

**STUDY TO GENERATE RECOMMENDATIONS ON HOW District  
Agricultural Development Plans [DADPS] CAN ADDRESS CLIMATE  
CHANGE ADAPTATION AND MITIGATION IN RELATION TO  
SMALL-SCALE FARMERS**



**THE CASE OF KILOSA AND CHAMWINO DISTRICTS**

BY

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## LIST OF ACRONYMS

AcT	Accountability in Tanzania
ASA	Agriculture Seed Agency
ASDP	Agricultural Sector Development Programme
ASDS	Agricultural Sector Development Strategy
ASLMs	Agricultural Sector Lead Ministries
CA	Conservation Agriculture
CBO	Community Based Organization
CC & V	Climate Change and Variability
CC	Climate Change
CCAP	Climate Change, Agriculture and Poverty Alleviation
CCD	Convention on Combating Desertification
CSA	Climate Smart Agriculture
CSOs	Civil Society Organizations
DADPs	District Agricultural Development Plans
DCT	Diocese of Central Tanganyika
DEMAT	Dodoma Environmental Management
DFT	District DADPs Facilitating Teams
DONET	Dodoma Environment Network
ESMP	Environmental and Social Management Plan
EVCs	Village Environment Committees
FGDs	Focus Group Discussions
FY	Financial Year
GHG	Green House Gas
HPT	Heifer Project Tanzania
HUDESA	Human Development Strategy Association
ICE	Information, Communication and Education
IRDp	Institute of Rural Development Planning
KADNET	Kilosa Agro-dealers Network
KIKU	Kilosa Cooperative Union
LGAs	Local Government Authorities
LSDS	Livestock Sector Development Strategy
MJUMITA	Mtandao wa Jamii wa Usimamizi wa Misitu Tanzania -Community Forest Conservation Network
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania (Network of Farmers Groups in Tanzania)
NFTs	National Facilitation Teams
QDS	Quality Declared Seeds
REDD	Reduced Emissions from Deforestation and Forest Degradation
RLDC	Rural Livelihood Development Company
RSs	Regional Secretariats
SUA	Sokoine University of Agriculture
TAWLAE	Tanzania Association of Women Leaders in Agriculture and Environment
TFCG	Tanzania Forest Conversation Group
TMA	Tanzania Meteorological Agency
TOAM	Tanzania Organic Agriculture Movement
ToRs	Terms of References
TZS	Tanzanian Shillings
UN	United Nations
UNCED	UN Conference on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
VADPs	Village Agricultural Development Plans
VLUPs	Village Land Use Plans
W3W	Water for the Third World
WOPATA	Women in Poverty Alleviation Tanzania
WUA	Water Users Associations

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This Analysis of Kilosa and Chamwino District Councils DADPs for 2010/2011 and 2011/2012 required acquiring relevant documents from the national, regional and districts levels. The team would like to acknowledge and thank wholeheartedly all who facilitated access to these documents.

Smallholder farmers are normally busy with farming activities especially during the farming season (farm preparation, weed and pests control to harvesting). In collecting primary information for this analysis, field visits were made in which FGDs were conducted with farmers. The team sincerely thanks the smallholder farmers in Msowero Village (Kilosa) and Manchali A Village (Chamwino) who despite their busy schedules were able to set aside at least three hours to make these FGDs possible.

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## EXECUTIVE SUMMARY

The agricultural sector is amongst the most important sectors for Tanzanian economic development. The sector is dominated by smallholder farmers. It employs 75% of Tanzanians and produces an average of 95% of the national food demand. In 2012, the sector contributed 26.8% of the GDP. Generally, the effects of Climate Change on the Tanzanian agricultural sector include: reduced crop yield due to drought and floods leading to increased risks of food shortage and famine; change in planting dates of annual crops; reduced water availability due to frequent drought spells, decrease in forest area and area for cultivation; increased temperatures; increased exposure to vector-borne and water-borne diseases etc. When it comes to climate variability, it is small-scale farmers who are hit first and hardest by climate change.

This analysis of Kilosa and Chamwino District Councils District Agricultural Development Plans (DADPs) for 2010/2011, 2011/2012 and 2012/2013 was carried out in order to provide recommendations on how DADPs can address climate change adaptation and mitigation in relation to small-scale farmers. In accomplishing this analysis, review was made to the said DADPs documents for the two districts as well as two field visits for Focus Group Discussions in two villages one in Kilosa District and the other in Chamwino District. Other relevant documents were also reviewed to make it possible to provide useful insights to respond to the requirements of the analysis.

The study revealed the following three mixed situations in as far as DADPs implementation is concerned:

- Funds approved are disbursed timely and by 100% to the district and the amount received by the district is wholly utilized for the forecasted activity. In this case the reports indicate that, the activity was carried out as planned. For example: DADPs 2010/2011; Chamwino district planned to support acquisition of 10 Power tillers for youth groups by June 2012, where Tshs **60,000,000/=** were approved, received and spent by 100%. The District managed to buy 10 power tillers where 3 farmer groups and 7 individual farmers contributed 50% of the costs
- Funds approved are disbursed by 100% and received by the district but less is spent on the said period. This tends to prompt the district to divert the use of funds and results in either late completion of the project or may not complete at all. For example Review report on DADPs performance for July – June 2010/2011 indicated that, the approved funds for improvement of 7 traditional irrigation schemes [Kilosa] were disbursed by 100% [ Tshs.**1,600,000,000/=**]. Based on the same report, the same amount was received by the district. But only 59% of the total amount was spent with only 27% - 29% of the allocated amount to Madizini and Mvumi respectively being spent by the time of reporting.
- Funds approved are not disbursed at all to the respective districts. This leads to failure in implementation of the planned project [the projects are either carried forward to next phase or skipped]. For example based on the above report for Kilosa, The district planned to introduce dairy goat production at Ibingu, Msowero, Mwasa and Kifinga where Tshs **24,000,000/=** were approved. But the said amount was not received by district under reporting period.

This analysis concludes that although some elements of climate smart agriculture like the water use efficiency, production of climate adaptive seeds, and introduction of small stocks for food and income security are taken onboard, the reviewed DADPs priorities do not take aboard small scale climate smart agriculture at a significant level. However, there are opportunities for the integration and mainstreaming of climate change adaptation, mitigation and Reducing Emissions of greenhouse gases from Deforestation and forest Degradation (REDD) in the DADPs. These opportunities include: integration of Village Agricultural Development Plans (VADPs) in the DADPs; presence of villages land use plans, and significant fund allocated to DADPs prioritised projects. Moreover, for DADPs to respond significantly to small scale climate smart agriculture, active participation of well informed small scale farmers at various stages of the process is crucial.

Based on the findings of this analysis, for the DADPs to address climate change adaptation and mitigation in relation to small-scale farmers, the following recommendations are put forward:

- A critical mass (District agricultural stakeholders, farmers inclusive) mobilisation around climate change adaptation, mitigation and REDD is required to enable stakeholders and the community being well informed

and proactive before sufficient accountability measures are taken for public interest. This can be done through campaigning meetings, trainings, look and learn visits, and use of Information, Communication and Education (ICE) materials.

- DADPs District Facilitation Teams should establish a reliable system that will allow easy access of user friendly climate change related documents (policies, laws/acts, guidelines, bylaws, and strategies) for enhancing clear understanding of the legal framework on climate change issues and ultimately ensuring enforcement and accountability of different stakeholders on matters related to climate change adaptation, mitigation and REDD.
- Composition of the DADPs facilitating teams to encompass a wider knowledge and experience in agricultural development. Additionally the team should have representation of members with knowledge and experience on climate change issues to facilitate inclusion of climate change adaptation, mitigation and REDD in the DADPs.
- ActionAid Tanzania has to facilitate initial process of establishing district climate change stakeholders' platform/forum for the purpose of avoiding overlapping and duplication of efforts, maximizing learning across actors, and promoting transparency and accountability among actors all leading to the mainstreaming of climate change adaptation, mitigation and REDD initiatives in the DADPs.
- ActionAid Tanzania to facilitate joint research (researchers, farmers and extension staff), documentation and/or translation, and dissemination of the validated small scale climate smart agricultural practices in Kilosa and Chwamwino for up-scaling and wider application of the practices.
- Climate change adaptation, mitigation and REDD should be made a common agenda in all public forums in view of gaining political will and support to push forward climate change agenda that will result in mainstreaming climate change adaptation, mitigation and REDD in development programs at all levels.

## **1.0 INTRODUCTION**

### **1.1 Background information**

Climate change and variability (CC & V) is rapidly emerging as one of the most serious global problems affecting diverse of livelihood sectors in the world and is considered to be one of the most serious threats to sustainable development with adverse impact on environment, human health, food security, economic activities, natural resources and physical infrastructure (IPCC, 2007; Huq et al., 2006).

Africa is one of the most vulnerable regions to climate change in the world. Previous assessments (IPCC, 1998; Hulme, 1996) concluded that Africa is particularly vulnerable to the impacts of climate change because of factors such as widespread poverty, recurrent droughts, and inequitable land distribution and over dependence on rain-fed agriculture. Devereux and Edward (2004) reported that countries in East Africa are already among the most food insecure in the world and CC & V will aggravate falling harvests.

Focusing on Agriculture, the sector's development underpins Tanzania's Development Vision 2025 which has an economic growth target of 8 per cent. Agriculture is the mainstay of the Tanzanian economy contributing about 26.5% of GDP, 30 per cent of export earnings and employs about 75% of the total labour force. Agriculture in Tanzania is dominated by Small scale farmers cultivating an average farm size of between 0.9 and 3.0 hectares each.

Generally, the effects of Climate Change on the Tanzanian agricultural sector include: reduced crop yield due to drought and floods leading to increased risks of food shortage and famine; change in planting dates of annual crops; reduced water availability due to frequent drought spells; decrease in forest area and area for cultivation, increased temperatures, increased exposure to vector-borne and water-borne diseases etc.

The Tanzanian Agricultural Sector Lead Ministries (ASLMs) are implementing MKUKUTA and the Agricultural sector Development Strategy (ASDS) through the Agricultural sector Development Programme (ASDP) which at district level is implemented through District Agricultural Development Plans (DADPs). In support of government initiatives in agricultural development, ActionAid Tanzania, the Community Forest Conservation Network (MJUMITA), the Farmer's Network of Tanzania (MVIWATA), the Tanzania Forest Conservation Group and the Tanzania Organic Agriculture Movement (TOAM) launched a project titled "Climate change, agriculture and poverty alleviation: putting small-scale farmers at the heart of policy and practice" in 2 districts of Kilosa and Chamwino with funding from the Accountability in Tanzania programme (AcT)

This analysis focused on developing recommendations on how DADPs in the two districts (Kilosa and Chamwino) can address climate change adaptation, and mitigation in relation to small scale farmers.

### **1.2 About the project**

The project "Climate change, agriculture and poverty alleviation: putting small-scale farmers at the heart of policy and practice" is a partnership of 5 organizations mentioned above. Development of this project is based on the fact that the majority of people in Tanzania are small scale farmers and depend on agriculture for their livelihood. When it comes to climate variability, it is small-scale farmers who are hit first and hardest by climate change (CC). It has been realized that land use changes particularly deforestation as a result of shifting agriculture, is the largest source of greenhouse gas (GHG) emissions in Tanzania. Investment in agriculture and agricultural policies and practices are prioritising a shift to more mechanised, fossil fuel dependent, larger scale agriculture with the aim of increasing productivity and commercializing smallholder production. Whilst this approach may increase short-term yields, it risks making small-scale farmers poorer and more vulnerable to CC.

