Simwatachela Sustainable Agricultural and Arts Program

Project Description with Attached Budget

Project Mission

The intention is to alleviate hunger through the community's proactive efforts in planting seeds for respective community gardens and to use the excess food to feed their families, to generate income and to further projects in their villages. Additional emphasis on working with arts and crafts to preserve Tonga culture near the Lower Zambezi River.

Aims of Project

- To alleviate hunger through people's proactive efforts of planting seeds in community gardens and through a sustainable agricultural activity
- To bring water to a relatively dry rural area
- To empower local people through their own ideas
- To encourage local income-generation through vegetable growing, traditional African medicine, and arts and crafts
- To display interest in helping develop at the grassroots level of a community
- To desire the betterment the lives of those in indigenous communities
- To display interest in empowering both women and men, individuals and groups to uplift the living standards of the people
- To think about other people who are less-fortunate than they and to proactively work to enhance the quality of those lives

Short Description of Project

Simwatachela Community – located approximately eighty kilometers from Kalomo, Southern Province, Zambia, is a hard-working, industrious community. I lived within this community for two years, and I speak their local language (*CiTonga*). In April 2008, the community gave me land specifically for the purpose of starting a sustainable agricultural program. Community groups will each form a small portion of land and grow vegetables on community gardens which will aid in problems with hunger and malnutrition in the village. The two in-country directing counterparts working for this program are Gibson Sinan'gombe and John Dickson Siandwa. (*Simwatachela Sustainable Agricultural and Arts Program – Sibooli Branch)*

In the last year, another community has arisen in the Simwatachela Area which is anxious to use the same development model. This community is located about ten kilometers from a small town called *Zimba,* which is sandwiched between Kalomo and Livingstone, the tourist

capital of Zambia. The in-country directing counterpart for this program is named Elijah Chikoma. (*Simwatachela Sustainable Agricultural and Arts Program – Zimba Branch)*

The same project model, which thus far has been helping to serve many in the Southern Province of Zambia, if it proves to be highly successful will be implemented in Sierra Leone, West Africa, where I have family (my daughter is half-Sierra Leonean) as well as many counterparts in the Eastern Province, a small village called Daru. The in-country directing counterparts for this program are named Israel Koroma, Mohamed Clifford Kamara and Bockarie Kamara. (*Simwatachela Sustainable Agricultural and Arts Program – Sierra Leone Branch)*

Project Summary

I returned to Zambia after having lived there from January 2004 to April 2006 with the U.S. Peace Corps. I returned to the Simwatachela Rural Catchment Area in April 2008 as the people had requested me back. I had been given land, asked to return by numerous friends in the village specifically for the sake of completing a large-scale sustainable agricultural and arts project.

The project will consist of the various community groups, already formed - examples: Womens' Groups, Bee-Keeping Groups, HIV/AIDS groups, Malaria Groups, Arts & Crafts Groups. The groups will organize themselves and will form committees within their prospective groups. After organizing, each group will receive a small plot of land on which to raise vegetables. We use the term 'Community Garden', similar to those in the U.S.A. and other developed countries, however minus the fee for the plot of land. A friend in the States donated a large portion of seeds entirely for the sake of this project, as well as seed exchange groups and a few other established seed companies which feel that this project is worth a donation of some seeds.

After the land has been cleared, and the people indicate their seriousness about the project, the organization's coordinators will distribute the seeds to those who are willing and want to work. Growing vegetables will help, ideally:

1. to aid in hunger problems in the village
2. to provide a source of nutrition
3. to provide income from selling

It is a large-scale project whose duration will endure ten to fifteen years.

History of this Project Model:

I was fortunate to meet Marles Kanyawinyawi some four years back, during the time in which I lived in the Simwatachela Catchment Area conducting a project with the Ministry of Education through the U.S. Peace Corps.

Marles Kanyawinyawi had spoken to me at length of a farm. A large, traditional farm - he called it - that his granddaddy had 'earmarked for an American' to run and own. He had an

obligation to his granddaddy to give an American this farm- this land - as was his granddaddy's wish. His granddaddy was sick for years before his actual passing, and was nursed throughout the duration of those years by Americans - missionaries who had come to the area to do charity work. Marles's granddaddy - Mr. Sianjina - owned a great deal of land - was on his deathbed when one of the American missionaries tending to him offered to buy him a coffin. Mr. Sianjina was overjoyed by the prospect of having his body buried in a fancy coffin, and quickly went to dig up his money he had buried in dispersed patches throughout his land.

Mr. Sianjina was touched by the gesture of the Americans, and later that same day - standing under a large tree, proclaimed: "*My offsprings…my family - these Americans have been very kind to me. They have bought me a coffin. So, please, if any American has a problem with finding land here in Zambia, surrender this land to such an American.*"

He was buried there, on his land, rather strangely. A deep ditch - dug into the earth - then piled over with dirt until level with the rest of the earth surrounding it. A metal lid - about the size of a grill cover - was used to mark its location.

Facts and Statistics concerning Zambia and Sierra Leone

UN list of least developed countries / poorest countries

Poorest Countries in the World (2009) on a world index Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, East Timor, Togo, Tuvalu, Uganda, Tanzania, Vanuatu, Yemen, Zambia.

Trends among the world's poorest countries

Since 1990, there has been encouraging news emerging from developing countries. According to the UN's 2005 Human Development Report, life expectancy in developing countries has increased by two years. There are three million fewer child deaths annually and 30 million fewer children out of school. More than 130 million have escaped extreme poverty. In 2003, however, 18 countries with a combined population of 460 million registered lower on the human development index (HDI) than in 1990, an unprecedented reversal.

Child mortality rates are directly related to a country's human development opportunity. Death rates among the world's children are falling, but the trend is slowing and the gap

between rich and poor countries is widening. Sub-Saharan Africa accounts for a rising share of child deaths: in 2005, the region represented 20% of births worldwide and 44% of child deaths.

To illustrate the income inequality between rich and poor countries, consider these facts: the world's richest individuals have a combined income greater than that of the poorest 416 million; 982 million people out of the developing world's 4.8 billion people live on $1 per day, and another 2.5 billion (40% of the world's population) live on less than $2 per day. In addition, the poorest 40% of the world population accounted for 5% of global income in 2005, the richest 20% accounted for 75% of world income, and the richest 10% for 54%.

About 60% of the poorest countries experienced civil conflict of varying intensity and duration in the period 1990–2001 that, in most cases, erupted after a period of economic stagnation and regression. In Rwanda, for example, average private consumption per capita fell by more than 12% between 1980 and 1993, the year before the genocide occurred.

Almost two decades ago, the first Human Development Report sent a clear message that human development is about enlarging people's choices, allowing them to develop their full potential and lead productive, creative lives in dignity and in accordance with their needs and interests. By ranking countries in a way which is more consistent with this thinking, the HDR report has helped shift the debate away from gross domestic product (GDP) per capita as the only measure of development. Instead, the HDI started providing a summary of each country's achievement in attaining:

- A long and healthy life
- Access to knowledge
- A decent standard of living

Since 1990, The Human Development Report has provided analysis, set the agenda and shifted the course and implementation on development policies worldwide. The 2010 global Human Development Report will mark the twentieth anniversary of the HDR, and will involve a major retrospective about the achievements of the human development approach, and continue to address the development challenges of the 21st century.

The cycle of annual reports will continue – with the 2009 edition focusing on the challenges around migration, both within and beyond borders. That 2009 report will investigate migration in the context of demographic changes and trends in both growth and inequality. It will also present more detailed and nuanced individual, family and village experiences, and explore less visible movements typically pursued by disadvantaged groups such as short term and seasonal migration. These underlying inequalities, which can be compounded by policy distortions, will be a major theme of the 2009 report.

Human Development Indices: A statistical update 2008 - HDI rankings

High Human Development

1. Iceland
2. Norway
3. Canada
4. Australia
5. Ireland
6. Netherlands
7. Sweden
8. Japan
9. Luxembourg
10. Switzerland
11. France
12. Finland
13. Denmark
14. Austria
15. United States
16. Spain
17. Belgium
18. Greece
19. Italy
20. New Zealand
21. United Kingdom
22. Hong Kong, China (SAR)
23. Germany
24. Israel
25. Korea, Rep. of
26. Slovenia
27. Brunei Darussalam
28. Singapore
29. Kuwait
30. Cyprus
31. United Arab Emirates
32. Bahrain
33. Portugal
34. Qatar
35. Czech Republic
36. Malta
37. Barbados
38. Hungary
39. Poland
40. Chile
41. Slovakia

Medium Human Development

76. Turkey
77. Dominica
78. Lebanon
79. Peru
80. Colombia
81. Thailand
82. Ukraine
83. Armenia
84. Iran, Islamic Rep. of
85. Tonga
86. Grenada
87. Jamaica
88. Belize
89. Suriname
90. Jordan
91. Dominican Republic
92. Saint Vincent and the Grenadines
93. Georgia
94. China
95. Tunisia
96. Samoa
97. Azerbaijan
98. Paraguay
99. Maldives
100. Algeria
101. El Salvador
102. Philippines
103. Fiji
104. Sri Lanka
105. Syrian Arab Republic
106. Occupied Palestinian Territories
107. Gabon
108. Turkmenistan
109. Indonesia
110. Guyana
111. Bolivia
112. Mongolia
113. Moldova

Low Human Development

154. Nigeria
155. Lesotho
156. Uganda
157. Angola
158. Timor-Leste
159. Togo
160. Gambia
161. Benin
162. Malawi
163. Zambia
164. Eritrea
165. Rwanda
166. Côte d'Ivoire
167. Guinea
168. Mali
169. Ethiopia
170. Chad
171. Guinea-Bissau
172. Burundi
173. Burkina Faso
174. Niger
175. Mozambique
176. Liberia
177. Congo, Dem. Rep.
178. Central African Republic
179. Sierra Leone

42. Estonia
43. Lithuania
44. Latvia
45. Croatia
46. Argentina
47. Uruguay
48. Cuba
49. Bahamas
50. Costa Rica
51. Mexico
52. Libyan Arab Jamahiriya
53. Oman
54. Seychelles
55. Saudi Arabia
56. Bulgaria
57. Trinidad and Tobago
58. Panama
59. Antigua and Barbuda
60. Saint Kitts and Nevis
61. Venezuela, Rep. Bov.
62. Romania
63. Malaysia
64. Montenegro
65. Serbia
66. Saint Lucia
67. Belarus
68. The former Yugoslav Republic of Macedonia
69. Albania
70. Brazil
71. Kazakhstan
72. Ecuador
73. Russian Federation
74. Mauritius
75. Bosnia and Herzegovina

114. Viet Nam
115. Equatorial Guinea
116. Egypt
117. Honduras
118. Cape Verde
119. Uzbekistan
120. Nicaragua
121. Guatemala
122. Kyrgyzstan
123. Vanuatu
124. Tajikistan
125. South Africa
126. Botswana
127. Morocco
128. São Tomé and Principe
129. Namibia
130. Congo
131. Bhutan
132. India
133. Lao, People's Dem. Rep.
134. Solomon Islands
135. Myanmar
136. Cambodia
137. Comoros
138. Yemen
139. Pakistan
140. Mauritania
141. Swaziland
142. Ghana
143. Madagascar
144. Kenya
145. Nepal
146. Sudan
147. Bangladesh
148. Haiti
149. Papua New Guinea
150. Cameroon
151. Djibouti
152. Tanzania, U. Rep. of
153. Senegal

2008 Statistical Update

Zambia

The Human Development Index - going beyond income

Each year since 1990 the Human Development Report Office has published the human development index (HDI) which looks beyond GDP to a broader definition of well-being. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income). The index is not in any sense a comprehensive measure of human development. It does not, for example, include important indicators such as gender or income inequality and more difficult to measure indicators like respect for human rights and political freedoms. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well-being.

