



## Mission Report

# COPING WITH DROUGHT AND CLIMATE CHANGE PROJECT



## ZIMBABWE PILOT SITE REGIONAL VISIT

26 September – 1 October 2010

Environmental Management Agency

Harare

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# **1. Introduction**

The Zimbabwe Coping with Drought and Climate Change project hosted a look and learn exchange visit for project teams from Kenya, Ethiopia, Namibia and Mozambique during the period 26 September to 2 October 2010. The UNDP/GEF Regional Technical Advisor, Jessica Troni was also part of the team. The mission started with courtesy calls in Harare where delegates met with the UNDP Country Director, Ms Christine Umtoni, the Permanent Secretary in the Ministry of Environment and Natural Resources Management, Ms Florence Nhekairo and the Director General of the Environmental Management Agency (EMA), Mrs Mutsa Chasi. EMA are the project host institution in Zimbabwe. After the courtesy calls, delegates then proceeded to the project pilot site in Chiredzi district in Masvingo Province, about 570 km southeast of Harare.

This report captures the main highlights of the regional exchange visit. The report is in five parts. The first section is the introduction and background to the exchange visit, section 2 presents the organization of the tour. Results and findings of the mission are captured in section 3 and in section 4 some conclusions and recommendations from the exchange visit are captured. The last part contains annexes to the report.

## ***1.1 Background***

The Coping with Drought & Climate Change project (CWDC) comprises four Global Environment Facility (GEF) medium size projects in Ethiopia, Kenya, Mozambique and Zimbabwe with similar objectives and co-finance by the Special Climate Change Adaptation Fund. The project document was originally developed for a single full size project by the United Nations Development Programme's Drylands Development Centre (UNDP-DDC) in consultation with the proposed participating countries and the GEF. Due to a range of factors the project was divided into four projects, on the understanding that each national project would include a deliverable and budget line related to the common activities in order to maintain a higher profile than four separate pilots. Regular interaction among the project teams throughout the project cycle was deemed of particular importance to ensure synergies, efficiencies and peer-learning.

The concept of the regional learning component was initially developed as part of an event in Mombasa, Kenya, in 2006 which was attended by the national representatives, UNDP country offices (COs), UNDP-DDC, UNDP-GEF and the national project design consultants. At the meeting, the recommendation was made that coherent activities be identified, common deliverables be included and corresponding budget lines be established in the logframes of all

four national projects as the fourth of their four outcomes to allow for regional learning. The fourth outcome will allow for:

- 1) Country project teams to visit the project site(s) / communities in each of the CWDC intervention countries to exchange knowledge and experiences, as a basis for future peer assistance;
- 2) Enhanced understanding of national and district level processes and policies with respect to drought adaptation among the project teams through their exposure to success stories in drought adaptation practices and interaction with the affected communities in respective country, as a basis for informing project design/implementation in their own countries; and
- 3) Produce a guidance material on mainstreaming drought risk adaptation practices into development to be printed and distributed to / through project teams and beyond, as a tool for project implementation support as well as for advocacy.

## **2. Organization of the mission**

Planning for the regional exchange visit to Zimbabwe started in the last quarter of 2009. The report from the Kenya field site visit conducted in 2009 was a useful resource for planning the Zimbabwe exchange visit. Getting the most suitable dates for project teams from all the countries was the first task. An online tool for scheduling events, [www.doodle.com](http://www.doodle.com) was used to develop consensus around the most suitable dates for the regional visit. Although Zimbabwe would have preferred to host the event in April/May to catch crops before harvest, this was not possible because of logistical challenges in the other Coping with Drought project participating countries. Later on consensus was developed around having the visit from 27 September to 2 October 2010.

Expected outputs of the regional exchange visit to Zimbabwe were as follows:

- i. Project teams familiar with each other as a basis for future knowledge sharing and peer assistance through the project cycle.
- ii. Project teams appreciate the Zimbabwe pilot site and project implementation arrangements.
- iii. Capacity of project teams enhanced through exposure to success stories on-the-ground and knowledge sharing; potentially improving project design / implementation in the project team's respective countries

The programme for the field visit was informed by the need to achieve these outputs and the range of pilot demonstration projects in the project site and other practices in Chiredzi district

that were deemed relevant to drought risk management and climate change adaptation. The final choice of pilot sites to visit was also guided by available time, accessibility, availability of project beneficiaries and the potential of the pilot project to generate lessons for the other countries.

The project team from each of the countries comprised of focal persons from the UNDP and the host government Department, and the project manager. In the case of Namibia, the delegation was made up of two government focal persons that are most likely to be responsible for mainstreaming climate change adaptation once the project comes to an end.

