Assessment of farmers' adaptation strategies to climate change in Southern Africa

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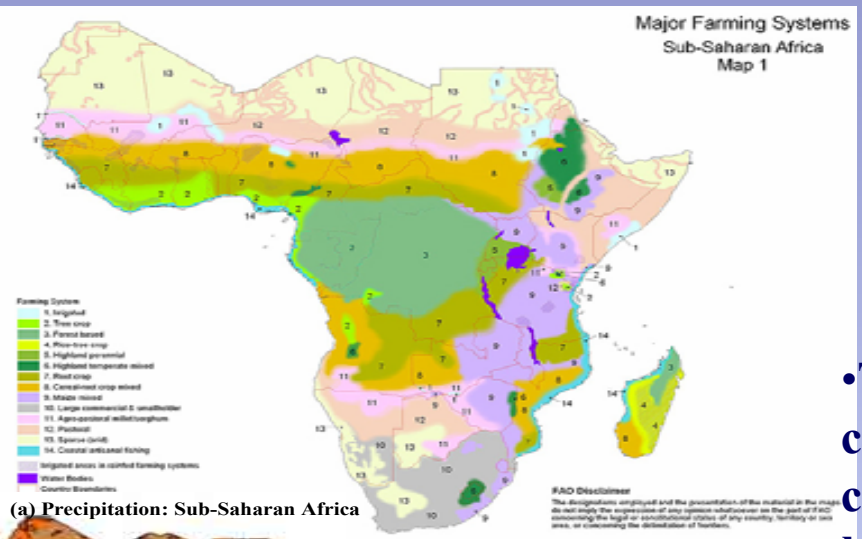
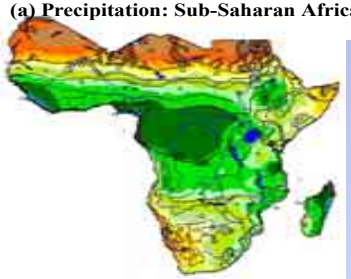
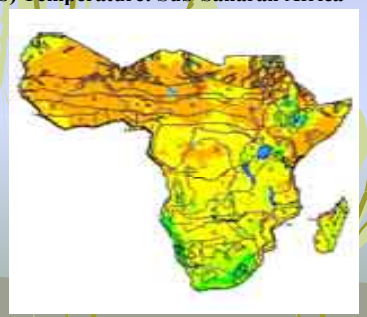
Introduction and background



(a) Precipitation: Sub-Saharan Africa



(b) Temperature: Sub-Saharan Africa



(a) Precipitation Ave mm/year	(b) Temperature (Ave Annual ¹C)
0 - 24	< - 29.5
25 - 74	-29.5 to -25
75 - 124	-24.5 to -15.0
125 - 224	-14.5 to -10.0
225 - 274	-9.5 to -5.0
275 - 374	-4.5 to 0.0
375 - 474	0.5 to 5.0
475 - 724	5.5 to 10.0
725 - 974	10.5 to 15.0
975 - 1474	15.5 to 20.0
1475 - 2474	20.5 to 30.0
2475 - 4974	30.5 to 35.0
4975 - 7474	35.5 to 40.0
7475 - 10004	> 40.0
> 10005	No Data
No Data	

Agro-ecosystems in Africa – most vulnerable to climate change:

- Climate already hot in most parts of Africa
- Most areas are already water stressed
- High dependence on agriculture – livelihoods
- Low ability of African farmers to adapt

- The high sensitivity of these tropical areas to climate change coupled with the interaction of climatic change, soils, and socio-economic factors have great impacts on the productivity of agriculture in the African region