ActionAid Tanzania and other project partners believe that there are alternative approaches to land use and food production that would bring 'wins' in terms of CC adaptation and mitigation, but lack of awareness to small-scale farmers and policy makers on the adaptation and mitigation to CC has been the problem.



## **The goal and objectives of the project**

### **Project goal**

Poverty has been reduced amongst small-scale farmers in Tanzania and greenhouse gas emissions from agriculture have been reduced through the widespread adoption of climate resilient, low emission agricultural practices.

### **Intermediate objective**

Tanzania has developed and is implementing policies and strategies that prioritise support to small-scale farmers to enable them to improve their livelihoods through the adoption of climate smart agriculture and sustainable land and natural resources management.

### **Immediate Objectives**

**Immediate objective 1:** Small-scale farmers and other stakeholders are demanding the integration of climate smart, small-scale agriculture and sustainable land and natural resources management in national policy and policy implementation.

**Immediate objective 2:** Government, private sector and civil society are cooperating to support Small-scale farmers to benefit from climate smart agriculture and sustainable land and natural resources management.

### **Project outcomes**

The project has 5 outcomes; the 3 outcomes which best link to this assignment are described below:

#### **Small-scale farmers**

Small-scale farmers are holding local and national government accountable for the delivery of efficient and effective support services that enable farmers to adopt climate change adaptation and mitigation strategies in ways that improve their livelihoods. Small-scale farmers are practicing C3S agriculture and are exchanging information and experiences about the kinds of on-farm and off-farm strategies that are effective in achieving climate smart agriculture. Small-scale farmers are aware of good governance practices and community rights in relation to land, agriculture and natural resources management and resist efforts to undermine those rights.

#### **District officials**

District officials are aware of climate change adaptation and mitigation. They are integrating climate change issues in their plans and budgets including the DADPs. They are involving communities in the planning, budgeting, implementation and monitoring of DADPs. They have the capacity to serve local communities by providing them with the necessary support to adapt to climate change in a way that minimises GHG emissions from agriculture. The kinds of support that the District provides reflect the priorities identified by farmers in their district. Support could include a wide range of initiatives such as training; assistance in improving access to market or access to inputs such as more climate change resilient seed varieties; construction of ward-level markets or improved irrigation systems; training and technical support from Extension workers; and networking local farmers with relevant national initiatives. They are actively enforcing laws that help to mitigate climate change. They are transparent and accountable in the execution of the DADPs. They are actively tackling corruption in the agriculture and natural resources sector. They are supporting the development and implementation of village land use plans and participatory forest management and are supporting communities to access REDD finance.

#### **Elected representatives**

Elected representatives are actively pushing at national and local level for improved services to support small-scale farmers to adopt climate smart agriculture. They are using their influence to ensure that the laws, policies and plans that are submitted to them for approval, integrate support for small-scale farmers in relation to climate change adaptation and mitigation.

### **1.3 Goal and Objectives of the assignment**

#### **Aim of the assignment**

The overall aim of the assignment was to develop recommendations on how DADPs can address climate change adaptation and mitigation in relation to small-scale farmers.

#### **Objectives of the assignment**

- i. Review DADPs for Kilosa and Chamwino districts to analyse how DADPs address issues of climate smart small-scale agriculture in terms of climate change adaptation, mitigation and REDD.
- ii. Provide relevant policy recommendations on how DADPs can address issues of climate smart small-scale agriculture.

#### **1.4 Limitation of the study**

The scope of this study was limited to two field visits, one in each district due to financial and time constraints. Accessing to DADP-related documents was bureaucratic and not easy, as some officials treat these documents as confidential. This also discouraged the interviews with district officials. Despite these limitations, the assignment was generally accomplished successfully. The report has been comprehensive enough to respond to the ToRs (Annex 1) of this assignment.

The scope of this study did not indicate and cover DADPs budget follow up, tracking and analysis. As a result, this study did not address issues relating to budget analysis including tracking of the expenditures and validate the “**value for money**” in DADPs implementation. Action Aid Tanzania may conduct another study for this purpose.

## 2.0 STUDY METHODOLOGY

To accomplish the objectives of this assignment both primary and secondary data were collected. A desk review was made on the District Agricultural Development Plans (DADPs) and guidelines. The team managed to obtain quite a number of documents which were used in the analysis; although with inconsistency problems. Using these documents, it was possible to provide useful insights into the issues in the ToR. The documents include:

- District Agriculture Development Plans (DADPs) 2010/2011; 2011/2012 and 2012/2013 for Chamwino and Kilosa District Councils
- CCAP project document
- Baseline study for the climate change, agriculture and poverty alleviation (CCAP) initiative
- DADPs quality assessment and project appraisal 2010/2011
- Documentation of the lessons and the best practices for climate smart small-scale agriculture,
- National policies and strategies related to climate change

Focus Group Discussions (FGDs) were conducted in two sampled villages of Manchali A in Chamwino District where a total of 25 people (11 women; 14 men) participated. While in Kilosa FGD was conducted at Msowero village where participants were 24 (15 female; 9 men) the criteria for selecting these two villages were among others, the fact that there are number of initiatives by other development actors in supporting Small scale farmers Agriculture related activities and climate change adaptation measures [like INADES Formation and TOAM in Chamwino; UMADEP in Msowero}. The other factor was limited budget to expand the reach of the study. Annex 2 provides a checklist for FGDs while Annex 3 is the list of FGDs participants.

Physical observations were also made to supplement and validate applicable information collected during FGDs and that obtained through desk review. The data collection exercise was followed by synthesis of data collected to create information out of it, organizing and producing this report.



FGD at Manchali village – Chamwino



FGD at Msowero village – Kilosa

## **3.0 LOCAL CONTEXT IN RELATIONS TO AGRICULTURE DEVELOPMENT AND ITS CHALLENGES IN THE TWO DISTRICTS**

### **3.1 Chamwino District Council**

Chamwino district is among six districts of Dodoma region. The district has a dry Savannah type of climate, which is characterized by a long dry season starting late April to early December, and a short single wet season starting December to mid April. The average rainfall is 500mm annually, and about 85% of this falls in the four months between December and March. The rainfall in the district is relatively low and unpredictable in frequency, amount and distribution particularly in January when most of the crops are generally sown.

#### **3.1.1 Agriculture land and vegetation**

Chamwino district has a total area of 8,056 square kilometres which is equivalent to 805,600 hectares. The proportion of suitable land for crop production in the district is about 70% of total arable land. The district has 563,920 hectares suitable for agricultural production and about 246,821 hectares are used for crop production. The district has the potential and possibilities for agricultural expansion since the acreage utilized for crop production is around 44 % of the arable land. This implies that more land could still be brought under crop production. The district has six forest reserves which cover an area of 107,720 ha. Chenene forest reserve has 29,839 ha, Chinyami 43,330 ha, Sasajila 1,145 ha, Goima 6,959 and Chamhene forest reserve, 3,785 ha. The forest and woodland areas in the district have been greatly reduced due to deforestation as a result of shifting cultivation, uncontrolled bush fires, overgrazing and catering for energy use. [Chamwino District - 2011/2012 – 2013/2014 District Agricultural Development Plans]

#### **3.1.2 Agriculture Potentials**

Chamwino district produces a substantial percentage of the total regional (Dodoma region) production of sorghum, maize, and cassava. Other crops grown include grapes, sunflower, sesame, groundnuts, bulrush millet and paddy. Livestock keeping is ranked second as a vital economic activity in the district, though its actual contribution to the district economy in terms of provisions of income, employment and contribution to GDP and Per Capita income is yet to be accurately assessed.

#### **3.1.3 Main economic activities**

Agriculture and Livestock sector constitutes the mainstay of the economy of Chamwino district and its population in providing income, employment and ensuring adequate food supplies. Agriculture sector is the major employer of the district's labour force, employing about 90% of the active working population. Only a small number of the population is engaged in commercial and industrial sectors. The latter sector is still limited to small scale enterprises which include maize and oil mills, carpentry, and tailoring mainly found at Chamwino and Mvumi Mission and trading centres of Haneti, Chalinze, Mpwayungu and Mlowa Barabarani. Despite the fact that, agricultural sector is the main employer in the district, it is faced by the following challenges: Frequent drought; Market forces for agricultural products; and Crop and livestock disease outbreak.

#### **3.1.4 Impact of climate change in the district**

According to the Baseline study for the climate change, agriculture and poverty alleviation (CCAP) initiative (2013), climate change is having major effects on crop yields, pest and diseases, drying of water sources, increased drought, increase in flood incidents, and loss of plant and animal species.

#### **3.1.5 Local communities coping mechanisms to climate**

Community climate change coping mechanisms include: Drought resistant seeds; Early maturing seeds; Terrace; Perennial crops; Crop rotation; Cover crops; Minimum tillage; Land fallowing; Weed control; Use of mulching; Agroforestry; Use of fertilisers; and Forest clearing for agriculture (Baseline study for the climate change, agriculture and poverty alleviation (CCAP) initiative - 2013).

#### **3.1.6 Stakeholders efforts in addressing climate change issues**

During 2011/2012 financial year, Chamwino district received support from the Food and Agriculture Organisation of the United Nations (FAO) to support improved water use efficiency through rehabilitation and establishment of irrigation schemes and provision of agriculture voucher scheme amounting to TZS 64 million for 400 farmers.

Other stakeholders in the district that address climate change issues include: INADES Formation Tanzania, Rural Livelihood Development Company (RLDC), MC Agrotech and agriculture produces processors, DCT (Diocese of Central Tanganyika), DONET (Dodoma Environment Network), DEMAT (Dodoma Environmental Management), TAWLAE (Tanzania Association of Women Leaders in Agriculture and Environment), ActionAid Tanzania, TOAM, and IRDP (Institute of Rural Development Planning).

### **3.2 Kilosa District Council**

Kilosa District Council forms one of the seven Councils in Morogoro Region. The district has an average annual rainfall ranging between 400-1400mm. The district receives long term rainfall from March to June and short rains from October to December. The district has a dry period from June to September. The average annual temperature is ranged from 19°C to 30°C depending on altitude above sea level.

#### **3.2.1 Land resource distribution**

The district's land includes: 536,590 ha land suitable for Agriculture; 483,390 ha is land under natural pasture; 323,000 ha is land under National Parks; 80,150 ha is land under Forestry; and 1,420 ha is land under urban areas, water and swamps.

#### **3.2.2 Agriculture Potentials**

The potential agricultural land is 536,590 Ha however, only 97,500 Hectares are currently under crop production. Subsistence crop production takes more than 47% of the land that is under cultivation. This prevailing condition of subsistence agriculture is likely associated with lack of capital for purchasing the farm implements; hence majority of the farming community depends exclusively on the use of hand hoe resulting in small areas kept under cultivation. The average cultivated land per capital is 0.31 ha. Important crops include: maize, rice, sorghum, beans, onions, sweet potatoes, bananas, sesame, sunflower, cotton, industrial sugar cane, table sugar canes and sisal [Kilosa District Council April 2012 District Agriculture Development Plans for year 2012/2013] .

The District has 483,390 ha under natural pasture of which about 90% is being utilized as grazing land, the rest is Tsetse fly infested. The livestock population has been steadily increasing from year to year giving rise to adverse environmental consequences due to overgrazing. Conflicts between farmers and pastoralists are fairly common in several parts of the district. The zero grazing practice has been introduced particularly to those areas where the Heifer Project Tanzania (HPT) has introduced the scheme locally known as '*Kopa Ng'ombe Lipa Ngombe*'. Such villages are Ibuti, Miyombo, Nyaranda, Kidete, Magole, Kiegea, Rudewa, Lumuma and Msimba.