The mission was organized in three parts. The first part involved courtesy calls to the UNDP Country Director and the Permanent Secretary in the Ministry of Environment and Natural Resources Management in Harare and in the project area the visit started with a courtesy call to the Chief Executive Officer of the Chiredzi Rural District Council. The second part of the visit involved a look and learn tour of Zimbabwe's pilot projects and interaction with the farmers involved in the project. Because of the travelling distances involved, two pilot projects were visited a day. The third part of the mission was a meeting of the project teams to exchange views on the visit and agree on the host of the next regional exchange visit and a tentative time line. The section that follows presents a summary of pilot projects or interventions visited and the general opinions of what could be success stories in terms of climate change adaptation practices, good practices in project implementation and areas where Zimbabwe could learn from the other countries.

## **3.0 Results and findings**

Five pilot project demonstration sites and one private sector initiative on drought risk reduction were visited. More than 120 farmers, extension workers, researchers and local leadership participated in the field visit. The subsections that follow summarize key elements of the visits.

### ***3.1 Welcome Remarks***

In her welcome remarks to the project teams, the UNDP CD observed that Zimbabwe is one of those countries in southern Africa hardest hit by impacts of drought in recent years, compounded by other socio-economic and environmental stressors. The relevance of the Coping with Drought and Climate Change project and the regional exchange visits were underscored. The fact that the exchange visits were happening during the life-time of the project offers opportunities for knowledge sharing to enrich choice of interventions and implementation arrangements in each other's countries. The Country Director, lamented the fact that, a number of good projects are being implemented by different players but in a scattered way thereby reducing impact. Project teams were challenged to understand what else was happening that is related to what the project was doing with a view to building synergies and learning from such interventions as well. Finally, the project was asked to produce an exit report of the field visit with specific recommendations to ensure that the main project objective is achieved.

The Coping with Drought and Climate Change project in Zimbabwe is hosted by the Environmental Management Agency under the Ministry of Environment and Natural Resources Management. In her remarks to the delegates, the Permanent Secretary in the Ministry implored the project teams to openly exchange views on choice of adaptation practices, implementation arrangements and the role of indigenous knowledge systems in drought risk management and climate change adaptation. The Permanent Secretary ended by challenging the project teams to invest some resources and time in documentation and developing knowledge products that can ensure that the projects influence policy.

In Chiredzi district, the Chief Executive Officer (CEO) of Chiredzi Rural District Council welcomed the project teams. In his remarks, the CEO chronicled the environmental and socio-economic challenges faced by the district. It was pointed out that the district lies in Natural Region V of the country, which is the driest agroecological region in Zimbabwe. Being in the driest region of the country, irrigation development is viewed as the only way to guarantee the district's food security. Also critical is finding suitable crop varieties and water to match the marginal climatic resources of the district. The district also faces marketing challenges in years

when harvests are good. The CEO challenged programmes such as the CwDCC to help link the district's farmers to high value markets. The tourism potential of the district was also described as the district is part of the Great Limpopo Transfrontier Park, one of the world's largest nature conservation areas. A third of the district's land area is National Parks, and for that reason the CEO wished to see the project have nature based pilot projects so that rural communities also benefit from the district's wildlife resources.

### ***3.2 Pilot projects visited***

The Zimbabwe Coping with Drought and Climate Change project is implementing a range of pilot demonstration projects in six main locations. Rainfed crops pilot demonstration projects include 8 seed-multipliers, 24 "mother" and 60 "baby" demonstration sites working where possible, with two introduced varieties and one local variety of open-pollinated maize, sorghum, pearl millet, groundnuts, cowpeas and cassava. The project team, accompanied by the CwDCC – Zimbabwe district level focal persons from the Environmental Management Agency (EMA), Agritex and the Chiredzi Research Station, visited the project intervention areas in Chiredzi district on the second day of the field trip. The aim of the field mission on day two was to acquaint the mission team with the biophysical landscape of the pilot project area, to share community experiences with drought and climate change, needs and perceptions, role of government and criteria of the project site selection.