The HDI for Zambia is 0.453, which gives the country a rank of 163rd out of 179 countries with data (Table 1).

Table 1: Zambia's human development index 2006 and underlying indicators in comparison with selected countries.

HDI value 2006	Life expectancy at birth (years) 2006	Adult literacy rate (% ages 15 and above) 2006	Combined primary, secondary and tertiary gross enrolment ratio (%) 2006	GDP per capita (PPP US$) 2006
1. Iceland (0.968)	1. Japan (82.4)	1. Georgia (100.0)	1. Australia (114.2)	1. Luxembourg (77,089)
161. Benin (0.459)	176. Sierra Leone (42.1)	112. Malawi (70.9)	123. Syrian Arab Republic (65.7)	148. Lesotho (1,440)
162. Malawi (0.457)	177. Angola (42.1)	113. Madagascar (70.7)	124. Singapore (64.4)	149. Kenya (1,436)
163. Zambia (0.453)	178. Zambia (41.2)	114. Zambia (68.0)	125. Zambia (63.3)	150. Zambia (1,273)
164. Eritrea (0.442)	179. Swaziland (40.2)	115. Cameroon (67.9)	126. Timor-Leste (63.2)	151. Benin (1,259)
165. Rwanda (0.435)		116. Angola (67.4)	127. Viet Nam (62.3)	152. Ghana (1,247)

179. Sierra Leone (0.329)	147. Mali (22.9)	179. Djibouti (25.5)	178. Congo (Democratic Republic of the) (281)

NB Changes in HDI values and ranks between two reports result from revisions to data for each of the HDI's three components (4 indicators) as well as real changes in the level of human development in different countries. The data revisions this year – especially of the GDP per capita (PPP US$) series – have resulted in more substantial apparent movements in the HDI than is normally the case between successive publications. For these reasons, HDI values and rankings are not comparable across different publications.

Human poverty in Zambia: focusing on the most deprived in multiple dimensions of poverty

The HDI measures the average progress of a country in human development. The Human Poverty Index for developing countries (HPI-1), focuses on the proportion of people below a threshold level in the same dimensions of human development as the human development index - living a long and healthy life, having access to education, and a decent standard of living. By looking beyond income deprivation, the HPI-1 represents a multi-dimensional alternative to the $1.25 a day (PPP US$) poverty measure.

The HPI-1 value of 41.8 % for Zambia, ranks 124th among 135 developing countries for which the index has been calculated.

The HPI-1 measures severe deprivation in health by the proportion of people who are not expected to survive age 40. Education is measured by the adult illiteracy rate. And a decent standard of living is measured by the unweighted average of people without access to an improved water source and the proportion of children under age 5 who are underweight for their age. Table 2 shows the values for these variables for Zambia and compares them to other countries.

Table 2: Selected indicators of human poverty for Zambia

Human Poverty Index (HPI-1) 2006	Probability of not surviving past age 40 (%) 2005	Adult illiteracy rate (%ages 15 and older) 2006	People without access to an improved water source (%)2006	Children underweight for age (% ages 0-5) 2006
1. Czech Republic (1.7)	1. Singapore (1.8)	1. Cuba (0.2)	1. Bosnia and Herzegovina (1)	1. Croatia (1)
122. Timor-Leste (41.0)	132. Lesotho (47.8)	91. Malawi (29.1)	104. Togo (41)	85. Lesotho (20)
123. Senegal (41.1)	133. Swaziland (48.0)	92. Madagascar (29.3)	105. Vanuatu (41)	86. Kenya (20)
124. Zambia (41.8)	134. Zambia (53.9)	93. Zambia (32.0)	106. Zambia (42)	87. Zambia (20)

125. Benin (44.5)	135. Zimbabwe (57.4)	94. Cameroon (32.1)	107. Haiti (42)	88. Vanuatu (20)
126. Central African Republic (44.6)		95. Angola (32.6)	108. Guinea-Bissau (43)	89. Côte d'Ivoire (20)
135. Afghanistan (60.2)		127. Mali (77.1)	123. Afghanistan (78)	135. Bangladesh (48)

Building the capabilities of women

The HDI measures average achievements in a country, but it does not incorporate the degree of gender imbalance in these achievements. The gender-related development index (GDI), introduced in Human Development Report 1995, measures achievements in the same dimensions using the same indicators as the HDI but captures inequalities in achievement between women and men. It is simply the HDI adjusted downward for gender inequality. The greater the gender disparity in basic human development, the lower is a country's GDI relative to its HDI.

To measure the impact of gender inequalities on human development achievement, Zambia's GDI value, 0.444 can be compared to its HDI value of 0.453. Its GDI value is 98.0% of its HDI value. Out of the 157 countries with both HDI and GDI values, 120 countries have a better ratio than Zambia's.

Table 3 shows how Zambia's ratio of GDI to HDI compares to other countries, and also shows its values for selected underlying indicators in the calculation of the GDI.

Table 3: The GDI compared to the HDI – a measure of gender disparity

GDI as % of HDI	Life expectancy at birth(years) 2006	Adult literacy rate (% ages 15 and older) 2006	Combined primary, secondary and tertiary gross enrolment ratio2006
	Female as % male	Female as % male	Female as % male
1. Sweden (99.9%)	1. Russian Federation (123.1%)	1. Lesotho (122.5%)	1. United Arab Emirates (120.2%)
119. Cape Verde (98.1%)	154. Pakistan (100.8%)	103. Nigeria (79.0%)	119. Bolivia (93.3%)
120. Guatemala (98.0%)	155. Lesotho (100.6%)	104. Uganda (79.0%)	120. Ghana (92.5%)
121. Zambia (98.0%)	156. Zambia (100.6%)	105. Zambia (78.4%)	121. Zambia (92.0%)
122. Tunisia (98.0%)	157. Niger (96.9%)	106. Algeria (78.0%)	122. Nepal (91.6%)
123. Nicaragua		107. Cambodia	123. Guatemala (90.9%)

(97.9%)	(78.0%)		
157. Occupied Palestinian Territories (92.8%)	135. Chad (31.3%)	157. Chad (60.4%)	

The gender empowerment measure (GEM) reveals whether women take an active part in economic and political life. It tracks the share of seats in parliament held by women; of female legislators, senior officials and managers; and of female professional and technical workers- and the gender disparity in earned income, reflecting economic independence. Differing from the GDI, the GEM exposes inequality in opportunities in selected areas.

Zambia ranks 91st out of 108 countries in the GEM, with a value of 0.425.

2008 Statistical Update

Sierra Leone

The Human Development Index - going beyond income

Each year since 1990 the Human Development Report Office has published the human development index (HDI) which looks beyond GDP to a broader definition of well-being. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income). The index is not in any sense a comprehensive measure of human development. It does not, for example, include important indicators such as gender or income inequality and more difficult to measure indicators like respect for human rights and political freedoms. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well-being.

The HDI for Sierra Leone is 0.329, which gives the country a rank of 179th out of 179 countries with data (Table 1).

Table 1: Sierra Leone's human development index 2006 and underlying indicators in comparison with selected countries.

HDI value 2006	Life expectancy at birth (years) 2006	Adult literacy rate (% ages 15 and above) 2006	Combined primary, secondary and tertiary gross enrolment ratio (%) 2006	GDP per capita (PPP US$) 2006
1. Iceland (0.968)	1. Japan (82.4)	1. Georgia (100.0)	1. Australia (114.2)	1. Luxembourg (77,089)
177. Congo (Democratic Republic of the)	174. Mozambique (42.4)	139. Senegal (42.0)	162. Burundi (45.1)	170. Central African Republic (679)

(0.361)				
178. Central African Republic (0.352)	175. Lesotho (42.3)	140. Benin (39.7)	163. Ethiopia (45.1)	171. Timor-Leste (668)
179. Sierra Leone (0.329)	176. Sierra Leone (42.1)	141. Sierra Leone (37.1)	164. Sierra Leone (44.6)	172. Sierra Leone (630)
	177. Angola (42.1)	142. Ethiopia (35.9)	165. Mali (44.3)	173. Niger (612)
	178. Zambia (41.2)	143. Niger (29.8)	166. Senegal (41.2)	174. Eritrea (519)
	179. Swaziland (40.2)	147. Mali (22.9)	179. Djibouti (25.5)	178. Congo (Democratic Republic of the) (281)

NB Changes in HDI values and ranks between two reports result from revisions to data for each of the HDI's three components (4 indicators) as well as real changes in the level of human development in different countries. The data revisions this year – especially of the GDP per capita (PPP US$) series – have resulted in more substantial apparent movements in the HDI than is normally the case between successive publications. For these reasons, HDI values and rankings are not comparable across different publications.

Human poverty in Sierra Leone: focusing on the most deprived in multiple dimensions of poverty

The HDI measures the average progress of a country in human development. The Human Poverty Index for developing countries (HPI-1), focuses on the proportion of people below a threshold level in the same dimensions of human development as the human development index - living a long and healthy life, having access to education, and a decent standard of living. By looking beyond income deprivation, the HPI-1 represents a multi-dimensional alternative to the $1.25 a day (PPP US$) poverty measure.

The HPI-1 value of 51.2 % for Sierra Leone, ranks 129th among 135 developing countries for which the index has been calculated.

The HPI-1 measures severe deprivation in health by the proportion of people who are not expected to survive age 40. Education is measured by the adult illiteracy rate. And a decent standard of living is measured by the unweighted average of people without access to an improved water source and the proportion of children under age 5 who are underweight for their age. Table 2 shows the values for these variables for Sierra Leone and compares them to other countries.

Table 2: Selected indicators of human poverty for Sierra Leone

Human Poverty Index (HPI-1) 2006	Probability of not surviving past age 40 (%) 2005	Adult illiteracy rate (%ages 15 and older) 2006	People without access to an improved water source (%)2006	Children underweight for age (% ages 0-5) 2006
1. Czech Republic (1.7)	1. Singapore (1.8)	1. Cuba (0.2)	1. Bosnia and Herzegovina (1)	1. Croatia (1)
127. Mozambique (48.2)	127. Rwanda (44.6)	118. Senegal (58.0)	109. Kenya (43)	110. Sri Lanka (29)
128. Guinea (50.9)	128. Mozambique (45.0)	119. Benin (60.3)	110. Tanzania (United Republic of) (45)	111. Maldives (30)
129. Sierra Leone (51.2)	129. Sierra Leone (45.6)	120. Sierra Leone (62.9)	111. Sierra Leone (47)	112. Sierra Leone (30)
130. Ethiopia (51.6)	130. Central African Republic (46.2)	121. Ethiopia (64.1)	112. Angola (49)	113. Angola (31)
131. Burkina Faso (53.7)	131. Angola (46.7)	122. Niger (70.2)	113. Chad (52)	114. Congo (Democratic Republic of the) (31)
135. Afghanistan (60.2)	135. Zimbabwe (57.4)	127. Mali (77.1)	123. Afghanistan (78)	135. Bangladesh (48)

Building the capabilities of women

The HDI measures average achievements in a country, but it does not incorporate the degree of gender imbalance in these achievements. The gender-related development index (GDI), introduced in Human Development Report 1995, measures achievements in the same dimensions using the same indicators as the HDI but captures inequalities in achievement between women and men. It is simply the HDI adjusted downward for gender inequality. The greater the gender disparity in basic human development, the lower is a country's GDI relative to its HDI.

