CHOLERA MITIGATION

THROUGH COMMUNITY HEALTH CLUBS

IN MANICALAND PROVINCE, ZIMBABWE.

GRANT NUMBER: AID- 613-G-12-00001

END OF PROJECT REPORT: October 2012 to September 2013

May 2014

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Acknowledgements

ZimAHEAD is greatly indebted to USAID for the oppotunity to role out CHCs albeit during a difficult political year.

The project owes its success to the dedicated ZimAHEAD professionals partiularly the Project Officers who steered the processes as well as the Community Based Facilitators who volunteerd their time to the project. They were rewarded when the results came out so well.

Zim AHEAD would like to thank the Local Authorities in the city of Mutare and in particular the City Health Department , the Rural District Councils in Chimanimani and Chipinge , the Ministry of Health's Environmental Health Department staff for the good working relations we both enjoyed.

Acronyms

AHEAD	Applied Health Education and Development
CBF	Community Based Facilitator
CHC	Community Health Club
DWSSC	District Water and Sanitation Sub Committee
EHT	Environmental Health Technician
MoHCC	Ministry of Health and Child Care
MOU	Memorandum of Understanding
NCU	National Coordinating Unit
PHHE	Participatory Health and Hygiene Education
PWSSC	Provincial Water and Sanitation Sub Committee
RDC	Rural District Council
USAID	United States Agency for International Development
ZimAHEAD	Zimbabwe Applied Health Education and Development

1. Project Summary

Title: Cholera Mitigation Through the Community Health Club Approach

Project Period: 1st October. 2012 - 30th September, 2013.

Programme Area: Manicaland Province, Zimbabwe.

Programme Extent : 23 wards in Two Districts

Chipinge District:	Wards: 16, 20, 21, 22, 23, 24, 26, 27, 29, 30
Chimanimani District:	Wards: 13,16,21,22,23
Mutare Urban:	Dangamvura: 6, 7, 8, 9, 15,18. Chikanga: 14 and 16

Direct Reporting to: USAID OFDA Zimbabwe

Implementing Partner: Zimbabwe AHEAD

Target No. of Community Health Clubs: 480

Target No. of Community Health Club Members: 36,000

Beneficiaries: 216,000 Community members

20 Environmental Health Technicians (EHTs)

240 Community Based Facilitators (CBFs)

Total Cost of Project: USD $506,316

Cost per Beneficiary: USD $2:34

2. Programme Goal & Objectives:

Goal: To increase health knowledge and improve hygiene and sanitation practices to sustainably reduce the risk of transmission of preventable diseases and build resilience within communities for cholera mitigation.

Objective: To improve hygiene and sanitation practices through health knowledge and to sustainably reduce the risk of transmitting water-borne diseases

3. Summary of Milestones and Achievements

3.1. Milestones

All our projected milestones were met as detailed below:

1. Implementation Plan (28th October, 2012)
2. Setting up of field office (27th December, 2012)
3. Recruitment of field staff (19th March, 2013)
4. First quarterly progress report (18th March, 2013)
5. Printing of toolkits and membership cards (3rd May, 2012)
6. Training of EHTs and CBFs (3rd May, 2013)
7. Second quarterly progress report (6th June, 2013)
8. Training completed of CHC members (9th August, 2013)
9. Third quarterly progress report (15th August, 2013)
10. Water Quality Test Report (20th Sept,2013)
11. CHC members Graduation Report (27th Sept, 2013)
12. Project Final Report (10th October,2013

3.1. Achievements

OBJECTIVE PLANNED	ACHIEVEMENT PER QUARTER	CUMULATIVE ACHIEVEMENT	% ACHIEVED OF TARGET	COMMENTS
Setting up of offices / staff recruitment	3 offices in Mutare, Chipinge and Chimanimani	3/3	100%	All three closed at end of project
Sensitization meetings	23 meetings	23/23	100%	One meetings done per ward and reached 4,388 people in total.
Training of 240 CBFs	245 Community Based Facilitators trained	245/240	101 %	11 CBFs had on-job training as they were chosen late
Training of 20 [EHTs]	9 EHTs Trained	9/20	45 %	only 9 EHTs who cover the project wards
CBFs with PHHE toolkit	245 CBFs received a 13 topic PHHE toolkit	245/240	101 %	All CBFs are now equipped.
CBFs with visibility materials	244 CBFs with t-shirts, hats, bags and bicycles	244/240	101%	All CBFs received visibility materials.
Establishment of CHCs	368 CHCs established	368/480	76.66 %	Affected by late start in programme
Training CHC members	23,684 members (21,441 women)	23,684/36,000	65.78 %	Affected by late start shift of project areas
Baseline and end line Surveys	10,321 H/holds Baseline/ end line h/hold inventories	10321/10321	100%	44% of household (10,321) was surveyed by CBFs (See Table 7)
Water quality testing	95 water samples collected and tested	95/530	18 %	MoH continues this activity
Home Model Competitions	368 CHCs in model home competitions	368/368	100%	Model Home competitions
CHC Graduations	15,028 CHC members graduated	15,028/23,684	63%	Time too short: continuing post project.
CHC Committee training	368 CHC committees trained	368/368	100%	All committees received training on leadership roles and responsibilities

