TEHIP RESEARCH:
SCOPE AND APPROACHES

Tanzania Essential Health Interventions Project
Ministry of Health
P.O. Box 78487
Dar es Salaam
Tanzania

TANZANIA ESSENTIAL HEALTH INTERVENTIONS PROJECT (TEHIP)
TEHIP Research: Scope and Approaches

Contents

Acronyms Used

BOD/CEA	Burden of Disease / Cost-Effectiveness Analysis
CIDA	Canadian International Development Agency
CTS	Cost Tracking System
DALY	Disability Adjusted Life Year
DHMT	District Health Management Team
DHS	Demographic and Health Survey
DSS	Demographic Surveillance System
EHI	Essential Health Interventions
EHIP	Essential Health Interventions Project
HMIS	Health Management Information System
HRS	Household Registration System
IDRC	International Development Research Centre, Canada
PAR	Participatory Action Research
RAP	Rapid Assessment Procedures
TEHIP	Tanzania Essential Health Interventions Project
WDR'93	World Bank's 1993 World Development Report - Investing in Health
WHO	World Health Organization
YLDs	Years Lived with Disability
YLLs	Years of Life Lost

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Chapter 1
Introduction

Introduction
Between the years 1997 and 2001, the Tanzania Essential Health Interventions Project (TEHIP) will provide a unique opportunity for the Tanzanian research community. TEHIP is a District level demonstration project with both development and research dimensions. With funding from Canada, this initiative is being conducted by Morogoro (Rural) and Rufiji Districts in cooperation with the Tanzania Ministry of Health. TEHIP is introduced in detail in Chapter 2 of this document.

Briefly, TEHIP is examining the feasibility of institutionalizing a more evidence-based approach to planning using burden of disease and cost-effectiveness measurements as tools for setting priorities and allocating health resources. It is expected that these considerations, combined with an appreciation of community preferences and the capacity of the District health services, will lead to the identification and improved delivery of packages of essential health interventions, and ultimately to significant reductions in the burden of disease.

TEHIP therefore tests innovations in planning, priority setting and resource allocation in the context of decentralization of the health system. It endeavours to determine how and to what extent district health planning can be more evidence based, how and to what extent such plans can be implemented, and how, to what extent, and at what cost do such planning interventions have an impact on population health? These core questions guide the overall design and execution of TEHIP. They take into account the current and planned decentralization of health planning and priority setting, placing greater emphasis at the District level. They also reflect the fact that TEHIP is about **testing a process of planning and priority setting.** As such, TEHIP will be in a position to answer several important questions facing health sector reform, both in Tanzania and other countries with similar economic and social sector constraints.

For the research dimension of TEHIP, the domains of importance have been organized programmatically under four research themes:

A)   *Health Systems Research* on District Health Planning, Prioritization, and Resource Allocation Processes;

B)   *Health Behaviours Research* on Household Health Seeking Behaviours in Relation to Essential Health Interventions;

C)   *Health Impact Research* on demographic and health effects of process changes;

D)   *Research and Development of Practical Tools* for Routine District Health System Analysis and Planning.

Purpose of this Document
The TEHIP research program is comprehensive and complex. Detailed protocols on each component are available through the TEHIP Research Facilitation Office. However for most readers not directly involved in TEHIP it was recognized that a summary overview document setting out clearly the scope, objectives, approaches, questions and context of the TEHIP research program would suffice. TEHIP has therefore prepared this document for those who want a guide to the nature of the research work carried out in TEHIP, and to how it fits in the context of other TEHIP developments. This document provides an overview of the background, history and rationale for TEHIP (Chapter 2), an overview of how the research components of TEHIP have been conceptualized (Chapter 3), a precise

articulation of the specific research objectives of each research Component (Chapter 4), and the scope and approaches for how these research objectives are being met methodologically (Chapters 5 to 8).

TEHIP's Approach to Research Capacity Building
What is novel in the approach taken here is that TEHIP funds the research through a network of research programs, and not as a collection of research projects. Therefore TEHIP does not support individual, short-term projects on the specific research objectives. Rather TEHIP facilitates research teams able to approach larger programs of research over several years. This requires teams or consortia for Component A (Health Systems Research), Component B (Health Seeking Behaviours Research), Component C (Demographic and Epidemiologic Research), and Component D (Tools for Health System Analysis).

Each research component addresses research questions which demand the skills of a number of disciplines. Such skills and disciplines are often attached to different host institutions in the academic, governmental, non-governmental, and private sectors. It was necessary that an inter-disciplinary, inter-institutional research coalition be assembled to address adequately and coherently the research questions within and across the Components.

It is a particular challenge of this research that it takes a programmatic rather than research project approach. It bridges and transcends disciplines of researchers in their individual capacities from different departments, faculties, and institutions in meeting multiple objectives. For researchers working on one Program Component, there are value added opportunities afforded by linkages with researchers and data in the other three associated Research Components of TEHIP, and with the TEHIP Research Facilitation Office.

TEHIP has therefore challenged Tanzanian researchers and Institutions to join forces to address the full scope of issues.

Proposal Development, Review and Approval Process
In February of 1996, TEHIP issued a Call for Letters of Intent for the Health Systems and for the Household Health Seeking Behaviours Components in support of overall TEHIP objectives. This evoked considerable interest from the Tanzanian health research community who signaled that interest by submitting a number of letters of intent to conduct discrete projects on these topics. TEHIP and its Scientific Advisory Committee reviewed these letters at its April 1996 meeting and recommended that these researchers be encouraged in certain instances to combine their efforts for a more programmatic and longer term approach to the research needs of TEHIP. It further proposed that some more detailed guidance be provided with regard to the expected scope and nature of the required research. Guidelines for the Preparation of Core Research Protocols of TEHIP were subsequently prepared by TEHIP and its Scientific Advisory Committee.

These Guidelines also represented the Call for Full Proposals. The Guidelines were shared widely with all those in Tanzania who had already shown an interest, or who might be interested, in TEHIP's research components. After distribution of Guidelines for Core Protocols Document in Tanzania, TEHIP and its International Scientific Advisory Committee organized a general briefing session on July 19-20, 1996, for any interested researchers for further in depth discussion. Once the Call for Program Grants had been announced, resources were made available for each inter-institutional team to develop their detailed proposals. This took the form of USD $500 proposal development grants for each coalition. Seven research coalitions formed and obtained their proposal development grants (three coalitions competed for the Health Systems Research and four competed for the Health Behaviours Research grants). The deadline for submission of full program grant proposals to the TEHIP Office in Dar es Salaam was September 30, 1996. All proposals were subjective to extensive international and domestic peer

review from a panel of 21 reviewers (three for each proposal). These reviews were considered by a plenary meeting of the full International Scientific Advisory Committee of TEHIP on December 10-11, 1996. The Committee ranked the proposals and made recommendations regarding the selection of the best candidates using the following criteria.

Selection Criteria
To ensure that the TEHIP Research Objectives are met, each research institution or network awarded a TEHIP Research Program Grant is assessed on an ongoing basis during their tenure of the grant. The following are three equally-weighted criteria used to evaluate the proposals and progress. The successful team must excel in each of the following criteria as a condition of both initial and continued support:

Research Program Design
>excellence, innovation, focus, and coherence of the research program design in relation to the Principal and Specific Objectives in the Core Protocol Guidelines;

>the most convincing methodological, logistical, and budgetary approach to their Component's Research Objectives;

Qualified Personnel
>compelling evidence that the research team or network has assembled the necessary leadership, expertise, experience and skills;

>ability to attract, develop and retain appropriately qualified scientists and field workers for the demands of the TEHIP Research Program;

>evidence of strategies and experience which promote multi disciplinary approaches to research and encourage team members to consider the economic, social, and developmental implications of their work;

Research Management
>evidence of an organizational structure suitable for the management and administrative functions of a complex multi disciplinary, (and if necessary, multi-institutional) program, including:

>- presence of effective leadership and expertise in research management function;

>- effective research planning and budgeting mechanisms; and

>- a management structure that allows research resource allocation decisions to be made and implemented.

>evidence that the team or network can negotiate the necessary institutional, administrative, and coordinating environment to manage their work.

Chapter 2

TEHIP Background and Rationale

Investing in Health

Health systems in low-income countries are currently facing enormous problems. These include the high incidences of communicable diseases (e.g. malaria, pneumonia, diarrhoeal diseases, HIV/AIDS and TB), a rising prevalence of chronic diseases and major disasters, including civil strife, that have resulted in unprecedented numbers of refugees and displaced persons. These problems are escalating costs of health services at a time when public health budgets and international assistance are decreasing under the pressure of macro-economic reforms and donor fatigue. In addition, structural reforms to health care programs have led to significant cuts in public spending, with an accompanying decline in services. These factors have contributed to the steady worsening of equitable access to health services, the decline in health status of populations and the demoralization of health workers.

In 1993, the World Bank's **World Development Report - Investing in Health** (WDR'93) made a series of proposals to address these problems. One such proposal was, that given the scarcity of available resources for health, especially in low-income countries, that the planning for and setting of priorities for essential health interventions should be based on principals of burden of disease and cost-effectiveness analysis. WDR'93 also asserted that improving and maintaining the health of the population is an integral and vital part of any country's social and economic development plan and policies.

The report analyzed problems in health care systems that hinder the delivery of services and the reduction of mortality and disability. These include the misallocation of funds toward interventions with low cost-effectiveness at the expense of highly cost-effective interventions; inequities in accessing health care whereby poor people suffer from a lack of basic health services; inefficiencies in planning, deployment of health care workers, use of facilities and purchasing of supplies; and the unnecessary reliance on specialized personnel, equipment and facilities and sophisticated tests and treatments. WDR'93 also noted that in low-income countries these problems are often compounded by highly centralized decision making, wide fluctuations in budgetary allocation, and low motivation of health care workers.

