

**CLIMATE CHANGE: FARMERS' PERCEPTION AND THEIR  
ADAPTATION STRATEGIES. A CASE OF LUSHOTO DISTRICT,  
TANZANIA**

**BY**

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# INTRODUCTION

- **Major threat** and the most pressing issues of this generation, which cause different impacts to the key sectors such as agriculture, water, fisheries, forestry, industry, and trade that are crucial to the **sustainable growth and development initiatives** in Tanzania.
- Over 78 % of the population depends on subsistence agriculture which is almost entirely rain fed.
- Annual flow reductions of 6-9% of in the River Pangani and 10% in the River Ruvu- source of water to Mtera Dam which produce Hydro Electric Power).
- Extreme weather events; heavy rain storms, and flooding.
- Recurrent drought in semi arid areas in Tanzania (singida, Dodoma and Tabora).

## Malaria is now also available in Highlands areas . . .



Due to escalating warming, Tanzania is experiencing outbreaks of malaria in highland areas where there is little experience with the disease.

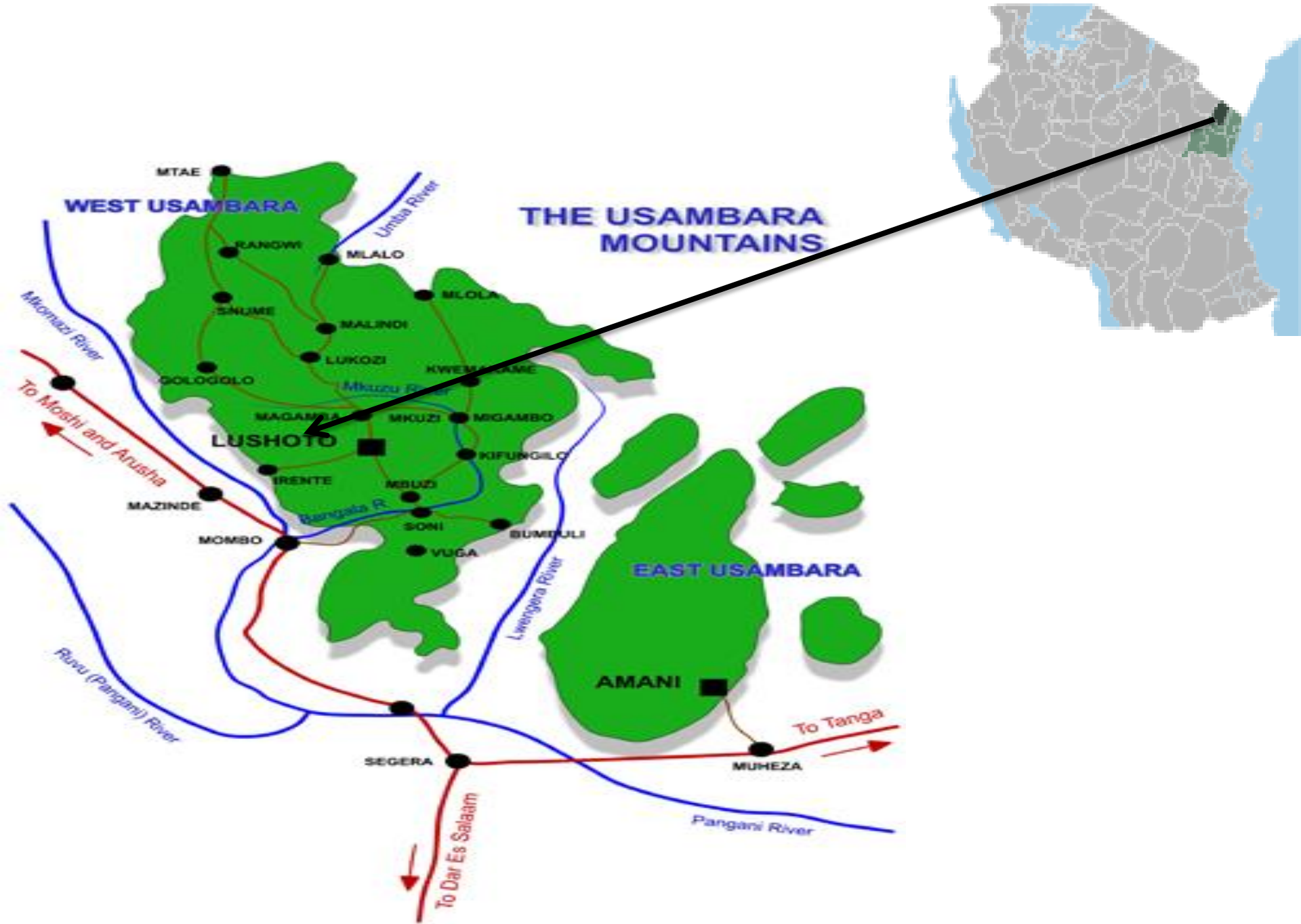
## 82% of the ice at Mount Kilimanjaro has disappeared



