# STRENGTHENING LOCAL AGRICULTURAL INNOVATION SYSTEMS IN LESS FAVOURED AND HIGH POTENTIAL AREAS OF TANZANIA AND MALAWI CLIMATE INFORMATION SUPPLY CHAIN ANALYSIS: EXPERIENCES FROM KONGWA DISTRICT IN TANZANIA AND MALAWI.

# CLIMATE INFORMATION SUPPLY CHAIN ANALYSIS: EXPERIENCES FROM STRENGHERNING LOCAL AGRICULTURE INNOVATION SYSTEM TO ADAPT TO CLIMATE CHANGE PROJECT IN TANZANIA AND MALAWI.


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# INTRODUCTION

- Climatic change and variability affect agriculture and the livelihoods of communities' in particular small farmers who largely depend on agriculture to earn their livelihood.

- Weather variability such as dry spells, continuous heavy rains and hot to very hot temperatures affect both crop and livestock production differently.

- The effects of climate variability are catastrophic if farmers and stakeholders do not take appropriate action.

# Introduction Continued

- In order to increase adaptive capacity to changing climatic conditions to communities, individuals, institutions and organizations are participating in a Participatory Action Research in less favoured and high potential areas of Tanzania and Malawi to adapt to the challenges and opportunities are arising from climate change and variability.

# Introduction Continued

In Tanzania, study areas are the central zone (Dodoma and Singida) and Southern Highlands (Mbeya and Iringa) while in Malawi Mulanje, Chikwawa, Mzimba and Karonga districts are involved. The research partners in the project are

- the Department of climate change and Meteorological services.

Ministry of Agriculture and Food Security.

- Natural Resources and Environmental Centre (NAREC) under University of Malawi, Department of Crop Science and Department Research services.

This paper draws much from the focus groups discussions and interviews with farmers and other non farmers stakeholders.

## PROCESSESES AND PRODUCTS CURENTLY BEING USED IN THE SUPPLY CHAIN AND ADAPTATION TO VARIOUS USER NEEDS:

Based on the seasonal outlook agricultural experts use the information to advice farmers on the following:

- The onset of rains and its duration during that year.
- Different crop types and varieties to be grown during that year.
- Crop production technologies to be promoted amongst farmers.
- Livestock species to be reared and feed preservation.
- Land husbandry practices to be promoted amongst farmers.

## CHALLENGES IN THE ARTICULATION OF DEMAND FROM USERS OF CLIMATE INFORMATION, OR IN THE PROVISION OF FEEDBACK FROM USERS:

- Supply driven approach to provision of climate information.
- Inadequate knowledge on utilization of seasonal outlook and weather forecast.
- Beliefs
- Coverage

## Processes and products currently being used in the supply chain and adaptation to various user needs Continued

- Based on the seasonal outlook messages are developed and disseminated to farmers.

With respect to the seasonal outlook, the department of climate change and meteorological services, ministry of Agriculture and Food Security and Chancellor College disseminated information to farmers through the following.

i. Farmer sensitization and mobilization through learning plots.

ii. Community training on climate change and adaptation.

iii. Mounting of on farm demonstrations in response to variable weather:

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# ISSUES TO BE ADDRESSED TO EXPEDITE THE INTEGRATION OF INDIGENOUS KNOWLEDGE IN SEASONAL FORECASTING IN DEVELOPMENT

**- Application of indigenous knowledge**:

- application of indigenous knowledge is even limited in the area where this knowledge exists.
- Indigenous knowledge on weather forecasts is still applicable but varies from one locality to another.

**- Sustainability of Indigenous knowledge vis-à-vis climate and environmental changes:**

- In most project areas knowledge on climate predictions is applicable but due to dramatic changes in climate their reliability in decreasing.
- With the advances in technology, reliance on Indigenous technology is gradually fading away.
- Transferring of knowledge largely depends on acceptance by young people without enough experience from elders.

# Issues to be addressed to expedite the integration of indigenous knowledge in seasonal forecasting in development Continued

**- Documentation of Indigenous Knowledge**.

- In Tanzania, indigenous knowledge on climate change has been document by the project in study villages.
- In the Malawi there is very little documentation on IK at community as well as at district level for reference by communities and stakeholders but this will also be done soon.
- Knowledge is transferred informally from one generation to another and therefore the probability of losing this information is very high.

- **Limited understanding and awareness on use of Indigenous technical knowledge.**

- This kind of knowledge is only restricted to certain group of people such as elders, traditional healers and which doctors.
- Efforts needs to be done in order sustain such knowledge for the benefit of all. .

- **Limited knowledge sharing amongst farming communities.**

# CAPACITY CONSTRAINTS (HUMAN, INSTITUTIONAL, SYSTEMATIC) AT EACH LEVEL OF THE SUPPLY CHAIN

- **Inadequate capacity amongst staff**.

- ❖ The majority of staff at district level has limited knowledge and understanding on climate change and adaptation.
- ❖ This affects the extension delivery services that are responsive to climate change in the district.

- **Inadequate capacity amongst farmers**.

- ❖ The level of awareness on climate change and adaptation is generally low amongst farmers.
- ❖ Most of the awareness meetings are done periodically at the on set of the rainy season.
- ❖ In most cases evaluation of these adaptation strategies is rarely done and where it is done it is not systematic to instill a culture of managing climate change.
- ❖ Only farmers involved in the action research systematically monitor and evaluate technologies being promote to adapt to climate change

## Capacity constraints (human, institutional, systematic) at each level of the supply chain Continued

**- Slowly support from policy side.**

- It is only recently that policy makers at district, village and ward levels are taking on board agricultural issues linked to climate change adaptation.
- Although a clear network is existing in managing disasters at different national level. Climate issues are not clearly taken on board.
- After the NAPA and other government initiatives climate change issues will be at the upper level.

THANK YOU FOR LISTENING AND GOD BLESS YOU