The report went on to postulate that the provision of *cost-effective packages of essential clinical and public health interventions* to 80 percent of the population in low-income countries could bring about a 32 percent reduction in the burden of disease. The World Bank estimated that these packages would cost, in low-income countries, roughly US$12.00 per capita per year to deliver; but acknowledged that this per capita allowance was greater than most health budgets allow in the majority of low-income countries.

As a result of the WDR'93, the **International Development Research Centre (IDRC, Canada)** convened an international conference in October 1993, to meet with representatives of the World Health Organization (WHO), the World Bank and other donor organizations, plus representatives from developing countries, to consider the findings and recommendations presented in the report. Conference participants decided that the hypothesis that burden of disease and cost-effectiveness analyses provide the basis for health services planning in low-income countries should be tested, and further concluded that the thesis held enough potential in such a critically important area of human need in developing countries that an investigation of its feasibility should be carried out without delay.

Canada's Decision to Support the Essential Health Interventions Project

This recommendation subsequently led to IDRC, with the support of the Canadian International Development Agency (CIDA), to develop what has now become known as the **Essential Health Interventions Project** (EHIP).

It was also decided that in order to properly address the issues of burden of disease and cost effectiveness, EHIP should also focus on a third topic raised in the report, that of improving the planning and management of health services at the district level. In recommending that EHIP proceed on this basis, it was felt that the project findings would have extremely important health implications for the future development of health care systems, not only in the "host" country where the project would be staged, but in other developing countries also.

In April and May 1994, IDRC sent letters to the ministries of health in seven eastern and southern African countries to explain the background and broad scope of the initiative, and to invite letters of interest.

Tanzania was one of the first countries to express interest in the EHIP approach. A group representing IDRC, WHO, The World Bank, and other interested parties spent three weeks in Tanzania in late November and early December 1994. Joined by representatives from Tanzania's Ministry of Health and the National Institute of Medical Research, the group met with officials from other Tanzanian ministries, the main groups conducting health research in the country, and the representatives of the major health donors in Tanzania. As a result of these meetings, it was decided that Tanzania would be the first country to test the EHIP approach.

A number of Districts were proposed as study sites by the Tanzanian Ministry of Health, and visited during this preliminary assessment. By April 1995 Rufiji and Morogoro (Rural) had been confirmed as the two districts where the Tanzanian Essential Health Interventions Project (TEHIP) would operate. Agreement to launch TEHIP was signed between the Government of Tanzania and Canada on October 20th, 1996. The TEHIP Office was established at the National Institute for Medical Research in Dar es Salaam in January, 1997. The final development of research proposals and awarding of research grants was competed by September 1997. Research commenced in the field by December 1997. Also during 1997, the first financial support to District Health Plans of the Morogoro and Rufiji Districts was provided by TEHIP.

Burden of Disease, Cost-Effectiveness and Health Sector Reform

The estimated **burden of disease** reflects the health care currently being provided, as well as the effects of all other actions which protect or damage health. The **effectiveness** of any intervention (preventive, curative or palliative) is the **reduction** in disease burden which results from the intervention. Where effectiveness is measured in the same units as burden of disease (such as DALYs), it is possible to compare interventions which addresses different problems and produce different outcomes, and to identify which interventions produce the greatest health gains for a given population. Costs of an intervention can then be incorporated to produce a measure of the cost-effectiveness, and to identify which interventions produce the largest improvement in the health status of a population at a given level of funding. WDR'93 has estimated the cost-effectiveness of a number of clinical and public health interventions commonly available in low-income countries.

Governments everywhere are struggling with questions about how best to allocate their available human and financial resources to maximize the health status of their citizens. Cost-effectiveness is a tool that may be used to define those interventions that a country will subsidize with public funds.

Tanzania is currently in the process of implementing policy changes under its Social Sector Strategy -- a strategy that has specific health sector and civil service reforms -- and the Government has indicated that the basic premise of TEHIP is consistent with the directions it has set down in its

health sector reform program, stating that an "evidence-based" approach to health planning will be able to provide them with the opportunity to pilot test certain aspects of their policies dealing specifically with the efficient and cost-effective delivery of health services at the district level.

Tanzania's Essential Health Interventions Project (TEHIP)
The **Tanzania Essential Health Intervention Project** (TEHIP) has been formulated as a research and development project, with the goal of testing the feasibility and measuring the impact of an evidence-based approach to health planning at the district level in Tanzania. District implementation began in 1997, and will continue until at least the end of the 2000/2001 fiscal year.

TEHIP comprises two dimensions which are complementary and inextricably linked to one another:

Development Dimension

to ensure adequate support for sustainable delivery of selected essential health interventions, based on the existing situation and available data; and

to utilize the project research findings in support of the sustainable development and implementation of integrated District Health Plans;

Research Dimension

to determine the information, management, policy and implementation requirements for the delivery of essential health interventions;

to measure the cost-effectiveness of these interventions and their impact through burden of disease reduction; and

to develop and support operational research, at the district and central level, which will strengthen capacity for the design, planning and delivery of cost-effective packages of essential health interventions.

TEHIP's Objectives
The broad objectives of TEHIP are to:

strengthen district level capacity (Rufiji and Morogoro-Rural Districts) to plan and set priorities using burden of disease and cost-effective analyses;

increase district level capacity to deliver effectively the selected interventions;

assess and document lessons learned in district health planning and management systems/processes; and

measure the overall impact of delivering health interventions in terms of burden of disease.

TEHIP's Core Questions
The research components of TEHIP, conducted by Tanzanian researchers, institutions and agencies, endeavour to answer three key questions:

1)   *In the context of decentralization, how, and to what extent, can District Health Management Teams (DHMTs) establish priorities and plan the allocation of resources according to local estimates of burden of disease and knowledge of the cost-effectiveness of relevant interventions?*

2)   *How, and to what extent, are these District Health Plans translated into the delivery of and use of the* essential health interventions?

3)   *How, to what extent, and at what cost, does this have an impact on the burden of disease?*

The research agenda of TEHIP is focussed on and organized around these core questions. Chapter 3 describes the TEHIP organizational framework which is derived from these questions.

For more in depth background information on the overall design of TEHIP please consult the document *Essential Health Interventions Project - Background Document, October, 1995* and other information available from the TEHIP Office at the National Institute for Medical Research, Dar es Salaam.

Chapter 3
TEHIP Research Framework

Rationale for Framework

In order to manage and coordinate the diverse research activities of TEHIP it is useful to consider them within an organizational and conceptual framework. Such a framework serves several purposes:

> It **assists the overall management** of TEHIP research by organizing a broad and complex research agenda into more manageable Components and Sub-Modules conducted by researchers with different skill sets studying reasonably distinct problematiques.

> It assists in **maintaining the demonstration nature** of EHIP by ensuring the necessary linkages between the research activities and DHMTs occur and that such research activities do not unduly intrude on, or replace, the routine information sources which Districts would normally use in their processes of planning, prioritizing, and delivering services at district level.

> It assists in keeping **research focused on** the core essential questions facing TEHIP.

Translating TEHIP's Core Questions into Research Components

TEHIP is about **testing a process of planning and priority setting**. In other words it tests an intervention on the health system itself.

The three core questions were conceptualized at the EHIP Design Workshop in Ottawa in July 1994 as:

> 1. *In the context of decentralization, how, and to what extent, can District Health Management Teams (DHMTs) establish priorities and plan the allocation of resources according to local estimates of burden of disease and knowledge of the cost-effectiveness of relevant interventions?*

> 2. *How, and to what extent, are these District Health Plans translated into the delivery of and use of the essential health interventions?*

> 3. *How, to what extent, and at what cost, does this have an impact on burden of disease?*

Questions 1 and 2 deal largely with processes. These will play out most intensively in the early years of TEHIP. **Question 3 deals mostly with the impact** of the changed processes of planning and priority setting including their impact on household behaviours. These impacts will become most evident in later years of TEHIP. Process and impact therefore provide the first levels of distinction in the research organizational framework.

Process and Impact: The Basis of the Framework

At the subsequent TEHIP Design Workshops in Washington, February 1995, and in Morogoro in July, 1995, the Sub-Group on Research was asked to elaborate how both process and impact could

best be studied. Figure 3.1 describing the research domains and topics of TEHIP summarizes the recommendations of that group.

The TEHIP Design Workshop group saw that the new approach to evidence-based District health planning processes was in effect a Health Systems Intervention. It also saw that this intervention would exert its impact on population health through the interaction between these new processes and the community. It therefore saw a need to work in three domains: Health System Intervention; Community Interaction; and Health Impacts. Respectively this would require research on three major fronts or components: District Health Planning Processes; Household Health Seeking Behaviour; and Demographic and Epidemiologic Impact.

Overview of TEHIP Research Components

A. Research Component on Health System Planning Processes.
For studies of process, much of the research falls in the domain of Health Systems researchers (Research Component A in Figure 3.1). Here, **both quantitative and qualitative studies of systems and services** would be specifically concerned with the following issues and the linkages among them:

> **Process.** The processes of planning, prioritization, and resource allocation within districts (how are priorities set? who decides them? on what basis?), and of the context and support provided by district, regional and central levels (what support is provided? is it effective?).

> **Content.** The content of plans developed to implement priority interventions and resource allocation decisions (eg. do the plans address the priority burdens and consider cost effectiveness? do the plans establish how the relevant activities are to be implemented?).

> **Context.** The extent to which district managers control resources; the capacity (personnel, skills, systems) of the district health management team to develop and implement plans; resource availability relative to needs for plan implementation; socio-cultural factors and their potential influence over plan implementation; constraints and facilitating factors; assessment of which groups support or oppose the implementation of plans, and why they do so (through for example, stakeholder analysis).