To measure the impact of gender inequalities on human development achievement, Sierra Leone's GDI value, 0.311 can be compared to its HDI value of 0.329. Its GDI value is 94.5% of its HDI value. Out of the 157 countries with both HDI and GDI values, 153 countries have a better ratio than Sierra Leone's.

Table 3 shows how Sierra Leone's ratio of GDI to HDI compares to other countries, and also shows its values for selected underlying indicators in the calculation of the GDI.

Table 3: The GDI compared to the HDI – a measure of gender disparity

GDI as % of HDI	Life expectancy at	Adult literacy rate (%	Combined primary,

	birth(years) 2006	ages 15 and older) 2006	secondary and tertiary gross enrolment ratio2006
	Female as % male	Female as % male	Female as % male
1. Sweden (99.9%)	1. Russian Federation (123.1%)	1. Lesotho (122.5%)	1. United Arab Emirates (120.2%)
152. Central African Republic (95.5%)	50. Tajikistan (108.2%)	124. Mozambique (56.2%)	147. Liberia (73.1%)
153. Sudan (95.4%)	51. Chile (108.0%)	125. Togo (56.0%)	148. Guinea (72.9%)
154. Sierra Leone (94.6%)	52. Sierra Leone (107.9%)	126. Sierra Leone (52.4%)	149. Sierra Leone (72.6%)
155. Niger (94.4%)	53. Luxembourg (107.9%)	127. Burkina Faso (52.2%)	150. Congo (Democratic Republic of the) (72.6%)
156. Yemen (94.3%)	54. Belgium (107.8%)	128. Central African Republic (51.7%)	151. Côte d'Ivoire (71.6%)
157. Occupied Palestinian Territories (92.8%)	157. Niger (96.9%)	135. Chad (31.3%)	157. Chad (60.4%)

(all information obtained by the UNDP, a branch of the United Nations [UN])

Methodology and Target Plan of Action (beginning in Zambia, Africa):

Natural resources of Zambia are plenty. They include copper, cobalt, zinc, lead, coal, emeralds, amethyst, gold, silver, uranium, and hydropower. Only 6.99% of Zambia's land is arable, however, and the irrigated land used in Zambia consists of 1,560 sq. km, as of 2003 (source: world wide web).

The life-expectancy of Zambians is the fifth-lowest in the world (source: The Economist, 2007). The average male lives to be 38.34 years old, whereas the average female lives to be 38.54 years of age. Starvation, malnutrition, and infant mortality are common occurrences in the villages of Zambia.

The rural areas of Zambia are deeply neglected. For the most part, the town areas in Zambia are targeted for much of the material and sustainable benefits provided from the NGOs (Non-Governmental Organizations), aid through foreign countries, and projects that the Embassies in Lusaka are conducting for the betterment of Zambia through development agencies. The towns benefit from NGO and donor aid money far more than the rural areas of Zambia.

In the village areas, there are many community groups / clubs working together for certain causes: Womens' Group, Bee-keeping Group, HIV/AIDS Group, Sewing Group, Farmers' Association, *M'Pongo* (Goat-rearing) Group, Church Group, Malaria Group, Carpenters'

Group, Neighborhood Health Committee. I have worked with these groups extensively, throughout a duration of two and a half years, and over time I have found that they have many ideas, but for various reasons the ideas are never carried through. Perhaps there is too much work to be done at home, too much work to be done on the fields, or other obligations. The projects and plans of the collective community groups fall to the wayside.

Land is an asset to any community, to any project in development. The main selling point of this project is that the *people,* who have entrusted me, are giving me land. The people know me and value me and it is an unfortunate fact many Zambians do not trust NGOs, foreign aid agencies, and donors from western countries. The main selling point of this project is that the *people,* who have entrusted me, are giving me land. The people know me and value me and it is an unfortunate fact that they do not trust many foreigners. Too many times, they have been promised things from foreigners - from western aid agencies or development funds - and have been disenchanted by the outcome, which is usually exceedingly less than the original promise. Another hardship that the rural village communities have endured from donor agencies is the attitude that many donor agencies exhibit. Rather than performing community entry tasks - such as learning about the culture and asking the people what they need to improve the condition of their lives - the donor agencies have decided for the people what they deem necessary to change in the village. Perhaps it is new toilets (*cimbuzis*) or a new bore hole (*cikuju*). The fault rests in not asking the people what they want or what areas they need to be helped, and too often the new *cikuju* is erected in a place where it will not benefit the masses, or new *cimbuzis* are made with iron roofs which fall apart after a few years, and the community - not having the money for new iron roofing sheets - cannot maintain them. Barging into a community and deciding for the people what they need without their consent is not sustainable development, it is not proactive, and it is not ethical. As Marles Kanyawinyawi has been kind enough to donate his land for the sake of development, and because he believes the project will be a prosperous one if put into the hands of people with the intention of making the village a better place for its people, this project has a selling point that is not common in most development projects throughout Africa and the developing world.

We began the project in April 2008, starting with a large community sensitization meeting in the Sianjina area, discussing with the community various ideas for the project. We discussed the role of the Organization, called *Simwatachela Community Sustainable Agricultural and Arts Program,* which is to provide leadership, to organize the community and to work with the chairpersons of the various committees working with the project. My personal goal is to work to empower the people and the communities.

This piece of land, donated by Marles Kanyawinyawi, is intended for the following project: to start a small-scale sustainable agricultural project. If time and resources prevail, the project will also have a strong emphasis in arts and crafts and preserving the culture of the Tonga people via means of art. At the initial sensitization meeting, and in the meetings to follow in April 2008, we conducted a survey of the various community groups interested in participating in the project. Perhaps, for example, nine initial community groups are interested in participating:

1. Bee-Keeping Group

2. Business Group
3. Farmers' Cooperatives
4. Basket-Weaving Group
5. Mpongo [Goat] - Rearing Group
6. Nkuku [Chicken] - Rearing Group
7. Womens' Group Simoono Village
8. Handicapped Persons Group
9. Carpentry Group

The interested groups will be instructed to hold meetings individually to elect committees consisting of a chairman, vice-chairman, secretary, and treasurer to be part of the Sustainable Agricultural Project. Once all of the groups have elected committees and I have gotten word of this, we will hold a large meeting with only the committees of those groups to discuss an official name for the Sustainable Agricultural Project, and a name for this co-operative. We will elect the head members on the board for the Sustainable Agricultural Project, and we will determine in that meeting, as well as the meetings to come, the following:

i. How large each group's plot of land should be
ii. Whether or not there should be (minimal) membership fees
This could potentially serve as a model for the beginning of a micro-finance/micro-credit program in the village
iii. How often each year the Head Committee and the members of the groups' committees shall meet
iv. What must be determined at meetings
v. Who will record meeting Minutes
vi. How often we will re-elect Head Committee members
vii. What land belongs to what group
viii. Draft maps of the whole section of land and what plots belong to what groups
ix. When to start the programs
x. Where to elect sign posts displaying names of various community groups

From there the committees must take initiative and begin, amongst themselves, to farm their individual land plots provided to them. I will provide seeds for the groups which have taken initiative. Seeds were donated to me by various seed companies in the States or from individuals who believed in the philosophy behind this project. However, obtaining seeds from donors is not sustainable, and thus community groups must learn how to preserve seeds to re-use season after season, learn how to dry seeds and arrange an organized drying system for the seeds within their respective community groups, or to identify a source in which to find seeds for the future and procure seeds from each season.

In time, because the people of the Simwatachela Catchment Area are enthusiastic and hard-working, their vegetables and crops will produce a small amount of income in which they could buy materials for their group (ex. Bee-keeping groups could use income to purchase jars to sell their honey). This could better the lives of those involved, as well as provide a source of food and nutrients to feed their families and communities better. As the project

grows, more and more plots of land could be sectioned out to interested groups. Those already working can aid those who are newer at the project.

In time, perhaps a school could be erected in which to teach the children of those who are working on the land, and the teacher(s) could be paid through means of income generated on the farm or in-kind, through vegetables or maize. Perhaps courses in agriculture, farming sustainability, seed-drying, nutrition, HIV/AIDS, organization and planning, arts and crafts of traditional Zambian culture, organic farming, carpentry, hygiene, sanitation or bee-keeping could be taught by various members of the community.

The project would be able to draw upon the resources in the area, such as already-existing government-related projects or church-related projects, as well as other NGO/donor-operating projects. For example, a retired school teacher in the community or a person from the church could become involved in the project and could distribute skills and knowledge to the people. Government-supported outreach health workers at the nearby Simwatachela Rural Health Center (RHC) could also become involved, teaching small classes and holding workshops on their wealth of knowledge. Volunteers from the church could also hold small classes on Bible lessons and studies.

Objectives and Aims:

1. to provide the community with necessary leadership skills
2. to empower both individuals and groups
3. to teach of the importance of working together on a large-scale project
4. to teach organization, planning, and goal-orientation skills
5. to provide a small amount of income for community groups working on the land
6. to provide a plot of land for those groups willing to take initiative to farm them
7. to help bring nutrition to the communities where a variety of produce is lacking
8. to help approximately 4,000 Zambian people: 1,000 men, 1,750 women, and 1,250 children (250 boys, 375 girls, 625 orphans and vulnerable children)
9. to aid approximately twelve villages in the Simwatachela Catchment Area: Sibooli-A, Sibooli-B, Kabanga, Siabeenzu, Cshipiso, Siamalundu, Sianeeda, Simoono, Sianjina, Mushome, N'gobe, and Syulikwa Villages
10. to work persistently to eventually erect a school or even a health post in the area, deep into the future
11. in the near future, to encourage as many community groups as possible to work on the project as the more groups that work together, the more will prosper
12. using skills people already have and putting them into motion
13. working with the body and mind together
14. to help eradicate hunger in the village
15. multiplication of seeds
16. sustainability of seeds
17. to ensure that the basic needs of people are met (i.e. food, water)

18 to generate a surplus of produce which will create economic activity and flow in the area
19 to create awareness with outreach government leaders in the area

Target Groups

Women: approximately 1,750 women
Men: approximately 1,000 men
Children (aged 0-18): approximately 1,250 children
Orphans and vulnerable children (OVCs): approximately 625 OVCs
Subsistence farmers: over 2,000 farmers
Local Artisans and Traditional African Healers (*N'gangas*): 90

Involvement of Target Groups

The target groups within Simwatachela Rural Community provided land specifically for the purpose of starting a sustainable agricultural program which would in-turn enhance the quality of their everyday lives. Each community group (i.e. Womens' Groups, Malaria Groups, Farmers Associations, Basket-Weaving Groups, Craft-making Groups) will garden a small portion of the land. Seeds have been donated from various seed companies and individuals from seed exchanging programs in the States. With the growth of vegetables, people can eat more plentifully and nutritiously.

Involvement of Women

Women play the most significant role in this agricultural project as the women in the community are the ones responsible for the upkeep of the small community gardens, the homes, the children, the laundry, and everything else associated with daily living. Men in rural Zambian villages tend to control the families and hold meetings amongst themselves but the women are the prime workers and laborers in the community. They are responsible for keeping their families alive. The women are the hard-workers on the subsistence farms for the individual families.

