The new strategy of using Community Health Clubs as a vehicle for rural health promotion was first used in Zimbabwe, in 1994 in Makoni District, in a field trial initiated by the author. As the demand for expansion increased, an NGO, Zimbabwe A.H.E.A.D. (Applied Health Education and Development) was founded in 1997 to support Ministry of Health implement this new approach, in the three districts of Makoni, Gutu and Tsholotsho. (Table 1, below).

### Table 1. Comparison between districts: Sept 2000

<table>
<thead>
<tr>
<th></th>
<th>Makoni</th>
<th>Gutu</th>
<th>Tsholo</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Clubs</td>
<td>265</td>
<td>85</td>
<td>32</td>
</tr>
<tr>
<td>No. of Members</td>
<td>11,450</td>
<td>4,489</td>
<td>2,105</td>
</tr>
<tr>
<td>No. of Beneficiaries*</td>
<td>68,700</td>
<td>26,934</td>
<td>12,630</td>
</tr>
<tr>
<td>No. of EHTs supported</td>
<td>15</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>No. of Health Sessions</td>
<td>1,244</td>
<td>857</td>
<td>182</td>
</tr>
<tr>
<td>Members full attendance**</td>
<td>6,234</td>
<td>2,823</td>
<td>2,100</td>
</tr>
</tbody>
</table>

*Number of members x 6 per family

**More than 20 health sessions

### Selection of study area

Although the smallest of the three project areas Tsholotsho excelled in terms of outputs, with relatively high levels of behaviour change (Waterkeyn 2000) and almost complete attendance by all members at the health sessions. (See Table 1) Makoni District had 54% full attendance and Gutu had 62% and both had a reasonable level of uptake of recommended behaviour by the club members (See Fig 2 & 3). However, Makoni has been selected for this study of cost-effectiveness because it was the biggest project, spread throughout 20 districts with 15 Environmental Health Technicians (EHTs) running 265 clubs with 11,450 members. As it was monitored directly by the NGO, project records tended to be more reliable than either in Gutu or Tsholotsho, which were both administered through the Rural District Council.

Makoni District, in Manicaland Province, lies in the east of the country, near the border with Mozambique and stretches between Macheka and Mutare. The administrative centre, Rusape is two hours drive from the capital Harare. The population in 2003 is estimated at 358,733 (1992 census). 15 EHTs stationed at rural clinics, cover 36 wards (population: approx 10,000 per ward) of which 20 are included in this project. With 24% sanitation coverage, Makoni is higher than the national average of 21%. It also has the second highest water coverage in the country with 1,710 communal water points, 839 family wells. As there is good coverage there was no water provision in this project, and implementation focused only on the construction of VIP (Blair) Latrines.

### The A.H.E.A.D. methodology

This is a theory that regards Health Promotion as the ideal entry point for development. It maintains that if this is used as a process to develop a real ‘common unity’ of understanding and a ‘culture of health’ within a community, subsequent W & S programmes will be effective, easier to implement, and sustainable. It is also a ‘Livelihoods’ strategy (DFID 2000) that recommends a stage–by-stage approach over at least 4 years. People form into ‘health clubs’ which progress from the 1st year of health promotion, to managing water and sanitation programmes in the 2nd year, onto income generating projects in the 3rd year and finally in the 4th year to other social development initiatives such as Adult Literacy, Play Groups and Aids Carers in each club. Makoni District is the only project that has achieved the full 4 year process in 10 wards involving 87 of the 265 Health Clubs.

### Project description

The Pilot Project using Community Health Clubs started in three wards in Makoni District in 1994, expanded to 7 in 1996 (53 clubs), and then went to scale in 20 wards in 1999. Fourteen EHT’s were trained in the participatory A.H.E.A.D Methodology, and supplied with extensive training visual aids for 6 months of weekly sessions, targeting mainly women in each village.

The aim of the Makoni project was to develop a demand for sanitation through health promotion, with a target of constructing 2,000 latrines in two years. In each of the 20...
project wards a minimum of 5 Health Clubs (with at least 50 members) were set up per year. (Table. 1). Weekly health sessions were held in all clubs to cover all 20 topics relating to good hygiene and preventable diseases. Health songs and dramas were produced in all areas with competitions held. Positive behaviour change was the main objective with members encouraged to adhere to over fifty hygiene recommendations (See Box. 1). Only those dedicated members who completed the health sessions, and had dug and lined their pits at their own expense could qualify for the (3 bag cement) sanitation subsidy.  