> **Implementation.** The implementation of plans in support of priority health interventions (eg. resource allocation; health services provided; service capacity; integration; costs; quality; coverage; provider compliance).

The scope and approaches to such studies are provided in Chapter 5 of this document.

B. Research Component on Household Health Seeking Behaviours
There is an arena of interaction between *process research* conducted on the DHMT's planning, priority setting and resource allocation processes for essential health interventions and *impact research* on the effect of such decisions on mortality and morbidity. This occurs at the level of household health seeking behaviours which mediate the effectiveness of the planning of essential health interventions on health impact (Research Component B in Figure 3.1). Household behaviours may both influence the very nature of DHMT planning processes and in turn will be affected by DHMT plans. It is here at the household level that health seeking behaviours, health service utilization, risk perception, household decision making, and household expenditures for health are likely to change. Qualitative and quantitative behaviour research though focused ethnographic surveys and other more structured studies (both cross-sectional and longitudinal) could reveal

important perspectives on user utilization patterns and trends, compliance, and user satisfaction which could help determine which interventions are selected, or how they are delivered, and help explain the use or non-use of essential interventions. It is at this level that trends in access and equity will also be seen.

The Demographic Surveillance System (DSS) used in the Health Impact Component (below) also provides a useful sampling frame for such studies. In some instances some of the required survey data can be collected during DSS enumeration rounds. However most of the household health seeking behaviour studies are conducted by behavioural scientists and socio-economic research specialists.

The scope and approaches for the Household Health Seeking Behaviour studies are provided in Chapter 6 of this document.

C. Research Component on Health Impact
At the other end of the continuum of research problematiques are the health impact studies, ie. studies on the effectiveness of investments in health (Research Component C in Figure 3.1). Such studies are normally in the domain of epidemiologic and demographic research. WDR'93 proposes the use of the Disability Adjusted Life Year (DALY) to measure burden of disease and cost-effectiveness. In sub-Saharan Africa, most DALYs are lost through premature mortality (80% from mortality vs 20% from disability). Half of all DALYs are lost by children under five years of age. Hence much of the impact of EHIP will probably result from improvements in child survival.

Given the preponderance of premature mortality in the burden of disease and the comparative difficulty in measuring disability versus mortality, a decision was taken to place most emphasis on mortality change as the measure of impact (i.e. age weighted, discounted years of life lost due to premature mortality or YLLs). It was considered that measuring short term changes in mortality, especially child mortality, during the course of TEHIP would require a **longitudinal demographic surveillance system (DSS) tracking all-cause mortality** at all ages, by sex, and where possible, by broad or specific cause.

Thus the Demographic Surveillance System (DSS) becomes a **major community based research component** of TEHIP and provides the sampling frame for other community based survey work of TEHIP.

A TEHIP DSS Workshop was convened in Dar es Salaam in February 1996 to develop practical field protocols for a DSS to meet the needs of TEHIP in Tanzania. Due to the limited availability of skills in operating such systems, the District DSS is conducted through contractual collaboration. A Report of the DSS Protocol Workshop is available from TEHIP.

It was further recognized that a few highly cost-effective interventions may operate largely on morbidity and not mortality (eg. school health programs for micronutrients, anthelminthics and health education). It was considered that if DHMTs choose to invest in such interventions that there might be need for limited **cross-sectional morbidity surveys** (or behaviour surveys) designed to measure the impact of such selected interventions on morbidity (or risk behaviours). Again such studies would likely be conducted through contract research by the most appropriate institution(s). No calls for such research have yet been issued since topics are dependent on the content of future DHMT plans.

Although impacts on mortality, morbidity and household behaviours will not begin to be evident until later in the course of TEHIP, baseline status must be established early. It must be appreciated that as a demonstration project, there are no control districts. Comparative data on mortality trends are

available from a variety of direct and indirect demographic methods applied elsewhere in Tanzania through continuous DSS and periodic DHS and other surveys.

D.   Component on Research and Development for Practical Tools for District Health Systems Analysis

TEHIP has both development and research dimensions. In the context of decentralized health planning at District level, new and practical tools need to be developed or adapted to assist DHMTs to undertake more evidence based planning. This is particularly so with regard to understanding local burdens of disease, changes in the burden, the cost-effectiveness of the interventions to which they allocate resources, and the community preferences with regard to District health services. For example, simple cost-tracking tools are needed to understand the actual costs of services delivered and the marginal costs of increasing coverage. A fourth Component (Component D in Figure 3.1) has been included to support the development of such tools. Their utility in the hands of DHMTs is ultimately assessed by Component A.

TEHIP Research Facilitation Office

Research under the above four components is funded by TEHIP through Research Program contracts or grants to Tanzanian institutions. Research conducted within a particular Research Component or any of its sub-Modules is the initial property of the research institutions and research teams who are free to publish results under their own auspices from within their studies (with appropriate acknowledgement of their funding source).   Research results and data are also shared with the TEHIP Research Facilitation Office of the Ministry of Health who are responsible for the overall synthesis of analyses and research across all the components and modules, and the official reporting and publishing on behalf of the MOH/TEHIP. TEHIP also oversees the coordination and linkage between and among the TEHIP Research Components, TEHIP Development Components, and the DHMT's to ensure coordinated activities, communications, and sharing of resources and data.

The following Chapter summarizes the Principal and Specific Research Objectives of each of the four Research Components of TEHIP.

Chapter 4
Objectives of TEHIP Research Components and Modules

Component A: **Health Systems Research**

District Health Planning, Prioritization, and Resource Allocation Processes

Principal Research Objective

To determine how, and to what extent, DHMTs can use locally generated information on burden of disease, cost-effectiveness, health system capacity, and community preferences to plan, set priorities, and allocate health resources.

Specific Module Objectives

Module A-1   Situational Analysis of Annual District Planning Processes

To identify and describe annual cycles of district planning, priority setting, and resource allocation processes used by DHMTs.

Module A-2   Establishing Determinants of Planning Process Effectiveness

To determine how, and to what extent, an evidence-based planning process using burden of disease and cost-effectiveness analysis can strengthen or improve planning processes;

and

To determine the factors influencing the effectiveness of these processes with particular reference to the context in which DHMTs function and the performance of the DHMTs in planning, priority setting, and resource allocation.

Module A-3   Validation and Strengthening of Planning Processes

To identify ways of strengthening the planning process at district level with respect to necessary adaptations in the context in which DHMTs do district health planning; and to additional data, tools, skills and systems required at the district level.

Component B: Health Behaviours Research
Household Health Seeking Behaviours in Relation to Essential Health Interventions

Principal Research Objective

To identify and analyze trends at household level in the utilization of selected essential health interventions provided through DHMT plans with respect to spatial, social, and economic determinants.

Specific Module Objectives

Module B-1   Situational Analysis of Initial Utilization Patterns

To identify, through rapid appraisal procedures, initial utilization patterns of the selected essential health interventions at the household level.

Module B-2   Longitudinal Qualitative Assessment of Utilization Patterns and Trends

To explore initial issues through focused ethnographic studies, and identify emergent issues and themes that impact on utilization patterns and trends over time with respect to the selected essential health interventions.

Module B-3   Longitudinal Quantitative Analysis of Utilization Patterns and Trends

To quantify the determinants of utilization patterns and trends identified in Modules B-1 and B-2, and to test key hypotheses on behavioural conditions that govern utilization patterns and trends.

Module B-4   Advancing the Community s Voice and Potential in District Health Planning

To identify community-based strategies that ensure appropriate utilization and increase effectiveness of essential health interventions and that increase effectiveness of processes through which they are planned.

Component C: *Health Impacts*
                  Direct Demographic Surveillance Systems

Principal Research Objective
      To quantify the changes in burden of disease.

Specific Module Objectives

Module C-1   Mortality Impacts

To analyze trends in mortality (discounted, age weighted, years of life lost) by age, sex and broad cause throughout the period that TEHIP operates using data from a longitudinal, direct, demographic surveillance system.

Module C-2   Morbidity Impacts

If required, to analyze trends in specific morbidity from selected causes addressed by any selected essential health intervention which is not expected to impact significantly on mortality (e.g. School Health Program).

Component D: Tools
          Practical Tools for Routine DHMT Health System Analysis and Planning

Principal Research Objective

To develop and / or validate practical tools for evidence based planning processes for the DHMT level.

