SUCCESS FACTORS IN A COMMUNITY-BASED NUTRITION PROGRAMME

Child Survival, Protection and Development (CSPD) Programme in Hai District, Tanzania

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At Hai District level the report benefited from interviewing the District Planning Officer, District Agricultural and Livestock Development Officer, District Community Development Officer, District Nutrition Officer and the District Education Officer. Other officials met at this level were the District Adult Education Officer, District Cultural Officer, District Health Officer and District Maternal & Child Health Coordinator.

At Machame West ward, discussions were held with key informants including the Ward Health Officer, the Chairwoman for Nronga Women Developmental Group, Ward Executive Officer, Ward Agricultural Officer and a Counselor. At Machame South Ward, focus group discussions were held with a group of Extension Officers including the Ward Executive Officer, Ward Health Officer, Counselor, Ward CCM Party Secretary, Ward Agricultural Officer, Ward Education Coordinator, Division Secretary for Lyamungo Division and Village Executive Officer for Kimashuku Village. At Siha Central ward, we met the Ward Executive Officer, Village Health Worker; Ward Health Officer and Village Executive Officer as key informants.

At Nronga Village, interviews were conducted to the Village Executive Officer, a Clinical Officer working at Nronga Dispensary, the Nronga Village Chairman, a Primary School Teacher, a pre-school Teacher and two retired teachers as key informants. Focus group discussions were held with Village Health Workers, Traditional Birth Attendants, and a group of 12 each of mothers and fathers. At Shiri Mgungani Village, we interviewed a Village Health Worker, a child day-care taker, two religious leaders (one Christian and one Moslem), two Traditional Birth Attendants, the Village Chairman, the Village Executive Officer and four Primary School Teachers as key informants. At Samaki Maini Village we had focus group discussions with eleven Traditional Birth Attendants. We also met a Village Health Worker, two Primary School Teachers and a Chama Cha Mapinduzi Party Village Secretary as key informants. A focus group discussion was also held with members of the Village Government.
Representatives from NGOs we met and discussed with included a District representative for World Vision, Tanzania AIDS Project, Kilimanjaro Women Development Association, Danish Volunteer Service, Women Group Against AIDS in Kilimanjaro, Tanzania Home Economics Association and Lutheran Church of Tanzania Northern Diocese.

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immuno-deficiency Syndrome
AMREF	African Medical Research Foundation
AMO	Assistant Medical Officer
ARI	Acute Respiratory Infections
CCM	*Chama Cha Mapinduzi* (a political Party in Tanzania)
CBC	Community Based Committee
CBW	Community Based Worker
CDC	Center for Disease Control
CHW	Community Health Worker
CRDB	Cooperative Rural Development Bank
CSPD	Child Survival, Protection and Development
DC	District Commissioner
DDC	District Development Committee
DCDO	District Community Development Officer
DEO	District Education Officer
DMO	District Medical Officer
DPLO	District Planning Officer
DS	Division Secretary
DSWO	District Social Welfare Officer
DTOT	District Trainers of Trainer
DTF	District Task Force
DVS	Danish Volunteer Service
EDP	Essential Drug Programme
EPI	Expanded Programme for Immunization
FG	Focus Group
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
GMP	Growth Monitoring and Promotion
HFS	Household Food Security
IDA	Iron Deficiency Anaemia
IDD	Iodine Deficiency Disorders
IEC	Information, Education and Communication
ILO	International Labour Organization
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
KI	Key Informant
KNCU	Kilimanjaro National Coffee Union
KIWAKUKI	Kilimanjaro Women Group Against AIDS
KIWODEA	Kilimanjaro Women Development Association
MCH	Maternal and Child Health
MD	Medical Doctor
MMR	Maternal Morality Rate
MoH	Ministry of Health

