AUDIOVISUAL TOOLS FOR COMMUNITY-BASED ADAPTATION:

Bridging the Malawi Red Cross and Meteorological Services

Final Report for Malawi

Executive Summary

Malawi is a land-locked country located in south-east Africa lying along a sector of the East African Rift Valley between latitudes 9o and 18o S, and longitudes 33o and 36o E. It is boarded by Tanzania in the north and north-east, Zambia in the west, and Mozambique in the south and east. It has a population of about 13.0 million people (NSO, 2008), the majority of whom (>85%) reside in rural areas and are poor, deriving their livelihoods from small land holdings of between 1.0 and 2.0 ha per farm family of an average of five people.

Malawi has been experiencing a number of adverse climatic hazards over the last decade. The most serious have been dry spells, seasonal droughts, intense rainfall, riverine floods and flush floods. Some of these, especially droughts and floods, have increased in frequency, intensity and magnitude over the last decade and have adversely impacted on food and water security, water quality, energy and the sustainable livelihoods of rural communities. It is against the background of rural communities' vulnerability to the adverse impacts of climate change and extreme weather events that Malawi decided to pilot a climate change intervention with emphasis on enhancing adaptation strategies.

This report describes the experiences and the preliminary results of a participatory video project for promoting community-based adaptation in rural Malawi. Through collaboration between the Red Cross and the Meteorological Services, subsistence farmers learned about climate change and how to respond to its impacts. Then they learned how to operate a video camera, develop a script and make a film showing examples of the adaptation practices they have been developing. The film was shown in neighboring villages, and its effect was evaluated through surveys and video interviews. The project shows that it is feasible for vulnerable people to make an educational film reflecting their own perspective, and that the people that watched it have learned the main messages. Thus participatory video is a suitable tool for up-scaling successful community-based adaptive measures.

Purpose:

Strengthen capacity for adaptation in rural Malawi through improved communication and use of climate predictions.

Objectives:

- Develop, test and disseminate audiovisual tools to assist climate adaptation.
- Accelerate and enhance training in risk communication, adaptation strategies and facilitation of participatory processes at the community level.
- Strengthen capacity of communities to adapt to climate change.
- Equip the Malawi Red Cross Society with mobile video projection units for improved dissemination of information among vulnerable communities.
- Create a sustainable partnership between the Malawi Meteorological Service and the Malawi Red Cross Society for improved disaster management through better communication and utilization of weather and climate predictions.

Targeted sector or system of the project:

Subsistence farming

Targeted decision makers/actors:

1. **Smallholder farmers**
Through the VCA the rural communities were involved in the identification and analysis of climate-related threats and opportunities. Participatory workshops on climate predictions helped the design of the best ways to promote communication and use of forecasts among smallholder farmers. Participatory video techniques were also used to develop storyboards and footage for the audiovisual tools. Rural communities were therefore engaged not only as recipients of information but also in the design, development, and testing of the communication approach.

2. **Malawi Red Cross Society staff and volunteers**
Selected individuals from MRCS headquarters and the pilot district received intense training on climate predictions and climate adaptation in order to be better equipped to support the design and implementation of audiovisual tools. This ensured the mainstreaming of proposed adaptation options into regular MRCS programs such as disaster management and food security.

3. **MetMalawi personnel**
The Climate experts played a key role in the formulation of training videos. Through active engagement with the Red Cross and farming communities during participatory processes, they were able to learn on-site about technical communication challenges and options, collaboratively developing strategies to overcome cognitive and other barriers. As a result, MetMalawi managed to produce tailor made predictions and warnings and were communicated directly with MRCS Disaster Management officers (who in turn linked with District action teams to pass on information to volunteers on the ground and then to the targeted communities).

Key words

Community-based adaptation, participatory video, communication, Malawi, climate change adaptation, subsistence farmers, climate risk management.

1. Background: Addressing climate change in rural Malawi

Need for Adaptation to Climate Change and Variability

As experienced over the last decade or two, climate change, through changes in climatic patterns and an increase in extremes, has resulted in serious impacts on Malawi, including loss of life during famines after crops failed due to drought, loss of life due to flooding and landslides, and serious economic hardships when substantial resources were diverted to address climate-related disasters. Given Malawi's extremely low economic capacity to cope with climate change, there is a pressing need to plan and implement urgent interventions immediately, so future adverse effects of climate change will be minimized.

