

REPORT OF FINAL EVALUATION

PROJECT HOPE PRIVATE SECTOR INITIATIVE
TO EXPAND CHILD SURVIVAL SERVICES
FOR TEA AND COFFEE ESTATE WORKERS
AND THEIR FAMILIES IN THYOLO DISTRICT
IN MALAWI

CHILD SURVIVAL VII PROJECT

July 18-29, 1994

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ACRONYMS

ADRA	Adventist Development Relief Agency
AEA	Agricultural Employers Association
AIDS	Acquired Immune-Deficiency Syndrome
ANC	Antenatal care
ARI	Acute Respiratory Infections
BHR/PVC	Bureau of Humanitarian Response/Private and Voluntary Cooperation
CAC	Central Africa Company
CBD	Community Based Distribution (of contraceptives)
cs VI	Child Survival VI Grant
cs VII	Child Survival VII Grant
cs x	Child Survival X Grant
DHI	District Health Inspector
DHMT	District Health Management Team
DHO	District Health Office
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
ECAM	Employers Consultative Association of Malawi
EPI	Expanded Programme of Immunizations
HIS	Health Information System
HSA	Health Surveillance Assistant
IGA	Income Generating Activity
KPC	Knowledge, Practice, and Coverage Survey
MCH	Maternal and Child Health
MOH	Ministry of Health
OPD	out-patient Department
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PVO	Private Voluntary organization
SOPAL	Secretariat of Plantations Association Limited
TTV	Tetanus Toxoid vaccination
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This report covers the findings, conclusions, and recommendations of the final evaluation team for Project HOPE's Private ***Sector Initiative to Expand Child Survival Services for Tea and Coffee Estate Workers and their Families in Thyolo Dism'ct in Malawi***, funded under a Child Survival VII grant. This project was designed to expand the health services made available to estate employees and their families to include community-based child survival interventions. Project HOPE assisted the tea and coffee estates to hire 30 Health Surveillance Assistants (HSA) and recruit 300 volunteers to provide health education and services in the areas of immunizations, management and control of diarrhoeal diseases, nutrition, family planning, management of acute respiratory infections (**ARI**), malaria, AIDS, and sanitation for a population of about 165,000 people living on 39 estates in the District of Thy010 in Southern Malawi.

The final evaluation took place July 18-29, 1994 and was conducted by a team composed of an independent consultant as team leader; representatives from the Ministry of Health (**MOH**) at headquarters, regional and district level, the Estate Medical Advisor, the MCH Director from Project HOPE/USA, and the program director from another USAID-funded child **survival** project in Southern Malawi. The team reviewed documents, met with Project HOPE staff, and interviewed 9 estate managers, 11 estate medical staff, 4 members of the District **Health Management Team/Thyolo**, 12 **HSAs**, 25 volunteers, 8 community based distributors (CBD) of **contraceptives**, and members of 23 compounds.

1. Project **Accomplishments**

The evaluation team found that Project HOPE had accomplished their overall objective of **demonstrating** that cost-effective child survival **services** can be offered by the estates: managers on all estates were **interested** in continuing to support the child survival structures (**HSAs** and volunteers) and most were willing to contribute additional resources to sustain activities when Project HOPE leaves. In addition, all estates in the neighboring district of Mulanje joined in the proposal for expansion in the Child Survival X grant awarded to Project HOPE. Project HOPE was also successful in meeting almost all of their specific project objectives. The following paragraphs **describe** in more detail final survey and **evaluation** team results related to the specific project objectives as specified in the Detailed Implementation Plan (**DIP**).

Continue collection of information relevant to child survival program planning and implementation: Project HOPE has developed an extensive system of compound-based data **collection**, out-patient data, and databases to track volunteers and **HSAs**. Monthly data is **entered in a timely manner**, but the system does not produce routine reports and the information is not **utilized** to the extent possible, neither by estate managers, **HSAs**, medical staff, or **Project HOPE staff** themselves.

Increase complete EPI coverage of children 12-23 months to 90% and coverage of women 15-45 with 5 tetanus toxoid immunizations to 5%: **Immunization** coverage on the estates mirrors that of Malawi as a whole and meets project objectives. No data **from the final** survey were available on tetanus toxoid vaccination (**TTV**) coverage, but midterm survey results show that

89% of women has two or more TTV. HSA knowledge on immunizations was high, **although** volunteer knowledge was generally weak.

Increase ORT and home available fluids use rate to 80%; increase the rate of mothers continuing to breastfeed during diarrhoea to 60%: Final survey results for provision of same or more fluids (**76%**), food (68%) and breastfeeding (59%) are in line with project objectives. However, continued breastfeeding during the diarrhoea episode has not improved since the baseline. It should be noted that ORS use has declined, due to shortages of ORS in the country. HSA and volunteer knowledge were strong on management of diarrhoea. In fact, more than 30% of health talks over the three years given by **HSAs** were on diarrhoea, hygiene or sanitation. Although not specified in the DIP objectives, Project HOPE has devoted attention to sanitation activities on the compounds. This strategy is in line with MOH practices and the need to produce visible effects for estate management. All communities mentioned sanitation as one of their major health problems. Data from the **HSA's** monthly forms indicate improvements in housing and **latrines**, and community involvement in clearing surroundings and digging rubbish pits.

Decrease use of phala maize porridge before four months of age to less than 50% and encourage appropriate nutritional practices in at least 70% of mothers: Mothers in Malawi introduce other liquids and foods every early. According to the 1992 Demographic and Health Survey (DHS), only 5% of **children** under two months were exclusively breastfed, and by 2-3 months, 76% of children were also being given other foods. Final survey results indicate that the objective for reducing the percentage of mothers introducing **phala** too early has been met: 23 %. The rate of exclusive breastfeeding (meaning no water, herbal teas, or other supplements) is 33% of infants less than four months. According to the **final** survey, 60% of women with children **20-24** months were still **breastfeeding**, and **70-85%** mothers were feeding their children fruits, beans, vegetables. HSA knowledge was quite good on nutrition, and volunteer knowledge was fair, with the exception of delaying adding food (84% of volunteers interviewed said after 4 months of age).

Increase use of m&m contraceptives to 10%: **Contraceptive** prevalence with modern methods has increased significantly since the baseline, to **18%**, and more than meets project objectives. Project HOPE has had to innovate on their DIP strategy of sending estate nurses to attend the MOH training in family planning, since the MOH put a moratorium on the training. **In addition to the training in family planning health education provided to HSAs** and volunteers, community-based distributors (CBD) were trained on two estates and **HSAs** were **trained** to **supervise** them. In addition, Project HOPE staff provided outreach family planning clinics on **other** estates. Knowledge levels of **HSAs**, volunteers and **CBDs** on family planning **methods** and **benefits** are high; however, **drop** outs among CBD workers have also been high.

Increase maternal knowledge about signs of ARI and malaria that require referral of children to 50%: No **baseline** data were available on ARI or malaria, but final survey results indicate that 45% of mothers recognized dyspnea as a danger sign **requiring** referral for ARI, and that 87% of children with **difficult** breathing were taken to a health facility for treatment (compared to 58% of all children with cough). For malaria, 91% of mothers took their **children** with fever to the clinic for treatment. HSA and volunteer knowledge on signs and management of malaria were high. For ARI, HSA knowledge was good, but volunteer

knowledge was weak. Volunteers were also weak on the variety of methods for preventing malaria.

Increase to 40% estate workers and their families who understand the three main modes of transmission (sex, blood, and mother to child); increase to 20% estate workers who use condoms to prevent AIDS: All survey data focused on mothers of children under two, but rates of knowledge for transmission and prevention appear to have improved from the baseline. Final survey results show 76% knowing AIDS is transmitted through sexual contact, and 58 % mentioning skin piercing instruments. On a midterm survey question about whether AIDS could be transmitted by mothers to babies in their wombs, 80% said yes. Knowledge about prevention were as follows: condom use - 21%, not sharing skin piercing instruments - 42 % , limiting partners - 55 %. There was no information on the percentage of estate workers using condoms to prevent AIDS, but Project HOPE has supplied **HSAs** and estate health clinics with over 100,000 over the last year and a half. HSA knowledge levels were quite good for both transmission and prevention. For volunteers, knowledge about transmission was good, but for prevention, their knowledge levels paralleled those of the mothers, with the exception of abstinence and condoms

2 . Lessons Learned

Community Level: This **first** phase focused on getting estate management convinced of the **usefulness** of child survival activities, and so, appropriately, a more “top-down” approach was used. However, the result was little community involvement in planning, and little sense of ownership of child survival activities at compound level. In addition, the populations on the estates are very fluid, and about **40-60%** of the workforce is seasonal. This means that compound **populations** are fluid, traditional **community structures** do not exist, and therefore, more efforts are needed to develop a community spirit in the next phase.

Volunteer Level: It is important to have someone to be the “eyes and ears” in the compound, and **HSAs**, medical staff, and communities felt the volunteers were very useful. However, there is no explicit job **description** for them, so it is **difficult** to assess their **performance** and therefore, whether volunteers are an effective strategy for teaching the population. Project HOPE has used a modular training program **for** volunteers, made up of 6 one-day modules. This has allowed **HSAs** and medical staff to conduct training for their volunteers over time, and has reduced the training burden created by the high volunteer **turn-over** due to the drought. Volunteer dropout rates were high during the drought year, where **32%** were lost. However, **drop-out** rates since then have fallen to about 8%. No incentives or recognition were given to volunteers by the estates, but estate managers interviewed said they would be willing to consider this.

HSA Level: The original training of **HSAs** was done in English, but refresher trainings have since been done in Chichewa (the local language) with much better results. More work needs to be done to encourage use of information collected by **HSAs** themselves and volunteers for their own planning.

Estate Medical Staff Level: Project HOPE has done well in involving estate medical staff in their activities, in preparation for **them** to take over supervisory responsibilities when Project HOPE leaves. However, estate medical staff have often relied on Project HOPE to

communicate with estate management, and now they will need to develop their own mechanisms for getting what they need.

Estate Management Level: Managers generally only had a superficial understanding of the activities Project HOPE was promoting on the compounds. However, they had noticed differences in compound cleanliness and knowledge. Better information about child survival for management may ameliorate communication with estate medical staff and **HSAs**. This project has demonstrated that private sector companies can and will support the costs of child survival activities for their employees and their families. Project HOPE could have probably asked for more financial support from the estates than they did.

Project HOPE Level: Experiences with the Project HOPE health information system (HIS) **has shown that the usefulness** of the information for management must be clarified first and **reporting** developed immediately for testing of its usefulness. There are many good items in the system, but it is not being used to its full advantage. Project HOPE has been generous in their staff development, enhancing staff competency and morale.

3. Sustainability

Project HOPE had developed a very good sustainability plan (seen below in bold), and assessment will be based on that plan:

- **Estates would replace HSAs that leave: Of the 6 HSAs that have** left over the three years, 5 have been replaced. All managers during interviews stated they would replace **HSAs** lost through attrition.
- **Training of volunteers would be done jointly by Project HOPE, HSAs, and estate medical staff:** Volunteer training has been done jointly by HOPE staff, **HSAs** and medical staff from the beginning.
- **Activities would be carried out in line with Ministry of Health guidelines:** **Generally**, Project HOPE has been very careful to **keep** within guidelines developed by the Ministry of Health.
- **Estate medical staff would be trained as trainers and supervisors of HSAs and volunteers:** Estate medical staff have received two training sessions: 1 day on adult education methods (1992) and two days **on supervision of HSAs** (1994).
- **Estate medical staff would be involved in programming and managing child survival activities:** Estate medical staff generally work with their **HSA(s)** in planning **out monthly activities to go into the HSA's workplan**. **However**, for the achievements to really be sustainable, the estates will need to have access to the kind of technical **assistance Project HOPE has been providing**. **Almost all managers interviewed** expressed interest in hiring **(jointly)** a public health advisor to provide coordination, monitoring, training and public health advice for the estates.
- **Form a health committee in the Thyolo branch of the Agricultural Employers Association (AEA):** **No health committee was formed in the AEA and** now the

organization no longer exists. It has been replaced by the Secretariat of Plantations Association Limited (SOPAL). Such a committee could still be formed during the extension phase in CS X, as the personalities are the same in the previous and the current **organization**.