#### **3.2.3 Main economic activities**

Agriculture is the most important economic activity in the District that contributes an average of 88% of the household income. Other economic activities include: Business; wage employment; Beekeeping, Carpentry, Kiosk, Café, Selling Alcohol Selling, Firewood and charcoal selling; and Selling Fruits. [Kilosa District Council April 2012 District Agriculture Development Plans for year 2012/2013] .

Despite the fact that, agricultural sector is the main employer in Kilosa District, the sector is faced by the following challenges: Inadequate working tools and facilities to impart the required knowledge and skills to farmers; Frequent eruption of conflict between livestock keepers and farmers; Agro-metrological information does not reach the producers to guide their decisions; Low levels of government subsidy to the agricultural sector; and inadequate financial capability.

#### **3.2.4 Impact of climate change in the district**

According to the Baseline study for the climate change, agriculture and poverty alleviation (CCAP) initiative (2013), climate change is having a major impact on crop yields, pest and diseases, decreasing water flow, periodical droughts, and recurrent flood incidents.

#### **3.2.5 Local communities coping mechanisms to climate**

Community climate change coping mechanisms include: growing of early maturing crops varieties; Terrace; Perennial crops; Crop rotation; Cover crops; Minimum tillage; Weed control; Use of mulching; Agroforestry; Use of fertilisers; and nomadic practices for pastoralists (Baseline study for the climate change, agriculture and poverty alleviation (CCAP) initiative - 2013).

### 3.2.6 Stakeholders efforts in addressing climate change issues

Stakeholders supporting government efforts in addressing climate change in Kilosa District include: Research Institute Ilonga; Training Institute-Ilonga; Heifer Project Tanzania; World Vision (T); KADNET (Kilosa Agro-dealers Network); W3W (Water for the Third World); Illovo sugar Company; HUDESA (Human Development Strategy Association); JICA; Green Light SACCOS; Parakuyo CBO; Mees Agri & Civil contractors LTD; Malaika Civil Contractor; Pascosi company LTD; WOPATA (Women in Poverty Alleviation Tanzania); Tushikame SACCOS; National Microfinance Bank; MJUMITA, TFCG, and Sokoine University of Agriculture (SUA); Kilosa Cooperative Union (KIKU); Caritas; Agriculture Seed Agency (ASA) (Msimba).

### 3.3 Government efforts in addressing climate change issues

At national level various initiatives to address impacts of climate change include: diversification of the energy sources, promotion of drought resistant crops, promotion of shallow wells and deep wells drilling, strengthening of Tanzania Meteorological Agency (TMA), and improving water supply, both for human and livestock use, by construction of charco dams. The key programmes and actions on climate change in Tanzania, that have and are being undertaken include:

- (i) Strengthening National Capacity to Adapt to the Adverse Impacts of Climate Change
- (ii) Mainstreaming Climate Change Adaptation in the National Sectoral Policies of Tanzania
- (iii) Eco-villages
- (iv) The National Climate Change Strategy and Action Plan
- (v) The National Adaptation Strategy and Action Plan
- (vi) Climate change related Technological Needs Assessment
- (vii) The National REDD++ Strategy and Action Plan
- (viii) Assessment of locally based climate change impacts in Tanzania and
- (ix) National Adaptation Programme of Action (NAPA).

### 3.4 Factors hindering wider adoption of the climate change adaptation and mitigation practices

*Sections 3.3 and 3.4 are added to this report taking into consideration that, DADPs are delivered out of the national agriculture programs and/or initiatives. It is worth to share some of initiatives relating to the study in view of highlighting similar or close related practices that can be advocated for the benefit of small scale farmers based on their context. This is mainly based from the experiences consultants have gathered through working with rural communities [Small scale farmers inclusive].*

There are a number of potential climate change adaptation and mitigation practices at national and local levels in the country that are currently not fully exploited. The adaptation and scaling-up of these innovations are still very low. The utilization pattern of these practices has remained patchy and localized for many years without wider adaptation and scaling-up. Based on the experience from the field including farmers' perceptions, hereunder are some of the factors that hinder adoption of the climate change adaptation and mitigation practices:

- Cropping pattern: A study in central Tanzania concluded that, large households are able to practice multiple cropping whereas smaller ones tend to practice only mono-cropping with a livestock activity, whether under dry land or irrigation. This suggests that multiple cropping is more labour intensive [Mbwambo J. S, Mwatawala H. W and Mngale A. S 2012 farmers coping strategies against climate change in Singida district, Tanzania]
- Limited awareness: Lack of awareness amongst wider government and citizens on climate change this leads to limited capacity to hold government and donors accountable on the impacts affecting their livelihood.
- Farmer's experience: The more experienced farmers are more likely to adapt than the less experienced. It is experience rather than age that matters for adapting to climate change.
- Contradicting extension messages from agricultural and non agricultural professionals to farmers e.g. Use of chemicals v/s Organic farming, Decision makers promoting industrial agriculture.
- Practices are not well documented, disseminated and/or widely shared and most of them are of the practices are not sufficiently backed with scientific evidences (validation). One of the limiting factors in documenting

and disseminating successful innovations that support climate smart agriculture is that farmers do not disclose some of the information for fearing piracy of their knowledge.

- Perception by the some of the community (professionals, decision makers, farmers) that the practices are primitive and outdated farming methods. Hence promoting these initiatives require intensive lobbying and advocacy.
- Inadequate financial capital for smallholder farmers to enable them adapt to some of resource needy practices e.g. water harvesting, biogas, solar etc [Photos below indicate one of the capital intensive irrigation project at Chinangali, Chamwino district – Dodoma]



Grape Project in Chinangali 2 – Drip irrigation



Constructed dam for drip irrigation in Chinangali 2

According to GTZ Sustainet. 2006. Sustainable agriculture: A pathway out of poverty for East Africa's rural poor. Examples from Kenya and Tanzania. Deutsche Gesellschaft für Technische Zusammenarbeit, Eschborn, scaling up is divided into four types:

- Quantitative up scaling** – where a large number of farmers either from same village or from different villages are directly or indirectly enabled to adopt a technology,
- Functional up scaling** – where same technology or a new activity is adapted to suit a new situation, which is particularly relevant in technologies such as CSA that are related and dependent on other aspect like socio-economic benefits e.g. value addition, diversify farming activities,
- Political scaling up** – influencing how government provide services or changing policies to favor adoption and use of technology, this can be achieved at local (through by-laws, village committees), national (through policy briefs, conferences/workshops), regional, or international level, and
- Organizational scaling up** – increasing capacity in governance and management; human resource development; and communication to make organization more efficient, e.g. build capacity of staff, increase number of technical staff, strategic planning.

## 4.0 RESULTS OF THE STUDY

### 4.1 DADPS priorities and resources allocations for 2010/2011 and 2011/2012

This section analyses the DADPs priorities, resources allocations and how the DADPs address issues of climate change adaptation, mitigation and REDD with a particular focus on small-scale climate smart agriculture.

#### Process development

Based on the DADPs guidelines of December 2007 and the revised version of December 2011, emphasis is put on addressing community needs and priorities at different stages of DADPs development (village, ward and District). In practice, community participation seems to be limited. The guideline lists categories of district agriculture stakeholders to be involved in the stakeholders meeting. In the list there are representatives from farmers (category vii of list). However, the guideline does not specify the number of farmers and as a result according to informal interview with Chamwino District officials, only two farmers are involved in the planning process. The number of farmer representatives to stakeholders meeting does not take care of representation from special groups and other things like gender etc.

According to Kilosa District Council DADPs 2012/2013, the district is divided into nine divisions with 37 wards and 164 registered villages while according to Chamwino District Council DADPs for 2011/2012, the district has 77 villages. Since the DADP guidelines do not specify the number of farmer representatives in the district agriculture stakeholders' meeting and the modalities/criteria of getting those farmer representatives, there is a high possibility of having farmers underrepresented in the stakeholders' meetings and hence limited assurance on addressing farmers' priorities in the DADP based on their context.

Focus Group Discussion in Msowero Village (Kilosa) and Manchali A (Chamwino) indicated that, villagers are not significantly involved in the process and hence are not aware of DADPs initiatives in their localities. This is against DADPs assessment criteria that emphasises on the inclusion of VADPs (Village Agricultural Development Plans) in DADPs.

FGDs revealed that, farmers in the visited villages were not aware on what DADPs is all about. This was evidenced by:

- Farmers not knowing anything about VADPs although some are aware of the village development projects especially those related to primary education and primary health care.
- Farmers' doubts on their representations as stipulated in the DADPs guideline [at various stages of the process]. FGDs participants in the two villages were not aware of the farmers who represented them in the DADPs development process (District Stakeholders' meeting).
- Testimony by the Ward Agricultural Extension Officer of Manchali village that he has never heard or participated in the process for a number of years now.

Villagers also testified that, there are some government managed projects [support of seeds, irrigation schemes] going on in their villages and/or neighbouring villages. But in most cases they are engaged during implementation and not planning or developing the projects. For example, in Msowero village two years back, farmers participated in a survey for the village traditional irrigation canal but at the end the project was not funded. This project was one of the DADPs project although farmers were not informed that it was a DADPs project as they did not participate in the planning face of the project. However, farmers acknowledged that they were in need of such a project though were not involved in prioritizing it. Farmers in Msowero village are also aware that in Mvumi Village (bordering village) Msowero ward there is a functioning irrigation scheme with the fund from Kilosa District Council. According to the reviewed DADPs this was a DADPs project.

Farmers in the areas are aware on Climate Change [Causes and Effects] and some of them are traditionally taking measures to adapt like use of early maturing and drought resistant crops, rain water harvesting etc in Manchali and Msowero villages.



Farmers showed appreciation on the contributions of other development organizations in orienting the farmers to adapt to climate change. Some of those institutions support farmers through trainings [Farm Field School], provision of inputs such seeds and equipments like oxen, ploughs, rippers etc. The identified organizations included: TOAM, INADES, LVIA for Chamwino and UMADEP in Msowero-Kilosa District.

The following sections (4.1.1 to 4.1.3) present a detailed analysis of the DADPs priorities and resources allocations for 2010/2011 and 2011/2012.