Objectives

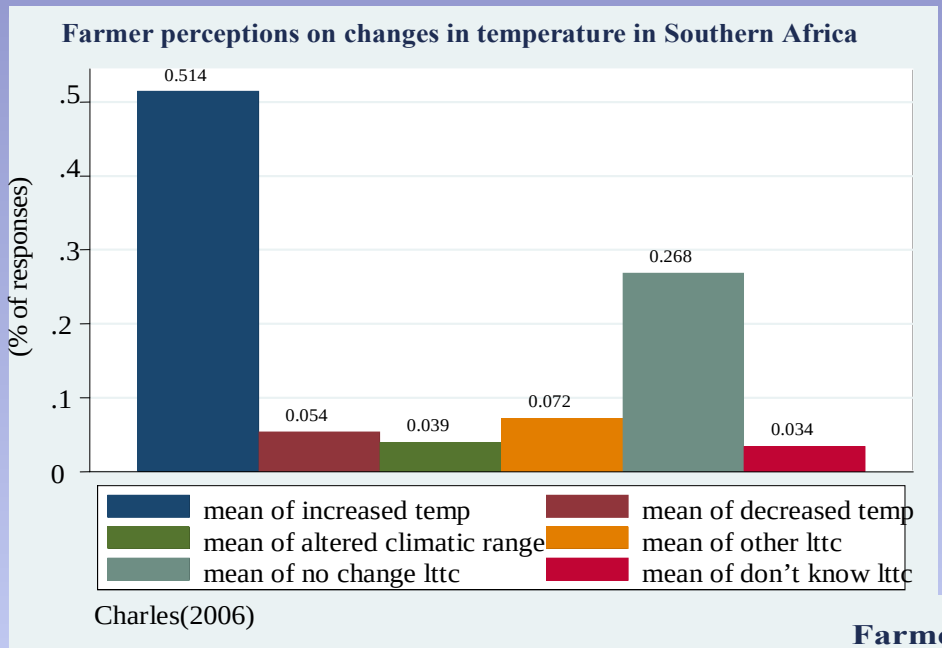
Assess farmers' perceptions and current adaptation strategies

Assess the determinants of farmer adaptation to climate change.

Identify alternative adaptation measures that Southern African countries can employ to stabilize national and regional food security in the face of anticipated changes in climatic conditions.

Results and discussion

Farmer perceptions on changes in temperature and precipitation



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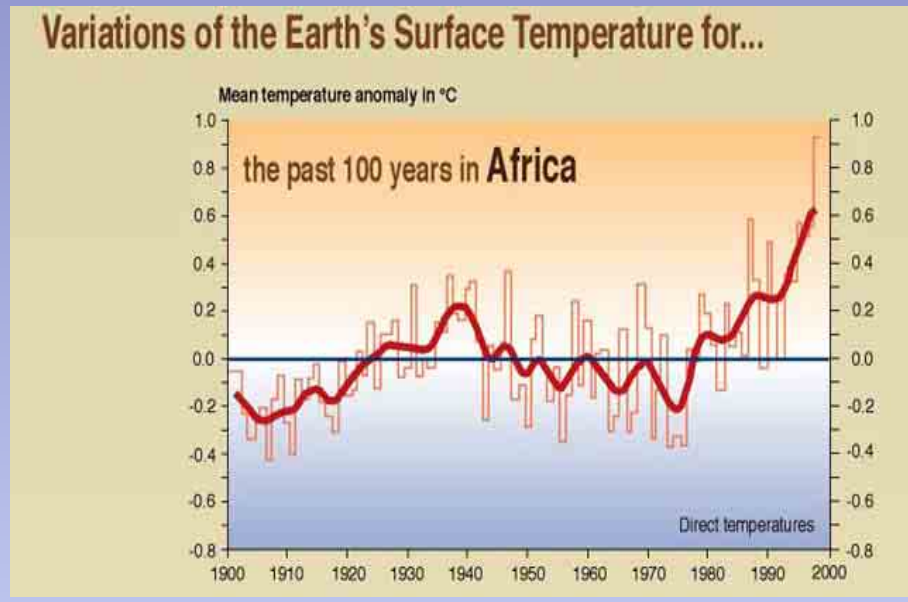
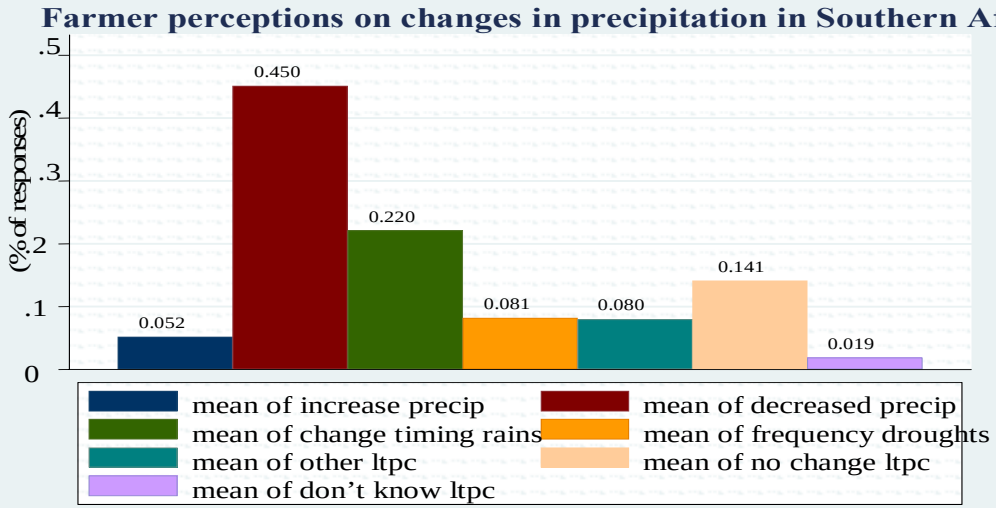