NBC	National Bank of Commerce
NCHS	National Center for Health Statistics
NGO	Non Governmental Organization
NURU	Nutrition Rehabilitation Unit
ORT	Oral Rehydration Therapy
RMA	Rural Medical Assistant
ROSA	Regional Office for South Asia
PEM	Protein Energy Malnutrition
PHC	Primary Health Care
PHN	Public Health Nurse
PRA	Participatory Rural Appraisal
SIDO	Small Scale Industrial Development Organization
TAP	Tanzania AIDS Programme
TAHEA	Tanzania Home Economics Association
TBA	Traditional Birth Attendant
TFNC	Tanzania Food and Nutrition Centre
U5MR	Under five years Mortality Rate
UCI	Universal Child Immunization
UMATI	*Uzazi na Malezi Bora* Tanzania (Reproduction and Care in Tanzania)
UNICEF	United Nations Child Education Fund
UPE	Universal Primary Education
VAD	Vitamin A Deficiency
VEO	Village Executive Officer
VHC	Village Health Committee
VHD	Village Health Day
VHW	Village Health Worker
VIP	Improved Ventilated Pit Latrine
WDC	Ward Developmental Committee
WEC	Ward Education Coordinator
WEO	Ward Executive Officer
WHO	World Health Organization
WV	World Vision

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EXECUTIVE SUMMARY

Over the past ten years, the Government of Tanzania in collaboration with UNICEF has been supporting community-based nutrition Programmes and projects under the umbrella of Child Survival, Protection and Development (CSPD) in twelve (12) regions of mainland Tanzania. Reviews conducted in the past years suggest that, CSPD Programme has performed differently between regions with some performing relatively better than other regions. In this report, success factors and better practices were assessed. The aim was to contribute to a better understanding of factors that make nutritional Programmes in some regions to perform relatively better than in others. Such factors will be useful when applied to strengthen other ongoing Programmes or new ones to be initiated in future within and possibly beyond the boundaries of Tanzania.

The assessment was conducted in a CSPD Programme in Hai District situated in the footsteps of Mount Kilimanjaro, Northern Tanzania. Hai District is subdivided into Upper, Middle and Lower zones that have distinctive ecology and agro-economic pattern. Relative to many other Districts in Tanzania, Hai District is well accessible from other parts of the country, has reasonably good health and socio-economic infrastructures and high literacy rate.

The CSPD Programme in Hai District has been implemented since 1987 and covers the whole District of a population of approximately a quarter of a million people. The Programme is an integrated community-based within the District developmental activities. The overall objective of the Programme is to alleviate malnutrition and improve the livelihood of the people. The specific objectives are to improve water and environmental sanitation, to improve the knowledge and understanding of community members regarding normal growth pattern of young children and monitor growth of children at household level. Also, to reduce incidences of childhood malnutrition and common illnesses, improve access to and utilization of MCH services to women and young children and educate community members on proper maternal and childcare, improve household food security and child feeding practices.

The report is divided into 12 sections. In section 1, the background and objective of the exercise is briefly highlighted. An overview of current nutrition status in Tanzania in accordance to the Tanzania Demographic Health Survey conducted in the early and mid 1990s is given. Further, the historical background of nutrition activities in Tanzania and conceptualization of malnutrition are addressed. Finally the section concludes by highlighting some success factors and better practices in a community-based nutrition Programme as documented in other assessed Programmes.

In section 2, the study area is described in detail highliting the geographical location, population, demographic data and ethnic groups. Further, the economic activities, administrative structure and accessibility from other parts of the country are summarized.

The methodology of assessment is described in section 3. It is a qualitative assessment based on a modified UNICEF/ROSA checklist that is designed to assess success factors and better practices in a Community-based nutrition Programme.

Section 4 starts by giving a summarized description of the CSPD Programme in Hai District and how it was conceptualized. This is followed by highlights on outcome variables with respect to nutrition prior to the start of the Programme and trends during the Programme. Section 5 presents practices and processes that have nutritional impact. Section 6 examines the background of the Programme area with regard to the knowledge, attitudes, perceptions, commitment and practices of key actors, community and political leaders. It also highlights previous experiences that had nutritional impact, nutrition information systems that existed and previous institutions and organizational resources with nutrition orientation that were used or could have been used to improve the situation. Further, the section identifies poverty-eradication policies and source of information that existed before the Programme was initiated.