#### 4.1.1 Chamwino District Council

The table below presents part two of the key findings of the study for Chamwino District. It entails the Climate smart Agriculture related activities for 2010/2011 and 2011/2012 DADPs. Further to this it indicates amount of funds approved, percentage received and spent. In addition to that, it shows the level/magnitude of implementation as well as comments on the same by the consultants:

**NB:** DADPs has many activities planned in the respective year, the activities addressed and analysed hereunder are those which are closely related to Climate Smart Agriculture in the mentioned period [s]

Target	Activities related to CSA	Budget allocation (TZS)	Review comments from the consultants based on the level of implementation from DADPs reports
<b>2010/2011 DADPs – Analysis based on Mid Year Review for DADPs 2010/2011</b>			
Quality and quantity of social services and economic infrastructures of 77 villages improved by 2010	To support acquisition of 10 Power tillers for youth groups by June 2012	<b>Tshs 60,000,000/=</b> Received and spent 100% of the approved budget	<b>Implementation:</b> The District managed to buy 10 power tillers where 3 farmer groups and 7 individual farmers contributed 50% of the costs. <b>Comments:</b> Ideally power tillers are meant for enhancing minimum to deep tillage that favours aeration, root penetration and water conservation in areas of bare/compact soil like the case of Chamwino District. Although some farmers diverts the use of power tillers for transportation and milling purposes.
	To support acquisition of 20 tonnes of certified sorghum seeds for on-farm seed production by June 2012	<b>Tshs 32,000,000/=</b> Received and spent 100% of the approved budget	<b>Implementation:</b> The district managed to buy and distribute 16 tonnes [80%] of Macia (sorghum seeds) to 6,400 households planting 2,560 hectares. <b>Comments:</b> The variety is drought tolerant and early maturing the practise that contributes to small scale farmers' climate smart agriculture (CSA).
<b>2011/2012 DADPs</b>			
Household food security to 77 villages and commercial farming to 15 villages improved by 2014	To support irrigation development projects for grapevine blocks in Mvumi Mission and Chinangali II and others irrigation schemes in Chalinze and Mpwayungu villages by June 2012	<b>Tshs 996,000,000/=</b> Received 100% and Progress report for 2011/2012 indicated only 23% were spent	<b>Implementation:</b> The actual expenditure in all four projects was only 23% of the total allocated budget (229,217,521.88). The amount covered drilling 2 deep wells [53m <sup>3</sup> at Mvumi mission. trenching of grapes; production of grapes in 141 acres [Chinangali]; 160 hectares surveyed at Mvumi makulu, rehabilitation of 2000 metres main canal [Chalinze] and rehabilitation of Mpwayungu scheme. The report indicates most of these activities are on progress. <b>Comments:</b> These are medium to large scale irrigation projects that require high investments in terms of finance, technology and human resources capacity, factors that hinder active and effective participation of small scale farmers in the project. Despite the fact that this drip technology can be climate smart (efficient water use at a rate of 1.6lts/hour), yet small holder farmers cannot apply this technology fully without external support.

	To support establishment of 80 hectares of sorghum seed multiplication farm at Chinangali II village by June 2012	<b>Tshs 31,245,963</b> Received 100% and spent 88% of the amount received	<b>Implementation:</b> The district managed to cultivate 171 acres (68.4 hectares) of Macia certified seeds. Under good management forecast on the production was expected at 1.8 tonnes/hectare. [Outcome not reported in the availed reports]. <b>Comments:</b> This project supports climate adaptation practices by smallholder farmers through accessing and using drought tolerant and early maturing seed varieties (Macia). Physical observations during the study on fields planted macia had very good crop stand like the one on the cover page pictured may 2013
Animal health status, production and livestock infrastructures in 77 villages improved by 2014	To support establishment of one dairy goat multiplication unit at Segala village by June 2012	<b>Tshs 56,162,678</b> Received 100% but nothing was spent basing on 2011/2012 DADPs review	<b>Implementation:</b> Late disbursement of the funds delayed implementation of these two projects with the expectation of implementing the projects in the following financial year. <b>Comments:</b> Livestock keeping (small stocks) is one of the climate change adaptation practices in Dodoma region as it contributes to food security and income generation which serves as a security in case of crop failures due to adverse climatic variations. Furthermore, the practice contributes to availability of farm yard manure as an important ingredient for soil nutrient recycling which is a small scale climate smart agriculture practice.
	To support two vulnerable groups on improved poultry production at Mvumi Mission by June 2012.	<b>Tshs 16,000,000</b> Received 100% but nothing was spent basing on 2011/2012 DADPs review	

#### Key observations:

According to the report on documentation of the CCAP April 2013, farmers in central Tanzania respond to climate change by diversifying their livelihoods means through livestock production, engaging in daily wage employment, seasonal migrations, selling crops, remittances and adopting farm practices such as switching crops, using drought tolerant species, intercropping and using early maturing varieties.

The analysis above indicates that Chamwino District Council DADPs for 2010/2011 and 2011/2012 limited climate smart agriculture practices to water use efficiency, availability of drought tolerant and early maturing sorghum seeds (Macia). Focus Group Discussions and physical observations in Chamwino District during this analysis revealed that, the district could integrate diverse of climate smart agriculture practices that cover, soil and water management/conservation, soil fertility improvement including, use of compost/farm yard manure, growing crops in seasonal rivers, crop rotation, Agro forestry, rain water harvesting, Chololo pits, trench farming, mixed cropping in combination with livestock keeping, livestock species resistant to pests and diseases, Practicing conservation agriculture i.e. maintaining soil cover by planting cover crops, construction of soil conservation structures which limit runoff like cut off drains, infiltration ditches, contour bunds; Use of local botanicals in control of pest and diseases; tree planting (those which conserve water like Mkuyu); and Use of renewable energy (biogas, energy efficiency stoves).

#### 4.1.2 Kilosa District Council

The table below presents part two of the key findings of the study for Kilosa District. It entails the Climate smart Agriculture related activities for 2010/2011 and 2011/2012 DADPs. Further to this it indicates amount of funds approved, percentage received and spent. In addition to that, it shows the level/magnitude of implementation as well as comments on the same by the consultants

Target	Activities related to CSA	Budget allocation (TZS)	Remarks
<b>2010/2011 DADPs</b>			
7 traditional small holder irrigation schemes improved by 2013	Improvement of seven traditional small holder irrigation canals in Msowero Lumuma, Ilonga, Chogwe, Madizini, Mvumi, Lengewaha, Mwasa, Chanzuru and Rudewa schemes	<b>Tshs 1,600,000,000/=</b> In total, Irrigation projects received 100% of the approved budget. The budget expenditure indicates only 59%. So implementation were done in patches	<b>Implementation:</b> Based on Review report 2010/2011, most of the funds were used to implement the forecasted activities. Except in Ilonga scheme where only 900m instead of 2500m canal was excavated; less funds were spent for only mobilisation of contractor campsite in Madizini instead of line canal 400m; for Mvumi scheme only 400m canal excavated in place 2300m while for Chanzuru scheme 1000m canal instead of 3000m and part of work in Rudewa scheme [This requires budget follow up and analysis for actual analysis which is not in the scope of this study] <b>Comments:</b> These are small scale irrigation projects that build on traditional practices in supplementing moisture in the field through irrigation. This has been one of the ways in which farmers in Kilosa can grow crops with harvesting assurance since water is available. The only shortfall that can be noted is the cost of improving these irrigation canals (very high) that small holder farmers cannot afford in absence of external financial and technical support. Otherwise the improvement of traditional irrigation canals contributes positively to small-scale climate smart agriculture
To ensure the Kilosa farmers community acquire improved seeds by 2011	To produce quality declared seeds at community level at Msowero, Mvumi and Msowero Lumuma.	<b>Tshs 17,430,000/=</b> The district received 37% of the approved budget with Mvumi and Msowero receiving 0% Even though the amount was not spent in the year under report	<b>Implementation:</b> Only Tshs. 6,430,000/= were released [37%] and nothing for Msowero Lumuma and Mvumi . But in the same report, nothing was spent [This requires budget follow up and analysis for actual analysis which is not in the scope of this study] <b>Comments:</b> Investment in supporting and promoting Quality Declared Seeds (QDS) enables production of seeds suitable to the specific environment. Though the Document (DADPs 2010/2011) does not clearly detail on the seed varieties under QDS, the technology can be used as an opportunity for producing seeds that are adaptable to climate variations.
Income to farmers is increased through milk production by 2013	To introduce dairy goat production at Ibingu, Msowero, Mwasa, and	<b>Tshs 24,000,000/=</b> The approved budget was not disbursed as	<b>Implementation:</b> the approved budget by 100% was neither disbursed to respective district nor spent for the forecasted support to farmers in Ibingu, Msowero, Mwasa and Kifinga villages – further budgetary analysis needed

	Kifinga villages	per Review report 2010/2011	<b>Comments:</b> Livestock keeping (small stocks) and aquaculture are some of the climate change adaptation practices in Kilosa. Dairy goat keeping and fish farming contribute to food and income security especially in times of crop and/or large stocks failures that happen during adverse climatic variations. Furthermore, dairy goat keeping practice contributes to availability of farm yard manure as an important ingredient for soil nutrient recycling which is a small scale climate smart agriculture practice.
Income to farmers is increased through fish keeping by 2013	To introduce fish keeping group at Msowero and Mwasu villages	<b>Tshs 10,000,000/=</b> The approved budget was not disbursed as per Review report 2010/2011	
To promote use of farm machinery in 8 irrigation schemes by year 2013	To provide 18 power tillers in 18 farmers groups	<b>Tshs 38,200,000/=</b> The district received and spent 100% of the approved budget	<b>Implementation:</b> The funds allocated were disbursed and spent by 100% i.e. 18 power tillers were bought as planned <b>Comments:</b> Ideally power tillers in Kilosa are meant to reduce labour intensity (hand hoe) and provide opportunities for increased areas under cultivation, time use efficiency and ultimately increased production and productivity.
<b>2011/2012 DADPs</b>			
Food and cash crop production increased: maize from 2tons to 4 tons per hectare; rice from 2tons to 6tons per hectare ginger from 6tons to 10 tons per hectare, onions from 9.0 tonnes per hector to 15.0 tonnes by year 2013.	Construction of irrigation canals in Madizini, Mwasu, Mvumi, Chanjale villages and spot improvement of irrigation canal at Malolo A village	<b>Tshs 270,500,000/=</b> The district received and spent 100% of the approved budget	<b>Implementation:</b> According to July – June 2011/2012 the funds were all spent as planned in implementing the activities. For example, according to FGD, the Mvumi Irrigation canal is functioning <b>Comments:</b> These are medium to large irrigation projects meant for ensuring that farmers get adequate water for their crops at the right time of demand. Although contributing to climate smart agriculture through efficient use of water, they are capital intensive projects and hence sustainability of the projects may be questionable.
	To support QDS production at Dumila, Mwasu, Kimamba B, Mikumi and Malolo A by June 2012	<b>Tshs 16,271,000/=</b> The district received and spent 100% of the approved budget	<b>Implementation:</b> According to July – June 2011/2012 the funds were all spent as planned in implementing the activities. <b>Comments:</b> Investment in supporting and promoting Quality Declared Seeds (QDS) enables production of seeds suitable to the specific environment. Though the Document (DADPs 2011/2012) does not clearly detail on the seed varieties under QDS, the technology in most cases produces seeds that are adaptable to climate variations.

#### Key observations:

According to the report on documentation of the CCAP April 2013, the common and also traditional farming practices in Kilosa District is clearing land by burning residues followed by direct sowing, and cultivation is done after germination to control weeds. In both lowland and highlands farming is practised where in lowlands crops such as rice,

vegetables and maize are dominant. Irrigation is practiced in rice production and vegetable production during dry season. Common beans, potatoes, vegetables and maize are common crops in highlands.

The analysis above indicates that Kilosa District Council DADPs for 2010/2011 and 2011/2012 limited climate smart agriculture practices to water use efficiency (irrigation projects/schemes), production of QDS and small stocks livestock keeping in their planning though in actual implementation, Interventions related to Dairy goat and multiplication of QDS were not implemented due to being partly supported in terms of funds or not receiving the funds at all [refer the table above]. However, there was evidence by FGDs that irrigation canal in Mvumi village was functioning.

