Efficacy of Community-Based Health Care in Kenya: An Evaluation of AMREF's 30 Years in Kibwezi

Discussion Paper No. 002/2010

AMREF Discussion Paper Series

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TABLE OF CONTENTS

PAGE

ABBREVIATIONS AND ACRONYMS III
ACKNOWLEDGEMENTS VI
ABSTRACT 1

1.0 BACKGROUND 2
1.1 Problem statement 3
1.2 Study objectives and justification 4
1.3 Study methodology 5
1.4 Data collection and analysis 8

2.0 EVOLUTION OF AMREF'S INTERVENTIONS IN KIBWEZI 10
2.1 Historical evolution of interventions 10
2.2 AMREF's programmes in relation to health policy 15

3.0 ANALYSIS AND RESULTS 16
3.1 Profile of respondents 17
3.2 Project objectives 17
3.3 Project inputs, process and outputs 21
3.4 Project outcomes 26
3.5 Partnerships 31
3.6 Sustainability 34
3.7 Challenges 37
3.8 Efficacy and effectiveness of interventions 39
3.9 Lessons learnt 40
3.10 Best practices 42
3.11 Replicability 44
3.12 Grand finale 44

4.0 CONCLUSION, RECOMMENDATIONS AND LIMITATIONS 45
4.1 Conclusion 45
4.2 Recommendations 46
4.3 Limitations 47

REFERENCES 48

APPENDICES 52
Appendix I: Kibwezi projects mapping 52
Appendix II: Evolution of AMREF programmes in
relation to government health policy 53

Discussion papers are aimed at presenting evidence to inform and solicit discussion on a wide-range of topical issues related to health and development interventions.

ABBREVIATIONS AND ACRONYMS

AAK	ActionAid Kenya
AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical and Research Foundation
ANC	Antenatal Clinic
ANP	Applied Nutrition Project
ART	Antiretroviral Therapy
ARV	Antiretroviral
CBD	Community Based Distributor
CBHC	Community Based Health Care
CBHCSO	Community Based Health Care Support Office
CBRD	Community Based Rehabilitation of the Disabled
CDC	Centres for Disease Control
CHMIS	Community Health Management Information System
CHW	Community Health Worker
CORP	Community Own Resource Person
CSD	Child Survival Development
CSO	Civil Society Organisation
DANIDA	Danish International Development Agency
DAS	Disabled Assistance Scheme
DDC	District Disabled Committee
DHMB	District Health Management Board
DHMT	District Health Management Team
DPO	Disabled People Organisation
DPU	Data Processing Unit
DVBD	Division of Vector Borne Diseases
EH	Environmental Health
EHU	Environmental Health Unit
EPI	Expanded Programme on Immunisation
FGD	Focus Group Discussion
FHU	Family Health Unit
FP	Family Planning
GOK	Government of Kenya
HIV	Human Immunodeficiency Virus
IDD	Integrated District Diagnosis
IEC	Information, Education and Communication
IFAD	International Fund for Agricultural Development

IGA	Income Generating Activity
IMF	International Monetary Fund
ITN	Insecticide Treated Net
KAP	Knowledge, Attitudes and Perceptions
KAWE	Kenya Association for the Welfare of Epileptics
KCO	Kenya Country Office
KHC	Kibwezi Health Centre
KI	Key Informant
KRHS	Kibwezi Rural Health Scheme
MCH	Maternal and Child Health
MFE	Methodological Framework Evaluation
MOALDM	Ministry of Agriculture Livestock Development and Marketing
MOH	Medical Officer of Health
MOH	Ministry of Health
MOWR	Ministry of Water Resources
MT	Metric Tonnes
MUAC	Mid Upper Arm Circumference
NCR	Norwegian Church Relief
NGO	Non-Governmental Organisation
PAFODA	Parents and Friends of the Disabled Association
PHC	Primary Health Care
PHO	Public Health Office
PIT	Project Implementation Team
PLWHA	People Living With HIV and AIDS
PMTCT	Prevention of Mother-to-Child Transmission
PWD	Person with Disability
RSK	Rural Shopkeeper
SSPHC	Strengthening Systems in Support of Primary Health Care
TBA	Traditional Birth Attendant
TOF	Trainer of Facilitators
UDPK	United Disabled Persons of Kenya
UK	United Kingdom
UN	United Nations
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development

VCT	Voluntary Counselling and Testing
WASH	Water and Sanitation Hygiene
WATSAN	Water and Sanitation

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ABSTRACT

AMREF has been involved in health development in Kibwezi, Eastern Kenya, since 1978. Its interventions have evolved in tandem with changes in community health needs and changes in government priorities. They have also greatly deepened and expanded in coverage in the 30 years of working in, for and with this hard-to-reach community. The paper is an evaluative research aimed at establishing the achievements of this long-term engagement. It presents the historical evolution of interventions, assesses AMREF's programmes in relation to national health policy. In addition, it analyses the success of the various interventions in terms of project objectives, implementation processes, expected outputs and outcomes,achievements of parnerships and sustainability and identifies programme challenges and lessons learned.

Using both secondary and primary data, the paper utilises a combination of methods to assess the efficacy, effectiveness and sustainability of AMREF's interventions. The paper concludes that, although it is difficult to precisely measure the proportion of AMREF's contribution, successful achievement of intended outputs and measurable or imputed health outcomes confirm a definite positive contribution to the improvement in the health status of the community. In addition, the interventions have had positive results in terms of health systems strengthening.

The paper presents project-specific achievements, identifies intervention programming challenges, and demonstrates that the approach adopted has produced useful lessons for improving the health status of communities through strengthening of health systems. The key lessons which emerge are that community participation and the use of community resources and institutions as entry points, understanding the community context and creating trust, and prior design of an exit strategy are necessary conditions for the success and sustainability of community-focused interventions.

1.0 BACKGROUND

AMREF's pioneering experience in community-based health care in Kibwezi started in 1978 and subsequently spread to several other divisions of Makueni District. The initial interventions were two-pronged types of experiments. First, there was the "pill-for-every-pain" approach where AMREF responded to the urgent needs of the population.

Second, there were the pilot-type interventions intended to establish a best practice which would then be replicated elsewhere. In this sense, the interventions were experiments, but not necessarily controlled ones.

Through the early 1980s and late 1990s, AMREF implemented interventions in child survival, family planning, maternal and child health, control of diarrhoeal diseases, community-based food aid targeting and distribution, primary health and community-based health care. During the early 2000s, AMREF's interventions progressively evolved to focus on disaster management, water, sanitation and hygiene promotion, integrated initiatives to prevent mother-to-child transmission of HIV and AIDS, and community-based health management information systems. The implementation of these interventions entailed long-term community partnering and health system strengthening approaches aimed at achieving gains in health and development[1].

Makueni district is one of the under-served areas in Kenya. It faces major development challenges that include high population growth rate, poverty and the HIV/AIDS pandemic. The current population growth rate is 2.8% per annum compared to 2.7% nationally (GOK, 2008). The poverty level stands at 73% compared to 57% for Eastern Province (GOK, 2004). The crude birth rate is 44.7 per 1000, while crude

[1] The extent of geographical coverage and expansion in AMREF activities from the initial nucleus of the Kibwezi Rural Health Centre to the multiplicity of the current interventions is depicted on the map in Appendix I.

death rate is 7 per 1000. Infant mortality is 45 per 1000 (GOK, 2000). Other health indicators show that total fertility rate is 4.7, 33% of households have access to piped water and 67% have access to potable water; there are six hospitals, 14 health centres, 59 dispensaries and 59 nursing homes; doctor-patient ratio is 1:119,879 indicating a heavy workload and therefore inadequate access to health care services for a larger proportion of the population; and a moderate to high prevalence of HIV/AIDS (i.e., between 10-30%) with the prevalence of the pandemic increasing with proximity to the Nairobi-Mombasa highway where the incidence is 30% (GOK, 2002). Between 1989 and 1990 there was only one HIV/AIDS testing centre and currently there are only three. Life expectancy stands at 58 years compared to a national figure of 47 years (GOK, 2005).

A baseline survey carried out in 1979 and a 14-year evaluation report (1979-1992) by AMREF, show that Kibwezi experienced the following challenges: a cycle of poverty (occasioned by dependence on unreliable farm-based income and recurrent drought every 7-8 years); high population growth rate (4.5% per annum) accompanied by rapid growth of urban centres on the main Nairobi-Mombasa highway; high rates of illiteracy, especially among women; and major health problems (which included endemic malaria at an average of 37% in the locations covered in 1979). Consequently, while the recent statistics cited earlier show a relatively better state of health than national averages in many cases, it is not clear how much of these improvements could be attributed to the interventions undertaken by AMREF in the area over the years. This prompted the need to evaluate and document AMREF's experience and achievements in Kibwezi in the past three decades.

1.1 Problem statement

AMREF has been working in Kibwezi to address several development challenges, particularly those related to poverty and ill health. The residents of Makueni district have consistently suffered three types of poverty, namely, food poverty (71.4%), absolute poverty (73.5%) and hardcore poverty (58.6%). Poverty in Kibwezi can be attributed to unreliable, inadequate and erratic rainfall; lack of clean drinking water

leading to increased cases of water-borne diseases (typhoid and amoebic dysentery); reduced economic productivity and high rates of unemployment; increased cost of medication; sparse location of health facilities and poor road network (GOK, 2002).

It would be expected that as a result of an engagement of 30 years by AMREF, the health status of the communities in Kibwezi would have improved. This study, therefore, sought to establish the extent of the impact of AMREF's interventions on the health status of the Kibwezi community.

1.2 Study objectives and justification

The main objective of this study was to document and assess AMREF's range of interventions and experiences in long-term health engagements with the disadvantaged and vulnerable communities of Makueni. The study also sought to find out whether the interventions have produced the desired outputs and outcomes, and the experience used to strengthen the health systems.

The study specifically sought to:

- Assess the long-term efficacy, effectiveness and sustainability of AMREF's interventions in Makueni District
- Establish intervention outputs and outcomes and assess the extent to which the outcomes have been used to strengthen health systems and influence policy and practice
- Identify any challenges faced and the lessons learnt from various interventions.

The assessment focused on four levels. The first was a review of achievements of specific interventions in terms of their contribution towards enhancement of the population's health status, capacity building, strengthening of the linkage between the formal health system and the community and ownership of the interventions. The second level was an assessment of the overall achievements in terms of improvement in the health status of the community. The third level considered the appropriateness of the architecture of the programmes and projects. The fourth level was the futuristic forecasts which are

based on historical performance of current and past interventions and this sought to find out what changes would be necessary, in terms of content, process and financing if further interventions were to be implemented.

This study is justified by various considerations. First, although AMREF has been in Kibwezi implementing health-related interventions for over 30 years, there is no coherent documentation to show what the organisation has achieved. It is therefore important to document the experiences and achievements that have so far been realised. This would help in determining whether the investments have translated into improved health outcomes for the people of Kibwezi. Secondly, it is expected that the evidence and lessons generated by AMREF in Kibwezi could be useful in replicating primary health care interventions in other areas. Finally, it is important to find out if the impacts of the interventions are sustainable in view of the fact that they were meant to be a learning experience.