Development Modules

Module D-1   **Developing and validating practical cost-tracking instruments**

Module D-2   **Developing and validating practical cost-effectiveness analysis instruments**

Module D-3   **Developing and validating practical burden of disease analysis tools within HMIS**

Module D-4   **Developing DHMT communication tools and strategies for discussing burden of disease and cost-effectiveness concepts with communities and potential beneficiaries of essential health interventions.**

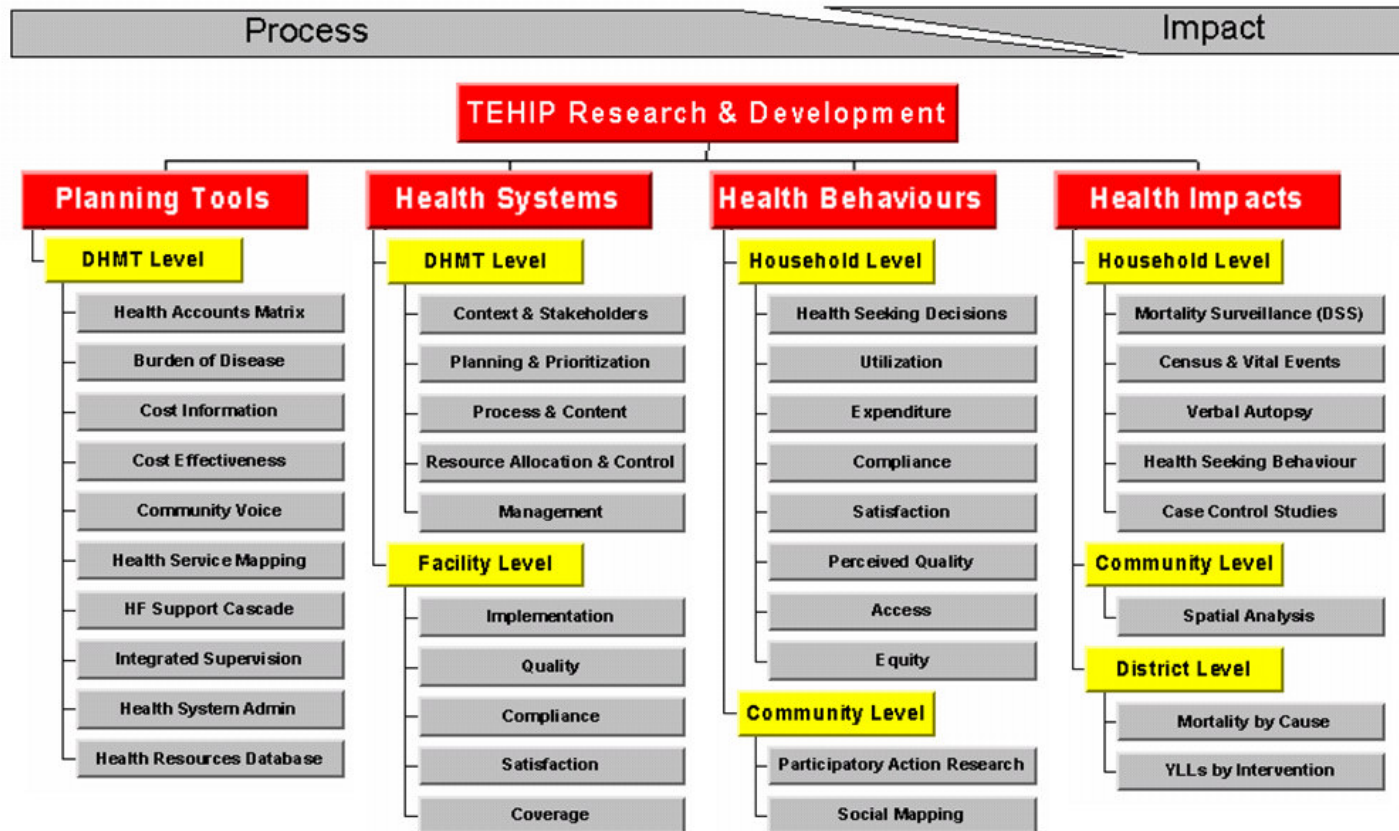| COMPONENT	PRINCIPAL OBJECTIVE	SPECIFIC OBJECTIVES OF COMPONENT MODULES
Component A: **Health Systems** District Health Planning, Prioritization, and Resource Allocation Processes	*To determine how, and to what extent, DHMTs can use locally generated information on burden of disease, cost-effectiveness, health system capacity, and community preferences to plan, set priorities and allocate health resources.*	**Module A-1 Situational Analysis of Annual District Planning Processes** To identify and describe annual cycles of district planning, priority setting, and resource allocation processes used by DHMTs. **Module A-2 Establishing Determinants of Planning Process Effectiveness** To determine how, and to what extent, an evidence-based planning process using burden of disease and cost-effectiveness analysis can strengthen or improve planning processes; and to determine the factors influencing the effectiveness of these processes with particular reference to the context in which DHMTs function and the performance of the DHMTs in planning, priority setting, and resource allocation. **Module A-3 Validation and Strengthening of Planning Processes** To identify ways of strengthening the planning process at district level with respect to necessary adaptations in the context in which DHMTs do district health planning; and to additional data, tools, skills and systems required at the district level.
Component B: **Health Behaviours** Household Health Seeking Behaviours in Relation to Essential Health Interventions	*To identify and analyse trends at the household level in utilization of Essential Health Interventions provided through DHMT plans with respect to spatial, social, and economic determinants.*	**Module B-1 Situational Analysis of Utilization Patterns** To identify, through rapid appraisal procedures, initial utilization patterns of the selected essential health interventions at the household level. **Module B-2 Longitudinal Qualitative Assessment of Utilization Patterns and Trends** To explore initial issues through focused ethnographic studies, and identify emergent issues and themes that impact on utilization patterns and trends over time with respect to the selected essential health interventions. **Module B-3 Longitudinal Quantitative Analysis of Utilization Patterns and Trends** To quantify the determinants of utilization patterns and trends identified in Modules B-1 and B-2 and to test key hypotheses on behavioural conditions that govern utilization patterns and trends. **Module B-4 Advancing the Community s Voice and Potential in District Health Planning** To identify community-based strategies that ensure appropriate utilization and increase effectiveness of essential health interventions and that increase effectiveness of processes through which they are planned.
Component C: **Health Impacts** Direct Demographic Surveillance Systems	*To quantify the changes in burden of disease.*	**Module C-1 Mortality Impacts** To analyse trends in mortality (and annual adjusted life years lost) by age, sex and broad cause throughout the period that TEHIP operates using data from a longitudinal, direct, demographic surveillance system. **Module C-2 Morbidity Impacts** To analyse trends in specific morbidity from selected causes addressed by any selected essential health intervention which is not expected to impact significantly on mortality (e.g. School Health Program).
Component D: **Tools** Practical Tools for Routine DHMT Health System Analysis and Planning	*To develop and/or validate practical tools for evidence based planning processes for the DHMT level.*	**Module D-1 Developing and validating practical cost-tracking instruments** **Module D-2 Developing and validating practical cost-effectiveness analysis instruments** **Module D-3 Developing and validating practical burden of disease analysis tools for HMIS** **Module D-4 Developing DHMT communication tools and strategies for discussing burden of disease and cost-effectiveness concepts with communities and potential consumers.**

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District, Community, and Household Level Research in TEHIP

Process   Impact

TEHIP Research & Development

Planning Tools

DHMT Level

- Health Accounts Matrix
- Burden of Disease
- Cost Information
- Cost Effectiveness
- Community Voice
- Health Service Mapping
- HF Support Cascade
- Integrated Supervision
- Health System Admin
- Health Resources Database

Health Systems

DHMT Level

- Context & Stakeholders
- Planning & Prioritization
- Process & Content
- Resource Allocation & Control
- Management

Facility Level

- Implementation
- Quality
- Compliance
- Satisfaction
- Coverage

Health Behaviours

Household Level

- Health Seeking Decisions
- Utilization
- Expenditure
- Compliance
- Satisfaction
- Perceived Quality
- Access
- Equity

Community Level

- Participatory Action Research
- Social Mapping

Health Impacts

Household Level

- Mortality Surveillance (DSS)
- Census & Vital Events
- Verbal Autopsy
- Health Seeking Behaviour
- Case Control Studies

Community Level

- Spatial Analysis

District Level

- Mortality by Cause
- YLLs by Intervention

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Chapter 5
Scope and Approaches for TEHIP Research

Component A: Health Systems Research:
District Health Planning, Prioritization, and Resource Allocation Processes

Research Context
A general description of the overall context relating the four research components to the core questions of TEHIP is presented in Chapters 1-4. Research Component A focuses on **health systems research for district health planning, prioritization, and resource allocation processes**. This Component therefore addresses research questions which demand the skills of a number of disciplines including health systems analysis, health economics, health administration, social sciences, institutional development and human resource management, health anthropology, political sciences, etc. Such skills and disciplines are often attached to different host institutions in the academic, governmental, non-governmental, and private sectors.

A particular challenge of this research is that it takes a research program rather than research project approach. It bridges and transcends disciplines of researchers in their individual capacities from different departments, faculties, and institutions in meeting multiple objectives. There are also opportunities afforded by linkages with researchers and data in the other associated Research Components of TEHIP (Component B: **Health Behaviours**, Component C: **Health Impacts**, and Component D: **Tools for DHMT's**).

Principal Research Objective
To determine how, and to what extent, DHMTs can use locally generated information on burden of disease, cost-effectiveness, health system capacity, and community preferences to plan, set priorities, and allocate health resources.

Rationale for Component A Research Modules
In order to clarify the research paths of this Component, TEHIP uses three iterative research modules to study **District Health Planning, Prioritization, and Resource Allocation Processes**. Deriving from the Principal Research Objective, each module has its own specific objective which addresses, in a sequential manner, distinct phases of description, analysis, and outcome. Each module is applied in nature, and together they lead to the design of information, guidelines, and tools which will have direct relevance to strengthened district health planning capacity. The three modules (*and their short form titles*) are:

Module A-1:   Situational Analysis of Annual District Health Planning Processes (*Describing Process*)

Module A-2:   Establishing Determinants of Planning Process Effectiveness (*Analysing Process*)

Module A-3:   Validation and Strengthening of Planning Processes (*Strengthening Process*)

Module A-1 generates descriptive information on the nature of planning processes, procedures, and instruments in each annual planning cycle over four years. It identifies potential facilitating or constraining factors which are addressed further in Module A-2.

Module A-2 analyses the influence of the TEHIP intervention (ie. the introduction of evidence based planning approaches using burden of disease and cost-effectiveness analysis) on the planning process over four annual planning cycles as well as the influence of other important influencing factors identified in Module A-1.

Module A-3 determines whether the resource allocation objectives of the planning processes have been realized, and if not, will explain reasons for discrepancies. This Module also serves as a conduit for lessons learned back to the DHMTs on an interactive basis in order to strengthen the planning process.

