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Agribusiness in Sustainable Natural African Plant Products

The Potential of Information and Communication Technology as an enabler for Agricultural and Community Development in the Chinyanja Triangle



Scenes from rural Malawi



The country and its people

The Chinyanja Triangle includes the Southern and Central Provinces of Malawi, the Eastern Province of Zambia and the Tete Province of Mozambique, as shown in *Figure 1*. Lilongwe, Malawi, is situated in the middle of this region. The Chinyanja Triangle has a predominantly agricultural society; the soil in the region is fertile, the rains are good (300-800 mm annually) and the region shows immense agricultural potential.



Figure 1 - Chinyanja Triangle Region.



Land with so much potential...

Available solutions

In a bid to introduce farmers to appropriate agriculture technologies and cultivation practices in these farming communities and also to assist them in gaining access to formal market systems, Agribusiness in Sustainable Natural African Plant Products (ASNAPP) and the University of Stellenbosch (US), along with U.S. Agency for International Development (AID/SA) are investigating the possibility of improving the means of communication for these small-scale farmers. This forms part of the Last Mile Initiative (LMI), a worldwide program from USAID to help broaden access of the rural poor to communication technology. The main goal of the LMI in the Chinyanja area is to enhance electronic communications between small-scale farmers, research organisations and buyers. A second goal is to provide young adults in this remote area with access to ICT tools which will allow communication with peers both inside and outside the region.



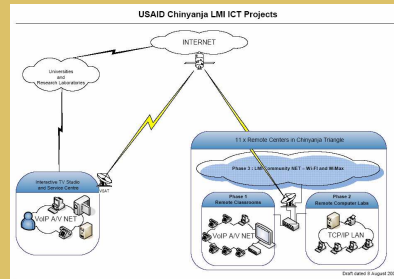
Applying research for successful crop production



Paprika is the biggest cash crop

Difficulties

However, the concentration of people is very high (especially in Malawi), the Triangle is landlocked and therefore driving up the price of farm inputs, HIV/AIDS infection rates range from 25-35%, and most of the farmers produce their crops on less than a hectare of land. The technology available to them is outdated and there is a clear need for real-time information on crop production over the full value-chain. However, the biggest problem these farmers face is that they have no access to the formal marketplace where they can sell their produce.



Possibilities to improve communication to remote areas



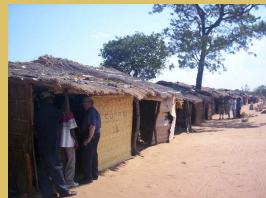
Television antenna at a rural homestead



VSATs could be set up at all regional offices to increase coverage



Successful Farmer



The means by which to achieve this is currently **under exploration** by AID/SA, US and ASNAPP. Certain channels of communication such as **radio, television** and cell phone technology are **generally available** and can be used as platform for interactive radio, television or voice systems. The University of Stellenbosch already has a distance learning interactive Television system based on satellite technology whereby research technology, production skills and marketing information and knowledge can be shared with target groups in remote locations. This system could be integrated with rural and local radio stations and/or television repeaters to broadcast audio and/or visual content to the general public. This system can be used to communicate and link the latest knowledge between the researcher and the farmer. Using cell phone technology, systems can be made interactive, so that the farmers also have a way of responding or posing questions as well as communicating with the formal market sector.

The main knowledge partner in Malawi may be the Bunda College of Agriculture at the University of Malawi. The University of Malawi, in turn, works closely with NASFAM (National Smallholders Farmer's Association of Malawi) which has its headquarters in Lilongwe. NASFAM has 11 regional offices. Each district office then services a number of farmer's "clubs" in a certain area which consists of a grouping of farmers in a club.

Parallel to the interactive television, radio or voice response systems, Internet services will be deployed with Very Small Aperture Terminal (VSAT) satellite communication systems at each of the approximately 24 regional offices to enable a Wi-Fi and WiMax meshed wireless network throughout the local community to enable more effective multi-media communication learning centres could be set up where training in ICT could be given to the local community. Once these centers have been completed they could serve as resource sharing centers and allow community access to information as well as foster an environment of information sharing among communities.

The **major challenges** of this project will be to set up joint ventures with the various institutions and to manage the interface of ICT with the communities.

Photos courtesy of Helmi Dreijer and Anthony Brooks