![Table 1. Cost of Health Promotion in Makoni District: March 1999–March 2001](image)

**Table 2. Cost of Health Promotion in Makoni District: March 1999–March 2000**

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wards</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>EHTs</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Health Clubs</td>
<td>72</td>
<td>265</td>
</tr>
<tr>
<td>Club Members</td>
<td>3,856</td>
<td>11,450</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>23,136</td>
<td>68,700</td>
</tr>
<tr>
<td>Health Sessions</td>
<td>1,448</td>
<td>2,283</td>
</tr>
<tr>
<td>Total EHT costs</td>
<td>US$ 7,990</td>
<td>US$ 21,811</td>
</tr>
<tr>
<td>Training costs</td>
<td>US$ 4,065</td>
<td>US$ 2,179</td>
</tr>
<tr>
<td>M/Bike purchase</td>
<td>US$ 9,210</td>
<td>nil</td>
</tr>
<tr>
<td>CHC costs</td>
<td>nil</td>
<td>US$ 405</td>
</tr>
<tr>
<td>TOTAL COST</td>
<td>21,265</td>
<td>24,395 (20%)</td>
</tr>
<tr>
<td>Health Ed. Cost per member</td>
<td>US$5.51</td>
<td>US$2.13</td>
</tr>
<tr>
<td>Cost per beneficiary</td>
<td>US$ 0.91</td>
<td>US$ 0.35</td>
</tr>
<tr>
<td>Cost per Trainer</td>
<td>US$1,518</td>
<td>US$1,626</td>
</tr>
</tbody>
</table>

**Hidden costs**

The figures above represent only the cost to the provider (NGO/donor) and do not take into account:

- Cost to the Ministry of Health which supports the salaries of 14 EHT’s and approximately 100 VCW’s.
- Voluntary time given by Health Club Committees, Members, Councillors
- Costs accrued by each household in buying new items recommended
- Saved time and the cost of developing necessary visual aids which had already been funded by other donors and were thus brought from A.H.E.A.D at cost price.

**Proxy indicators**

For this analysis, the cost of the programme should be gauged against it’s effectiveness in achieving health knowledge as well as its ability to change hygiene practices. Past research has established that improved hygiene does decrease the incidence of diarrhoea, (Feachem, 1984). Based on this finding, a household survey was conducted which used only observable indicators of good practice that can be taken as proxy indicators of improved family health. Some of the spot observations done during the household survey are highlighted below.* (Box. 1)

**Results: Project achievements**

By the end of the project in March 2001, each of the 15 EHTs, with the help of VCWs, (Village Community Workers) were responsible for around 17 clubs each (5+ per year for 3 years), with an average of 763 members, and 4,580 beneficiaries (6 per family). Within a year each EHT had held an average of 152 sessions, (12 sessions per month). Project and clinic staff soon noticed higher levels of health knowledge, and more importantly there was empirical evidence of improvements within homes of many of the recommended hygiene practices. With 1,402 latrines having been constructed in 1999, and 1,726 in 2000, the ambitious target had been surpassed and it was evident that the A.H.E.A.D Methodology was substantiating its claim to be able to engender demand driven sanitation. It should be mentioned that the income generation was so successful that 87 clubs raised an income of US$ 63,984, almost doubling the investment in them in one year. The full 4-stage A.H.E.A.D Methodology through Community Health Clubs not only achieves behaviour change, demand for sanitation in a cost effective manner, but also if taken to its fullest potential is a strategy for achieving genuine Sustainable Livelihoods.

**Transport and subsistence inputs**

Once training is done, training material supplied and the EHT’s equipped with motorbikes, there are only two main expenses in supporting the trainer. Firstly, the purchase of the motor bike, and running costs for 1,200kms per EHT per month. Secondly, token incentives for EHT’s running health clubs. As they are required to work far beyond customary civil servant levels they were initially given a small meal allowance for time spent away from their base. However, one of the surprises of this project has been that EHT’s remained committed to their clubs, and continued without extra allowances once donor funding ceased. Although, the work load is demanding all 30 EHTs who have run Community Health Clubs were unanimous in support of this approach, as they claim it not only rationalises their work load but that they have great job satisfaction and enjoy the communities’ respect.