The vast majority of subsistence farmers lack access to useful and comprehensible information about the changing climate and possible adaptive measures that could help reduce the negative impacts.

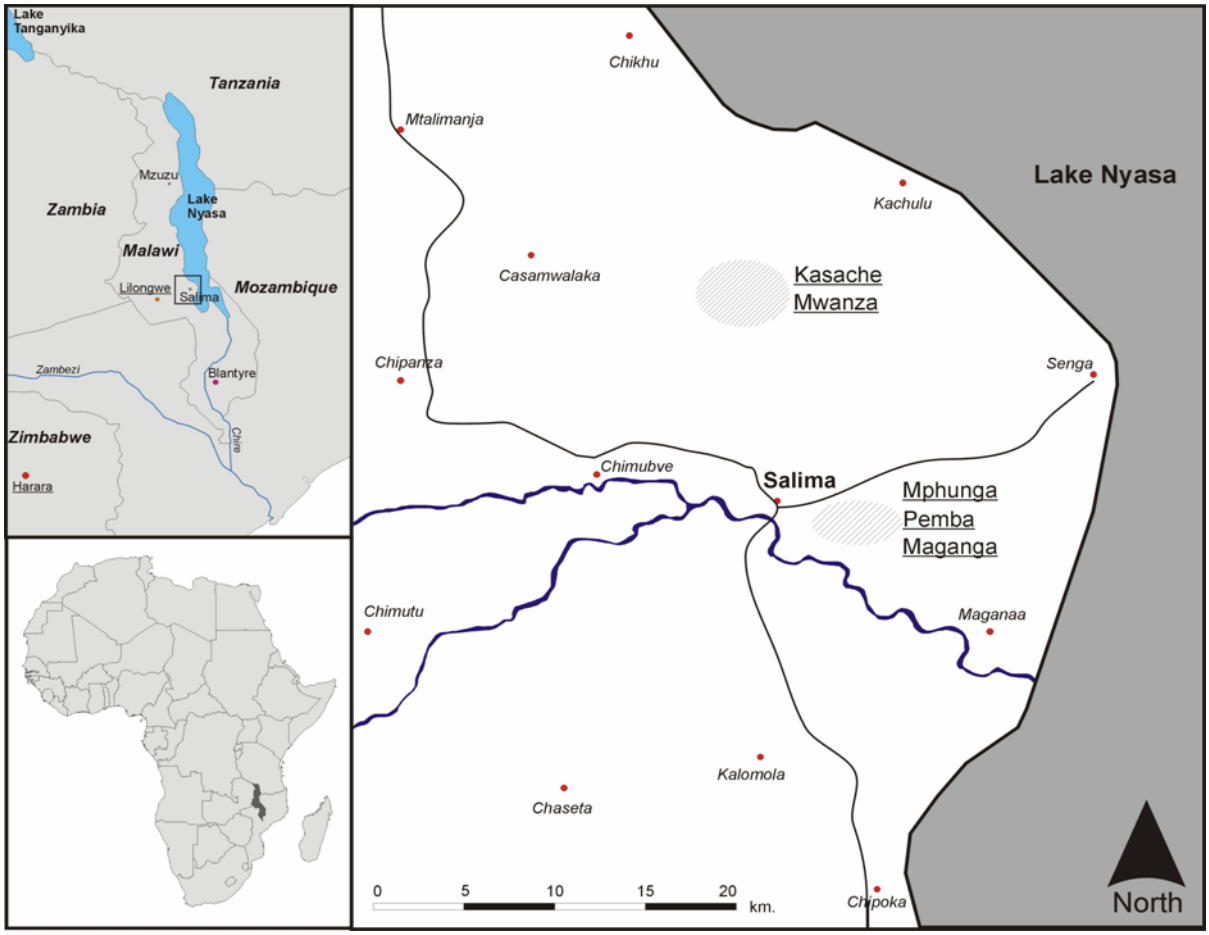

Figure 1: Location of the research areas in Malawi, indicated as shaded circles North and East of Salima town.