Relevance to Development

Development is essential to Simwatachela Rural Community. As the people are enthusiastic and hard-working, they are open-minded concerning any project in the community that will improve the conditions of their lives: more food, better nutrition for their families, water – both potable and for washing the clothes, children, and watering vegetables, schools, clinics, better homes, better toilets, and medicine. They are willing to work hard to attain these things. In the past I have observed them to work very hard for the things which will change their lives for the better and help to alleviate the distress of poverty from weighing down their happiness. This project will implement more food, better nutrition, and water to the area. This will improve the lives of the people, their animals (cattle, goats, chickens, etc.) and will overall generate a better lifestyle for them.

Result to be Achieved

The Simwatachela Rural Community will have access to more variety and an abundance of food where there was not before. This will help to reduce hunger and malnutrition, starvation where there is plenty in the village. With any excess produce, the groups can sell and generate a small amount of income for their prospective community groups. With this income the community groups can pursue individual projects such as the Womens' Groups buying more yarn to weave babies' sweaters which can then be sold – yielding more money – or the Bee-Keeping Group buying jars to sell honey in. Within the year, the community at-large hopes to create a meeting hall/community center where seminars on the following topics will be taught: Organization and Planning Skills, Organic Farming, Women and Gender Equality, Arts and Crafts of the Native Tonga People, Basic Woodworking and Carpentry, Knitting and Sewing, Cooking for All [with emphasis on nutrition], Avoiding Malaria, and so forth. We would like to have a traditional African medicine man/healer (*N'ganga*) on-site for the project who will aid in helping the sick to heal.

Timeline April 2008 – January 2009

1. April 21, 2008: Initial Sensitization meeting with Sianjina Village and surrounding villages to discuss the project and to introduce myself
2. April 21, 2008: Collect signatures of those who want to participate in the project, including villagers and headmen
3. April 22-30, 2008: Organize a time to meet with the chief to discuss the project and get his endorsement
4. May 1 - June 1, 2008: Work to hold and organize community meetings with community groups to elect committees for each community group / work to register Simwatachela Rural Community Agricultural and Arts Program with Zambian Ministry of Home Affairs branch of Zambian government
5. May 1 - June 1, 2008: Have a large meeting with committees for community groups to elect one Head Committee for the entire Sustainable Agricultural Project / work to register Simwatachela Rural Community Agricultural and Arts Program with Zambian Ministry of Home Affairs Branch of Zambian government; register Project with Kalomo District Council, return endorsed papers with signatures from village, Headmen, and Chief to Muzyamba: Lawyer in Livingstone
6. June 1-20th, 2008: Hold meetings with community groups and their accompanying committees and distribute seeds already donated by various groups in the States interested in helping the project
7. June 1-20th, 2008: Work to plow the land and begin to harvest the seeds among the community groups; continue to sensitize community groups on sustainable agricultural project; distribute seeds already donated by various groups in the States interested in helping the project
8. June 15-20th, 2008: Distribute tasks and responsibilities to others in preparation for my departure from Zambia: June 24, 2008
9. June 20th, 2008-February 2009: Community groups working to plow individual plots of land, putting seeds into the land to prepare for *mainza* (rainy season). Main persons in organization will supervise these actions in my absence and will gain ability in leadership positions.
10. January 2009 – February 2009: Project director will visit Zambia and designate tasks / assign groups to the community to complete specific jobs needed to progress the

project (i.e. goat committee, seed committee, dam committee, house committee, registration committee)

11 February – April 2009: Project director will travel to Sierra Leone to meet with counterparts interested in creating a similar model of the *Simwatachela Sustainable Agricultural and Arts Program* currently active in Zambia, Africa.

12 May-July 2009: Project director returns to Zambia to meet with both the *Sibooli Village-Simwatachela Sustainable Agricultural and Arts Program* as well as the new Zimba-branch program. Oversees the committees and determines that committees need to continue their work effectively until July 2010. Also, May 2009 visitor from Engineers Without Borders, Marshall College Branch visits for two weeks (Nathaniel Stansberry) to determine whether or not micro-dam can be build into land.

13 July -August 2009: Project director returns to U.S.A. to work together with Ed Villano, Project Engineer for URS Corporation, Denver, Colorado. Take soil samples to laboratory in URS building, determine future plan. URS will work with Zimba branch of project, whereas Engineers Without Borders, Marshall College Branch will work with Sibooli branch of project.

14 August – December 2009: Project director sensitizes to possible partners/donors in U.S.A. about project.

15 December 2009: Engineers Without Borders, Marshall College Branch will visit Sibooli branch and determine what needs to be accomplished in 2010 to complete micro-dam.

16 June/July 2010: Project director returns to Sierra Leone to oversee progress of possible project branch in this location; Project director returns to Zambia with Ed Villano to assess Zimba branch of program.

17 July/August 2010: Engineers Without Borders, Marshall College Branch will arrive in Zambia to build micro-dam in Sibooli branch of project.

Future Time-Line for Project Model:

January 1, 2009-April 1, 2009: "*mainza*" = rainy season

Reevaluate and/or reelect a project council/committee. Taking advantage of the water, groups will plant seeds that will grow quickly through the rainfall. Groups will harvest the vegetables, eat and/or sell vegetables, then dry seeds for future seed multiplicity for future use. In lieu of taking advantage of the water, we will begin to dig a hole in the earth for construction of the weir. Water begins to collect. Consultation with an engineer or dam specialist.

April 2, 2009 "*mainza*" = rainy season – June 15, 2009 "*mapeyo*"=cold season

Water will continue to fill in the weir as run-off from the rivers and streams from the rainy season collect there. Community groups will continue to harvest vegetables, eat and sell them. In the meantime, the community center can be started (meeting hall or community meeting center) and will be built by the community as one of the many community contributions. *All* parts of the meeting hall will be constructed with indigenous materials at no cost, only labor from the community.

June 16, 2009 "*mapeyo*" = cold season – September 15, 2009 "*cilimo*" = hot season

Community members will attend and even teach seminars at the community meeting hall. Other workers will involve themselves in further weir construction (i.e. digging out land, compacting land around sides of weir, planting long grasses along the perimeter of the weir to keep water contained within it). Trees in the area also will be utilized by the *n'ganga* (traditional African healer) to help the sick through the trees' bark, leaves, and roots. Other trees can be utilized for arts and crafts, used for preserving Tonga culture through art.

September 16, 2009 "*cilimo*" = hot season – December 31, 2009 "*mainza* = rainy season

Seed preservation, seed multiplication and seed distribution will continue. Community groups will continue to attend courses (three to five days in length) at the community meeting hall and will teach those courses as well. The community will also continue to work (community labor and contribution) to dig out the weir, placing cement around its exterior and waiting for the rains of late November and December to fill it. Produce will begin to germinate and ripen for harvest – for eating and selling – and the cycle will continue itself again. Project is solely community-based and organized and self-sustained by its people. Weir will fill with water after the stream is utilized properly.

Intended Follow-Up:

The project director will live in the village with the Simwatachela people. Her home is located in this village. Along with the project committee, she will handle finances and conduct monthly reports on progress (Monitoring and Evaluation skills).
She will travel to Sierra Leone in intermittent stages of this project to assess the possible productivity of such a project model in this location (West Africa). Along with the project committee, she will handle finances and conduct monthly reports on progress (Monitoring and Evaluation skills).

Description of the Activities that will Ensure Continuation after Completion of the Project:

The Simwatachela Community Sustainable Agricultural and Arts Program will have approximately twenty to twenty five members on its council (committee board) and the council will meet every month to determine successes and failures of the project, maintenance of the weir and which community groups need be held responsible. The project council will consist of community group members, members of the project's organization (ex. Agricultural Manager, Project Manager, Project Activities Coordinator, Outreach Coordinator, Finance Coordinator). These members of the organization – along with representatives from various community groups – will be responsible for composing the project council and will be responsible for holding monthly meetings (first Tuesday of every month, for example). They will need to produce monthly meeting Minutes in both CiTonga and in English to give to project partners, project donors, and Project Coordinator (myself).

The project will maintain itself so long as the community groups are enthusiastic and hard-working, resourceful, and clear-minded as to what they want to accomplish from the project. The project benefits from no one but themselves and their families: the hungry, the

vulnerable, and malnourished. If the community groups realize this simple fact: that they are working for *themselves* and to help *themselves* (not the donor, nor the Project Coordinator, but to better the quality of their own lives) then I guarantee they will work hard! Also the phrase 'development project' is a buzzword in the community in which all people respond. Chief Simwatachela, his committee, traditional council members, and other people of high-ranking in this community have informed me that they are hungry for development in the area and will do whatever possible to maintain and sustain that development. Required monitoring and evaluation (M&E) reports monthly by the project council as well as frequent visits from the project coordinator, project's organization staff and even the donor agency will motivate community groups to keep up their good work ethic, to perform maintenance on the weir, and to keep multiplying and preserving the seeds which will serve as a key to the betterment of their lives.

Various Committees for the Project and their Responsibilities

Seed Committee:

- Distribute seeds to existing community groups willing to work/clear the land for harvest of crops and vegetables
- Complete seed chart to report to seed donors in U.S.A.
- Prepare area for planting
- Write letters thanking seed donors

Dam Committee:

- Responsible for management of dam
- Organize shovels
- Take measurements on: stream flow, rainfall, watershed, downstream users rights, water rights, historical flood information
- Establish a plan and format to record stream flow for following year's rainy season
- Get soil samples: topsoil, mid-layer soil, deep soil layer
- Investigate logistics of obtaining cement: cost, type, etc.
- Find best spot on Project Director's land for dam's location
- Look for evidence of clay strata in depressions/ravines/water holes
- Establish plan to dig holes to look for clay. Start using shovels. 10-15 feet. Document: 0-2 feet, 2-6 feet, 6-10 feet

Registration Committee:

- Responsible for representing *Simwatachela Sustainable Agricultural and Arts Program* at the local, town, and regional level
- Travel to the nearest town to report to the District Council office and other project partner organizations
- Spokespeople for the community
- Responsible for collecting payment to register the organization with government

annual fee
- Active treasurer and secretary holding Registration cards and other important documentation for the project

Tree/Seedling Committee:

- Trees bring water
- Cuttings from fruit trees, trees that produce firewood, trees that the African doctor (*n'ganga*) could utilize for medicinal purposes
- Create list of other trees/tree seedlings needed for project
- Plant cuttings in soil to create new trees

Goat Committee
- Procuring 5-8 goats (depending on size) with the money donated by goat-donors
- Securing adequate housing for the goats
- Finding food/medicine for the goats
- Organizing for who will look after the goats and their well-being

Qualifications: Project Coordinator

My experience in the field is vast. A graduate of the University of Colorado at Boulder in Boulder, Colorado, U.S.A. May 2003, I studied Humanities and Comparative Literature with an emphasis on Art History and English Literature. Following this education, I was a Peace Corps Volunteer for two and a half years in Southern Province, Zambia where I learned how to work patiently with people who are frustrated from not having their goals met over a prolonged period of time. I lived in the same Simwatachela Catchment Area that I am now proposing to build a weir in Zambia.

Pasted below is my resume / CV as well as a short biography. My qualifications to head the project are included there.

I would like to use the land given to me by Marles Kanyawinyawi for the betterment of the people's lives in the rural areas. I am interested in helping them to achieve their goals and dreams, and to have their projects succeed. I want to make their lives better, and I want to do this starting at a very basic, grassroots level.

