REPUBLIC OF MALAWI
HIV/AIDS in the Agricultural Sector:
Policy and Strategy, 2003-2008

PREPARED BY
The Malawi Ministry of Agriculture, Irrigation and Food Security
Family Health International

[Verbatim excerpts in “Times New Roman”: Comments by Arnold P. Wendroff, Ph.D. in “Arial.”]

[Arnold P. Wendroff, Ph.D., Malawi Handcart Project  www.malawihandcartproject.org]

[How the AfriCart Handcart can help alleviate Malawi’s HIV/AIDS induced agricultural labor-shortage.]

FOREWORD [Chakufwa Tom Chihana, Minister of Agriculture, Irrigation and Food Security]

The need to mainstream HIV/AIDS issues and the related gender issues into the agriculture sector policies and programs arise from the dramatic impact of the epidemic on agricultural productivity...
[Handcarts such as the AfriCart can have a positive impact on agricultural productivity.]

ACKNOWLEDGMENTS [Charles January Matabwa, Principal Secretary, MOAIFS]

EXECUTIVE SUMMARY
Malawi’s [HIV/AIDS] infection rate—around 10% in rural areas ... is one of the highest in the world. HIV infection rates are higher among women, who bear a disproportionate share of the burden for care and support of the sick. These two factors place women in a more disadvantaged position than others. HIV/AIDS is, therefore, both a gender issue and an intersectoral issue.
[Even in the absence of HIV/AIDS, women literally “bear a disproportionate share of the burden of head-load carrying of water, firewood, grain, and harvested crops. This means that even under normal circumstances, much of their time and energy is spent on transport activities, as opposed to productive agricultural activities. Any assistance given to women by provision of mechanized transport, such as handcarts, would free up labor un-productively expended on transport.]

The devastating impact of AIDS on agriculture .. The impacts of HIV/AIDS are reducing agricultural productivity and increasing poverty. [Provision of handcarts in effect increases agricultural labor, by freeing up un-productive labor expended on transport.]

Rationale for the HIV/AIDS Policy Development in the Agriculture Sector

... Aspects significant to agricultural productive roles, such as technology development and transfer ... improved agricultural technologies; ... [The AfriCart handcart represents one such significant “technology development” and “improved agricultural technology” which can enhance Malawi’s agricultural productivity. The AfriCart handcart is “significant” because of its high uptake potential compared with competitive IMTs (Intermediate Means of Transport) such as bicycles and wheelbarrows which are suited neither to farming operations, nor to women’s domestic transport of water, firewood and grain.]

HIV/AIDS and gender issues must be recognized and mainstreamed into policies and programs, ... in the farming communities. If they are not, it will be difficult to mitigate the adverse impacts and resultant gender disparities on productivity and livelihoods. [Even without HIV/AIDS, there are significant
and longstanding gender inequalities in the realm of domestic and agricultural transport. Men tend to monopolize what few IMTs are available, mainly bicycles and ox/donkey-carts. Men are also more likely to use wheelbarrows, in part because women do not have the strength to use them for large loads. Women perform most domestic transport by headloading, as well as much of their transporting of cash crops to local markets. They generally have no other option.]

Guiding Principles for Policy Development and Strategic Focus

• Economic Empowerment

SECTION I: CONTEXTUAL BACKGROUND

COMPONENT 1

1.3 HIV/AIDS in the Agriculture Sector
Malawi has an agriculture-based economy, with more than 85% of rural households deriving their livelihood from farming. ... MOAIFS staff provides information to farmers on improved technologies and methods to increase their agricultural productivity. [It is envisioned that agricultural extension personnel (AGRESS) will act to disseminate AfriCart handcart technology to farmers and rural carpenters who will build the carts for their local clientele, thereby enhancing agricultural productivity.]

One impact of HIV/AIDS ... is that farmers, especially women farmers, spend more of their time caring for the sick., thus spending less time tending to their agricultural enterprises. .... the groups made most vulnerable are widows, orphans, the elderly and the sick, because they cannot easily access productive resources (e.g. labour ... ) ... The decrease in MOAIFS staff in turn makes it difficult for farmers to obtain information about new technologies and agricultural techniques. [Even in the absence of HIV/AIDS, women normally spend far more time and energy on transport activities. Until the advent of the relatively affordable and ergonomically efficient AfriCart handcart design, there was very little new transportation technology that was even remotely affordable by Malawi’s smallholder and subsistence farmers.]

