

## **Smallholder farmer perceptions and experiences of climate change adaptation policies in semi-arid district of Zvishavane, Zimbabwe**

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### **Abstract**

The Zimbabwe National Climate Change Response Strategy provides the most comprehensive statements of the Government's climate change adaptation strategies by various sectors because Zimbabwe still lacks a stand-alone policy. Although the strategy has recently been launched, rural agrarian communities have always been interacting with various policies that relate to their welfare in the scenarios of climate uncertainties and the related livelihood sensitivities. This paper interrogates the smallholder farmer experiences of varied climate change adaptation policies and examines the institutional arrangements for different adaptation strategies in the semi-arid area of Zimbabwe.

The study adopted an explanatory design and employed a questionnaire survey, focus group discussions and key informant interviews. 300 households were randomly selected from 3 purposefully selected wards to elicit data on community experiences of climate change adaptation strategies that were then traced to a related policy, policy implementer up to the policy makers' level. 15 key informants were purposively selected to provide information on policy transmission channels and their implementation at community levels. Questionnaire data was analysed using Statistical package for social scientists, and was supported by information derived from focus group discussions and key informant interviews. Analysis and discussion was based on generated themes.

It emerged that households and communities have developed strategies to adapt to climate change and these have become local level adaptation policies that are based on their own cultural values and norms. Even though the farmers were not readily aware of government policies, it emerged that state-centred decision making processes in policy formulation revealed a manner that excluded the society as a variable of any significance in the existing policies on climate change adaptation at national, community and household levels. However the government through different pieces of legislation and policies have included the issue of climate change adaptation. As such there is need to create a special unit in the Ministry of Environment, Water and Climate to coordinate government departments working on weather and climate issues. The findings indicate the need to integrate the household and community based approaches of adaptation into the grand adaptation policies of the government. It was also recommended that society-centred policy arrangements should be integrated into state centred policy making processes.

Key words; climate change, adaptation policies, smallholder farmers, norms and values

## Introduction

Rural agrarian communities that rely on climate sensitive livelihoods are vulnerable to climate risks (IPCC 2007). The vulnerability varies within countries, communities and even households. Therefore, adaptation requires context-specific activities, with strategies targeted to meet needs of different vulnerable groups (Brown, et.al 2013). At the same time, local and national policies and institutions play a critical role in shaping people's capacity to adapt to climate change. In the absence of a standalone climate change policy and where climate change issues are addressed by fragmented and often uncoordinated pieces of legislation, it has been observed that such policies may be insufficient in light of the projected impacts of climate change and the scope of vulnerability (Chagutah et.al 2010). The Zimbabwe National Climate Change Response Strategy provides the most comprehensive statements of the Government's climate change adaptation strategies by various sectors because Zimbabwe still lacks a stand-alone policy. The strategy has been recently launched, but communities have always been interacting with various policies that relates to their livelihoods under the changing climate. This work adopts a bottom-up perspective to explore the small holder farmers' experience and interaction with various policies and pieces of legislation in a bid to deal with impacts of climate change.

## Study site



Figure 1 Study Area

Zvishavane lies in the southern part of Midlands province of Zimbabwe, in agro-ecological region IV of the country, which receives annual rainfall of 450-600mm. The region is characterised by seasonal droughts and severe intra season dry spells. Although considered to

be generally unsuitable for dry land cropping, smallholder farmers grow varieties of maize and small grains like sorghum, pearl millet and finger millet.

## **Methodology**

A questionnaire survey was used to collect household data on the farmers' climate change adaptation strategies and experiences of supporting policies and major institutions for their adaptation. 300 households were randomly selected from 3 purposively selected wards for the survey. Participatory rural appraisal (PRA) was also used to gain an understanding of the main characteristics of policy and livelihood strategies. Data was collected through 3 focus group discussions, one in each ward. PRA tools such as historical trend analysis, matrix scoring, ranking; impact diagramming and Venn diagramming were employed. A comprehensive review of secondary data in policy document analysis was also done. The main focus was on national level policies and strategic plans for climate change adaptation (CCA). The idea was to understand the linkage between local and national level policy frameworks in CCA. Key informant interviews were conducted with district and national level policy makers to gain insights that would enable identifying of gaps in policy implementation and community experiences of policies for CCA.