**Estimate of savings**

Further research is needed to gauge the cost saved in terms of direct savings (saved treatment costs), or indirect saving (lost caregiver days for nursing a sick child), or improvement of family health in terms of morbidity and mortality prevented by reduction of TB, HIV/AIDS, Dysentery, Cholera, Malaria, Worms, Skin diseases and Schistosomiasis.

**Discussion**

**How much to expect**

The recent tendency in health promotion supports the belief that semi-literate women can only be expected to focus on a few key high-risk practices (Loevinsohn,1990) This is borne out in some studies that show the success of targeting only two interventions such as hand washing and safe disposal of toddlers faeces (Curtis et al, 2001). Whilst this may be the case with Social Marketing strategies (where the loosely targeted urban population is less defined), the A.H.E.A.D strategy has successfully proved that in rural areas, targeting those dedicated members of Community Health Clubs the opposite is true.
A raft of changes
Within six months of weekly meetings, an entire raft of 50 practices can be targeted, and with constant reinforcement through peer pressure and group decisions, high levels of behaviour change can be achieved in all practises. A genuine improvement in family health requires a consistent effort with safe hygiene practices and it cannot be achieved if only a few high risk practices are targeted. Diarrhoea in particular, has multiple causes; it is not enough to target only hand washing, for example, if food and water usage remain unsafe. A raft of small interventions are needed to eliminate all risk practices.

Developing a culture of health
Whilst this sounds ambitious, it has been demonstrated in this project that this degree of change is achievable. It is vital to work with a consistent group who meet regularly and follow up their knowledge with changes in the home. In the health clubs, one topic is tackled per week for at least six months, until all preventable diseases have been covered in depth. This knowledge is reinforced by peer pressure exerted between members who compete with each other to be clean and progressive. Home visits between members, as well as the Hawthorne Effect (being under scrutiny) all contribute to some impressive shifts in practice. (See Fig 2 & Fig 3)

The study: A household survey
After two years of health promotion activities a comprehensive household survey was carried out between August 2000 and August 2001, to record the knowledge and levels of behaviour change within the Community Health Clubs (CHCs) and this has been contrasted with that of non CHC areas. In Makoni, 25 clubs were randomly selected, and in each club a random sample of 15 members was individually surveyed, giving 375 respondents observed in total. A control group of 100 respondents were visited from similar communities adjacent to the project areas. The findings are summarised in the figures below (Figs.2& 3 below), which highlight observable differences between health club members and the non-CHC control group.

Box 1: 50 Recommended Practices reinforced during 25 sessions within Community Health Clubs

Prevention: Diarrhoea, Cholera, Dysentery, & TB
1. Covered drinking water*
2. Boiling contaminated water
3. Use of ladle for taking drinking water*
4. Hygienic handling of drinking water*
5. Hygienic handling of water/food containers*
6. Washing plates after meals*
7. Pot rack for storing clean plates/pots*
8. Safe storage of left over food*
9. Use of individual cups for each family member*
10. Use of individual plates when sharing a meal*
11. Clean containers for water storage*
12. Washing hands before touching food
13. Washing hands after faecal exposure
14. Safe disposal of toddler’s faeces
15. Keeping compound free from garbage/faeces
16. Well managed rubbish pit for solid waste disposal*
17. Safe sanitation practices (cat, covered, VIP)*
18. Clean well maintained latrine*
19. Use of safe water source*
20. Use of Hand Washing Facility (HWF)*
21. Use of soap for hand washing*

Prevention: Trachoma, Scabies, Tape/Ringworm & HIV/AIDS
22. Washing children’s faces regularly
23. Washing children daily
24. Pour-to-waste method of hand-washing used*
25. Avoid sharing clothes with infected people
26. Avoid shaking hands with infected people
27. Avoid sharing bedding with infected people
28. Do not use communal towels for drying hands
29. Wash clothes and bedding frequently
30. Wash with soap before sleeping
31. Keep compound well swept*
32. Wash uncooked fruit before eating
33. Keep fingernails cut short
34. Provide a well balanced diet for the family
35. HIV/AIDS: (ABC) Abstinence, Be faithful, or use a condom