4. Community Entry

4.1. Signing of MOUs and Allocation of Project Wards

Owing to the fragile political environment in Zimbabwe in the 2012-2013 period prior to referendum and elections, the Provincial Authorities took their time to allow us to work in the provinces as they were suspicious of the timing of an American funded project in the field as they perceived it could be politically motivated. It took all of 3 months before the Provincial Administrator gave us clearance to work in the province in spite of the good and transparent working relations Zimbabwe AHEAD as a grass roots organisation had established over 17 years working in four out of 7 districts in Manicaland. This delay militated against timely achievement of our milestones. During the pre-election period, all NGOs were banned from working in rural communities, however this did not impact on the project as Community Based Facilitators, villagers themselves, had already been trained and were able to keep the project running whilst Zim AHEAD Project Officers pulled out of the field for a month.

Memorandum of Understanding agreements [MOUs] were signed in the four Project districts of Chipinge, Chimanimani, Makoni and Mutare City between ZimAHEAD and the Rural District Councils as agreements to operate in the districts after getting clearance from the Manicaland Provincial Administrator. The agreement with Makoni RDC was later on cancelled for political reasons prior to elections. Despite the fact that facilitators had been chosen and communities alerted to the impending project, Zim AHEAD had to leave Makoni without recourse.

We moved the quota of CHCs to Chipinge district, where we were happily received as they were delighted to double the number of CHCs in their district. A total of 23 wards were allocated for the project in the 3 districts, and were finalised as follows:

Chimanimani: 5 wards:[13,16,21,22 and 23]

Chipinge: 10 wards: 16, 20,21,22,23,24,26,27,29 and 30]

Mutare: 8 wards: [Dangamvura; wards: 6, 7, 8, 9, 15 and 18.] and Chikanga wards: 14 and 16

Fig. 1. Programme Manager introducing project to communities

4.2. Community Sensitization meetings

Ward sensitization meetings were attended by ward stakeholders such as Councilors, Chiefs, Headmen, Kraal Heads, Village Health Workers, government workers from various departments and the Community at large. A total of 4,388 people attended the meetings in the selected 23 operational wards in the 3 districts of Chimanimani, Chipinge and Mutare.

Table 1 Sensitization meeting statistics

Districts	Wards	Attendances	Selected Trainee CBFs
Chipinge	10	2,281	84
Chimanimani	5	1,083	76
Mutare	8	1,024	23
Total	**23**	**4,388**	**246**

The selection of trainee Community Based Facilitators (CBFs) was also done at the end of each meeting with a total CBFs selected. Table 1. above, shows the attendance at sensitization meetings and selection of trainee CBFs.

Fig. 2. Project Officer demonstrating tippy tape to CBFs at training

5. Implementation of the Programme

5.1. Training of Trainer workshops

Three 5 day training of trainers' workshops were conducted, one each district of Chipinge, Chimanimani and Mutare. A total of 234 Community Based Facilitators [191 females and 43 males]: 76 in Chimanimani, 146 in Chipinge and 12 in Mutare urban were trained in Participatory Health and Hygiene Education (PHHE) as these sessions are known in Zimbabwe. Nine Environmental Health Technicians were also trained in PHHE and in the formation Community Health Clubs. [4 in Chimanimani and 5 in Chipinge]. The project aimed at training 20 EHTs but there was a staff shortage in the Environmental Health department of MOHCW, so only nine could be trained. At the end of the training workshop each Community Based Facilitator received a certificate and was provided with the Zim AHEAD PHHE toolkit of 13 card sets of visual aids and visibility materials such as a hat, t-shirts a bag and a bicycle.

The training workshops were supported by the District Water and Sanitation Sub Committee (DWSSC) members from the two rural districts and local authorities from the city of Mutare. Six DWSSC members and one official from the City of Mutare attended the trainings. There were 13 Community Based Facilitators who were selected too late for the initial workshop, so they had to be trained on the job.

Table 2 CBFs and EHTs Trained

District	Wards	Females	Males	Totals	EHTs
Chimanimani	5	58	18	76	4
Chipinge	10	118	28	146	5
Mutare	8	12	0	12	0
	23	188	46	234	9

The topics were done using participatory activities with visual aids, demonstrations and songs.