- Unique tourist destination in the world which is the home of thousands flora and fauna.
- Source of water for domestic uses, irrigation, and hydropower.
- Ice cap has been melting alarmingly fast and are estimated to disappear completely by 2015 - 2020.

# STUDY AREA

- Lushoto is one of the district of Tanga region situated at the base of West Usambara Mountains a part of the Eastern Arc Mountains.
- Lushoto district used to experience bimodal rainfall pattern.
- Experiencing irregularity and decreasing of rainfall pattern and prolonged drought which are the clear manifestation of the climate change.



**This study aimed at understanding farmers' perception which is the basic knowledge in creating the appropriate adaptation practices.**

**Both qualitative and quantitative methods were used in this study. FGD & Structured questionnaire.**

**70 farmers participate in the study (45 were women)**

## **CAUSES OF CLIMATE CHANGE**

## **FARMERS' PERCEPTION ON CAUSES**

**a) Cutting down of trees (Deforestation)**

Community still believing that deforestation can not be avoidable (forest resources-main source of energy and still they are opening new agricultural fields). 18% of the GHG from forest loss (CCS-2012)

**b) Emissions from vehicles**

Still there is a strong believe that emission from vehicles can not be reduced.



## **EFFECTS OF CLIMATE CHANGE**

## **FARMERS' PERCEPTION ON EFFECTS**

**a) Climate change is causing water scarcity**

The community is strongly believing that the trend of water scarcity in the area has been caused by recently changes in rainfall pattern.