Chiredzi District (Figure 1) is located in southeast Zimbabwe and extends over an aggregate area of 1.71 million hectares. The District experiences low and erratic rainfall and high evaporation making the district semi-arid. Thus, limited rainfall is a major constraint on dryland crop production. When considering the economic situation and livelihoods of the inhabitants of communal areas as well as the state of infrastructure in these communal areas, this district is regarded as one of the poorest in the country. It however, encompasses a wide diversity of land uses; including, Parks and Wildlife management (Gonarezhou National Park, the Great Limpopo Transfrontier Park and private ranches like the Save Valley Conservancy), large-scale commercial irrigation (Hippo Valley, Triangle and Mukwasine), communal lands, small-scale commercial farm land and resettlement areas. Crop production data from the Department of AGRITEX show that large areas are cultivated for crop production but very low yields (0.5 t/ha) are achieved in all communal areas in Chiredzi district. Further, the amount of crops produced is inadequate to meet food requirements (Socioeconomic Report, 2008). Chiredzi District is, however, well endowed with fertile soils formed on gneisses and basalts. It is not possible to take full advantage of these soils for dry-land farming because of the low rainfall. However, these soils are highly suited to irrigation and form the basis of the successful irrigated sugar estates of Triangle, Hippo Valley and Mkwesine.



Figure 1 Geographical location of Chiredzi district

### **3.2.1 Rainfed agriculture pilot project**

The first day of the field mission took the project team to WARD 10 where farmers displayed an array of crops that they had successfully grown under the project despite a ravaging dry spell. Because of unseasonable timing of the regional monitoring mission, the 23 participating farmers presented their experiences in the form of drama. The key message from the drama showed the efficacy of infield rainwater harvesting and soil moisture conservation techniques, crop type and variety at optimizing rainfed crop production in semi-arid regions. The drama also highlighted the benefits of farmer field schools, field days and strengthening the farmer-extension worker linkage. Top among the farmers' requests included: improving farmer access to high value markets for their produce, project promotional materials to promote outscaling of good practices, livestock to improve availability of draught power and other income generating projects.

### **3.2.2 Village climate monitoring**

With the objective of building local level capacities of the farming communities to cope with climate related production risks, the Zimbabwe Coping with Drought and Climate Change project set up village rainfall monitoring stations in selected villages across the project site. The project team visited one such installation at Mr Makondo's homestead. In the first phase, these sites monitored rainfall only. However, due to overwhelming response from the farmers and extension workers, mini-climate monitoring stations are being established. The underlying hypothesis was that the data collected by the extension workers and community over a period of time would help the community to develop weather-based rules of thumb for taking appropriate farm decisions based on simple weather parameters like rainfall, temperature, wind

speed and direction, relative humidity and evaporation. Integrating seasonal climate forecasts with this observed information can only strengthen adaptation strategies among farmers.



Figure 2 Farmer level rainfall monitoring in WARD 10 of Chiredzi district

### 3.2.3 Cassava pilot project

The first day of the field mission ended with a visit to a CwDCC cassava pilot project site at Mr Sahanyana's homestead in WARD 11. Cassava could be Zimbabwe's future crop for coping with drought and climate change. A technician and agronomist from Chiredzi Research Station gave the mission team an overview of cassava and why it has potential to alleviate food insecurity challenges in Chiredzi district. It was explained that Cassava is grown for its enlarged starch-filled roots, which contains nearly the maximum theoretical concentration of starch on a dry weight basis among food crops. Fresh roots contain about 30% starch and very little protein. Roots are prepared much like potato. They can be peeled and boiled, baked, or fried. Cassava can be dried to make a meal. It is not recommended to eat cassava uncooked, because of potentially toxic concentrations of cyanogenic glucosides that are reduced to innocuous levels through cooking. The largest producer of cassava is Brazil, followed by Thailand, Nigeria, Zaire and Indonesia. Production in Africa and Asia continues to increase. The world market for cassava starch and meal is however limited, due to the abundance of substitutes. Cassava also has traditional medicinal uses. As shared by one of the visitors, cassava leaves boiled and taken like tea is a remedy for anemia.

**Mr Maringa of Chiredzi Research Station had this to say on the toxicity of cassava in response to a question from one of the team members**

"Cassava is famous for the presence of free and bound cyanogenic glucosides, linamarin and lotaustralin. They are converted to HCN in the presence of linamarase, a naturally occurring enzyme in cassava. Linamarase acts on the glucosides when the cells are ruptured. All plant parts contain cyanogenic glucosides with the leaves having the highest concentrations. In the roots, the peel has a higher concentration than the interior. In the past, cassava was categorized as either sweet or bitter, signifying the absence or presence of toxic levels of cyanogenic glucosides. Sweet cultivars can produce as little as 20 mg of HCN per kg of fresh roots, while bitter ones may produce more than 50 times as much".



Figure 3 Cassava is one of most promising crops being introduced by the Zimbabwe CwDCC project.