The research team liaises most closely with the team(s) involved in research Component D and with the DHMT. Note also that utilization of essential health interventions is addressed in Component B. The TEHIP intervention and research process contains, but is not limited to, a series of strategically-timed interactive benchmark meetings with DHMTs, at which time occur communication, exchange and planning as regards implementation of the research. These interactive moments are designed to coincide with milestones in the district health planning cycle. Each research module is described below according to its specific objectives, suggested themes and research questions, methodological approach, and expected outputs.

Specific Research Modules

Module A-1:   Situational Analysis of Annual District Health Planning Processes[1]
(Describing Process)

Objective of Module A-1 (Describing Process)
To identify and describe annual cycles of district planning, priority setting, and resource allocation processes used by DMHTs.

Themes and Research Questions of Module A-1 (Describing Process)
In order to address this objective, an essential prerequisite involves a detailed exploratory and descriptive phase focused on the existing planning structures and information used in the current district health planning process and final allocation of human and financial resources. This permits the development of analytical comparison criteria and the necessary baseline profile upon which subsequent changes can be compared and assessed. The purpose of this Module is to identify any missing variables (e.g. barriers, constraints, community preferences, etc) and complete the baseline profile. It generates qualitative and quantitative information on inputs to District planning processes, the processors themselves, and the results of the processes.

   *Essential Question***: Who in the planning process actually make input, take decisions, set priorities, and control allocation of resources (both overtly and behind the scenes, at district, regional, national and external levels, i.e., donors, etc)?**

Related questions of interest are: Who are the stakeholders in setting priorities? What role does the community play in setting priorities? What role do key stakeholders play in setting priorities?

   Essential Question: **How do DHMTs plan and set priorities for the District Health System and to what extent do plans get reflected in resource allocation?**

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[1]   The term *Planning Processes* as used here includes the processes of planning, priority setting, budgeting, and resource allocation decisions.

Related questions of interest are: What are the processes of planning, priority setting, and resource allocation? What is the content of District Health Plans? How do plans relate to long-term goals of District? What priority setting tools are used? At what levels are priorities determined? How do priorities for interventions relate to burden of disease and cost-effectiveness? How do DHMTs monitor and analyze allocation of District health staff?

> *Essential Question:* **Does the process result in a "quality" plan?**

Related questions of interest are: What is the feasibility of implementing the plan? What is the acceptability of the planning process to stakeholders? Does the plan have ability to address unexpected problems within a planning period?

Methodological Approaches of Module A-1 (Describing Process)

The approach includes **exploratory studies** to identify the criteria for an analytical framework to be used in assessing subsequent changes in the planning process and to identify any missing variables such as barriers, constraints, community preferences, etc. This requires focus groups, structured interviews, observations, etc. These studies are followed by **descriptive studies** to establish the nature and extent of existing planning, priority setting, and resource allocation process against which process changes and outcomes can be assessed. This requires content analysis of plans, document reviews, semi-structured interviews, surveys, and structured (non-participatory) and semi-structured (participatory) observation.

In order that the information generated in this phase is available to Module A-2 (Analysing Process) in time for the annual planning cycle (usually starting in the second quarter of the fiscal year), this Module must be completed within the first fiscal year quarter of each year, i.e: the period between July and September. Module A-1 (Describing Process) are repeated at the same time each year.

Expected Outputs of Module A-1 (Describing Process)

a platform for critical appraisal of the potential value of burden of disease/cost effectiveness analysis (BOD/CEA) data in significantly assisting and strengthening the planning process is established

other data, apart from economics and BOD/CEA (e.g. community preferences, system capacity) as essential ingredients for optimal district health planning identified and enlisted

Module A-2: *Establishing Determinants of Planning Process Effectiveness (Analyzing Process)*

Specific Objective of Module A-2 (Analyzing Process)
To determine how, and to what extent, an evidence-based planning process using burden of disease and cost-effectiveness analysis can strengthen or improve planning process; and to determine the factors influencing the effectiveness of the planning processes with particular reference to:

> *the context in which DHMTs function (e.g.. the national/regional organizational, technical, socio-economic, and political context); and*

> *the performance of the DHMTs in planning, priority setting and resource allocation*

Themes and Research Questions of Module A-2 (Analyzing Process)

This module is essentially analytical in nature and initiates the formative (process) evaluation phase of Component A. It addresses the monitoring and measurement of changes in planning process and activities which are stimulated through the incorporation of BOD/CE analysis in particular, and other information as appropriate. This Module builds upon the descriptive base of Module A-1.

*Essential Question***: How, and to what extent, is the evidence based planning process used to set priorities and allocate resources?**

Related questions of interest are: What data or evidence is used? How reliable is the evidence used? How timely is it made available? How is that evidence used? How, and to what extent does an evidence based planning process strengthen or improve the DHMT planning, priority setting and resource allocation process? To what extent does it improve the plan? What are the consequences for effectiveness of the planning process of using that evidence? Is the evidence used to persuade opposing or facilitating stakeholders to change their view?

Essential Question: **What are the most important influencing factors (facilitating and constraining) both within districts and outside the district, for the planning, prioritization, and resource allocation processes?**

Related questions can be organized under the following headings:

Process
How do criteria of the planning processes identified in Module A-1 influence planning effectiveness? How important are the team-working, planning, and communication skills of DHMTs? How does monitoring and evaluation influence planning? What is the extent of consultation within the process?

Context (e.g., organizational, technical, socio-political, socio-economic)
Who and what most influence priority setting and resource allocation decisions? How important are the formal lines of accountability among district, regional, national, and health donors and vertical programmes with regard to resource use and control? What is their influence over decision making? How important are 'informal' conflicts for resource control and decision making power? How adequate are the structures and processes for community involvement in decision making processes? How do resource allocation decisions and budgeting processes link to or influence the planning process? How important is the health systems capacity to deliver services?

Actors
Who are they, what are their interests, and how do they influence effectiveness of the planning processes? To what extent do prevailing planning processes influence stakeholders?

Approach of Module A-2 (Analyzing Process)
This module entails formative (process) evaluation to monitor and measure changes in each annual planning process and to ascertain the degree to which changes are likely to produce desired results. This will require observation; semi-structured interviews with DHMTs, stakeholders, and communities; document reviews and comparisons; content analysis of plans; stakeholder or political analysis; and surveys in relation to health seeking behaviours seen in Component B. This module is implemented throughout the project but is particularly active during the planning cycle (fiscal quarter 3).

Expected Outputs of Module A-2 (Analyzing Process)
the potential value of BOD/CEA data in significantly assisting and strengthening the planning process critically appraised

other data or evidence, apart from economics and BOD/CEA, identified as potentially essential ingredients for optimal district health planning identified

Module A-3: *Validation and Strengthening of Planning Processes (Strengthening Process)*

Specific Objective of Module A-3 (Strengthening Process)
To identify ways of strengthening the planning process at district level with respect to:

necessary adaptations in the context in which DHMTs do district health planning;
additional data, tools, skills and systems required at district level.

Themes and Research Questions of Module A-3 (Strengthening Process)
This Module embodies the synthesis of Modules A-1 (Describing Process) and A-2 (Analysing Process). Although it conducts essentially a summative evaluation, Module A-3 (Strengthening Process) starts at the beginning of the Project so that it can translate relevant and important research findings and recommendations from any Modules of TEHIP Research Components A, B, C and D back into discussion with the DHMTs and key actors in the study districts, and to other districts if required. This facilitates dialogue and ensures feasible suggestions are made at predetermined intervals.

Essential Questions:

What are the lessons learned with regards to the planning process? (e.g. What is being learned that has practical application? What works in the new processes? What lessons can be generalized beyond the study districts?)

What are the minimal essential tools, instruments and information?

Approach of Module A-3 (Strengthening Process)
This Module is a summative (outcome) evaluation to determine whether objectives of planning, priority setting, and resource allocation processes have been realized - and if not, to explain reasons for discrepancy; provide recommendations for changes to process; and / or to how external factors must be accommodated by planning processes (content analysis, interviews, surveys, observation, focus groups, etc.). This Module is implemented throughout the planning cycle in each year.

Expected Outputs of Module A-3 (Strengthening Process)
- guidelines and tools for incorporating burden of disease/cost-effectiveness, community preferences, and health system capacity considerations into District Health Planning assessed

- evaluation and monitoring system for assessing execution of District Health Plans established

- information necessary to identify important constraints and facilitating factors that can lead to positive change appropriate to assist district planning methodology provided.

Chapter 6
Scope and Approaches for TEHIP Research

Component B: Health Behaviours:
Household Health Seeking Behaviour in Relation to Essential Health Interventions

Research Context

A general description of the overall context relating the four research components to the core questions of TEHIP is presented in Chapter 1-4 of this document. Research Component B focuses on **household health seeking behaviours in relation to essential health interventions**. This Component therefore addresses research questions which demand the skills of a number of disciplines such as health anthropology, health demography, health sociology, health systems analysis, health economics, epidemiology, etc. Such skills and disciplines are often attached to different host institutions in the academic, governmental, non-governmental, and private sectors.

A particular challenge of this research is that it takes a research program rather than research project approach. It bridges and transcends disciplines of researchers in their individual capacities from different departments, faculties, and institutions in meeting multiple objectives. There are also opportunities afforded by linkages with researchers and data in the other associated Research Components of TEHIP (Component A**: Health Systems**, Component C: **Health Impacts**, and Component D: **Tools for DHMTs**).