## **Findings**

There was an indication that communities engage in a variety of activities to cope with climate shocks. The major adjustments that the farmers make relate to food production practises, management of income source and adjustments to consumption patterns.

### **Smallholder farmers' perceptions of CCA policies**

A policy for them was explained as any plan of action that comes to them as rules and regulations, programmes and projects from government departments, civic or private organisation or locally constituted way of doing things. There was confusion among the farmers on the role played by government agencies in livelihoods enhancement. Almost all organisations that work with the farmers come with change agencies or relevant government field officers. This has created a challenge in policy demarcation between different government departments and agencies. The confusing of development agency programmes and government programmes and roles demonstrates limited civic education and awareness on government roles and activities in the community livelihoods. As such even when communities are benefitting from a government policy that is being implemented by a development partner, this is viewed as the other organisation's initiative. This becomes worrisome if the perception influences how farmers accept and design strategies for CCA at household level.

### **Institutions for CCA**

Farmers indicated great reliance on external assistance from various institutions in their adaptation strategies. Assistance come in form of food hand-outs, trainings and capacity building for livelihood diversification aimed at household food security and enhancement of their livelihood capital assets. The government (public institutions), the non-governmental

organisations (NGOs) and other enterprises (civic and private institutions) are visibly present to the communities in varied ways.

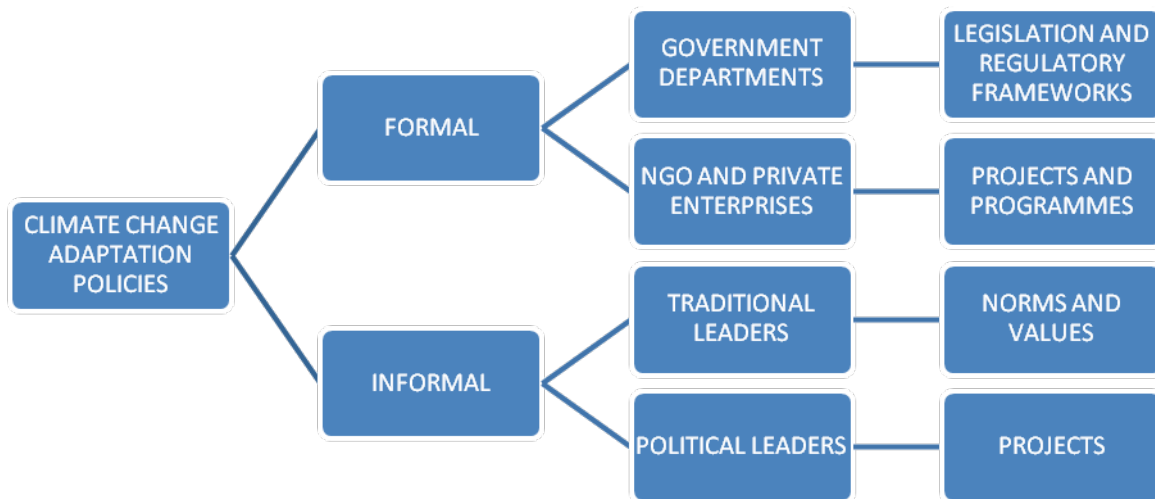


Figure 2 Institutions for CCA

Informal institutional arrangements (figure 2) emerged to play a very important role in farmers' adaptation at local level. Traditional leadership of village heads and chiefs have encouraged and/or discouraged certain practises and this is readily accepted and implemented by the communities. The local level norms and values have developed overtime into policies that are influencing household adaptation strategies. Community elders and the traditional leaders become the custodians of these norms and values and they are passed on to community members and to generations through oral tradition, community gatherings and ritual ceremonies. Such practises like indiscriminate cutting down of trees, stream bank cultivation, lighting up veld fires and unsustainable utilisation of natural resources are policed by the local leadership to ensure sustainable adaptation practises.