Section 7 analyses the nutrition outcomes as related to input. It also highlights on existence of other interventions carried out during the Programme lifetime, national policies and change in available institutions that might have influenced the nutrition outcomes. Section 8 presents the processes used during the Programme implementation that can explain the nutritional outcomes and change in nutritional practice.

The quality of process assessment, process leading to the choice of action and the nutritional information system put in place are discussed in section 9 while specific actions undertaken that brought about the nutrition outcomes reported in the preceding sections are discussed in section 10. Section 11 discusses Programme sustainability, monitoring processes, management issues, project evaluation, expansion, replication and handing over process. Finally, the summary of success factors and better practices identified are presented in section 12.

Based on information generated from the community monitoring system and District annual review reports between 1988 and 1999, the general[1] malnutrition measured as weight for age seem to have dropped by over 70 percent and severe[2] malnutrition by over 80 percent. Infant and childhood mortality rates also shows to have gone down by 18 and 44 percent respectively.

Based on review reports, access to basic preventive and curative health services for both children and women seem to have improved. The number of health centres have increased from 2 to 4, dispensaries from 27 to 66, health facilities providing MCH services from 35 to 42 of which 37 provide family planning services as well. The population living within 10 kilometers walking distance from a health facility has increased from 80 percent at the beginning to 87 percent in 1999. The average population served per health centre and dispensaries has also been reduced by half.

[1] Proportion of children falling below 80% standard weight for age
[2] Proportion of children falling below 60% standard weight for age

Further a total of 65 health posts have been established along with training and establishment of a two VHWs per village. VHWs under the supervision of VHCs are key actors in organizing and conducting quarterly GMP, giving health and nutrition education and demonstrations and providing first aid for minor illnesses. In collaboration with other community-based workers such as TBAs and CBDs as well as other community-based organizations, VHWs does home visits for follow-up of malnourished children where they do on site analysis of the problem, propose and undertake relevant home-based actions. They also compile GMP reports, submit them to the VHC for discussion and taking actions. These reports are also submitted to the WDC and DDC for discussion and taking actions that the village could not afford. On the basis of community monitoring system and Programme review reports, immunization coverage seem to have improved by 30 percent, population served with improved water supply has increased from 54 percent to 75 percent, and households with latrines from 54 percent to 65 percent. Further a total of 154 day-care centres were established during the lifetime of the Programme.

There is a possibility that the Programme may be sustainable after partners stop giving support. The sustainability can be attributed to both contextual and programmatic factors. Among the contextual factors are ① commitment of political and community leaders at all levels to improve the welfare and livelihood of the people; ② putting nutrition as a developmental agenda at all administrative levels; ③ active involvement of other community organizations such as religious organizations in undertaking actions that have improving effect on health and social-welfare of the people; ④ high literacy rate particularly of women; ⑤ spirit of self-help and ⑥ people being ready to adopting new innovations and practices that have livelihood improving effect.

Programmatic factors that may explain the achievements observed in the Programme include recognition of community people as key actors in the planning and implementation of the Programme and awareness creation resulting in improvement of household and community decision-maker's knowledge, perception, and attitude about the nature, magnitude, causes and consequences of malnutrition. Others are community involvement in the assessment and analysis of the problem and designing of actions; improvement in basic services such as health, water and education; training and retraining of key actors, facilitators and community mobilizers and continuous advocacy for improvement of nutrition practices. The adoption of resource mobilization and planning using a bottom-up approach, the development of community-based manpower, establishment of community-based GMP and surveillance and enacting of by-laws for enforcement of positive nutritional practices are also some of the programmatic factors that may be regarded as success factors.

Although the CSPD Programme has resulted in motivated household decision-makers to have health children and therefore go seeking health-improving services, the role of VHWs in community-based GMP is important particularly for some households that need close follow-up. Due to staff constraint, the facility-based GMP service may not be quite effective particularly on the follow-up aspect for cases that may need to be closely

followed-up and do an on site problem analysis and coming up with household-level resource relevant actions. VHWs appear to be more effective in this regard and therefore poor motivation of VHWs is a drawback to the success of the Programme.