### **3.2.4 Pilot project on captive crocodile breeding**

Day two of the regional monitoring mission took the project team to the captive crocodile breeding pilot demonstration site. The twenty-eight resettled small-holder farmers are integrating captive crocodile breeding into their small-scale irrigation scheme. The chairman of the project gave an overview of the pilot project and its' management arrangements. The visiting delegates were informed that the pilot project started with 318 hatchlings and aims to produce 1000-2000 crocodiles per year. The crocodiles are mainly bred for their skin which has a ready export market. In Zimbabwe the crocodile breeding policy includes a potential contribution to the survival of wild stocks. A number of crocodiles, equal to 5% of the eggs collected, must be made available for release into the wild when they are considered large enough to be safe from most predators. Initially this was set at three years of age and available evidence indicates that 5% of eggs collected will be far more than would have survived for three years in the wild. Such a policy could be particularly useful in restocking areas which have been depleted of crocodiles. The requirements for successful incubation are:

- a correct and constant temperature
- high humidity
- eggs correctly oriented and undisturbed.

The monitoring mission was also informed that, commercially the aim is to grow crocodiles to marketable size as quickly and cheaply as possible. Commercial rearing is therefore dependent upon a reliable supply of animal protein - a commodity often in short supply for human consumption. The project beneficiaries have started a goat rearing project and plans are at an advanced stage to start fish farming to ensure a ready supply of protein for the crocodiles. During interactions with the monitoring mission, questions were raised around the cost-benefits of crocodile breeding.



Figure 4 Captive crocodile breeding

### **3.2.5 Chilonga small-scale irrigation scheme**

Small-scale irrigation is a policy priority in Zimbabwe for rural poverty alleviation and growth as well as climate change adaptation. The rate of failure of small-scale irrigation schemes is however disheartening. The second day of the regional monitoring mission ended with a visit to the Chilonga small-scale irrigation scheme. One of the elders and beneficiary of the irrigation scheme gave a brief history of the scheme followed by the chairman's account of the organizational arrangement of the scheme, its' achievements and challenges. Apart from the main project beneficiaries, the scheme also benefits stakeholder groups including people living with HIV/AIDS, Youth, Primary School, Secondary School and extension workers. The project team was informed that the irrigation scheme started in 1963 with a membership of 56 which has since grown to 300 and with 200 hectares under irrigation. The current water pumping capacity is however not for 200 hectares resulting in reduced productivity of the scheme. The strategy of the CwD project at this irrigation scheme which had collapsed and only started functioning in October 2009 was twofold. First was to give farmers a voice to demand service from the various role players and secondly to invest in a few strategic aspects of the irrigation scheme such as augmenting water supply, addressing water use efficiency and enhancing extension support and farming skills.

### **3.2.6 Nature conservation – Exploiting ecosystem services to cope with drought**

Inhabitants of Likulu have noted that their resilience to climatic variability and change can only be sustained by obtaining their needs from a large spatial area, by treating their core resources (wild animals) very conservatively, by possession and nurturing intimate local knowledge and through high social capital in the community. A balanced exploitation strategy

in which core resources are not damaged beyond recovery remains crucial. The last day of the regional monitoring mission took the project team to Chehondo Communal Area Management Programme for Indigenous Resources (CAMPFIRE) community where the Coping with Drought project is working with the communities to strengthen the initiative as a drought coping strategy. The chairman of the CAMPFIRE programme narrated the history, success stories and challenges of the programme. It was noted that the programme started in 2004 and cash proceeds from wildlife resources have been turned into other projects including: grinding mill, kiosk, truck and schools. 305 households from three villages that are close to Gonarezhou national park are benefiting from these projects. The project spans an area of about 80-100 km by 70 km and boasts wild animals including elephants, lions, leopards, hyenas and jackals.

### **3.2.7 Interbasin water transfer**

Interbasin water transfer is well established as a strategy for addressing water scarcity where one catchment area is rich in fresh water resources and the other faces scarcity. The last day of the regional monitoring mission ended with a visit slightly out of Chiredzi town to get a feel of the massive infrastructure of canals that bring water from more than 60 km to irrigate the sugar estates. The canals represent an engineering masterpiece. The project team was informed that the investment in water transfer was prompted by recurrent droughts and the devastating impacts of the 1991/92 drought. Communities that have settled along the canals are currently illegally drawing water from the canals. The visiting team felt that as a corporate social responsibility the sugar estates should assist the drought prone communities to legally benefit from the already available water transfer infrastructure. The existing water transfer infrastructure was viewed as a good example of adaptation but requires a huge financial outlay.