1. Community Health Club establishment and management
2. Community mapping
3. Community members
4. Hand washing, personal
5. Home and food hygiene
6. Water sources
7. Water storage and usage
8. Germ theory
9. Dehydration
10 Diarrheal diseases
11. Sanitation technology and management
12. Bilharzia
13. Malaria
14. Nutrition
15. Skin Disease
16. Worms
17. HIV and AIDS prevention
18. Disaster risk reduction
19. Monitoring and evaluation
20. Action Planning

Fig. 3. Participants learning how to use visual aids in participatory activities for each of the topics.

5.2. Formation and Registration of Community Health Clubs

Registration of CHC membership and formation of CHCs started soon after the completion of training of trainer's workshop and community feedback meetings.

Table 3. Wards, CHCs, CBFs and registered CHC members

District	Wards	CHCs	M/ship			
		Trained		Total	Male	Female
Mutare	8	12	22	1,702	154	1548 (90%)
Chimanimani	5	83	111	7,187	1,050	6,137 (85%)
Chipinge	10	150	235	14,795	1,039	13,756 (92%)
Totals	**23**	**234**	**368**	**23,684**	**2,234**	**21,441 (90%)**

Fig. 4. Community Health Club members select a venue and decorate their venues, putting up seating and making maps of the village which depict every household and the number of latrines.

A total of 368 CHCs [78.63% of project target] with a membership 23684 members [65.78% of the project target] [21441 females and 2243 males].

Fig. 5. Communities use their initiative to use a flat rock at the CHC venue to draw a permanent map of their village as a planning tool to help them assess their sanitation coverage.

5.3. Health Promotion Training

Weekly PHHE sessions were conducted regularly as scheduled meetings at agreed venues and times. The 20 sessions followed the standard Zim AHEAD Manual and included the following topics: community mapping, burden of disease, personal, home and food hygiene, the water chain, safe sanitation , feacal oral route, diarrhea, prevention of water related and water borne diseases, nutrition , TB, HIV and AIDs and social planning.

Fig. 6. The community based facilitators conduct the same training sessions in their community health club, training fellow villages in health and hygiene by participatory sessions that enable everyone to join in and contribute.

5.4. Putting Recommended practices into action

Homework was given after every session and which entailed home improvements such as the construction of a bath shelter, a dedicated smoke-free kitchen (with decorations of homemade shelves), a pot rack, digging a rubbish pit, and having simple hand-washing facilities (tippy- tap) to enable frequent and accessible hand-washing with soap.

These facilities are observable indicators of home hygiene improvements which were closely monitored by the CHC Executive committees as to ensure that the club members conform to standards. Positive peer pressure and innovations were created as members worked towards achieving the highest standards of home hygiene improvements.

Fig. 7. Our Motto is 'Catch them young' – establishing good hand washing practices with children is key to the sustainability of the health impact. Every CHC home had one, if not two Hand washing facilities (Tippy taps). Kids just stand on the stick to tip the water which enables people to wash hands properly with soap without assistance.

Construction of toilets ranged from temporary structures to permanent structures depending on what was affordable as recommended in the training on the sanitation ladder. Kitchen hygiene was also done which resulted in the equipping the kitchens with enough utensils, and moulding kitchen shelves from clay and polishing so ensure they were not dusty. Proper water storage and drawing methods were also practiced and observed in the kitchens with covered water containers, use a ladle when drawing water and use of individual cups.

Fig. 8. In one year 2,116 new pot racks for drying utensils hygienically were erected, a 21% increase to 92% of all members

5.5. Model Home Competitions

Model home competitions were done prior to the graduation ceremonies to promote a high standard of cleanliness and hygiene in the homes and to encourage every member to take responsibility practically. Competitions were centered on putting up hygiene enabling facilities such as temporary or permanent VIP latrines, pot racks, a bath shelter, a dedicated smoke-free kitchen (with decorations of homemade shelves), digging a rubbish pit, simple hand-washing facilities or tippy-tap (See Fig.7 above) to enable frequent and access hand-washing with soap, kitchen hygiene with clean utensils, proper water and food storage to ensure that food is protected from flies, rodents and cockroaches These indicators of home hygiene improvements were monitored by the CHC Executive. Competitions were also held on the preparation of CHC venues. Club members put in a lot of effort to work at the venues so that the venues looked attractive, educative and durable. The venues would serve as a demonstration of a good homestead. Hygiene enabling facilities were constructed at the club venues and a catchment map provided on the ground as monitoring tool. The map is updated each time the club meets and as and when there are developmental changes in the village. This brought cohesion amongst the club members as they would want to outdo the other club in the competition.