(a) The perception in the region is that long term temperatures are warming with very few indicating decreases in long term temperatures

(b) Perceptions on long term precipitation changes are that the region is getting drier and there are pronounced changes in the timing of rains and frequency of droughts



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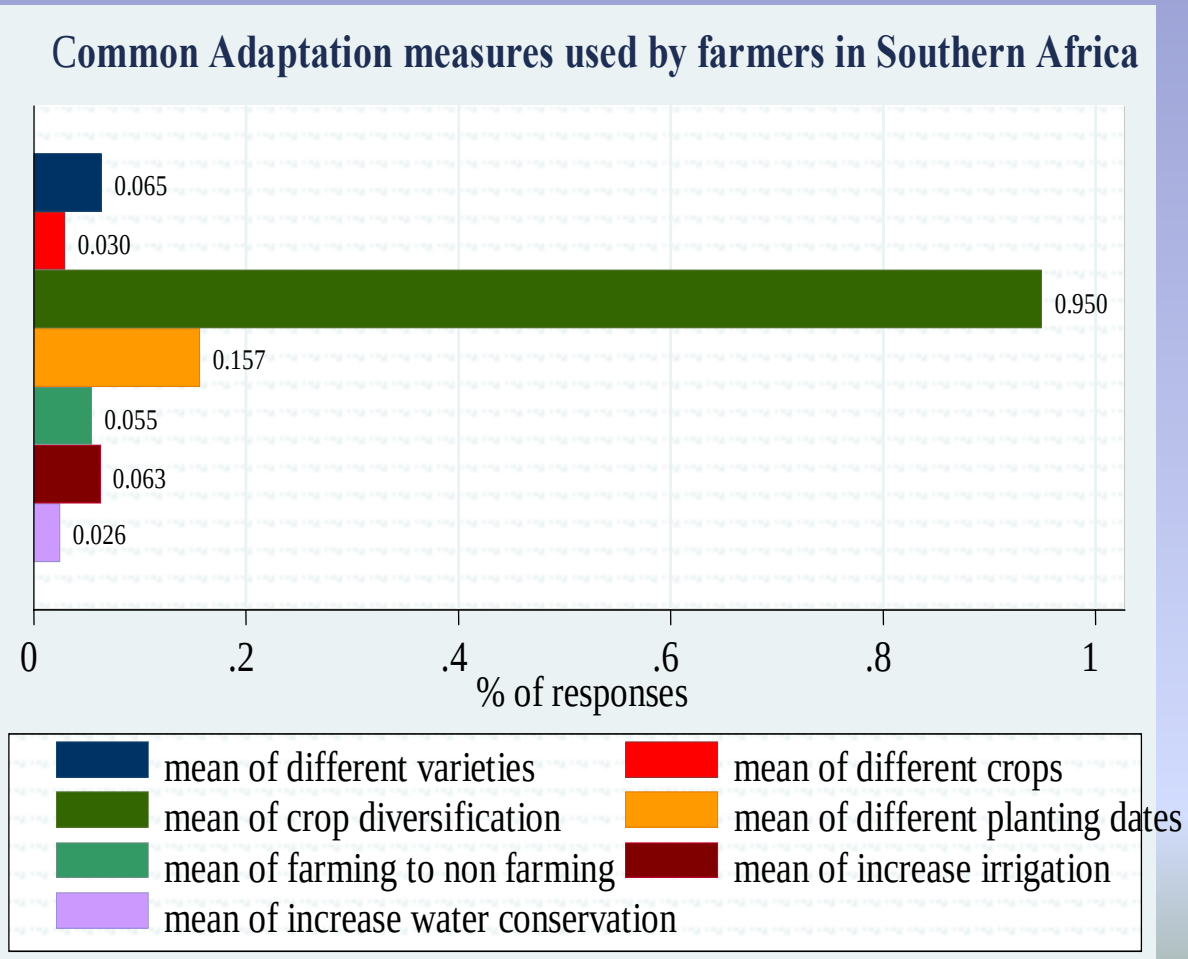
Common farmer adaptation strategies in Southern Africa



