BY Prof Joha
Associate Professo
UFS-Di
Tel: 051 4
Email: Belle

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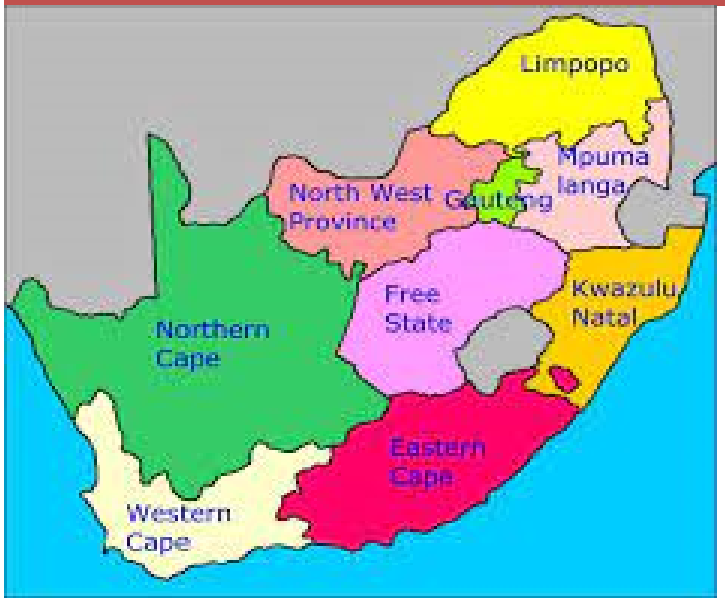
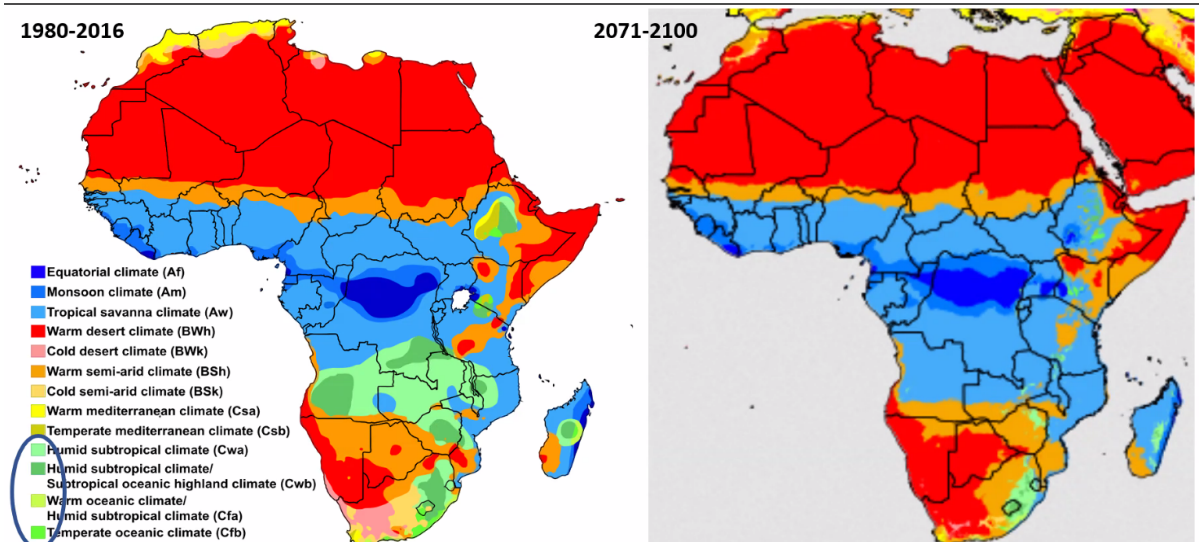
BACKGROUND



CLIMATE CHANGE



in acute food insecurity.

-50% decrease in yield from rainfed agriculture

-GDP to contract by 2.5-12.5%

SOUTHERN AFRICA AND SA CLIMATE CHANGE

- Similar trend to Africa
- Stronger El Nino with more drought
-La Nina with cyclones (Sn Africa, mozambique)

South Africa
- increasing temp 1-3*c
-Decrease rf 5-10% (summer areas, though slight increase early winter
generally dry n & w, wetter s &e but erratic

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METHODOLOGY

- Mixed research method

- Target population = smallholder farmers in the 33 villages

- Population =1135 smallholder farmers

- Sustainable Livelihood Model = main theoretical framework while pragmatism = guiding paradigm.

