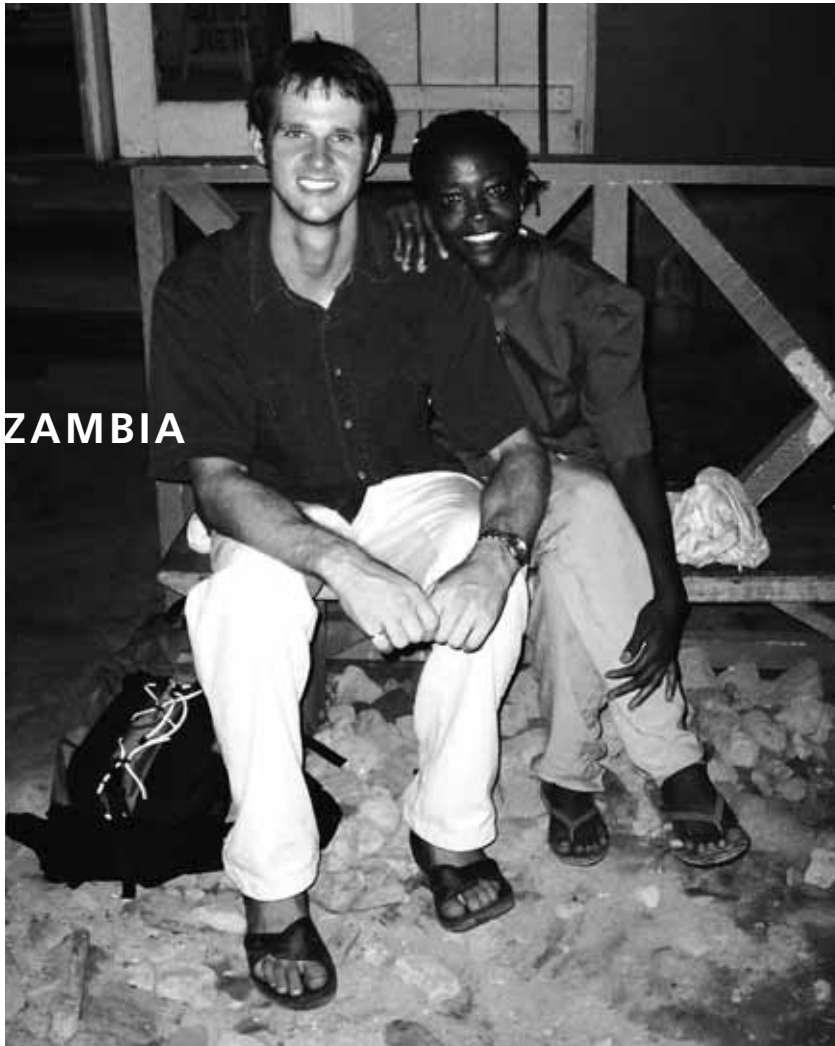


**SORGHUM,
SARAH
MCLACHLAN
AND THE
DROUGHT IN ZAMBIA**



A UBC grad joins Engineers Without Borders and learns that politics and economics are as big a part of poverty as drought.

The author with his friend, Christy Yaa, in Accra, Ghana. Christy was featured in Sarah McLachlan's music video, *World on Fire*.

It WAS A HOT AND STICKY JULY EVENING in Accra, Ghana. I sat in a small internet café in the urban slum of Alajo next to my mosquito-infested one-room apartment. My ten month volunteer placement with Engineers Without Borders (EWB) was over, and I was just checking my email to see what time my plane left for Canada the next day. I felt devastated to leave so many close friends behind, but as with the end of any experience my sadness was accompanied with a bittersweet feeling. I was excited to go home and see my friends and family in Canada, and even caught myself dreaming of the joys of a hot shower and a toilet with an actual seat.

That's when MSN Messenger signalled that a new message had come in. A good friend who was working at the EWB head office in Toronto asked if I was sitting down because she had some really big news for me. Apparently, Sarah McLachlan's producer had just phoned, and inspired from reading one of my "Letters from the Field" on the EWB website, wanted to use it in crafting the music video for her new hit song "World on Fire." I had written about a close friend in Alajo named Christy Yaa, a single mother who worked

16 hours a day as a house cleaner and orange seller to put her son through school, yet refused to ever let me pay for the oranges I bought from her. The bewildering message on the screen flashed, "Sarah thinks your words speak for the song."

When I returned to Canada, I found the reverse culture shock to be intense. Everything was so quiet, clean, and comparatively dull next to the hustle and bustle of Ghana. I had trouble dealing with the level of comfort and consumption that our society has become so accustomed to. I was able to get a manufacturing engineer job shortly after my return through one of my UBC co-op connections, but it felt extremely empty. I was making nearly seven times the salary but the struggle to force myself out of bed every morning affected my entire outlook on life.