**Figure 5 Part of the interbasin water transfer infrastructure in Chiredzi district.**

### **3.3 Success stories in Drought Risk Reduction practices**

This sub-section summarizes Zimbabwe pilot projects and other interventions that were identified by the visiting project teams as possible success stories some of which could be considered for upscaling through a larger programme.

#### **i. Cassava**

With growing concern that increasing frequency and severity of drought associated with climate change will lead to frequent failure in classic food staples such as maize and sorghum could cassava be the crop of the future for Zimbabwe. The “Coping Drought and Climate Change Project” worked with Chiredzi Research Station, Department of Agricultural, Technical and Extension Services (AGRITEX) and farmers have identified cassava, grown in semi-arid areas, as one of the so-called "climate ready crops" which could tackle Zimbabwe's malnutrition and food security problems. The visiting project team felt the cassava pilot demonstration project was a success and had huge potential as an adaptation practice. Cassava is highly drought tolerant, yields 4-5 tons of tuberous material per hectare under marginal management and can yield in excess of 10 tons/ha under good management. Tubers can stay in the ground unharvested for periods up to two years making an excellent crop choice to improve household food security in drought prone regions. The choice of cassava was informed by available knowledge from the research conducted at the Chiredzi Research Station and farmer consultations conducted by the project team. The presence of an agricultural research station in the pilot project area greatly assisted the Zimbabwe project team in identifying technologies that had potential to succeed in drought risk reduction in the district.

#### **ii. Pigeon Pea**

Pigeon Pea is a short-lived leguminous perennial shrub which lives for about five years and yields up to 2 tons/ha under low rainfall conditions making it a potential crop of choice under increasingly dry conditions. It's a food crop that provides good protein. You can use the green peas like fresh peas, and the dried peas like any other dried peas or beans. The crop produces its own nitrogen so farmers do not need to apply fertilizers, seen as expensive by most farmers in rural Zimbabwe who tend to be poor smallholders. The nitrogen remains in the soil even after the crop is harvested, making it valuable to places with nutrient-poor soils. Thus apart from its potential to guarantee food security, the crop also offers soil conservation benefits because of its nitrogen fixation properties. Pigeon pea is drought-tolerant, can survive shifting weather patterns, especially as there are varieties that can produce yields within 90 days and without requiring abundant rainfall. Most varieties are not frost tolerant though. Once established, the pigeon pea self seed prolifically.

iii. Water conservation technologies in rainfed agriculture

Water is the greatest constraint on rainfed agriculture production in drylands. The project teamed up with Chiredzi Research Station and Agritex to demonstrate the effectiveness of water conservation techniques in enhancing the return on the limited rainfall received in the district. The water conservation techniques that were demonstrated with farmers' participation at 92 sites included: "zai pits", tied ridges and tied deep plough furrows. These tillage practices were compared against the farmers' traditional flat tillage. Farmers' own testimonies showed that available water conservation practices are a good drought risk management strategy and can be promoted at very little cost. The choice of water conservation integrated with crop and variety selection for drought tolerance was viewed by the project team and farmers as a good choice of adaptation practice.

iv. Nature conservation

The project team witnessed a successful nature conservation project involving rural communities. About 305 households have organized themselves with the support of the Rural District Council and the National Communal Area Management Programme for Indigenous Resources (CAMPFIRE) to protect a local wilderness for the benefit of wildlife and inhabitants of the area. The wilderness area stretches over an area of about 5600 km<sup>2</sup>, borders Gonarezhou National Park and enjoys relatively undisturbed woodland which provides a habitat to elephants, lions, leopard, hyena, buffalo, jackals, duiker, kudu and impala. One licensed professional hunter contracted by the Chiredzi RDC hunts in the community's nature conservation area for a gazette fee.

The annual hunting quota for the area is determined by the Zimbabwe Parks and Wildlife Management Authority to ensure sustainable utilization of the resource. Proceeds from the hunting are shared between the community (50%), the Rural District Council (46%) and the CAMPFIRE association (4%). The community showcased grinding mills, a kiosk, a truck and schools that have resulted from proceeds of their nature conservation efforts. In some years, households receive dividends from the wildlife and profits from the other associated projects. The entry point for the Coping with Drought Project was to strengthen this community initiative building up on what communities know best as an alternative landuse option for these drylands. As a result of the Coping with Drought, fire management and nature conservation activities have been strengthened through better training, organization and tools.