1.3 Study methodology

The interventions undertaken include, putting up of the Kibwezi Rural Health Centre, community-based health care, applied nutrition, FP/MCH, community-based rehabilitation of the disabled, water, sanitation and hygiene, communication skills, disaster management and PMTCT. In an attempt to evaluate their health development outcomes, the study was guided by the realisation that there is no single methodology which has been developed to undertake an evaluation of these types of interventions. Available literature[1] shows that such evaluation faces insurmountable difficulties because the exercise does not fall squarely within the perimeters of the traditional linear input-output analytical paradigm.

The conceptualisation of this study was further guided by the realisation that various researchers have used different approaches and tools to accomplish social and economic impact assessments of development projects. According to the World Bank (2002), the social assessment approach may be used to provide a dynamic research process and a framework for identifying and integrating the key social and institutional issues that should be addressed in the project cycle. Notably, the first

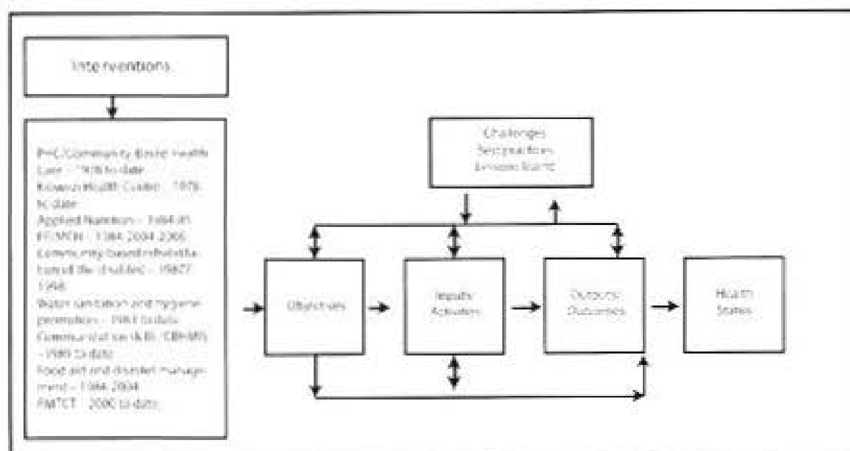
[1] Good examples include World Bank (2006) Elements of Good Poverty and Social Impact Analysis; Charles-Antoine Hofmann, et al. (2004) Measuring the Impact of Humanitarian Aid: A Review of Current Practice. HPG Research Report; and Danida (2006) Evaluating Guidelines, Ministry of Foreign Affairs

step is to identify the projects that are the subject of evaluation and analysis followed by a clear understanding of the interventions in question and the formulation of the right questions.

The study therefore utilised a combination of methods in order to achieve its objectives. First, the study reviewed specfic project objectives, inputs, outputs and outcomes, as well as implementation processes as documented in project proposals and reports. A data matrix was created which captured all these aspects for all projects. Both horizontal and vertical analysis of the data matrix was carried out in order to find and interpret the information for consistency and sequencing of results. The relationships between input and outputs and between objectives and outcomes of the interventions were assessed. The data matrix was also analysed to identify the challenges, best practices and lessons learned from AMREF's experiences.

Second, the study benefited from several other conceptual designs. Lemoine, (1985) used the methodological framework evaluation (MFE) which involves systematic assessment of impacts to produce a consolidated picture of results, impact and performance of projects. This framework consolidates insights and learning from each evaluation (Landall, 1985). The Centres for Disease Control (CDC, 2007) approach contends that the critical areas that need to be considered when evaluating projects include systematic assessment of results, comparison of performance across projects, identification of generic lessons, and provision of performance and results of a group of projects.

Figure 1: Analytical framework



On account of these considerations, the study adopted the analytical framework presented in Figure 1. It seeks to establish what activities were undertaken, what outputs/outcomes were realised and how this could have led to improvement of the health status of the residents of Kibwezi and Makueni. This was attained by collating and analysing the various projects' objectives, inputs and the outputs/outcomes and establishing the extent to which set objectives were attained. Further, deductive analysis was carried out to establish the challenges, best practices and lessons learnt as a result of AMREF's interventions. In general, a deductive assessment was done to determine whether or not the interventions in Kibwezi were successful.

The analysis looked at the various project objectives and evaluated their harmony, consistency and sequencing in order to establish whether or not the intervention programming was based on a well-conceived health development vision as opposed to episodic short-term responses. Subsequently, various outputs were validated and their reported outcomes established. From the outset, it was recognised that it would be difficult to relate to the evaluation of outcomes and impacts in a situation where intervention programming was done without factoring in possible future evaluations and no mechanisms had been put in place to capture information for that purpose.

Third, secondary data was used to establish possible trends which could be related to the outputs and outcomes of the various interventions. This information was obtained from government documents such as the National and District Development Plans, Kenya Demographic and Health Surveys, Economic Surveys, Welfare Monitoring Surveys and MOH policy and strategy documents. Other documents reviewed included publications by United Nations agencies such as the World Health Organisation (WHO), United Nations Development Programme (UNDP), United Nations Children's Fund (UNICEF) and World Bank, among others. Lastly, published materials such as books and articles relevant to the Kibwezi experience were reviewed.

Fourth, views of project beneficiaries, project managers and *dramatis personae* were enlisted, synthesised and analysed. In a nutshell, the study adopted a combination of methodologies for two reasons. First, the interventions were not designed with the a *priori* objective of eventually evaluating their impacts. Hence, there was no in-built monitoring and evaluation mechanism for the interventions. Second, there is no single "best" method of evaluating these types of interventions.

1.4 Data collection and analysis

In light of the magnitude and complexity of the project activities that have been ongoing for over 30 years, a number of methods and approaches were adopted to guide the data collection process. First, existing literature was reviewed to generate basic project information. Data was obtained from three baseline surveys, 31 project proposals, 11 workshop and training reports, 19 evaluation reports, 58 progress and annual reports, and other relevant publications. Secondary data was also obtained from relevant government and WHO reports.

Primary data was collected using open-ended, in-depth interviews and focus group discussions (FGDs) with key informants (KIs) who comprised project staff, the community beneficiaries and government representatives. A mix of interviews and self-administered questionnaires were conducted with *dramatis personae*.

The target population of the study was all the stakeholders involved in the Kibwezi projects. Several considerations informed the sampling of respondents. Key informants and focus group discussants were purposely selected so as to include persons deemed to have crucial information.

The sampling of beneficiary respondents was guided by the consideration to cover the geographical area of AMREF's interventions. Cluster sampling was done in which the three locations of Kibwezi, namely Twaandu, Nzambani and Kikumbulyu, were treated as clusters for purposes of sampling. A small purposive sample of 100 beneficiaries was selected and interviewed. Sampling within the cluster was done using systematic random sampling where a research assistant starting at the chief's office interviewed an adult member of the household in every fifth home until a total of 35 households were interviewed. Ninety-six (96) respondents were interviewed in the three locations: 34 (35.4%) from Twaandu, 29 (30.2%) from Nzambani and 33 (34.4%) from Kikumbulyu.

The questions asked included: what has been AMREF's contribution to overall health development in the area? In which specific ways has AMREF influenced the health status of the people in this area? Looking at all the interventions over the years, in which areas have there been tangible results/ successes? If the organisation was to exit from the area, what aspect of work would the community miss most? Are there interventions which can be sustained by the community without any further assistance? Are there any lessons, in terms of programme/project design and implementation, which can be derived from these interventions? Are there areas in which interventions would have been done differently to ensure that the health status of the community is improved?

Answers obtained from KIs and beneficiaries, either individually or through group discussion, were analysed to augment the findings and conclusions derived from secondary data.

Data analysis entailed content analysis of both the qualitative and quantitative data that was generated and deductive reasoning as the researchers interacted with the data and the stakeholders.

2.0 EVOLUTION OF AMREF'S INTERVENTIONS IN KIBWEZI

The evolution of AMREF's interventions in Kibwezi[3] was looked at from two perspectives. First is the historical evolution of programmes and projects over time. The second is the evolution of AMREF's interventions over time and in relation to national and sectoral policy development, aims and the specific and strategic approaches in the health sector in Kenya. The first perspective is presented in sub-section 2.1 while the latter is presented in sub-section 2.2 and summarised in Appendix II.

2.1 Historical evolution of interventions

AMREF first became interested in the health situation in Makindu-Kibwezi division of Machakos District in 1974. With encouragement from the Ministry of Health, the organisation prepared a proposal which included a component of "maximum local participation" and a 100-bed hospital which was circulated to potential donors in 1975. Although some donors were interested, no favourable responses were forthcoming. However, in 1978 funding was received from the Norwegian Church Relief (NCR) and the Swiss Civil Servants Organisation against Leprosy. The support spanned the years 1978 to 1986 and saw the Kibwezi Rural Health Scheme (KRHS) founded as a joint venture between the Ministry of Health and AMREF. It was started as a prototype large-scale, low-cost community-based health care (CBHC) project in a semi-arid part of Kenya with a dispersed, low-density population which was inadequately covered by conventional medical facilities. The project put emphasis on promotive and preventive health care for the estimated population of 150,000 who lived on 3,400 square kilometres of land.

The overall goal of KRHS was to activate a rural health scheme which would provide adequate health coverage to a semi-arid area, with a

[3] In 1978 when AMREF began working in the area, Kibwezi was a division in the southern part of Machakos district. In 1992, it became a division within the new Makueni district. In 2007 Kibwezi became a district. While the area of primary focus is Kibwezi division as existed right from the time of AMREF's initial intervention, and in light of the expansion of AMREF's activities beyond Kibwezi division into the wider Makueni district, some projects such as water and sanitation which have been undertaken beyond the initial area of coverage have also been studied.

widely scattered population (poorly served by health facilities) in Kibwezi Division, using a health centre staffed along standard government norms without incurring extra expenditure. The project sought to initiate, sensitise, train and technically support CHWs of Kibwezi Division and carry out refresher training for health personnel in the area. Over the years, the project has had several broad phases.

Phase I (1978-1982): This was the developmental phase, whose initial objectives were to: (i) develop a model system for divisional level health care delivery based on a health centre in Kibwezi, using CHWs as the major input in the villages (ii) develop teaching materials and learning resources for rural health workers; and (iii) improve the effectiveness and impact of vital health services and training programmes.

As a first step towards implementing the project, a baseline survey was undertaken in 1978 to understand the way of life of the people of Kibwezi/ Makindu Division, make a preliminary assessment of community needs in health and related aspects and to generate information on which to base further planning and action. The baseline survey also had long-term objectives which included to: (i) provide a baseline for the subsequent assessment of change in the area; (ii) permit comparison with other similar projects; and (iii) make possible the assessment of the effectiveness of components of the KRHS and the project as a whole.