- Primary data collection:

    Survey = 60 from 13 out of 33 villages
    KI =6
    Field observations = 2

Data analysis

    Thematic analysis
    Descriptive statistics

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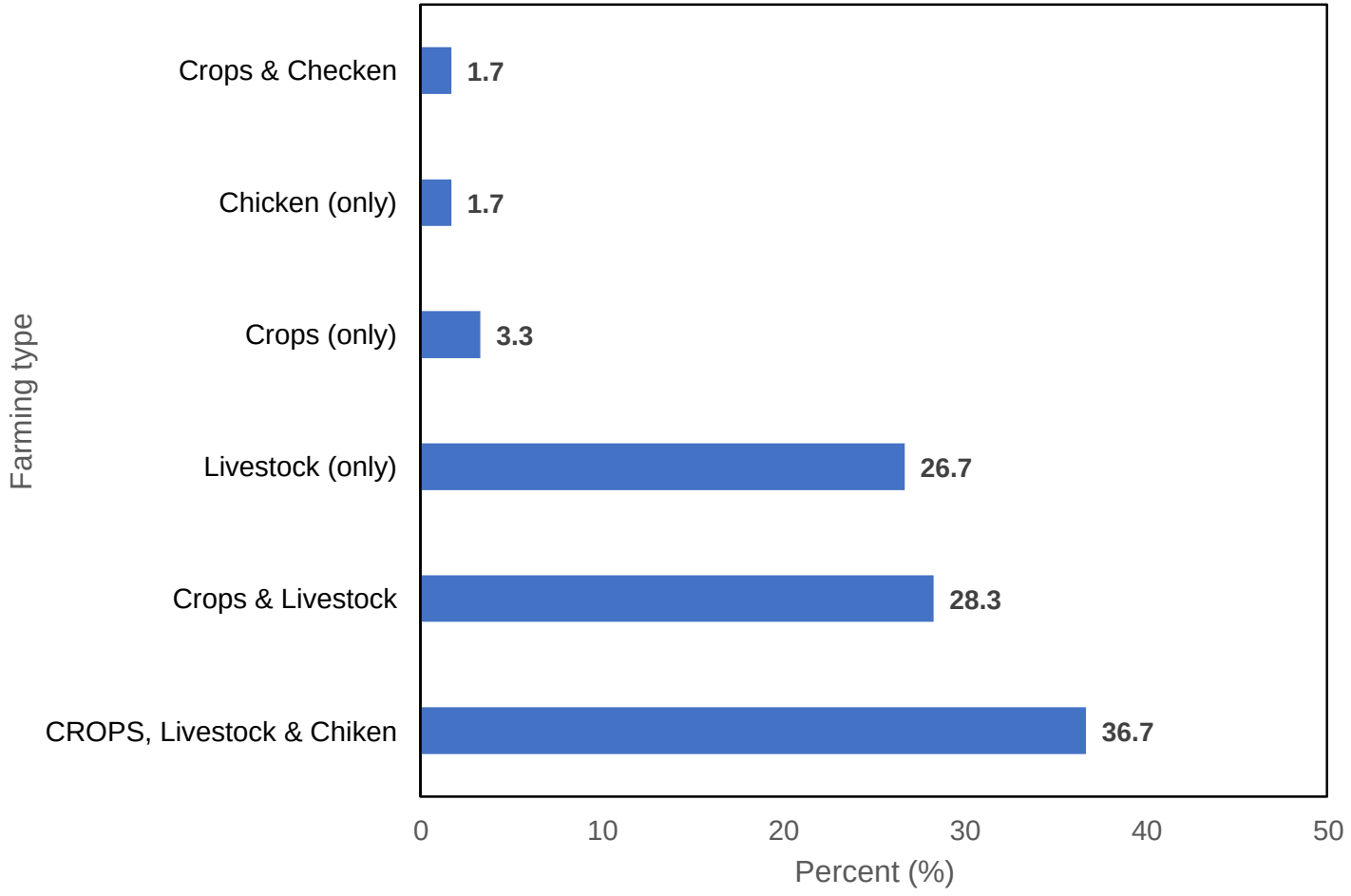
Socio-demographic characteristics

Household participant characteristics		Frequency	Percentage
Sex	Male	47	78.3%%
	Female	13	21.7%%
Land ownership	Own	56 (no title deeds)	93%
	Rent	4	7%
Age groups	20-25	3	5%
	26-30	4	7%
	31-35	5	8%
	36-40	5	8%
	41 & above	43	72%
Household members	Live alone	4	6.6%
	1 to 2 people	15	25.0%
	2 to 4 people	19 (provide labour++)	31.7%
	4 to 6 people	8	13.3%
	6 & above	14	23.7%
Educational level	Primary & others	41	68%%
	Higher/ Matric	15	25%
	Graduate	2	3.3%
	Any technical	2	3.3%
Level of skill	Semi-skilled	30	50.0%
	Skilled	12	22.1%
	Unskilled	17	27.9%

FARMING PRACTICES



CLIMATE CHANE

- Most understand cc and its causes cc is (37/22; 32/27)

- Most have been severely impacted by cc (44/15)

- Government is not doing enough to mitigate the impacts of cc (50/ 7)

- Mass media their main source of climate information (78%)

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CLIMATE IMPACTS

- Late rains and early winters (Short growing season)

-Increasing temperature and decreasing/erratic rainfall (less soil moisture)

