



# Trip Report: Promoting Equitable Access to Water Resources

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**Malawi: 5-21 November 2002**

**By John Kerr, Michigan State University**

## **Purpose of trip**

The two main purposes of my trip were to become familiar with the research project on small scale irrigation and to look for opportunities to incorporate economic analysis into the work, either immediately or next year.

My main activities were visiting field sites, talking with knowledgeable people and reviewing documents. There are three main field sites: two canal irrigation schemes and one area where streambank irrigation is practiced along the Likangala River.

## **Itinerary**

Nov 5 travel from Michigan to Malawi, via Johannesburg

Nov 7: attend part of a workshop on water quality improvement action plan

Nov 8: introduction to Chancellor College (University of Malawi) and review of project activities

Nov 11-13: field visit to irrigated areas where the study is being conducted

Nov 14: review issues related to the survey; meet other experts

Nov 15: meet the USAID folks

Nov 18-19: wrap-up

Nov 20: return to Michigan via Johannesburg

## **Technical observations**

Malawi is a beautiful country full of hard working, unusually friendly people. It is also desperately poor with terrible problems, including high rates of disease, food shortages

and hunger, and a bleak economic outlook. More than half of the government budget comes from foreign aid, and corruption is rife.

The first thing I noticed upon landing in Lilongwe was how much the landscape and vegetation reminded me of southern India, where I lived and worked for many years. I saw the same red soil and the same flowering trees as I'd see driving outside of Hyderabad or Bangalore. The only thing missing was huge stony outcroppings as you'd find in India. But then, just south of Lilongwe, sure enough, there were the same stony outcroppings. I thought to myself, "Hey, I recognize this place – it's the semi-arid tropics!" Zomba, where the BASIS work is taking place, is more mountainous and has much higher rainfall; it looks a lot like the Western Ghat range in southern India. So, although I have a great deal to learn about the culture and politics and economics of this place, at least it's familiar from an agroecological perspective.

Like many if not most developing countries around the world, Malawi is embarking on a campaign to decentralize the management of natural resources. This process seems to be proceeding quite rapidly, although people I've spoken to suggest that it is uneven. A few people mentioned to me that the government appears to be in a hurry to turn over to local communities the management of those natural resources that drain the government budget, but to hold onto those that generate income. The canal irrigation schemes that we are studying under BASIS fall under the former, whereas fisheries in Lake Malawi – particularly in scenic areas with tourist potential – fall under the latter.

The big fears with decentralization of canal irrigation concern local people's ability to manage the canal systems from a technical perspective, to resolve disputes, and to generate income to pay for maintenance. As in many developing countries, the canals (which are about 30 years old) have a long history of centralized management. The government has been solely responsible for everything, including determining who should get land and who shouldn't, managing water delivery, deciding what crops to grow and when, and maintaining the water delivery channels. Not surprisingly, local people don't appear to have taken much interest in maintenance because someone else has always been there to do it.

One big question after handover is how the local people will finance the management of the canals. The government's financial contribution apparently will drop down to nothing within 2 or 3 years and it isn't clear whether local people will be able to raise the cash to pay for technical assistance and canal maintenance. I don't know much about this issue but it seems like it could raise major problems.

In one of the schemes (Likangala) there are major disputes over land and water access. In one case the dispute can be traced to the government's takeover of customary land many years ago. After the canal scheme was built the government distributed the land to private owners, but not the same people from whom it had previously taken it. Now, with a more benign government in place and the land worth quite a bit as it is perennially irrigated, the original customary owners of the land are trying to reclaim it.

It is difficult to see how local communities will be able to resolve problems such as this after the canal is handed over.

Right now it's the end of the dry season, and dry season irrigated crops in the canal scheme are about to be harvested. The area under cultivation in the dry season is sharply reduced from the wet season -- it's determined at the start of the season based on how much water is expected to be available, as determined by the water level in the river. Driving and walking through the scheme lands, it was easy to see a lot of stunted maize crops that obviously didn't receive enough water. In many cases the crop is not even worth harvesting. The scheme manager in Domasi (Mr. Nkhata) told us that this was because the Water Users' Association pushed its luck regarding how large an area could be irrigated given the likely availability of water -- it authorized the planting and irrigation of too large an area.

In trying to consider how to add some economic analysis to the research project that is already under way using an anthropological approach, one possibility would be to estimate the productivity of agriculture in the irrigation scheme this year, before the handover takes place, and then again next year and maybe the year after, after handover has already happened. However, it's not clear to me that such an estimate would tell us more about the effects of the handover than a thorough qualitative investigation of what decisions are taken and how, plus a good idea of how water delivery systems change. Of course, productivity can change greatly from year to year depending on agroclimatic conditions, so unless we can collect productivity data for several years running we might not learn much from it.

I am inclined to skip the productivity estimates (which would require gathering very detailed data on costs and returns of cultivation) and focus instead on how water allocation works -- what determines who gets enough water, who gets cut off mid-season, and why. This could be done with a combination of survey and qualitative investigation and would probably yield more useful information, at this stage anyway, than detailed productivity estimates. Given staffing constraints I think these two things might not both be feasible, and our field assistants would need training to collect detailed data on agricultural production. If this seems like an important thing to do we can plan in advance to do it next year. (I'd be interested in feedback on this issue.)

I also visited some sites where streambank irrigation is practiced, both in the rainy season when the river floods its banks, and in the dry season when crops are grown on a combination of receding moisture followed by supplementary irrigation using buckets from the river. (The "river" in question and others like it are really just small streams.) Previous research has shown that these irrigation systems, known as dimbas, are extremely important to household income and food security, and conversations with people suggest that they are highly productive. Stephen Carr, a retired British agriculturalist with 50 years of experience working in Africa who lives in Zomba, told me he'd been asked to look for opportunities to provide technical assistance to dimbas, but that he couldn't find any basis for doing so. He couldn't think of anything he could tell the farmers that would improve on what they are already doing.

Some people in the Land Husbandry Department and the Department of Environmental Affairs argue that dimbas cause streambank erosion and thus should be banned. The Department of Environmental Affairs actually has been pushing for measures to control streambank cultivation. I thought this might be a very interesting issue for research, when I actually visited the dimbas it was not at all clear that they have anything to do with erosion. I saw lots of streambank erosion but none of it had anything to do with dimbas, and I saw a lot of dimbas that didn't seem to be contributing to erosion. Stephen Carr concurred with this view. We visited people from the local Department of Land Husbandry, who told us that there really isn't any data at all on the extent to which erosion is or isn't a problem in the dimbas or elsewhere.

I've been trying to think of other research I can contribute regarding dimbas, but I can't really think of much. There is already very detailed information regarding their contribution to household food security, so there's not much point in doing that again. It would be possible to estimate their productivity relative to the irrigation schemes, but that would be very complex and take more resources – and different personnel – than we have available as of now. Dimba cropping systems are extremely complex, so measuring inputs and outputs on a per hectare basis is a great deal of work. (Just measuring plot size is a bit tricky and very time consuming.) So, for the dimbas, I think it's best for now just to stick to the question of how households are granted access to farm the dimba lands, how this changes from year to year, and what implications this has for food security of the poorest people.

### **List of contact people and their title and organizational affiliation**

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