Fig. 9. In one year 2,281 new kitchen were decorated a 22% increase to 56% coverage

5.6. Graduation Ceremonies

Twenty Graduation Ceremonies (8 in Chimanimani, 2 in Mutare and 10 in Chipinge) were held to award 15,028 members, 63 % of the registered 23,684 CHC members. These CHC members received certificates after managing to go through the 20 PHHE sessions and practically demonstrating cleanliness at their homes. The CHCs are still mobilizing for membership to reach the 36,000 projected memberships as within the limited time available we reached 66 % of the targeted population. The CBFs will continue with the sessions until all households are into clubs. The ceremonies were attended by the CHC members, local leadership, DWSSC members and the community at large. The CHCs took turns to show case the knowledge gained at the Clubs through song, drama, poems and dance, providing the entertainment for the day. DWSSC members officiated as the guests of honour with speeches of encouragement, motivation and handed the certificates to the graduates. No hand outs were given as prizes, as past experience shows that this can create tensions if not everyone receives a prize.

Table 4. CHC Number of people completing 20 sessions and graduating

District	No of CHCs	Registered CHC members	Graduates	% Graduated
Chimanimani	121	7,187	4,765	66%
Chipinge	255	14,795	9,562	64%
Mutare	32	1,702	1,301	76%
Totals	408	23,684	15,028	63%

Fig. 10. The only reward for attending all 20 sessions is a certificate.

One of 20 Graduation ceremonies, where 15,028 members graduated (63% of all members)

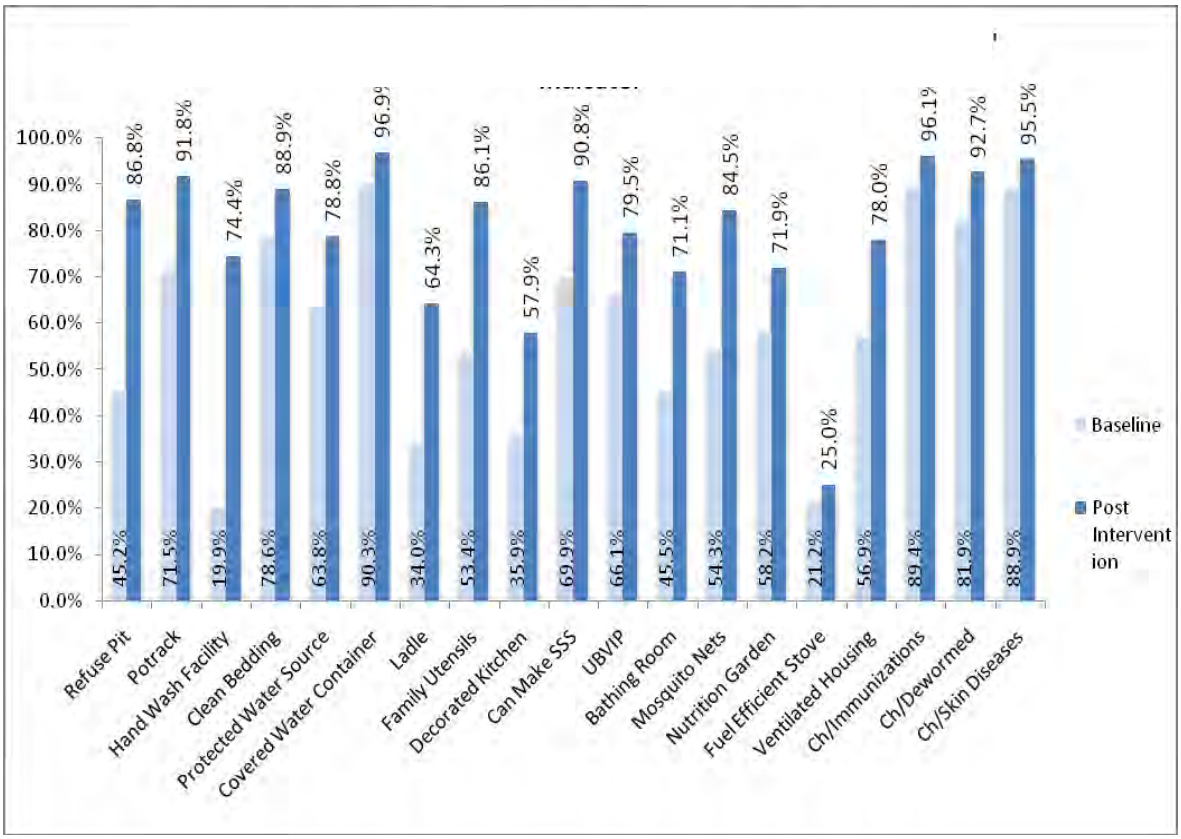

Fig. 11. All ages are encouraged and this is one of the elderly graduates – for many semi-literate women of this generation it may be the first certificate she has ever achieved. Men are encouraged to attend and there were 2,234 men out of 21,441 members

6. Project Outcomes

6.1. Baseline and End line Household Inventory

To accurately measure the outcomes of the project quantitatively, a baseline and end line household inventory was done at 10,321 households (44% of total membership) in the 3 project areas, by the CHC committee, supervised by EHTs. Although this is not an objective verification, we have found that community members themselves usually deliver the true picture, as it is part of their job to monitor their village properly. The household inventory covered 19 observable indicators at each household before and after the intervention. Results of the two inventories are presented in Table 5. and Table 6. below.