Focus Group Discussions, physical observations, and documents review in Kilosa District during this analysis revealed that, the district could also integrate diverse of climate smart agriculture practices that cover: Bench or ladder step terraces; Contours; Mulching; none burning of residues; reduced tillage; Crop diversification. In the highlands, cover crops establishment at the end of growing season to protect soils during dry season can be done taking advantage of residue moisture; integrated soil fertility management and agro forestry; Bee keeping in conserved areas/forests; Use of well decomposed manure and compost; crop rotation; and reducing overgrazing can also be practised.

DADPs guideline for allocation of projects in the villages clearly spells out the criteria for selecting the villages. The findings of this study and experience by the consultants, revealed the following shortfalls in honouring the process:

- ✚ FGD showed their concern on politicizing the process i.e. more projects are skewed to areas with more influential people in the districts, wards and villages.
- ✚ Practise of top down planning as is currently done, in most cases does not take aboard the key community priorities. This has in some places, led to villagers [farmers shy away/refuse or poorly manage whatever is brought for them from top authorities.
- ✚ Based on limited understanding and insignificant participation in DADPs processes, few elites take advantage of tapping whatever opportunity that emerge.

### **General Observations for Kilosa and Chamwino DADPs 2010/2011 & 2011/2012**

- In all of the above proposed small scale climate smart agriculture practices for Chamwino and Kilosa, best agronomic practices are crucial to ensure crop productivity and benefits from soil and water, as well as soil fertility management. Agronomic practices such as timely planting, plating at right spacing and timely weed control and integrated pest management should be adopted, if increased yield to ensure adaptation to climate change is to be realized.
- As opposed from previous years where DADPs were said to address a number of small projects (spreading funds thinly) this analysis has shown that, District councils are now focusing limited projects with adequate fund allocation.
- Agriculture practices that protect environment and support small-scale farmers are not fully addressed in the reviewed DADPs for both Kilosa and Chamwino. Small-scale farmers will not be the main beneficiaries for the irrigation schemes whose technology and investment favours medium and large scale farmers.. Here under are just some of the observed or learned practices by the consultants that DADPs can address as they can be easily adapted by Small scale farmers. Some of them are already part of DADPs investment like Poultry keeping, and production of macia seed. Others are farmers practices in Chamwino (cropping in river sand) and Kondoia (composting) that are not supported by DADPs but could advocated for receiving DADPs support.



*Macia demo plot*



*Compost making by farmers*



*Cropping in river sand*



*Traditional irrigation using bamboo tree*



*Local chicken keeping*

### 4.1.3 Challenges in DADPs implementations

Hereunder are specific DADPs implementation challenges for Kilosa and Chamwino Districts that were identified during this analysis:

- Late disbursement of funds is a recurrent challenge in the implementation of DADPs. Furthermore, some projects are less funded while others are completely not funded. Sections 4.1.1 and 4.1.2 above give analysis for varying amounts of approved, received and expenditures. The delays contribute significantly to untimely completion of most projects. Funds are sometime delayed for the period more than 6 months [e.g. In Chamwino for DADPs 2011/2012 was received as late as February 2012]. In adverse cases some funds are not received at all [e.g. In Kilosa activities related to improvement of milk production received 0% of the approved budget indicated in the table above]
- Community willingness and capacities to contribute resources (cash and in kind) for implementation of DADPs is not satisfactory hereby delaying the implementation of some planned projects.
- Inadequate understanding of climate change related policies, acts/laws, by-laws and initiatives leading to poor enforcement and implementation of same. This contributes to low accountability on climate change issues and failure to mainstream climate change issues in the DADPs.
- The analysis revealed that the local community ownership of the high investment DADPs project such as the grapes projects in Chamwino District cannot be obviously evidenced. This may impact on the project sustainability.

### 4.2 Gaps and or risks in the DADPs

#### Gaps and or risks in the DADPs in terms of achieving climate smart, small-scale agriculture and community oriented REDD+

In the review of the DADPs (2010/2011 and 2011/2012) for both districts and DADPs assessment for 2011 it was noted that:

- Small holder farmers have their own context based initiatives and practices that address climate smart agriculture. In the reviewed DADPs, agriculture practices that protect environment and support small-scale farmers' initiatives are not fully addressed – Refer the analysis in the tables above (section 4.1.1 and 4.1.2) which outlines limited initiatives of DADPs in addressing CSA related initiatives.
- Irrigation has shown to be a high priority in both districts (Kilosa and Chamwino). But the observation is that small- scale farmers will not be the main beneficiaries for the irrigation schemes that have shown trend to favour (in terms of technology- such as drip irrigation and capital investment) medium to large scale farmers.. E.g. in real situation, a Small scale farmer in Chinangali – Chamwino Dodoma can hardly afford to repay fully the costs of a grape drip irrigation project investment and production costs. On top of that, to date the market for Grapes has gone down out of the expectation of Small scale farmer. In view of this, some Small scale farmers have opted to sell their plots to medium and large investors. Furthermore, maintenance of irrigation canals constructed under Kilosa District council 2011/2012 DADPs (section 4.2 above) may not be feasible for small scale farmers as these are medium to large scale irrigation projects. These is why the spot improvements of the canals required DADPs fund showing that farmers were not able to maintain the canals.
- Lesson from reviewed documents indicated that most of DADPs investment projects do not significantly address environmental issues. For instance projects on:
  - Establishment of drip irrigation scheme of grapes in Chinangali II village Chamwino District worth TZS 596,000,000/= was assessed in 2011 and the observations were that: *'The project is about rehabilitation of irrigation infrastructure for about 96Millions but the project write ups is for +2Billions and that is for cost benefit analysis an activities, **No environmental issues concern, number of***



*beneficiaries you talk about Group member while the project type is COMMUNITY so it's confusing'. Similar case was noted in the Dairy goat production at Segala village and Establishment of drip irrigation on grapes community farm at Mvumi Misheni both in Chamwino District where the comment was **Indicate sustainability, environmental concerns** (DADPs Assessment 2011).*

- Climate Smart Agriculture (CSA) is a relatively new intervention in many parts of the country thus it is **partially** addressed in most of DADPs e.g. ripping, cover crops, crop rotation, rain harvesting, contouring chololo pits etc [CCAP Project Final Report April 2013 Documentation of the lessons and the best practices for climate smart small-scale agriculture]. For example, in Kilosa it is only through the REDD project interventions by TFCG that some farmers in the project villages are aware of Conservation Agriculture (CA) and not CSA per se. In Chamwino some initiatives to address CSA can be noted through producing early maturing and drought tolerant sorghum seeds that are provided to farmers at a subsidised price.

#### 4.3 Opportunities in the DADPs

##### **Opportunities in the DADPs for smallholder farmers to engage in achieving climate smart, small-scale agriculture and community oriented REDD**

- DADPs guidelines provide room for smallholder farmers to actively participate in developing their context based Village Agricultural Development Plans (VADPs) as well as establishing village DADPs project committees. On top of that, the guidelines show that farmers should be represented in the District agriculture stakeholders' meeting. These two forum give avenue for farmers to ensure inclusion of issues related to small scale climate smart in the DADPs. Despite this good intention, the opportunities are not taped by the communities following the high level of unawareness and probably lack of political will to make process work the way it is supposed to be.
- In the district where most of the villages have village land use plans as is the case for Kilosa District, accompanied by relevant by-laws, climate smart agriculture can be strongly advocated for and practised as part of environmental conservation through Village Environment Committees (EVCs). Amongst others, this gives an opportunity for farmers to participate in REDD through the reserved forests. This can be possible when the community is well aware of the climate change issues and include them in their respective VADPs and ensure that the VADPs are forwarded to the Ward Development Committees and also sent to the District Executive Director for inclusion in the DADPs. Furthermore, villages should develop and enforce respective village environmental by-laws.
- According to DADPs guidelines, projects are run through cost sharing from ASDP, District Council and farmers. But the lion share comes from ASDP and farmers are allowed to share in kind. Farmers in kind contribution mean that they can prioritise climate smart agriculture projects that are within their capacity to contribute.
- Presence of DADPs projects supporting production of QDS (both in Chamwino and Kilosa) gives room for farmer groups to participate in the production and use of seeds that in most cases are drought tolerant, early maturing and resistant to pest and diseases. *For example in DADPs 2010/2011 Chamwino District set aside TZS 32,000,000/ to support acquisition of 20 tonnes of certified sorghum seeds (Macia) for on-farm seed production.*
- Water resources conflicts are common in most of the communities. DADPs irrigation projects offer an opportunity for farmers to establish Water Users Associations (WUA) for effective and efficient use of water in crops and livestock production. *For example, in DADPs 2010/2011 Kilosa District set aside TZS 270,500,000/= for the construction of irrigation canals in Madizini, Mwasa, Mvumi, Chanjale villages and spot improvement of irrigation canal at Malolo A village.* According to the Review report July – June 2010/2011, the level of completion varies significantly. For example Mvumi irrigation canal was completed and farmers including small scale farmers are benefiting from the project.
- DADPs projects that support farmers to keep small stocks like local chicken and dairy goats contributes

to food and nutrition security, income security, and promotes the practise on nutrient recycling (use of farm yard manure in crop production). For instance, in DADPs 2010/2011 Kilosa District budgeted TZS 24,000,000/= to introduce dairy goat production at Ibingu, Msowero, Mwasa, and Kifinga villages.

#### 4.4 Policy and policy implementation gaps

##### Gaps in the policies and policy implementation in climate smart, small-scale agriculture and community oriented REDD

- At the sector level climate change is not yet mainstreamed into some sectoral policies and activities, for example it is not included in available documentation on the government's Kilimo Kwanza initiative. Even in policies where climate change is mainstreamed, enforcement is questionable and/or insignificant. Hereunder are some of the policies that have gaps in addressing small scale climate smart agriculture:
  - **The National Land Policy (1997):** The policy does not clearly provide enabling environment for small scale farmers to take advantage of their tenure rights over land for practising CSA.. Apart from farmers' right to own land, the policy does not give any guideline on how the land should be used including practising CSA. However, customary land ownership as provided for by the Village Land Act No. 5 (1999) can be used as an opportunity for farmers practising CSA. This will only happen when farmers are aware of the CSA practices.
  - **The Agriculture and Livestock Policy (1997):** The policy shows that climate change has serious impacts on agriculture and livestock sectors and that agricultural practices could have a contribution on climate change through slash and burn practices. There is no substantial voice about SSCSA in the agricultural policy. CSA needs to be incorporated into the policy to ensure that food production is done through methods which takes care of mitigation and adaptation of climate change while at the same time improving the livelihoods of the poor.
  - **The National Forest Programme (NFP, 2001-2010):** The document outlines obligations, opportunities and implications of international initiatives to Tanzania's forest management in the context of the international treaties and initiatives such as United Nations Framework Convention on Climate Change (UNFCCC), the UN Conference on Environment and Development (UNCED) and the Convention on Combating Desertification (CCD), but without providing a clear roadmap on how climate change related issues would be addressed. This is a notable shortcoming given the clear linkages between forestry resources and climate change; and so is with agriculture.
- All the reviewed DADPs documents have addressed some policies and strategies related to the agricultural sector including: Agriculture and Livestock Policy (1997), Livestock Policy 2006, Cooperatives Policy, Fisheries Policy, Microfinance Policy, Agricultural Sector Development Strategy (ASDS), Agricultural Sector Development Programme (ASDP, Livestock Sector Development Strategy (LSDS) and Kilimo Kwanza. Taking into account the climate smart agriculture, it has been observed that there are some other important policy and strategies that need to be adhered to when developing DADPs. These include: Environmental policy, Water policy, Forestry, Land Policy and their respective laws/acts.
- There is poor coordination of agricultural stakeholders at District level. In the two districts under study, there are no formally established platforms and mechanisms for stakeholders engaged in climate change adaptation and mitigation initiatives. This is critically important to reduce duplication of efforts, maximize learning across actors, and promote transparency among actors.
- In reality, there are relatively few specialists (in terms of number and expertise) engaged with climate smart agriculture agenda, and this may be one of the factors contributing to climate smart agriculture being given less priority in the DADPs as observed in the reviewed DADPs.