COMPONENT 2

2 IMPACT OF HIV/AIDS ON AGRICULTURE AND RURAL LIVELIHOODS
HIV/AIDS-caused illnesses and deaths continue to affect agricultural productivity in most of Malawi’s rural communities.

2.1 Nature of Impact of HIV/AIDS on the Agriculture Sector

• Reduction in Labor Supply
HIV/AIDS reduces the labor available to small farms because the household diverts agricultural labor and other productive resources to caring for the sick. [Conversely, the provision of labor-saving IMTs such as the AfriCart increases labor available to the agricultural sector.]

• Change in Land Use Patterns
The reduction in labor supply leads farmers to switch to less labor-intensive crops, ... [Availability of handcarts frees up labor enabling more labor-intensive crops to be grown.]

• Changes in Demographics of Farming Communities
The increasing prevalence of HIV/AIDS results in more single-headed households that include orphans and the elderly, who are unable to perform the household chores. [Availability of an AfriCart enables small children as well as the elderly to transport their daily water requirements, as well as to move firewood and grain to the grinding mill. This enables families impacted by HIV/AIDS to remain intact, even when the usual breadwinners are incapacitated or deceased.]

• Gender Discrimination and Disparities

Women take more responsibility than men in caring for the sick. [As mentioned earlier, women are generally responsible for domestic transport, and bear an additional burden in caring for the sick.]

SECTION II: POLICY FRAMEWORK

COMPONENT 3 AGRICULTURE SECTOR POLICY FRAMEWORK

• To ensure equitable and sustainable food availability and consumption, at both the household and national levels, for increased food and nutritional security; ...
• To guide action research that mitigates the impacts of AIDS and increases agricultural productivity and the health of people; [Targeted research on the positive contribution AfriCarts can make to assisting HIV/AIDS-impacted farm families in mitigating the impact of AIDS and in increasing agricultural production should be initiated at once. It is suggested that such research would be looked upon in a most favourable light by the donor community, as it is eminently practical, and its impacts are readily quantifiable.] and
• To stimulate development and use of innovative agricultural interventions for improved health and livelihoods. [Malawi’s existing civil service engineering talent, including personnel from Blantyre’s Polytechnic, and Malawi Industrial Research and Technology Development Centre; as well as the specifically agricultural engineering expertise of Chitedze Research Station’s Farm Machinery Unit, and Bunda College’s Department of Agricultural Engineering should be enlisted in the assessment of handcart technology, which they have all been aware of for some years. The use of handcarts can best be disseminated by means of the AGRESS. Funding from external donors is vital to the speedy implementation of such development assessment and dissemination programmes, and government should have no hesitation in requesting such funding.]

3.1 Rationale

... Severe food shortages, caused in part by the decreasing size of the active labor force, ... [Labor-saving technology such as handcarts effectively increases the size of the agricultural labor force.]

3.2 Major Challenges

• Lack of resources to scale-up HIV/AIDS interventions

... the ability to scale-up implementation is severely constrained by weak performance in the agricultural sector; ...

3.6 Objectives

There are eight priority areas for which there are policy recommendations, strategies and major actions:

• Gender and HIV/AIDS mainstreaming

• Economic Empowerment ... [Provision of handcarts to HIV/AIDS-impacted communities, especially to women and children, is a tangible form of economic empowerment.]

Addressing these eight priority areas is intended to:

• Promote inclusion of gender-based issues in the agriculture sector simultaneously with an HIV/AIDS response; ... [This must include the disproportionate transport burden borne by women, and one viable technology to reduce that burden, namely the provision of handcarts that can be manufactured in these HIV/AIDS-impacted rural communities.]