4 . Recommendations

a. Organizational Development for Sustainability for Thy010 and Mulanje

The first phase of the project has been very successful in getting managers committed to financing child survival activities. Now is the time to create mechanisms for technical and organizational sustainability:

- i. **Provide the Estate Managers with Realistic Information on the Additional Costs of Sustaining the HSA/Volunteer Network.** It is **important** that the estate managers understand well the financial commitment they need to make to ensure continuity of the **HSA/network**: HSA training and refresher training, training and refresher training for volunteers, HIS, and technical support.
- ii. **Help the Estates recruit and hire an overall HSA/Public Health Coordinator for the Estates.** To ensure the technical coordination, **supervision**, organization of training and refresher training, the estates will need to develop some mechanism for replacing the role that Project HOPE plays. **Mechanisms** will need to be developed among the estates for paying, housing, and **transporting** such a person.
- iii. **Help Clarify Responsibilities and Increase Communication with Junior Management, Field Staff, and Medical Staff.** Project HOPE should orient the senior and junior management/field staff and medical staff to project activities. This would include descriptions of what is happening, clarification of roles and responsibilities for the activities, and developing mechanisms for communication, monitoring, and problem solving.
- iv. Strengthen **Supervision of HSAs by Estate Medical Staff:** **Medical** staff should be **given additional training in supervision of HSAs**. Supervision of **HSAs on a** regular (at least monthly) basis should be explicitly added to the medical **staff's** job description.
- v. **Strengthen the Dialogue between the District and the Estates.** Already relationships have improved tremendously between the District Health Office and the estates. It will be **important** over the next **several** years to **institutionalize** the links between the district and the estates, so that communication is no longer **dependent on** individuals.
- vi. Create a **Broader Base of Support for Health Activities at Compound Level.** Project HOPE should explore various means of increasing support for child survival activities in the compounds: e.g., having more than one volunteer per compound, forming and training compound health committees that would take over the functions of the volunteer, and training the compound watchman (an estate employee) in areas affecting men (AIDS, family planning, sanitation). Project HOPE should try some

innovations in Mulanje and Thy010 in the first year and then spread the most successful ones to other compounds. **After** this first phase, it will be important to employ both a top-down and a bottom-up approach.

- vii **Help the Estates develop Incentives for HSAs and Volunteers.** Most **estate managers** interviewed were willing to consider options for incentives and recognition for the volunteers. Possible options include: providing soap, providing uniforms, introduction to compound after training, instituting regular meetings **with HSAs**, and having the managers meet with the volunteers on an annual basis to recognize contributions and discuss problems. Estate managers might consider developing a standard policy on how to approach incentives for volunteers, so that problems in retention do not develop later. In the same light, the variations in HSA salaries have demotivated some of the **HSAs**. **SOPAL** should contemplate, **with the assistance of Project HOPE**, conducting a survey of salary levels and benefits of **HSAs** and medical staff to develop suggested salary **ranges/structure** to easy **recruitment** and retention of health staff.

viii Develop Routine Reporting of Outputs from the Health Information System.

Routine reporting of outputs need to be developed for managers, Project HOPE, and the District Health Management Team needs. These outputs should then be tested for their usefulness, and **modified** as necessary.

- ix. **Increase Malawian Project HOPE Staff in Communications with Estate Management.** **As Project HOPE moves towards transition in Thyolo, it will be** important for estates to become accustomed to health assistants or health **inspectors** giving them advice on public health issues, and for these cadres to learn how effectively approach estate management. Thus, the Child Survival Coordinator, in conjunction with a newly recruited Estate Public Health Advisor, should to be present and active in all meetings and communications with estate management.

b. Improving Effectiveness of Teclutial Interventions

Project HOPE has met almost all of its objectives, but strengthening certain areas would increase impact on child survival.

- i. **Strengthen Activities in the Areas of Maternal Care, AIDS, and Family Planning:** **The first has not been addressed at all, and the last two require a broader audience than have been reached for other child survival interventions. In addition, the latter two interventions** are viewed as **important** to management, **and would therefore receive their support.**
- ii. **Help the Estates Jkvelop Strategies to Reach Men fur Health Education:** **The estate medical staff, HSAs, and field managers should investigate ways for health talks to be arrmged at times and places that allow men to attend: e.g., organizing health talks in the fields during lunch breaks, and organizing health talks on the weekends (implying making the HSAs' working hours flexible).**

- iii. Simplify the **Health Education** Messages: Many of the messages include long lists of symptoms of diseases or actions to take, with the consequence that people only remember some, and not always the most important ones.
- iv. **Increase** the Depth of Knowledge of **HSAs**: Almost all **HSAs** were able to recite the answers to the questions asked about the various child survival interventions. However, those answers that indicated the relationship between interventions were rarely given. Training of **HSAs** should also include components for strengthening supervision and problem solving skills.
- v. Clarify the **Job Description of the Volunteers: Once the** method of expanding community support for child survival is determined, a clear job description for the volunteers (or compound watchmen or compound health committees) should be developed that **outlines expectations** for activities and hours worked.
- vi. Family **Planning**: Project HOPE should experiment with some variations on family planning strategies in Mulanje before adopting a general strategy, such as, using a social marketing strategy for **CBD's** and trying a more facility-based strategy on the estates by training nurses in family planning. These variations should be evaluated for coverage, costs, ease of implementation and sustainability.
- vii Sanitation: The estates should be encouraged to continue improvements in housing, water and **sanitation**. Project HOPE can help to provide technical **assistance** in **prioritizing** activities and circulating efficient designs (ex. housing, latrine)
- viii **Nutrition**: There appeared to be little follow-up of **malnourished** children, and several medical staff remarked on weakness in this area. Possible strategies for improvement include: **establishing a system** for follow-up of children at home that could be verified by supervisors, and initiating food preparation **demonstrations** in the homes of **malnourished** children in addition to simply giving advise.

Project HOPE staff should be commended on its success in breaking through the barriers of working with the private sector and developing a strong, **sustainable network** of **HSAs** and compound level **child** survival activities. As well, the estate management should be **commended on the commitment they have demonstrated to improve the health of their employees and their families** through collaboration and financing of child survival activities **on their estates**.

**FINAL EVALUATION REPORT FOR
PROJECT HOPE PRIVATE SECTOR INITIATIVE TO EXPAND CHILD
SURVIVAL SERVICES FOR TEA AND COFFEE ESTATE WORKERS AND
THEIR FAMILIES IN THYOLO DISTRICT IN MALAWI**

CHILD SURVIVAL VII PROJECT

I. TERMS OF REFERENCE

The final evaluation team was presented with terms of reference outlining what was expected of them:

1. To conduct a process evaluation, using a participatory evaluation approach, of Project HOPE's Child Survival activities in Malawi
2. To assess Project HOPE's effectiveness in carrying out the activities specified in the **Detailed** Implementation Plan in a competent manner.
3. To assess the sustainability of the project.
4. To synthesize achievements and lessons-learned in the Final Evaluation Report.
5. To make recommendations for project extension and expansion.

This report **will** describe the project and its background, the methods used to conduct the evaluation, and then **will** present findings in terms of: project achievements, lessons learned, and project **sustainability**. Recommendations **will follow**, focusing on actions for sustainability in Thy010 and on issues for future activities in Thy010 and **Mulanje**.

II. BACKGROUND AND DESCRIPTION OF THE PROJECT

Malawi is a **small**, densely populated, land-locked country in **central-eastern** Africa, which gained **independence** from Great Britain in 1964. Stretching over 500 miles north-south and **50-100** miles east-west, it is bordered by Mozambique, Tanzania, and Zambia. The **total population** is 9 **million** inhabitants, and **population** density is high at 163 per square **mile**.

Malawi's economy is based on agriculture. Tobacco is the major export crop, followed by tea and coffee, while maize is the major subsistence crop. Approximately 90% of the population can be found in the rural areas, living in small villages and working **smallholder** farms. Per capita income was estimated in 1993 at \$200, one of the world's lowest.

Infant mortality, while slowly declining, is still one of the highest in the world at 136 deaths per **1000** live births (Demographic Health Survey (DHS), **1992**). Fertility is high, at 6.7, and the birth rate is 43 births a year per **1000** population (DHS, 1992). The leading causes of death in children under five include: **malaria**, measles, **diarrhoea**, malnutrition, and pneumonia. Rates of under five malnutrition have historically **been** high **and they have increased in recent years due to the drought**.

The district of Thyolo, in the Southern Region, has a population of about 500,000 with about one third of them associated with the tea and coffee estates' during the peak season (DIP, 1992). The Ministry of Health (MOH) operates a district hospital and a system of rural health centers, supplemented by a number of private hospitals and clinics. On the tea and coffee estates themselves, curative health services are available through a network of estate medical clinics, staffed mainly by nurses and medical assistants. These clinics provide free treatment to estate employees and their families, and refer to the district or regional hospital for care beyond their scope.

In 1990, Project HOPE began working in Thy010 District, experimenting with the possibility of introducing preventive care services to estate populations, through the establishment of a network of health surveillance assistants (HSA) and volunteers. The initial project was a one year grant to bring such services to the eight estates of Central Africa Company, covering an estimated population of about **40,000** (about 8,000 women ages 15-45, and 4,500 children under 5). In 1990, the project was expanded, under a Child Survival VII (CS-VII) grant, to cover the remaining 31 estates in the Thy010 District. This brought the total population to about 144,000, with emphasis on the **35,000** women and 27,0 children under live. These estimates were based on employee data from the estates (peak season) and then multiplied by five (for total family members).

The Reject HOPE Private Sector Tea Estate **Child** Survival project focused on management of **diarrhoeal** diseases, immunizations, nutrition education, malaria control, management of acute respiratory infections, child spacing, and HIV/AIDS prevention. Other activities included village sanitation and well protection. The Project HOPE activities started **with** the development of relationships with the Tea **Estate** managers, and convincing them to try increasing preventive services on their estates.

Project HOPE helped the estates establish a network of **HSAs** and volunteers to bring child survival services to compound level. Volunteers are mostly women, living in the **compound, and chosen by their peers to serve as the link between the HSAs and the** compound members. There are currently 279 active volunteers.

A total of 30 HSAs were hired by the tea estates and trained by Project HOPE in September 1991 and February 1992 (for a total of six weeks). These trainings were based on the **Ministry of Health (MOH) HSA** curriculum and were done in collaboration with District health **staff. HSAs** have received training certificates from the MOH. **HSAs are hired and paid by each individual estate and salaries and conditions vary from estate to** estate, although **conditions** include housing and usually one meal a day. **HSAs are women or men, generally living on the estate, and having at least Standard 8 and a good** knowledge of English. The **HSAs** are responsible for supervising and supporting a network of **about** 10 compound volunteers each, and to conduct health promotion activities in the compounds. **HSAs** are supervised by the medical staff at the estate medical clinics, by the estate managers, and by **Project** HOPE staff.

¹ About **40-60%** of employees and their families live in compounds on the estates while the rest live in nearby villages.

Training was a major activity of Project HOPE staff: in addition to the initial training provided to **HSAs**, a 2.5 day course on adult education methods/supervision in **1994** and a one day refresher training in **HIS**, **HSAs** received a 5 day refresher course in the third year, as **well** as more informal trainings during quarterly meetings. Volunteers received a series of six one-day trainings to cover the various topics. Due to the drought conditions during 1991-1992, there was a large migration of estate workers back to their home villages. This led to a relatively large number of drop-outs among the volunteers. During the **last** year, catch-up training was intensified to strengthen the sustainability of activities after Project HOPE phased out. Currently, about half the volunteers have received all six modules.

In addition to the strategies for the seven child survival interventions, Project HOPE also implemented an extensive health information system. The health information system was based on a four types of information:

1. reporting on activities by the HSA in his/her monthly consolidated form
2. monthly reporting of cases seen at the estate medical clinics From the standard MOH Out-patient Department (OPD) data form
3. monthly reporting by volunteers on cases of illness seen in the compound and activities **generated** (e.g., houses smeared, rubbish pits dug)
4. data bases on volunteers and **HSAs** to **track** training received and number of active volunteers and **HSAs**.

Information on **1**, **2**, and **4** are entered into the computer which has the capacity to generate **standard reports**.

III. METHODS OF EXECUTION OF THE FINAL EVALUATION

A. Team Composition

The **final** evaluation team was composed of 7 members. The team leader was an external consultant, and was joined by Project HOPE b&stopping staff from **Headquarters**, representatives from the Minis&y of **Health (MOH)** at central, regional and district level, a project manager **from** another Child Survival project in **Malawi**, and the Estate Medical Advisor.

Dr. **Lynne Miller Franco**, Team Leader

Mrs. Martha **Kasonda**, Deputy National **Family** Health Coordinator, **MOH/Headquarters**

Mr. **Kinsley Lungue**, Senior Health Inspector, Regional Health Office, Southern Region

Mrs. Dorothy Kaliwa, In-Charge, Maternity, District Health **Office**, Thy010

Dr. **Elizabeth** Miller, **Estate** Medical Advisor for the Tea Estates, Thy010

Dr. **Bettina Schwethelm**, **Director** of MCH **Programs**, Project HOPE, USA

Dr. Joy Cook, Project Director, **ADRA** Child Survival Project, Nsanje

The team was joined by Mr. Nkhanu, District MCH Coordinator, Thyolo, Mr. George Sande, Child Survival Coordinator, Project HOPE, Thyolo, and Mrs. Catherine Thompson, Country **Director**, Project HOPE Malawi.

