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An Integrated Approach to Achieving Sustainable Household Nutrition and Food Security in Malawi

Malawi, located in South Eastern Africa, is an extremely poor landlocked nation according to the Ambassador of Malawi, Isaac C Lamba. Indeed, twelve million people inhabit a mere forty- six thousand square miles, leaving Malawi with a population density of 282 people per square mile (compared to the USA's 32 people per square mile). Sixty- four percent of these people live on less than 1 US dollar per day (**UNICEF. Malawi 6**). Many alarming statistics encompass Malawi. For instance, 16 percent of Malawians are infected with HIV/AIDS and the rate of infection is six percent. Malawi's child mortality rate is 189 per 1000, and the life expectancy would be less than forty years, compared to 77.6 years for a child born in the United States. In contrast to these disturbing predicaments, the Malawian National Government is very modern and effective. The first multiparty democratic election was held in 1994. A universal vote elects the president and vice president into a five year term. Currently Dr. Bingu wa Mutharika functions as President with Dr. Cassim Chilumpha serving as Vice President. A unicameral National Assembly made up of 193 members composes the legislative branch while a High Court, Supreme Court, and Magistrate Court forms the judiciary branch. These officials rule over 28 districts. Malawi has great foreign relations with Europe and the United States. It is also a great neighbor, accepting more than a million refugees from surrounding countries. Refugees of Mozambique's sixteen year civil war crowd the asylum camps of Malawi, as well as Rwandese, Somalians, and Congolese (**US Department 6**). The instability of Malawi's neighboring countries diminishes border trade and exhausts Malawi's food and money supply. Such a dense and growing population combined with poor agricultural and marketing practices makes it impossible for Malawi to sustain itself. The implementation of Family Planning education and immigration control would allow for a stronger, healthier, and more informed Malawian population.

Ninety percent of Malawian farmers live as subsistence farmers, meaning they generate only enough food to sustain their family. Malawians are very traditional and the typical Malawian household is very large, with four to seven children and extended family members. It is very difficult for large Malawian families to consume daily nutritional needs. The general population eats two meals a day and their diet consists of less than five different items. Beef and chicken are too expensive, so grasshoppers, red beans, and peanut flour substitute as protein sources (**US Department 4**). The average Malawian farmer makes an estimated yearly income of 600 US dollars (**2**). This low amount of income is due to small farm size, flawed agricultural practices, and a poor marketing system. Malawian farmers grow maize, tobacco, cassava, beans, and rice on small farms. These one half to three hectare farms are hilly and therefore, very difficult to manage. The average subsistence farmer practices very poor agricultural management techniques. The lack of crop rotation results in severe soil erosion, heavy pest and disease incidence, weed problems, and substantial decline in soil fertility. Most farmers use recycled seeds that reduces annual crop productivity potential. The farms lack irrigation systems and the necessary pesticides for pest and weed control. Most of the arable land is exposed to erosion and eventually becomes barren and useless.

But what if a farmer was to grow a surplus of crops? There would be practically no where to market his produce. Malawi has poor road networking and lacks proper transportation to local as well as foreign markets. Few marketing agents reach rural areas, causing monopolization and the farmers end up practically giving away their produce. Since there are no fixed prices or competition among buyers, the farmer has no choice but to sell cheap. In isolated areas, many farmers grow the same crops and with no

market, extremely low demand results in extremely low prices (**Jumbo**). Malawian farmers lack the governmental and financial support needed to improve their agricultural and food sector. Besides an inferior market, many other factors impede the food and nutrition security of the people. Malawi lacks food processing plants and companies, causing a devastating lack in the nutritional value and shelf life of food (**Jumbo**). There are limited storage and freezer systems. Packaged goods can only be found in the major metropolitan areas. Without proper transportation and limited access to processed goods, the majority of the population has little or no access to a balanced diet. Malawi's immense population is no stranger to the devastating effects of famine.