• Advocate for legislative support for the HIV/AIDS policy in the agriculture sector. [It is high time that elected legislators advocate for, and fund programs to disseminate agricultural labor-saving technologies such as the AfriCart handcart.]
COMPONENT 4

4 PRIORITY SECTORAL POLICY AREAS

4.1 Gender and HIV/AIDS Mainstreaming

4.1.1 Policy Recommendations

• The agriculture sector should take into account the varied gender needs, interests, roles, rights and relations in agriculture production systems, to facilitate efficient and equitable technology development and outreach programs. [Women as well as men need access to mechanized farm transport which is currently denied them. The vast majority of both men and women farmers have only their heads and backs to transport their farm inputs (commercial fertilizer, manure, compost, seed, water) and implements (hoes, watering cans, treadle pumps), and whatever crops they harvest. Wheeled transport has effectively been denied them, in large part due to a policy of ox- and donkey-cart advocacy. Over a century of experience has demonstrated the ever decreasing uptake potential of conventional (ox and donkey) draught animal transport. The agricultural development community must realize that it is in-equitable to ignore the masses of Malawians whose smallholdings and poverty level have and will continue to preclude them from possessing an ox- or donkey cart. “Equitable technology development and outreach programs” must focus on providing the masses of subsistence and smallholder farmers, many of them women, with mechanized transport suitable to their needs, and to their income levels. Handcarts of the AfriCart design, developed in Malawi and built by rural carpenters of local wood and bicycle wheels, are currently the single most suitable IMT for this application. If purpose-built handcart wheels were to be imported from India, the source of most treadle pumps, or China, then handcart technology based on those more suitable (more rugged yet lighter weight carts) components, resulting in more rugged yet lighter weight carts, should be disseminated.]

• The agriculture sector should strive for gender empowerment in all aspects of participation to ensure access to, and control over, production assets, information, technologies, ... [Women farmers and their children need access to, and control over handcarts. Handcarts should be used by men as well, but, as is largely the case with bicycles and ox-carts, must not be allowed to fall into the exclusive control of men. AfriCart handcarts are readily pulled behind a bicycle on relatively level ground, and similar carts have been and are currently pulled by large (such as Boer) goats in both Europe and the Americas.]

4.1.3

• Train and educate the community, including women, men and community leaders, in efforts to improve the role and status of women in the society. [The continued over-working and overloading of Malawian women as headloading porters does little to enhance their status in this 21st century. Women’s status will be enhanced when they demand and are afforded adequate and appropriate IMTs such as handcarts. It is hoped that the provision of handcarts will encourage men to more equitably participate in domestic and agricultural transport roles, and in sharing this transport responsibility, women’s status will be enhanced.]

• Carry out diagnostic surveys to increase the understanding of the needs, issues and links among HIV/AIDS, gender and agricultural development. ... [Specifically, ascertain the temporal and caloric expenditures of women and men in their normal as well as HIV/AIDS-impacted transport activities; calculate the amount of time and energy that the introduction of handcarts would impart to agriculturally productive activities, and measure the increased crop production resulting from the application of handcart technology.]

• Design and provide technical support to agricultural training institutions, ... [Agricultural training institutions should familiarize students and field personnel with handcart technology and its application. Agricultural extension workers should be provided with their own handcarts so as to demonstrate their potential to farmers, and to the rural carpenters who can build them for farming communities.]

4.2 Economic Empowerment

The HIV/AIDS epidemic has a negative economic impact on Malawi. This impact includes reduction in the size, quality and experience of the labor force, ... Providing such families with access to microfinance ... [Micro-finance plans can enable impoverished and HIV/AIDS-impacted families or villages to acquire a handcart and enjoy its labor-saving benefits. Such small loans are readily repaid from income-generating activities including outright rental of the cart, or provision of
small-scale transport services (carrying bricks, firewood, fertilizer, etc.), as well as participation in local markets where farm produce is sold.]

4.2.1 Policy Recommendations

...  
• Time- and labor-saving technologies should be identified and disseminated to vulnerable groups. ... [Few technologies introduced to Malawi in recent times have the potential to save as much time and labor as the AfriCart handcart. The Ministry of Agriculture has already “identified” this technology, as illustrated by the AfriCart being awarded the bronze prize in the 1st National Agriculture Fair (Lilongwe, October 2003) and the gold prize in the 2nd National Agricultural Fair (Blantyre, June 2004), both awards in the “Farm Mechanization Category.” What is now needed is the “dissemination” of this technology to Malawians in general, and to the “vulnerable groups” in particular. In other words, what is needed is action, and not merely report generation.]