A few months later, I saw Christy Yaa's beaming smile displayed in the video of Sarah McLachlan's song and could not help from breaking down into tears. An assortment of international charities (including EWB) were \$150,000 richer, thanks to the generosity of the Vancouver artist. Christy also received

BY MIKE QUINN

DROUGHT IN ZAMBIA

\$1,000 of that money for a scholarship to put her son through school and a grant to expand her business.

Now, as I am writing this in Zambia, in the heart of southern Africa, I realize that moment when I first saw the video was the second turning point in my life. For the first time, I learned that it is possible to change the world and knew inside that I could only be happy if I yielded to my passion for helping the poor.

And looking even farther back, I cannot even picture what my life would be like right now if I didn't join the UBC chapter of EWB in 2001 and turn my attention to Africa. That was the first turning point in my life, where I changed from a disgruntled engineering student to an inspired and aspiring global citizen. Through my involvement and connection with that group of amazing people, I found an avenue to apply the engineering problem solving skills I was learning in lecture halls towards solving the problems faced by small scale farmers in rural Zambia on my second volunteer placement in Africa with EWB.

This time, I am based in Livingstone, situated in the Southern Province of Zambia and adjacent to troubled Zimbabwe. It is the tourist capital of the country and home to Victoria Falls, the world's seventh wonder. People from all over the world flock here to see the falls, visit the majestic five-star Royal Livingstone Hotel, and conquer the world's best white water rapids. In fact it's incredibly easy to come here as a tourist and be completely oblivious to the crisis that exists just beyond the smokescreen of adrenaline and luxury that is put up to attract visitors and shield them from Zambia's often depressing reality.

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In the villages immediately outside Livingstone and throughout the entire Southern Province of Zambia, there was a severe drought this past season resulting in an acute food shortage for nearly every rural household. Only this wasn't a one-off occurrence, as the rains have become less dependable and the soils less fertile over the past few decades. Food insecurity has become a chronic problem and I can see it in the hungry eyes of malnourished, underdeveloped children in the villages I work in. Children are the last to eat in rural Africa, and thus the first to suffer in times of hardship.

My home province, Alberta, experiences droughts that last a few years, crippling many farmers. Droughts there and in Zambia can be equally severe, but the consequences are much more dire in Zambia. In Canada, our diets are well balanced with a variety of food from all over the world. Our government is able to buy food from other regions and other countries to make up for any shortfall caused by drought, and farmers are often insured with some level of compensation and a social safety net. I read about the recent drought in Alberta in papers from home, and while the livelihoods of those farmers are seriously compromised, none of them are starving as a result.

Compare that situation to Zambia, where the majority of the rural population relies on maize (corn) as their staple food for every meal of the day, often only one already. The region has virtually no irrigation, and nearly all rural dwellers are farmers who rely on one harvest of rain-fed maize per year to feed their families and save enough money to

last them until the next one. Harvest time is normally a time of excitement and happiness, a time of feasting and replenishing hungry bellies, a time of repairing rain-damaged houses with farm income. But when I arrived in Zambia this year in March, all I could see were fields of stunted, dried up crops which have now progressed to empty household grain silos and the start of the long hungry season.

I have come to understand that the food insecurity experienced here is different and much more complex than it is in many other parts of Africa. The cause of these frequent droughts in Zambia has to do with a changing climate, but their negative effects seem to be from an ill conceived government policy dating back to the 1960s. The Tongan and Lozi people of this area traditionally relied on a nutritious cereal crop called sorghum for their subsistence. It is well suited to the sandy soil and can withstand long periods without water. However, the government of Kenneth Kaunda introduced a one-crop policy in Zambia as part of a campaign to bring unity to the newly independent country. A massive government system was set up to promote maize, which included handing out free inputs (seeds, fertilizers, and pesticides) to farmers, offering a guaranteed price of purchase, and building huge state-owned maize storage and processing infrastructure.

But in the Southern Province the soil and climate are not well suited to maize, which is why sorghum was grown for centuries previously. Over the following decades the already less-than-ideal soil became less and less fertile from the nutrient thirsty maize crops, increasing the susceptibility to drought damage. Then, in 1991, under increasing pressure from the International Monetary Fund (IMF) and a newly elected government, Zambia's economy underwent massive change with market liberalization policies

that ended government subsidies and resulted in nearly all state-owned companies being privatized.

This policy shift had major consequences for small-scale farmers in the Southern Province. Most notably, they are pastoralists (cattle farmers), and when the previously subsidized livestock vaccinations suddenly cost money, people simply stopped vaccinating their cattle. The result was the rapid spread of tick-borne disease (called East Corridor Disease), and just this past year, foot and mouth disease. Ninety per cent of livestock has perished in this region. Not only do people not have cattle to eat anymore (a primary source of protein), but they do not have any to use to plough their fields, a key factor in agricultural productivity which enables farmers to plant earlier to fight drought-shortened growing seasons.