Table 5. Baseline information compared to Post Intervention change of 19 proxy indicators of hygiene behavior change in three Districts of Zimbabwe, after 8 months. 2013. Zim AHEAD



6.2 Discussion on findings

All 19 nineteen indicators changed across the project with average improvement of 20% from 59% to 80% with the range of between 54% and 4% of change over eight months.

6.2.1. Handwashing and Personal Hygiene

Hand washing practices recorded the highest change at 54% increase as the tippy taps were easy to make with readily available materials. Not only did *every* house have at least one hand washing facility, 28% had more than one, indicating a complete conversion to the importance of washing hands after using the toilet and keeping hands clean generally.

Table 6. Percentage Improvement of Proxy Indicators of Hygiene Behavior Change after 8 months, in three districts of Zimbabwe, 2013. Zimbabwe AHEAD Organisation.

		Baseline		Post Intervention		Percentage Improvement	
	Indicator	Number	%	Number	%	Number	%
	Personal Hygiene						
1	Hand Wash Facility	2054	20	7638	74	5584	54
2	Bathing Room	4696	46	7328	71	2632	26
3	Clean Bedding	8112	79	9186	89	1073	10
4	Children no Skin Disease	9175	89	9908	96	733	7
	Kitchen Hygiene						
5	Refuse Pit	4665	45	8979	87	4314	42
6	Family Utensils	5511	53	8876	86	3365	33
7	Pot rack	7380	72	9495	92	2116	21
8	Decorated Kitchen	3705	36	5986	58	2281	22
9	Ventilated improved latrine	6822	66	8257	80	1435	14
	Safe Drinking Water						
10	Protect Water Source	6585	64	8154	79	1569	15
11	Ladle drinking water	3509	34	6605	64	3096	30
12	Covered W/Container	9320	90	10011	97	692	7
	Disease Prevention						
13	Mosquito Nets	5604	54	8773	85	3169	31
14	Ventilated Housing	5873	57	8050	78	2178	21
15	Can Make SSS	7214	70	9392	91	2178	21
16	Children Immunized	9227	89	9908	96	681	7
17	Child de wormed	8453	82	9599	93	1146	11
	Environment						
18	Nutrition Garden	6007	58	7431	72	1424	14
19	Fuel Efficient Stove	2188	21	2580	25	392	4
20	Average of all above		59%		80%		21%

All variables are highly significant at p>0.001

Unique to this project was the recommendation to build bathing shelters to encourage frequent washing in privacy, and avoid washing in rivers where bilharzia is contracted. This increased by 21% from 46% to 71% (7,328 households)

Our objective is to develop such a strong culture of hygiene that it extends to *all* areas of the home. Skin disease such as scabies and ringworm is spread by lack of washing, and sharing of unwashed bedding and clothes. Therefore a good indicator of personal hygiene is the number of children without skin diseases, as rashes of scabies and the clear ring shaped lesions of ringworm are easily observed. Bedding was assessed for cleanliness and in 89% of homes was found up to standard with a 10% improvement (1,073 households). This is also triangulated with the improvement of homes where children did *not* have skin disease which had improved by 7% (i.e. 392 more households where children had no scabies or ringworm).

6.2.2. Kitchen Hygiene

Kitchen hygiene is aimed at preventing germs spreading during the handling of food. To break the fecal-oral route transmitted by flies, we recommend kitchens should be well swept and surfaces kept clean, so flies are not attracted. Pots and plates should be washed properly and dried in the sun, above ground on a pot rack out of reach from dogs, goats and chicken contamination. It is also recommended that each person have their own plate as sharing one plate spreads germs from dirty hands (as well as children eating less as they have to compete with adults for their share). A refuse pit is recommended to attract flies away from the kitchen and refuse should be burnt regularly so preventing breeding. A VIP latrine is also part of the general effort to prevent flies from accessing food as they may go down the latrine but cannot escape if the vent pipe is properly sealed with fly gauze. A wash hand facility (tippy tap) with access to soap is also critical to prevent food contamination from dirty hands. As shown in Table 6. above in indicators 5-8, kitchen hygiene improved significantly with over 86% practicing safe food hygiene with 3 different indicators: 87% members had refuse pits (43% improvement), 86% were using individual family utensils for eating (33% improvement), and 92% had pot racks (21% improvement). In addition 58% had decorated kitchens indicating a high level of effort (22% improvement) was being made in this project to upgrade kitchens.