v. Use of climate information

All rural farmers face the same set of management decisions on how to allocate limited resources among crop production, livestock production and off-farm employment. Overall

productivity is determined to a large extent by how effectively farmers make use of limited amounts of water. Use of climate information could help farmers make more informed decisions at critical decision points in the crop and livestock production cycles. Project teams witnessed efforts by the Zimbabwe project team to promote use of climate information. The project is establishing village level climate monitoring stations and training extension workers and farmers on how to make rules of thumb from the recorded data. The project has also trained extension workers in the interpretation and use of medium-range and seasonal climate outlooks. Observed rainfall data used in conjunction with the medium-range (7-14 days) outlook is assisting farmers to make informed decisions about the timing of planting to minimise emergence failure and costly replanting. Farmers are also finding medium range outlooks useful in managing weed management operations. Because of the high temperature regime in Chiredzi district, farmers use the medium range forecast to determine whether or not to use a cultivator for weeding. Using a cultivator increases chances of evaporative soil water loss. The seasonal forecast was being used mostly to vary crop density.

vi. Interbasin Water Transfer

Interbasin water transfers are not a new phenomenon. Just like dams, these are often touted as a quick fix to water demand problems. The southeast lowveld inter-basin water transfer is a multimillion dollar project implemented by the private sector to save the sugar industry in Chiredzi district from collapse following years of recurrent droughts and the devastating impact of the 1991-92 drought. The canals that bring water to the lowveld pass through drought prone communities. The existence of this infrastructure offers opportunities for other vulnerable communities to improve their livelihoods and reduce their vulnerability to climate change impacts through organized and negotiated utilization of infrastructure, without compromising the sugar industry.

### **3.4 Good practices from Coping with Drought: Zimbabwe**

a. Selection of pilot sites

The project team felt that the approach used by Zimbabwe to **identify pilot sites** represented good practice as there was clear evidence of exposure and vulnerability to drought and climate change impacts on the ground and from farmers' own testimonies. Both **biophysical and community participatory approaches** were used by the project to identify vulnerability "hot-spots" and the drivers of vulnerability.

b. Selection of pilot adaptive strategies

Zimbabwe's **choice of adaptation practices** was described by the visiting project teams as excellent. A thorough context analysis, consultations with farmers and government technical partners was instrumental in the identification of relevant adaptation options for the district.

c. Project implementation arrangements

- The Zimbabwe project shows clear **coordination and integration of all role players** from the national, provincial, district to the village level. This was identified by visiting project teams as best practice. The host institution, the Environmental Management Agency has a project focal person at the national, provincial and district levels that assist the Project Management Unit in coordinating the activities of the project with other relevant role players. This arrangement has worked very well for the project particularly at district and village levels. The commitment shown by government to the project was impressive.
- The project's **choice of strategic partners** was also highlighted as a critical success factor. For pilot projects on crops, the project is working with an agronomy research institute that has worked in the project area for years and is an obvious source of vital insights on technologies that have potential to succeed. The choice of Agritex extension workers made farmer mobilization and supervision easier and helps to build the foundation for sustainability. For Natural Resources Management and captive wildlife breeding, the project is working with Parks and Wildlife Management Authority.
- Evidence on the ground showed strong **stakeholder involvement** particularly in the project pilot sites. Farmers clearly showed that they owned the projects and this is a critical success factor and base for sustainability.
- There was strong evidence of the Zimbabwe Project Management Unit having created a good rapport with project partners including project beneficiaries. Connecting with all role players is a critical project success factor and requires good interpersonal skills.

d. Making huge impact with limited resources

A range of cutting edge studies and pilot demonstration projects were done with limited human and financial resources. This was achieved through the following strategies:

- **Nesting activities within existing successful initiatives**, as was the case for the Likulu Nature Conservation pilot project.
- Working on projects that already have a starting point such as infrastructure and organizational structures.

- **Giving farmers a voice** to demand services from those institutions that have a constitutional/legal obligation to provide the service.
- **Not giving too much support** to project beneficiaries right from start but rather playing a facilitative role and encouraging farmers to be self-reliant. This strategy helps to address issues of sustainability of an intervention.
- **Using knowledge products, such as posters and booklets** to educate and influence practices. Farmers indicated that simple posters and promotional regalia can go a long way in influencing practices at low cost to a project.

e. Use of climate information

Climate change is dynamic and empowering farmers to objectively monitor their climate at village level was identified by the project teams as good practice. The project has also done studies to tailor current climate forecast products to Chiredzi smallholder farmers' requirements, with the possibility of integrating indigenous knowledge systems.

f. Knowledge products and promotional material

The knowledge and project promotional materials produced by the Zimbabwe project were identified as a step in the right direction in promoting the project and offered good lessons to the other countries.

### **3.5 Gaps**

This sub-section captures some of the views expressed by the regional monitoring team in terms of areas that may need attention in some of the interventions.