During this phase, AMREF developed two components, namely, a health centre for curative and preventive health services, that is, Kibwezi Rural Health Centre (KRHC), and a community-based health care system for promotive and preventive health services. Construction of the health centre started in 1979 and was completed in 1981, when it began operations. Sensitisation and mobilisation of the communities for CBHC started in 1979 and the first batch of CHWs were trained in 1980.

Phase II (1983-1989): This was a service operations extension phase that grew as an extension of the first phase with the same aim and objectives, except for the first objective (development of the health centre) which had been met. The water and environmental sanitation component,

which started in 1983, was as a result of the finding from the baseline survey done at the beginning of the first phase in 1979 which had revealed that water was a major problem. Further, according to the 1979 National Population Census report, a lot of the morbidity and mortality seen at KRHC and the community was due to lack of water and environmental problems. In 1983, an MCH/FP project was also started and the implementation schedule was to follow a series of activities to be completed in three phases, namely, Phase One (August-December 1983), Phase Two (January-June 1984) and Phase Three (July- December 1984). (Maneno *et al*, 1987).

The years 1986-1988 saw the extension and expansion phase grow as a continuation of the second phase and it expanded in response to events and lessons from the previous phase. During Phase Two, there was widespread and prolonged drought with subsequent famine in most parts of Africa and Kenya. Kibwezi was not spared and AMREF was involved, in collaboration with the Government of Kenya, in relief food supplies. This led to the identification of a need for a nutrition intervention which developed to become the Applied Nutrition Project (ANP). Moreover, the reasons why the project was started were because: (i) there was a problem of malnutrition among children in the region; (ii) lack of nutritional and health awareness and knowledge among families and communities in Kibwezi; and (iii) lack of self-reliance in food production and food storage, and income-generating activities to support improved nutrition (Biteyi, 1990).

In 1986, the CBHC project was strengthened using funding for additional activities in the area of child survival and development. This project was started in order to offer accessible and effective MCH/FP education and services to the population in Kibwezi Division of Machakos District (Biteyi, 1990).

During this phase, AMREF also began to take an interest in the care of the disabled. At that time, ActionAid Kenya (AAK), the Association of the Physically Disabled of Kenya, and the Kenya Association for the Welfare of Epileptics (KAWE) were running some community-based activities and clinics for disabled persons in Kibwezi. AMREF, in

collaboration with ActionAid Kenya and the Ministry of Health, developed a joint project on Community-Based Rehabilitation of the Disabled (CBRD) which started in 1987.

In 1989, the broad objectives of KRHS were changed to include: (i) provide preventive, curative and rehabilitative health services; (ii) ensure the co-ordination of services within the scheme and between KRHS and other modern and traditional health providers in the community; (iii) develop low-cost, appropriate, replicable models for the delivery of specific services; (iv) promote sustainability of KRHS services; (v) assist and support the community in development; and (vi) share experiences with the MOH and other government ministries and NGOs, both nationally and internationally.

Phase III (1990 to date): In 1990, two components were initiated. These were communication skills and community-based distribution of contraceptives. The project also expanded in size and scope. Although the expansion of the project was as a result of the desire to meet community needs, it raised questions and concerns regarding sustainability and future direction of the initiative.

In an attempt to respond to some of these concerns, a review workshop was planned and held in October 1991. It brought together people at the project level who had worked in Kibwezi for a considerable length of time and were knowledgeable about the needs of the communities (Biteyi, 1991). The participants identified the major constraints which included inadequate human and financial resources, and future sustainability of activities. All the same, the needs of the Kibwezi communities were reassessed. Food, water and income stood out as both felt and real needs. Some issues such as nutrition, family planning, environmental conservation and literacy did not feature in the list. These were then identified as areas that needed awareness raising as a means of converting them into felt needs (Biteyi, 1991).

As part of the phase-out strategy, the workshop participants concluded that systems, strategies and interventions that had the highest likelihood of continuing with support from the community should be promoted

over the five-year period. Participants identified five key components that would need to be phased out gradually. These were community rehabilitation, applied nutrition, community-based distribution of contraceptives, CBHC training, and specific delivery activities like MCH (immunisation, growth monitoring and promotion, antenatal care and family planning) through mobile clinics. The goal of KRHS was re-stated as follows: "To enhance community and support systems to improve and sustain communities' health, wellbeing and overall development." One issue that could be raised was whether or not phasing out CBHC training weakened the strategic approach in building community capacity. To enhance the achievement of the goal of improving and sustaining communities' health, wellbeing and overall development in the mid 1990s, AMREF increased its focus on HIV/AIDS. This pandemic set out to undo much of the progress made in health care during the 20th century, and become a major burden to health systems in developing countries. Moreover, to meet this additional health care need, AMREF prioritised research, capacity building and advocacy relating to HIV/AIDS, TB and sexually transmitted infections (STIs), malaria, safe water and basic sanitation, family health, clinical services, training and health learning materials development. During the same period, in recognition of the need for partnerships at community level, AMREF engaged more with local groups to promote community-based planning, shared identification of issues and priorities, and efficient use of resources.

Hence in 2000, the organisation initiated a strategic shift of its CBHC focus on community participation as a strategic way of attaining community health care. This involved empowering communities through facilitation and building of viable and sustainable community-based organisations, as well as establishment of partnerships with respective communities, and supplementation of community resources (MABS, 2002). The CBHC strategy has, as a result, led to the development of health facilities with communities.

In recent years, AMREF has highlighted the fact that despite huge investments by donors in health products and delivery of health services, a large percentage of African communities still have limited

access to sufficient and quality health care. Consequently, AMREF's current ten-year strategy (2007-2017) focuses on finding ways to link health services to the people that need them by focusing more on people and less on diseases, thereby ensuring that initiatives are tailor-made for specific community needs.

Some of the community needs that AMREF has focused on in recent years include disaster management, water, sanitation and hygiene promotion and integrated interventions, PMTCT and HIV/AIDS. The PMTCT and HIV/AIDS intervention is ongoing and will end in March 2010 (Akacha, 2005). Disaster management started in the year 2006 (Esakwa, 2006). This intervention aimed at saving people's lives from deaths associated with droughts since Kibwezi is a drought-prone area. The project on strengthening systems at primary health care level started in 2005 (Ong'ayo, 2005), while the one on health management information systems began in 2004 (Ndwiga, 2004).

2.2 AMREF's programmes in relation to health policy

AMREF's activities and programmes have evolved over the years just as government programmes have changed in response to different health challenges. A review of national development plans in the past has revealed that government health sector objectives have evolved to reflect the development needs and health concerns of the time. For instance, in the late 1970s the main area of interest was primary health care at the community level. Today, it is the community approach to health care where communities are involved, not just in curative, but also in preventive health care.

The table in Appendix II captures the intervention programming evolution from 1978 to date in relation to the national development focus. Three things stand out. Overall, the economy has had mixed outcomes where there were years of significantly high economic growth rates such as in 1979 when the economy grew by 7.6% and equally, times of low growth as in 2002 when the economy experienced -2% growth. Second, with regard to the case of Kibwezi, the issue of poverty has remained a constant problem. While no figures are available for levels of poverty at the start of the project in 1978, the baseline done in 1979 showed that Kibwezi experienced widespread poverty. Statistics for 2007 show that over two-

thirds of the population in Kibwezi still live in absolute poverty. In light of the fact that poverty is an underlying cause of ill health, the concern is whether the 30 years of AMREF's stay in the area has resulted in significant health improvements.

Finally, it should be noted that AMREF's interventions evolved in tandem with the broad government public health policy and strategy over the years. This could be said to be indicative of AMREF's sensitivity and responsiveness to health concerns in a changing development environment over the years. The interventions have clearly been supportive of the government health development initiatives.

It is apparent that to a large extent, AMREF's programming has been in tandem with the broad health sector concerns at every development plan cycle. To that extent, it can further be submitted that the organisation has been responsive to the national health challenges over time just as the government, through the Ministry of Health, has been striving to address health concerns and challenges as they emerge. It has appropriately adjusted its interventions to respond to the community's health needs. However, its response to health concerns seems to come with a lag-in pursuit or adjusting to government policy changes.

It is clearly demonstrated from this review that the main aim of the interventions remained consistent, that is, improvement of the health status of the community. The question one may ask at this point is how much of the expected accomplishments were attained. This is the focus of subsequent sections of this paper.

3.0 ANALYSIS AND RESULTS

In this section, project objectives, inputs, outputs and outcomes are analysed. In addition, issues pertaining to partnerships, sustainability and challenges, efficacy and effectiveness, lessons learned and replicability of the interventions are investigated. The information which forms the basis of the analysis below was obtained from various documents and field interviews.

3.1 Profile of respondents

Respondents included six AMREF Kenya Country Office managers, five CHWs, three nurses, one medical officer of health, one public health officer, one district development officer, one medical records officer, three administrative chiefs, three village elders, four *dramatis personae* and 89 beneficiaries. In addition, two focus group discussions were held with a cross-section of other community leaders. The beneficiary respondents were aged between 22 years and 89 years with a mean age of 49.09 years. Forty (41.7%) of the respondents were male, while 56 (58.3%) were female. The majority of the respondents (58.3%) were farmers, 15.6% were unemployed, and 12.5% were self-employed while 12.5% were employed (skilled/unskilled). The majority of the respondents (83.3%) were married, 10.4% were single, 3.1% were divorced, 1% were separated and 1% were widowed. The location of residence for the respondents was almost evenly distributed; 35.4% lived in Twaandu, 30.2% in Nzambani and 34.4% in Kikumbulyu. The sections that follow present an analysis of the information obtained from all the sources.

3.2 Project objectives

The overall objective of AMREF's intervention in Kibwezi was to improve the health status of the people. Different projects were initiated to achieve this objective. The core project that also offered strategic direction to all the subsequent interventions was on community-based health care. The objectives of the intervention were varied, wide-ranging and to a large extent could be said to cover the many dimensions of the community's health needs. These objectives included to: (i) sensitise and mobilise communities in Kibwezi about their problems and need for action; (ii) increase accessibility to health care services; (iii) increase the utilisation of proper sanitation systems; (iv) develop a community-based health information system; (v) promote the utilisation of family planning services, as well as strengthen obstetric and perinatal care services; and (vi) reduce malnutrition and improve the nutritional status of children, mothers and women of child-bearing age.

It is important to note that, in pursuit of these objectives, specific interventions were initiated. Kibwezi Rural Health Centre was put up to offer a base for health care service delivery, and AMREF supported it

until 1986, when it was handed over to the Ministry of Health. Other interventions included the initiative on water and sanitation which began in 1983 and aimed to mitigate poverty by focusing on improved health and welfare of the community, using water as an entry point. The main objectives of the water projects were to: (i) increase access to adequate and safe water among communities in Makueni, (ii) increase access to water for hygiene (iii) build capacity of the communities to control and prevent WATSAN-related diseases and (iv) improve the capacity of the communities to develop, operate, manage and maintain their water and sanitation facilities. This intervention is still ongoing and the specific objectives have usually been refined with each new phase.