6.2.3. Self Supply Sanitation

There was a very high demand for sanitation, after going through the PHHE sessions in the CHCs. Club members worked in small groups to construct permanent BVIPs with the support of the EHTs who trained the CBFs in siting and pegging the toilet pits. There were 55 builders

trained and they got overwhelmed with the demand from the communities. Chimanimani District was outstanding with 91 toilets completed in six months and close to 650 pits were dug and lined for VIP Latrines by the project end all with 100% self supply. The community's biggest challenge was that of the shortage of river sand needed for lining the pits and constructing the slab and infrastructure as it was only available 80 km away from the project area. Pit lining was done with rocks to reduce the costs. Across the two rural districts, sanitation coverage increased by 14%. This is an impressive achievement in a very short time given that no material inputs were supplied by the project for this sanitation.

Table 7. Newly constructed BVIPs in Chimanimani

Ward	New BVIPS	Lined Pits
13	13	84
16	35	87
21	14	96
22	23	169
23	6	211
Total	91	647

Fig. 12. Sanitation demand in Chimanimani – pit lined with rocks (above), with home made bricks (below) and women being trained in casting the toilet slab

6.2.4. Safe Drinking Water

Clean drinking water relies on a safe 'water chain' in which each link must be safe:

(1) safe water source *AND*

(2) safe water storage in clean and covered containers *AND*

(3) a safe method of drawing drinking water, using a ladle so dirty hand do not contaminate the drinking water.

The following Section outlines water concerns.

6.2.5. Capacity Building and Support for MoHCC

Two Del Agua water quality testing kits were brought with consumables to test 400 water samples and these were donated to the Environmental Health Department in the 2 districts of Chipinge and Chimanimani. Two 3 day training workshops on Water Quality Monitoring and Testing were conducted in Chipinge and Chimanimani. 60 EHTs from the Environmental Health Department of MOHCC (25 in Chimanimani and 35 in Chipinge) were trained in water quality monitoring and testing in the workshops. The training aimed at equipping the MOHCC and covered both staff with skills and knowledge in processing, interpreting results and analysis in bacterial and chemical tests. The monitoring entailed a series of observations, measurements and sampling for bacteriological and chemical analysis at water at source, during transportation and at point of use.

Topics covered at the training included water quality monitoring, water quality vs. water borne diseases, water parameters, WHO recommendations on water quality, sanitary inspection of water points, water sampling methods on various water points, media preparation, reading and analyzing results and care of field kits.

6.2.6. Water Quality Monitoring and Testing

A total of 95 water samples for chemical and bacteriological testing were collected from sites selected because they were known to be particularly risky areas, in the two rural project districts of Chimanimani and Chipinge [42 in Chipinge and 53 in Chimanimani].

Water samples were collected in 11 out of the 15 wards as follows.

Chimanimani District wards: 13, 21, 22 and 23;

Chipinge District wards: 16, 20, 22, 24, 26, 27 and 29.

The distribution of collection is as follows:

Table 8. Water sample collection Chimanimani and Chipinge

	Boreholes	Family wells	Piped water	Spring	River	Reservoirs	Household	Other	Total Samples
Chimanimani	2	0	21	20	1	1	6	2	53
Chipinge	30	2	0	7	1	0	2	0	42
Totals	32	2	21	27	2	1	8	2	95

Water samples were collected at a range of different *protected* sources, 32 at boreholes, 2 at shallow wells, 21 piped water, 27 springs and at *unprotected* sources: two samples from the River, and one from a Reservoir, as well as 8 samples from households, and 2 'other'.

Two types of tests, (turbidity and pH) were done on site whenever it was convenient. No tests were done for residual chlorine since no chlorine is added in the rural water sources.

It was found that 27 % of the samples collected (26 samples) of which half were in Chimanimani and half in Chipinge, were indeed found contaminated with feacal coli forms ranging from 1 to 180 and therefore not safe for human consumption.

Chimanimani had the lowest water quality owing to the contaminated unprotected springs and streams that run down the hills. The community has very few boreholes and therefore relies on springs which are not protected. Spring water protection will be the best option for safe water supplies to the communities since these are in abundance and perennial. There was no water provision component in this project so it was difficult for the communities to upgrade their water sources, but they did clean up around the sites.

Although 40 of the 53 water samples collected in Chimanimani were found safe, there is high risk of contamination at any time from various sources and from rainfall runoff in the rainy season due to lack of protection. Most of the water sources are open.

Possible sources of contamination are open defecation around the water points, broken / burst pipes, lack of head works (apron, drain, fencing) and protection around the water points.