• Low input agriculture should be encouraged. [“Low input agriculture” actually requires significant amounts of organic manures and/or compost, as well as adequate water. These cost free inputs still must be transported from source to field. Handcarts are ideal for the carriage of such loose bulky wet and heavy materials.]

4.2.2 Strategies

...  
• Improve the economic status of disadvantaged groups, especially women, ... [Empowering women by providing them access to modern transport technology in the form of handcarts, is certain to enhance their economic productivity, and hence their economic status.]
• Develop community programs in the agriculture for income generation and poverty eradication that integrate HIV/AIDS issues. [Provision of handcarts to HIV/AIDS-impacted communities creates jobs for local carpenters and bicycle repairers, as well as enhancing the income-generating potential of the farm families possessing the carts.]

4.2.3 Major Actions

• Develop projects that promote viable agriculture-based, small-scale industries. [Virtually any such “industries” will involve some transportation component which in most cases can be provided by the services of a handcart. Movement of raw materials to the industrial site, and transporting value-added goods to market can be facilitated by the use of handcarts.]
• Initiate programs that improve the economic status of vulnerable groups. ... [To reiterate, it is time for action and not merely words on the part of government to disseminate handcart technology to the rural (as well as urban) poor and HIV/AIDS-impacted. Although new to Malawi, lightweight handcarts are a mature technology. The wood-frame AfriCart is ready to make an immediate contribution to poverty reduction and HIV/AIDS alleviation now.]
• Initiate integrated HIV/AIDS agricultural basic community programs for income generation. [Handcart technology is appropriate for incorporation into community income generation programmes, as most such programmes require transport of produce to markets. Depending on the distance to markets, the handcart might be used on its own, or for longer distances (but lighter loads), it may be used as a bicycle trailer.]

4.4.1 Policy Recommendations

• Agricultural research and extension services should carry out action research to develop and introduce more time- and labor-saving technologies. [As stated earlier, handcarts are one of the few technologies that can save small farmers both time and labor, yet are affordable (especially with the provision of micro-credit) to this capital-starved sector.]

4.4.2 Strategies

...
I. **Make time- and labor-saving technologies available.** [What such “time- and labor-saving technologies” can the reader name that have the uptake potential of the AfriCart? AfriCarts can be made “available” by informing the farming of their existence and of their advantages; by training rural carpenters to make them via TEVETA, and by distributing dimensioned plans with building instructions in local languages via AGRESS.]

II. **Carry out research in laborsaving technologies.** [As mentioned earlier, mechanical design studies of the AfriCart should be carried out by Malawi’s relevant engineering institutions. Application studies are largely within the province of the agricultural research stations. Conventional handcarts should be acquired and tested, with an eye to convincing the entrepreneurial sector to import and distribute their wheel-axle sets to enable more lightweight yet sturdy handcarts to be built.]

4.4.3 **MajorActions**

I. Identify and implement income-generating activities that target vulnerable groups. [On July 1, 2004 the Principal Secretary of MOAIFS directed that the Chitedze Agricultural Research Station, and its Farm Machinery Unit (FMU) take the lead in integrating AfriCart handcart production into the One Village One Product (OVOP) programme. It is hoped that this strategy will be operationalized. The initial steps to realize such action were taken in 2002, when personnel from the FMU, the Malawi Handcart Project (MHP), and Chitedze’s carpentry workshop trained several local carpenters in AfriCart construction, and supplied each of them with sufficient bicycle wheel components and fasteners (wood screws, bolts and nails) sufficient to construct one AfriCart. The carpenters supplied their own wood and labor, and each build one AfriCart which was inspected and modified as necessary to conform with basic standards, before being purchased by the MHP for distribution. It is envisioned that this group of local area carpenters, and others that have been added in the intervening years, will constitute the first group to produce AfriCarts under the OVOP program. Similar groups are currently being recruited by MHP branches in Mzuzu and in Blantyre. Additionally, at a meeting with the Director and Deputy Directors of Gender Affairs of the Ministry of Gender, Youth and Community Affairs (MOGYCA) on July 2, 2004 it was recommended that the MHP collaborate to train ATTIGA trainers in AfriCart construction, who would in turn train women’s groups to build AfriCarts as an income-generating activity. The MHP began such a training programme at its Mzuzu branch in early 2004, with a group of four young women and two young men, being taught by two local carpenters under the supervision of the, and at the workshop of MHP Mzuzu associate. This group has produced some 20-odd AfriCarts in that time, most of which have been distributed to local government and NGO’s for assessment. It is suggested that similar “actions” be undertaken by governmental agencies and NGOs in order to disseminate the labor saving AfriCart technology and generate employment by building them. AfriCarts can and are utilized in income-generating marketing and vending activities. Carrying farm produce to local markets, or to more distant markets when used as a bicycle trailer offer a considerable savings in labor, and time over the alternative of headloading. Similarly, use of a handcart enables a vendor to transport a far greater stock of goods for sale, while greatly lessening the labor required. Thus the vendor is economically empowered, and is able to sell more in a given period of time.]