The multi-faceted research in this Component is designed to understand behaviours and utilization patterns at the household level with respect to the selected essential health interventions. Two basic approaches are pursued: (i) a combination of qualitative and quantitative studies to understand the utilization patterns in relation to essential health interventions; and (ii) a process of participatory action research to identify and assist community initiatives that will strengthen the district health planning process and increase utilization of the planned interventions. The research team liaises most closely with the team(s) involved in research Component D and with the DHMT. The TEHIP intervention and research process contains, but is not limited to, a series of strategically timed interactive benchmark meetings with DHMTs which assure communication, exchange and planning as regards implementation of the research. These interactive moments are designed to coincide with milestones in the district health planning cycle.

Principal Research Objective
To identify and analyze trends at household level in the utilization of selected essential health interventions provided through DHMT plans in respect to spatial, social, and economic determinants.

Rationale for Component B Research Modules
In order to clarify the research paths of this Component, TEHIP uses four iterative research modules in this component to study **Household Health Seeking Behaviours in Relation to Essential Health Interventions**. Deriving from the Principal Research Objective, each module has its own specific

objective which addresses, in a sequential manner, distinct phases of description, analysis, and community participation. Each module is applied in nature, and together they lead to the design of information, guidelines, and tools which will have direct relevance to strengthened district health planning capacity. The four modules (and their short form titles) are:

Module B-1:   Situational Analysis of Initial Utilization Patterns (***Utilization Situation Analysis***)

Module B-2:   Longitudinal Qualitative Assessment of Utilization Patterns and Trends (***Utilization Qualitative Analysis***)

Module B-3:   Longitudinal Quantitative Analysis of Utilization Patterns and Trends (***Utilization Quantitative Analysis***)

Module B-4:   Advancing the Community's Voice and Potential in District Health Planning (***Community Preferences***)

Module B-1 is a short situation analysis of the initial utilization patterns at the beginning of TEHIP using Rapid Assessment Procedures and is necessary to assist the design of Modules B-2 and B-3.

Module B-2 uses focused ethnographic methods to explore household behavioural issues (facilitating and constraining) related to trends in utilization of selected essential health interventions over the course of TEHIP.

Module B-3 uses quantitative approaches to understanding the determinants, levels and trends of utilization patterns identified in Modules B-1 and B-2 and to test key hypotheses that govern these patterns.

Module B-4 uses participatory action research approaches with the DHMTs to identify community strategies for voicing community preferences in the District planning process and to assist appropriate utilization of essential health interventions.

Each research module is described below according to its specific objectives, rationale, themes and research questions, methodological approach including sampling framework and time frames, and expected results.

Specific Objectives and Modules

Module B-1:   Initial Situational Analysis of Utilization Patterns

Specific Objective of Module B-1 (Utilization Situation Analysis)
To identify, through rapid assessment procedures, initial utilization patterns of the selected essential health interventions at the household level.

Rationale of Module B-1 (Utilization Situation Analysis)
Information on initial utilization patterns at the household level must first be generated and linked to the results from the descriptive studies of Component A (see chapter 5). In addition, preliminary results from Module B-2 on **Qualitative Analysis of Utilization Patterns,** linked with the results of this **Situational Analysis** module, inform the construction of measures and instruments for Module B-3 on **Quantitative Analysis of Utilization Patterns**. Given the nature of this situational analysis step and the precision required, the data in Module B-1 is generated by rapid assessment procedures (RAP).

Research on household health seeking behaviour is needed to better understand the links between household needs, preferences, and decision making, and the degree to which these household and community needs relate to the choice and utilization of selected *essential health interventions*. RAPs are used for two fundamentally distinct types of essential interventions: (1) utilization of a selected tracer *clinical (curative) intervention;* and (2) utilization a selected tracer *public health (preventive) intervention.*

Themes and Research Questions of Module B-1 (Utilization Situation Analysis)
Some preliminary themes that are pursued relate to health care seeking behaviour and decisions, illness narratives, satisfaction and compliance in relation to the essential health interventions at the household level (access/equity).

> *Essential Questions*:

- Who makes decisions about whether to seek care and where to go?
- Does the person making the decision differ according to the person who is ill or the symptoms?
- What are the sources of care typically sought for particular sub-groups (e.g. combinations of people and symptoms)?
- What are the typical prices paid for different types of providers, different types of treatment, transport, preventive intervention, etc.?
- What types of preventive interventions are taken and what are the typical costs of those?

Methodological Approach of Module B-1 (Utilization Situation Analysis)
A rapid assessment procedure (RAP) is employed using key-communicator and key-informant interviews that are complemented by focus group discussions. *Key communicator* interviews are conducted with community opinion leaders and/or leaders who are linked to participatory processes; i.e., individuals who are positioned to voice the concerns, needs, and preferences of representative groups in the community. *Key respondents* are at the household level. The results of this module generate the key variables and measures of the quantitative analysis, Module B-3. In addition, the information can be filtered into the DHMT planning cycle.

Focus group discussions (FGD) also complement these in-depth interviews with key communicators and key respondents. The purpose of these complementary FGDs is to validate information. The triangulation of approaches is felt crucial to assure the data quality.

> *Sampling* This module generates information that is specific for the major socio-ecological strata of each district. There are four strata for Morogoro (Rural) District: mountain area; rural plains/savanna; and the peri-urban belt and four strata for Rufiji District; the delta, the river flood plain, and the northern and southern uplands. *Key-communicator*s are identified in each stratum in sampled villages (simple random sample). Within the village the key communicators are a purposeful selection of informants based on existing knowledge of the communities. The approach of <u>deviant case sampling</u> is done in order to maximize identification of the factors of interest. *Key respondents* are identified at household level in each stratum in sampled villages (simple random sample).

> *Time Frame*. The field work and first analysis of this module will take a maximum of nine months.

> **Expected Results of Module B-1 (Utilization Situation Analysis)**

1.   patterns of utilization qualitatively described
2.   measures and means to be pursued are established
3.   final stratification of districts is delineated

Module B-2:   *Longitudinal Qualitative Assessment of Utilization Patterns and Trends (Utilization Qualitative Analysis)*

Specific Objective of Module B-2 (Utilization Qualitative Analysis)
To explore initial issues through focused ethnographic studies, and identify emergent issues and themes that impact on utilization patterns and trends with respect to the selected essential health interventions.

Rationale of Module B-2 (Utilization Qualitative Analysis)
An ethnographic research module is necessary to identify problems and generate hypotheses on household health seeking behaviours in relation to selected essential health interventions that are not elicited through RAP approaches of Module B-1 or through the quantitative surveys of Module B-3. It is essential to use an ethnographic approach so as to understand the barriers and constraints to health seeking and utilization patterns (whether politically, economically, or culturally determined), the context of health care seeking not presently understood (e.g., environmental issues), and other patterns of resistance (dilemmas in health care utilization, coercion, control). While Module B-1 mainly focuses on '*what*' questions , this module focuses on '*why'* questions.

Themes and Research Questions of Module B-2 (Utilization Qualitative Analysis)
The issues and themes identified in this research are linked to a sub-set of "tracer" essential health interventions selected by the DHMT. The specific research questions are established once the interventions are selected. Some preliminary issues and themes, all as related to essential health interventions, are as follows:

- community resources, preferences and concerns with respect to priorities
- folk taxonomies of disease and illness and the interpretation of signs and symptoms
- risk perceptions and behaviours
- perceptions of peoples who are vulnerable
- beliefs and experiences influencing treatment and prevention patterns
- people's perception of the health care delivery system and their concept of facilitating and inhibiting factors for utilization

Methodological Approach of Module B-2 (Utilization Qualitative Analysis)
This research module approaches the selected themes from two angles.

The first angle is ethnographic and is linked to selected tracer essential health interventions identified by the DHMT (one clinical and one public health intervention).   In general terms, the ethnographic work focuses on the diseases and interventions in question, and the behaviours, experiences, emotions, and beliefs that are linked to these diseases. For clinical interventions, descriptive illness narratives are elicited at spells of illness; for example, on the last episode of the illness of relevance in representative households with key respondents.   In this research, it is essential to study the experiences of a variety of subjects and persons at particular risk associated with the intervention in question. A combination of observational techniques (e.g., participant observation), in-depth interviews with key respondents and group discussions are applied.

The second angle examines people's health perspectives in relation to their context of risk perception, risk behaviour, compliance and vulnerability of persons targeted at risk specific to the selected tracer

interventions.   In-depth interviews, focus group discussions are conducted with *key communicators* from the popular, folk, and professional health domains.

Sampling Stratification is as outlined and applied in Module B-1. Villages are selected by cluster sampling. Households are selected by a systematic random sample which will allow the selection of the household key-informants. This sampling procedure is also harmonized with the sampling in Module B-3, and sampling is with both the same and independent clusters.   Key respondents and members for group discussions are selected in the sampled villages by <u>primary selection</u> using the concept of <u>intensity sampling</u>. Key communicator sampling is opportunistic and voluntaristic.

Time Frame   The ethnographic research begins at the same time as the Module B-1 and covers two annual planning cycles. The timing of some studies may have a seasonal character depending on the incidence of the disease(s) in question.

Expected Outputs of Module B-2 (Utilization Qualitative Analysis)

1. qualitative evidence of behavioural patterns and trends at the household level are described as a basis for further work in Module B-3
II. barriers and constraints to the utilization of essential health interventions delineated
III. risk profiles described and interpreted
IV. contributing factors for the health development process are identified at community level
V. information regarding characteristics and distribution of beneficiaries and non-beneficiaries of Essential Health Interventions offered by the District.

Module B-3:   Longitudinal Quantitative Analysis of Utilization Patterns and Trends

Specific Objectives of Module B-3 (Utilization Quantitative Analysis)

This module has both a descriptive and an analytic objective

To quantify the determinants of utilization patterns and trends identified in Module B-1 (Utilization Situation Analysis) and Module B-2 (Utilization Qualitative Analysis).