It is against this background of rural communities' vulnerability to the adverse impacts of climate change and extreme weather events that Malawi Red Cross Society received a grant to develop video tools for promoting climate change adaptation from the Advancing Capacity for Climate Change Adaptation project (ACCCA). The proposal was formulated and implemented in collaboration with the Red Cross / Red Crescent Climate Centre and the Malawi Meteorological Service. Over a period of 18 months, this project aimed to convene experts and stakeholders, hold a series of workshops with subsistence farmers to discuss climate change and what could be done about it, support implementation of local adaptation measures, and produce video tools to scale up adaptation. Table 1 outlines the key steps of the project.

Table 1: Outline of the Malawi project on video tools for adaptation to climate change

Month	Activity
1	Inception workshop for Red Cross, Meteorological Service and other participating institutions
2-12	Series of participatory workshops at Mphunga on climate risks (figure 3) • observed and projected impacts • exploration of possible adaptation measures
6-15	Series of participatory workshops at Mphunga on participatory video • farmers learn to use camera equipment • farmers learn to formulate a script
9-15	Implementation of community-level adaptation measures
16	Participatory video work on climate adaptation measures (figure 15) • selection of examples for video and formulation of narrative • filming adaptation practices (figure 4 and 5) • video editing (figure 6)
16	Development of survey instruments to assess impact of video as dissemination tool
17	Screening in neighboring villages and survey of participating farmers (figure 7 and 8)
17-18	• Screening and reporting of results at Mphunga • Questionnaire and video interviews of Mphunga filmmakers (figures 13 and 14) • Analysis and reporting

Training of Red Cross staff and volunteers on climate predictions and adaptation
Selected individuals from MRCS headquarters and the pilot district initially received intense training to enable them support the design of audiovisual tools.
The training was executed by MetMalawi's senior meteorologist office, with participation of the MRCS disaster management officer and support from the RC / RC Climate Centre's technical adviser.

The main assumption for this project was that audio-visual communications can play a stronger role in community-based climate change adaptation in two ways; to help transferring local adaptation experiences between vulnerable communities, and to contribute to bridge gaps between the scientific- and the real world.

Based on the assumption above it was hypothesized that a films produced by the villagers or Red Cross volunteers with a local perspective, language and approach could be an efficient way of promoting community-based adaptation or communicating climate related risks. To do this, three main activities were undertaken, namely training the local people in producing a film, screening this film in other villages, and evaluating the effect of the film (participants answered a questionnaire before and after the screening to help distinguish what they had learned from the video). A group of villagers were also interviewed on camera.
These activities were carried out in five rural villages in the district of Salima in Malawi, Africa. (See figure 1): Mphunga, Kasache, Pemba, Mwanza and Maganga were chosen based on their high vulnerability to the effects of climate change. Their livelihoods are mainly based on smallholder farming, with the staple crop being maize (a grain that often fails due to excessive or insufficient rain). During participatory workshops on climate risks, local people reported increased occurrence of flash floods and droughts. The Malawian Red Cross Society was key in providing local knowledge and access to these communities.

2. The participatory video process

By June 2008, the project had already established a strong foundation: On one hand, climate scientists and Red Cross staff had worked collaboratively with farmers in understanding the threats posed by changing climate risks in central Malawi, discussing key vulnerabilities of Mphunga, and identifying possible options for adapting to observed and projected climatic conditions (building both on local knowledge and on lessons gathered by the Red Cross and other humanitarian organizations outside Mphunga. On the other hand, a series of workshops on participatory video had enabled several farmers in Mphunga to become familiar with filmmaking equipment and approaches, to the extent that they produced a short video describing the impacts of a changing climate in their village (video available at http://www.youtube.com/watch?v=FSquE0WKHuM).

In July 2008, the work began by facilitating a group of sixteen Mphunga villagers, which was quickly named the farmers filmmakers', to identify what they had being doing differently as a result of their understanding of climate change. They came up with a list of six adaptation messages that were going to be turned into a short film to go on a "screening tour" around the four other villages. These villages were on average 40 km apart and their members had no contact with each other. We suggested they organize themselves in pairs: an on-camera reporter to deliver the message and a camera operator to record the message. They directed and filmed absolutely everything.