B. Work Schedule

The team worked together from July 18-29, 1994. The first three days were spent discussing project and evaluation objectives, and determining the **data** collection needs. Based on **drafts** prepared in advance by the team leader, the team developed a series of questionnaires to gather **information** from Project HOPE **staff**, compounds, volunteers, **HSAs**, estate medical staff, estate managers and the District Health Management Team (DHMT). Data collection was carried out on 8 estates (representing most of the 9 companies operating in Thyolo) over a period of four days. The last three days were spent compiling and analyzing the data, and preparing conclusions and recommendations. Findings and recommendations were presented to Project HOPE staff for discussion on the afternoon of the last day. The final report was written by Dr. **Lynne** Miller France, **team** leader for the evaluation.

C. Data Collection

A series of 8 questionnaires were employed to collect information for this evaluation (copies of these **questionnaires** can be found in Appendix B):

Data Collection Instrument	Sample size
Questionnaire for compound volunteers	25
Questionnaire for community-based distribution (CBD) workers	7
Group discussion guide for compound members	23
Questionnaire for Health Surveillance Assistants	12
Questionnaire for Estate Medical Staff	11
Questionnaire for Estate Managers	9
Questionnaires for District Health Management Team	1
Questionnaires for Project HOPE staff	5

The selection of samples was conducted in the following **manner**:

1. A listing of the major companies working in Thy010 was developed, and at least **one estate from each company was chosen** (one company was not represented due to the **shortage of time**).
2. On each estate, two compounds were chosen randomly **from those** compounds **having a population greater than 40**.
3. For each compound, the volunteer and the compound members were interviewed.
4. The **HSAs** and **medical staff** working with these compounds were selected for interviewing, as well as the general managers for those estates.
5. All HOPE technical staff were interviewed.

The design of the instruments was based on the objectives outlined in **the** Detailed Implementation **Plan** (DIP) and the **BHR/PVC** Guidelines for Final Evaluation and Sustainability Assessment of Child Survival Projects ending in 1994 (CS-VII). **Unfortunately** the new guidelines did not arrive until after the data **collection** had **started**. The new guidelines were simplified and would have reduced the data collection burden.

All team members participated in data collection at **all** levels. Data collection from Project HOPE staff, estate medical **staff**, and estate managers was generally conducted by the non-Chichewa speaking members. When translation was required, one local Project HOPE staff and the District MCH Coordinator served as interpreters.

Iv. FINDINGS

This section contains the information required by the BHIUPVC Guidelines for CS-VII projects. Section **A** reports on project accomplishments and lessons learned. Section B discusses project **sustainability**.

A. Project Accomplishments and Lessons Learned

Before presenting the specific results for Project HOPE's objectives, it is useful to get an **overall** impression of child survival indicators. These are listed in Table 1 on the next page. The **specific** results from the **final** evaluation household survey can be found in Appendix C.

1. Achievement of Project Objectives

This section **will** review the achievements of the project relative to their stated goals and objectives in the Detailed Implementation Plan (DIP). **A** review and assessment of the **overall** goals **will** be presented first, followed by assessment of the individual interventions. For the specific interventions, the DIP objective is cited first.

Some comments should be made about the **final** evaluation team's assessment of project achievements. As the team had limited time to carry out its work, it was not able to gather **all information needed** to **truly** assess the achievement of all project objectives. Findings based on the evaluation team's instruments are conservative: they were designed to be conducted with no prompting of **answers**, such that volunteers and **HSAs** had to rely solely on their memory.² The **KPC** survey, required by **USAID**, used a standardized **questionnaire administered** to **mothers** of children under two. Thus, data collected was not **always** in alignment with the Project HOPE target populations. In addition, by **mistake a question on tetanus toxoid vaccination (TTV) was dropped** from the survey. Other factors affecting interpretation of data available to the **evaluation** team include:

- **Baseline** data, **collected only** on the estates of Central Africa Company (CAC), may not **be representative** of other estates: CAC has eight clinics, staffed by nurses, **conducting** under five (U5) clinics. Management was very supportive of **child** survival activities, and they had a very active Clinical Officer. This may explain the high knowledge levels for certain interventions during the baseline.

² The evaluation team felt that the best test of sustainability was to see what mothers and promoters could recite from memory. However, this method does not necessarily reflect all knowledge, since nervousness could cause them to **temporarily** forget things they do know.

TABLE 1:
KEY INDICATORS OF CHILD SURVIVAL PROJECT PERFORMANCE

Appropriate infant feeding practices:

1. question on time of initiation of breastfeeding not included on final survey	
2. percentage of children < 4 months exclusively breastfed	33% (N = 47)
3. percentage of children 5-9 months eating (semi)solid food	100% (N = 64)
4. percentage of children 20-23 months still breastfeeding	59% (N = 32)

Management of Diarrheal Diseases:

5. percentage of children with diarrhoea in last two weeks who were given the same or more breastmilk	59% (N = 92)
6. percentage of children with diarrhoea in last two weeks who were given the same or more fluids other than breastmilk	76% (N = 92)
7. percentage of children with diarrhoea in last two weeks who were given the same or more food	68% (N = 92)
8. percentage of children with diarrhoea in last two weeks who were treated with ORT	76% (N = 92)

Pneumonia Control - Medical Treatment:

9. percentage of mothers of children with cough/rapid breathing in last two weeks who sought medical treatment for child	87% (N = 91)
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Vaccination Coverage:

10. percentage of children 12-23 months who received DPT1	87% (N = 150)
11. percentage of children 12-23 months who received OPV3	85% (N = 150)
12. percentage of children 12-23 months receiving Measles	85% (N = 150)
13. dropout rate DPT3 to DPT1	2% (N = 150)

Maternal Care':

14. question on presence of maternal care card not included on final survey	
15. question on time of TT'V coverage not included on final survey	
16. question on antenatal coverage not included on final survey	
17. percentage of (non-pregnant) mothers with children <24 months using a modern contraceptive method	24% (N = 276)

* The project did not have maternal care objectives, aside from child spacing.

- The population on the estates is fairly fluid: about half of the population are **permanent** workers, **while** the rest are seasonal. The seasonal workers are not always the same every year, and the families of employees move on and off the estates for planting, etc.

Finally, it should be noted that generally differences of less than 15% between baseline and final survey data are not **statistically** significant, and would not indicate a positive or negative change.

a. Overall Project Goals

The overall goals of the program, as stated in the project proposal, were as follows:

1. **Reduce** morbidity and mortality in children under 5 and mothers of childbearing age through collaboration with private sector tea and coffee estates in Thyolo.
2. Through the **Agricultural** Employers Association (AEA), demonstrate to estate managers elsewhere in Malawi that cost-effective child survival services can be provided by the private sector.

In reference to the first goal, the final evaluation team did not attempt to assess actual improvement in health status, given the time constraints and the fact that drought conditions over the last several years would complicate any such analysis. However, if knowledge and coverage are to be taken as a proxy for improvement in health status, one can deduce that improvements have been made.

For the second goal of demonstrating to estate managers elsewhere in **Malawi**, the fact that all tea and coffee estates in Mulanje have agreed to participate in the upcoming CS-X project indicate that this goal has been met. In addition, of the 75 companies who had membership in the **Agricultural** Employers Association (AEA), about half responded positively to a letter from Project HOPE requesting expressions of interest in such activities. Those responding included sugar, tobacco, macadamia, and maize growing estates. It was generally the **smaller** companies that did not **respond**. However, the limitation of funding have led to restrict CS-X activities to Thy010 and Mulanje.

b. Achievement of Information Collection

Continue collection of information relevant to child survival program planning and implementation.

The system consists of monthly reports of **HSAs** and volunteers and information entered on computer at the Project HOPE office. This information is **easily extracted** by HSA, estate, compound, or project. However, the information system does not produce routine **reports and it is not much used for planning. Significant time has been spent in ensuring** reliable data on the forms, and data are checked and verified by HSA supervisors. **Anecdotal** information **from** Project HOPE staff indicate that probably **only** 50% of volunteers return their forms regularly, but these data are not entered into the computer. Return rates for **HSAs** is much better, averaging about 85% return rate in 1993 and 79% return rate in the first half of 1994.

Project staff also say that only in the last year do they **really** feel confident about the reliability of the information being collected. A meeting on HIS held in November 1993 **revealed** some differences in the ways **HSAs** were filling out their monthly consolidated forms.

It is somewhat difficult to assess the utility of the HIS data for management purposes, since the data have never yet really served that function. However, some general comments can be made about the content of the HIS:

- **OPD data:** These data are already in use nationally to track utilization and disease patterns, and have demonstrated their usefulness, if they are compared over time (graphed)
- **Volunteer and HSA database:** These data have proved their utility, particularly the volunteer database, for tracking training needs and dropout rates.
- **HSA Consolidated Form:** This form is the backbone of the HIS and contributes the largest bulk of the data to be entered and analyzed. There are basically several types of information collected:
 1. **health education attendance:** HSAs keep track every month of where they conducted talks on each topic and how many people attended. Information on **topics and compounds can be used to ensure that HSAs** are, over time, giving balanced attention to the range of topics and that they are going routinely to **all** compounds. However, the utility of collecting data on the number of people attending over time is not so clear. It does not indicate coverage, since the same women may be attending every month.
 2. **US/nutrition** The total number of children attending under five clinics or nutrition clinics for the month are **recorded**, but not by compound. This information should also be available on the monthly MOH **MCH forms, so it may not be needed on the HSAs' forms.**
 3. **referrals to dispensary and patients received:** Information on referrals to the **dispensary, if this is to represent all cases in the compounds, could provide useful** epidemiological information. However, if it does not represent all **cases, its use as a routine data item is not obvious. If one is concerned with the quality of referrals, spot checking by a supervisor would be more useful.**
 4. **inspections:** The data on **inspections of housing and sanitation conditions** is important for estate management action. This information might more **usefully be collected on a six monthly or quarterly basis, rather than monthly,** since conditions do not change so **frequently** and the same situation would be **counted more than once if analyzed on a yearly or twice yearly basis.** Of course, any problems identified should be brought to the attention of estate **management** right away.
 5. **water supply:** Like with inspections (4.), these data could be collected six **monthly or quarterly.**
 6. **infestations:** Like with inspections (4.), these data could be collected six **monthly or quarterly.**
 7. **activities generated:** These data indicate the level of involvement of the **community** in sanitation **activities**, and are useful for monitoring.
- **Volunteer form:** The volunteer data are not entered into the computer. This means the data is basically only available for the **HSA's** use. The information on illness episodes could be used to also **track** disease patterns, but the data would have to be **compiled.** At this moment, no one appears to do so. It is not clear exactly what use the **HSAs** make of the information on the forms: half of the **HSAs interviewed** said they used the forms to follow-up on volunteer activities, only 25% said they used them to identify diseases in the compound or to see

referral. The use of volunteer data for management purposes needs to be clarified before continuing its use.

c. Achievement related to Immunizations

Increase complete EPI coverage of children 12-23 months to 90% and coverage of women 15-45 with five tetanus toxoid immunizations to 5% by project end.

Results - Childhood Immunizations: Final survey results indicate that childhood immunization objective is met, but survey data do not indicate any change from baseline (BCG: 94% to 87%; DPT3: 85% to 85%; Measles: 82% to 84%). Anecdotal data suggest that immunization status on other estates at baseline may not have been as high as on CAC: one nurse on Conforzi collected data on immunization status in all compounds over a two year period which bears this out, and many volunteers said mothers now take children to the Under 5 clinic. **It should be noted that the population on the estates is not stable, particularly mothers and children who return to villages for planting.** OPD data from the estate clinics and HSA data from the compounds indicate a sharp drop in measles cases seen, with peaks of 100-150 cases a month in 1991 and early 1992, to less than 10 cases a month in 1993. These data suggest that measles coverage on other estates was not as high as on CAC prior to 1992, as such peaks would not be expected with measles coverage of 82% as seen on CAC in 1990.

Results - Immunization of Women of Childbearing Age: Coverage with tetanus toxoid vaccine (TTV) has changed substantially from the baseline (no survey data, but assumed to be less than 5%) to the midterm (89% of women with children under two had 2 or more TTV). **Prior to 1990, little effort was made in Malawi with relation to TTV.** No data on TTV coverage were collected during the final survey, but MCH data from the District for the 8 immunization clinics operating on the estates show the following numbers of TTV given (not coverage) as 5,911 in 1991, 3,342 in 1993, and 2,155 for the first six months of 1994.