A nutrition project was initiated in 1984 with the aim of preventing deterioration in the nutritional status of under-fives due to the effects of the drought in 1983 (Biteyi *et al*, 1989). While food was distributed to the affected population, such direct supplies were not sustainable. This prompted AMREF to change its approach and launch the Applied Nutrition Project in 1986 whose aim was to address the basic contributory factors to under-nutrition in Kibwezi through awareness creation and capacity building in increasing food sustainability at community level (Biteyi *et al*, 1989). The focus was shifted to the household level as evidenced by the 1994-1997 Muuni Resettlement Scheme Project whose specific target was to reduce moderate malnutrition among under-fives from 29% to 14% (Bwibo et al 1993).

As the water and sanitation and nutrition projects were going on, AMREF in collaboration with ActionAid Kenya launched the Community-based Rehabilitation of the Disabled Project in 1987. The main objective of the initiative was to minimise the effects of disability, particularly in children aged 0-15 years (AMREF, 1991). This was to be done by increasing awareness in the community and training CHWs on simple rehabilitation skills, knowledge and attitude, support and monitoring. In 1989 the project objectives were revised to include rehabilitation of the disabled persons in the community and improve the mobility and functions of disabled people. These objectives were further revised between 1991 and 1992 with an emphasis on improving the wellbeing and livelihoods of persons with disabilities (Kagere *et*

al, 2001) by increasing access to educational, economic and rehabilitation services and enhancing policy and legal reform for the disabled. All these were efforts to achieve improved health status of the community.

Further efforts in the pursuit of the goal of improved health status included the initiation of the Health Management Information System (HMIS) Project in 1989 whose main objectives were to (i) identify information needs and gaps of the communities in Makindu, Mtito Andei and Kibwezi divisions and (ii) put in place an information system that is complete and that can be integrated into the district and national system. The idea was to establish an information system that was community-friendly and owned and which would easily feed into the national planning grid (Ndwiga, 2004). This project was closely linked to the Health Policy and Management Programme that was started in 1994, and whose main objective was to improve health care systems in rural areas in Kenya. This objective was refined in 2005 to include strengthening district health information systems for primary health care in Kitui and Makueni districts (Ong'ayo, 2005).

Another aspect of this project, known as the Integrated District Diagnosis Project, was initiated in 1991. Its aim was to put in place a more decentralised process of planning, programming and resource allocation at district level. This was to be done by developing and testing appropriate low-cost methods for generating population-based health information at district level and below, and to develop a model for district health information systems that could be implemented elsewhere if found useful and replicable.

While the HMIS Project was ongoing, another project, Communication Skills, was begun in 1989 (Mbugua & Mbugua, 1990). Its main objective was to develop appropriate communication skills at the community level, as well as create a network system, which would support communication for better health. It mainly targeted women and put emphasis on developing a model resource centre within the community which would house relevant information about the community, as well as information about other programmes (Mbugua & Mbugua, 1990). This project hoped to increase community participation in achieving improved health

promotion.The Maternal and Child Health/Family Planning (MCH/FP) Project was initiated in 1984. Its main aim was to improve the health of mothers and children below three years by developing replicable methods of fertility management and control (Maneno *et al.*, 1987). Specific objectives included to: (i) lengthen the mean birth interval, (ii) increase family planning from one to three years, (iii) increase antenatal coverage, (iv) reduce prevalence of STIs, and (v) enhance monitoring and evaluation. The objectives were revised in 1992 to also target the health status and quality of life of children under-five years and women of child-bearing age. This would indirectly impact on the fertility control as the mother will not desire more children since the ones already born would be assured of surviving. This added objective was in line with the Millennium Development Goals (MDGs) of reducing by three-quarters the maternal mortality ratio by improving the health status of the mothers (UNDP, 2000).

In the 1990s, HIV/AIDS was a major cause of death in Kenya and AMREF launched the HIV/AIDS Project with a view to reducing HIV spread among sex workers and other vulnerable groups. By 2000, AMREF sought to enhance the capacity of the Ministry of Health to offer ANC, VCT/PMTCT, PMTCT plus, and ART services for HIV positive pregnant women and newborns (Akacha, 2005).

In 1990, an intervention on treatment and control of schistosomiasis was begun in Ngwata Location, Kibwezi. The main objective of the project was to reduce the prevalence of schistosomiasis among school children in four communities in Kibwezi Division. (AMREF, 1991). The project emphasized change of community behaviour and promotion of health seeking behaviour so that infected people could seek treatment, avoid hazardous contact with water and promote safe disposal of human waste, as well as willingly pay for treatment. The project also maintained stocks of drugs in the community.

Lastly, there was the Disaster Management Project whose objective was to reduce loss of lives and livelihoods, and mitigate the effects of the disasters in Kenya (Esakwa, 2006). This project is, however, episodic and is implemented only when need arises.

It can be concluded that all AMREF project objectives have been aimed at enabling the communities to improve their quality of life, and consequently their health status. A multiplicity of health determinants were targeted in order to achieve a holistic approach to health promotion.

An analysis of the programmed activities for each of the interventions, as well as the expected outputs[4] clearly demonstrates that by and large, the set objectives were achieved, notwithstanding the fact that in all cases, project objectives were stipulated in a very general and open-ended manner[5] . It also shows that the objectives were well aligned with the national objectives of achieving health for all by the year 2015.

3.3 Project inputs, processes and outputs

A variety of inputs have gone into AMREF's interventions in Kibwezi over the years. The organisation's inputs were mainly in the form of funds and technical support. The community made a significant contribution largely in the form of: (i) provision of locally available materials and resources such as construction materials (sand, stones, bricks and water) and labour (artisans); (ii) participation in implementation of the projects, awareness creation, and community mobilisation; (iii) their time, ideas and local leadership and (iv) various services, particularly those of the CHWs, RSKs and CORPS.

Interviews with KIs and focus group discussions with community leaders indicated that AMREF's interventions have realised a wide range of achievements.

First, there was consensus amongst all beneficiaries and other informants that health and health-related services have been established and the community is benefiting from the facilities. Of significance, was the establishment of the Kibwezi Rural Health Centre, which has since become a sub-district hospital, thus facilitating access to both preventive and curative health care to a wide cross-section of the people of Kibwezi

[4] It is important to note that each project had several activities programmed for implementation and also detailed expected project outputs were stipulated in the project documents.

[5] The generality from which this finding is based is a good wake up call for future intervention programming and points to the need for in-built M&E requirements in project designs. This will facilitate the derivation of more convincing evaluation results.

and surrounding areas. In addition, several water service points were established. This has ensured that families and livestock have access to potable water within reasonable distance.

Secondly, there was concurrence that a process of community empowerment had been undertaken and the community's capacity to pursue health improvements as a matter of their human right had been developed. Thus, they were able to own the interventions and processes. As a result, today there is awareness about health and the community's role in health and development. Further, as part of capacity building, the community was mobilised and organised in groups for health and development. They include women, parents and friends of the disabled, water groups and community health workers, among others.

Available information revealed that the extent to which project inputs led to achievement of targeted project outputs varied from project to project. An intervention-by-intervention review is presented hereunder.

The Water and Sanitation Project increased access to safe water from 19% in 1998 to 83.6%, and sanitation coverage from 20% in 1998 to 96.8% in 2006. This could be attributed to the 631 protected shallow wells constructed and four boreholes rehabilitated in Makueni by 2006. Further, 90 local artisans have been trained in well construction, while a community-based organisation, the Kibwezi Divisional Water Committee, has been formed to oversee the project activities at community level (AMREF, 2006). In the process, distance to water points had been reduced by 50% (from an average of 4.2 km to 2.2 km) while water per capita usage has reportedly increased by 10%. Capacity building has also been achieved through initiation of participatory workshops. These workshops have contributed to the development of training manuals and guidelines which were used in the training of the targeted groups. In addition, peer educators in 16 primary schools were trained on the promotion of sanitation and hygiene (Mondoh & Rukunga, 2007). The main objective of this project was to ensure that at least 50% of the target population had

access to safe water, and so far this has been achieved.

According to Bwibo *et al* (1993), inputs into the Applied Nutrition Project included drought-resistant crops, financing of income generation activities such as buying a maize- milling machine and support of a basket-making project. This was in addition to direct food donations and rehabilitation of severely malnourished children. Other inputs were in form of capacity building that involved educating mothers on improved child feeding practices. The outputs of the project included increased community participation in child growth monitoring and utilisation of developed weaning diets (Bwibo *et al*, 1993). Revolving crop seed loans in the community resulted in high proportions (60%) of farmers growing drought-resistant crops. In addition, schools initiated vegetable gardens and reared rabbits, a practice which later infiltrated into the community through the pupils as parents learnt from their own children.

Inputs for the Community-Based Rehabilitation of the Disabled Project involved spending money in child sponsorship education programmes and corrective surgery (Kangere *et al*, 2002). Resources were also used in conducting workshops to train community-based rehabilitators, a job that was done by the AMREF staff. In the process, support groups such as PAFODA and DPO were formed. Their main responsibility was to facilitate the running of playgroups, community mobilisation and advocacy, integration of children into regular schools, development of a curriculum on community-based rehabilitation for use by trainers at the community level, and increase in the production of local aids by local artisans using readily available materials at the Kibwezi workshop. By September 1994, two clinics for those suffering from epilepsy had been opened at the community level and 168 clients had been attended to. Further, a CBR information system was established which included a resource centre, a borrowing system for community members, a filing system, conducting awareness meetings in the location and offering technical advice. A report by Kangere *et al* (2002) indicates that in the mid-1990s the CBR project team expanded its collaborators to include the Ministries of Education (Special Needs Education), Labour and Human Resource Development (Adult Education), and Health at divisional levels as main implementers. Original collaborators were KAWE, MOH and UDPK. As a result of advocacy

activities, in 2005 the Disability Bill became an Act of Parliament and the government domesticated the Kenya National Plan of the African Decade of PWDs (Were, 2007).

The Health Management Information System Project used resources, both financial and technical, to carry out activities such as health information needs assessment, health information gap analysis, develop relevant CHMIS tools and carry out district CHMIS capacity strengthening. A CBHMIS key informant noted that: *"The community's contribution to this project has been primarily through the sacrifice and volunteerism of CHWs who compile and continually update the data sets".*

Overall, these inputs resulted in improved quality and utilisation of community-based health information data. Linkage between community health information, facility-based information, private sector, district and the national health planning process was established and there was evidence of improved management of MCH services at health facility and community levels.

Moreover, a training manual, entitled "Training in Collection and Use of Information by Community Health Workers", was produced and published (Progress report, 1989-1991). A new MCH risk identification card was developed, tested and further improvements made on it. A number of health facilities, are collecting facility-based data and are willing to integrate the community data into the already existing MOH information system.

The Strengthening Systems in Support of Primary Health Care (SSPHC) Project that was closely related to the HMIS intervention realised the establishment of community-based diseases surveillance systems in all divisions of Makueni District. This was achieved after carrying out health systems research activities in various aspects of health services management as well as planning for PHC programmes. In addition, the capacity of rural health facility staff, governance structures and CORPs was strengthened.