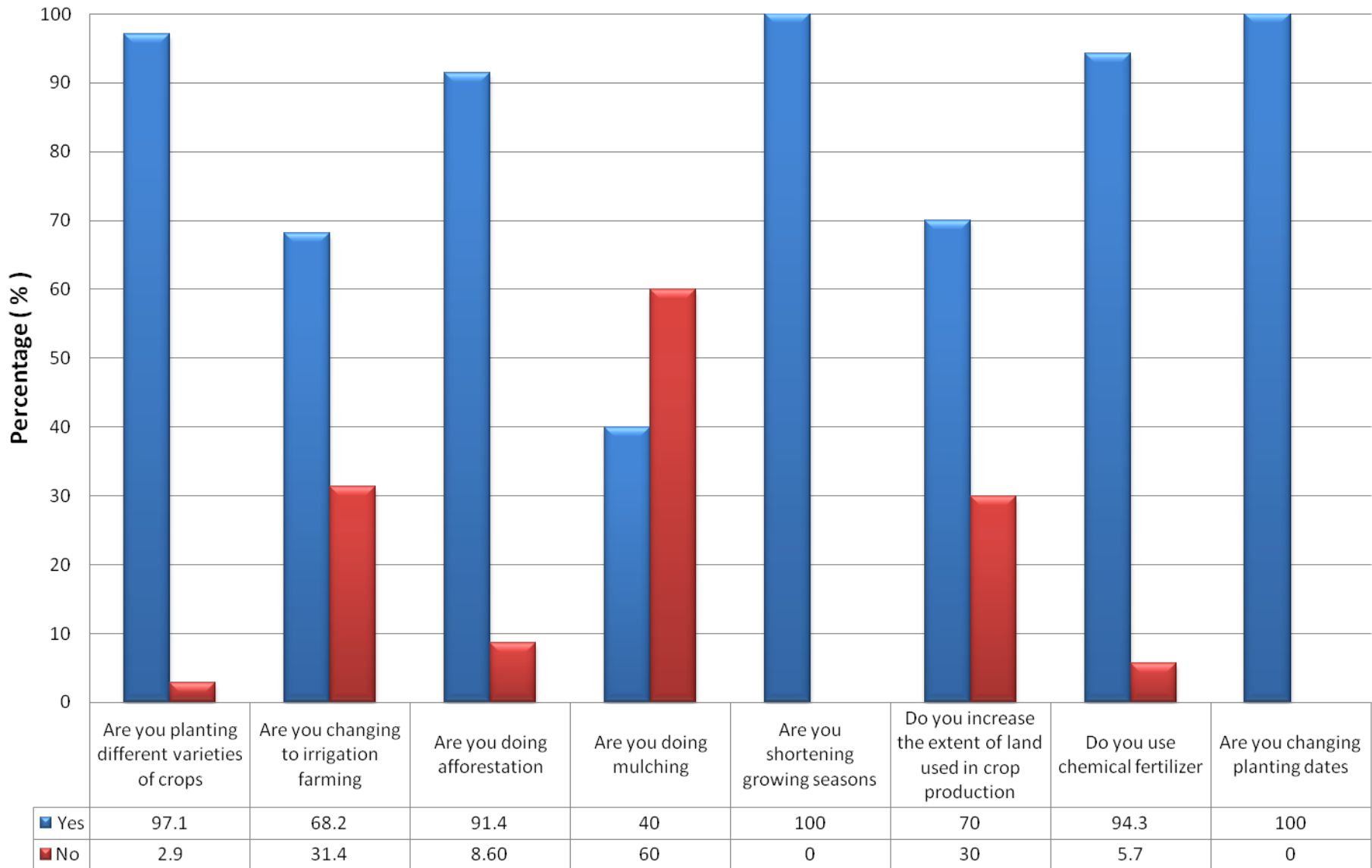
**b) Climate change/unemployment**

Agriculture yields has been dwindling as the results of climate change hence affecting livelihood of the farmers.