In the 10 wards of Chipinge [wards: 16, 20, 21, 22,23,24,26,27,29 and 30] a total of 483 water points are theoretically considered as safe water sources out of 503 sites, according to MoHCC records. These are providing water to 42,585 households. Chipinge District as a whole is at 58% safe water coverage in 30 wards.

In 5 project wards of Chimanimani [wards 13,16,21,22 and 23] which were assessed a total of 47 water points were considered safe out of 112 water sources (41%), serving 11,250 households. Chimanimani district as a whole, has estimated safe water coverage of only 31% in 23 wards.

Table 9. Safe water sources in the 15 project wards in Chipinge and Chimanimani

District	Wards	H/holds	Safe water sources				
			Boreholes	Protected wells	Protected Springs	Total safe water sources	Total no of water sources
Chipinge	10	42,585	450	33	0	483	503
Chimanimani	5	11,250	16	0	31	47	112

6.2.7. Water Storage and taking drinking water in the homes

Traditionally water is stored in covered containers and so even at the outset of the project water storage was high at 90.3 %. This high coverage still increased by 6.6% to 96.9%, which is encouraging. However water continues to be contaminated when withdrawing from the containers as the use of a ***ladle was found as low as 34.0% at baseline. This improved significantly by 30% to 64.3%*** after the intervention but there is still room for improvement as 6 water samples collected from water containers at household level for bacterial testing were found contaminated - evidence there still remains some poor handling practices, and there is a need for treatment at household level with Water Guard. Although setting up the supply of Water Guard was one of the projects intentions, the time was too short to facilitate this marketing. We are seeking ongoing support to complete the marketing of hygiene enabling facilities such as water guard.

6.2.8. Disease Prevention

The recommended practices in the CHC training include many practical actions that a mother can take to prevent disease in her home. This includes preventing malaria by ensuring all children sleep under mosquito nets, and the use of nets increased to 85% ***with a 31% improvement in eight months.*** There were no handouts of mosquito nets in the project. Before the CHC started, mosquito nets had been provided by previous projects but were not valued as a means of preventing malaria and were sometimes used for fishing in the Save River!

Ensuring that homes, especially smoky kitchens, are ventilated is recommended to minimize acute respiratory infections (ARIs) such as pneumonia and bronchitis, and ventilation in households improved by 21% to 78%. The CHC training also reminds mothers on the importance of preventing killer childhood diseases by correct immunization, which prevents Polio, Tuberculosis, Tetanus, Pneumonia. Measles and Meningitis. As a result of the training immunization in CHC households increased by 21% to a record 96%. Intestinal worms which are often endemic in small children should be treated every six months to avoid malnutrition and stunting of children as a result of these parasites; after six months, 11% less children had signs of worms with 93% of households having treated for parasites. Finally every mother should be able to recognize the signs of dehydration and make ‘sugar salt solution’ (SSS) at home to

prevent infants dying for lack of treatment and this simple skill increased by 21% to 91% of all CHC members.

The only recommendation which was disappointingly low in response was the uptake of fuel efficient stoves. This was because the one year programme was curtailed to eight months in the field and it was a challenge to finish the sessions in time, let alone embark on the environmental aspect of the programme which includes training in making fuel efficient stoves, planting of wood lots and nutrition gardening. This is usually part of the second phase of the programme and it would be ideal if there was another years funding to follow through of this and other initiatives which were abandoned due to this short time frame.

Fig. 13. A fuel efficient stove - Community innovations

There was a low uptake of fuel efficient stoves [3.8%] as there was no training in the design offered to the communities and they had to rely on their own innovations which were confined to a few individuals and sometimes not suitable for all types of kitchens. Traditionally the cooking fire is constructed in the center of the kitchen hut but as fuel efficient stoves need a chimney they have to be moved to the side wall which disrupts traditional seating arrangements for eating.

7. Unforeseen Benefits of the Project

7.1. CHCs turn into Savings Clubs

Savings clubs were started within the 86 CHCs (23%) in the 3 districts as the club members realized the need for self financing of activities to compliment health and hygiene education so as to be able to buy such items as soap, kitchen utensils, cement for latrine construction, borehole spares etc. Each club member contribute US$1 weekly at the club venue each time the club met. The contributions were then directed to a specific activity with the Club Executive Committee monitoring the progress.

Fig. 14.

Social capital generated resulted in CHCs evolving to Community Based Organizations (CBOs) participating in Income Savings and Lending at their own initiative

8. Inputs and Support

8.1. Staffing

Zim AHEAD is appreciative of the capacity building which was possible due to the budget which could support 9 members of staff: the Programme Manager, two administration staff, two caretakers and four Project Officers. A provincial office was secured in Mutare city (the Provincial capital) and two field offices were established in the districts of Chimanimani and Chipinge. However these all had to close at the end of the funding. The core staff were

supported at Head office with part time allocated to the Executive Director, Director of Programmes, Finance Administration and Monitoring & Evaluation Officer.