- Inadequate political will to push climate change issues in the national and local government development programs and projects and hence excluded in most of the development initiatives.
- There are a number of climate change documents especially at national level. One of the weak point is on how these documents are prepared that is the process of developing them is not adequately participatory, the language used is not user friendly especially for the villagers and their accessibility is not easy/smooth including limited transparency.
- Lack of formal link between small scale climate smart agricultural practices and researchers work for validation and latter scaling up by extension staff for wide dissemination and use of feasible and successful small scale climate smart agricultural adaptation practices.

#### 4.5 Integrating climate change adaptation and REDD in the DADPs

##### How climate change adaption, mitigation and REDD can be integrated in the DADPs

- Despite the fact that members of the District Facilitating Team are multi-sectoral as per DADPs guideline 2011, the aspect of team working is questionable. Therefore, for effective inclusion of climate change adaptation, mitigation and REDD in the DADPs, criteria for representation should include adequate and diverse expertise and experience on issues related to climate change.
- There should be on going capacity building (practical trainings, forming community environmental groups/clubs and meeting them frequently, visiting communities at home/site) and awareness creation initiatives at village and sub village levels on issues related to climate change. This will empower villagers to prioritize projects related to climate change adaptation and mitigation in their VADPs which are used to form DADPs.
- DADPs should venture to facilitate development of Village Land Use Plans (VLUPs) which clearly demarcate settlement areas, grazing land, farming land and reserve land. This will discourage and control some of bad practices that are not climate/ecological friendly for example bush fire, shifting cultivation, forest clearing etc. This will also encourage establishment and conserving village forests hereby supporting REDD initiatives.



*Bush fires*



*Charcoal business*



*Firewood collection*

- Increasing motivation and incentives among climate change stakeholders to share and contribute their experiences in the process of developing DADPs. This can be **achieved** through:
  - Developing sound policies or enabling environment that aims at promoting successful farm-level adaptation practices, information and experience sharing, and ways to implement adaptations through affordable means. Policies, Laws, and Procedures at national and District levels need to recognize successful local innovations by farmers and promote them.
  - Improving the use of communications networks and emerging media with interest around climate change to raise awareness and increase domestic demand for climate change activities.

## 4.6 Effective local community participation in the DADPs processes

### How effective local communities can participate in the DADPs planning processes

- Findings from FGDs in Msowero (Kilosa) and Manchali (Chamwino) showed that the local community is not aware of the DADPs in its totality. They appreciate seeing agricultural projects been implemented in their villages but were not involved in the prioritization of the projects. To some of them, these projects are like a favour from the districts.

The results of FGDs in two villages indicated that, farmers were not completely unaware of the process through which DADPs are developed. The practice through which the DADPs are developed, sidelines the wider farming community participation. In an advanced stage for a example in Manchali, even the long serving Ward Agriculture and Extension Officer failed to testify as to when he last participated in the DADPs process

The groups indicated knowledge on Climate change variability and matched their tradition practices as ways to adapt to climate change. Otherwise they showed current initiatives by other development organisations as eye openers to wide understanding the Climate change adaptation and REDDs.

In Manchali for example, farmers were not aware of DADPs activities in their ward. The rehabilitation of Chalinze irrigation scheme was budgeted for Tshs 267,000,000/= [DADPs Performance 2009/2010] and forecasted to cost about 300,000,000/= [DADPs performance 2011/2012], where report on Midyear review 2011/2012 indicated that 2000 metres of main canal had been rehabilitated and that bean production under irrigation increased from 2 – 3.5 tones per acre [DADPs performance 2011/2012]

There DADPs process should be significantly transparent and inclusive (take into accounts interests of different social groups in the community). This will motivate local community participation.

- There should be on going DADPs awareness creations to the local community at village levels to be facilitated by all agricultural stakeholders in the district (District Council, CSOs, Resource farmers, community volunteers and private sector). In so doing farmers at the village level will be well empowered and informed on the DADPs process, hereby motivating them to participate meaningfully in the process. Awareness creation can be in form of trainings, workshops at village levels and dissemination of farmer friendly DADPs related documents (guidelines, leaflets, posters).
- DADPs guidelines (2011) give an opportunity for VADPs to be incorporated in the DADPs. Farmers should exploit this opportunity effectively by ensuring that they play key roles in the Villages Assembly and in the development of their context based VADPs that accommodate interests of different social groups at the village level.
- Farmers individually and/or in organised groups should take own initiatives to understand the process and be part of the process. If it happens that they are not involved in the process, they should be in a position of demanding for their participation rights. This will depend on how much the community is well informed.
- Despite the fact DADPs planning process offers a room for farmer representations in District Agricultural Stakeholders Meeting, criteria for selecting farmers' representatives should include adequate and diverse experience on agricultural issues in the district and ability and willingness to present collective priorities as proposed by his/her respective community (avoiding individual or small group opinions).

## 5.0 CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusions

This analysis reviewed the 2010/2011 and 2011/2012 DADPs for Kilosa and Chamwino districts in a view of establishing how they address issues of climate smart small-scale agriculture in terms of climate change adaptation, mitigation and REDD, identifying the gaps in relation to climate smart small-scale agriculture and the opportunities available in the DADPs that smallholders farmers can use in achieving climate smart, small-scale agriculture and community oriented REDD+.

The review identified that the two reviewed DADPs priorities do not significantly take aboard small scale climate smart agriculture. Though, some elements of climate smart agriculture like the water use efficiency, production of climate adaptive seeds, and introduction of small stocks for food and income security are taken onboard. However, there are opportunities for the integration of climate change adaptation, mitigation and REDD in the DADPs like the room for VADPs to be incorporated in the DADPs, some villages having village land use plans in place, and significant fund allocated to prioritised projects.

The review concludes that, for DADPs to respond significantly to small scale climate smart agriculture active participation of well informed farmers in the process and at various stages is crucial. This will also contribute positively to owning and sustenance of both the DADPs projects and their outcomes or impact.

### 5.2 Recommendations

Based on the findings of this analysis, the following recommendations are put forward:

- A critical mass (District agricultural stakeholders, farmers inclusive) mobilisation around climate change adaptation, mitigation and REDD is required to enable stakeholders and the community being well informed and proactive before sufficient accountability measures are taken for public interest. This can be done through campaigning meetings, trainings, look and learn visits, and use of ICE (Information, Communication and Education) materials.
- DADPs should broaden/integrate diverse of interventions and/or activities that accommodate small scale climate smart agriculture. For example, soil improvement, and water management and use of recommended seed varieties can be applied in the same project intervention.
- Based on guidelines, all DADPs projects are implemented through cost sharing approach that is from ASDP, District Council and farmers. To avoid conflicts that may lead to project failure, the three parties especially farmers should be well informed on the basis and the scope of the cost sharing aspect.
- District DADPs Facilitating Teams (DFT) should establish a reliable system that will allow easy access of user friendly climate change related documents (policies, laws/acts, guidelines, bylaws, and strategies) for enhancing clear understanding of the legal framework on climate change issues and ultimately ensuring enforcement and accountability of different stakeholders on matters related to climate change adaptation, mitigation and REDD.
- The DADPs development process should not only refer to the directly related agricultural policies but also other elements of policies and acts that are related to climate change including Environmental Policy, Water policy, Forestry, Land Policy and their respective laws/acts that were not adequately reflected in the reviewed DADPs.
- ActionAid Tanzania to facilitate initial process of establishing district climate change stakeholders' platform/forum for the purpose of avoiding overlapping and duplication of efforts; maximizing learning across actors, and promoting transparency, accountability among actors and mainstreaming of climate change adaptation, mitigation and REDD initiatives in the DADPs.
- Climate change adaptation, mitigation and REDD should be made a common agenda in all government and

public meetings/forum in view of gaining political will and support to push climate change agenda that will result in mainstreaming climate change adaptation, mitigation and REDD in the national and local government development programs and projects.

- ActionAid Tanzania to facilitate joint research (researchers, farmers and extension staff), documentation and/or translation and dissemination of the validated small scale climate smart agricultural practices in Kilosa and Chamwino for up-scaling and wider application of the practices.
- Composition of the DADPs facilitating teams to encompass a wider knowledge and experience in agricultural development. Additionally the team should have representation of members with knowledge and experience on climate change issues to facilitate inclusion of climate change adaptation, mitigation and REDD in the DADPs.

## REFERENCES

(CCAP) initiative, 19<sup>th</sup> March 2013: Baseline study for the Climate Change, Agriculture and Poverty Alleviation

Chamwino District Council April 2012: District Agricultural Development Plans 2012/2013-2015/2016

Chamwino District Council [.....] District Agricultural Development Plans 2011/2012 – 2013/2014

CCAP Project Final Report April 2013 Documentation of the lessons and the best practices for climate smart small-scale agriculture

GTZ Sustainet. 2006. Sustainable agriculture: A pathway out of poverty for East Africa's rural poor. Examples from Kenya and Tanzania. Deutsche Gesellschaft fur Technische Zusammenarbeit, Eschborn.

Kilosa District Council April 2013 District Agriculture Development Plans for 2013/2014

Kilosa District Council April 2012 District Agriculture Development Plans for 2012/2013

Jamhuri ya Muungano wa Tanzania Desemba 2011. Mwongozo wa kuandaa na kutekeleza mipango ya maendeleo ya kilimo ya wilaya

United Republic of Tanzania; Prime Minister's Office Regional Administration and Local Government; The Agriculture Sector Development Programme (ASDP); DADP Quality Assessment and project appraisal 2010/2011: DADP quality assessment and project appraisal conducted by ASDP National Facilitators, Regional Secretariat ASDP Coordinators and JICA RADAG staff at morogoro – EDEMA Conference hall, 23rd May – 3rd June 2011.

## **ANNEXES**

### **Annex 1: Terms of Reference**

ToR for undertaking DADPS analysis and provide recommendations on climate change adaptation, mitigation and REDD in relation to small-scale agriculture

#### **ABOUT ACTIONAID TANZANIA**

ActionAid is an international anti-poverty agency working in over 40 countries in Africa, Asia, America and Europe, taking sides with poor people to end poverty and injustice together. In Tanzania, ActionAid started its operation in the year 1998 with a mission to reduce poverty by empowering the poor, excluded and their organizations, to effectively claim their rights using Rights Based Approach to Development (RBA). ActionAid Tanzania (AATz) believes that, there are interlinked and interactive factors that affect peoples' capabilities and entitlements and due to that the poor and excluded people do not effectively participate and lack the power to have meaningful control over decisions that affect their lives. In this case the structural causes of poverty takes toll in aggravating the devastating poverty situation faced by the Tanzanian.

Since introduction of ActionAid in Tanzania in 1998, it has been actively engaged in capacity building of the communities, service delivery and policy research and campaign with the aim of influencing policy and policy practices in areas of land rights, women rights, education, building local democracy and agriculture and food security. In agriculture and food security ActionAid Tanzania has played a major role in promoting farmers cooperatives in Singida, Kilwa and fishers cooperatives in Mafia. Farmers associations and community based organizations have been mobilized and empowered to demand their rights from duty bearers.