1.0 INTRODUCTION

1.1 Background

Over the past ten years, the government of Tanzania in collaboration with UNICEF has been supporting community-based nutrition Programmes and projects under the umbrella of Child Survival, Protection and Development (CSPD) in twelve (12) regions of mainland Tanzania. Community-based nutrition Programme is here defined as a Programme that is implemented at a community level using community-based approaches and has nutritional improvement as at least one of its objectives. The regions included in the CSPD Programme in Tanzania are Mtwara, Singida, Coast, Shinyanga, Iringa, Ruvuma, Mara, Morogoro, Kagera, Mbeya, Mwanza and Hai District in Kilimanjaro Region.

A series of Programme reviews conducted in the past suggest that, the performance of CSPD Programmes has faired differently between different Programme areas with some performing relatively better than others in achieving Programme objectives and desired outcomes. Figure 1 shows mean reduction in malnutrition rate (PEM) per year in all the twelve CSPD areas in Tanzania.

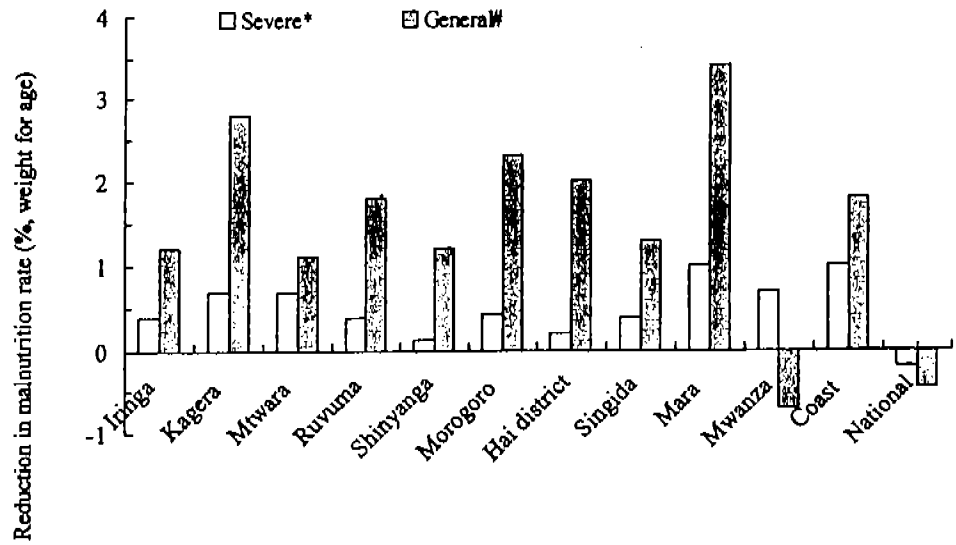


Figure 1: Mean reduction in prevalence of malnutrition (PEM) rate per year in children under the age of 5 years old in 11 CSPD project areas over the last 10 years.

* Proportion of children falling below 60% standard weight for age

\# Proportion of children falling below 80% standard weight for age

The Figure shows that Hai District is among the first four CSPD Programme areas that has performed relatively well compared to the other eight Programme areas. This exercise was undertaken in order to identify success factors and better practices that has contributed to Hai District performing relatively better than several other areas implementing the same Programme. Such factors could be useful when applied to strengthen the other ongoing Programmes. Lessons from this analysis would also guide implementation of community-based intervention on reduction of low birth weight planned to be undertaken soon in three of the CSPD Programme areas.

1.1.1 Objectives

To document success factors and better practices in a CSPD Programme in Hai District that may account for the positive nutritional outcomes and practices. The specific objectives were:

- To determine the initial conditions and trends in malnutrition rate, access to and utilization of basic preventive and curative health services, caring practices, household food security sanitation and water situation and literacy rate.
- To determine the knowledge, perception, attitudes, commitment and practices of key actors on the nature and severity of malnutrition before and after Programme implementation.
- To determine the presence of effective demand of key actors for nutrition-related information and motivation to act.
- To determine technical capabilities of key actors to obtain information in assessment and use of information in analysis and designing of actions against the problem
- To determine availability of human, economic and organizational resources for the establishment and maintenance of the nutrition information system and
- To determine availability of human, economic and organizational resources for taking actions.