- Irrigation
  - The capacity of extension workers may need strengthening to address the low productivity of the irrigation scheme.
  - For every crop grown on the scheme, the extension workers in collaboration with Chiredzi Research Station should have pilot demonstration sites to facilitate farmer learning of best practice.
  - The irrigation scheme should consider value addition on some of its horticulture products.
  - Integrating fish farming into the project might improve the sustainability of the irrigation scheme.

- Captive crocodile breeding
  - Whereas crocodile breeding could be a good idea of diversifying livelihoods, the cost involved can be prohibitive. It is essential therefore, to make sure that a proper cost-benefit analysis is carried out to guide practice.
  
- Capacity of Extension Workers
  - Strengthening the capacity of extension workers in terms of knowledge, skills and tools to enable them to carry out their duties was identified as key issue for the sustainability of the interventions.
  
- Policy level awareness
  - It was felt that each country should organize a within country tour for policy makers aimed at making them appreciate the challenges faced by farmers living in drylands and to gain an insight into promising technologies to address the challenges, and share ideas on policy level support required to sustain farmers' interest in adopting practices that increase their resilience to climate variability and change.
  
- Scale of interventions
  - Because of the pilot nature of the Coping with Drought project, it was felt that the scale of some of the interventions was rather limited to make a major impact. This gap calls for formulation of a bigger programme to upscale promising adaptation practices and remove barriers to their replication.
  
- Marketing
  - In almost all interactions with the farmers, the issue of lack of access to markets was brought about. The Coping with Drought project may need to find an innovative way to address this gap.
  
- Post-harvest losses
  - Post harvest losses were identified by the regional team as a major issue in the project area, attributed to pests, poor post-harvest management practices and limited investment in post-harvest loss management. It was strongly felt that the Coping with Drought project could address this aspect in all the countries.

## 4.0 Conclusions and recommendations

This report has attempted to document major activities carried out during the Coping with Drought and Climate Change regional exchange visit to Zimbabwe from 27 September to 1 October 2010. The Regional Exchange visit to Zimbabwe by project teams from Ethiopia, Kenya, Mozambique and Namibia, and the UNDP/GEF Regional Technical Advisor provided a platform for networking, learning and knowledge sharing across the five project countries.

With the Coping with Drought and Climate Change project implementation in its early stages in Ethiopia, Kenya and Mozambique there was a lot for the project teams to learn from Zimbabwe in terms of pilot project implementation arrangements, selection of pilot sites, identification of adaptation practices, development of knowledge and project public relations materials and possible role of seasonal climate information. Five pilot projects spanning rainfed agriculture, irrigation, nature conservation, captive wildlife breeding and village level climate monitoring were visited.

From the feedback obtained during the regional monitoring visit it can be concluded that the mission was a major success. Delegates also concluded that the Zimbabwe project presented a number of best practices such as inclusive pilot projects implementation arrangements, knowledge based selection of vulnerability “hot-spots” and adaptation practices for pilot demonstration projects, making a huge impact from limited resources, knowledge and project public relations materials and stakeholder involvement.

### Recommendations

Recommendation 1: Recognizing great efforts made by the Zimbabwe project team to introduce cassava as a climate change adaptation strategy; noting the success of the pilot demonstration projects in Chiredzi district; appreciating the potential of cassava to alleviate drought induced food insecurity challenges in Zimbabwe; and recognizing the experience Mozambican farmers have the production and use of cassava in their food basket and observing that the Mozambican Coping with Drought pilot site shares a common border with the Zimbabwe pilot site, the project team recommended that:

- *An exchange visit for farmers from Chiredzi district to Mozambique be organized and implemented in 2011 to share knowledge on cassava production and processing, as well as forage management for livestock production. In return Mozambique would want to visit Zimbabwe to learn more on nature conservation since the country’s rural areas are facing massive deforestation associated with the charcoal industry.*

Recommendation 2: Noting that Kenya and Zimbabwe hosted the Regional Exchange Visit in 2009 and 2010 respectively; recognizing challenges faced by Ethiopia and Mozambique to roll out the project, and also appreciating the need to maintain continuity in the implementation of the regional component, the project team recommended that:

- *Mozambique hosts the 2011 edition of the regional exchange visit around the first week of October.*

Recommendation 3: Noting the great experiences and lessons learned during the look and learn regional visit; recognizing the great potential of some of the pilot interventions as adaptation strategies; and recognizing the need for upscaling of potential success stories through policy influence, the project team recommended that:

- *Similar look and learn visits be organized for policy makers for each country, as a way to raise awareness among decision and policy makers on the plight of farmers and for them to appreciate the possible role that social systems can play to buffer humans from the vagaries of natural systems by generating incentives for the application of appropriate technical systems.*



## ***Annex 1: Field visit programme***

### **DAY 1: Sunday, 26 September 2010**

- Arrival of foreign visitors
- Transfers - A CwD official will meet delegates on arrival and arrange transfer to hotel

### **DAY 2: Monday, 27 September 2010**

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| <b>AM</b> | <ul style="list-style-type: none"> <li>- Courtesy calls:               <ul style="list-style-type: none"> <li>• Ministry of Environment &amp; Tourism, Permanent Secretary</li> <li>• UNDP Country Director</li> </ul> </li> </ul> |
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Lunch – before departure

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| <b>PM</b> | <ul style="list-style-type: none"> <li>- Depart for Chiredzi</li> <li>- Delegates stay at: Triangle Country Club, and Nesbit Arms Hotel</li> </ul> |
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### **DAY 3: Tuesday, 28 September 2010**

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| <b>AM</b> | <p><b>COURTESY CALL:</b> CHIREDDI RURAL DISTRICT COUNCIL (08:30-9:00)</p> <p><b>VISIT FARMERS IN WARD 10</b></p> <p><b>OBJECTIVE 1:</b> To get firsthand accounts from farmers, extension workers and agronomists from the local research station on drought impacts in the area and how various soil moisture conservation techniques being piloted by the project integrated with crop variety selection performed during the 2009-10 rainfall season. What have been the impacts on their lives? Has this helped them better manage drought risk? What has worked / not and why? How would they advise other communities interested in similar systems?</p> <p><b>Objective 2:</b> To get farmers' and extension workers' accounts on usefulness of local climate monitoring and prediction information being introduced by the project in their farming operations.</p> <p><b>Objective 3:</b> To share with farmers Indigenous knowledge systems for keeping livestock through drought periods.</p> |
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**Lunch – Pre-packed**

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| <b>PM</b> | <p><b>VISIT CASSAVA PILOT SITE IN WARD 11</b></p> <p><b>OBJECTIVE:</b> To witness how the broadening of the crop mix through introduction of new crops can reduce drought risk and contribute towards climate change adaptation</p> |
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	in semi-arid regions of the country.
<b>DAY 4: Wednesday, 29 September 2010</b>	
<b>AM</b>	<b>VISIT PILOT PROJECTS IN WARD 7 – MEET FARMERS INVOLVED CROCODILE BREEDING</b>
	<b>Objective:</b> To witness captive crocodile breeding by vulnerable men and women small-holder farmers to capture opportunities brought by warmer temperatures and reduce exposure to risks associated with drought.
<b>Lunch – Pre-packed</b>	
<b>PM</b>	<p><b>i. Visit Chilonga Irrigation Scheme</b></p> <p><b>Objective:</b> To appreciate the challenges of small-scale irrigation in semi-arid regions as an adaptation strategy.</p> <p><b>ii. PROJECT MEETING – (18:30 – 20:00)</b></p> <p><b>Objective:</b> To share lessons across the project teams.</p>
<b>DAY 5: Thursday, 30 September 2010</b>	
<b>AM</b>	<b>VISIT LIKULU WILDERNESS PILOT SITE – WARD 8</b>
	<p><b>OBJECTIVE(S):</b> to gain an overview of the physical landscape, community stories and perceptions on drought and climate change impacts, role of government, civil society, rationale for project design at this project site.</p> <p>To learn how Community Natural Resources Management and sustainable utilization can reduce impacts of drought and improve rural livelihoods. This will also give an opportunity to share lessons on governance arrangements for sharing benefits and how the CwD project is working with communities to strengthen NRM as an alternative livelihood strategy in this inherently dry region.</p>
<b>PM</b>	<b>VISIT INTERBASIN WATER TRANSFER SITE</b>
	<b>Objective:</b> To appreciate the potential role of the private sector in climate change adaptation. The Lowveld inter-basin water transfer project offers a practical example of private sector investment to reduce impacts of drought on agriculture. There are also lessons to be drawn on potential conflicts that can arise as the water is conveyed

	through water scarce regions where small-holder farmers are vulnerable to impacts of drought.
<b>DAY 6: Friday, 1 October 2010</b>	
<b>AM</b>	<b>Delegates Return to Harare (Overnight stay in Harare)</b>
<b>DAY 7: Saturday, 2 October 2010</b>	
	<b>Delegates Depart Harare</b>

## ***Annex 2: List of participants***

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