To test key hypotheses on behavioural conditions that govern utilization patterns

Rationale of Module B-3 (Utilization Quantitative Analysis)

Module A-1 and Modules B-1 and B-2, through their description of utilization patterns and trends, provide the foundation for a quantitative approach and subsequent hypothesis testing in this Module B-3. Module B-3 establishes and tests a series of hypotheses to determine how wide-spread and generalizable are these conditions. This Module is also viewed as a validation exercise for issues and themes and therefore contributes to the triangulating of the behavioural evidence on household health seeking behaviours. This Module allows the multi-disciplinary teams to test the reliability of the instruments developed, as well as the validity and generalizability of emerging hypotheses.

Themes and Research Questions of Module B-3 (Utilization Quantitative Analysis)

This module identifies observed utilization patterns and attempts to explain differences in access. TEHIP follows the following domains of inquiry:

Mapping of health seeking behaviour patterns for essential health intervention users and non-users, specifically:

the spatial distribution of public, private, and voluntary (e.g., NGOs, religious groups) providers;
the spatial relationship between households and the different types of care providers, both traditional and modern;
educational levels relative to use of private, public, and voluntary sectors;
groups served (over served and undeserved) relative to risk groups, etc.

 Curative care questions related to the tracer essential health interventions:

Two types of questions are asked. The first type of questions ask all household individuals about the last time they sought care: symptoms, who they went to or did they self medicate; why they chose that form of treatment; costs (time and money); etc. The second type of questions concentrate on particular tracer conditions thought to be important in the area. For example, because IMCI is one of the interventions, the questionnaire should ask about fevers, symptoms of ARI, and diarrhoea in children in the last two weeks, etc., and go on to explore their use of the various potential sources of care.

Preventive behaviours relating to the tracer essential health interventions:

Depending on the essential health interventions selected by DHMT, this might include coverage of vaccination for children, antenatal visits for pregnant women, or types of mosquito protection.

Perceived reasons for these health seeking behaviours:

This will include perceptions of satisfaction and quality of services at the different health care sites.

Socioeconomic determinants of behaviour correlated with the above information:

This also includes a wealth or income variable, age and sex of the informant, household size, and location.

Compliance with regard to use of tracer essential health interventions:

For example, the extent to which persons at risk sleep under nets; compliance with drug regimens -- e.g., anti-malarials, antibiotics, etc.

Methodological Approach of Module B-3 (Utilization Quantitative Analysis)
For the descriptive part, a quantitative instrument -- preferably a semi-structured interview -- are designed with constructs and questions informed by relevant issues and themes from Module A-1 and Modules B-1 and B-2. In addition, a mapping exercise is conducted for the social, environmental, household, and provider conditions leading to a presentation of utilization patterns. These surveys, administered to a cross-section of households once per planning cycle, will also allow an evaluation of utilization trends and health seeking behaviours.

The approach for the analytic part will be established once the specific hypotheses to be tested are formulated as a result of the descriptive part.

Sampling Stratification is as outlined and applied in Module B-1. Villages are selected by cluster sampling. Households are selected by a random sample which will allow to select the adults and children to be interviewed. Once selected, these individuals will form a cohort to be followed

through two planning cycles and should cover rainy and dry seasons. This sampling procedure will also be harmonized with the sampling of key respondents in Module B-2.

It is strongly recommended that the cohort approach should be compared with results from repeated cross-sectional surveys.

Time Frame The descriptive part will occur over a maximum of 24 months and will lead to the analytic part that will last for another 12 months.

Expected Outputs of Module B-3 (Utilization Quantitative Analysis)
maps of EHI utilization patterns and access differentials produced for the various strata and relative to provider, sector, and consumer variables

determinants and factors of EHI utilization quantified and compared to the qualitative results of modules B-1 and B-2

at least two key hypotheses on utilization of selected interventions established and tested in each district

information regarding characteristics and distribution of beneficiaries and non-beneficiaries of Essential Health Interventions offered by the District

Module B-4:   Community s Voice and Potential in District Health Planning (Community Preferences)

Specific Objective of Module B-4 (Community Preferences)
To identify community-based strategies that ensure appropriate utilization and increase effectiveness of essential health interventions and that increase the effectiveness of the processes through which they are planned.

Rationale of Module B-4 (Community Preferences)
Since community preferences are a required ingredient of the TEHIP evidence-based planning process, a need exists to have community views (perspectives, felt-needs) identified, understood, and communicated so as to be part of the DHMT planning process. In the context of the rationing of health care resources at the district level, there is also the need for stakeholders in the community to understand the decision-making processes of the DHMT and the rationale and justifications made for essential health intervention decisions. A participatory action research (PAR) process (process of action-reflection-action) should gradually result in community members participating in this process (underscoring the issue of ownership in decision making), opening emergent roles of influence in the decision making process, and also, the organization of sustainable, productive, and participatory criteria for ongoing district health management decision making (equity, justice). This module deals with the potential of communities/groups/associations to assist in health planning and health development. It is the essence of participatory action research to identify institutions and potential that can be carried forward to application.

Themes and Research Questions of Module B-4 (Community Preferences)
the communities' groups/groupings that have a potential in contributing to health development and its planning

the communities' groups/groupings/associations that bear a potential to support effective implementation of the selected interventions

the assistance required to capitalize on these potentials and initiatives in the planning process

Methodological Approach of Module B-4 (Community Preferences)

Social animators, working in community settings to accomplish health and development goals and who are guided by an experienced PAR researcher, are the agents of facilitation in this reflection-action, evaluation, and monitoring process. They are instrumental as well in constructing appropriate mechanisms for influencing the decision-making process.

The PAR Module will initially be engaged for the purpose of participating in the creation of an effective procedural framework for communicative actions towards health development. This procedural framework will establish criteria for: decision-making; delineate evidence/data which informs these decisions; effective organizational structures; recommended guidelines; potential options; a forum for decision making; etc.   Subsequently, PAR activities, initially linked to the selected interventions, may spill over into community based health and development activities.

      Sampling Sampling issues in PAR are usually voluntaristic, involving individual persons, groups, associations who voice the concerns, worries, and felt-needs of vulnerable groups in the population and state own initiatives/solutions to the problems raised. In each district at least one village per stratum is selected based on existing knowledge/information on its potential to serve as initial PAR site.

      Time Frame The community preferences participatory action research module begins approximately at the start of Modules B-1 and B-2 of will continue periodically throughout the TEHIP project period.

      Expected Outputs of Module B-4 (Community Preferences)
approaches for introducing community preferences in the health and development process established and validated

a procedural framework for effective health planning at district level and driving health development involving decision-makers, stakeholders and beneficiaries pilot-tested

household survey schemes and schedules to monitor coverage, access, and user satisfaction.

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Chapter 7
Scope and Approaches for TEHIP Research

Component C: Health Impacts:
Direct Demographic Surveillance System

Research Context

A general description of the overall context relating the four research components to the core questions of TEHIP is presented in Chapters 1-4 of this document. Research Component C focuses on Health Impacts: Direct Demographic Surveillance Systems in relation to health interventions. This component therefore addresses research questions which demand the skills of several disciplines such as: health anthropology, health demography, health sociology, health systems analysis, development studies, population studies, health statistics, health economics, nutritionists, and epidemiology to name but a few. Such skills and disciplines are often attached to various institutions in the academic, governmental, non-governmental and private sectors.

A particular challenge of the TEHIP's research is that it takes a research program rather than research project approach. It bridges and transcends disciplines of researchers in their individual capacities from different institutions in meeting multiple objectives. There are also opportunities afforded by linkages with researchers and data in other associated Research Components of TEHIP. These include, Component A: **Health Systems** Component B: **Health Behaviour**, and Component D: **Tools for DHMTs**.

Principal Research Objective
To document burden of disease (BOD) f or priority setting and to quantify changes in the burden of disease to assess impact of interventions.

Rationale for Component C Research Modules
The need to quantify the BOD and use it as an indicator in health services and health studies is justified by several reasons. The indicator can assist in setting health service priorities, both curative and preventive. In addition it is possible to use it for identifying groups that are disadvantaged in terms of health provision and thus devise interventions that target these groups. The BOD indicator can as well be of use in setting additional health research priorities. Last but not least, this indicator provides a comparable measure of output for intervention, programme and sector evaluation and planning. In this respect the main thrust of TEHIP, increasing capacity to plan and deliver effective health interventions at district level, can be evaluated using the findings of this Component.

Component C has two interrelated research modules determined to quantify the burden of disease, namely, **Module C-1: Mortality Impact, and Module C-2: Morbidity Impacts.**   Module C-2 is dependent on intervention choices of DHMTs and may not be required.

Specific Research Modules

Module C-1: Mortality Impact
Specific Objective: *To analyze trends in mortality (discounted, age weighted, years of life lost) by age, sex and broad cause through out the period that TEHIP operates using data from a longitudinal, direct demographic surveillance system.*

Rationale of Module C-1

Measuring the BOD is a crucial exercise in any health system. The BOD could feed into a useful tool for effective planning as well as evaluation of health services and interventions. In many populations the BOD is a reflection of the amount of investment in the health sector and also consequences of operations that safeguard or damage health. As far as TEHIP is concerned the quantification of the BOD is a crucial strategy towards evidence based planning since it has dual purposes. Firstly, it can be used as a tool to assist districts, especially the DHMTs, in their planning processes and secondly, as a research tool to assess the impact of various health interventions so far introduced in the districts.