This is a report of the assessment and is based on secondary data from district, regional and national documents. Information was also gathered from meetings and discussions with key informants at district, ward and village levels. Discussions with focus groups of extension workers, community-based workers, community leaders, mothers and fathers in the Programme area were another source of information.

1.2 Malnutrition, State of the art in Tanzania

Nutrition problems in Tanzania like in most developing countries relate mainly to undernourishment including Protein Energy Malnutrition (PEM), Iron Deficiency Anaemia (IDA), Iodine Deficiency Disorders (IDD) and Vitamin A Deficiency (VAD). Women and young children are mostly affected (Table 1 and 2) because they have higher nutritional needs and are highly susceptible to infections. Data for Kilimanjaro Region have been included in Table 1 to show how Kilimanjaro Region fare compared to the

national levels and as an estimation of how Hai District might have faired at that time.

Table 1: Trends in PEM (%) in under five years children during the first half of the 1990s

Index	TDHS (1991/1992)		TDHS (1996)	
	National (N=5,943)	Kilimanjaro (N=306)	National (N=5180)	Kilimanjaro (N=246)
Underweight				
Total[1]	28.5	26.0	30.5	21.0
Severe[2]	7.0	6.8	7.7	4.0
Stunting				
Total	46.6	40.1	43.6	33.5
Severe	19.7	19.0	17.9	14.9
Wasting				
Total	5.5	5.2	7.1	5.6
Severe	1.2	1.5	1.3	1.2

1. < -2 SD units from the median of the NCHS/CDC/WHO international reference population
2. < -3 SD units from the median of the NCHS/CDC/WHO international reference population

From Table 1, around 30 percent of Tanzanian children in the age below five years old were underweight, 44-47 percent were stunted and 5-7 percent were wasted. The severely underweight children were 7-8 percent; stunting 18-20 percent and wasting around 1 percent. For both TDHS surveys, prevalence of the different forms of PEM for Kilimanjaro Region were lower than the national average.

Table 2: Micronutrient Malnutrition in the 1980s in Tanzania according to population groups (%)

Type of malnutrition	Under fives	Pregnant and lactating Women	Others	Total population
IDA (Hb < 8.5g/dl)	45	80	20	32
VAD (serum retinal 10 - < 20 µg/dl)	30	0.7	0.1	6.1
IDD (non-visible goitre or urinary excretion of 25-50 µg/dl)	13	52	40	25

Adopted form Kavishe (1993)

Table 2 presents the situation of micronutrient malnutrition in Tanzania in the 1980s as summarized by Kavishe (1993) and shows that children and women were mostly affected.

According to Kavishe (1993), the prevalence of low-birth-weight (<2.5 kg) in the early 1990s in Kilimanjaro was 8 percent and the national average was 9 percent. Maternal Mortality Rates (MMR) standing at 200-400 per 100,000 live deliveries. Infant Mortality Rate (IMR) at 115/1000 and Under 5 Mortality Rate (U5MR) at 191/1000 live birth are also unacceptably high.