I should also draw upon your attention three very important factors in this project. First, as the Project Coordinator, I speak the local language of the people fluently (*CiTonga*). Second, I have lived and worked with this specific community for two and a half years so that a relationship of significant *trust* has been formed. The people are trusting me by putting their land and their skills into this project. This should be taken into consideration. Third, the community gave me land for this project. This is their project, but they have entrusted me with their land.

HEATHER CORINNE CUMMING

heatherflower6@hotmail.com

Qualifications Summary

Over two years experience of living and working abroad in rural Zambia, speaking the local language and attending to the needs of the community in terms of education, health, and the HIV epidemic. Over five years experience living and working overseas in Asia and Africa doing a range of activities from teaching nutrition skills, hygiene, malaria, English, organization and planning. Her work includes a plethora of community development projects ranging in interest from the scope of OVCs (orphans and vulnerable children) to HIV-AIDS voluntary counseling and testing (VCT), as well as working with Traditional Birthing Assistants (TBAs) to deliver children in the villages.

Community Development

1 Sensitized sixteen villages in the rural catchment area of Kabanga, Kalomo, Zambia in Interactive Radio Instruction (IRI), through the use of an educational radio program in Zambia called Learning at Taonga Market (LTM) which caters to the needs of children orphaned and vulnerable in Zambia (OVCs).
2 Initiated the development of six new learning centers using the LTM program in the rural catchment area of Kabanga.
3 Hosted two three-day workshops in which fourteen mentors for the LTM project were trained and sensitized in HIV-AIDS and Life Skills education, girls' empowerment, action planning and organizational skills, and various teaching techniques. Wrote a 43-page Mentors' Training Manual to instruct others on conduction of workshops.
4 Trained sixteen chairpersons and committee members in IRI sensitization and use of the LTM program in their respective villages.
5 Hosted a district-wide meeting in Kalomo in which four Ministry of Education members and twenty-six local community counterparts attended.
6 Implemented Adult Literacy courses in the respective catchment area.
7 Attended and invited a three-day seminar in Lusaka for a review of the LTM project in which United States Peace Corps officials from Washington, D.C. attended. Two local counterparts who showed perseverance and a willingness to learn from the Kabanga area also attended the seminar.
8 Observed eighteen births at the Rural Health Center (RHC) in Kabanga, assisted one nurse and two doctors, and conducted a personal study on the variations in culture regarding labor processes
9 Aided mothers of newborns in bathing their babies and helped to teach about the importance of hygiene in prenatal care
10 Worked with an HIV-AIDS group once a week to teach about basic HIV-AIDS facts, how an HIV-test is performed, and modes of HIV-transmission.
11 Participated in skits and traveling HIV-AIDS drumming groups in local venues, such as the community clinic and local community schools in the area.
12 Hosted a three-day workshop with participants from the Kalomo District AIDS Task Force and the Kalomo District Health Management Team at the local clinic to discuss the issue of lack of blood-testing facilities available at the clinic, and sensitization on Voluntary Counseling and Testing for HIV (VCT).
13 Delivered an overview course on the HIV-virus, its consequences and methods of contraction to fourteen LTM mentors and sixteen chair-members in the community, plus seventy-nine OVCs.
14 Organized a World AIDS Day even at the Kabanga Rural Health Center (RHC) involving drumming, performance of drama skits, and speeches of HIV. The purpose of the event was to celebrate learning and awareness about the epidemic rather than to fight against a force that is unknown to the masses.
15 Worked hand-in-hand with U.S. Peace Corps' HIV-AIDS committee based in Lusaka to assist other volunteers' access to HIV-related information.
16 Participated in an AIDS Walk to promote the sensitization of HIV and AIDS.
17 Assisted the local clinic with Care and Support projects for HIV-patients, sensitizing five villages, three hundred twenty-two men and one hundred and forty-three females.
18 Worked with a disabled and handicapped group in the Kabanga area and local clinic.
19 Helped to distribute mosquito nets to twenty-six households in eight villages alongside the local clinic.

Professional Experience

1. Taught English at college level in Bhaktapur, Nepal for Himal Asia Foundation. August 2008-January 2009.
2. Worked to coordinate orphanage programs in Sierra Leone, Africa for Arts Education International Organization (AEI). October-November 2008, February – April 2009, June-July 2009.
3. Worked to develop sustainable agricultural project to alleviate hunger in Zambia, Africa. April 2008-present. Developed organization with rural community called Simwatachela Sustainable Agricultural and Arts Program.
4. Volunteer, Lower Mustang, Nepal, June-October 2007 teaching English at Dzong Monastery and Shree Janapriya Lower Basic School in the Himalayan Mountains of Dzong Village, Nepal
5. Worked with a Tibetan Doctor (*Amchi*) in Muktinath area of Lower Mustang, Nepal
6. United States Peace Corps Volunteer, Zambia, Africa, April 2004-April 2006
7. Certified and Registered Counselor with the counseling mother-body of Zambia: ZCC (Zambia Counselling Centre)
8. Study Abroad Advisor, University of Colorado at Boulder, September 2002-September 2003
9. Four-handed Dental Assistant, Clerical, Monarch Dental Health, Boulder, Colorado, September 1999-July 2001

Education and Training

1 Community Development in Education and ciTonga Language Training (116 hours), Peace Corps/Zambia

2 B.S. Humanities, minor in Sociology, University of Colorado at Boulder. Graduated Dean's List 3.6 G.P.A., 2003.
3 English and American Studies scholar at the University of East Anglia, Norwich, England, January-May 2002

Published Works

1. The Messages of Trees Volumes I-IV by PublishAmerica, July 2008. Part One of a Trilogy on Zambia, Africa called 'Bewithment'.
2 'Radiance', 'Elijah', 'Zebron', 'Fern', Juliet'. Collection of short stories published in 'Peace Corps at 50' Anthology. 2009.
3 'Immortal Eyes'. Poem in a Published Anthology called Days Gone By, 1996.

Unpublished Works

1 Surendra. Memoir concerning India, August 2003.
2 Curses and Blessings, May 2007. Part Two of a Trilogy on Zambia, Africa called 'Bewithment'.
3 The Bridges, May 2007. Part Three of a Trilogy on Zambia, Africa called 'Bewithment'.
4. Maila, concerning life with monks in Lower Mustang, Nepal, November 2008.
5 Kompele Kompasa, concerning obtaining land in Africa, July 2008.

Short Biography on Project Director Heather C. Cumming

My name is Heather Corinne Cumming. I am a graduate of the University of Colorado at Boulder with a degree in Humanities and the Arts. I was a Peace Corps Volunteer from 2004-2006 in Zambia, Africa whereby I helped in a rural community to do an outreach education project via the radio. In 2006 I returned to the States and published four volumes of my twelve-volume epic novel, called 'The Messages of Trees' available on all the major bookselling websites. I went to Nepal in 2007 to teach monks in a monastery in Lower Mustang, high in the Himalayan mountains, then returned to Zambia in April of 2008 when one friend of mine requested my return as he was dying of AIDS. The community was happy to see me and three headmen of the Simwatachela Catchment Area granted me a plot of 140+ hectares of land to begin a sustainable agricultural and arts program. We are beginning to make community gardens to grow vegetables to aid in starvation as well as to generate a bit of income in the village. However, the land is very dry (being near the Namib Desert) and thus I have been looking for engineers to help build a weir/micro-dam on the land. I was successful in finding Engineers Without Borders to help in building a dam in 2010 on this land so as to produce a sustainable water source. I am starting a nearby project involving the same water-sustainability and food security in a village area about 100 kilometers from the land in which I was given. I am hoping to make a project model to move from village to village in Africa if these projects in Zambia are to be a success.
My fiance is from Sierra Leone. I spent a great deal of time in Sierra Leone in 2008/2009 helping a friend to work on her non-profit, teaching art to former child-soldiers. If the projects (x2) are to be a success in Zambia I would like to create one of the same nature in Sierra Leone. I do not like to work in communities in Africa in which I do not know the people or speak the language as I feel, being from a developed country, it is easy to be taken advantange of unless I have a loving, trusting relationship with the people I am working with. I speak both ciTonga (Zambia) and Krio (Sierra Leone) and want to work with people that trust me as well. I like the idea of working with people who I love and spreading love, and do not like to use the phrase 'helping people' as they have helped me just as much as I have helped them, in Africa! Instead, I look at it as though I have been blessed with so much in my life: good health, a loving family and a good education, citizenship in a country where so much opportunity is available to me. I like to help others with less opportunity than

myself and try to spread the abundance I have been given in this world.

The Rainwater Harvesting Conservational Weir (Micro-dam)

The intention for this project model is to self-help people: teaching people to help themselves void of dependency on foreigners, foreign aid, and materials; helping those most in-need (vulnerable people, which include orphans, handicapped people, people with mental disabilities, people who are ill or HIV-positive), and working hard to help those who can benefit the most. The poorest and most vulnerable/hungry people are targeted to help for this project.

The concept of water conservation, i.e. holding water and conserving and controlling its expenditure, will alleviate hunger in the village. The presence of the water in the dam year-round will allow food/vegetables/crops to be able to grow year-round, thus alleviating hunger in the village. What is needed most in the village to curb the issue of not having enough food/starvation/malnutrition is **water.**

The project aims to provide water availability throughout the year for the people in the village. Ensuring water availability and laying grounds for irrigated 'high value' aquiculture is primary to the overall success of such a project.

Time-Frame:

The project is intended to have a life-span / longevity of ten to fifteen years'; however, the weir will be able to sustain itself for the next twenty to fifty years - if constructed properly with the correct tools and materials. It will take approximately five and a half months (November to March or April) to fill the weir with water, and the water will be utilized throughout the year. The weir could potentially take up to three years to thoroughly fill, however. The weir is specifically designed to maintain water during periods of draught (August through October) when there is no water. The weir will ensure water for the land, the cattle used to plough the land, and the vegetables growing upon it.

The community will maintain the weir and is responsible for its upkeep - specifically the SAP: Sustainable Agricultural Project Committee.

It will take five and a half months approximately to fill the micro-weir with rain water and the remaining months of the year to empty it again.

The Southern Province of Zambia's seasons are as follows:

1. November - March / April: rainy season (*mainza*)
2. March / April - July: cold season (*mapeyo*)
3. August - October: hot season (*cilimo*)

What Will the Weir Do?

The requested funds are approximately 456,152,400 ZK ($138,228). Please consult the budget for breakdown of costs.

The weir itself will cost only approximately 6.69 million ZK of the cost ($ 2,027.28).

If the project is funded 6.69 million ZK in 2009 for the weir alone for this sustainable agricultural project, by 2019 it will have generated approximately 372,000,000 ZK ($ 112,727.28) through selling produce that has been grown via the aid of the weir's water. Thus, the weir will have generated an exponential growth's worth of income and in ten years' time will have paid for itself back from the money given by the donor, plus earned income compounded to that. Other benefits of the weir include community participation and organization, capacity-building, human resource development, and the long-term commitment of the community to the project.

Community Input and Community Contribution

The community is enthusiastic about the project - demonstrated through enthusiasm at community meetings (if a reference to this is needed, I can provide Minutes from all meetings held in the community throughout this process), their invitation for my return to the village after having been absent for two years time, and - ultimately - their donation of land for me to use to begin the project.

The community is willing to provide the labor to dig the weir, to place cement, pipes, etc. for the weir, and to clear and farm the land within their individual community groups.

