YEN- ZRBI (Kazungula & Sesheke) Field Visit Report

30th August - 4th September, 2013
Acknowledgement

Youth Environment Network (YEN) - Zambia is thankful to the Zambia Red Cross Society (ZRCS) for the existing collaboration in the implementation of the Zambezi River Basin Initiative (ZRBI) in a quest to make vulnerable communities in the Zambezi river basin become more resilient to climate hazards and disasters.

Furthermore, we wish to express our gratitude to the Zambia Red Cross Society (ZRCS) members of staff more especially Mr. W. Mudenda, Mr. Mutambwa Moono and Mr. Simon Moosho for the logistical support rendered during the familisation visit to Kazungula and Sesheke in the Southern Province of Zambia.

Last but not the least, we are also thankful to the schools, farmers, Forestry Department and other Government officers both in Sesheke and Kazungula who provided an overview of the general baseline information for the two districts.
1.0 INTRODUCTION

The Zambian economy is predominantly based on the exploitation of the country’s natural resources. The adverse effects of climate conditions to which the country is exposed affect these resources more especially in the low lying areas like the Zambezi flood plains. Climate-induced changes to physical and biological systems are already being felt and exerting considerable stress on the Zambezi river basin communities (i.e. Kazungula and Sesheke) thereby threatening their survival and livelihood. Already, the sensitive sectors - agriculture and food security, wildlife, forestry, water and energy, and human health have been adversely affected by climate change, thereby significantly affecting the economic, social, and environmental dimensions of our national sustainable development (NAPA, 2007). The problem has been synergistically worsened by lack of knowledge in communities and school-going children in community-based mitigation and adaptation of the climate change impacts.

For this reason, Youth Environment network (YEN) – Zambia in collaboration with the Zambia Red Cross Society embarked on the initial familialisation and need assessment visit to collect baseline data pertaining to community’s perception of having a more climate resilient in Kazungula and Sesheke.

This exercise enabled us to identify the existing gaps in the communities and schools with respect to climate change mitigation and adaptation. Identification of such gaps will enable us to understand the communities and schools better, and come up with meaningful materials on ‘climate changes basics and tree planting’ which will include brochures, training manual and posters.

1.1 Main Objective

To have a detailed understanding the communities and schools in regards to community-based climate change mitigation and adaptation.
1.2 Specific Objectives

Specific objective of the field visits included the following:

- To determine the level of knowledge of the schools, stakeholders, farmers and communities in community-based climate change mitigation and adaptation.
- To enhance nutritional supplements from fruit trees amongst the Schools and Communities.
- To actively engage pupils and communities in tree planting as a community based adoption response to climate change.
- To access community willingness to actively engage in community-based climate change mitigation and adaptation.
- To identify the factors that will lead to community ownership of the activity

2.0 METHODOLOGY

2.1 Introduction

The execution of this study involves a number of activities. The designed methodology predominantly addressed aspects of data collection and analysis. A summary description of the approach that was employed is presented in the section below.

2.2 Literature Review / Desk study

Literature review /desk study comprised of the most important activities in this study and was the main source of information to develop a strategy for the execution of the study. This involved researching and extracting of relevant information from the publications, documents and the internet on other examples of climate change adaptation.

2.3 Field Data Collection

The field data collection was through both qualitative and quantitative methods of research. Qualitative methods involved defining working terminologies at the extent to which the study was
conducted, designing entry strategies into the communities for the collection of data and identifying sources of the required data. Quantitative methods involved conducting surveys and questionnaires based on interviews.

2.4 **Nature and Source of Data**

The study areas are as defined under, for each study area data was collected at the household, communities, farmers and other various stakeholders. Demographic and social economic data collection was obtained from the central statistical office (CSO, 2010) report.

2.5 **Sampling Technique**

The selection of the information from the Communities, Schools, Farmers and Stakeholders was quantitatively by narrowing down the study areas to a manageable but representative sample; including the selection of the communities using purposive sampling method. For all data collection activities, YEN –Zambia worked closely with the Zambia Red Cross Society- Kazungula and Sesheke office and community structures. Appointments with relevant stakeholder for this assignment were made possible through Zambia Red Cross Society- Kazungula and Sesheke offices.