1.3 Development of nutrition strategies in Tanzania

Nutritional concerns in Tanzania have always been considered a major national issue receiving strong political support since the birth of the nation in 1961. In this regard, nutrition has always been framed as part of the national economic and social developmental plans and conceptualization of the problem has been a continuous process (TFNC's 20th Anniversary, 1973-1993). Initially, the problem was considered to be due to lack of nutrients such as protein, carbohydrates, vitamins or minerals. As such emphasis to alleviate the problem concentrated on provision of these nutrients or eating balanced diet. The approach changed later when malnutrition was conceived to be a result of leakage of food at different stages in the food chain. Inputs from the agricultural sector, activities related to food production and handling led to the adoption of the food cycle model for planning nutrition Programme and consequently, food production, processing, quality control and food development received considerable attention. Much as that model was relevant, its uni-sector nature limited its usefulness. Carefully planned nutritional surveys revealed also the socio-economic related causes of malnutrition that the food cycle model was not addressing. In the process, the multi-sector and multi-disciplinary nature of the problem of malnutrition became evident. A common conceptual approach and dialogues among and between the sectors and disciplines became necessary. This realization led to the development and adoption of a more explicit and comprehensive conceptual frame -work for assessing, analyzing and acting on the causes of malnutrition in the mid 1980s (a new TFNC/UNICEF conceptual frame work for malnutrition). This became the new nutrition strategy and was developed by TFNC in collaboration with UNICEF.

1.3.1 The New Nutritional Strategy

This new tool analyses the different causes of malnutrition at various depths of causality namely: immediate, underlying and basic levels. It has two components; a factual analysis (Figure 2) and an operational analysis (Figure 3) (Jonsson 1995).

In this context, malnutrition is considered to be the ultimate manifestation of various social-economic and biological processes in society and takes into account both food and non-food factors in analyzing causes of malnutrition. At the immediate level, important factors are inadequate food intake and recurrent infectious diseases.

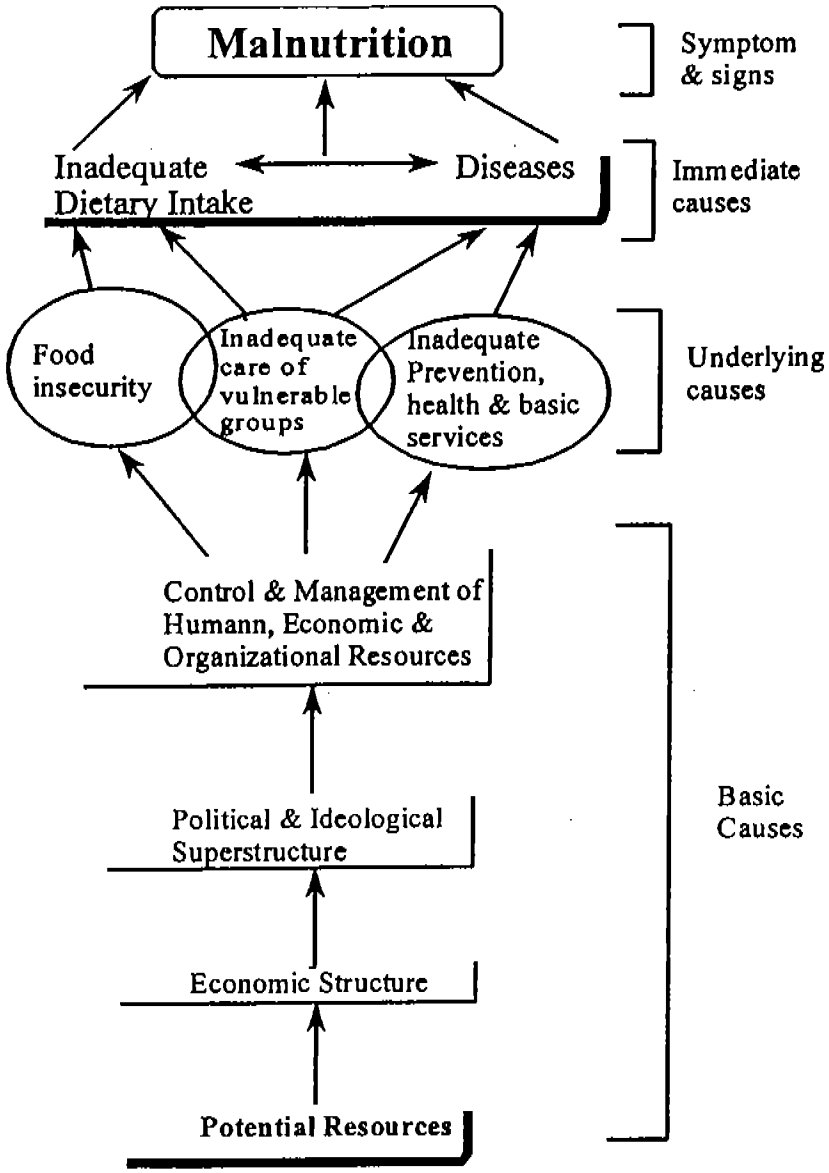


Figure 2: The conceptual Framework for Malnutrition

Adopted from Jonsson (1995)