The community will mould bricks for building. The community will bring thatched grasses from nature and use them to roof shelters and homes, even the community meeting hall. The community will make roof shelters for toilets on the project site.

The community's contribution will consist of providing furniture, jerricans (watering buckets), a house (*n'ganda*), toilet (*cimbuzi*), and kitchen (*cikuta*) for the project coordinator.

The community will contribute a meeting place where seminars, workshops, monthly meetings, and other learning sessions can take place within the community.

The community has also agreed that as a community activity, every week following church activities they will go to the site of the weir and help with **earthen works** (digging out the land, preparing the land around the dam with trees and grass which will help to prevent erosion, compacting the land surrounding the dam).

Community Output:

Through their perseverance, hard work and dedication, the community intends to grow, sell and eat the vegetables grown on their individual plots of land (specific to each community group). They intend to sell approximately 3,200 vegetables per year [1,000<x<5,000 vegetables per year], bringing in an estimated surplus of 3,100,000 Zambian Kwacha (ZK) per month, and annually 37,200,000 Zambian Kwacha (ZK) per year, on average. The community expects that through their loyalty to the project, they will benefit as individuals,

as families, and as community groups.

By 2019, the expected income generation is 372,000,000 ZK ($ 112, 727.28).

Life Cycle for the Project:

The intended life cycle for the project is approximately ten to fifteen years. However, if maintained properly, the micro-dam could last approximately one hundred years, if maintained well and cared for by the community which is supporting it.

The Community:

The community is hard-working, enthusiastic, and dedicated to the project. They are all very happy that I have come to help work with them on a project that will directly benefit them. Also, their donation of land to the project is evidence enough of their commitment to the project.

I speak the local language of the people: *CiTonga,* which is very beneficial to the project, as I am able to communicate with people of ranging ages, of various educational backgrounds and literacy, and this also helps me to gain insight into the culture and the mentality of its people.

The community holds meetings continuously, and if called on to help - they will indeed help with anything that is asked of them.

The community will also donate the use of their cattle to this project.

Cattle is a large industry in the Simwatachela Catchment Area. The cattle serve five main purposes:

1. milk
2. meat
3. manure
4. plowing / clearing land
5. having babies / producing offspring

The man who donated this land to the project, Marles Kanyawinyawi, is providing the project with cattle to help plough the land, approximately forty in number. This will also provide a source of manure which will aid both in creating compost and in crop production.

The Land:

The land is extremely fertile, however lacks sufficient water during certain months of the year (specifically August through October). The land is fairly flat, perfect for farming, and slopes a bit in one direction. This is the specific place where we will erect the weir. The land is grayish in color, and is sandy loam soil.

There is a stream in the area which stretches approximately eight to nine kilometers. The

weir is intended to have a width of approximately fifty-five meters across, and the weir will run perpendicularly to the stream. The weir itself will not be very large, probably not more than 1,000 feet in diameter. There is water in the stream half of the year: during November, December, January, February and March. The rest of the year it is dry, thus yielding no water and leaving the land dry.

The land is dry, loamy soil - not cleared as of now. There exists the issue of water-seepage, and the inability of the sandy land to conserve water, but with the passage of time, water-holding capacity of the dam will improve. Trees and grasses will be planted along the outer perimeters of the weir which aid in preventing erosion along with bringing in less silt into the weir. Initially the weir will require silt and clay from the soil, but after the first layer of silt has invaded the weir naturally, excess silt will be prevented through the aid of the trees and grasses planted around the perimeter of the weir.

We can expect the natural process of the weir to be as such:

1. weir is dug out of the earth
2. Year One: water does not stay in the weir throughout the duration of the year
3. Year Two: more water in the weir than the year before, but not enough still to remain in the weir the whole year round
4. Year Three: more water will come inside the weir, potentially able to fill for the whole year round

Additionally, there are many medicinal trees which grow on the land which will *not* be cleared for the purpose of the future *N'ganga* Clinic.

The weir will be dug in the deepest place possible, on a slope of approximately 20-degrees. This will aid the natural flow of water to collect into one central place. The various pipes leading out of the weir will benefit others downstream.

The weir will be strengthened through use of local materials outside its parameter, such as reeds and grasses, growing alongside the weir so as to seal the sandy soil from dissolving into the weir and thus devastating it.

Location of Land:

The land is located in Southern Province, Zambia, rural Kalomo: approximately 70 kilometers from Kalomo town, and 10 kilometers from Kabanga Mission. The Kabanga Road eventually leads to Mapatizya Mines, which mine anything from amethyst to copper and other minerals.

Land coordinates of the area are: 17" 35' 00. 00 S, 26" 46' 00. 00 E.

Elevation is 4,067 feet.

An Environmentally-Sound Project:

Compost Versus Slash-and-Burn Method:

The culture of the Tonga people of Southern Province, Zambia is such that they deeply revere the 'slash and burn' method of clearing land: burning the land to prepare it for next season's harvest. This present system**,** is the 'slash and burn' method. This is *not* a sustainable method of agricultural farming and in fact has no inherent value, yielding the land fertile for only a short two to three years. The method we are aiming for in the project is called **intensification** and will not only be sustainable but will also increase the overall health of the environment.

Instead of burning, we will convert the materials that come from living plants (i.e. crop waste such as grasses, straw, vegetable peels) into a large pit which will then create compost. This improves the soil's ability to maintain moisture. Also manure from the cattle will be applied. This will add nutrients to both the soil and will help to provide nutrition to crops.

Insect repellent can be made indigenously, to keep pests away from crops, and can be made with leaves from already-growing trees, weeds, and things growing in the bush. We will conduct research in finding only eco-friendly pest-control methods to use on the land.

No chemicals or chemical fertilizer is to be used on the land (with the exception of pest-control on the vegetables) as it is expensive and non-sustainable.

We will grow and harvest crops that have symbiotic relationships to one another. For example, maize-beans-squash have a symbiotic relationship. Maize supports beans to grow, the beans fix the nitrogen in the soil for the maize and squash to grow, and the squash provides shade and reduces evaporation for the roots of beans and corn. These three crops are known as 'The Three Sisters' to the sacred earth.

Importance of Medicinal Plants:

Plants were once a primary source of all the medicines in the world and they continue to provide mankind with new remedies. Natural products and their derivatives represent more than 50% of all drugs in clinical use in the world. Higher plants contribute no less than 25% of the total. Well-known examples of plant-derived medicines include quinine, morphine, codeine, and aspirin.

All parts of a plant may be used medicinally: roots, bulbs, rhizomes, tubers, bark, leaves, stems, flowers, fruits, seeds, gums, exudates, and nectar. However, the active ingredients (chemical compounds) in leaves, roots or bark - for example - are often quite different. One part may be extremely toxic while another part quite harmless. For this reason, the whole plant is therefore rarely used together to generate a single medicine.

Each system of medicine is an art and science of diagnosing the cause of disease, treating diseases, and maintaining health in the broadest sense of physical, spiritual, social and physical well-being. Each culture has found solutions in the preventative, promotive, and curative aspects of health that resonate in harmony with the world view of that culture.

Western medicine may diagnose a disease in terms of a bacterial infection, for example, and treat that infection with antibiotics. An African traditional healer will seek to understand why the patient became ill in the first place, and the treatment administered will address the perceived cause, usually in addition to specific therapies to alleviate the signs and symptoms of the condition.

Planting Trees:

To conserve the indigenous ecosystem, for every community group that participates in the project, we will plant two indigenous trees in the areas in which there is no erosion. The issue here is the indigenous trees against the new imported trees, which have little to no indigenous inherent healing value to the medicine men (*n'gangas*) in the village. Planting indigenous trees will promote the work and health of the traditional healing methods of the *n'gangas*. This will aid in the following:

1. soil conservation
2. trees help to eliminate erosion
3. trees provide the best antidote against global warming; global benefit called **carbon sequestration**
4. trees have an inherent indigenous benefit: keeping culture in-tact through using bark, roots, and leaves as medicine
5. trees have a commercial value: use to make furniture and other household necessities
6. trees used for making art/crafts/furniture/household utility items

Thus, we will plant trees which have multiple benefits and purposes. With crop intensification, for example, it will become possible to allow some of the area to revert to forest again. This is the best form of carbon sequestration.

Maintaining Indigenous Tonga Culture via Arts and Crafts

The community will still be working with gardening and sustainable agricultural techniques to grow vegetables for the people to eat as well as to have a bit of income-generation among their prospective community groups. This proposal is primarily a request to build a weir in the area to harvest rainwater as the problem with starvation in the village is directly proportional to not having water all year-round for growing food. The majority of the village consists of subsistence farmers who are just aiming at keeping their families alive. They have informed me that year-round food will grow as the land is fertile; the only problem is that there is not water six months of the year.

Additionally to the food-growing aspect of the project, the people in the village want to implement other kinds of activities. Among them is a traditional African healer (*n'ganga*) center, classes/workshops/seminars on nutrition, health, HIV/AIDS, malaria, organic farming, woodworking / craft courses. There is an interest in making art and woodworking/carpentry in the village. Two of the project coordinators are artists who even sell their work in craft markets near Victoria Falls and the nearby Livingstone. They are interested on an art-focus for the project.

The Tonga culture that grew up along the banks of the Zambezi River - the Tongas, Leyas, Toga Leyas, even the Lenje tribe - makes crafts that preserve the culture of the Southern Region of Zambia. This indigenous culture makes variations on Nkisi statues from Zaire (the chief of Mukuni Village near Victoria Falls originates from Zaire (D.R.C., currently). They are making traditional things like baskets, spoons, bracelets, bowls, animals, and necklaces made of seeds. Also they are creating little dolls adorned with the traditional dress of long ago, to preserve this aspect of their culture.

But these artists are also making new things that haven't been seen before. The artists are being creative with their natural creative spirits and making woodcarvings, for example, with half of a piece of wood; the rest of the wood is left in spirit of observing its color. I am encouraging these artists who are working with the Simwatachela Community Sustainable Agricultural and Arts Program to make things people haven't seen before, to challenge their own creativity. These products can be sold, also can be used as a tool for teaching others how to use the trees in the village for practical home-products, to make art, and to use as medicine to heal the sick per the *n'gangas.*

The artisans of the Simwatachela Community Sustainable Agricultural and Arts Program - people from the Zambezi River, woodworkers, artisans, and craftsmen and women - interpret this as a long-term project and that for every community group that clears land for using to grow vegetables, each group will plant 3-5 trees which can grow to be used either medicinally, for furniture/household products, or to make art - all of which help to preserve the indigenous beauty of the Tonga People.

The art that is created will be sold locally, nationally, and even - perhaps in the future - internationally as I am working with some buyers from America that are interested in maintaining the culture of the indigenous tribes of Africa.

Maintaining Indigenous Tonga Culture via N'ganga / Traditional Medicine of the Trees:

To conserve the indigenous ecosystem of the area, we will plant three medicinal plants for every community group that participates in the project. This will aid in the following:

1. maintaining traditional culture in indigenous regions
2. healing the sick
3. providing medicine to those who are in need
4. the placement of an *n'ganga* (traditional African medicine doctor) on the land
5. selling of herbs and traditional medicines originated on the land
6. erection of an *n'ganga* clinic in which sick people can go to receive traditional treatment

The community values the wisdom of the *n'gangas* (medicine doctors) and the medicinal value of certain trees and plants on their land. These trees and plants will thus be grown in the sustainable agriculture project, and the community will take care of them - preserving roots and seeds to perhaps use as medicine at a later point in time. This is called **conservation of biodiversity.**

Envisioning for a Future:

The project is intended to unite all villages in the Simwatachela Catchment Area interested in participating. The community involved is a strong one, and one that is united currently. It can withstand any minor shocks due to a lack of water, lack or surplus of external help and the sustainability of such a project.