Immunization Strategies: The DIP listed several strategies for immunizations, two of which were not carried out: expansion of under five (U5) clinics and outreach into the compounds. Strategies of training HSAs and volunteers, education of individuals and community groups, as well as assistance at under five clinics, have all been implemented. All HSAs reported giving health talks and participating in giving immunizations at U5 clinics. Over the three years of the project, 9.5% of all health talks given by HSAs were on immunizations, and 89% of all compounds received at least one talk on the subject. **All but the 5 newly recruited HSAs have received training and refresher training on immunizations, and 76% of the current 279 volunteers have received the immunization module training.**

HSA and Volunteer Knowledge: HSA knowledge on immunizations was generally good: 83% of those interviewed could mention all 6 diseases and the correct immunization schedule. Volunteers were less knowledgeable: only 36% could mention all six diseases and less than 15% could state the correct immunization schedule. Only 32% of volunteers said a child could be immunized when ill, although 83% of HSAs said so.

d. Achievement related to Control of Diarrhoeal Disease

Increase ORT and home available fluids use rate to 80% by project end; 40% of mothers will continue to breastfeed during diarrhoea; and 60% of mothers will be reached by health education.

Results - Home Management of Diarrhoea: ORS use appears to have decreased from the baseline and midterm to the final survey (63% to 47% to **29%**), due at least in part to shortages of ORS nationwide (shortages have been acute in Thy010 until about 4 months ago). Because of these shortages, the evaluation team decided to focus on home-based treatment of diarrhoea.

The percentage of mothers continuing to breastfeed same or more than usual has not changed from the baseline, but meets project objectives (**68%, 64%**; 59%). The percentages of mothers providing the same or more fluid has improved from the midterm, but not much from the baseline (**86%, 50%**, 76%). Provision of the same or more food shows more improvement (**51%, 40%**, 68%). Again, the baseline data may not be representative of other estates.

There are no specific data indicating the percentage of mothers reached by health education. However, final survey data indicate that 57% of mothers **attended** a health talk (on any topic) in the last six months. About 18% of health talks over the three years **were on diarrhoea, and 96% of compounds have received at least one talk on diarrhoea.** A total of 40,720 mothers have been in **attendance** at these health talks, but it is not clear **how many women attended more than one talk.**

The District Health Management Team anecdotal remarked that they received fewer cases of severe dehydration from the estates over **the** last few years.

Results - Sanitation: Although there were no specific objectives in the DIP related to sanitation, Volunteers **and HSAs** focus much of their attention on **diarrhoea** and sanitation: **23%** of all health talks given by **HSAs** over the three years were on hygiene or sanitation. Communities **felt** that **diarrhoea** was one of their major health problems, with 22 of 23 communities interviewed naming it, and 50% listing it among the two most **important health problems. Lack of latrines, rubbish pits, and safe water were each mentioned by about half of all compounds interviewed as one of the greatest problems they face in improving the health of people in the compound.**

From the three **compound** surveys (1991, 1993, 1994) conducted **by the HSAs**, there appears to be **little** change in sanitation conditions, except for an **increase** in clean water supply. Average number of houses per latrine is about two; average number of houses per rubbish pit is about five. The number of houses per clean water supply have gone from 32 to 29 to 26 houses per water point. The ratio of 2 houses to 1 latrine is actually **good, and should be the goal. Some compounds visited had as much as 15 houses per latrine.** People on compounds seem to feel that the latrine is the estate's business (only **Nasonia** has compounds where people have participated in building **latrines because** estate management let them knock off early to do so). The Ministry of Works recommends

about 250 people per borehole, so the ratio of 26 houses to 1 clean water source is good. However, these figures hide the fact that some compounds have no access to clean water.

HSA data from their consolidated forms on the state of houses and pit latrines (satisfactory or unsatisfactory) show some improvement from 1991 to 1994, as seen in Table 2:

Table 2: Percent of Housing Conditions that are **Satisfactory**
According to HSA Monthly Consolidated Forms'

	1991	1992	1993	1994
Houses	68%	80%	89%	92%
Pit latrines	75%	81%	86%	87%

* These numbers are based on monthly figures for satisfactory and unsatisfactory housing conditions. However, the same houses or latrines could be counted more than once in a year.

All communities interviewed mentioned sanitation as one of the most effective activities introduced by the volunteers. Two thirds of the **medical** staff interviewed also mentioned sanitation as one of the more effective activities. 56% of volunteers mentioned improving sanitation and 12% mentioned decreasing **diarrhoea** as ways they have been able to make positive changes (83% of **HSAs** mentioned sanitation and 25% mentioned decreased **diarrhoea**). **About half the managers mentioned improved compound cleanliness** as one of the effects of Project HOPE activities. OPD data and data from the **HSAs'** consolidated form do not, however, indicate any change in **diarrhoea** incidence.

Diarrhoeal Disease Control Strategies: All strategies but one listed in the DIP were **implemented:** the only exception was the provision of **ORS** to **HSAs** for initiating treatment in the compounds. Given the current shortages of **ORS** in the country, this strategy was deemed unfeasible. **All HSAs** and 58% of volunteers have received training in **diarrhoeal disease and sanitation**. **Compound** members have participated in **cleaning latrines and digging rubbish pits on about 70% of the compounds.**

Volunteers and **HSAs** reported carrying out the **following** activities for sanitation:

	Volunteers	HSAs
Health education	80%	92%
Digging rubbish pits	48%	100%
Smearing houses	56%	58%
Clearing surrounding	88%	92%

In addition, 58% of **HSAs** mentioned cleaning around water sources, 75 % mentioned **chlorinating water**, and 17% mentioned **protecting wells**. **Several estates have only boreholes**, but of the 9 **HSAs** interviewed saying they chlorinated water, 8 correctly cited **the preparation of 1% stock solution of either chloride of lime or HTH**, and 6 knew how to use it in pot to pot chlorination. It should be noted that several **HSAs** chlorinate water drums directly and do not do house to house chlorination.

Project HOPE staff have changed their strategies in dealing with management on sanitation issues: instead of going only to top management, HOPE staff have now been informing and discussing sanitation issues with the mid-level managers who are in charge of setting aside any labor and materials for sanitation activities.

HSA and Volunteer Knowledge: Knowledge of **HSAs** about signs of moderate or severe dehydration appear quite good (80% knew three or more signs). Volunteer knowledge was less but about 60% knew three or more. The three most often mentioned were: sunken eyes, sunken fontanelle, loss of skin elasticity, and no tears. However, some of the signs of more mild dehydration, such as thirst and dry mouth were about **50-65%** for **HSAs** and **24-32%** for volunteers. In terms of management of **diarrhoea**, **all HSAs** and about 75% of the volunteers interviewed knew how to prepare ORS, and **all HSAs** and 75% of volunteers mentioned giving the **child** more fluids. Continued feeding of **the child** was less frequently mentioned, at about 60% for both. 76% of volunteers and **83% of HSAs mentioned the need to give extra food to the child after diarrhoea.** For diarrhoea prevention, **HSAs** stressed washing of hands (92%) while only 48% of volunteers mentioned it. Volunteers were stronger on proper food preparation, and boiling or chlorinating water (76.88%). Exclusive breastfeeding was very rarely mentioned as a means of preventing **diarrhoea** (0% of **HSAs** and 8% of volunteers), **although 83% of HSAs** and 28% of volunteers mentioned preventing diarrhoea, when asked the advantages of exclusive breastfeeding.

e. Achievement related to Nutrition

Decrease use of phala maize porridge before four months of age to less than 50% and encourage appropriate nutritional practices in at least 70% of all mothers with children under two.

Results: The KPC surveys indicate **little** change in the percentage of mothers introducing **phala** before four months of age: 47% of mothers from the baseline (**N=273**), 44% from the midterm (**N=48**), and 23% from final survey (**N=47**). **Differences from the baseline to final may be significant, although the question was asked in the past tense in the baseline and in the present for the final survey.** The rate of exclusive breastfeeding (meaning no water, herbal teas, or other supplements) is 33% of MINTS less than four months at the **final** survey. For the objective of delaying **phala**, the objective has been met (**confidence** limits 12% - 35 %). For exclusive **breastfeeding**, there are two **additional considerations:** 1) the **confidence** limits on this last percentage range from **15%-52%**, and 2) the **results from** the DHS (1992) are much lower -- only 5% of **children under** two months were exclusively **breastfed**, and by 2-3 months, 76% of children were also being given other foods. It **should also** be noted that one of the major **constraints** in getting the **mothers** to delay introducing other fluids and foods is that health workers themselves are not convinced.

³ It should be noted that mothers' **recall** in the baseline survey question may be less **accurate than the data from the final survey which refers to the feeding status of the child as of the day of the survey.**

With respect to other nutritional practices, 60% of women with children 20-24 months were still breastfeeding, and **70-85%** mothers were feeding their children fruits, beans, vegetables. 100% of **children** between 5-9 months were given solid or semi-solid food in the final survey. These figures give the impression that the variety of food is adequate, **although the survey data do not indicate the frequency or quantity of food types.**

From the final survey, **78 %** of children had been weighed in last four months.

Nutritional Strategies: **Most** of the strategies listed in the DIP have been implemented, with the exception of an ethnographic study designed to improve nutritional messages, and provision of scales to the **HSAs** to weigh **children** in the compounds. The latter was dropped because it was felt that the U5 clinics were accessible enough.

Because of the drought in Malawi, Project HOPE conducted two nutrition surveys (weight-for-height) in 1992 to monitor the effects of the drought on the estates, as compared with the rest of Thy010 District, and advanced the planned dates for training volunteers in the nutrition modules. The surveys were not **originally** part of the child **survival** DIP, but were conducted with **USAID** approval and at minimal cost (since Project HOPE staff were used).

All **HSAs** and 57% of volunteers have received training on nutrition. 80% of volunteers and 100% of **HSAs reported** giving group health **talks** on nutrition. 9% of HSA health talks in the last three years were on nutrition, and 89% of compounds were reached at least once. 92% of **HSAs reported** giving food **preparation demonstrations** and 75% **reported** doing home visits for **malnourished children**. However, of the 36% of the **children in the survey whose weight had remained the same or decreased in the last year**, only 21% had been visited at home by an HSA or a volunteer. This could be **partially** explained by low **attendance** at nutrition clinics **lately**, since the supply of Iikuni phala has been spotty. It should be noted that on one estate, they gave skim **milk** from the dairy to **malnourished children when Iikuni phala was not available, and another estate said it was willing to purchase Iikuni phala for the malnourished children on the estate.**

Knowledge of HSAs and Volunteers: Knowledge of **HSAs** was **generally** good with regard to nutrition, although volunteer knowledge was weaker. However, two medical **staff reported that their HSAs needed additional training on nutrition, focusing on more practical advice.**

HSAs		Volunteers topic
100%	84%	do not add food to baby's diet before 4 months
67%	40%	breastmilk only food needed until 4-6 months
100%	60%	children need to eat from all three food groups
75%	40%	children need to eat at least 4 times a day

f. Achievements related to Child Spacing

Increase use of modern contraceptives to 10% by project end.

Results: Contraceptive prevalence with modern methods from the baseline survey was **4.2%**. By the midterm, the rates had reached **19.5%**, and were measured at 17.6% in the **final** survey. The national level of contraceptive prevalence is 7%. The difference between the midterm and the final survey is not statistically significant, and the confidence interval around the final evaluation figure is +/- 6%. Thus, the results indicate that objectives have been more than met, especially considering that:

- there have been some shortages of contraceptives at the district in the last several months,
- there is not a stable population on the estates, meaning that acceptors often return to their villages, and new acceptors must be recruited.

Table 3 below shows the usage rates of the various contraceptive methods:

Table 3: Contraceptive Prevalence by Method

Method	Baseline (1990)	Midterm (1993)	Final (1994)
Pill	2.0%	11.5%	10.8%
Injection	0.6%	2.4%	2.9%
Condom	1.3%	3.4%	2.5%
IUD	0.3%	0.3%	0.4%
Sterilization	0.0%	1.7%	1.0%
Total	4.2%	19.5%	17.6%

The pill appears to be the most accepted method, but this is probably because the community based distributors (CBD) have them among their supplies. HSAs and medical staff at the clinics distribute condoms. However, anecdotal, it appears that the injections are preferred, but supplies are limited.

40% of **volunteers interviewed** mentioned family planning as one of the things they had **learned** that families **find** most useful. 58% of **HSAs mentioned family planning** as one of the most **important** activities introduced by Project HOPE. 17% of compounds spontaneously mentioned family planning as what the volunteers did that was most effective. 24% of communities said men were involved in family planning (either talks or encouraging/permitting their wives).