Themes and research questions

Module C-1 attempts to answer the following major questions.
- o *What is the future stream of time lost due to premature death?*
- o *What are the causes (determinants) of death?*
- o *Who carries the mortality burden?*
- o *Where is the place of death?*
- o *What are the health seeking behaviours in the illness leading to death?*
- o *What are the estimates of the incidence of deaths over time per population?*
- o *What are the changes in the burden of disease overtime?*

Methodological Approach of Module C-1

Module C-1 employs a longitudinal direct demographic surveillance system (DSS) to collect health status data. It involves a continuous surveillance at household level for demographic and socio-economic statistics such as age, sex, household demographic composition, aspects of nuptiality, deaths, migration, education and occupation using census taking. The DSS is considered as the most relevant methodology to obtain up-to-date and accurate data on the impact of interventions to health where mortality is high and vital registration system is either non-existent or incomplete. Using households as the main unit of analysis is not unique to Rufiji DSS or Tanzania. The approach, developed by the Population Council at Navrongo, Ghana, is now used in about eleven sites across Africa.

The DSS approach uses a population size between 70 000 and 100 000 combining both census taking and use of key informants. It begins by baseline data collection using pre-coded forms. Then after every four months update is conducted to capture events such as migration and nuptiality issues. The major role of key informants is to report all births and deaths as they occur in the study area. The key informants consist of community leaders. In addition the DSS conducts verbal autopsies on all registered deaths to ascertain their main cause. The interviews are normally conducted on a person or relative who was very close to the deceased at the time of death.

Expected Outputs

The DSS data can generate the following distributions.
- Direct and underlying cause of death
- Population size and structure
- Average household size
- Household leadership by gender
- Relationship with head of household
- Population distributions: age (dependency ratio), sex (sex ratios), and density
- Population movement i.e. migration
- Trends in terms of births e.g. birth seasonality, deaths e.g. death seasonality, migration and trends in nuptiality (marriage, separation, divorces, widowhood and remarriage)

- Levels of formal education
- Names pattern analysis
- Levels of child orphanhood and adoption.

Module C-2: Morbidity Impacts

Specific Objective
To analyze trends in specific morbidity from selected causes addressed by any selected essential health intervention that is not expected to impact significantly on mortality (e.g. School Health Program).

Rationale for Module C-2
Module C-2 aims at analyzing trends in specific morbidity from selected causes. These are causes selected or addressed by any essential health intervention that is assumed to have major impact on mortality. Such an analysis is important in designing both curative and prevention programmes for major killer diseases. Information obtained can be used to justify training programmes for clinical and public health practitioners as well as generating relevant health intervention priorities.

Themes and Research Questions
Module C-2 attempts to answer the following major questions.

What are the estimates of the incidence and prevalence of non-fatal diseases?
What are the values that the individuals or community members place on different health states?

Methodological Approach
Like Module C-1, this module will also rely on the DSS approach in terms of data collection. In addition Module C-2 will employ the SF-36 questionnaire, one of the best known instruments for measuring self-rated health status. The Module will also make use of the available hospital based disease specific registries for additional details of characteristics of patients with particular disease problems. In order to get into the insight of the morbidity selected focus group discussions will be conducted specifically to determine the attitude of the community members to common diseases as well as health facility.

Expected Output
Identification of major causes of disability and community health needs and priorities; assessment of the effectiveness of the health care system; identify and make efficient use of resources; and a tool for measuring the effectiveness of health interventions in the district.

Scope and Approaches for TEHIP Research

ACKNOWLEDGEMENTS:
The design of EHIP, and ultimately TEHIP, is the product of a broad consultative process which commenced in 1994. A number of fora convened by EHIP provided opportunities for ideas to be brought forward.   Many of these ideas have found expression in one way or another in the scope of research applied to TEHIP. TEHIP owes much to the contributions of those who participated in its design through these meetings. The following groups have been pivotal in setting the course of TEHIP and its research:

Conceptual Design
The overall conceptual design of EHIP was put in place by its initial **Steering Committee**

Jose-Luis Bobadilla, World Bank
Joe Cook, Edna McConnell Clark Foundation
Don de Savigny, IDRC
Joel Finlay, IDRC
Tore Godal, WHO
Demissie Habte, ICDDR, B
Dean Jamison, World Bank
Michel Jancloes, WHO
Steve Jarrett, UNICEF
Maureen Law, IDRC
Ernest Loevinsohn, CIDA
Tom Nchinda, WHO
Ebrahim Samba, WHO
Rogatian Shirima, Tanzania Ministry of Health
Jim Tulloch, WHO

As EHIP took root in Tanzania, the International Steering Committee evolved to an **International Advisory Committee**:

Agnes Aidoo, UNICEF
Joe Cook, Edna-McConnell Clark Foundation
Joel Finlay, IDRC
Charles Griffen, World Bank
Maureen Law, IDRC
Irene Mathias, IDRC
Don McMaster, CIDA
Raymond Mrope, Tanzania Ministry of Health
Eva Rathgeber, IDRC
Ebrahim Samba, WHO
Jim Tulloch, WHO
Dirk Warning, WHO

Once work commenced on the ground in Tanzania, the International Advisory Committee evolved to a **National Steering Committee:**

Emmanual Malangalila, World Bank, Tanzania
R. Mariki, Tanzania Planning Commission
Raymond Mrope, Tanzania Ministry of Health
Victoria Mushi, CIDA Tanzania
S. Sijaona, Tanzania Prime Minister's Office
Gabriel Upunda, Tanzania Ministry of Health
Dirk Warning, WHO WR Tanzania

Research Design
Although research and development are inextricably linked, much effort has been invested in developing a research design in TEHIP which would hold plausibility for policy makers and planners. The conceptualization of TEHIP research emerged from a series of consultative workshops held in: Ottawa in July, 1994; Geneva, October, 1994; Washington, February, 1995; and Morogoro, July 1995 attended variously by:

Neil Andersson, CIET International
Elizabeth Badley, University of Toronto
Essy Banniasad, Dalhousie University
Enis Baris, IDRC
Fred Binka, Ghana Ministry of Health
Robert Black, John Hopkins University
Jose-Luis Bobadilla, World Bank
Mariam Claesom, WHO
Peter Cowley, World Bank
Don de Savigny, IDRC
Timothy Evans, Harvard University
Joel Finlay, IDRC
Pierre Fournier, University of Montreal
Larry Gelmon, IDRC
Lucy Gilson, London School of Hygiene and Tropical Medicine
Tore Godal, WHO
Demissie Habte, ICDDR,B
Margaret Hillson, Canadian Public Health Association
Dean Jamison, World Bank
Harun Kasale, TEHIP
Peter Kilima, Tanzania Ministry of Health
Henry Kitange, Tanzania Ministry of Health
Maureen Law, IDRC
Nicolaus Lorenz, Swiss Tropical Insitute
Wilbald Lorri, Tanzania Food and Nutrition Centre
Karen Madden, IDRC
Conrad Mbuya, TEHIP
Anne Mills, London School of Hygiene and Tropical Medicine
Bertha Mo, IDRC
Lawrence Munyetti, Tanzania Ministry of Health
Christopher Murray, Harvard University
Marguerite Pappaioanou, US CDC
Dev Ray, WHO
Peter Riwa, Tanzania Ministry of Health
David Ross, London School of Hygiene and Tropical Medicine
Joas Rugemalila, Tanzania National Institute of Medical Research
Steve Sapire, WHO
Sally Stansfield, McGill University

George Stroh, US CDC
Marcel Tanner, Swiss Tropical Institute
Peter Tugwell, University of Ottawa
Gerome van Ginneken, Netherlands Interdisciplinary Demographic Unit
Gabriel Upunda, Tanzania Ministry of Health
Cesar Victora, Federal University of Pelotas
Russell Wilkins, Health Canada
Dennis Willms, McMaster University

The general scope and core protocols for **Component A (Health Systems) and Component B (Health Behaviours)** were prepared by an ad hoc group convened in Basel, May 1996 by a Sub-Committee of the Scientific Advisory Committee. The group consisted of:

Doug Angus, Ottawa University
Fred Binka, Ghana Ministry of Health
Don de Savigny, IDRC
David Evans, WHO
Lucy Gilson, University of Witswatersrand
Andrew Kitua, Ifakara Centre
George Lwihula, Muhimbili Medical Centre
Conrad Mbuya, TEHIP
Graham Reid, IDRC
Marcel Tanner, Swiss Tropical Institute
Mitchell Weiss, Swiss Tropical Institute
Dennis Willms, McMaster University

The approach to **Component C (Demographic Surveillance)** emerged from a workshop on DSS methods held in Dar es Salaam in February, 1996 attended by:

Joanna Armstrong-Schellenberg, Ifakara Centre
Sandra Baldwin, UK ODA
Fred Binka, Ghana Ministry of Health
Don de Savigny, IDRC
Andrew Hall, Oxford University
Harun Kasale, TEHIP
Peter Kilima, Tanzania Ministry of Health
Japhet Killewo, Muhimbili College of Health Sciences
John Kimario, Ifakara Centre
Henry Kitange, Ministry of Health, Adult Morbidity and Mortality Project
Zohra Lukmanji, Tanzania Food and Nutrition Centre
Harun Machibya, Tanzania Ministry of Health
Cheick Mbacke, Rockefeller Centre
Conrad Mbuya, TEHIP
Bruce McLeod, University of Maryland
Leslie Mgalula, WHO/TEHIP
Candida Moshiro, Muhimbili Medical Centre
Sadiki Mshana, Tanzania Ministry of Health
Robert Mswia, Ministry of Health Adult Morbidty and Mortality Project
Lawrence Munyetti, Tanzania Ministry of Health
Rose Nathan, Ifakara Centre
Chris Nevill, AMREF
Sylvester Ngalaba, Tanzania Bureau of Statistics
Pierre Ngom, Ghana Ministry of Health, Navrongo