AMREF's input to the Health Policy and Management Programme was in the form of funds spent in establishing the community-based disease surveillance system by carrying out descriptive and longitudinal household survey activities. On the other hand, the Integrated District Diagnosis Project inputs were not very clear. The main output of the project has been report writing of the various surveys.

Regarding the Communication Skills Project, two resource centres were established to train both women and extension workers (Biteyi, 1991, 1992). In the Maternal and Child Health Care Project, activities included a workshop to train TBAs and prepare teaching guidelines for TBAs, CHWs and RSKs in FP distribution. Some of the outputs of the project include training of 80 health care professionals, 617 TBAs and 718 CHWs (Biteyi, 1993). Child growth monitoring centres have been increased and there is a rise in use and demand for FP services through CHWs, TBAs and increased supplies through rural shops. In addition, there was improved attendance at Kibwezi antenatal and FP clinics and mobile units, and reduced complications of pregnancy from clients living in these areas. Other outputs included increased knowledge of family planning and HIV/AIDS awareness in schools. Antenatal risk identification at KHC was improved through the use of the AMREF-designed mother and child health card, which encouraged early and appropriate referral. A baseline survey by Biteyi (1993) indicated that contraceptive use among couples increased from 6% in 1986 to 29% in 1993 and tetanus toxoid immunisation coverage was raised to about 55%. Such improvements were also confirmed by various key informants interviewed.

Moreover, MCH interventions undertaken realised an increase in the number of mothers delivering at health facilities from an estimated 30% to 78% in 2005 compared to 41.6% nationally in 2003. Closely related to the MCH/FP project was the women's productive and reproductive health initiative that began in 1995 with the major inputs being social mobilisation, awareness raising and advocacy, provision of MCH/FP services and reproductive health education. The main achievement of this project was training of 250 TBAs and CHWs in comprehensive reproductive health including STI/HIV/AIDS with an emphasis on counselling, treatment, compliance and partner notification (AMREF, 2001).

With regard to the HIV/AIDS Project, AMREF provided nutritional supplements and medicines for a home-based care programme for those who were HIV positive. In addition, nurses and clinical officers were trained to provide home-based care in their own communities (AMREF, 2004). Through this intervention, 12,769 women were tested and counselled in antenatal clinics. Counselling and testing in maternity has improved and is currently estimated at 61% in Makueni (Akacha, 2005). The extent to which these outputs are significant in the fight against HIV/AIDS is not clear in the absence of baseline data.

The Disaster Management Project invested resources in food distribution and training of community relief committees on disaster management. Equally, the Trypanosomiasis Treatment and Prevention Project undertook laboratory diagnostic survey and services and treatment of reported cases.

Overall, the outputs reflect an effective use of inputs that were infused into various projects[6]. For example, at least 60% of the households had safe water; education on improved sanitation and hygiene was done; rehabilitation of severely malnourished children was achieved; health management information tools were developed and are in use; and the proportion of mothers who delivered in the hospitals increased. The survey of beneficiaries found that AMREF's interventions had contributed positively to several health achievements. These included increased utilisation of health facilities (43.8%), reduced disease morbidity (32.3%) increased knowledge on disease diagnosis and prevention (27.1%), training of CHWs, TBAs and CBHMIS (21.9%), reduced malarial morbidity (17.7%), increased utilisation of immunisation services (13.5%), distribution of food aid, establishment of income-generating activities, reduced cases of typhoid and improved standards of living (4.2%).

3.4 Project outcomes

Evidence based on review of available literature as well as primary data indicates that various intended outcomes have been attained as a

[6] Given the paucity of reliable information on activity-specific financial outlays and noting the non existence of monitorable indicators of funding efficiency, it is impossible to claim that optimal outputs were achieved.

result of AMREF's interventions in Kibwezi. Due to the absence of adequate quantitative baseline data in most projects, some of the outcomes are only indicative of the achievements with regard to improvement in the health status of the target community. Moreover, there is a general and compelling argument that measuring impact of projects that have been ongoing for as long as the 30 years AMREF has been in Kibwezi pose further challenges related to migration of people, to the extent that different people are affected at different times and in different ways.

Further, needs of communities evolve with time. New needs mean new projects and hence impact assessment needs to equally capture this dimension.

These analytical constraints notwithstanding, an analysis of primary data showed that more than 30% of the beneficiaries perceived their health status to have improved in terms of reduced diarrhoeal morbidity, HIV/AIDS prevalence, malnutrition prevalence, and malaria and TB cases. This corroborates the evidence generated from the literature which was reviewed. It was, however, noted that the challenge of preventable diseases and concomitant ill health still abound in Kibwezi. Interviews with project beneficiaries revealed that common diseases in the area included malaria (35.4%), HIV/AIDS (29.2%), skin diseases (19.8%), diarrhoea (18.8%) and coughing (7.3%). At the household level, beneficiaries cited malaria (20.8%), diarrhoea (14.6%) and coughing (5.2%) as the major diseases which a member of the household had suffered in the last one month prior to this study.

Data on the Water and Sanitation Project show that there was increased water supply which in turn helped save energy and time spent by women on fetching water. Project managers reported that the outcome of this was that more time was subsequently spent on child care and other health promoting activities such as immunisation and nurturing. Further, between 1994 and 1997, the percentage of households that collected water within 10-30 minutes increased from 23.1% to 60.8% in Makueni district and 7.7% to 56.4% at national level (WMS II, 2000). This means that more households in Makueni district than at national level could collect water within 10-30 minutes. The import of this is it could have resulted

in the reduction of water-borne diseases. This improvement could, to some extent, be attributed to the water-related interventions in Makueni district in which AMREF has been playing a major role.

On improved access to safe sanitation, it was noted that between 1994 and 1997, the percentage of households accessing safe sanitation dropped from 89.9% to 65.45% in Makueni district as compared to a drop from 80% to 65% at national level. However, between 1997 and 2006, the percentage increased from 65.45% to 90.10% in the district and 65% to 67% at national level (KIHBS, 2006). This means that, on average, relatively more households in Makueni district practised safe sanitation. This improvement could be attributed to the sanitation interventions in the district where AMREF has been a major player during this period. This could have contributed to the reported increased access to safe sanitation from 19% to 83.6% of households.

Data on the Applied Nutrition Project showed that there was an overall improvement in nutritional status of children in the whole division. This was as indicated by the reported drop of malnutrition rate from 44% in December 1984 to 38% in January 1985, and further down to 9% in March 1988. According to Biteyi *et al* (1990) this drop could be attributed to nutritional education, rehabilitation of malnourished children, improved household food security, and skills training for community leaders, CHWs, TBAs and women groups. Bwibo *et al* (1993) reported that the improved nutritional status was achieved through community participation in growth monitoring of the children in their own community. He also indicated that improvements in nutritional status were associated with increased food supply that was as a result of introduction of a variety of weaning diets, and use of revolving fund and revolving seed loans to growing drought-resistant crops such as millet, sorghum, cassava and greengrams. Other achievements that contributed to improved nutritional status include initiation of gardens and rearing of rabbits in schools, establishment of community-based information systems for child growth monitoring and participation of community members in planning, implementing and evaluating nutrition and food security activities. Moreover, the improved nutritional status was also reflected in the reduced number

of underweight children. For example, between 1994 and 1997 the proportion of underweight children who were under five years increased from 22.3% to 32.7% in Makueni district though there was a marked drop to 31.1% in 2006. The national average for 2006 was, 20.9% (WMS II, 1994). This aspect was compounded by the fact that the proportion of children experiencing stunting increased from 40% in 1997 to 56.1% in 2006 (KIHBS, 2006) and this was at a time when the national rates were dropping. The trend revealed that the national wasting rate of under-fives was higher than that of Makueni district. This data indicates that while the main objective of the nutrition project was to reduce moderate malnutrition among under-fives, this objective was not adequately achieved because malnutrition among children under-five was still high.

The Community-Based Rehabilitation Project benefited disabled persons in terms of reconstructive surgery (Asindua, 1998). In addition, disabled persons benefited from decentralisation of the epilepsy clinic from the KRHS. For instance, by September 1994, two clinics for those suffering from epilepsy that were intended to issue anticonvulsive drugs to patients were opened at the community level (AMREF, 1994). Further, the community was trained in identification and simple rehabilitation skills and were thus able to refer the disabled to the appropriate facilities and even provide rehabilitation services in the community. There was also an increase in the training of local artisans and thus improvement in their knowledge to produce aids. This led to improved production of local aids using locally available materials (sitting aids, standing aids, callipers, crutches, pushing trolleys, pushing carts). This in turn could be said to have contributed to reduction of risks of accidents among the disabled.

Moreover, disabled children were integrated into regular schools. The initiation of the child-to-child programme in the schools positively changed attitudes towards the disabled (AMREF, 1991). Noting that the main objective of this project was to rehabilitate the disabled persons in the community and improve their mobility, it could be concluded that this objective was achieved because several children were, for instance, integrated into the regular schools.

With regard to the MCH/FP initiative, two major outcomes were realised. These included a decrease in infant mortality rates as a result of the child survival interventions and efforts of TBAs, CHWs and RSKs, and reduction in maternal mortality due to complications of pregnancy (Maneno *et al*, 1987). Over a period of ten years (1985-1995), the infant mortality rate dropped from 18% to 10% as compared to a drop from 9% to 6.1% at national level (Kilombia *et al*, 1986; GOK, 1998). Nevertheless, the overall infant mortality rate was higher in Kibwezi compared to the national level.
Other MCH indicators show a positive trend and thereby positive outcomes with regard to child health. For example, between 1994 and 1997, the DPT 3 immunisation coverage increased from 89.6% in 1997 to 93.9% in 2000 in Makueni District while it decreased from 89.2% to 80.3% nationally. Further, while between 1994 and 1997 the measles immunisation coverage increased from 78.6% to 85.4% in Makueni District and 76.8% to 81.4% at national level, from 1997 to 2006 the immunisation coverage dropped from 85.4% to 82.3% in Makueni District as compared to a drop from 81.4% to 76.7% at national level (WMS II, 1994). The decline was, however, less steep in Makueni than nationally. The same trend was repeated with regard to data on full immunisation coverage increasing from 78.6% to 85.4%.

Generally, the relatively higher levels of immunisation coverage could be attributed to the success of child survival interventions in Makueni district where AMREF has been a major player. Earlier evaluations seem to concur with the finding that there had been a steady increase in MCH/FP attendance since 1983 on a monthly basis, where there were at least 30 new patients per day at Kibwezi Health Centre (Mwabu & Wolderufael, 1985). Other achievements that could have contributed to reduction in child and maternal mortality were reported as the reduction in neonatal tetanus as a result of improved hygiene among TBAs during delivery since majority of them used clean razor blades; raised tetanus toxoid immunisation coverage to about 55%; and improvement in prenatal mothers' nutritional status (Biteyi, 1993). The fact that there was also an increase in the use of contraceptives among couples (from 6% in 1986 to 29% in 1993) helped (Biteyi, 1993; KCPS, 1984; CBS *et al.*, 2004). What is evident from the analysis is that reduction of maternal mortality and child mortality was realised,

and as such it could be concluded that the MCH/FP project attained its intended outcome.