At the same time as market liberalization, the much publicized HIV/AIDS pandemic exploded and a multiyear drought marked a period of tremendous hardship. Newly privatized companies and mines (70 per cent of the economy relies on copper mining) that were sold at rock bottom prices were gutted and closed, creating massive unemployment. Life expectancy dropped from the mid 1950s to 32.7 years since 1991 and the HIV infection rate has only stabilized at just under 20 per cent because death is starting to catch up with the spread of the virus. And of course the pandemic also undermines food security through decreased farmer productivity since people living with AIDS are often sick and find it difficult to work their fields by hand. In short, the timing and pace of market liberalization couldn't have been worse.



Drought's harvest: This grain bin should be overflowing with maize.

at a good price. We have established a demand for sorghum in nearby Botswana (where it is the staple food) and for use as livestock and chicken feed. There is also a strong demand for sorghum use in a new brand of beer being introduced by Zambian Breweries. By targeting respected leaders like Alfred, it is hoped that his example will be closely watched and copied by all his neighbours and sorghum will eventually make up to 60 per cent of the aggregate food crop in all drought prone areas. But this will only be achieved by creating a sustainable and profitable advantage over maize throughout all levels of the supply chain. And if Alfred decides that he still doesn't want to eat sorghum, at least he will be able to sell it and buy maize without depending on food aid to make it through the dry season.

These socio-cultural barriers need to be addressed head on. And they are not easily solvable. In an area where most people are accustomed to relying on the annual delivery of free food aid, my first objective will be to earn the trust of Alfred Mulele, who probably sees me as a rich *Mzungu* (foreigner) and expects me to either give him something for free or simply disappear after meeting him once. My approach is to spend as much time in the field with Alfred as I can, learning the local language, eating the local food and breaking down as many of the cultural barriers that separate us as possible. Living with Christy Yaa in a slum in Ghana is what enabled me to make a connection that helped her, and being side by side with Alfred on his farm and in his village is what will help him.

Working closely with Alfred, I am already in the villages nearly every day identifying farmers who are leaders, and who are serious about fighting drought and sharing their knowledge with others. In this first phase, I will introduce newer, productive farming techniques to these local leaders

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Now Zambia is in trouble and there is a general feeling among the people here of dependency and helplessness. But even with all of these real and very serious problems, the biggest obstacle to food security in the Southern Province as a socio-cultural one dating back to the one-crop maize policy of the 1960s. People are now so accustomed to maize as their staple food that they refuse to eat anything else. They will plant it year after year even knowing that if the rains are insufficient it will fail. They will refuse to grow or buy sorghum or cassava (both drought-resistant crops) even if they are a fraction of the price of maize, and even though taste tests have shown that people cannot tell the difference if sorghum or cassava is properly blended into their staple meal, *nshima*. A lot of this has to do with stigma, as traditional, drought-resistant crops are commonly known as "poor man's crops."

My job is to work directly with small-scale farmers such as Alfred Mulele to attack this stigma. Alfred is the chairman of a small agricultural cooperative near Livingstone, and is very well respected in the area for his generosity, work ethic and leadership. Through EWB, and CARE (an international non-governmental organization), I am involved in the pilot phase of a market-driven project to commercialize sorghum as a cash crop and enable farmers like Alfred to move from farming for subsistence to farming as a business. This past year, Alfred planted 1.5 hectares of maize without harvesting a single cob because of the drought. Through this project, he will be given free early-maturing and drought resistant sorghum seeds to plant and an assurance of a market to sell his harvest

so they can achieve a good harvest even in years of low rainfall, and help them become trainers themselves. Even before the first rains come in December, I will be with them in their fields emphasizing that they must prepare to plant early, because the biggest cause of crop failure is that farmers wait too long and miss out on the crucial first few rains. By February, I will be teaching these lead farmers proper harvesting and grading techniques to supply a good quality sorghum to the market so that they can command a fair price. And in the final phase, I will be helping to analyze the successes and failures of the past year to lay the groundwork for a scaled up, three year project involving many more farmers.

Tackling systematic barriers that the poor face in their everyday lives is where I want to focus my career, to create sustainable opportunities rather than perpetuating hand-outs. I don't believe that poverty in Africa can be made history through charitable aid or even debt relief (although both can be tremendously positive if targeted effectively). Rather, a long term, sustained commitment with a humble approach and firm grasp of the micro and macro causes of poverty will be much more effective and is why I feel I need to make this a career choice to make a significant contribution.

Joining the UBC chapter of EWB was the first step for me along this path, and I hope the next one will be a Master's in Development Management at the London School of Economics in 2006-2007 followed by a Master's in Business Administration in Social Entrepreneurship. But for now, I am quite happy working with farmers like Alfred Mulele to enable him to have more control over nature, and ultimately more control over his life. ■