A fertility rate of 6.3 children per woman devastates the family farm because it negatively impacts the health of the family, hinders children's education and quality of life, and prevents monetary income saving and investment. A high fertility rate is incredibly dangerous to the health of the mother and her children. In Africa, one out of every twenty mothers runs the risk of death due to high risk pregnancy and unsafe abortion. For young mothers (ages 15-19), older women (aged 35+), and mothers of five or more kids, the risks of death during pregnancy is one and a half to three times greater than that of a 20- 24 year old woman (**World 3**). These factors are partially responsible for the 500,000 Malawian minors that are orphaned due to causes other than HIV (**UNICEF. Malawi 4**). Un- spaced and multiple births are also very dangerous for the children. Malawi possesses the nineteenth world rank in infant mortality, with its staggering child mortality rate of 189 per 1000. Twenty- two percent of children under the age of five are underweight, and 45 % of children under five suffer from moderate to severe stunting due to malnutrition related illness (**2**).

A high fertility rate is not only unhealthy for the child at birth, but it prevents good health throughout childhood. The poor, oversized family lacks the money to invest in malaria treated nets, dietary supplements, medicines, and a well- balanced diet. Poor health and nutrition lead to poor development and the children suffer emotionally and mentally. The lack of emotional support and attention makes the child lose hope and become doomed to a life of poverty. As Jeffery Sachs states in his book, *The End of Poverty*, the lack of investment in children is "disastrous" because "high fertility rates in one generation, therefore tend to lead to impoverishment of the children and to high fertility rates in the following generation" (**Sachs 65**). Another problem with the large family is that all of the children do not have the opportunity to receive a complete education; 90% of children receive free primary education, but only 20% move on to secondary school (**Embassy 1**). Malawi desperately needs education and community to produce future leaders and thinkers. Without an education, it is difficult to improve the quality of life.

Here is an alarming question: How can a poor subsistence farmer feed a large family and hope to market his crops? When there are so many mouths to feed, one cannot save produce to sell. When a farmer does not have savings, he cannot make the money that could be used to purchase improved seed or advanced farm equipment. Once the patriarch dies, the small, one acre farm is divided between his children who now have only a small piece of land to cultivate in hopes of supporting a family. The lack of population control and family planning keeps Malawi caught in a vicious poverty trap.

Due to global advocacy and improved contraceptive methods, family planning is becoming a reality in underdeveloped countries. Within the last century family planning has become a worldwide trend and phenomenon. Due to increased education, governmental assistance, and advanced birth control techniques, the global fertility rate has decreased by half (6.0 to 3.0) in only three decades! (**Caldwell 4**). The most populous (and some of the most poor) countries and regions have successfully adopted family planning legislation and have seen drastic positive results. For instance, India reduced its birth rate to 2.23 from six (**Murthy 3**). Family planning is a global trend and Malawi's population crisis has a good chance for improvement. Despite Malawi's immense fertility rate and the fact that only 26 percent of women use modern contraceptives, programs such as Engenderhealth, RTI, and Malawian religious and governmental

organizations are investing in Malawi. For example, Lilongwe agency, Fasu and Maternal Life (FAMLI) has embedded tradition into family planning; the women wear traditional beaded waistbands that indicate the location of their fertility cycle (**Malawi 1**). According to USAID graphs, the contraceptive prevalence rate almost triples that of the last decade. The reason family planning has been so well received is because it works to improve food and resource security. A decreased population size obviously makes it easier for a country to feed itself and assert an acquired independence.

On a smaller scale, family planning drastically affects the small, subsistence farm. It reduces the risk of maternal death by 25% and family spacing eliminates the 60- 70% increased risk of infant death (**World 3**). Family planning would generally allow for a much healthier and therefore happier family. With more time and money devoted to raising a healthy and educated child, future generations of Malawians would experience more economic success. Family planning also improves the quality of life and status of women, who represent half of the population. Traditionally, the role of Malawian women is solely for procreation and running the house, but if the women are able to make decisions about childbirth and family spacing they will gain confidence and a sense of value. In a smaller family, a young girl would have the opportunity to receive a complete education, a process which would delay the marrying age and allow her to become an instrumental member of the community. Women represent half of the population, six million people who could completely revolutionize the labor system! Even though family planning does not provide immediate relief, it could set the stage for a stable and improved future Malawian generation.