2.6 **Data Collection techniques**

This study employed participatory approach as the main source of the primary data validated in order to have an understanding of the community perception on climate change mitigation and adaptation. Key participatory techniques envisaged include round table discussion, in a deeper interview with community members and leaders (farmers), Participatory Rural Appraisals (PRA), and key information interview with stakeholders. A participatory method was used to validate the data obtained from secondary source through triangulation.

The study was conducting in both western and southern province (Kazungula district and Sesheke district) while concentrating areas that fall within the project target.

Data was collected from the following areas:
<table>
<thead>
<tr>
<th>No</th>
<th>Name of the district</th>
<th>Name / Places</th>
<th>Number of Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kazungula</td>
<td>Mambova</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Sesheke</td>
<td>Ngambwe / Lusu</td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 1: Mathews Kalabo and Dennis Mubangalala, Yen-Zambia member of staff getting ready to go in the field.

3.0 RESULTS

The study was conducted in both Kazungula and Sesheke districts. Whilst in Kazungula particularly mambova area, we sampled, Mr. Mulilo Sikute who is one of long serving / leading farmers in area of Conservation Agriculture. Mr. Mulilo is a teacher by profession from Livingstone and after retirement, the leading farmer involved himself in conservation agriculture. According to his experience, agriculture is doing well in the area despite challenges despite the area being fertile. These challenges include the unpredictable rainfall season meaning the rainfall patterns have been compromised. Culturally and traditionally the signs to predict the starting of a good season and a
favourable weather for agriculture have ceased. In the early of a month of October culturally and traditionally speaking, a flying bird called *vimbe* would normally fly all the time symbolizing the preparation of the rains. After that comes the *chivunangombe* appearing huge showing which calls for farmers to prepare their land for cultivation. The former deputy teacher also pointed out another challenge which is the instabilities of groundwater. He mentioned that the area had nothing to hold water (e.g. a dam) which makes it difficult to rely on other agricultural activities after the rain season. In addition, flash floods in rain season, impassable feeder roads and droughts on the other hand also have become big challenge in conservation agriculture.

**Fig 3: Interview with one of the Lead Farmer in Mambova (Kazungula District)**

According to the respondents, in mambova there had been an improvement in agricultural practice because of fertile soil for crops like Sorghum, Groundnuts, and Panna Seed especially in droughts. The leading farmer suggested Groundnuts to be a number one crop when it comes
YEN - Zambezi River Basin Initiative (ZRBI): Climate change sensitisation & tree planting project component

agriculture with drought resistance sorghum is very good but it has no market for industrial purpose and it is good for consumption. Panna crops also have advantages but attract insects and birds. The place is also good for an animal raring which is another source of livelihood for people in Kazungula. Among the animal reared are cattle, goats and chicken despite the periodic disease out-breaks to animals. The lead farmer expressed his displeasure for giving little/no attention to the problem from 1997 to 2004 and since there has been animal out-breaks among Carnival Bovine Piural (CBP) which is an out-break of lung cancer and army worms which were spotted in the early 1997/1998 farming seasons.
Figure 4: Animal rearing one of the Sources of livelihood.

The former Deputy Head teacher suggested the creation of dams to hold water, work on the road networks as to be created and tar them, adopted sorghum to be best crop for drought resistance crop activities, re-stocking should be much emphasised, creation of ballows for irrigation and afforestation.

Furthermore, he recommended that there is need for more sensitisations in communities and schools in order for them to understand the changing weather patterns and what they can do about it. He added that more emphasis should be placed on training youths in afforestation and
other climate resilient activities as the saying goes youths are future leaders, hence forth need a lot of training especially in areas of fish farming, banana plantation and crop farming. Mopani tree is recommended for drought resistance.