Prevention: Shistosomiasis, parasites, Hook worm
36. Cover faeces/use a latrine/ cat sanitation
37. Wash at home not in contaminated water sources
38. Wash plates and clothes at home
39. Do not swim or take water in contaminated sources
40. Protection when taking water from unsafe source
41. Test and take bilharzia cure

Prevention: Malaria
42. Empty all containers that catch rainwater
43. Fill in ruts and pots holes to prevent standing water
44. Use of mosquito net, specially for young children*
45. Cover up with long sleeves when exposed at night
46. Cut grass and vegetation around homes
47. Use mosquito repellents/ coils/ make repellent
48. Use Mospar/citronella soap for washing every night
49. Use mosquito netting on window
50. Test & take malaria cure immediately when affected

* Spot observations conducted during this household survey

Ave. Number of Health Promotion Sessions attended : 17

Box 2. Profile of 375 Community health club respondents: Makoni District: August 2002–2001

<table>
<thead>
<tr>
<th>Gender</th>
<th>86% women (n=322)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age</td>
<td>47.04 years old (S.D. 13.59)</td>
</tr>
<tr>
<td>Married</td>
<td>98% men ; 72% women</td>
</tr>
<tr>
<td>Widows</td>
<td>25% women (n=81) : 1 man</td>
</tr>
<tr>
<td>Household heads</td>
<td>67% male headed, 33% female headed</td>
</tr>
<tr>
<td>Household size</td>
<td>51% (4-6 children); 26% (7-16 children)</td>
</tr>
<tr>
<td>Average income</td>
<td>19 US$ per month (Z$33: US$1)</td>
</tr>
<tr>
<td>Breadwinners</td>
<td>70% joint breadwinners (man &amp; wife)</td>
</tr>
<tr>
<td>Religion</td>
<td>72% Christian; 26% Apostolic</td>
</tr>
<tr>
<td>Education</td>
<td>31% 2–4 years Primary School only</td>
</tr>
<tr>
<td></td>
<td>33% women, 37% men Complete Primary</td>
</tr>
<tr>
<td></td>
<td>3.7% passed ZJC (3rd yr Secondary)</td>
</tr>
<tr>
<td></td>
<td>2% passed O’ levels</td>
</tr>
</tbody>
</table>

Ave. Number of Health Promotion Sessions attended : 17
Costs of health promotion

The objective of this paper is to demonstrate the low costs of effective health promotion to the donor, in an effort to encourage greater investment in this essential component of a Water and Sanitation programme. Thus only marginal costs for Health Promotion are calculated to give a cost per beneficiary. Additional Costs not included are US$ 47,709 (40%) for Sanitation (3128 VIP latrines in two years); US$ 36,878 (30%) for establishing over 500 income generating projects, as well as US$ 10,242 (10%) on Administration. The Total Project cost for 2000 was US$120,000, of which only 20% was spent on Health Promotion. In the second year, cost per beneficiary dropped from 0.91 in Year 1, to only 0.35c. This token amount can improve health knowledge of the mother, which can result in upgrading of family hygiene and the prevention of many diseases. When this budget is recalculated as a cost per trainer, (including training, equipment, motorbike and running costs), this amounts to only US$3,144 for two years. (See:Table 2. below).

Levels of behaviour change

In all 12 observations the difference of prevalence of positive indicators of good hygiene were in all cases higher in the health club group. This varied from 40% difference in the methods of washing hands between the two groups, to only 6% in the use of soap for hand-washing (due to economic constraints). However there is a confounding factor that should not be ignored. Many of the practices (Fig 3) have been recommended for over 20 years by the Min. of Health and so have become widely practiced throughout Zimbabwe, as in the case of the practice of covering drinking water (which is also traditional) and the construction and use of pot racks. The real impact of the project can really only be accurately understood by measuring the new practices that were introduced into this area by A.H.E.A.D, and it will be seen that in all cases there is a substantially higher uptake in the health clubs with less in the control group. (See Fig. 2). For example 'cat' sanitation, (the burial of faeces) is a recommendation unique to the project and is now practised by all those who have no latrines, while open defecation is still common elsewhere. Similarly the use of individual cups and plates is a new idea and used exclusively in the health clubs, with an increase of 33%. Thus, not only can the health clubs prove themselves highly effective, but in addition the cost of this impact can be accurately measured. At an estimated 35c (US) per beneficiary the A.H.E.A.D method of health promotion is clearly cost effective.

References