The other project that attained some positive outcomes was HIV/AIDS. Available information indicates that there was increased uptake of counselling and testing, as well as ARV prophylaxis (Akacha, 2005). Indeed, there was increased access to counselling and testing services in antenatal clinics with 12,769 women receiving counselling and testing.
Further, there was increased access to maternity and improved ANC, VCT/PMTCT, and ART services among HIV positive women. For instance, counselling and testing in maternity improved with access in Machakos and Makueni currently estimated at 70% and 61%, respectively. All this was an indication of possible improved health outcomes for mothers and children served by the project.

The main outcome of the Disaster Management Project was the reduction of drought-related diseases. Such reduction was attributed to efforts that led to 251,540 beneficiaries receiving 5106 MT of food commodities in two distribution cycles at 125 centres, and saw 1800 community relief committees trained (Esakwa, 2006). Esakwa (2006) further reports that there were improvements in emergency response to disasters, increased local capacities to respond to disasters through empowerment of women and employment of local people, reduced incidences of drought-related diseases and minimal loss of human and animal lives. All this could be said to have provided the much needed emergency relief. However, the project is episodic and not considered a core activity of AMREF.

From the foregoing discussion, it can be convincingly argued that from a global perspective, AMREF projects' outputs and outcomes have positively contributed towards improved health status of the population[7].

3.5 Partnerships: strengthening the health delivery system

AMREF has established partnerships at different levels. The philosophical foundation of the various interventions was to tap on popular participation in the project implementation process. This has been built and developed

[7] It is important to note that project programming did not, in all cases, include an explicitly defined monitoring and evaluation framework which would facilitate the generation of credible data sets. Therefore, while measurable outputs are documented, it is difficult to attribute health outcomes directly to AMREF interventions.

over time through the use of CHWs as agents in addressing the health needs of the residents. It is, however, important to note that partnerships were not always the way of doing things for AMREF. Interviews with some KIs revealed that prior to 2000, AMREF tended to do everything for the community in Kibwezi. After 2000, there was the realisation that the organisation needed to partner with others, including communities so as to be able to concentrate on its core business of facilitating learning and documenting best practices in health. Partnerships allowed others to pick and build on lessons derived from AMREF's work. Besides, partnering with the community also helped build a sense of ownership.

Key informant interviews and focus group discussions further indicated that AMREF has significantly strengthened the linkages between the community and formal health system in several ways.

They include (i) training of community health workers and linking them to the nearest health facilities; (ii) promoting support supervision of CHWs by health workers in neighbouring health facilities and (iii) putting in place a community-based information system that supports planning at the formal health system level.

Moreover, partnering in addressing the health needs of the local people was also reported by some beneficiaries who indicated that the community had developed a positive attitude towards cost-sharing over the last three decades. The majority of the beneficiaries (83.3%) acknowledged that AMREF was the organisation that had significantly contributed to the positive attitude of the local community towards cost-sharing.

It was also found that significant partnerships have been established with the Government of Kenya, principally through the Ministry of Health. While the Kibwezi Health Centre (KHC) was established by AMREF, it reverted to the Ministry of Health in August 1986. The government initially provided staff who were involved in the running of the centre. Over the years AMREF has collaborated with the District Health Management Board (DHMB) to manage this facility as well as

others in the district. Moreover, between 1988 and 1993, the MOH used the CBR programme as a training base to initiate programmes in the country. Machakos District Hospital dealt with the referrals and emergency drugs for Kibwezi Health Centre while Makindu hospital staff served referred cases from Kibwezi and participated in training of the CORPS. Interviews with community members indicated that as a result of the health education received through the CBRD project, stigma associated with disability was reduced and disabled children were brought forward for assistance. AMREF field project managers also indicated that the experience of the project in Kibwezi provided beneficial input for the National Disability Policy.

The KHC and CBRD initiatives are notable success stories of up-scaling interventions to the national level through successful AMREF-government partnerships. Moreover, partnership was enhanced through inter-sectoral collaboration where other government departments were drawn in to support initiatives in line with their mandates. In its work in the division, AMREF collaborates with the administrative office of Kibwezi division and, generally, the provincial administration. AMREF serves on the Sub-District Development Committee which is a co-ordinating mechanism for integrated planning, and controls the balanced development of the division. A male Ministry of Planning and National Development official in Makindu District during a key informant interview mentioned that AMREF has been the most active non-state actor in the district. Further, there has been collaboration with the Ministry of Agriculture, especially with the Home Economics Officer who deal with nutrition and food production. Both AMREF and the ministry have trained women groups in nutrition. The Division Livestock Extension Officer participated in the training workshops and planned the activities of the Applied Nutrition Project with the rest of AMREF's ANP team (AMREF, 1993). With regard to the CBRD project, other stakeholders were the Ministry of Education officials who helped in the integration of disabled children into schools and the Department of Social Services, who helped in the advocacy of PWDs (Kioko & Mwenzwa, 2005)

AMREF has also established partnerships with the main stakeholders in the project – the community. To that extent, the KHC and its various components have collaborated with various actors. The main ones are

the communities in the sub-locations where the organisation has implemented its projects. This has been actualised through the process of mobilisation and community participation in all initiatives to ensure ownership of the process and outcomes. Further collaboration has been enabled by constituting village committees especially in the case of CHMIS and divisional well committees in the case of water and sanitation interventions.

Partnerships have also been established with other NGOs working in Kibwezi, and indeed Makueni. For instance, the Kenya Association for the Welfare of Epileptics (KAWE) was instrumental in the CBRD project through its running of a clinic for epileptic patients from Kibwezi Health Centre. ActionAid Kenya and AMREF have collaborated closely since 1989 and both were involved in the implementation of maternal and child health, environmental health and sanitation, health education, and community-based rehabilitation (though in different locations). Other collaborators have been CARE Kenya and Sisters of Mercy. Also notable has been the collaboration with the commercial sector in the training of shopkeepers in community-based distribution of contraceptives (AMREF, 1993).

Last but not least, partnerships were established with a wide cross-section of donors who have supported the various interventions over time. The fact that AMREF has continued to attract such a large number of donors is testimony to a good working relationship with them, as well as the ability to achieve acceptable outcomes. Communities have owned the initiatives while development partners have seen their support translated into positive outcomes for beneficiaries.

3.6 Sustainability

Sustainability is reflected by efforts made in three fronts: capacity building, community participation and ownership, and assimilation of project experiences in a policy framework. There is, however, the question of the extent to which these interventions and their outcomes could be sustained without further support from AMREF. Project beneficiaries presented a divided opinion. The majority of the beneficiaries (82.3%) acknowledged that the projects would continue

even after AMREF exits the area. Some of the reasons given included the fact that AMREF had: (i) trained communities on project ownership; (ii) involved the community in project implementation; (iii) initiated income-generating activities and (iv) created greater awareness amongst the community about their health.

Nevertheless, the beneficiaries who thought that the projects would not continue cited: (i) poverty; (ii) lack of manpower to mobilise the community and (iii) lack of government support. There were some fears expressed by a cross-section of key informants, both at AMREF and in Kibwezi with regard to the fact that owing to the long stay of AMREF in the area and the fact that the community has come to rely so much on the organisation, a dependency syndrome might have set in and this would further jeopardise sustainability of interventions.

There are three aspects, however, which need further elaboration in relation to sustainability. These are discussed below.

Capacity building

Capacity building has been realised through training of leaders of CHWs, CBDs, TBAs, women groups and teachers as trainers. Continuous capacity strengthening of communities enabled the trainers to carry out health education activities in their respective areas. Training was carried out through use of participatory learning and action approach at village-based workshops and demonstrations. This was important because the communities were the key implementers of the PHC project. Moreover, CORPs were mobilised to carry out health education (AMREF, 1993). In addition, some of the extension workers were trained as trainers of trainers (TOTs) (Kilombia *et al*, 1989). Capacity building was also undertaken through training of parents, local artisans, teachers, CHWs and CBR staff on skills of handling disabled children (Asindua, 1998).

On the water projects, water committees were trained and CBOs involved in the development and management of water sources. Some CBOs have also begun income-generating projects ranging from agriculture, trade and sale of water (Mondoh, 2001). The evaluation of the SSPHC project revealed that the training of the health management committee staff

enabled them to effectively play their roles. As a result, there was increased awareness in the community (AMREF, 2007).

An overwhelming majority (100%) of the beneficiaries acknowledged that the technical know-how of the local community in managing diseases had improved in the last 30 years. The key areas of improvement included treatment of drinking water (86.5%), use of ITNs (85.4%), latrine use (40.6%), safe sex (24%), drying utensils using a dish rack (15.6%), water storage and conservation (14.6%), utilisation of health facilities (14.6%), prevention of diseases (12.5%), utilisation of immunisation services and the use of the leaky tin. The majority (82%) of the local community acknowledged AMREF as the organisation that had significantly contributed to the improved technical skills of the local community.

"Capacity building is one of the major achievements of AMREF in Makueni. Training has focused on community own resource persons who include CHWs, health committees, community leaders, water committees, women groups, parents and groups of friends of the disabled. The focus of capacity building was community organisation, priority setting, planning, implementation, monitoring, evaluation and health promotion", noted a key informant from AMREF KCO.

Community participation

Community participation, and in some cases the cost-sharing approach, right from the planning period was used in some projects in order to encourage the communities to play a more active role in sustaining the projects and implementing new ones. Study results indicate that the majority of the respondents (91.7%) were involved in the processes of identifying their priority interventions, project implementation and decision-making. The community participation strategy generated a strong sense of ownership and volunteerism (Kilombia *et al*, 1989). This was particularly relevant in most of the projects and proved most useful in water, SSPHC, nutrition, CBR and reproductive health as confirmed by KIs.

Assimilation of project outcomes into national policy framework

There were special efforts made to create linkages among the AMREF staff, government line ministries, NGOs working on similar projects and CBOs. A multisectoral committee was set up at divisional level, which jointly planned, reviewed and executed the project activities. It comprised line ministries i.e. Ministries of Agriculture Livestock Development and Marketing, Water, Health and Culture and Social Services. This process facilitated inclusion of the project processes and outcomes in the existing and planned national policies. Of particular importance was the CBHMIS project which planned to review the existing national policies and guidelines on HMIS. The end-of-project report indicated that the intervention was able to come up with a report on national policies (AMREF, 2005). In addition, the CBR project built the capacity of the DPO, though not extensively enough to advocate for the rights of persons with disabilities. AMREF worked with UPDK during the constitutional review process in lobbying Members of Parliament to include the needs of the disabled in the draft constitution. This culminated in the enactment of the Persons with Disabilities Act (2003), tailored in the spirit of the UN standard rules of equal opportunities for persons with disabilities (Kioko & Mwenzwa, 2005).