Besides initial construction of the weir, small seed donations from the States, and of course the sustenance of project director, the project is completely self-sustaining and runs successfully by involved, committed and dedicated host country nationals. The project requires four main things for upkeep:

1. seed multiplicity
2. water
3. land
4. labor

In the future, the following projects are envisioned:

1 Traditional African Medicinal Clinic
2 Community Meeting Place
3 School
4 Youth Program [coordinator will provide jerseys and balls from the States]
5 Tool Room for storage of farming equipment
6 An information center for visitors
7 Market erected to sell vegetables

The project has an intended life cycle of ten to fifteen years.

The project will enable the community with the ability and tools to continue the activities, as well as to move into further innovations, and to adopt technologies, build resources, enforce organizational techniques, etc. etc. so on the project coordinator's completion of the project after ten years time, the project will continue on into the village forever. It will be passed down from generation to generation amongst the people in the village.

Budget

For Agriculture Portion of Project:

Item	Quantity	UnitPrice	Total

Cement bags	10	65,000/bag	650,000
Pipe (metal / steel)	3	135,000/pipe	405,000
Paint	6	150,000/can	900,000
Iron Sheets	3	58,000/sheet	174,000
'Urea' chemical fertilizer	2	120,000/bag (50kg)	240,000
Insect repellent/pest spray	10	49,000/container 500 mL	490,000
Trigger Pump	6	350,000/pump	2.1 million
Fuel for machinery	1,050	120,000/20 litres	6.3 million
Hire Agricultural Dept. To construct drawings of The land	1	3 million/hire	3 million
Drawings of Land	8	50,000/map	400,000
Bicycles for Project	3	390,000/bicycle	1.17 million
'*Jerricans*': watering cans	20	40,000/can	800,000
Twine	6	20,000/roll	120,000
Plastic drums	3	100,000/drum	300,000
Wheel barrows	10	300,000/unit	3 million
Sprayers	5	400,000/sprayer	2 million
Shovels	7	50,000/shovel	350,000
Protective clothing	10	74,000/uniform	740,000
Black plastic	1	100,000/roll	100,000
Gardening forks	30	70,000/fork	2.1 million
Hose pipe	1	300,000/pipe	300,000
Agricultural lime	2	50,000/lime	100,000

For Office Supplies:

Yearly fee for holding a P.O. Box at the post office	10 years	200,000/year	2 million
Monthly maintenance fee For Organization's office (Providing tea, coffee, Papers, pens, etc.)	120 (months)	2 million/month	240 million
Monthly email expense	120 mos.	350,000/month	4.2 million
Monthly printing expense	120 mos.	150,000/month	1.8 million
Monthly meeting food Costs	120 mos.	1 million	120 million
Door frames	2	245,000/frame	490,000
Doors	7	100,000/door	700,000
Window Frames	2	225,000/frame	500,000
Cement bags	20	65,000/bag	1.3 million
Scale	2	150,000/scale	300,000
Measuring tape	4	50,000/tape	200,000
Reams of paper	5	40,000/ream	200,000
Markers	10	30,000/pack	300,000
Bostik stick-um	20	20,000/unit	400,000
Manila paper	2	45,000/realm	90,000
Exercise books	50	5,000/book	250,000
Folders	100	40,000/folder	400,000
Files	30	15,000/file	450,000
Flip chart	10	50,000/chart	500,000
Flip chart stand	1	300,000/stand	300,000

Portable blackboard	1	350,000/board	350,000
Boxes of chalk	10	8,000/box	80,000
Calculators	4	120,000/unit	480,000
Stapler and staples	4	40,000/stapler	160,000
Paper puncher	1	75,000/puncher	75,000
Paper cutter	1	120,000/cutter	120,000
Scissors	2	10,000/scissors	20,000
Board rule	1	10,000/rule	10,000
Tipex	10	15,000/bottle	150,000
Glue	5	12,000/bottle	60,000

For Arts Portion of Project:

Camp tent	1	2 million/tent	2 million
Transport expenses	10	1 million/year	10 million
Cement bags	4	65,000/bag	260,000
Woodcarving tools	20	40,000/tool	800,000

TOTAL BUDGET EXPENSES	**414,684,000 ZK**
Contingencies (10% of the Total)	**41,468,400 ZK**
GRAND TOTAL ------→	**456,152,400 ZK**
In U.S.D. ----------→	**$ 138,228.00**

(There is approximately 3,300 ZK in 1 USD)

Justification for Project Expenses:

Cement bags: use for constructing the perimeter of the weir, for putting pipes in place and

other elements to weir-construction

Pipe (metal / steel): use to control water output / rainwater conservation in weir
Monthly maintenance fee for having an office for the Organization (providing tea, coffee, papers, pens, etc.): basic office expenses

Paint: used to make signs displaying community groups various plots on the land

Iron Sheets: used to make signs displaying community groups various plots on the land

'Urea' chemical fertilizer: a little goes a long way, and for the initial stages of the project before organic fertilizer is established within the project, use of *Urea* is deemed necessary by the community**.** Note that this is only necessary in initial stages of project as in the future, organic chemical fertilizers will be created.

Insect repellent/pest spray: a little goes a long way, and for the initial stages of the project before organic fertilizer is established within the project, use of insect repellent/pest spray is deemed necessary by the community. Note that this is only necessary in initial stages of project as in the future, organic pest sprays will be created.

Trigger Pump: to irrigate the land. Use of a trigger pump to distribute water will dramatically increase produce production. Secured irrigation will ensure intensification. However, the trigger pumps will be of most use within the first few years after creating the weir when water sustainability is erratic.

Fuel for machinery: used to power the dam-scoop and other machinery associated with weir-construction

Hire Agricultural Department to construct drawings of the land: necessary for official documents

Drawings of Land: necessary for official documents; eight are required for District Council

Bicycles for Project: used by community to move from project site to other communities as the Simwatachela Catchment area is very spacious. Also used to transport produce and other goods generated by the project and its Organization to Kalomo town, Mapatizya Mines, and throughout the villages.

'*Jerricans*': watering cans: used in initial stages of project to water the gardens before trigger pumps have been purchased and as the weir is filling with rain water

Twine: used for fencing community gardens

Plastic drums: used for storing produce, as well as storing other organic farming materials

Wheel barrows: used for transporting produce as well as organic farming materials and other agricultural tools

Sprayers: used for spraying the crops and vegetables with insect/pest repellent. Also used for watering plants.

Shovels: used for digging holes in the earth to plant vegetables and other crops

Protective clothing: used when plowing and clearing the land

Black plastic: used for drying seeds and other produce

Gardening forks: used for raking the land to make fertile for more planting after a harvest's cycle

Hose pipe: used as trigger pumps to aid in irrigating the land

Agricultural lime: used to ward off insects and other pests

Yearly fee for holding a P.O. Box at the post office in Kalomo town: Yearly fee for holding a P.O. Box at the Post Office: to receive mail at the local post office

Monthly maintenance fee for Organization's office: fees for an office such as providing tea and coffee to visitors, papers, pencils, pens, etc.

Monthly email expense: using email in town to communicate with potential donors and other sources of aid in this project

Monthly printing expense: printing documents in town

Monthly meeting food costs: to provide food for village people and other visitors/guests after meetings

Door frames: not found indigenously in the village but necessary for keeping security of the project's office headquarters

Doors: not found indigenously in the village but necessary for keeping security of the project's office headquarters

Window Frames: not found indigenously in the village but necessary for keeping security of the project's office headquarters

Cement: not found indigenously in the village but necessary for floor of office headquarters for project

Scale: used for measuring and weighing produce generated from the project

Measuring tape, reams of paper, markers, 'Bostik' sticky gum, manila paper, exercise books, folders, files, flip chart, flip chart stand, portable blackboard, boxes of chalk, calculators, stapler and staples, paper puncher, paper cutter, scissors, board rule, 'Tipex' correction fluid, glue: office supplies used for teaching workshops, in office, and

for overall instruction and meetings among community groups

Camp tent: used for a shelter to make arts & crafts/woodcarvings and in the future as a market for selling these products

Transport expenses: taking public transport to and from Kalomo town to distribute goods will require a small monthly fee

Cement bags: used to create a small structure/shelter for selling arts & crafts generated from project

Woodcarving tools: aid in Tonga arts & crafts products, woodworking, and carpentry

Viability of Income Generating Projects

Where Will Products Be Sold?

Products will be sold at nearby Kabanga Mission Market, surrounding villages (internally), Mapatizya Mines, as well as on the Mapatizya Road, and in Kalomo town.

Potentially we will also have our own market for selling produce within the Simwatachela Catchment Area.

Who Will Buy Them?

Village people will buy the produce, along with people from town coming to the village to visit, travelers coming from Kalomo to Kabanga Mission as well as to Mapatizya Mines. Potentially even tourists who hear about the project and are interested in coming to the Simwatachela Market to purchase produce, arts and crafts and other goods at very affordable rates.

Sales per Month

Item	*Quantity*	*Unit Price*	*Total*
Squash	100	1,500/squash	150,000 ZK
Rape	300	500/bundle	150,000 ZK
Tomatoes	400	500/heap	200,000 ZK
Peppers	200	1,500/heap	300,000 ZK
Cantaloupe/melon	100	2,000/melon	200,000 ZK

Cucumber	200	500/cucumber	100,000 ZK
Pumpkin	200	1,500/pumpkin	300,000 ZK
Eggplant	200	1,000/eggplant	200,000 ZK
Cow Peas	400	2,000/bundle	800,000 ZK
Green Beans	300	1,000/bundle	300,000 ZK
Onion	300	1,500/bundle	450,000 ZK
Cabbage	400	1,000/head	400,000 ZK
Corn	100	500/cob	50,000 ZK

Total Monthly Running Sales: 3,600,000.00 ZK
Total Annual Running Sales: 43,200,000.00 ZK

What are the monthly running costs associated with the project?

Transport to and from Kalomo town to sell produce. To and from Mapatizya Mines, bicycles may be used.

50,000 ZK round trip to Kalomo town x 10 people traveling/month (average) =500,000 ZK/month

What are the total monthly running costs? 500,000 ZK

What will be the net income/profits generated monthly?

(Total sales minus total running costs) 3,100,000 ZK

What will be the net income/profits generated annually?

(Total sales minus total running costs) 37,200,000 ZK

How will these profits be used?

Percentage	***Purpose***
45%	food
35%	buying more seeds (seed multiplication yields sustainability)
20%	clothing/shoes/materials for school

*Note that each community group will also be earning profits to use among their individual community groups.

Direct and Indirect Benefits of Project

Some benefits are going to be **direct benefits,** whereas other benefits are **indirect benefits**.

Examples of direct benefits are things directly derived from the project source: produce grown on the Simwatachela land via the project, arts and crafts made from the trees grown through the project, medicine produced by the *n'ganga* at the African Healing Clinic on the project site.

Indirect benefits are things which will inevitably come from the project but will arise not from its root, but rather through the fruit which the project seeds. For example, even though a carpenter from the Carpentry Group will take home what he earns from production of a bed, a part of it will be due to the project that he had the money to make the bed in the first place, so it is also included in the benefits of the project. Goats, chickens, cows reared by the Goat Rearing Group, Chicken Rearing Group, and Cattle Rearing Groups will generate eggs created by the chickens, meat, milk and labor from the cattle raised, and meat, milk from the goats, not to mention the offspring produced by these animals. Honey procured through the Bee-Keeping Group, etc. are all intrinsic benefits of the project.