Underlying these causes are household food insecurity, inadequacies in quantity and quality of caring practices of vulnerable groups and inadequacies in basic services such as health, education, housing, water and sanitation. Much deeper are the basic causes encompassing inadequacies in material and technological conditions such as climate, quality of soil and technological skills. They also include social conditions, such as

ownership of means of production, political factors, national and local policies, legal systems and ideological factors including traditional, religious, habits and value systems. These factors interplay between and across levels and are compounded by gender relationships.

The strategy emphasizes the important role of households and community members in mobilizing and managing their resources to solve their nutritional problems. Further, it emphasizes the need for higher level authorities (districts and national) supporting the community-based efforts through provision of training and technical assistance and in the formulation and implementation of national developmental policies. This approach has improved inter-sectoral consultations, planning and coordination of food and nutrition activities in the country.

1.3.2 The Triple A Cycle

Whereas the conceptual framework guides assessment, analysis and action on a context-specific basis, the Triple A Cycle operationalizes the conceptualization. In this regard, the Triple A approach acknowledges coping strategies from the household level to the national level. The approach is considered as a function of any management processes at the different levels of society (Jonsson *et al.* 1998).

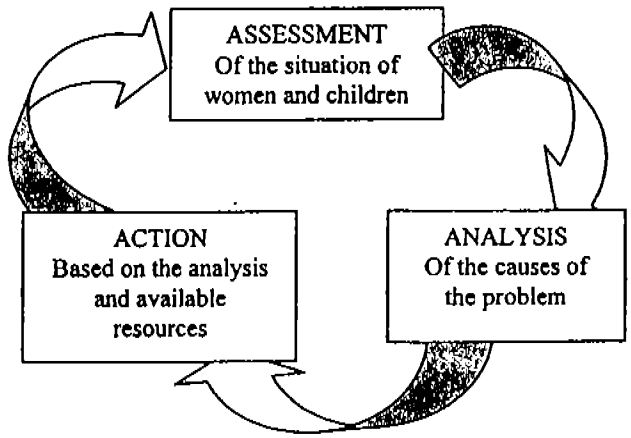


Figure 3: Triple A Cycle

Adopted from Jonsson (1995)

For a useful or effective action to be undertaken, availability of information from assessment and analysis of a problem is necessary. Information helps decision-makers and people initiating action to understand the type, nature and magnitude of the problem, its causative and consequences. Information is also necessary for monitoring and

assessing results of action taken. Other important elements in this approach are awareness, commitment and ability to understand information by decision-makers. This often requires facilitation in partnership between people most affected and knowledgeable people about the situation to undertake analysis of the problems. For focused actions, the re-assessment requires existence of some information system to be put in place.

1.5 Success Factors and Better Practices in a Community-based Nutrition Programme

Although community-based Programmes may not be replicable, there are some features that are common in Programmes that have been seen to meet intended objectives such as nutrition improvement that may partly be attributed to the Programme (Annon. 1996). For sustainability, however, a successful Programme needs also to create, catalyze, strengthen and sustain nutrition-improving processes. This means conscious decisions, commitment and active participation by the community members themselves to improve nutrition (Jonsson *et. al.* 1998). It also requires change in people's power, capabilities and creates sense of ownership and/or responsibility of the Programme and empowerment of community members especially women (Annon. 1996; Jonsson *et. al.* 1998).

It is not easy to quantitatively assess processes in community-based nutrition Programmes and projects particularly those processes that concern community participation in the design, implementation and management. Nevertheless, using qualitative methods, it is possible to identify some features shared in many of community-based Programmes as success factors (Annon. 1996). However, since different Programmes and projects perform differently depending on situations it is necessary to assess and analyze the local situation.