I. **Create and maintain community food banks and transport support.** [If relief food is to be transported on a local level, what better means of “transport support” could there be than to employ local carpenters to build AfriCarts to carry such food to the local recipients? Such a programme creates local jobs, and furnishes the recipient communities with vitally needed appropriate IMTs suitable for ongoing community development and food production.]

4.5.2 **Strategies**

I. **Support water-harvesting technologies to increase off-season crop production.** [Movement of water is one of the key applications the AfriCart was designed for. Similar handcarts employing ordinary bicycle wheels (28" x 1½") but with extra-strong 12 gauge (as opposed to the ordinary thinner 14 gauge) spokes, are routinely used to carry from 200 to 400 liters/kilograms of drinking water in Tanzanian cities. AfriCarts are currently being used by the Malawi NGO Water for People in the Blantyre area for water distribution. An early Africart builder and NASFAM representative in Chumphira has been successfully using an AfriCart for moving his irrigation treadle pump from his home to the several pumping sites serving his numerous irrigated fields. AfriCarts can carry water for irrigation using watering cans as well.]

I. **Develop food-processing technologies to expand agriculture-based industry and household food availability.** [An essential part of any food processing activity is the transport of the foodstuff from field to processing area, and thence to storage facility or marketplace. The AfriCart is of suitable capacity, and price to make it applicable to the small-scale food-processing operations smallholder farmers engage in.]
4.5.3 Major Actions

I. Establish income-generating activities so that households and communities can earn enough money to buy food. [As mentioned above, possession of a handcart is associated with numerous income-generating activities.]

4.6 Expanded HIV/AIDS Communication

Despite a high level of awareness, little has changed in terms of the spread of HIV/AIDS and people’s behavior, especially of men’s behavior toward women. [These negative gender relations extend into the ownership and use of IMTs such as bicycles, wheelbarrows and ox- donkey-carts. They must not be allowed to persist with reference to handcart ownership and utilization. AfriCarts were designed with women as their primary owners and users. Dissemination of handcart technology must be accomplished with this women-oriented objective in mind.]

4.8 HIV/AIDS Action Research

The agriculture sector has the potential to contribute through research to the interventions aimed at reducing the ... impacts of AIDS. For example, farming technologies that were developed for the average, healthy male farmer may not be useful in HIV/AIDS-imposed situations characterized by physically weak individuals, the elderly or juveniles. [Handcarts can empower weak and sick individuals to transport the materials they need to sustain life and generate income. Targeted research on the use of handcarts to reduce the adverse impacts of AIDS on farm families is called for.]

4.8.1 Policy Recommendations

I. Agricultural research and extension institutions, other research institutions and the community should investigate and introduce time- and labor-saving technologies that take into account those infected and affected by HIV/AIDS. [Handcarts such as the AfriCart are one such “time- and labor-saving technology” that can immediately and realistically assist farm families afflicted with HIV/AIDS.]

4.8.2 Strategies

I. Establish research networks to conduct action research to improve the livelihood of HIV/AIDS-infected and -affected households. [Specifically investigate the applicability of IMTs such as the AfriCart to income-generating activities of HIV/AIDS infected and affected farm families.]