Ensuring food security in Malawi is the responsibility of both national and international governments and organizations. With the help of aid organizations, the government needs to invest in technological and economical advancement through the forms of legislation and grants. Most importantly, the government must rework its current agricultural marketing policy. A decade ago, the government had a sound agricultural loan and credit policy that stabilized the crop production system. But recently, the government adopted a small scale and medium business oriented policy that shifted the focus away from agricultural production and marketing policy resulting in the complete collapse of the agriculture system. In an effort to rebuild the agricultural scene, the Malawian government provided each farmer with a “starter pack” of seed and fertilizer. The hope was that the farmer would grow a surplus and use his sales to purchase the next year’s basic agricultural inputs of seed and fertilizer (**Jumbo**). This plan proved unsustainable because there was no way to market or store the surplus crop. All of the extra food went to waste.

Since over ninety percent of Malawians are subsistence farmers, Malawi needs to concentrate on strengthening its agricultural production and marketing system. The number one priority is to improve the transportation network in order to greatly reduce the price of travel. Secondly, the government needs to educate poor farmers about beneficial agricultural practices and provide farmers with a good loan recovery system that would allow access to improved seed, fertilizer, farm equipment, and pesticides. One of the best actions the government can take is to connect the isolated areas and build up a sense of community. An idea would be to invest aid money into the creation of small local towns by constructing health clinics, schools, small produce markets, storage areas, and community centers. The community center would house agricultural training workshops, information sessions, and even festivals or celebrations. With improved transportation and communication, Malawians would have ready access to education and health. Only through community can Malawians progress by the spread of ideas and have an outlet to the modern world. Even the construction of small buildings creates new chances for employment and therefore a higher family income and an eventual progression towards urbanization.

Ironically, Malawi supports refugees that drain the economy but fails to provide substantial support for the few educated scholars once they return home. Within recent years, immigration has caused a population jump of approximately three million (nine million to twelve million). This immigration trend

is increasing, draining Malawi's economy and food source. International organizations must help Malawi in its relief efforts. They should create separate refugee camps, or fund the existing Malawian camps. Malawi cannot handle these refugees without increased aid. Another detrimental factor is the lack of sustained support for agronomist and plant breeders. Many of the agriculture students trained in the United States and other developed countries often are poorly supported upon return to their native countries (**Jumbo**). There is a need for sustained, long-term funding and support of agriculture research programs in developing countries like Malawi. Improved crop varieties, for example, are not developed overnight, and there is a continued need for better improved varieties to keep up with evolving pests, pathogens, and improved cultural practices. Developing countries, such as Malawi, cannot afford to waste one of their most important resources, intellectual capital. The success of the Green Revolution illustrates how a few determined scientific leaders can have a great impact on feeding the world. There are new leaders in the current and future generations who have the potential to eliminate food and nutrition insecurity given adequate support.

On an international level, wealthy countries need to cancel all debts that have no chance of being paid. Many undeveloped countries feel much pressure from these debts. Recently, Malawi has experience a 90 percent decrease in debts! (**Jumbo**). This cancellation of foreign debts allows for Malawi to invest in the careers, education, and health of the people. Next, the market must shift: wealthy countries must increase their imports of goods from the weaker countries, thereby enabling the participation of developing countries in global trade. It is also very important for large corporations to invest in underdeveloped countries. The garment industry has especially succeeded in worldwide investment. Corporations such as Gap and Wal-Mart own worldwide factories, and even though the conditions of these factories are often degrading, they do offer the underdeveloped country a starting point for eventual industrialization (**Sachs 63**). Business investments will increase international dependence on Malawi and lessen Malawi's dependence upon wealthier countries.

The monster of third world poverty may seem unconquerable but there are many international organizations fighting against it. For instance, the United Nations Children's Fund (UNICEF) is planning to meet its "Millennium Development Goals" by the year 2015. This seven billion dollar per year plan involves eight goals: eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria, and other diseases; ensure environmental stability; and develop a global partnership for development (**UNICEF 1**). Unfortunately Sub-Saharan Africa is much less successfully meeting goals when compared to India and Asia. Malawi specifically felt the benefits of the United State's Agency for International Development's (USAID) specialized four step strategy. Already, Malawi has decreased dependence on tobacco as a cash crop and the sale of agricultural products continue to increase rapidly. USAID has also implemented a dairy farm industry in Malawi, and milk sales have increased by 54%. USAID is improving Malawians involvement in democracy and the training of paralegals. The third goal to improve health and HIV/AIDS care has also succeeded – abstinence educational programs reached 370 school and condom sales have grown to 8.5 million. The slowest moving portion of the strategy is education, but USAID is investing in teacher training programs (**USAID 1-2**). Malawi is also a member of various international agencies such as the World Bank, the World Health Organization, and the United Kingdom. With the financial and strategic combined efforts of these various organizations, Malawi will be sure to experience improvement within the next century.