Family Planning Strategies: Project HOPE developed four strategies for improving **contraceptive prevalence on the estates: education in groups and during home** visits, training of **HSAs** and volunteers, arranging for training of **nurses** from the estates in the MOH three month child spacing courses, and conducting a study **on barriers to**

contraceptive use. Only the first two of these strategies were implemented. The MOH had stopped child spacing training while they were revising their curriculum, and no study was carried out. However, to counteract the lack of available training for nurses, Project HOPE developed an alternative strategy: training of CBD workers on two estates to distribute condoms, **pills** and foam, and using the Project HOPE nurse to conduct outreach family planning clinics on **three** other estates in collaboration with District MCH staff.

Reaching women of child bearing age appeared to be mostly done through group health education, with the exception of CBD workers who almost **all** reported doing individual education.

	Group Health talks	Individual talks
HSAs	100%	42%
Volunteers	88%	16%
CBDs	100%	86%

10% of health talks given by **HSAs** over the three years of the project were on **child** spacing, and 85% of **compounds have received at least one health talk**. 75% of **HSAs** reported giving male motivation meetings as one of their activities for promoting family planning.

All **HSAs** and 71% of active volunteers have received training in **child** spacing. In addition, 6 **HSAs** (on two estates) have received extra CBD **supervisory** training.* A total of 18 CBD **workers** were trained, using the SEATS' two week curriculum. CBD workers on one estate were recruited **from among** the volunteers and play both roles. On the other **estate, they only do CBD work. Of the 18 CBDs trained, only 8 remain active. This high drop out rate appears to be due to two factors: the difficulty of their work, and the instability of the estate populations** (with **CBDs** leaving because their husbands leave). In comparison with the volunteers interviewed, the CBD workers complained more of lack of support **from** the community and the **difficulty** with their jobs.

Although the MOH has not conducted family planning training for nurses, 10 nurses on **the estates are ready willing and able to attend such training (one month) when the new curriculum is ready**. Two other estates are interested in having a family planning clinic, even though they have no nurse at present. Project HOPE started the **family planning clinic on Mianga (where there is a nurse already trained in family planning)**. On **three other estates (Malfesi, Naming'omba, and Thunga)**, Project HOPE runs monthly family planning clinics with their own nurse (trained in **family** planning). If she cannot go, then **someone from the District goes**.

⁴ One of the six is not currently active, because her husband was transferred to another estate which does not have CBD workers.

⁵ SEATS is a worldwide **USAID** funded project that has developed a training curriculum for CBD workers and their supervisors.

Knowledge of HSAs, Volunteers and CBD Workers: Knowledge levels about modern methods of contraceptives was high: 80% of volunteers, 100% of **CBDs**, and 94% of **HSAs could** name the main methods (pills, injection, condoms, and IUD). Knowledge **about** the benefits **to Family Planning** were as follows:

	HSAs	CBDs	Volunteers
current child grows well	83%	71%	84%
mother recovers from pregnancy	83%	86%	64%
mother has time for family	92%	71%	60%
father better able to care for family	75%	71%	48%

Knowledge of CBD workers on when a women should not take the **pill** was more spotty: signs of high blood pressure, pregnancy, and goiter were frequently mentioned, **while** heart disease, **diabetes**, lumps in breasts were only mentioned by **a few CBDs**. Only 4 of 7 said they referred women on the **pill**. Knowledge about how to take the **pill** was very good, although knowledge on foam was lower: **only** 5 of 7 mentioned that one must **wait** 10 minutes before intercourse.

g. Achievements related to ARI and Malaria

Increase maternal knowledge so that 50% of mothers can recognize signs of ARI and malaria that require referral of their child.

Results - Acute Lower Respiratory Infections: **No baseline data is available** on acute **respiratory** infections (**ARI**). From the final survey, mothers' knowledge of some danger signs were fairly good: 45% mentioned dyspnea, 43% mentioned fever, and 64% mentioned cough. However, only 3% mentioned chest in&awing. **There** does not appear to be much change in knowledge from the midterm (38% **dyspnea**, 59% fever, 46% cough, and 2% chest in&awing). **Final** survey data do indicate appropriate health seeking **behavior on the part of mothers whose children suffered from respiratory illness in the two weeks previous to this survey: 87% of children with dyspnea were brought to a health facility for treatment, while only 58% of all coughs went to a health facility.**

These figures are within range of the **project** objectives, but Project HOPE staff feel that **more could have been done: ARI was the least frequently discussed topic in health education and Project HOPE staff themselves most often mentioned ARI as their least effective intervention.**

Strategies - ARI: Strategies for ARI were health education and training of **HSAs** and volunteers. Both strategies were implemented, but as mentioned above, they received less emphasis than for other interventions: **only 8% of all HSA health education talks were on ARI over the last three years (although 89% of compounds had at least one talk on the subject), and all HSAs had received training on ARI, but only 46% of all active volunteers have received ARI training. 92 % of HSAs and 64 % of volunteers reported giving health talks on ARI.**

Knowledge of HSAs and Volunteers - ARI: Knowledge for **ARI** was not too bad for **HSAs**, although volunteer knowledge was weak. The latter may be explained by the low percentages of volunteers having received the **ARI** training.

	HSAs	Volunteers
Danger signs:		
difficult breathing	100%	44%
rapid breathing	42%	28%
wheezing	50%	16%
Management of ARI:		
take to clinic	92%	84%
feed child	50%	24%
keep child warm	50%	32%

In terms of prevention, both **HSAs** and volunteers emphasized smearing house to reduce dust (92 % for HSA and 60% for volunteer). **HSAs** also mentioned not lighting fires in the house (58%).

Results - **Malaria:** No baseline data was available on malaria. Final **survey** data indicate that mothers do take their child to the clinics when they have fever: 98% in the midterm and 91% in the final survey. Although the MOH policy is for mothers to start treatment at home, Project HOPE has focused their messages on having mothers go to the clinics, since treatment is free and the clinics are generally more accessible than groceries where mothers could buy S-P (**sulfadoxine-pyrimethamine** -- **often** known as fansidar). No questions were asked in the **final** survey on mothers' knowledge of when to take their child to the clinic.

The **importance** of malaria is recognized by the community, with 78% of compounds mentioned malaria as one of their major health problems and over half mentioned it as the most important.

OPD data do not appear to indicate any real change in malaria, although the peak from 1994 seems to be a little lower than previous years.

Strategies - **Malaria:** Three strategies were mentioned in the DIP with respect to **malaria: health education, clearing** of mosquito breeding sites, and training of **HSAs** and volunteers. **100% of HSAs and 80% of volunteers reported** giving group **health education on malaria. 13% of all health talks in the last three years were on malaria and 95% of all** compounds have received at least one health talk on the subject. Over the three years, clearing of **surroundings** has taken place 3,564 times, touching 99% of all compounds. **46% of volunteers have been trained in malaria and all HSAs.**

Knowledge of HSAs and Volunteers - Malaria: Knowledge of **HSAs** and volunteers on malaria was quite good. Notable are knowledge levels for management of malaria, particularly feeding and reduction of fever. Knowledge on prevention was much lower in volunteers and may reflect the low percentage of volunteers trained.

	HSA s	volunteers
Signs/Symptoms of Malaria:		
fever	100%	88%
vomiting/diarrhoea	100%	60%
body ache	50%	48%
Management of Malaria:		
take to clinic	100%	96%
feed child	83%	52%
reduce fever	92%	82%
Prevention:		
clear surrounding	100%	84%
mosquito net	92%	08%
do not plant maize	50%	20%
keep windows closed	83%	28%

h. Achievements related to HIV/AIDS

Increase estate families knowledge about transmission mechanisms of HIV and preventive measures: 40% of estate workers and their families will understand the three main modes of transmission (sex, blood, mother to child), 20% of estate workers will use condoms to prevent AIDS.

Results: It should be noted that the data from **all** three surveys **focused** on knowledge of mothers with children under two. Thus, there is no information about knowledge of husbands or other families without small **children**. Knowledge of transmission of HIV/AIDS since the **baseline** has improved for skin piercing instruments (from 18% to 42% to 58%). For transmission through sexual contact, the change is probably not significant (69% to 60% to 76%). **Transmission** from mother to child was spontaneously mentioned very rarely (1-2%), although responses to a direct question in the midterm **survey, 'can mothers transmit HIV/AIDS to their babies in the womb?,' were about 80%**. Knowledge of prevention of AIDS has improved from the baseline for most modes of prevention: condom use from 3% to 21%, limiting **partners from 33% to 55%**, not sharing skin piercing **instruments** from 22% to 42%. These rates also appear higher than those found in the DHS (respectively 11 %, **41%**, and 30%) for rural women. However, even **with** these **knowledge** levels, AIDS was only mentioned by one HSA and two communities as an **important** health problem. Two **HSAs**, two volunteers, and one **manager felt** AIDS was one of the least effective interventions. There is **still** a general reticence to **recognize** that AIDS is a problem and to change behavior.

There is no direct data **on** the percentage of estate workers using condoms to prevent AIDS, but 9.5% of women with children under two were using condoms for **family** planning. Project HOPE has supplied medical staff and **HSAs** with over **100,000** condoms for distribution.

Strategies: Project HOPE **developed** four strategies for **improving** knowledge and behavior related to AIDS prevention: **health** education, supplying condoms to estate clinics, conducting condom promotion campaigns, and training **HSAs** and volunteers.

100% of **HSAs** and 88% of volunteers said they gave health education on HIV/AIDS. **9%** of **all health talks** conducted by **HSAs** in the last three years were on AIDS. Project HOPE has helped form two drama groups composed of volunteers that present AIDS plays on their estates (Conforzi and Malfesi). These plays are very creative and well received.

There had been some difficulty obtaining condoms during the three years, but Project HOPE made the effort to procure them **directly** from the AIDS Secretariat in Lilongwe. **83 %** of **HSAs** and 8% of volunteers mentioned they distributed condoms in the compounds.

All **HSAs** and 63% of volunteers have received training in HIV/AIDS.

Knowledge of HSAs and Volunteers: HSA knowledge levels were quite good for both transmission and prevention. For volunteers, knowledge about transmission was good, **but** for prevention, their knowledge levels paralleled those of the mothers, with the exception of abstinence and condoms.

	HSAs	Volunteers
Transmission of HIV/AIDS:		
sexual contact	100%	96%
unsterile needles	100%	92%
mother to child	67%	20%
Prevention of HIV/AIDS:		
abstinence	42%	36%
sticktoonepartner	92%	56%
use condoms	92%	52%
do not sharing razors	67%	60%
avoid unnecessary injections	58%	56%

i . General Comments on Achievement of Goals and Objectives

Project HOPE has **generally** met its **overall goals** and **specific** objectives, **particularly** in immunizations, **diarrhoeal diseases**, ARI, **child** spacing, and malaria. Nutrition and AIDS **were adequate, but indicate areas for more emphasis.**

2 . Project Expenditures

The pipeline analysis can be found in Appendix A. Differences between the budget presented in the DIP and actual expenditures include:

- continuation of expatriate staff position into the third year of the project, due to **reductions in other expenses and the fact that some of her salary has been time-shared** with other projects.
- reduction in **office** supply cost category because, **although** pharmaceutical supplies were budgeted there, they were not required for the project.
- **increasing the amount allocated to local and international consultants, based in** needs identified by project staff and by the midterm evaluation team

- reduction of spending in travel/per diems due to Estate policy on per diems. The estates permit only lunch or lunch allowance during training, instead of the government procedures that give **full** per diems for training.
- **increase** in other direct costs, such as telephone, fax. This increase reflects a need deemed crucial by both local and home office staff to have sufficient home office **support**.

It appears that project finances were well handled. The project has been able to benefit from extended expatriate support in the third year which was important for maintaining contacts with estate managers and generating support for the project's extension and expansion. In addition, the project has been able to keep within the project's overall budget, even when a required change of strategy called for additional expenditures: the whole CBD component was not originally budgeted because the MOH was to train nurses in family planning delivery. Because of the MOH moratorium on this training, Project HOPE organized and funded a **training** of CBD workers and supervisors on two estates, and a refresher course on one estate.

The lessons from Project HOPE's experiences with budgeting for private sector projects indicate that many expenditures can be given over to the estates from the beginning of the project, as has been planned for in their extension/expansion grant.