-Changes in seasonal patterns (Planning difficult)

-Decreasing yields and low farming income (Rising poverty levels)

-Crop loss, animal deceases and more pests

-Loss of livestock (dying) poor quality (less market values)

-Lack of government subsidies and high market competition from commercial farmers

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ADAPTATION STRATEGIES ADOPTED

- some repair their broken windmills
- buying and stockpiling fodder
- use green house to grow backyard vegetables
- reducing the number of livestock by selling some
- planting more green plants than animals
- searching alternative sources of water like rivers

ADAPTATION STRATEGIES CONT'D

- early planting of crops and early harvesting
- planting drought resistant crops
- rain harvesting using "jojo" tanks
- practising conservation agriculture
- practising in-field rainwater harvesting
- getting advice from agricultural extension officers
- building strong social/community ties
- use of indigenous knowledge to predict the weather

DESCRIPTIVE STATISTICS ANALYSIS

Independent variable		Adoption	Awareness	Attitude
Age	R^2 value	0,068	0,155	0,154
	Sig. level	0,604	0,236	0,241
	N	60	60	60
Gender	R^2 value	0,156	0,104	0,041
	Sig. level	0,233	0,428	0,756
	N	60	60	60
Educational Qualification	R^2 value	0,135	0,013	0,133
	Sig. level	0,305	0,923	0,311
	N	60	60	60
Level of skills	R^2 value	-0,050	.802**	-0,031
	Sig. level	0,703	0,000	0,812
	N	60	60	60
Farming sector	R^2 value	-0,021	-0,136	-0,001
	Sig. level	0,873	0,303	0,992
	N	59	59	59
Farming Experience	R^2 value	0,008	.536**	-0,048
	Sig. level	0,951	0,000	0,718
	N	60	60	60
Source of Information	R^2 value	.749**	0,051	.671**
	Sig. level	0,000	0,699	0,000
	N	60	60	60

CONCLUSIONS AND RECOMMENDATIONS

- Government support is not enough and does not come in time. support and assistance from government and other stakeholders to come in timeously and effectively address the need of the farmers.

- EWS are not customised to suit the local needs. The early warning system and forecast measure be increased and early warning information to be improved, including translation into local languages. Innovative methods be used to communicate agro-climatic information such as participatory video, photo stories, oral history videos, vernacular drama, radio, television, and festivals,

- Indigenous knowledge is freely available as most of the farmers grew up in these villages. Integration of LIKs into formal research, education and training.

CONCLUSIONS AND RECOMMENDATIONS CONT'D

- Most farming infrastructure are obsolete. Build and maintain infrastructure (dams, windmill, farrows, greenhouses, fencing for livestock to control the movement of animals to avoid over grazing and conflicts.

- Little or no irrigation systems are used by these farmers. They rely on conventional rainfall. Introduce and improve irrigation infrastructure to help them grow crops all year round and not only depended on sensitive rainfed system. Efficient use of irrigation water, minimum disturbance of the soil, crop rotation, crop diversification, crop residue management and incorporation of organic matter, best grazing systems etc

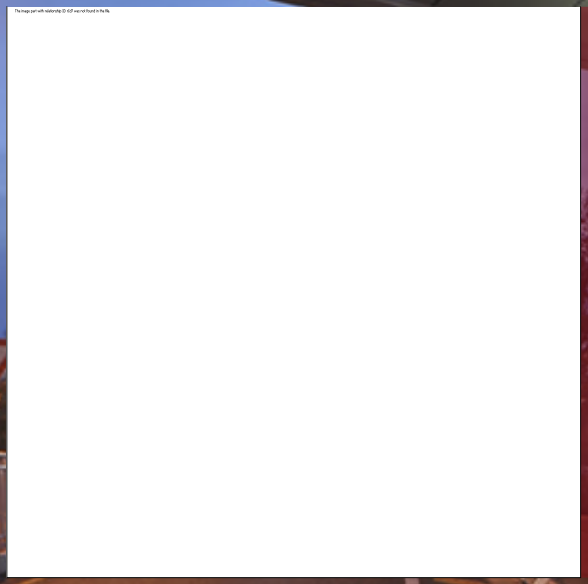
- Conservation and greening (planting more green plants) as well as continued provision of technical support regarding rain harvesting techniques, conservation agriculture and IRWH

CONCLUSION AND RECOMMENDATIONS CONT'D

- Land degradation including overgrazing and soil erosion was observed. Land degradation, water scarcity and pest control are significant environmental issues facing agriculture in south Africa. Sustainable manage the environment soil, water and natural veld management, for greater productivity and food security.

- . The farmers and even one agricultural extension officer had limited knowledge on the dynamics of climate change. Training and workshops to uplift skills and change attitudes and mindset, towards effective climate change adaptation measures

Thank You!
Merci!
Dankie!
Kea leboha!



T: +27(0)51 401 9111 | info@ufs.ac.za | www.ufs.ac.za

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