Due to the impact of prolonged droughts in chamwino which is one of our Local Right Programme (LRP) where we operate, ActionAid Tanzania has supported communities in Chamwino with food aid and improved drought tolerant seed varieties as one way of adapting to climate change. Exchange visit has also been undertaken for farmers to learn from their fellow farmers on the improved agricultural practices that adapt to climate change.

Recently ActionAid Tanzania, Community Forest Conservation Network (MJUMITA), the Farmer's Network of Tanzania (MVIWATA), the Tanzania Forest Conservation Group and the Tanzania Organic Agriculture Movement received funding from AcT for implementation of the project titled "Climate change, agriculture and poverty alleviation: putting small-scale farmers at the heart of policy and practice" in 2 districts of Kilosa and Chamwino.

#### **About the project**

The project "Climate change, agriculture and poverty alleviation: putting small-scale farmers at the heart of policy and practice" is a partnership of 5 organizations mentioned above. Development of this project is based on the fact that the majority of people in Tanzania are smallholders and depends on agriculture for their livelihood. When it comes to climate variability, it is small-scale farmers who are hit first and hardest by the climate change (CC). It has been realized that land use changes particularly deforestation as a result of shifting agriculture, is the largest source of greenhouse gas (GHG) emissions in Tanzania. Investment in agriculture and agricultural policies and practices are prioritising a shift to more mechanised, fossil fuel dependent, larger scale agriculture with the aim of increasing productivity and commercializing smallholder production. Whilst this approach may increase short-term yields, it risks making small-scale farmers poorer and more vulnerable to CC.

We believe that there are alternative approaches to land use and food production that would bring 'wins' in terms of CC adaptation and mitigation, but lack of awareness to small-scale farmers and policy makers on the adaptation and mitigation to CC has been the problem.

#### **The goal and objectives of the project**

##### **Project goal**

Poverty has been reduced amongst small-scale farmers in Tanzania and greenhouse gas emissions from agriculture have been reduced through the widespread adoption of climate resilient, low emission agricultural practices.



### **Intermediate objective**

Tanzania has developed and is implementing policies and strategies that prioritise support to small-scale farmers to enable them to improve their livelihoods through the adoption of climate smart agriculture and sustainable land and natural resources management.

### **Immediate Objectives**

Immediate objective 1. Small-scale farmers and other stakeholders are demanding the integration of climate smart, small-scale agriculture and sustainable land and natural resources management in national policy and policy implementation.

Immediate objective 2. Government, private sector and civil society are cooperating to support Small-scale farmers to benefit from climate smart agriculture and sustainable land and natural resources management.

### **Project outcomes**

The project has 5 outcomes; the 3 outcomes which best link to this assignment are described below.

#### ***Small-scale farmers***

Small-scale farmers are holding local and national government accountable for the delivery of efficient and effective support services that enable farmers to adopt climate change adaptation and mitigation strategies in ways that improve their livelihoods. Small-scale farmers are practicing C3S agriculture and are exchanging information and experiences about the kinds of on-farm and off-farm strategies that are effective in achieving climate smart agriculture. Small-scale farmers are aware of good governance practices and community rights in relation to land, agriculture and natural resources management and resist efforts to undermine those rights.

#### ***District officials***

District officials are aware of climate change adaptation and mitigation. They are integrating climate change issues in their plans and budgets including the DADPs. They are involving communities in the planning, budgeting, implementation and monitoring of DADPs. They have the capacity to serve local communities by providing them with the necessary support to adapt to climate change in a way that minimises GHG emissions from agriculture. The kinds of support that the District provides reflect the priorities identified by farmers in their district. Support could include a wide range of initiatives such as training; assistance in improving access to market or access to inputs such as more climate change resilient seed varieties; construction of ward-level markets or improved irrigation systems; training and technical support from Extension workers; and networking local farmers with relevant national initiatives. They are actively enforcing laws that help to mitigate climate change. They are transparent and accountable in the execution of the DADPs. They are actively tackling corruption in the agriculture and natural resources sector. They are supporting the development and implementation of village land use plans and participatory forest management and are supporting communities to access REDD finance.

#### ***Elected representatives***

Elected representatives are actively pushing at national and local level for improved services to support small-scale farmers to adopt climate smart agriculture. They are using their influence to ensure that the laws, policies and plans that are submitted to them for approval, integrate support for small-scale farmers in relation to climate change adaptation and mitigation.

### **Strategies of the project**

In order to achieve the outcomes of the project, the five partners apply four inter-linked strategies. A strategy is a bundle of activities that is carried out to bring about the outcomes that we are striving towards. It provides the direction and logic for individual activities. Each strategy may touch upon more than one of the outcomes. Some strategies may target a single stakeholder whilst others target the environment with which those stakeholders interact.

The four strategies that the project works through are:

1. Community networking as a force for securing climate-smart agricultural land management.

2. Research on policy and practice in relation to the interface between small-scale agriculture and climate change adaptation and mitigation
3. Demonstrating an integrated approach to Climate Smart Small-scale agriculture and REDD+
4. Advocating for Climate Smart Small-scale agriculture

The four strategies are interlinked. Strategy 3 provides a real life foundation for the other three strategies. Through support to C3S agriculture not only will direct benefits be channeled to the participating farmers, the six villages where project is implemented will provide a learning ground for identifying the most effective C3S agricultural techniques and for understanding more about how these can be scaled up. **Strategy 2, provide a sound knowledge base by documenting the experiences gained from Strategy 3 and by linking them with other experiences around the world.** Strategies 1 and 4 provide the mechanism by which to take the experience from Strategy 3 as documented under Strategy 2 and to advocate for broader changes in national policy and practice.

### **Strategy 1: Community networking as a force for securing climate-smart agricultural land management**

#### **Overview of Strategy 1**

*Key Output of Strategy 1:* Two national networks of community groups are advocating for climate smart agricultural land management at national and local levels.

The project aims to raise the voice of communities from around the country to demand that the agriculture sector provides the necessary support for climate smart, small-scale agriculture. Tanzania's two community networks, MJUMITA and MVIWATA provide a firm foundation for achieving this. Together the two networks can reach over 800 communities through their members. In terms of changing the behaviour of the project's priority stakeholders, this strategy is primarily focused on MJUMITA and MVIWATA members. This strategy aims to deepen the understanding of the linkages between climate change, agriculture and deforestation within these two networks and to increase their capacity to hold local and national government accountable for climate change, agriculture and natural resources-related policy and policy implementation. Learning will occur within the staff and leaders of the two networks as well as amongst their members. The strategy will also strengthen the linkages between the two networks in order to promote a more unified and targeted community voice. Building on an enhanced understanding of the relevant issues within these two networks, the project will support MJUMITA and MVIWATA to advocate for climate smart, small-scale agriculture, community-oriented REDD+ and sustainable natural resources and land management.

### **Strategy 2: Research on policy and practice in relation to the interface between small-scale agriculture and climate change adaptation and mitigation.**

#### **Overview of Strategy 2**

*Key Output of Strategy 2:* Information and analysis on the interface between small-scale agriculture and climate change adaptation and mitigation that draws on research from within and beyond Tanzania, is documented and distributed.

This strategy aims to provide a firm evidence base to guide the partners' advocacy work. The two main themes for the research are climate change, agriculture and natural resources policy and policy implementation in Tanzania; and best practices for integrating small-scale climate smart agriculture and REDD+ in Tanzania. The research will draw on lessons learned within Tanzania and internationally in relation to climate smart agriculture; sustainable agricultural land management; REDD+; and other related issues. The detailed research reports are intended to influence policy makers, academics and other civil society organizations as well as informing the more direct advocacy work described under Strategy 4.

#### **Activities under Strategy 2**

*Policy analysis in relation to climate change adaptation, mitigation, agriculture and REDD*

Research on changes that are needed to ensure that the ASDP, Kilimo Kwanza, SAGCOT and National REDD strategy promote climate change adaptation and mitigation in a pro-poor, gender sensitive way. The project intend to analyze and monitor existing national programmes such as Kilimo Kwanza, SAGCOT and the National REDD

strategy to identify risks and opportunities associated with these programmes in terms of achieving climate smart, small-scale agriculture and community oriented REDD+. Given the dynamic nature of these programmes, it is anticipated that this will continue throughout the lifespan of the project. In Years 1 and 3 the project will produce one report looking at how climate change is being integrated into climate change plans and into national policy. In addition, at least three special focus reports looking at specific policy issues will be produced. Results of this analysis will feed into the advocacy work described under Strategy 4.

*Document and share best practices for small-scale climate smart agriculture*

This activity aims to enrich Tanzania's approach to developing climate smart agriculture by drawing on best practices internationally and from within Tanzania. Internationally there are many different initiatives looking at issues around climate smart agriculture. This research will review the principles, results and relevance to Tanzania of climate smart agriculture initiatives elsewhere and will propose interventions to be tried as part of Strategy 3. This will result in at least five technical reports. The emphasis will be on generating practical recommendations that can be applied in a Tanzanian context to make agriculture in Tanzania more climate smart. Research will cover crops and agricultural techniques appropriate to the two agro-ecological zones in Kilosa and Chamwino. In Year 3 of the project implementation the project will bring together a small group of national and international experts to evaluate and enrich the research results.

*Monitor and analyse small-scale climate smart agricultural and REDD+ interventions in Tanzania*

This activity will primarily focus on drawing out lessons learned and practical recommendations from the pilot villages under Strategy 3. In addition, the research will also visit other sites in Tanzania to integrate lessons learned from those areas. The research will analyse not only the kinds of agricultural techniques that achieve improved climate change adaptation and mitigation but also the most effective ways of supporting farmers to adopt C3S agricultural practices. The results of the research will be documented in research reports; will be integrated into the manuals produced under Strategy 3; and will be proposed for inclusion in the radio magazine and discussion programmes proposed by BBC Media Action.

**Strategy 3: Demonstrating an integrated approach to Climate Smart Small-scale agriculture and REDD+**

**Overview of Strategy 3**

*Key Output of Strategy 3:* Small-scale farmers in two agro-ecological zones are modelling best practice in terms of climate-smart agriculture and support for C3S agriculture and sustainable land and natural resources management is integrated in District plans.

The project will demonstrate climate Smart Small-Scale agriculture (C3S agriculture) and sustainable land and natural resources management in two agro-ecological zones with a view to providing real life examples of how small-scale farmers can adapt to climate change in ways that increase incomes; improve food security and minimise GHG emissions. The strategy is primarily targeted at changing the behaviour of two priority stakeholders: small-scale farmers and district officials. Other priority stakeholders that will be influenced by the strategy are: elected officials, members of the National Climate Change Steering Committee and MJUMITA and MVIWATA members.

The project will focus on both the technological aspects of C3S agriculture; the linkages between C3S agriculture and REDD in Kilosa; as well as modelling how local governments and elected officials can support small-scale farmers to achieve this. This will include working with local government and elected officials to integrate C3S agriculture in District Agricultural Development Plans and to address local governance shortfalls in relation to agriculture, land and natural resources management.