Sixty percent of the world population increase is contributed by only ten countries. Every four seconds we live, someone else dies of starvation; this person is usually a child (**UNICEF Goal 1**). Poverty must be defeated. As Dr. Norman Borlaug stated in his 1970 Nobel Peace Prize acceptance speech, "There can be no permanent progress in the battle against hunger until the agencies that fight for increased food production and those that fight for population control unite in a common effort." Without the combined efforts of seed geneticists, family planning advocates, economists, and aid providers

nothing will be accomplished. The world needs leaders. This past summer, I was lucky enough to work alongside a Malawian graduate student who leaves his wife and daughter behind in order to devote years in America to study plant breeding with the hopes of creating genetically improved corn hybrids. It's the many heroes like McDonald Jumbo, who leave their home and family in order to advance the circumstance of the world, that we need in order to eventually eliminate food and nutrition insecurity. Malawi must create a sense of community that would allow for the much-needed spread of education and awareness through communication. Improving the state of the country requires the participation and the partnership of all Malawi's twelve million inhabitants. In conclusion, a multi-factor approach encompassing family planning education, improved transportation systems, better food policy, strong leaders, funded intellectuals, and the implementation of community centers will greatly facilitate population control and food security in Malawi. The success of the Green Revolution and the increased aid from philanthropic foundations and other agencies provide reason for optimism about Malawi's future.

Works Cited

1. Caldwell, John. "Paths to Lower Fertility." BMJ Journals. BMJ 319:985-987 (1999).
15 September 2006. <<http://bmj.bmjournals.com/cgi/content/full/319/7215/985>>
2. Embassy of the United States. USAID Success Stories. Lilongwe Malawi. Malawians Learn So They Can Teach Back Home. By Sherri Byrand. Sheboygan Press. 19 September 2006. <<http://lilongwe.usembassy.gov/usaidsuccessstories10.html>>
3. Jumbo, McDonald. Personal Interview. 17 September 2006.
4. "Malawi: Planning Your Family – The Beads Way." The Chronicle Newspaper.
5 September 2006. 25 September 2006.
<<http://allafrica.com/stories/200609050939.html>>
5. Murthy, Laxmi. "India's Billion." India's National Magazine. September 1999. 15 September 2006. <<http://www.hinduonnet.com/fline/fl1619/16190890.htm>>
6. Sachs, Jefferey D. The End of Poverty. New York: The Penguin Press, 2005.
7. UNICEF. Millennium Development Goals. 19 September 2006.
<<http://www.unicef.org/mdg/>>
8. UNICEF. Millennium Development Goals. Goal: Eradicate Extreme Poverty and Hunger. 19 September 2006. <<http://www.unicef.org/mdg/poverty.html>>
9. UNICEF. Malawi. Statistics. 15 September 2006.

<http://www.tsunamigeneration.com/infobycountry/malawi_statistics.html>

10. United Nations. Special Report. Symposium No. 2: "Family Planning, Reproductive Health and Development." United Nations, New York: The Dag Hammerskjold Library Auditorium. November 2003. 10 September 2006.

< <http://www.un.org/special-rep/ohrlls/ohrlls/ppd.sym2.sum.03.11.03.htm>>

11. USAID From the American People. Sub- Saharan Africa. Malawi. USAID's Strategy in Malawi. June 2006. 19 September 2006.

<http://www.usaid.gov/locations/sub-saharan_africa/countries/malawi/index.html>

12. US Department of State. Under Secretary for Public Diplomacy and Public Affairs. Electronic Information and Publications Office. Background Notes: Malawi. June 2006. 19 September 2006. <<http://www.state.gov/r/pa/ei/bgn/7231.htm>>

13. World Health Organization. Department of Reproductive Health and Research. The Health Benefits of Family Planning: Chapter 1. 10 September 2006.

<http://www.who.int/reproductive-health/publications/health_benefits_family_planning/FPP_95_11_chapter1.en.html>