3. Lessons Learned

The lessons learned from Project HOPE's private sector tea estate project can be examined from the various levels that the project operated: community, volunteer, HSA, medical staff/clinic, estate managers, and HOPE staff. However, the biggest lesson that has been learned **from** this project is that it is possible to work with the private sector to expand the horizon of employee health care from clinical **treatment** to the preventive outreach **programs that focus on the mothers and children as well. The estates have demonstrated their willingness** to invest money on the development of a **volunteer/HSA** network on the **compounds, and have stated their willingness to increase spending in health to sustain** what has been started. This achievement is even more noteworthy, given that the world **tea market is in a down-swing and tea has not shown a profit in Thyolo for the last seven years.**

8. Lessons at Community Level

Community Involvement: There appears to be insufficient knowledge about and **involvement** in child survival activities at compound level, particularly with the men. Only 43% of the compounds visited could tell the evaluation team the goals of HOPE's activities. **Men** were rarely involved in child **survival** activities, beyond building of dish racks for sanitation. Almost no compound had received any **feedback** on health status or results of surveys, and no **other** compound members, beyond the volunteer, had received any training. The **kind** of changes in behavior required to improve health of children and adults need community support **and** community mechanisms for **discussing** and sharing ideas. problem-solving skills appear to be weak, with both community members and volunteers responding to questions about improving the major health problems in terms of

“doing what the volunteer tells us” and “continuing motivation, ” or having “management take care of that.”

It should be noted, however, that this lack of community involvement is not necessarily a reflection of a project failure. This first phase on the estates required a focus on working **from** the top down, getting the estate management to support child survival activities. It is **likely** that too much involvement at community level, before gaining management’s trust, would have made the management nervous about inciting discontent in the compounds. A top-down approach was not unmerited in this first phase. However, now is the time to involve the compounds more in **planning** and implementing activities. Such involvement **will** require some structures at compound level for supporting the work of the volunteer, such as a **village** health committee.

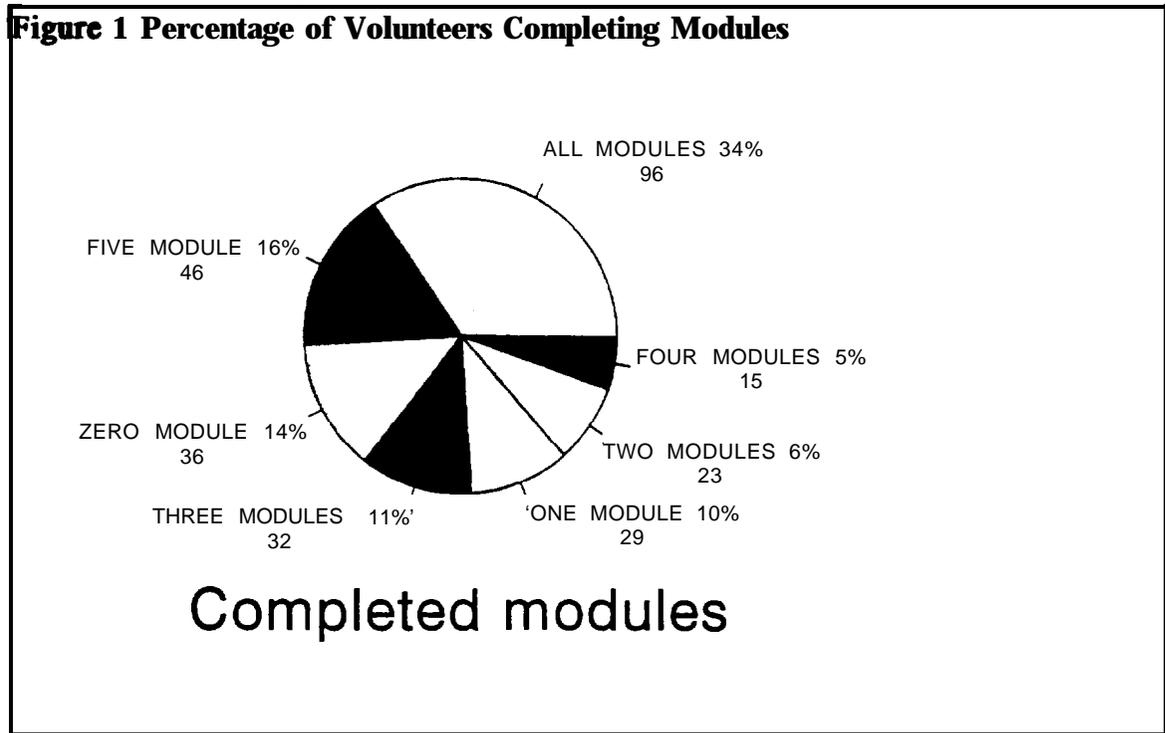
Stability of Compound Populations: Another lesson learned at compound level is that populations living in private sector housing are not stable. On the tea estates, only about **40-50%** of the work force is permanent, with the rest coming to work only during the peak season (October-April). In addition, even the “permanent” workforce may be less permanent than what one **would** find in villages in the rural areas, especially when the tea market is not good. This means that mechanisms for **addressing** problems stemming from this fluidity of the target **population** must be developed. In addition, it means that **traditional community structures do not exist on the compounds and more efforts need to be made** to develop a community spirit.

b. Volunteer Level

Usefulness of Volunteers: One of the requests of the Project HOPE Country Director was to assess the usefulness of the volunteers: **Is the time and energy to train and supervise them worth the effort? This is a hard question to answer, but the general impression** from the HSAs, medical staff, and communities was that the volunteers are playing an **important** role, being the “eyes and ears” in the community as well as **providing a local source of advice for the mothers. There is no specific written job description for the volunteers in this project, although they are expected to give health education and visit each home every day to identify sick children. Only 46% of mothers sampled in the final survey had been visited by their volunteer or HSA in the last month.** However, the **general impression** is that volunteers like the work, are happy, feel they are helping their community and their families (even though they would like incentives). There is a need for some kind of contact for the **HSAs** at compound level, but it is not clear that volunteers are the only answer.

Volunteer Training: Project HOPE has used an innovative method for providing volunteer training: instead of a one week concentrated program, they have spread the training out over six one-day modules that are conducted separately. The **health information system** tracks which modules each volunteer has received, so that **catch up training can be carried out.** The advantage of such a system is that the training burden is **not so heavy. Each HSA, with the help of the estate clinic staff, can train his volunteers,** based on **materials** developed by Project HOPE. In addition, when new volunteers are recruited, it is easier to insert them into the ongoing training schedule **than** to organize a five or six day training just for them. However, the disadvantage is that it is hard to

ensure that all volunteers receive all modules. Figure 1 shows the percentage of volunteers having completed all, some, or none of the modules.



Volunteer Drop-Outs: Another area of difficulty encountered by Project HOPE is volunteer dropouts. There are at least two issues that contribute to this:

- the fluidity of the population on the estates, meaning that spouses of volunteers leave, taking the volunteer with them
- lack of support and incentives.

The average length of service for all volunteers ever recruited (N = 402) is 512 days or 1.4 years. However, it should be noted that the drought had a profound effect on the stability of the **populations** on the estates. Lack of rain reduced employment needs on the estates and many people, even **permanent** workers, returned to their villages. Another **indicator for drop-outs** was developed to try to take into account the impact of the drought: **percentage** of volunteers working as of **10/92** still working in **10/93** and the percentage of volunteers working as of **10/93** still working as of **6/94**. The drop out rate for 92-93 was high, at 32%. However, the rate for the next year, which was after the **drought, had dropped to 8%**.

Volunteers viewed the lunch money they receive during training (**MK10** = \$1.37 per day) as an incentive. Some volunteers mentioned being mocked or discounted because they receive no money or incentives for the work they do. The estate managers **reported** giving no recognition **or** incentives to the volunteers, but most seemed willing to consider options for types of incentives they could provide.

Volunteer Supervision: Supervision of volunteers needs strengthening. **HSAs** visit the compounds often, but do not appear to do real supervision: 56% of volunteers **reported** their supervisor do health talks to the community while 20% reported supervisors doing compound **inspection** on their visits. Only 20% of volunteers reported **HSAs** doing training or home visiting together.

c. HSA Level

Project HOPE has developed a good group of **HSAs**, whose knowledge levels are quite high, and who generally appear to be active. **HSAs** are a well known cadre in Malawi, and the role of the HSA on the estates mirrors that of the “new” HSA that the MOH is now training.

Training of HSAs: The first **training** of **HSAs** was conducted in English. After this experience, Project HOPE has decided to conduct further trainings in Chichewa. This does not follow MOH policy of holding trainings in English, but does address the need to either recruit with a good understanding in English or train in a language they can understand.

Conditions of HSAs: The **HSAs** seemed generally happy with their work, and 75% said they would definitely stay after Project HOPE left. An assessment of HSA supervision (March 1994) revealed that some **HSAs** saw Project HOPE as a buffer between themselves and the estates, and they were not sure they would want to continue when HOPE left. This appears to be resolved, primarily through **communication** and education. However, there is one area in which complaints still arise: conditions and salaries. The range of salaries paid to **HSAs** is quite large, and this discourages those **HSAs** paid less than others. This is a thorny issue, because the estates operate independently and each **makes its salary decisions, based on their salary structure.**

Health Information System: One lesson learned in this first phase is that good information collection takes a lot of work to make it reliable. **After two** years, a one-day refresher course on the HIS revealed that the **HSAs** were **interpreting** various items on the consolidated form differently. This reinforces the point that one should make no **assumptions about what people understand** or are doing. The **HSA's** knowledge about the use of the volunteer data was also not so strong, with half seeing it only to follow-up volunteer activities.

Supervision of HSAs: Project HOPE took major technical responsibility for the **supervision** of **HSAs** until just recently. The midterm evaluation team suggested bringing in a **consultant** to help develop a more useful supervision checklist and to help prepare the estate medical staff to take over responsibility for HSA supervision. The assessment of current supervision by HOPE and estate medical staff revealed that HOPE staff had good supervisory style and knowledge of the job description and technical tasks of the **HSAs**, but did not make much use of the HIS, nor was there much system for follow-up to supervisory activities. A new supervision checklist, consisting of guidelines for supervisors and quality checklists for HSA tasks, was developed and is currently being tested by the estate medical staff. Interviews with estate medical **staff** indicated that they all thought it was useful: it shows what was expected, it identifies weakness and

accomplishments, and helps prioritize issues. It also seems that estate medical staff have more difficulty with the supervisory guidelines than with the quality checklists.

d. Estate Medical Staff Level

Involvement of Medical Staff: Project HOPE has done **well** in involving estate medical staff (medical assistants and nurses manning the medical clinics) in their activities. Medical staff have received training from Project HOPE in adult education **methods**, supervision of **HSAs**, **HIS** and **AIDS**. Medical staff have been involved in training of volunteers with their **HSAs**, and Project HOPE supervisors have contacted medical staff when they go out to supervise volunteers and **HSAs**.

Developing Independent Means of Getting What is Needed from Management: Many medical staff do not feel they have access to or get responses from management when they need **assistance** or have identified a problem in the compounds. Project HOPE has often worked as a go-between, and has **generally** been effective in getting a quick response from management. Nonetheless, it is important for estate employees (including medical staff) to start developing mechanisms on their own to get what they need.

e. Estate Management Level

Knowledge about Child Survival: **Of the managers** interviewed, most did not **know** the range of **child** survival activities. They tended to focus on sanitation (89%) and **child spacing (78%)**, with only half mentioning diarrhea, malaria or nutrition. Despite that, **all** felt that HOPE activities had been very effective, particularly in improving compound cleanliness and knowledge. It is likely that many of the complaints from medical staff and **HSAs** about management could be ameliorated with better information to managers about the specifics of child survival activities.

Willingness to Support Child Survival: **This project has demonstrated** that private sector companies can and will support the costs of child survival activities for their employees and their families. One lesson learned from the **evaluation** is that Project HOPE could have probably asked for more **financial** support **from the estates than they** did: managers expressed a willingness to cover all the major costs of the **HSA/volunteer** network. Project HOPE should take this experience and use it to their advantage in Mulanje, being ready to support the estates only where they are not ready to spend their money.

f. Project HOPE Level

Health Information System: Project HOPE has developed an extensive information system which routinely gathers information on the number of health talks given, the number of people in attendance, the number of cases referred to the clinics, the number of cases seen, housing conditions satisfactory, and activities generated, and number and types of OPD cases. However, the experiences from Project HOPE show that the usefulness of the information for management must be clarified first and reporting developed immediately for testing of its usefulness. There are many good items in the system, but it is not being used to its full advantage. In addition, Project HOPE should have added

review of the HIS before the end of the second year, when they discovered there were different understandings of what items on the consolidated forms meant.

Staff Development: **Project HOPE** has been generous in their staff development, giving not only the Child Survival Coordinator, but other staff the opportunity to go to conferences and study tours. This has both enhanced staff competency and morale.

B. Project **Sustainability**

One important component of the USAID-funded **Child Survival** project evaluations is the assessment of sustainability of project activities when the Private Voluntary **Organization (PVO)** phases out. The **BHR/PVC** guidelines require sustainability discussions to focus on the following areas: community participation, counterpart institutions, efficiency, cost recovery, household income generating activities, and the **PVO's** sustainability plans.