8.2. Transport and other logistics.

A new twin cab truck and 4 new motor bikes were procured to equip the project with reliable transport. 5 laptops, 2 desktop computers and 4 printers were provided as office equipment for the staff. These will be used in the next USAID funded project to start shortly.

The Environmental Health department also received a donation of 2 motorcycles, spares for 8 motor cycles, and a monthly fuel allocation of 20 liters petrol every month for each of the 8 motorcycles to enable the EHTS in the operational wards to continue supporting the CBFs and CHCs.

9. Challenges

9.1. Provincial Clearance

This proposal was written in 2010 in response to the Cholera epidemic in Zimbabwe which took over 4,000 lives and over 10,000 cases in 2009. By the time the programme was approved the political landscape had become complicated and as we went into 2013 we were aware that it would be difficult to operate in a year of elections, given the violence and the banning of NGO activities in the field in previous election periods. In preparation of the proposal Zim AHEAD had consulted widely with the stakeholders but when the funded was finally approved two years later we found ourselves having to be *vetted again* for suitability to implement in the province. This process took about three months with us checking every week and getting a 'perhaps tomorrow' response. The application for authority to operate was submitted to the Provincial Administrator on 26 October 2012. This negatively affected the project start up as we could then not engage with the communities until this was given from the PA. More time was lost again towards the election period as all field activities were suspended for two months. The project implementation period was affected as result of the time lost and the targets such as the size of club membership could not be fully achieved.

10. Project Exit

Meetings were done with the DWSSC to appraise them of the progress in the project wards and it is expected that the MoHCC Environmental Health Department will continue working with the CBFs and CHCs in their wards since they have been working hand in hand with Zim AHEAD from the project inception till the end. IEC materials have been left with the CBFs and at strategic points such as rural health centers for easy access by the CBFs. The community have raised funds for cement, and DWSSC is grappling with ways and means to assist these energized communities to get river sand for completing their latrines.

11. Sustainability, Replication and Scale up

This project was an exceptional project by any standards but it was too short. It is sad to note that we are exiting the project (October 2013) when self supply sanitation was starting to pick up in Chimanimani, and so much more could have been achieved with a little more support for Zim AHEAD to keep up the pace in the communities. Because this was an OFDA funded *emergency* project it could not be extended despite the extraordinary chance to make even more impact at scale. This underlines the dilemma of much of community development. When solutions such as the CHC Model are able to demonstrate that they are able to mitigate against future disasters, they should be taken to their full capacity.

Sustainability: ZimAHEAD continues to look for a committed donor for *long term* funding to continue to scale up the CHCs in Zimbabwe to other households. For sustainability, the 380 CHCs which have finished Stage 1 (Hygiene Promotion) in this project, should now move onto activities to sustain family health such as nutrition gardening which will ensure the continued livelihoods of households are maintained now that they have reached a high level of hygiene. At present Zimbabwe AHEAD, so adept at achieving targets at minimal cost, is all but idle. In the near future USAID is funding a project through DAPP to start CHCs in Goromonzi and Chipinge. Meanwhile we leave 380 communities ripe for sustainable development stranded, having been with them for less than a year. We appeal to USAID to do an external evaluation to verify our claims with a view to extending this project in existing areas of Mutare and Chimanimani to achieve sustainable outcomes.

Scaling up: The community response was exceptionally high and warrants an expansion of this programme which only cost US$2.34 per beneficiary and has achieved so much already in less than a year. The target is to reach at least 1 million beneficiaries in Zimbabwe in the next five years. The National Sanitation and Hygiene Strategy of 2011 states the Community Health Club approach is the methodology through which Participatory Health and Hygiene Education should be channeled. In 2013 the Government of Zimbabwe in the Water Policy directed that every village should have a functional Community Health Club (CHC) that seeks to empower communities to take full responsibility in preventive health. Hearing about the success of the CHCs in this project, the Minister of Health himself visited the project in Chipinge in April 2014, to verify the impact on the community. The Minister commended the efforts that had been made by Zim AHEAD thanks to USAID funding, and said that there was need to scale CHCs up nationally, incorporating new research findings on environmental enteropathy. He noted that in Rwanda CHC had been adopted at a national level so that each and every village has a CHC as the main tool for disseminating primary health care information. He wants the same in Zimbabwe and the MoH has proposed that Zim AHEAD should train MoH staff throughout the country. Although the CHC methodology is being used sporadically by different NGOs in different parts of the country, there is little coordination and short projects such as this one, are not linked into a national programme. This successful project needs to be scaled up to a national programme managed by Ministry of Health so that in future Government of Zimbabwe can prevent cholera with less dependence on donors such as USAID/OFDA to assist in such emergencies.