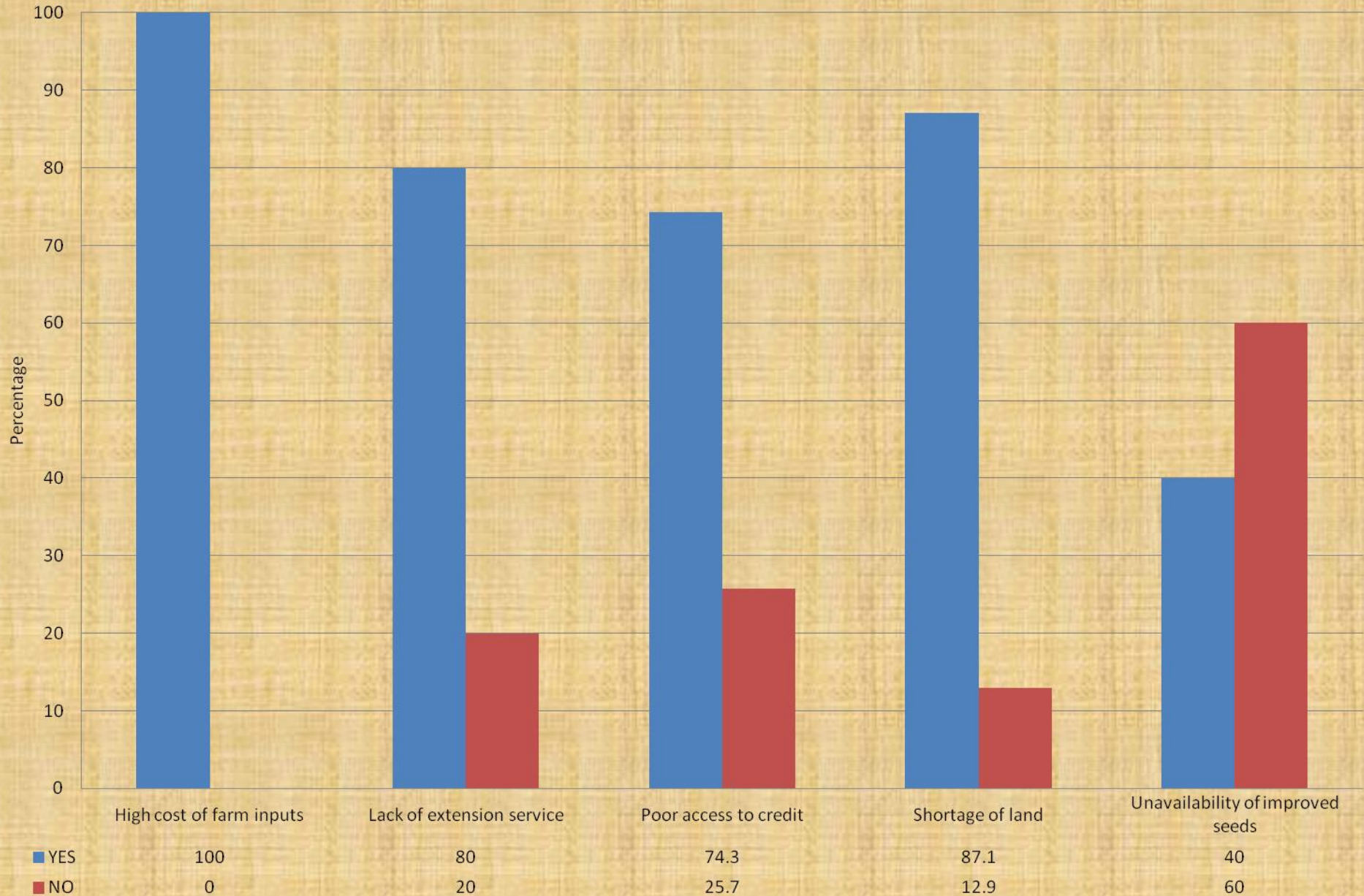
**c) Climate change is likely cause poverty**

The existing poverty is directly linked with agricultural yield.

# FARMER'S ADAPTATION TO THE CLIMATE CHANGE



# CHALLENGES FACED BY FARMERS IN ADAPTING TO CLIMATE CHANGE



# CONCLUSION

- The most obvious findings that emerged from this study is that majority of the farmer were having partial understanding about climate change.
- 99.7% are aware that the climate is changing due to the effects they face in their agricultural activities,
- 0.3 % are aware that anthropogenic activities such as transportation, industrial activities, and deforestation contribute to climate change.
- The investigation also showed that farmers efforts to adapt such as, switching to irrigation farming, and changing planting dates tend to be constrained by some drawbacks such as poor access to weather data and lack of farm inputs hence low agricultural yields something that threatens food security.

