**Masvingo District Climate Services Assessment Report**

**19-21 July 2017**

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**Wards visited:** ward 1-Sekenende Fish ponds communities, ward 14-Chemavara fish ponds communities and ward 19-Mapanzuruze irrigation scheme communities.

Meetings were held with the past FFA beneficiaries and non-beneficiary community members, government ward extension workers like Agritex, Livestock Production Department (LPD), Veterinary Officers and ZFU representative (in ward 1), village heads and ward councilors.

**Main findings highlights:**

**Weather /climate hazards**

* The wards visited mainly fall under Natural Region I V & V, known for low annual rainfall (about 500mm), seasonal droughts, periodic mid-season dry spells, extreme heat waves and low rainfall which in turn has resulted in low agricultural production.
* **Periodic and chronic hazards:** Drought and prolonged mid-season dry spells are a chronic hazard in the district resulting in low production and increased food insecurity and Livestock diseases
* The visited wards climate has been heavily affected by the two large water bodies in the district-Lake Mutirkwi and more recently constructed Tokwe-Mukosi dam causing micro climate.
* Masvingo largely falls in the Masvingo, Manicaland Middleveld Smallholder livelihood zone. The main livelihood options are primarily agricultural based; growing of crops and keeping livestock. Most crop production is rain fed which makes production very difficult due to the low and erratic rains but production of small grains is of moderately potential. Crop and livestock production are the main sources of food and cash income. Common crops grown in the district include maize, sorghum, finger millet, pearl millet, cotton, Bambara nuts, ground nuts, sweet potatoes and rice. Horticultural crops grown include cabbage, onions, tomatoes, leafy vegetables, butternuts, carrots, lettuce and spinach. Main crops grown for consumption include maize, sorghum, millet and groundnuts. Crops sold are mainly leafy vegetables, tomatoes, groundnuts and cereals mainly through barter exchange for the poor wealth groups. The main cropping season is the rain season which generally start in November to March.Most crops are for household consumption, lasting 3-4 months for poor households.
* The wards visited received excessive/above normal rains for the 2016-17 agricultural season, which caused extensive leaching of crops whose impact was significant for poor households because the crops lacked fertilizer for re-application and did not have the capacity to re-plant crops to cover losses due to waterlogging. This was compounded by the liquidity problem, acute cash shortages, long bank queues and withdrawal limits, general price increases, along with a multiple pricing system in markets. However, some better-off households managed to re-apply fertilizers and manure to their crops, resulting in better yields.
* The most commonly owned livestock are cattle, goats, donkeys, pigs and chicken. However quails, aquaculture and apiculture are still picking up in the district.
* Goats and cattle are sold and cows are milked mainly for consumption and chickens and goats slaughtered for consumption. Other livestock products sold are chicken eggs. Livestock are found in small numbers with cattle providing draught power for agricultural production.
* The main livestock diseases in Masvingo District are Foot and Mouth, Black leg, coccidiosis, mastitis, Newcastle and heart water. Outbreaks of tick borne diseases are mainly experienced during the rainy season. The main diseases affecting cattle are anthrax, red water and black leg.
* Recently, there were two consecutive years of drought which resulted in massive livestock deaths that significantly affected livestock holdings for households as well as draught power during the last cropping season. Consequently some households practiced zero tillage whilst for others zero tillage is by choice due to extensive conservation farming teaching from Agritex.
* The women and elderly men (retired men) formed the majority of the focus group discussions groups whilst the majority of abled bodied men were reported to have migrated to towns and neighbouring countries like South Africa to supplement incomes for households. However it was reported that remittances have been on the decline in frequency and amounts due economic difficulties faced and violence hence some South Africa based migrant-workers have been returning home.
* Self-employment livelihood activities such as brick moulding, construction of small structures, vegetable sales, and house thatching were below average. Livestock sales were low due to reduced or depleted head sizes, particularly for poor households, compounded with the impacts of the cash shortages. Consequently, some households were reported have failed to pay school fees, levies, and exam fees for their children at the local schools. Schools were reported to have made arrangements for parents to bring maize grain in lie for school fees and schools were reported to be holding on average about 10 MT each without any buyers for now.
* The Fall Armyworm and stoke borer attacked crops mainly maize and it reported that the control measures applied by farmers did not manage to eradicate the pest.

**Weather and climate information**

**Early warning**: Communities receive weather /climate information through: radios, TV, newspapers, ward extension workers like Agritex, LPD, schools, telephone SMS, Whatapp, word of mouth and traditional indigenous methods. However, there were limitations associated with each method, hence farmers could not reliably depend and entirely use it for planning and taking action accordingly at the appropriate time. This information is mostly regarded as inaccurate and unreliable to be used by farmers due to the generalized nature of it for planning localized actions.

**Radios/TV:**

* There were national programmes broadcast which came at specific times. However, the information was so general that it could not be used for local planning. Not all people had radios/TV. Even those that had access to these facilities, there was competition for programmes among family members. On Radios, the young especially boys would always want to play music whilst men in particular will want to listen to news and weather programmes. Most women seem to be busy with kitchen/other household chores so much so that they do not have time for such programmes hence at times have limited access to weather and climate information. Reception is always poor in the wards. Masvingo has a radio station but the reception is extremely bad whilst Zvishavane radio station has better reception in the wards.
* **Recommendations:** local radio stations to broadcast localized weather forecasts and farmer programmes and improve reception/coverage. The Met Department to give weather forecast based on specific areas and not on the province per se.

**Newspapers:**

* Few people have access to newspapers on daily papers. Most that read newspapers, read them after sometime with the contained information being outdated to take meaningful action. Also newspapers are written in English including the local Masvingo-The MIRROR and very difficult to understand by the majority.
* **Recommendation** : local newspaper to write localized weather forecasts and farmer programmes in local languages

**Ward extension workers (Agritex, LPD, Teachers/schools)**

* These are good at interpreting the information to farmers but they have limitations themselves. Staffing-they are few in a ward to effectively share information to all corners of ward and they are not mobile in most cases. They are ward based as well, accessing current information is a challenge as well. There are no weather stations at their wards.
* **Recommendations:** each ward must have a weather station/ rain gauge. The staff must be trained to interpret data/ messages to be meaningful to farmers and generate specific advises for real time action for farmers. If extension workers can be mobile information sharing will be easy and quick to be transmitted. That the information should come from the community (indigenous knowledge system) –then fuse the two together to come up with a hybrid (a combination of scientific and Indigenous knowledge systems).

Met Department

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Communities

**Telephone SMS/ Social media (Whatapp groups)**

* There are three main networks in the district, namely Econet, Telecel and Netone. Econet has the strongest signal strength and used by a greater percentage of the population. However not all households have access to cellphones and ability to operate the gadgets and SMS are mainly sent in English.
* **Recommendations**: These can be utilized to share weather information in the correct languages. These have a big coverage since almost every household has a member with a cellphone in the village.

**Traditional indigenous methods**

* These are still there although mostly believed by the elderly. Signs like watching certain trees behavior, listening to birds cries and behavior, mountain behaviors like mountain burning at certain periods, mountain talking/sounds, direction of wind etc. These have been proven to be very accurate by those who believe them. However, this knowledge is simultaneously used with scientific methods from MET department.
* **Recommendations:** that the information should come from the community (indigenous knowledge system) –then fuse the two together to come up with a hybrid (a combination of scientific and Indigenous knowledge systems).