Crafts made through the artisans involved in the project who sell their art either to village people or to outside visitors will represent the project. People with a bit of money, or visiting tourists interested in the culture of the Tonga people may request an order for more art. Peanut butter made from nuts grown on the land might be put into bottles and sold to visitors also, who might tell others about the project. Sweaters knitted from the Womens' Groups will be sold which will also yield more income. Baskets woven from the Basket Weaving Group will also bring more income to the community.

Moral: the benefits will be much, much higher in the end than 43.2 million Zambian Kwacha per year.

Potential Negatives Associated with Project

The addition of money to a community might cause many problems. Any change in a traditional society must be gradual and slow, not abrupt and fast. The project, especially in its initial stages, will move very slowly. This is a good thing. If it takes three years for water to

collect in the weir, this is also a good thing, as the more gradual the change is within the community the greater the chances for stability are, and thus sustainability.

Another potential problem is the introduction of water into the area. The leading cause of death in Zambia is through malaria, second leading cause is AIDS, and third is tuberculosis alongside basic malnutrition and starvation. Thus, adding a weir in the area will invite more mosquitoes to the area, increasing exponentially the rampancy of malaria. However, mosquito larvae are killed by fish larvae. In other words, while killing mosquitoes you are also creating another source of livelihood for more people. Which also means another protein source for malnourished people is being created. So benefits really start to multiply.

When there is a dam/weir, there is a body of water. A worthwhile income-generating project, as well as a wonderful source of protein, would be to start fish culture. There is a method to this:

1. Baby fish are released (Fisheries Departments sell these and promote this activity. Fisheries Departments have ponds in many districts of Zambia). Baby fish eat mosquito larvae, and fish become a source of livelihood.

2. In some places, people build chicken houses above the lake/or pond. Chicken droppings drop straight into the water and provide nutrition to fish. Once again, many fish species eat many other organisms, including mosquito larvae.

3. What type of fish? Generally, every region of Zambia, in every area, has a list of economically-viable fish types. These days, Tilapia is the most common one. There are also others; we will select the fish species according to our area.

Outside Support and Interest in the Project

Please note that support from local government administration is there. The Kalomo Agricultural Department (MACO) is helping through their efforts of visiting the micro-dam site, and drawing maps of the area.

Seed companies in the States (Johnny's Seed Company, Seed Exchangers, ECHO) as well as individuals belonging to seed exchange companies have donated seeds to the project.

Various groups have expressed interest in both the project and in the work of the artisans as well.

Engineers Without Borders, Marshall College Branch, has committed to building the micro-dam in the Sibooli branch of the project, timeline finishing in 2010/2011.

Ed Villano, P.E. who works with URS Corporation in Denver, Colorado has committed to building a water source in the Zimba branch of the project. [Ed Villano, Project Engineer, URS Corporation, 8181 East Tufts Avenue, Denver, CO 80237. Tel: (303)694-2770; Dir: (303)740-3800; Fax: (303)694-3946]

A company in the States called 'Overstock' is potentially interested in buying and helping the artisans to distribute their woodwork. URS, another group from the States which works largely with dam production, has also shown their interest, as well as Engineers Without Borders, a group from the States which helps to make micro-dams in parts of the world where people are without representation to do so. An engineering branch of the University of Dayton works with students to create plans for creating dams, so I have been in contact with a woman who is considering having her students work on such a project.

The people of Simwatachela Rural Community are also supporting the project through their hard work, by developing good farming practices to ensure that the communities get the most from their commitment and skills. Educated persons in agricultural skills will train fellow community members. People who grow vegetables or maize can get more from their area if they are aware of organic framing procedures, multiplication of seeds, and other harvesting techniques. Over time they will learn the best way to practice these agricultural skills.

People have great support in the Simwatachela Community Sustainable Agricultural and Arts Program. Dr. Malik Salifullah M. Khokhar, Ph.D. who works with International Development through CDT (Cotton Development Trust) as well as with the World Bank, for example, has endorsed this project through means of his time and support. The MACO office in Kalomo is willing to come and assist with the design or development of vegetable production as well as other technical aspects of this project. Other individuals, such as Andre Houssney who has a company called Zambeezi which makes Natural Organic All-Natural soap, lip balm and other toiletries is interested in working together in this endeavor. Ms. Heather DeLong, from DUG: Denver Urban Gardens, has also expressed extreme interest in this project. She is a former Peace Corps-Mauritania Volunteer now working with Denver Urban Gardens and implementing many sustainable development skills she learned while as a Peace Corps Volunteer now into the DUG program. The Nature Conservancy is also interested in a potential partnership in this program, provided that the land still remain solely for the use of this project.

Other activities will generate funds besides selling vegetables. Among them will be the selling of crafts, medicines, and other things generated from the project (carpentry, animal-rearing, honey-making, peanut butter manufacturing). This should be considered as a substantial part of the communities' benefit in this endeavor.

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Simwatachela Community Sustainable Agricultural and Arts Program
C O N S T I T U T I O N

Article 1: **Name of Organization**

The name of the group shall be

Simwatachela Sustainable Agricultural and Arts Program

The group address shall be

Simwatachela Sustainable Agricultural and Arts Program

c/o Heather Corinne Cumming

P.O. Box 620005

Kalomo, Zambia

Any change of address shall be informed to the Registrar of Societies.

Article 2: **<u>Aims /Objectives</u>**

- to aid in hunger problems in the village
- to provide a source of nutrition
- to provide income from selling excess produce
- to ensure that the basic needs of people are met (i.e. food, water, etc.)
- to produce surplus to create/generate economic activity
- to create awareness with outreach community government workers
- to provide the community with necessary leadership skills
- to empower both individuals and groups
- to teach of the importance of working together on a large-scale project
- to teach organization, planning, and goal-orientation skills
- to provide a small amount of income for community groups working on the land
- to provide a plot of land for those groups willing to take initiative to farm them
- to help bring nutrition to the communities where a variety of produce is lacking
- to help approximately 4,000 Zambian people: 1,000 men, 1,750 women, and 1,250 children (250 boys, 375 girls, 625 orphans and vulnerable children)
- to aid approximately twelve villages in the Simwatachela Catchment Area: Sibooli-A, Sibooli-B, Kabanga, Siabeenzu, Cshipiso, Siamalundu, Sianeeda, Simoono, Sianjina, Mushome, N'gobe, and Syulikwa Villages
- to work diligently to eventually erect a school, a n'ganga clinic for traditional healing and medicine, and a

craft workshop for the project

- to encourage as many community groups as possible to work on the project as the more groups that work together, the more will prosper

- using skills people already have and putting them into motion

- working with the body and mind together

- to help eradicate hunger in the village

- multiplication of seeds / sustainability of seeds

- erection of a community learning center where community workshops and learning on the following topics will be addressed: nutrition, HIV/AIDS, organization and planning, arts and crafts of traditional Zambian culture, sustainable agriculture, organic farming, carpentry, bee-keeping.

Article 3:

The Office Bearers for Each of the Community Groups Shall Be:

Chairperson
He/she shall:

(a) Be the spokesperson of the group

(b) Preside at all meetings

(c) Call up for meetings through consultation with the secretary

(d) Carry out any other assigned to him/her by the executive committee

(e) Will supervise that all activities are carried out.

Vice-chairperson
He/she shall:

(a) Preside at all meetings in the absence of the chairperson
(b) Be the chairperson for all disciplinary cases
(c) Carry any duties assigned to her/him by the chairperson of the executive committee

Secretary
He/she shall:

(a) Shall keep all records of the group.

(b) Shall record all the minutes of the meetings

(c) Shall keep an update register of the members

(d) Shall carry out any duties assigned to him/her by the executive committee.

Vice-secretary
He/she shall:

(a) Keeping up to date records concerning funds

(b) Keeping all monies of the group

(c) Fundraise for the group through consulting the group

Treasurer
He/she shall:

(a) Keep all money transactions in accordance
(b) Work close with the chairperson and secretary in keeping up records.

Committee members
Shall:

(a) Carry any duty assigned to them by the executive members or general members
(b) Attend meetings regularly, listen and pay attention to discussions at meetings.

Article 4: Term of office for office bearers

a. The term of office bearers will be one year.
b. By-elections will be made when in need.
c. Note: The by-elections will be made after the period of three months from the time when the position becomes vacant.

Article 5: **Membership**

a. The association (Simwatachela Community SustainableAgricultural and Arts Program) has no maximum limit
b. Agriculture instruction and association which are prepared to promote the objectives of the association may also be admitted as a member's subject.
c. A member shall cease to be a member upon death but one of her/his relative (Son, daughter or dependant) can take over through him or her.
d. The executive will reserve the right to accept or reject any application without being compelled to reasons for the refusal.

Article 6: **Termination of Members**

a. If any member misuses the funds for his/her specific community group she/her will be given a notice of three months and if his/her case is unreasonable, the person shall cease to be a member.
b. When a member is expelled the share capital is not refundable, without any surplus.
c. Not be eligible for re-admission as a member of the association within a period of three years (3 years) from the date of the expulsion.

Article 7: **Discipline**

A member of the community group or a community group itself will be asked to resign from the project if the following behavior occurs:

a. Misbehavior or not following the rules of the association
b. Not attending meeting for three (3) consecutive meetings
c. Cheating other members of community group
d. Not residing in catchment area
e. Drunkenness, unwanted speech

f. Respect to the chairperson/chair group during meetings

Article 8: **Finance**

The finance report will be given in annual general meeting when closing the term membership fee, share capital and the project fund raise by the treasurer.
(Term membership fee is 1,000 kwacha per year after the second year of the project's initiation).

Article 9: **Meetings**

Meetings will be held as follows

a. Extra ordinary general meeting will be held quarterly.
b. Council meetings will be every after (4) months of a year or done on emergency.
c. Executive meetings monthly
d. Annual general meetings after the term in the month of April.

Article 10: Amendment to Constitution

The amendment of the constitution will be made when the majority of the association seconds or agrees so. (at least 75% of the population)
This will be done in the annual general meeting.

Article 11: Dissolution

a. The executive committee will sit and discuss all the asspects in a written document and will be read to members.
b. The executive committee will call a meeting and give a report over the issue or any issue pertaining to the association

Article 12: Disposal of Assets Upon Dissolution

a. If the dissolution is confirmed, the assets will be shared according to the decision of each club member and community group working on the project.
b. This issue will be brought forth for further discussion at a later time.

Article 13: Organization's Head Members and Roles

Project Coordinator: Heather Cumming - Teacher. American.

Team Leader: Gail Cumming - Fund Raiser. American.

Rural Agricultural Officer: Gibson Sinan'gombe - Photographer. Zambian.

Project Organizer: Elijah Chikoma - Teacher. Zambian.

Farming Manager: Marles Kanyawinyawi - Cattle-Rearer. Zambian.

Member of Head Organization: Pastor Sikalobe - Farmer. Zambian.

Member of Head Organization: John Dickson Siandwa - Farmer.

Zambian.

Member of Head Organization: Lloyd Sikalele - Farmer. Zambian.

Craft Coordinator: Boswell Siambweda - Artist. Zambian.

Craft Coordinator: James Siambweda - Artist. Zambian.