Whilst in mambova we managed to interview Mr. Martin Sinendende, Mr. Crispin Mabuku and Mr. Mabuku senior, who are both beneficiaries for Zambia Red Cross Society for conservation agriculture. They said beneficiaries are into gardening as one of the source of livelihood, asked what challenges do they face, the farmers attributed to some among: low price, marketing and long distance, floods, unfavorable weather, transport and insects. Despite the challenges the farmers pointed out the most grown products to be cassava, rape, cabbage and tomatoes. The farmers don’t know what to do with the challenge of insects because they damage the crops and one of the common insects are the aphids. Furthermore, transportation is a big challenge to the farmers of Mambova because their catchments areas for market are Sesheke, Kazungula, mwandi or Livingstone.
Mr. Bagley Kubika is another beneficiary for Zambia Red Cross Society who has been practicing conservation agriculture and preferred to practice pot holing than ripping. After a meeting with him we proceeded to another area called Ngambwe particularly Lusu area where we met Mr. Kampamba, Mr. Lyoke and Mr. Kamitondo Muyongo. The attributes from this beneficiary are of the essence to have more training so that sustainability of knowledge and activity based projects are emphasised more especially to the youth and school pupils.
There is a process of resettlement in Kazungula due to floods as reported by one of the forestry department officer. The process has always been received with mixed feelings by the community members because generally the community members embrace fishing as their source of livelihood and if they are taken on other place which is an upper land they do much complain due to them not accessing fishing activities. The victims end up practicing charcoal burning as an alternative source of living which brings great impacts to the environment. Deforestation is growing at a faster rate in the area. The department of forestry is now embarking on alternative measurers for the community members as a source of livelihood like, Bee-keeping through honey production. The most recommended tree is Moringa for afforestation and in schools the department is encouraging to plant fruit trees like guavas, mangoes and Pawpaw. Mangoes and Paw paws are preferred due to its adaptation and resilience to insects.
Figure 7: A farmer drawing water from a River to water the Garden.

YEN Zambia is anticipating to successfully undertake the project based on the following assumptions of strength and opportunities;

- The organisation has a track record in implementing project environmental, climate change, waste management as well as water and sanitation.
- YEN established expertise and partner based.
- Presence of cooperating partner and other government programmes such as the forestry department, ministry of health and education and district councils.

4.0 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Women are particularly vulnerable to climate change because they are more prone to the adverse impacts from climate change, their limited adaptive capacities arise from prevailing social inequalities and ascribed social and economic that manifest in difference right, access to information, lack of employment and equal resources. Further change on climate usually impacts on sectors that are traditionally associated with women, such as paddy cultivation and fishing. The research showed that climate change has adverse impact on fishing, Agricultures as the sea level rises and enters into the fresh water system making fishing difficult. Further in extreme events more
community members, deaths are observed for their inability to swim or run or lack of strength to withstand physically demanding situation such as floods, from a long perspective this will have serious implication for the community member especially youths and women who end up spending more time on tasks that re-inforces stereotype gender roles. This (youth and women) are faced by a situation where their ability to adapt is a low (due to a number of pre-existing factors) but the share of the adoption burden falling disproportionately on them this makes the consideration of the impacts of climate change imperative.

4.2 Recommendation

i. Enhanced access to climate change information for community members more especially women and youths;

ii. More training to women and youths (key agent of adaptation and mitigation to climate change);

iii. Capacity building for both farmers and stakeholders in pest management;

iv. More training and sensitisation for youths especially in schools in climate change basics, afforestation, establishment of tree nurseries;
5.0 Proposed Schedule

<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Year 1 (2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sept</td>
</tr>
<tr>
<td>1</td>
<td>ZRBI familiarisation project site visit</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Formulation of the Climate change and Tree Planting manual</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training of the teachers and ZRCS community volunteers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Plan and undertake public awareness campaigns in schools</td>
<td>Wk 2,3</td>
</tr>
<tr>
<td>5</td>
<td>Setting-up of tree nurseries in schools</td>
<td></td>
</tr>
</tbody>
</table>