"Farmer filmmakers"

2.1 The six climate change adaptation messages by the villagers were:

The actual adaptation strategies promoted through this initiative were decided during participatory processes at the community level and consultations with agriculture and disaster management experts from Red Cross, MetMalawi and other institutions.

1. ***Diversification of crops***: Most farmers depended heavily on maize, which was failing to produce good harvests when there was too much or too little rain. By planting more land with rice, beans, cassava and other crops, farmers could ensure that some food would be produced even with relatively unusual rainfall.

2. ***Irrigation farming***: Agricultural practices in Mphunga are entirely dependent on rainfall. Yet in the neighboring village of Kasache, simple technology allows for irrigation farming through treadle pumps, providing water to plants and increasing production.

Maize under irrigation in Kasache Village

3. ***Ducks versus chickens***: When floods occur in the village, chickens can't swim and often drown, affecting local food security. Mphunga farmers were inspired by an idea from women in Bangladesh, which after experiencing more frequent flooding decided to substitute chickens with ducks (they are able to float during floods). Now Mphunga exports ducks to neighboring communities.

Adoption of duck rearing in Mphunga Village

4. ***Storm drains and elephant grass***: During floods, running water causes erosion and other damages. With the right measures, the negative impacts can be reduced.

5. ***Storage of food***: Mphunga farmers used to store the harvest in granaries that, when flooded, would result in the spoiling of the harvest. Now farmers are storing grains in 50-kilogram bags, so that when waters are rising they can take the food to higher ground and avoid food insecurity.

6. ***Flood Alert***: Waters can rise relatively rapidly, and catch households unprepared. Since the Red Cross supported the formation of local action teams, some community members are responsible for alerting the village when waters are rising by blowing a whistle.

These measures were simple and creative, and appeared to be effective in coping with the impacts. Importantly, they are well easy to understand through the video made by farmers, as well as easy to replicate in villages experiencing similar problems. *(The complete film can be watched at: http://www.youtube.com/watch?v=2PcVn4oy3NI*

3. The Film Tour

The Red Cross organized screenings of the video in neighboring communities. Groups of around 20 villagers gathered at the villages' schools, which were turned into a "movie theater". These events followed local traditions, beginning with welcoming remarks and a group prayer. It was explained to the participants that the project had a very special mission - to transmit messages specially put together for them by villagers like them. First the pictures of the making of the film were showed as that helped create an open atmosphere.

Storyboard pictures

Then the film was screened straight from a 13" laptop computer placed on a higher level so all the villagers could see well. There were small speakers plugged to the computer, powered by AA batteries, to increase the volume of the audio. The moment the computer was turned on and the audience saw villagers like them delivering the lessons the room was filled by a respectful attention.

A video being shown in kasache

For evaluating the method, questionnaires were distributed before showing the film. Participants had to answer 15 questions mainly about if and how they were experiencing climate change and how open they were to adapt their livelihoods. After watching the film they had to answer a post-film questionnaire so the knowledge before and after the screening could be compared. For a qualitative and more emotional capture on their views, four participants in each village were video interviewed.

Box 1 gives an example of such an interview.
(A sample of these interviews can be watched at 'Farmers Become Filmmakers' short doc: http://www.youtube.com/watch?v=MQYM3iRtABs)

Box 1: Transcribed interview of Alick Malunje a Kasache villager from after watching the film.
"The messages I've learned most are 1) That the climate is changing 2) How we can inform others when flood is coming 3) Ducks farming as they protect themselves when floods come 4) Crops diversification. That's all that I have learned most."

In the final stage of the project we went back to Mphunga, the filmmakers' village, to show their film to the whole group, to share pictures and stories of the four villages their film was screened and to interview the filmmakers on their perspectives on the project. (Figures 13 and 14)

Box 2: Transcribed interviews from Mphunga filmmakers on the project.

Jamila Anusa:

"The way I've seen the making of this film is very good because I've learned about climate change exactly what it is in a way we can even teach our friends in the other villages"

Mustafa Sakhani:

"I believe that this video can teach villagers because if they can see with their own eyes will make a difference than just hearing on the radio. If they can see what is happening in other places they can learn a very big lesson."