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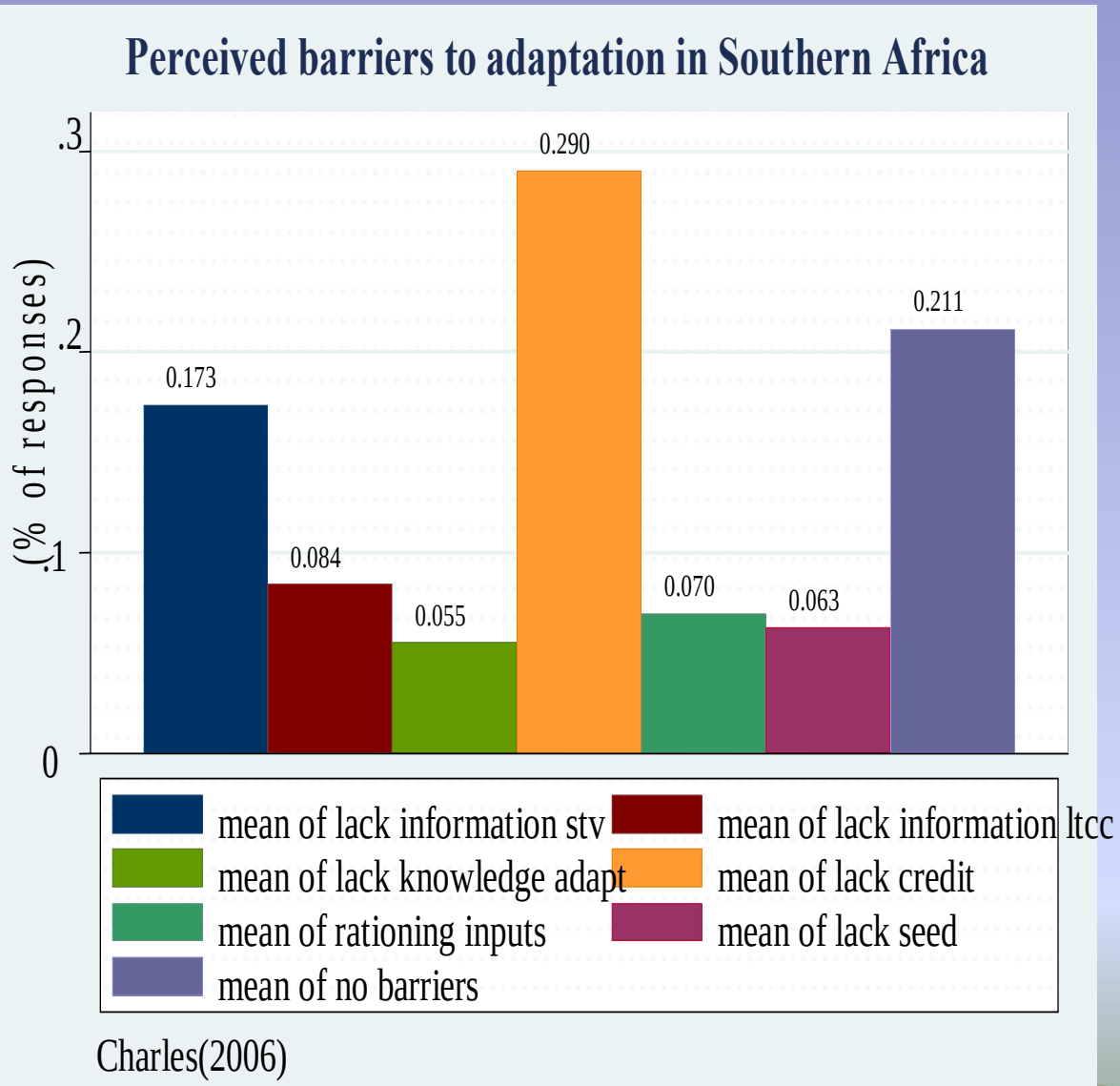
crop diversification, different planting dates, different varieties, increased use of irrigation, increased use of water and soil conservation techniques are some of the common adaptations options being used by farmers

Perceived barriers to adaptation in Southern Africa



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information concerning climate change forecasting, adaptation options and other agricultural production activities, Lack of credit or savings are important constraints for most farmers

Conclusions and Implications

- **farmers are aware of changes in climate variables (temperature and precipitation) and have some form of adaptation options in place.**

- **Current adaptation options include: crop diversification, differing planting dates, using different varieties and crops; increased use of irrigation, water and soil conservation techniques**
- **Information concerning climate change forecasting, adaptation options and other agricultural production activities as an important constraint to adaptation.**
- **Government policies need to support research and development that prepares the appropriate technologies to help farmers adapt to changes in climatic conditions.**
- **Examples include crop development, improving climate information forecasting, or promoting and even subsidizing certain farm-level adaptations such as use of irrigation technologies**

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Thank You