Asked to comment on the implications of an AMREF exit from Kibwezi, literally all respondents and KIs were of the view that while AMREF had done a lot of work in the area including capacity building, their presence would be missed. There was consensus that the community has not been prepared for that possible eventuality. Equally, extension officers from the government departments had, to a significant extent, become dependent on AMREF facilitation and this would be missed. It is therefore evident that for AMREF's work in Kibwezi to be sustainable, mechanisms need to be developed to prepare communities for a phase out. It is very clear from all the feedback received that phase out plans should be part of any programme development.

3.7 Challenges

The long-term engagement in health development in the area has been met with challenges which varied from one project to the next. On average, the challenges that appear to have had a negative impacted on AMREF's interventions are harsh weather, poverty and cultural beliefs.

Development environment: The Applied Nutrition Project reported that climate was a major challenge to food security. The case, as was in 1978, incidentally remains the same to date. Frequent droughts continue to be experienced. The situation has been aggravated by high levels of poverty. A survey carried out in 2005 (AMREF, 2005) in Makueni revealed that poverty prevalence in the project areas of Kibwezi was 85%, Makindu 89% and Mtito Andei 70%. The water project staff reported that high poverty levels affected the ability of communities to cost share in the development of wells. To that extent, poverty acts as a hindrance in any effort towards the fast realisation of project goals.

Cultural practices: Cultural practices, such as polygamy, were found to be a challenge. For example, there were situations where men married many wives and bore several children that they could hardly feed or take care of. This left women with the burden of taking care of malnourished children. In some cases when these women were admitted in the malnutrition rehabilitation ward, their spouses took on more wives (Kilaki, December 2008 – personal interview). This meant that once the rehabilitated children were discharged, they would end up in a single-mother-headed households. This would further worsen the vulnerability of the children to poverty and malnutrition.

Data integrity : Since interventions are funded on a project basis, managers devote a significant amount of time to fundraising, and are more likely to report that their projects are a success to enhance the chances of continued project funding. In addition, interventions have not been designed either based on baseline surveys or with the intention of capturing evaluative information. Thus, there is no competent mechanism for the generation of accurate, comprehensive and timely data during the projects' life.

Ndwiga (2004), reported that all health facilities cited lack of training in HMIS. This contributed to poor collection and analysis of data that could have helped in effective decision-making. This raises questions about the usefulness of the tailor-made software if most users were

not trained on how to use it. Further, Maneno *et al*, (1987) and AMREF Workshop Report, (1991) indicate that most CHWs were non-literate, requiring special record sheets and that there was lack of development of information gathering methods for interventions early in the programme. Overall, this is indicative of a challenge in the gathering and processing of data for most of the life of AMREF's interventions in Kibwezi.

Volunteerism of CHWs: This is a moral dilemma because while within the community strategy of the Ministry of Health, the CHWs are seen as the community's responsibility, the questions posed by a key informant best captures the untenable gravity of this issue. *"Volunteerism of CHWs.... How far can it be taken? Is it ethical... given that these are people working in a poor marginalised area and they have their own financial needs?"*

3.8 Efficacy and effectiveness of interventions

To assess effectiveness and efficiency of interventions in Kibwezi, it is important to focus on two key issues. The first one is the attainment of project objectives. The key question is: What were the objectives, and were they achieved efficiently and economically? An analysis of available and field information showed that significant amount of work has been done and projects completed, in most cases, within the time schedule.

Nevertheless, from an evaluation perspective, the design of most projects was that it renders a straightforward evaluation, indeed comparison of what was intended and what was achieved, difficult. The statement of most objectives tended to be open-ended to the extent that quantifying their attainment was problematic. An examination of these statements of objectives shows that the objectives do not render themselves measurable nor are they time-bound. This means that whatever outcomes the programme personnel attain are technically acceptable as long as they indicate a positive trend. Also, the programmatic cycles for most projects were too short and this meant that a quick cycle of successive projects were implemented. It is again difficult to determine how effective and efficient that approach is. An example in this regard were the water projects which were often funded for cycles of two years. The following excerpt will suffice as an example:

"In October 1991, AMREF had a review workshop during which there was a redefinition of goal and objectives for KRHS.... The workshop set them to be (i)

increase coverage and accessibility of health care in Kibwezi, (ii) support community initiatives in the development of water sources, (iii) enhance self sufficiency and security in the provision of food among communities in Kibwezi, (iv) enhance the capacity of Kibwezi communities to raise income at household level, (v) provide support for educational, training and employment activities for the disabled and (vi) enable women to acquire functional literacy skills" (AMREF, 1991).

The second one is the absorption and utilisation of project resources. Efficiency and effectiveness are generally determined on the basis of the proportion of project resources that go directly into community projects as compared to that going into project administration. In this case, most project leaders indicated, that on average, 30% of resources were used for administrative support while 70% went to community level interventions. This compared favourably with the reported administrative limit that not more than 40% of resources should be used for project administration[8].

3.9 Lessons learnt

The projects which have so far been implemented and are the subject of this evaluation generated project-specific lessons. The lessons were specific and applicable within the context of a particular intervention. However, some lessons were over-arching and are key to future intervention programming. These are presented have been below.

Community participation and the use of existing community resources and institutions as entry points: all the interventions invariably indicated that it was important to work with communities to ensure success and wide ownership of the projects. Nevertheless, they also indicate that in marginalised communities, participation is usually low. Thus, as interventions are initiated, two things are important. One, awareness has to be created about interventions among all members of the community so that they understand what's happening and their role in it. Two, capacities for community participation need to be continuously developed and supported.

[8] It was not possible to rigorously analyse the costing and financial resource utilisation for the various interventions because financial data was not readily available.

Right from the start, there was realisation of the value of using CORPs to spearhead the community-based health care initiative. While the CHWs had to be identified and trained, it has also been increasingly realised that other existing institutions such as schools, women and clan groups, and parents-teachers associations could also be useful avenues for support of health education. These could, in any case, be more sustainable than selecting and training a cadre of staff to carry forward initiatives.

Indeed, available information indicated that working through community-based organisations enables retention of skills as well as ensures that communities are organised for sustainable development. This lesson is consistent with the current AMREF strategy of working through CBOs (AMREF, 2007).

Understanding the community context and creating mutual trust: the community context has serious implications on the success of interventions. For instance, the uptake of contraceptives remained low even when the cost barrier was removed. The issue was the culture and attitudes that needed to be understood. In addition, CHWs' success depended more on how they identified with the community than with AMREF; nutrition issues could not be adequately addressed without looking at the cultural destiny of women; and disability could not be addressed outside the cultural context of the community. Thus, a community's context is an important assumption in any health development intervention. Moreover, the community context also has implications in determining what needs are immediate and needed to be prioritised. Results from KI interviews corroborated the importance of recognising and utilising the community's own strengths and skills. The above lesson also applies on the part of the community understanding the intervention promoter's context. One key informant remarked:

The community has over time come to know AMREF and its approach and this makes it easy for the organisation to work in the area. On the other hand, AMREF has also come to understand how the community operates. In the process there is openness on the part of the community"

This is a lesson on the need to create mutual trust!

Need to have an exit strategy right from the start: to ensure that there is clarity on the extent of mandate by all stakeholders as well as to avoid complacency and long-term dependency, it is important to have a phase-out plan right from the start of an intervention. AMREF's stay in Kibwezi has been open-ended with regard to time. One key informant from AMREF noted, *"There is need to have an exit strategy as projects are designed... think about whom to hand over to and how... in an organised manner".*

A long stay may be beneficial: a key informant was of the view that despite the foregoing point, Kibwezi has been an important intervention laboratory largely because of the long stay that has enabled development of structures and networks that have been useful in the experimentation process with health improvement initiatives. As such, and given the achievements associated with such a long-term engagement, there is convincing argument for continuing the stay, albeit with a change in mandate.

3.10 Best practices

AMREF's intervention in Kibwezi is characterised by a variety of policy and programmatic actions that could be described as best practices. From a programmatic perspective, three issues stand out as best programming practice. First, the choice of site for the intervention was based on consideration of accessing health care to communities that otherwise were hard to reach in light of the fact that Kibwezi was a newly settled area with minimal government services. Thus, the interventions offered a lifeline to those communities, not only in terms of health care, but also in health promotive services such as maternal and child health, family planning, nutrition and water. Development ought to be inclusive, thus reaching out to Kibwezi served this ideal.

Second, is the importance of the ability to be flexible and adaptive in programming. To a large extent, AMREF's programme in Kibwezi was able to be adaptive and thereby focus on critical community concerns as they arose. While, initially, the intervention in Kibwezi was a pilot community-based health scheme, as realities unfolded other aspects were added since it was realised that health improvements could

not be achieved, for example, in an area which lacked food security and water.
Hence, the launch of the Applied Nutrition Project and the water and sanitation interventions could be seen as indicative of AMREF's adaptive programming. Indeed, a key informant pointed out that AMREF has managed to stay for so many years because it was addressing evolving as well as emerging community needs.

Third, the exposure visit to the Aga Khan Public Health Care Service Project in Kwale helped in reducing the learning curve for the CHMIS between 2004 and 2005. The importance of this is the acknowledgement that it is possible to learn from other models already developed and thus save considerable resources and time, and in the meantime be able to offer deserved service to the community speedily.

From a process perspective, two best practices were isolated. First, the community-based health care model in itself may be characterised as a best practice. Increasingly, it is a programmatic reality that governments may never be able to mobilise adequate resources to ensure health for all as was initially anticipated in the Alma Ata public health declaration of 1978. Consequently, communities need to be involved and to actively participate in initiatives that can uplift their standards of living, including health. The CBHC approach has over time ensured that communities are involved in planning and executing projects that are crucial in uplifting their welfare. The reality is that communities need to be the starting point for any people-centred development initiative. Use of local persons, community-level committees and empowering of the communities (through training) enabled the beneficiaries to own the projects, and therefore achieve some level of sustainability (Kangere *et al*, 2002; Maneno *et al*, 1987).

Second, collaboration with the government is a necessary condition for success. In all the projects, the relevant government ministry or department was always involved. This, in itself, is a good practice as it linked community members to government agencies who are the primary duty bearers and consequently they could press for services from them. This aspect of collaboration and involvement of stakeholders led to cultivation of goodwill and therefore, support for interventions including

by government and community leaders. Further, such collaboration ensured access to and use of public technical resource persons to backstop interventions.

Third, cost sharing is an essential mechanism for ensuring ownership and sustainability. This has been more so in the case of water projects. The community had to contribute 50% of the project cost. This ensured that the beneficiaries had a deep sense of project ownership.

3.11 Replicability

Kibwezi Rural Health Scheme started out as a pilot scheme that was to model delivery of health care in semi-arid areas with sparse populations. The comprehensive health care delivery system, which was backed by active community participation and inter-sectoral collaboration, proved to be very successful. One of the original objectives of CBHC was to carry out special studies on health centre-based programmes to determine their feasibility for replication. It has succeeded and has been a pioneer in significantly influencing CBHC in many parts of Africa. Its work is relevant to PHC in semi-arid areas with its emphasis on water and nutrition (AMREF, 1993).