The results in table 2 are based on 75 questionnaires with the villagers. On behavioral change most options show an increase of approximately 10%. Having ducks instead of chickens showed an increase of over 30%. The outcomes show that most messages were picked up by 80 to 90% of the farmers involved, thus showing that a film produced by the villagers on a participatory approach is a good way of transmitting important messages and promoting community-based climate change adaptation.

Table 2: Main result of pre- and post screening questionnaires

Which of these behaviors are you willing to change?	Pre-Video	Post-video
	YES %	**YES in %**
Change crops	80	88
Plant multiple crops	77	87
Eat more rice and less maize	33	31
Implement irrigation	73	79
Storage food differently	63	73
Have ducks instead of chicken	49	80

What did the people learn? Post-Video	
That the climate is changing	88%
The need to prepare	80%
About the weather predictions	76%
Ducks instead of chickens	85%
Irrigation	93%
Diversification of crops	90%
Storage of food	89%
Informing villagers about floods	86%

The film produced as a result of this project was also used for raising awareness at the international level, including at the United Nations conference on climate change held in Poland during December 2008.

4. Lessons learned and next steps

Six months after the screening of the video made by farmers, Alick Malunje from Kasache village told a Red Cross member: “I have started keeping my maize in bags. In January 09 our village was affected by flood. I was able to carry the bags to the temporary shelter without difficulties. I did not lose my food, however those who keep their maize in granary lost the food”. The participatory video approach, integrated to the work of a humanitarian organization, has already helped some Malawian farmers improve food security in a changing climate. It shows that people become empowered to cope with the negative impacts of climate change, when they have access to relevant information. To make use of participatory video as a successful tool, there are basic requirements that need to be addressed. A substantial amount of energy and effort was required from the participating institutions and local actors to introduce and transfer the basic concepts on climate change and its impacts. (See table 1 for the full process). It was also a challenge to establish effective communication among the Red Cross national and international staff, climate experts, film experts and the local villagers. To promote this inter-disciplinarily it is critical to disseminate this method by utilizing on-going capacity building efforts targeted to practitioners. When starting a project like this, practitioners should take into account simple issues that may pose serious challenges. For example, the final film should be in the local language; there is a necessity for electrical power for editing; sufficient time needs to be allocated for editing the raw material with participating villagers; the screening would have more impact if projected on a bigger screen powered by a generator; and that it is important to know in advance what you want to bring about so it is easier to monitor the effect by means of survey instruments.
The anticipated visibility of the final product brought together many stakeholders in an atmosphere of collaboration and innovation. The video tools, even during the early months of the project when it was merely at its conceptual stage, can provide an unusually fruitful space for the Red Cross and other humanitarian organizations to mediate between poor communities at risk and the institutions that can support community-level adaptation to climate change.

Increased interaction between MetMalawi personnel and users of their predictions (such as Red Cross staff and volunteers and the communities they serve) has created learning opportunities on how to best communicate climatic information.

Ideally, monitoring and evaluation efforts should be strengthened, for example by returning to the project area during the wet season to observe the villagers’ behavior and how the different measures function during the floods. For further expansion of this method it is recommended to do a cost benefit analyses to properly evaluate the effectiveness of the tool in comparison to other dissemination strategies as part of local level risk management and as a disaster preparedness tool.

5. Challenges

- Some of the important activities were not budgeted for like the VCA which was to inform the intervention the risks the targeted communities faced as well the capacities which the communities had but were not utilized.

- At some point during the implementation of the project the disbursement of the funds from the donor delayed such that some of the activities were not timely done

6. Conclusions

The project has shown that participatory video is a very suitable tool for transferring community-based knowledge on successful adaptive measures on climate change between vulnerable communities - the messages were picked up by 80 to 90 percent of the people surveyed at the screening. It also shows that villagers in developing countries can easily learn how to make films telling their own stories according to their local perspectives.
The Malawi experience on video-enabled adaptation to climate change has proven the enormous potential of combining participatory methods with audiovisual technology for formulating, implementing and disseminating climate risk management practices among vulnerable communities and because of this initiative MRCS through consultations with participating stakeholders (the Met department) is able to produce tailor-made information relevant for use by stakeholders including the community.