NGOs and other development agency programmes have been identified as major stakeholders in community adaptation strategies. However the organisations target specific household or individuals. These exclusionary tendencies have led to heterogeneous benefits from the programmes. As such long term adaptation may be challenged.

### Existing policies and their influence on CCA

Farmers acknowledged that several policies are there to enhance agricultural productivity, since the community's major source of food and income is agriculture. The government policies address issues of land ownership and access, farming training and capacity building through Agricultural Extension Services (AGRITEX) and various models of agricultural input schemes. NGOs also selectively assist with inputs and farming equipment. Government

efforts are also visibly present in provisions of water for irrigation schemes. However the schemes were said to be too small to cater for the rising need. Moreso, siltation of dams and dysfunctional irrigation equipment has challenged the intended benefits of the program in improving livelihoods. NGOs help in drilling boreholes and rehabilitation of existing water sources. It was apparent that the government has resource challenges for continued supply of water to communities.

NGOs with collaboration from AGRITEX and Livestock Production Department (LPD) have been involved in promotion of conservation agriculture through input support, follow-ups and in some cases incentivizing. There has been promotion of small livestock production through trainings and also funding for cattle pen fattening programmes. In cases when agricultural produce has been increased, there is generally absence of major markets. The NGOs however helped in construction of selling sheds for some produce. The government agricultural marketing institutions have become dysfunctional and communities now suffer from unfair trading terms offered by buyers.

Traditional leaders worked closely with NGOs and government agencies in dealing with policy issues of agricultural production. There has been the practice of *Zunde ramambo* programme in which there is centralized production of grain which is stored at the chief's residence and distributed to the needy usually in times of food insecurities. Regular community meetings called by traditional leaders have also created platforms for interaction and sharing of ideas to improve one's adaptive strategies. It is through these platforms that farmers also echoed that various rules and advices are presented to the community by the leaders, invited government agencies, NGOs and any other institution for CCA. Agricultural field days that are mostly sponsored by NGOs also provide platforms for training for various CCA options.

Institutions work together in issues of environmental conservation, as such policies addressing rangeland management, soil conservation, forest conservation and water bodies' management are well articulated. There are trainings in sustainable utilization of natural resources from Environmental Management Agency and Forestry Commission of Zimbabwe and the local leadership enforce this. This has come as a result of continued destruction of land through gold panning, sale of firewood, sale of river-sand and brick moulding as alternative sources of livelihood. Even though enforcement against these practices appears to disadvantage farmers, they have come to an appreciation of orderliness and environmental prudence.

Farmers felt some policy areas had negative implications on their livelihoods as they do not fully address their needs. One such policy is the irrigation policy which was cited to be discriminatory in nature, with few households benefiting while the majority of farmers still suffer dry-land crop failure. Farmers lament certain regulations that work against provisions and support of livelihood for CCA. These include absence of policies that provides for the prohibition of other policies, e.g., lack of alternative energy source where other regulatory framework discourages felling of trees. Also the local leadership, in as much as they direct policy implementation at grassroots level, they were also considered to be hindrances in other

cases with allegations of corruption. Chiefs would in some instances take advantage of people's vulnerability and villagers pay tribute and fines in form of livestock to the chief's forum.

### **Conclusions**

There are challenges of policy demarcation of the different government change agencies in the implementation of policies, farmers often misrepresent their roles.

Informal actors like the traditional leaders play a key role in ensuring that communities respond to impacts of the changing climate and also on importance of indigenous management systems of climate change.

Since communities have viable adaptation options, there is need to integrate these in the national policy framework.

There is need for harmonisation of policies that influence the farmers' livelihoods.

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