# RECOMMENDATION

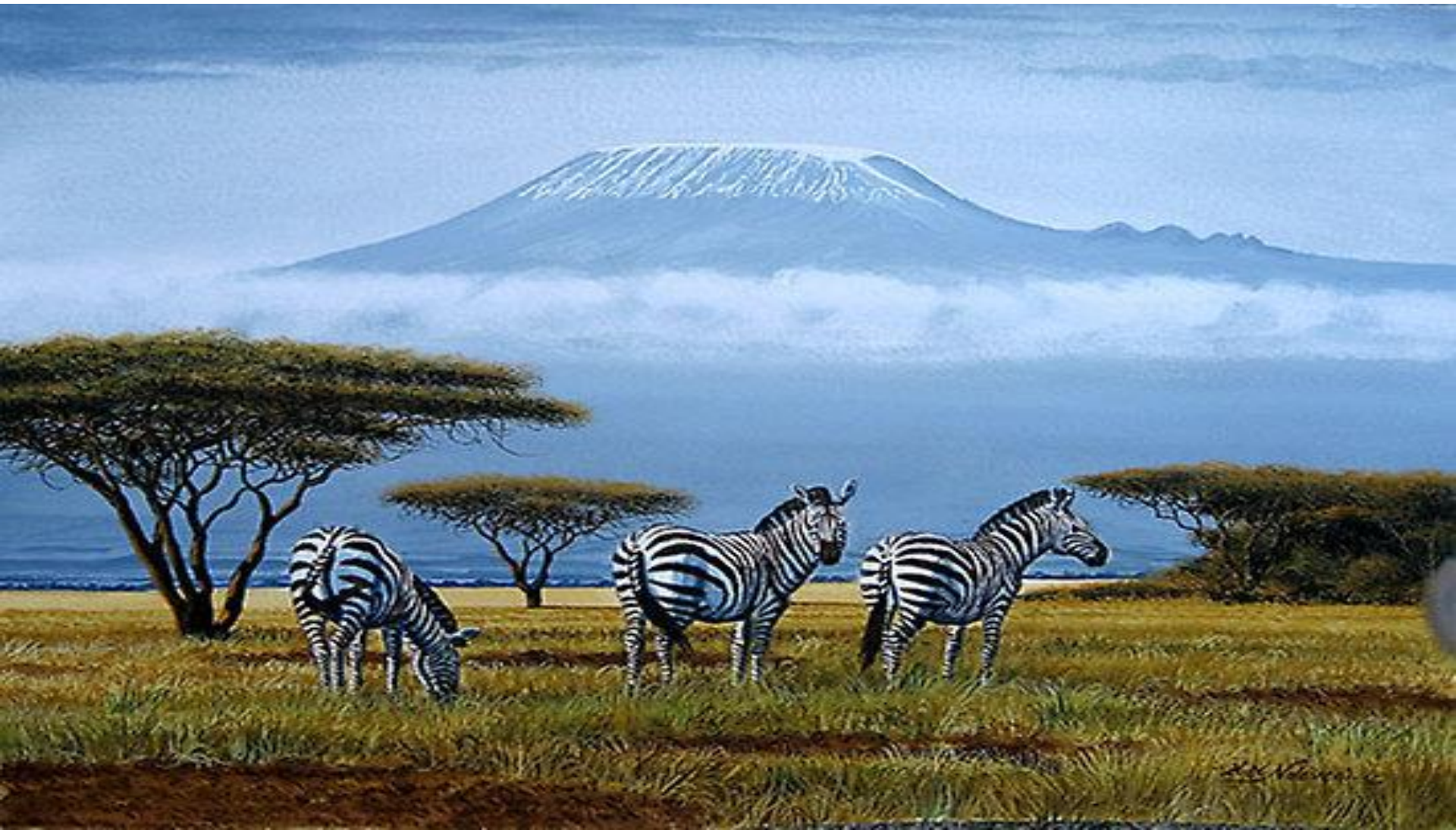
- Taken together, these results, it is suggested that farmers understanding about climate change need to be reinforced;
- Adaptive capacity to climate change needs to be improved as well.
- Increasing farmers access to weather data, improvement of the traditional means of land conservation.
- Increasing efforts in research concerning suitability of different kinds of crops in different zones.



**USAMBARA MOUNTAINS---LUSHOTO**

**THANKS FOR YOUR ATTENTION.WELCOME TO  
TANZANIA THE LAND OF;**

# MOUNT KILIMANJARO (THE ROOF OF AFRICA)



## 2. The land of Zanzibar





# 3. The land of Serengeti



# Amani nature reserve(The remaining paradise of Africa)