The successful execution of the CBHMIS has reportedly seen the Kibwezi project voted as the best in the country. In the process, there have been efforts to replicate their model. There have also been requests for capacity building by other districts in the country, as well as countries outside Kenya. The conclusion is that the community-focused intervention work initiated in Kibwezi has become significantly viable and visible in the country and is increasingly being replicated in other countries. The scaling up is real!

3.12 The grand finale: a recap of interventions

Several persons, who were the architects and captains of the initial interventions in Makueni, were asked to give a post-event assessment of the engagement in the community. They were requested to

give their own non-quantified views about the general and specific achievements over the 30 years of involvement in the area.

Scanning through their individual answers, it can be safely concluded that there is consensus that the interventions were appropriate and there have been positive achievements which are directly attributable to these engagements. They commend AMREF's ability to constantly re-engineer itself to the evolving health needs of the community.

4.0 CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

4.1 Conclusion

Based on this analysis, several conclusions could be drawn. First and foremost, despite the unclear status of CBHC, either as a project or as a strategy, the initiative was successful in community capacity building and delivery of public health care. The other interventions successfully utilised the CBHC approach in their implementation. This led to the community participating in various interventions directly and also through the input and sacrifice of the CHWs who worked on volunteer basis. Nevertheless significant capacity building was achieved.

Second, lack of programmed quantifiable achievement indicators hinders the measurement of project success in relation to the improvement of the health status of the community. For instance, the water project developed 631 wells in Kibwezi division and Makueni district. However, gaps arose on the optimum number of wells required to make a difference by way of sustained reduction of water-borne diseases. The same applies to the nutrition project. At a glance, the project reports success. However, a critical look at the intervention raises the question of sustainability. The same case of lack of quantified benchmarks applied to all other initiatives.

Third, the projects operated in isolation from each other, in the sense that there was no link between them. This made it difficult to measure their collective impact in terms of the wellbeing of the community. Fourth, there has been significant collaboration and partnership with government departments as well as NGOs and communities. Attributing any achievements to AMREF is a challenge in light of inadequate documentation of inputs by all other partners/ stakeholders.

Finally, according to the 2002-2008 Makueni District Development Plan, the district still faces the developmental challenges of high population growth rate, poverty and disease (especially HIV/AIDS). This raises eyebrows on the direct and significance of effectiveness of AMREF's 30 years of intervention in Kibwezi. However, despite these challenges AMREF is acknowledged as the strongest health NGO in Makueni district. It has therefore contributed greatly to strengthening health systems at the community and formal health system levels and also to whatever health outcomes that have been realised in the district in the last 30 years.

4.2 Recommendations

In light of the foregoing findings and conclusion, the following recommendations are made:

1. **Integration of interventions:** one gets the impression that while all interventions are aimed at improving the health status of the community, each project appears to be an entity on its own. Therefore, there is need to integrate all the interventions so as to cultivate project synergies. In a situation where projects are implemented in subsequent periods, the sequencing should allow synergies of previous periods.
2. **Adopt log frame-based (performance-based) programme design:** available documents that were reviewed did not indicate what benchmarks informed project activities. Assessing success in the absence of such benchmarks, indicators and clearly predetermined means of assessing success and processes meant that any achievement, however modest, was acceptable. A log frame-based programming is an option AMREF should embrace

a priori to address this challenge. It is also important to ensure that the processes of problem identification, priority setting, planning, implementation, monitoring and evaluation are more participatory and that the community is involved at every stage of the programme. In addition, community contribution in terms of material, labour and money should be well defined and agreed upon with all parties. These aspects would enhance the possibility of generating project information/data.

3. **Specific terms of partnership** should be developed up-front in order to minimise the potentially enormous costs of exit. The government should be urged and encouraged to create a partnership arrangement that ensures that beneficiaries do not perceive AMREF or any other NGO as permanent facilitators of their development.
4. **Further study** to establish "the impact of a possible AMREF exit" may help determine the implications of long-term engagement with communities. This is in view of the fact that AMREF's interventions have taken 30 years so far and evidence generated in the course of this study points to the existence of a lot of unpreparedness for disengagement and dependency on the part of stakeholders.

4.3 Limitations

The process of undertaking this study was constrained by several factors. The first limitation revolves around the fact that no mechanism had been put in place to monitor and evaluate the performance of the various interventions. Hence, no reputable databases have been built over the 30 plus years.

The second pertains to information completeness, accuracy and consistency. The 30-year period under review meant that massive information was generated. However, the records and data reviewed could only be accepted as a faithful account of the interventions. This is because of the potential biases of the compilers of the reports which could have influenced their judgment in terms of what was recorded. Further, the records kept were those that the project administrators, in their judgement, deemed useful. Also, respondents and the *dramatis personae* relied on recall for their responses. This information has inherent limitations.

The third major limitation relates to capturing of data in an environment where the administrative boundaries of the study area have changed over the years. These have changed from the Kibwezi in Machakos District in 1978 to Kibwezi in Makueni District in 1992 and on to the present situation of Kibwezi as a district starting 2007.

Thus, the variables under study could not be consistently tracked as the administrative platform has kept changing.

Finally, the non-availability of accurate and complete financial data inhibits the possibility of evaluating the interventions from a holistic investment perspective.

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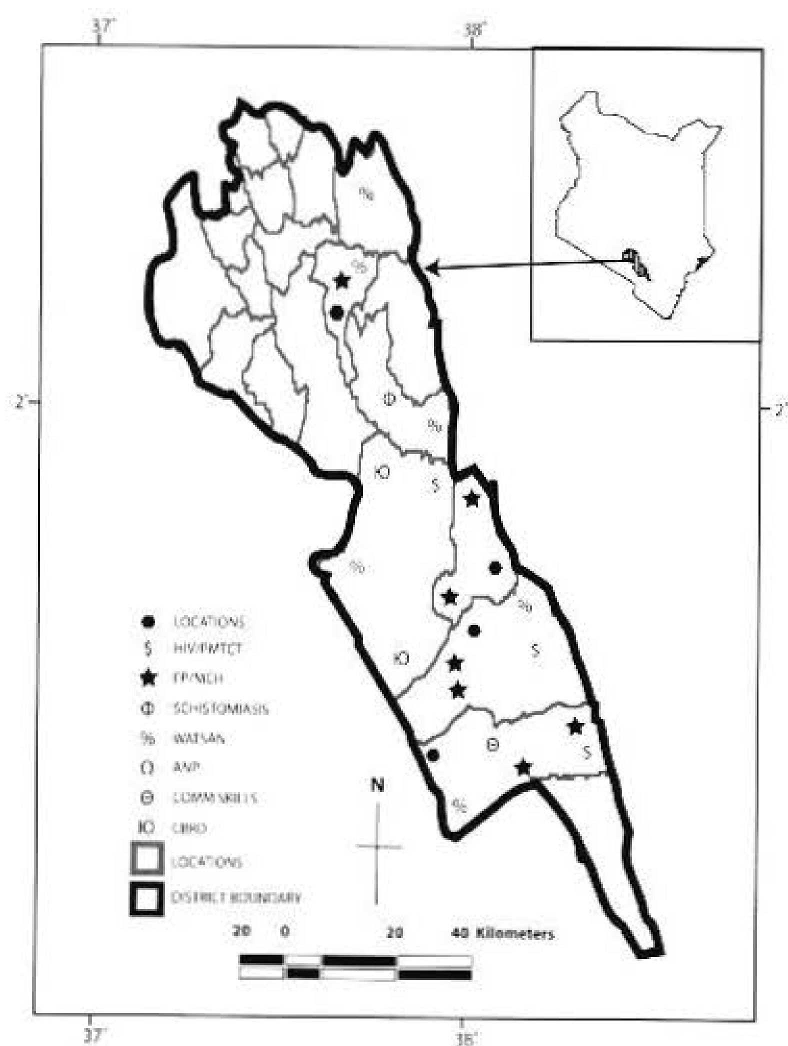
The authors are responsible for any technical errors or omissions, in this paper.

APPENDICES

Appendix I: Kibwezi Projects Mapping



Appendix II: Evolution of AMREF Programmes in Relation to Government Health Policy

Plan Period	National economic growth rate (%)	Poverty levels (%)	Government health policy	AMREF programmes
1974 - 1978	1978 - 6.9	Poverty, illiteracy and disease	Integrated and comprehensive master plan on rural health services - focus: • Development of ruralhealth services • Health training • Hospital development	• Proposal for establishment of community based health care project • Development of a model system for divisional level health care delivery • Start of Kibwezi rural health scheme • Proposed development of Kibwezi rural health centre
1979 - 1983	1979 - 7.6 1983 - 1.3		Development of rural health services - focus: • MCH/FP • Nutrition • Environmental health activities	Establishment of Kibwezi rural health scheme - focus: • CBHC • Building of KRHC • Training of CHWs • MCH/FP • Nutrition • Water and environmental sanitation
1984 - 1988	1984 - 1.6 1988 - 6.2		Health for all by 2000 • Integration of basic services • Cost sharing • Establishment in collaboration with Ministry of Planning and National Development Health Management Information system • Water supply and sanitation • Environmental health	• CBHC • Applied nutrition – capacity building and awareness creation • MCH/FP • Water and sanitation • Community based rehabilitation of disabled (CBRD)
1989 - 1993	1989 - 4.6 1993 - 0.4		Health for all by 2000 • Integration of services • Cost sharing • Health management information system	• CBHC • MCH/FP - distribution of contraceptives • Communication skills • Community based rehabilitation of disabled (CBRD)
			• Church, NGO and Private sector participation	• Applied nutrition • Water and sanitation • HIV AIDS

1994 – 1996	1994 – 2.6		Development of Kenya health policy framework of 1994 • Control of HIV • Immunization • Safe water	• CBHC – community capacity building • MCH/FP – distribution of contraceptives • Water and sanitation • HIV/AIDS
1997 – 2001	1997 – 2.1	2000 – 58.6 (Makueni District)	• Social dimension – human centred development • Strengthen control of HIV	• Shift of CBHC towards community participation strategy • Water, sanitation and hygiene (WASH) • HIV/AIDS
2002 – 2008	2002 - (2.0) 2008 - 2.5	Absolute poverty: Makueni District: 2002 - 73.5% 2005: Kibwezi- 85%, Makindu- 89% Mtito Andei 70%; Adult poverty: Kibwezi Constituency: 2004 – 54.1 2005 – 54.5 2007 – 64.3	Redistribution of services to rural areas- focus • Preventive and promotive health services • Health standards • Efficiency improvement	Community approach to projects using CBOs Main projects: • WASH • CBHMIS • HIV/AIDS - PMTCT - Maanisha • Food distribution (up to 2007)

Sources: CBS (2006), Kenya Facts and Figures and National Development Plans (various years)

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Mission
AMREF is committed to improving health and health care in Africa. We aim to ensure that every African can enjoy the right to good health by helping to create vibrant networks of informed and empowered communities and health care providers working together in strong health systems.

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