpopo	3	17	9.3	7 657 939	84.20
Mpumalanga	2.5	11	6	3 684 679	65.51
Northern Cape	7	140	33.3	27 894 251	98.49
North-West	5	25	9.6	5 845 092	75.54
Western Cape	12	140	49.7	8 322 170	81.59

* Extracted from National Land Cover data set 2013/14

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Natural Resources Inventories Assessments

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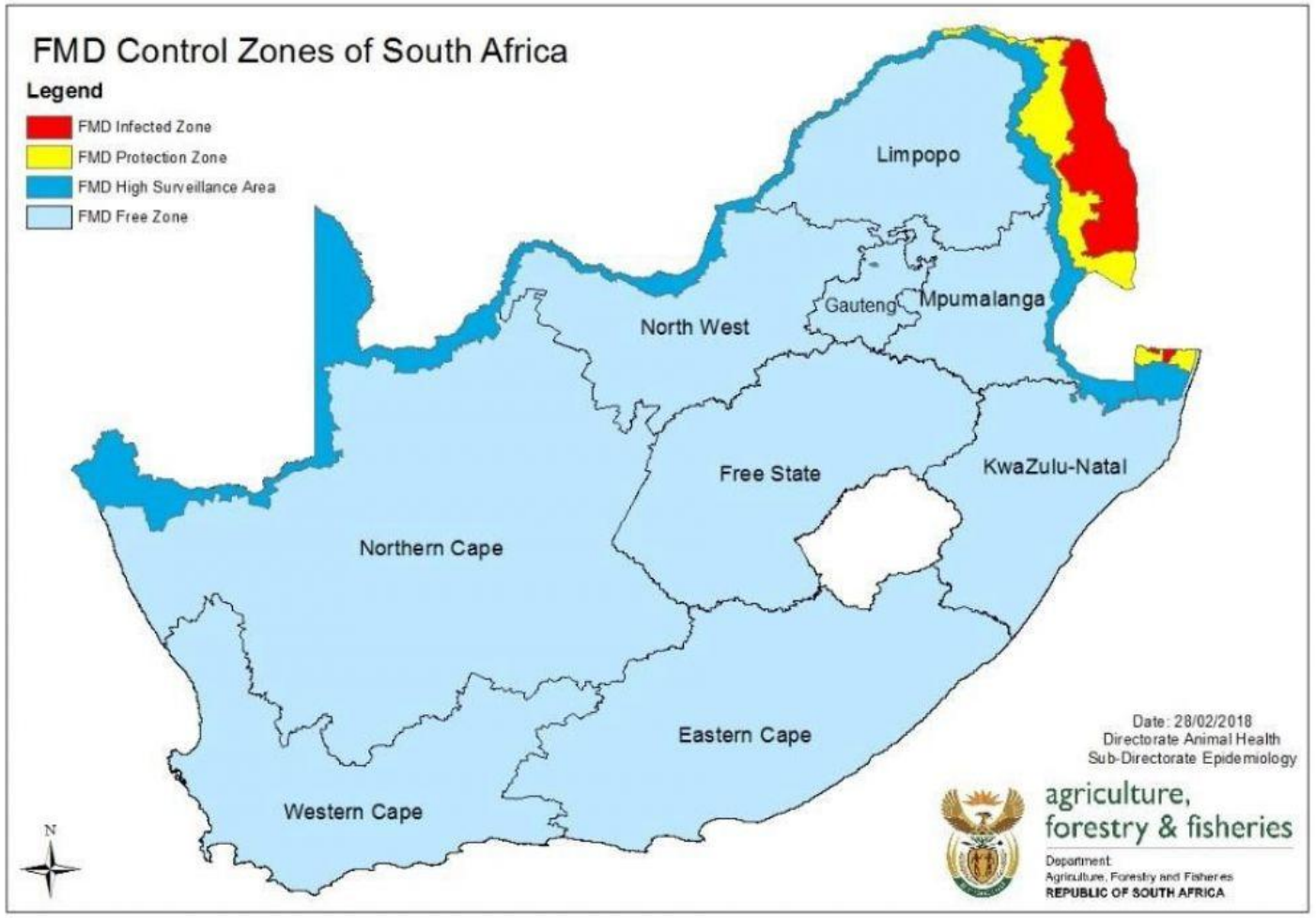
Natural Resources Inventories Assessments

FMD Control Zones



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Relevant activities

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- *The effect of crossbreeding on the carbon footprint of beef production*
- *The Farm gate carbon and water footprint of diverse beef cattle genotypes*
- *The methane reduction from ruminants by feed inclusion of tannin rich plants*
- *Mitigation of heat stress effects on ruminants with feed additives*
- *Training and information sharing with rural farmers*
- *Research on drought resilient forages for livestock*

Future priorities

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- *Carbon, methane and water footprint of extensive beef cattle production on natural grazed rangeland*
- *Quantification of the effect of heat stress on milk production, methane emissions, udder health and milk composition for the development of adaptation and mitigation strategies*
- *Improving feed digestibility of animal feeds*
- *[Insert description of activities]*
- *[Insert description of activities]*
- *[Insert description of activities]*

Capability needs

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- *Acquisition of two GreenFeed systems to measure methane and metabolic carbon dioxide emissions under normal production conditions in cattle*
- *Establishing of GHG measuring metabolic houses for large livestock and related personnel capacity*
- *Genomic manipulation of microbiota involved in methane production*
- *Genomic selection for low methane production*
- *[Insert description of capability needs]*
- *[Insert description of capability needs]*