Relative to the work that the project partners are already conducting in these districts, the proposed project allow for much more intensive training in the six villages covering a broader range of topics related to C3S agriculture. This will allow for the most effective agricultural practices from Chololo to be introduced in additional villages. While the Chololo Ecovillage project is developing a range of climate change innovations, it currently has very little experience of scaling up best practice to other communities, and is not resourced to do so. Strategy 3 will help us learn how that can best be achieved. Site visits alone are unlikely to achieve lasting results so the plan is

to support farmers in the target villages to take up some of the most appropriate best practices, with some start up inputs including for example seed and tillage implements as well as on farm training. In the case of Kilosa, whilst TFCG, MVIWATA and MJUMITA have some funds for promoting conservation agriculture, these are very limited and are divided over the 14 villages where TFCG and MJUMITA are implementing REDD. The proposed project allow for increased involvement of MVIWATA in three REDD project villages thereby linking the farmers with a broader national network; will allow for the introduction of other technologies that have proved successful in areas such as Chololo; and will allow for training to reach beyond the single sub-village per village where training has so far been conducted. Similarly in Chamwino, whilst ActionAid have some funds for promoting improved agriculture these are divided between the 12 villages where they are working and have not been sufficient to apply many of the C3S agricultural strategies that are proving so successful in Chololo.

#### **Strategy 4. Advocating for Climate Smart Small-scale agriculture**

##### **Overview of Strategy 4**

*Key output of Strategy 4:* Elected representatives express support for small-scale climate smart agriculture and use their influence to direct support to small-scale farmers to implement climate change adaptation and mitigation strategies.

Under this strategy, the project intends to support members of MJUMITA and MVIWATA and other project partners to demand the integration of climate smart, small-scale agriculture, sustainable natural resources management and REDD in national policy and policy implementation. This strategy aims to change the behaviour of Members of the National Climate Change Steering Committee and Technical Committee and elected representatives. This strategy also aims to empower MJUMITA and MVIWATA members by raising their voice through mass media, meetings and printed materials.

#### **Goal and objectives of the assignment**

##### **Aim of the assignment**

The overall aim of the assignment is to develop recommendations on how DADPS can address climate change adaptation and mitigation in relation to small-scale farmers.

##### **Objectives of the assignment**

- iii. Review DADPS for Kilosa and Chamwino districts to analyse how DADPS address issues of climate smart small-scale agriculture in terms of climate change adaptation, mitigation and REDD.
- iv. Provide relevant policy recommendations on how DADPS can address issues of climate smart small-scale agriculture.

##### **Scope of the assignment**

The consultant is expected to analyse **DADPS from Kilosa and Chamwino for 2010/2011 and 2011/2012 financial years to see how they address issues of climate change adaptation and mitigation**. The consultant is required to consider the following issues among others:-

1. Desk review of DADPS to assess how they address issues of climate smart small-scale agriculture -- climate change adaptation, mitigation and REDD
2. Highlight any existing potential or conflicts or gaps between DADPS and other investment policy in the district in achieving climate smart, small-scale agriculture and community oriented REDD+. This should include an analysis of the degree to which these are coordinated and synchronised
3. Assess any existing interventions that are being carried out by local government in Kilosa and Chamwino in addressing climate change in-terms of adaptation, mitigation and REDD
4. Provide practical recommendations on how DADPS can address issues of climate change adaptation, mitigation and REDD.
5. Assess to what extent are the DADPS address smallholder farmers needs and priorities

In addressing the objectives of this assignment, the consultant should take into account the following **key questions**

- ✓ How DADPS address issues of climate change adaptation, mitigation and REDD
- ✓ What are the gaps in the DADPS in relation to climate smart small-scale agriculture
- ✓ What are the opportunities available in the DADPS that smallholder farmers can use in achieving climate smart, small-scale agriculture and community oriented REDD+

#### **Expected output from the consultant**

One detailed study with practical recommendations on how DADPS can address climate change adaptation, mitigation and REDD for smallholder farmers

#### **Headings of the report**

Below are the proposed headings of the report

- ✓ Table of contents
- ✓ List of acronyms
- ✓ Acknowledgements
- ✓ Executive summary
- ✓ Introduction outlining the objectives of the assignment , background information in relation to the assignment and the project and limitation of the study if any
- ✓ Study methodology, including documents and or strategy and plans reviewed
- ✓ Local context in relation to agriculture development and its challenges, main economic activities in the districts, impact of climate change in the 2 districts and local communities coping mechanisms to climate change and government and stakeholders efforts in addressing climate change issues. DADPS priorities for Kilosa and Chamwino for 2 years and there resource allocation to the interventions priorities.
- ✓ Results of the study. This section should include among others
  - a. How DADPS address issues of climate change adaptation, mitigation and REDD with a particular focus on **small-scale climate smart agriculture**.
  - b. What are the gaps and or risks in the DADPS in terms of achieving climate smart, small-scale agriculture and community oriented REDD+
  - c. What are the opportunities in the DADPS for smallholder farmers to engage in achieving climate smart, small-scale agriculture and community oriented REDD
  - d. What are the gaps in the policies and policy implementation in climate smart, small-scale agriculture and community oriented REDD
  - e. How climate change adaptation, mitigation and REDD can be integrated in the DADPS
  - f. How effective local communities can participate in the DADPS planning processes
- ✓ Conclusions and recommendations on how DADPS can address issues of climate change adaptation, mitigation and REDD
- ✓ Annexes if any

#### **Timelines**

The timeline for this assignment is 15 days. The total available budget for this assignment is 2500 USD payable in TZS. This amount covers all cost related to this assignment.

#### **Qualities of the person required**

This assignment requires a person with good experience and knowledge on climate change adaptation, mitigation and REDD as well as good understanding of communities coping mechanisms to climate change variability and national policies.

Candidate who meets the above qualification should submit their technical and financial proposals on how they will undertake this assignment.

Should you need further clarification or have question, don't hesitate to contact Elias Mtinda through this email [Elias.Mtinda@actionaid.org](mailto:Elias.Mtinda@actionaid.org)

NOTE: Deadline for receiving application is 4 days from the date of this advertisement.

Technical and financial proposals should be submitted to ActionAid Tanzania through the address below

Country Director  
ActionAid Tanzania  
Plot No. 115 Ngorongoro Street  
Mikocheni B Area  
P.O.BOX 21496  
Dar es Salaam

Or by email: [jobs.tanzania@actionaid.org](mailto:jobs.tanzania@actionaid.org); cc [Elias.Mtinda@actionaid.org](mailto:Elias.Mtinda@actionaid.org)

## **Annex 2: Checklist for Focus Group Discussions**

### **Mwongozo wa majadiliano/usaili na wakulima**

- i. Je, umeshawahi kusikia kitu kinachoitwa mpango wa wilaya wa maendeleo ya kilimo?
  - a. Kama ndio, nini uelewa wako juu ya mpango huo? Uliusikia kwa nani? Namna gani umeweza kushiriki katika mchakato wa kuandaa mpango wa wilaya wa maendeleo ya kilimo? DADPs inajumuisha vipaumbele vya kijiji chako?
  - b. Kama hapana, msaili aelezee kwa kifupi sana maana ya DADPs.
- ii. Je, ushawahi kushiriki katika mchakato wa kuibua vipaumbele vya maendeleo ya kijiji?
  - a. Kama hapana, kwa nini?
  - b. Kama ndio: Ni namna gani umeshiriki katika mchakato huo?
- iii. Katika kipindi cha miaka mitatu iliyopita, hadi sasa, je ni miradi gani ya maendeleo iliyotekelezwa/inayotekelezwa katika kijiji chako kwa kutumia fedha kutoka halmashari ya wilaya?
  - a. Nani aliibua miradi hiyo?
  - b. Jinsi gani jamii inanufaika na miradi hiyo?
- iv. Ni mbinu gani ambazo jamii inazitumia katika kukabiliana na changamoto ya mabadiliko ya tabia nchi katika kijiji chako?
  - a. Je, kuna misitu ya ambayo inahifadhiwa na jamii/kijiji? Kama ipo kwa nini?
  - b. Je, Halmashauri inatoa mchango gani katika kuendeleza jitihada hizo za wakulima?  
Je, katika kijiji hiki kuna miradi ya kukabiliana na changamoto ya tabia nchi ambayo inapata fedha kutoka wilayani? Kama ipo orodhesha.
- v. Je, kuna taasisi au mashirika ambayo yanatekeleza miradi ya kukabiliana na changamoto ya tabia nchi katika kijiji hiki? Kama ipo orodhesha mashirika hayo pamoja na aina ya miradi inayotekelezwa.

Annex 3: List of Focus Group Discussions participants

WASHIRIKI WA MAJADILIANO JUU YA MIPANGO YA MAENDELEO YA KILIMO  
WILAYA YA CHAMWINO

TAREHE: 21-05-2013

Na	Jina kamili	Anuani/Namba ya simu	Saini
1	ZEPHANIA NgunDESI	560 - 0754091804	Z. NgunDESI
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10	SAUEL L. CHINULUKA	560 0753 79 62 97	S. CHINULUKA
11	BAMORI Y. MANYANGALA	560 0759340697	B. MANYANGALA
12	SOPHIA NGUSULE	560 0766501070	S. NGUSULE
13	TELUFENA CHUYA		T. Chuya
14	Rudica magawa	560 0752219240	R. magawa
15	Janeth manyangala	560 0769362242	J. manyangala
16	Telupena Kabia	560 0766823302	T. Kabia
17	EDITHA JONASI	-	E. JONAS
18	ANJA MWALUKO	560 0754908957	A. MWALUKO
19	JOINA MARONGO	560	J. MARONGO
20	LUSI MAMUKA	560	L. MAMUKA
21	GEORGE MWALUKO	560 0763272453	G. MWALUKO
22	FRIBBE NDALIKO	560 0754767640	F. ndaliko
23	A. MANYANG'ANGA	560 0752320885	A. MANYANG'ANGA
24	AMOSY J. MUKOFY	560 0765979961	A. MUKOFY
25	MOKENI MLEWA	0752905151	M. MLEWA
26			
27			
28			
29			



Orodha ya washiriki katika majadiliano: Madadiliko ya tabia nchi na utekelezaji wa ADPS; Msowero-Kilosa tarehe 22/05/2013

Na	Jina Kamili	Kazi/shuguli	Simu	Saini
1.	PESSA KUSSABA	FIELD OFFICER (UMADDP)	0717310874	
2.	MENAS G. YAPIZA	MKULIMA	0714-182275	
3.	JAMES M. NDAGIJE	LWA UMADDP	0719-409809	
4.	RICHARD NCHIMBI	MKULIMA	0657656318	
5.	REGINA MARTIN	MKULIMA	0713624465	M. Dyeja
6.	AGNESS SHATO	MKULIMA	0653248182	A. Shato
7.	MARGRITH NCHIMBI	MKULIMA	0657317202	
8.	ZAINABU M. KISEGELE	MKULIMA	0652603271	
9.	MWANAMBI MASALA	MKULIMA	0789917849	
10.	KALULINIA IHAMISI	"		K. IHAMISI
11.	SILVIA RAZALO	MKULIMA	0654237826	S. Razalo
12.	MALIAMU SEMGWENO	MKULIMA	065735431	M. SEMGWENO
13.	MPEMWA KISONGELA	MKULIMA	0789695281	
14.	MANGULA JAPHET	AFISA Kilimo (Kasa)	065246109	
15.	ANONA M. KISEGELE	MKULIMA	0712854687	A. Kisegele
16.	MUSAZA SABIKISE	MKULIMA	0717, 45239	
17.	AGNES JOSEPH	MKULIMA	0688946176	
18.	MALIAM LEMGIOHA	MKULIMA	1	M. LEMGIOHA
19.	SAIDI ISSA	MKULIMA	078109901	
20.	JASINTA KABOGO	MKULIMA		