II. Compile data on labor saving technologies related to HIV/AIDS and agriculture. [The AfriCart is one of the very few forms of farm mechanization available to Malawian farmers. Its initial version was given a brief trial by the Ministry of Local Government’s Malawi Rural Travel and Transport Programme (MRTTP), whose March 2003 report “Gender and Rural Transport Initiative (GRTI) Phase Two” stated that:

“The introduction of the Malawi Handcart has also relieved the burden of head and shoulder loading and it has been taken as an alternative to the bicycle for heavy carriage for both business and domestic use.

This project has also assisted to assess the effects of gender relations between men and women; control over and access to different IMTs by both men and women.

And generally, the project has also managed to bring awareness to the people in the areas to be innovative in rural travel and transport to facilitate their mobility by adapting a wooden frame Malawi Handcart for carrying goods.”

It should be noted that the MRTTP’s assessment was made on an unimproved design, which used the far weaker 14 gauge spokes. The latest versions of the AfriCart are significantly
stronger and easier to use, with stronger and more durable handles, stands, bodies and wheels.]

I. Identify and prioritize (according to current means and resources) areas for research. [The AfriCart and other handcart designs are prime technologies for assisting HIV/AIDS-impacted rural farm families. They should be given a high priority for research and assessment in this role, as well as in general agricultural and economic development in Malawi. Their use is complementary to that of the bicycle and ox-donkey cart.]

4.8.3 Major Actions

... I. Identify new options for enhanced livelihoods with HIV/AIDS-affected communities. [The AfriCart handcart is such a new option, and furthermore, an option with a realistic uptake potential and one that can make a significant difference in economically empowering those who currently must use headloading as their sole transport modality.]

... I. Explore new forms of farming systems, cropping and innovative approaches (including cooperative arrangements) that may benefit those infected or affected by HIV/AIDS. [The AfriCart handcart is an “innovative approach,” as the material presented above attests to. It needs to be made available to farm families via the AGRESS and other appropriate technology dissemination strategies.]

... I. Clarify the effects of AIDS on labor availability and capital accumulation. [Also clarify the interaction between AfriCart ownership, labor availability and capital accumulation.]

SECTION III: AGRICULTURE SECTOR STRATEGIC NETWORK

COMPONENT 5

5 AGRICULTURE SECTOR STRATEGIC FRAMEWORK

... I. Economic empowerment [By definition, access to a handcart to move heavy loads empowers the user in his or her economic activities in a very real and immediate manner.]

5.2 Operational Guiding Principles

5.2.1 Design Phase

... I. Clarify ... gender roles and relations for equity and efficiency in the mobilization of resources for individuals, households, communities ... [The AfriCart is one such resource. As mentioned earlier, existing gender relations may tend to inhibit the equitable mobilization of handcarts, and extension workers involved in handcart dissemination must be aware of this possibility from the outset.]

5.2.2 Implementation Phase

... I. Empowerment of both men and women ... to access and control necessary resources ... with equity and equal outcomes. [See immediately above.]

5.2.3 Gender and HIV/AIDS Mainstreaming

Gender and HIV/AIDS issues should be mainstreamed simultaneously to respond to the reduced agricultural production that results from decreased participation caused by increased morbidity and mortality rates from HIV/AIDS and the resultant disparities in gender roles, responsibilities, rights, relations and benefits. [Refer to earlier discussions of disparate gender roles and the need to address them in the context of technology dissemination.]
5.3  Public Sector  
The Office of the President and Cabinet (OPC) will lead in policy direction, institutional development, resource mobilization and advocacy. [It is hoped that due to the multi-ministerial nature of HIV/AIDS impact, and the broad applicability of handcarts to Malawi’s developing economy, that the OPC will act to coordinate and to advocate for this new technology, both in the public sector, as well as in programs run for the Malawian people by the NGOs working in Malawi.]

5.3.3  Non-Governmental Organizations  
[NGOs need to be encouraged to incorporate handcarts, and specifically AfriCarts into their programmes. Several NGOs working in Malawi have taken tentative steps at AfriCart assessment, including World Vison, CARE, Water for People, AfriCare, NAPHAM and Uplile Orphan Care. These uses need to be expanded, so that more people can directly benefit from the ease of transport afforded by handcarts, as well as by the role they play in the diffusion of handset technology into rural communities that their presence fosters.]

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