Impact of climate change on agriculture in sub-Sahara Africa

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INTRODUCTION

The impact of climate change on agriculture is now real and without adequate adaptation and mitigation strategies to climate change, food insecurity and loss of livelihood are likely to be exacerbated in sub-Sahara Africa. The Inter-Governmental Panel on Climate Change (IPCC), released in 2007, has clearly revealed that increases in the emission of green house gases (GHGs) have resulted in warming of the climate system by 0.74°C between 1906 and 2005. Such climatic changes are affecting agriculture through their direct and indirect effects on crops, soils, livestock and pests, and hence the global. See figure1

RESULTS

This paper declared that a concerted effort, backed by policy makers at the national level would be the key to enhance food security as well as ensuring agricultural sustain ability. Climate change is expected to have a high impact on food security. See figure 2 and 3

This may specifically affect African countries, since predictions indicate that the African climate may be subject to more extreme conditions, and food security is already at risk in large regions of Africa. New genotypes tolerant to multiple stresses: drought, floods, heat, salinity, pests and diseases, will help further increase food production. This would require substantial breeding and biotechnology (including genetically modified varieties) related efforts based on collection, characterization, conservation and utilization of new genetic resources that have not been studied and used.

METHODS

The data used in this research paper are drawn from several sources, including: the International Monetary Fund's Government Finance Statistics; the Organization for Economic Cooperation and Development (OECD) Creditor Reporting System (CRS); the United Nation's Food and Agriculture Organization database (FAOSTAT); the United Nations Millennium Development Goals (MDG) statistics; and the World Bank World Development Indicators (WDI).

These data are supplemented by more recent data compiled by the ReSAKSS network from various national sources, including Ministries of Finance and Economic Affairs and National Statistics Bureaus.

ANALISIS

Figure 1 World Map

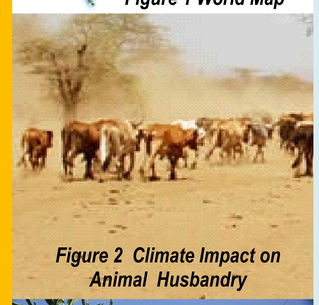


Figure 2 Climate Impact on Animal Husbandry

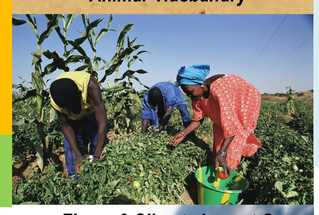
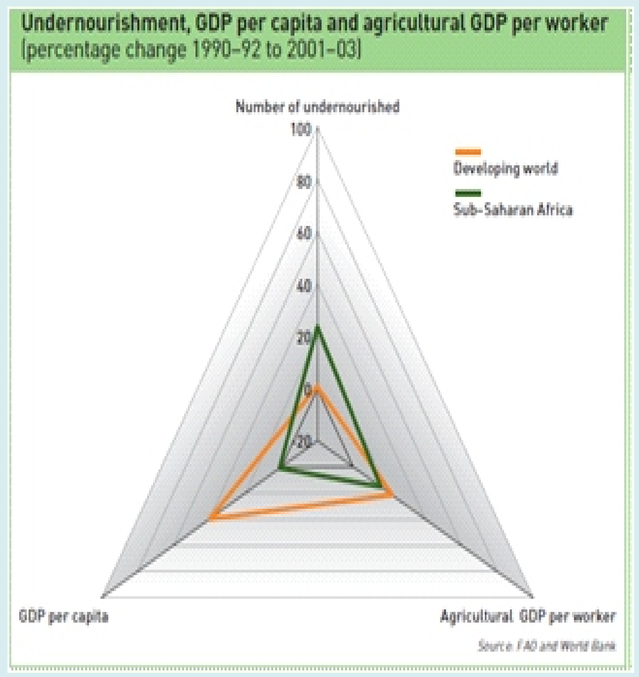
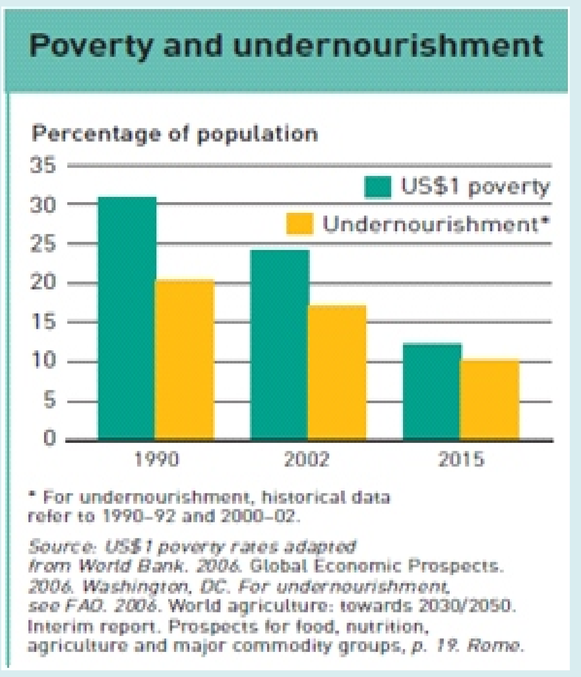


Figure 3 Climate Impact On Crop Production





DISCUSSIONS /ANALYSIS

Management time is one of the Scarcest resources available to those working in agriculture today.

Given increasing challenges of all sorts, management time is likely to be even scarcer in the future, and adapting to climate change and the various environmental constraints that climate change represents will require increasing amounts of valuable management time.

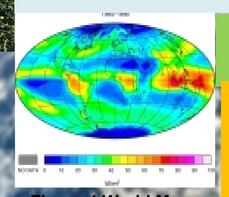


Figure 4 World Map Climate Distribution

CONCLUSION

Admit the possibility of climate change, and plan for the eventualities being projected by reputable agricultural and climate scientists.

Second, even if the outcome is not yet certain, producers must devote some management time to climate change eventualities, as risk insurance.

Developing the agronomic, engineering, and financial risk management tools for climate change adaptation is a long-term project.