1. Community Participation

Compound watchmen and community members were interviewed in 23 compounds on nine estates. For each community discussion, an average of 15 women and 7 men were present. Compound watchmen (estate employee) were present 52% of the time. Other leaders occasionally present included: capiwo (estate employee), chairman for political parties, and church deacons.

When asked which child survival activities they felt were most effective, all 23 communities mentioned sanitation activities. Other activities were mentioned much less **frequently: family planning (17%), referral to clinic (13%), health talks (13%), diarrhoea (9%), and AIDS (9%)**. The activities cited reflect what is most easily visible to the community.

Project HOPE's contribution to increasing self-reliance of compound members comes mainly through the teaching activities of the volunteers and the **HSAs**, and participation in sanitation activities, such as house smearing, clearing surroundings, digging rubbish pits. The activities of Project HOPE have given the community a sense of control over their environment which they did not have before, especially since the houses they live belong **to** the estate. This improvement in compound **cleanliness** has come to the attention of management on several **estates**, who have in turn been more ready to invest money in improving living conditions. The compound members' **ability** to sustain child survival activities has been **increased** by the presence of volunteers and **HSAs**.

It should be noted that the first phase of this project has used mainly a top-down approach **in order to convince estate management that this was a safe and useful thing to invest in**. Thus, the communities have not been involved in design or evaluation of activities, although many have participated in clean-up activities: 99% of compounds have participated at some point in clearing surroundings, 83 % in house smearing, 67% in cleaning of pit latrines, and 76% in digging or maintaining rubbish pits.

Project HOPE did not form or train any committees at compound level during this phase. However, community members have contributed their time to sanitation activities. In the

case of the estates, it is the responsibility of **estate management** to supply housing, water, and medical care to their employees and their families.

Project HOPE has provided some training to volunteers who, in turn, have educated the mothers and others in the compounds. Knowledge levels of mothers and volunteers were **generally** good. However, compound members interviewed on the estates did not seem to feel particular ownership of the child survival activities. As mentioned in section 3, not much effort was put into developing community mechanisms taking responsibility for health activities.

Attrition levels for the volunteers have been high during the drought years, but appears to be leveling off at about 10% attrition a year. Many volunteers complained about the lack of incentives. However, estate managers seemed willing to entertain the idea of some kind of **incentives, but tended to shy away from anything financial.**

2. **Willingness of Counterpart Institutions to Sustain Activities**

Members of two types of counterpart institutions were interviewed during the final evaluation:

- Estate General Managers and Superintendents: nine managers representing seven companies and nine estates
- District Health Management Team (**DHMT**): District Health Officer, District Environmental Health Officer (in charge of MOH **HSAs**), Matron, and District MCH Coordinator

The first group has a larger impact on sustainability than the second group, because they will have to finance all aspects of the volunteer/HSA network. The DHO only provides some technical support and some outreach activities, such as under five or family planning clinics.

a. **Estate Management**

The Project HOPE Country Director (formally the Child Survival Coordinator) has developed very good linkages with estate **management** in all steps in the implementation process. **Most of the managers complemented the Country Director on the approaches used to gain entrance to the estates and continuing to inform them. There is no formal mechanism for consulting** with the estates, but Project HOPE sends out quarterly reports to managers and informs them in writing (and often by telephone as well) of all activities involving estate **staff**. Strong linkages have also been developed between Project HOPE **technical staff and the medical staff on most estates.**

Project HOPE expects the estates to take over all financial aspects of the volunteers, **HSAs, and sanitation activities. Eight of the nine managers said they would be willing to continue the expenses they are already incurring and would even be willing to increase them to cover the costs that HOPE is now supporting: HSA and volunteer training, and the health information system.**

The estate managers felt that Project HOPE had been most effective in improving compound cleanliness and knowledge of the population. As managers, they are quite far removed from the day to day activities of the project, and only notice those activities with visible effects.

There are several levels of estate employees that **will** be involved in the sustainability of Project HOPE-initiated activities: estate general managers, field managers, and medical staff. No specific training has been provided for general or field managers, although there have been periodic meetings to keep them informed. Project HOPE has provided training for the medical staff, which **will** be responsible for supervision and guidance of **HSAs** and volunteers on a day-to-day basis. Trainings for medical staff focused on building **skills** for sustainability include: adult education techniques (1 day - **1992**), AIDS and condoms (1 day - **1992**), **health** information system (1 day - **1993**), and supervision **skills/checklist** (2 days - 1994). Medical staff have collaborated with the **HSAs** and Project HOPE staff in training of volunteers since the **first** volunteer training. Medical staff have always had somewhat of a supervisory role for the **HSAs**, but since the May 1994 supervision training, this role is becoming sharper.

One of Project HOPE's greatest achievements in this project has **been** to bring managers to the point where they are **willing** to support additional costs. No financial commitments were made during the design of the project; although all estates agreed to hire and pay the salary of at least one HSA as a condition for participating in project activities. Discussions with estate managers representing seven of the nine companies in Thy010 **revealed** an openness to not only **sustaining** the costs already being borne by the estates (HSA salaries and HSA transport), but also the additional costs now covered by Project HOPE (training, supervision, and health information systems).

One **important** role that Project HOPE staff has played is coordination and priority setting for the **child survival** activities. The leadership at this level is important for several reasons: communication and support to volunteers, **HSAs** and medical **staff**; initiation of training and refresher training, and management of the HIS. Many of these tasks could **be carried out by a staff member hired by the estates (a community nurse or a health inspector)**, if they are properly oriented and **interested**. Seven of the nine managers said they would be interested in jointly supporting, with other estates, the cost of a public health technical advisor for the estates. Several managers mentioned that even though this is not a good economic period for tea growers, the costs of **maintaining** the **HSA/volunteer** system are **small** compared to the benefits.

The phase over to the estates was, in effect, started from the beginning, since the estates have always paid HSA salaries. Preparations for take over have intensified in the last several months. However, since the project has been extended for another three years, Project HOPE has time to develop more detailed plans. Meetings are being **planned** with estate managers to discuss the transition period, and information from this evaluation **will** be used to help guide this process. **The general plan is to spend another year full time in Thy010** and then over the following year, start to phase out, **while** in the third year, Project HOPE will be available to provide technical assistance as needed.

b. District **Health** Office

Project HOPE has developed close linkages with the District Health Office, through its other projects (safe motherhood, etc.), and through frequent communication with the District Health Officer. In fact, Project HOPE made a conscious decision to base its office at the DHO, and not on the estates. The DHO has strengthened communication and collaboration with the estates over the last **several** years, partly due to the **ground-laying** work of Project HOPE, and partly due to the new District Health Officer. DHMT members stated that the most effective Project HOPE activities are training of **HSAs** and contributing to improving relationships between the District and the estates.

Because the CS-VII project focuses on child survival activities on the estates, there was no financial commitment made on the part of the MOH and no specific training component for district staff. However, the District Health Inspector has participated in all trainings of **HSAs**, as **well** as the supervision training provided to estate medical staff. The DHO **will** not be expected to sustain Project HOPE **child** survival activities after HOPE leaves, since this responsibility belongs to the estates. However, DHMT members mentioned that they would be able to provide some technical assistance to the estates in supervision and training of **HSAs** if requested and financed by the estates.

There are some aspects of **child** survival activities on the estates that might also be useful for the District's **HSAs**, such as the reporting system and the supervision checklist. Some discussions have been held with the district on this, but more should be done in the next **phase**.

c. Participation of Counterpart Institutions in **Evaluations**

The midterm **evaluation** was designed and **conducted** by an outside consultant and Project HOPE **staff** (Country **Director/Malawi, Child** Survival **Coordinator/Thyolo**, and MCH Director/HOPE Center). Reports were sent to the estates, the DHO, the Regional Health Office, the **MOH/Headquarters** and **USAID**.

As mentioned in section III, the final evaluation was designed and implemented by a team composed of an outside consultant; the Estate Medical Advisor; the MCH Director from HOPE Center; representatives of MOH Headquarters, Regional, and District Health Offices; and **the** program director from another **USAID-funded child** survival project in the **Southern** Region. In addition, the Project HOPE local staff were involved in the interpretation of the **results**, and discussions on recommendations.

3. Attempts to Increase Efficiency

Project HOPE has used **several** strategies to reduce expenditures: pushing costs to the estates, not paying HOPE **staff** per **diems** (only reimbursing expenses), and being **generally financially** conservative. As a result, Project HOPE was able to do more in some areas than **originally** planned, such as the CBD component, additional training of **HSAs**, medical staff, and volunteers, **and** hiring of consultants.

4. Cost Recovery and Household Income Generation Activities

Project HOPE did not implement any cost-recovery mechanisms on the estates during this first phase, and did not organize any household income generating activities. For a first phase in working with the private sector, this was an appropriate approach, but cost recovery for sale of condoms and other contraceptives is planned in the expansion to Mulanje District. Exploration with estate management about implementing household income generating activities is recommended for the second phase.

5. Plans and Status of Sustainability

Project HOPE's plan for sustainability outlined in the DIP included the following aspects:

- **Estates would hire and pay HSAs as their employees:** All HSAs are employees of the individual estates where they work, and are paid by that estate. All managers interviewed stated they would continue to pay salaries and other expenses of HSAs, such as bicycle repair and replacement.
- **Estates would replace HSAs that leave:** Of the 6 HSAs that have left over the three years, 5 have been replaced. For the remaining HSA, the manager stated that it had not been brought to his attention that he needed to replace the HSA. This manager indicated that he would do so in the near future. All managers during interviews stated they would replace HSAs lost through attrition.
- **Training of volunteers would be done jointly by Project HOPE, HSAs, and estate medical staff:** Volunteer training has been done jointly by HOPE staff, HSAs and medical staff from the beginning.
- **Activities would be carried out in line with Ministry of Health guidelines:** Generally, Project HOPE has been very careful to keep within guidelines developed by the Ministry of Health. The only exception is the national malaria policy which calls for promotion of home-based care (treatment with S-P), whereas Project HOPE health education messages encourage mothers to take their child to the clinics for treatment. On the estates, this policy is reasonable, since treatment is quite accessible and free on the estates.
- **Estate medical staff would be trained as trainers and supervisors of HSAs and volunteers:** Estate medical staff have received two training sessions: a 1 day session on adult education methods in 1992 and a two day session on supervision of HSAs in May 1994. The former was designed to improve their skills for volunteer training, and the latter addressed supervisory skills and an introduction to an HSA supervision checklist. They have also received two additional one day trainings on AIDS/Condoms and the health information system.
- **Estate medical staff would be involved in programming and managing child survival activities:** Estate medical staff generally work with their HSA(s) in planning out monthly activities to go into the HSA's workplan. They have been involved in training of volunteers. With the emphasis now on having medical

staff take over supervision responsibility for the **HSAs** and volunteers, they will be come even more involved in programming and managing child survival activities. However, for the achievements to **really** be sustainable, the estates will need to have access to the kind of technical assistance Project HOPE has been providing. 8 of the 9 managers interviewed expressed interest in hiring (jointly) a health inspector or similar cadre to provide coordination, monitoring, training and public health advice for the estates.

- Form a **health** committee in the Thy010 branch of the Agricultural **Employers Association (AEA)**: No health committee was formed in the AEA and now the organization no longer exists. It has been replaced by the Employers Consultative Association of Malawi (**ECAM**) and the Secretariat of Plantations Association Limited (SOPAL). Such a committee could still be formed during the extension phase in CS X, as the personalities are the same in the previous and the current organization.

Project HOPE has reached its **sustainability** objectives, and some cases even gone beyond. This is a laudable achievement for an innovative private sector project.

V. RECOMMENDATIONS

The following recommendations focus on two main aspects: organizational development and technical effectiveness of the interventions. These recommendations were developed by the evaluation team in **discussion** with Project HOPE staff.

A. Organizational Development for Sustainability for Thy010 and Mulanje

The first phase of the project has been very successful in getting managers committed to **financing child** survival activities. Now is the time to create mechanisms for technical and organizational **sustainability**.

Provide the Estate Managers with Realistic Information on the Costs of Sustaining the HSA/Volunteer Network. It is important that the estate managers understand **well** the **financial** commitment they need to make to ensure continuity of the **HSA/network**. Several of the managers said they **would** be **willing** to support costs, but **needed** more **information on the** amounts before giving a **definite** "yes." Items and activities to be costed **include**:

- **HSAs: training of new HSAs and refresher training for all HSAs -- cost of trainers, venue, meals, transportation, training materials**
- **Volunteers: training of new volunteers and refresher training for all volunteers -- cost of venue, meals, transportation, training materials [training to be conducted by HSAs and medical staff]**
- **Health Information System: cost of reproduction for HSA and volunteer forms, cost of computer support (if used)**
- **Technical Support: cost of Public Health Advisor (salary, housing, transportation, supplies) to be shared among estates (see recommendation below).**

Project HOPE should work with estates to develop a timetable for taking over the various costs.

Help the Estates recruit and hire an overall HSA/Public Health Coordinator for the Estates. To ensure the technical coordination, supervision, organization of training and refresher training, the estates **will** need to develop some mechanism for replacing the role that Project HOPE plays. The idea had already been floated in the Tea section of the AEA in the last year. However, the AEA is now defunct and discussions will need to start anew with the Employers Consultative Association of Malawi (ECAM) and the Secretariat of Plantations Association Limited (SOPAL). Mechanisms will need to be developed among the estates for paying, housing, and transporting such a person. It is suggested that a separate person be hired for Mulanje as the distances are too great for a single individual. Project HOPE should help the estates to draw up a job description, recruit, and train this **person**. **In Thyolo**, it would be useful to have this person start now, so they could work in conjunction with Project HOPE staff, and take over more and more responsibility as Project HOPE phases out. In Mulanje, the Public Health Coordinator could be hired from the beginning of Project HOPE's activities or at the end of the first **year**.

Help Clarify Responsibilities and Increase Communication with Junior Management, Field Staff, and Medical Staff. Estate staff have varying levels of understanding about child survival activities and their role in supporting these activities. In the past, Project HOPE has concentrated its communication with top management. Now, in Thyolo, and starting **from** the beginning in Mulanje, Project HOPE should orient the senior and junior management/field staff and medical **staff** to project activities. This would include descriptions of what is **happening**, clarification of **roles** and responsibilities for the activities, and developing mechanisms for communication, monitoring, and problem solving. **Child** survival responsibilities should be explicitly added into written job descriptions for **all** staff.

Management **will also** need explicit guidelines on what things they need to look out for and plan for to ensure continuity. In addition to orientation meetings, Project HOPE should work with the estates to develop criteria for the transition phase, and should meet with the various levels on a regular basis to provide technical support to the process.

Strengthen Supervision of HSAs by Estate Medical Staff: **Medical staff** should be given **additional training** in supervision of **HSAs**. Supervision of **HSAs** in the compounds on a regular (at least **monthly**) basis should be explicitly added to the medical staff's job description. This **will** aid monitoring whether supervision is being carried out and will facilitate **obtaining transport** to the compounds for **supervision**. The **supervision** checklist should be simplified, in line with specific feedback **from** the medical staff, and its use should be monitored by estate management and/or the Estate Public Health Advisor.

Strengthen the Dialogue between the District and the Estates. **Already** relationships have improved tremendously **between the District Health** Office and the estates. However, this is partly due to the personalities involved. It **will be important** over the next **several** years to **institutionalize** the links between the district and the estates, so that communication is no longer dependent on individuals. Procedures as simple as informing

the estates beforehand when visiting, or sending copies of communication with the medical staff to the managers as well, can ensure openness on the part of the estates.

District and estate managers need to clarify their various responsibilities for the health of district populations on the estates. In this line, estates should work closely with District to ensure continuity of supplies especially family planning, and chloride of lime. Estates seem willing to contribute transport, letters, reporting, or other support to ensuring access to these supplies. Cooperation for ensuring continuation of outreach family **planning** clinics should be established, using district staff and estate transport until the estate medical staff can receive training in family **planning** delivery.

Create a Broader Base of Support for Health Activities at Compound Level. Project HOPE should explore various means of increasing support for child survival activities in the compounds. The volunteer structure now focuses on messages for women, and does not address men. In addition, the populations living in the compounds do not have the traditional structures for internal organization. There is no single best answer about how to broaden support, but possible, non-mutually exclusive options include:

- having more than one volunteer in each compound so that they can provide support for each other
- forming and training compound health committees that would take over the functions of the volunteer (thus having, in a sense, several volunteers) and organize the compound members for child survival activities. This strategy would also increase the knowledge base in the community, and would include both men and women. This might also address the problems associated with loss of single volunteers in a compound.
- training the compound watchman (an estate employee) in various areas of child survival, particularly those **affecting** the men (AIDS, family planning, sanitation)

Project HOPE should try some innovations in **Mulanje** and Thy010 in the first year and then spread the most successful ones to other compounds. These innovations should be **tested in both compounds with and without stable populations.**

In addition to broadening the number of people involved in **child** survival, it is important **to also increase communication with the community, the** volunteers and even the **HSAs** about activities and health status. Effectiveness could be increased if the community felt more ownership and involvement in the planning of activities. Project HOPE should work with medical **staff** and **HSAs** to explain to communities the benefits of **child** survival activities and community-initiated improvements in their living conditions (which appears to have encouraged management to make changes). Communities should be encouraged to monitor the activities of the volunteer and HSA.

Help the Estates develop Incentives for HSAs and Volunteers. Both the HSAs and the volunteers need some kinds of incentives to keep them motivated. Most estate managers interviewed were **willing** to consider options for incentives and recognition for the volunteers. Possible options include: providing soap (to reinforce the cleanliness theme), providing **uniforms** (to make them easily recognized in the community), introduction to compound after training, instituting regular meetings with **HSAs**, and

having the managers meet with the volunteers on an annual basis to recognize contributions and discuss problems. The evaluation team would like to suggest that perhaps the managers, in consultation with Project HOPE, consider developing a standard policy on how to approach incentives for volunteers, so that problems in retention do not develop later.

In the same light, the variations in HSA salaries have demotivated some of the **HSAs**. The evaluation team would like to suggest that the Secretariat of Plantations Association, Limited (SOPAL) should, with the assistance of Project HOPE, conduct a survey of salary levels **and** benefits of **HSAs** and medical staff to develop suggested salary ranges/structure. Having more standardized salary ranges will ensure easy recruitment and retention of health staff. This **survey** should include MOH salaries and benefits.

As regular supervision and refresher training help maintain motivation, Project HOPE should develop guidelines for estate managers on the frequency of supervision and refresher training for volunteers and **HSAs** so that these can be budgeted and organized.

Develop **Routine Reporting of Outputs from the Health Information System**. Project HOPE has developed an extensive information system which has not reached its communication potential. Routine reporting of outputs need to be developed for managers, Project HOPE, and DHMT needs. These outputs should be developed with input from users: what information they need and when they need it. These outputs should then be tested for their usefulness, and **modified** as necessary. In addition, Project HOPE needs to start investigating the sustainability of the information system with estates now: one estate offered the use of their computer.

Increase Malawian Project HOPE Staff in Communications with Estate Management. Project HOPE has been successful in developing productive and collaborative relationships with the estate management through the skills of the Project HOPE Country **Director**. As an initial strategy, this was appropriate. Now, as Project HOPE moves towards **transition** in Thyolo, it will be **important** for estates to become accustomed to health **assistants** or health **inspectors** giving them advice on public health issues, and for these cadres to learn how effectively approach estate management who are frequently expatriates. Thus, it will be important for the Child Survival Coordinator, in conjunction with a newly recruited Estate Public Health **Advisor, to be** present and active **in** all meetings and communications with estate management.

B. Improving Effectiveness of Technical Interventions

Project HOPE has met almost all of its objectives, but strengthening certain areas would increase impact on child survival.

Strengthen Activities in the Areas of Maternal Care, AIDS, and Family Planning: These three interventions could benefit from more attention in the next phase. The first has not been **addressed** in the child survival project at all, and the last two require a broader audience than have been reached for the other child survival interventions. In addition, the latter two interventions are viewed as important to management, and would therefore receive their support.

Help the Estates Develop Strategies to Reach Men for Health Education: One of the difficulties of reaching men with health education is that the **traditional** working hours of the **HSAs** are also the working hours of the men in the fields. The estate medical staff, **HSAs**, and field managers should investigate ways for health talks to be arranged at times and **places** that **allow** men to attend. Examples include: organizing health talks in the fields during lunch breaks, and organizing health talks on the weekends (implying making the **HSAs'** working hours flexible).

Simplify the Health Education Messages: Many of the messages include long lists of symptoms of diseases or actions to take: e.g., signs of dehydration, prevention of malaria, and contraindications for the pill. The consequence of such long lists is that people only remember some, and not always the most important ones. Thus, shortening the lists to the real priority messages is more likely to be effective. The evaluation team recognizes that many of these messages were developed from MOH documents or policies. The team would, however, like to suggest that Project HOPE use the data from their surveys and evaluation to point out the problem to the MOH and start a dialogue on prioritization.

Increase the Depth of Knowledge of HSAs: Almost **all HSAs** were able to recite the answers to the questions asked about the various child survival interventions. However, those answers that indicated the relationship between interventions were rarely given: the link between immunizations and incidence of **diarrhoea** and ARI, and the link between exclusive breastfeeding and ARI. If the **HSAs** are to be able to **supervise** and support the volunteers, they need to have a better understanding of how child survival interventions interrelate. Training of **HSAs** should also include components for strengthening **supervision** and problem solving skills. It is true that **HSAs** have received some training in supervision of volunteers, but it appears that the vagueness of the volunteer job description has impeded the **HSAs** from understanding **what** they should be supervising. Some of these trainings could be done through quarterly meetings and refresher trainings.

Clarify the Job Description of the Volunteers: **Once the** method of expanding community support for child survival is determined, a clear job **description** for the volunteers (or compound watchmen or compound health committees) should be developed that outlines **expectations** for activities and hours worked. This **will** help supervision of volunteers, developing mechanisms for incentives, and provide clarity for the volunteers **themselves**.

Family Planning: The CBD program has created a cadre of well-trained CBD workers. However, the high drop **out** rates indicate that CBD may not be the "easier" or "best" strategy. To maintain the CBD program, intensive supervision must be continued at the present high level, **some** incentives for **CBDs** need to be developed to reduce drop-outs, **and a mechanism for determining who is married to a permanent employee needs to be** developed. The evaluation team suggests that Project HOPE experiment with some variations on family planning strategies in Mulanje before adopting a general strategy. Variations include: using a **social** marketing strategy for **CBD's** (which would allow them to earn some money as an incentive), and trying a more facility-based strategy on the estates by training nurses in **family** planning (or outreach before nurses have been

trained). These variations should be tried on a few estates and evaluated for coverage, costs, ease of implementation and sustainability.

Sanitation: The estates should be encouraged to continue improvements in **housing**, water and sanitation. Reject HOPE can help to provide technical assistance in prioritizing activities and circulating efficient designs (ex. housing, latrine)

Nutrition: The nutrition intervention was one of the weaker interventions. There appeared to be little follow-up of malnourished children, and several medical staff remarked on weakness in this area. Possible strategies for improvement include: establishing a system for follow-up of children at home that could be verified by supervisors, **and initiating** food preparation demonstrations in the homes of malnourished children in addition to simply giving advise.

C. Final Comments

The Project HOPE Private Sector ***Initiative to Expand Child Survival Services for Tea and Coffee Esme Workers and their Families in the Thyolo District of Malawi*** has been very successful in convincing estate managers in Thy010 that child survival services are **cost-effective**. This has been demonstrated by the very large percentage of managers that responded favorably to continuing and expanding financing for the **HSA/volunteer** network, as well as the acceptance of all estates in Mulanje District to join in the extension. The results of the final survey and final evaluation exercise indicate that Project HOPE has **implemented** its plans and has met almost all of the specific project objectives in Thyolo. There are still some areas that need strengthening in the next phase, particularly in the more difficult interventions: family planning, AIDS, nutrition.

This initial private sector project required a different approach than other child survival projects: a more **top-down** approach. Community **development** is difficult on estates **where the “communities” are artificial and housing, water, and medical services are provided** by the estates. In **addition**, working with the private sector requires building the trust of the management that Project HOPE was not here to “incite the workers.” On the estates, sustainability depends more on what management is willing to do than what the communities are **willing** to do.

In the next phase in Thy010 and Mulanje, now that a good collaborative relationship has been developed with management, it will be important to build up community involvement in the range of **child survival** activities, not just sanitation. For the **new** activities in Mulanje, and for the strengthening of current activities in Thyolo, it would also be worthwhile **to** examine how the **standard** approaches to **child** survival projects fit within the estate context (community participation; cost recovery), and to experiment with alternative strategies for the use of volunteers and **CBD** workers.

Reject HOPE staff **should be** commended on their efforts and commitment to break through the barriers of working with the private sector and **developing a strong, sustainable** network of **HSAs** and compound level child survival activities. As well, the estate management should be commended **on the** commitment **they** have **demonstrated** to

improve the health of their employees and their families through collaboration and **financing** of child survival activities on their estates.