In reviewing community-based nutrition Programmes or projects key issues of concern are the driving forces behind changes that occurs in nutritional practices and the degree and how these forces relate to the design, implementation and management of the Programme. Others are the degree and how the driving forces are related to the particular context in which the Programme was initiated or implemented, the type of policy and programmatic decisions catalyzing or strengthening the factors, processes behind successes and lessons that can be learned for nutrition Programmes.

2.0 THE STUDY AREA

2.1 Geographical location, agronomic conditions and ethnic groups

The assessment was conducted in a CSPD Programme in Hai District. Hai District is one among five Districts that form Kilimanjaro Region in Northern Tanzania. It is situated along the slopes of Mount Kilimanjaro, the tallest mountain in Africa. The District has an area of 2169 square kilometers and borders with Moshi Rural and Rombo Districts in the east and with Arusha Region in the West and the South. In the North, the District partly borders with Arusha Region and partly with Kenya. Of the total 2169 square kilometers, 1000 square kilometers are cultivated, 570 are grazed, 310 are under forestry and 289 are covered with rocks, water and snow (Hai District Council, 1999a). The District is sub-divided into Upper, Middle and Lower zones with distinctive agro-ecological and economic activities (Annex 1).

According to Hai District Council (1999a) in 1988 the District had a population of 200,136 inhabitants and projected at 238,317 in 1999 and population density of about 110 per square kilometer. The main tribes are Chaggas (75%) a dominant tribe in the Upper and Middle zones, Pares (10%), Maasai (12%) and others (3%) occupying the Lower zone (Annex 1). Christians (Roman Catholics and Lutherans) dominate the Upper zone while a mixture of Christians and Moslems occupies the Middle and Lower zone. Other sociao-economic profile can be seen in Table 3.

Table 3: Other Socio-economic profile of Hai District

Item	Values
Total population	238,317
Male:female ratio	96:100
Children under the age of 1 year	10,199
Children under the age of 5 years	29,994
Age group of < 18 years old	61,576
Adults in the age group of 18-64 years	51%
Population > 64 years old	6%
Dependence ratio	100:105
Women (15 – 49 years)	52,466
Family planning coverage	75%
Family size	5
IMR /1,000 birth	62
U5MR/1,000 birth	93
MMR/100,000 live birth	306
Rate of low birth weight	6.5%
Rate of orphans	0.6%
Birth registration rate	9%

Source: Hai District Council (1998 & 1999a).

2.2 Economic activities

According to Hai District Council (1999a), about 95% of people depend on agriculture for their livelihood. Bananas, the main staple is grown surrounding the households mixed with coffee the main cash crop while barley; wheat and potatoes are grown in West Kilimanjaro institutional farms as cash crops. In terms of food crops, the Middle zone is more productive relative to the other two zones whereas the Upper zone produces milk more than the other two zones (Annex 1). There are a total of 77,341 dairy cattle all together producing around 30 million liters of milk per year, much of which comes from the Upper zone (Annex 1). Part of the milk produced is taken to Northern Diaries Industries Ltd. in Arusha. There are also some women groups such as in Ng'uni and Nronga villages that sell milk to Moshi township, the regional Headquarters. The group at Nronga village make also yogurt and another group at Losaa village make cheese. In some areas of the Lower zone, irrigation through traditional irrigation furrows is practiced where some horticultural activities are carried out. The Maasai in the Lower zone are pastoralists keeping free grazed cattle and goats. Most people from Upper and Middle zones also grow seasonal crops such as maize and beans in the Lower zone. During years of drought the Lower zone usually face famine resulting in malnutrition.

2.3 Administrative structure

Administratively, Hai is divided into four divisions, eleven wards, seventy villages including five institutional farms in West Kilimanjaro and 342 hamlets (Table 5). Total number of households is 45256.

Table 4: Administrative structure and population in 1999

Divisions	Wards	Number of village	Number of hemlets	Total households	Population
Lyamungo	Machame East	9	33	4332	26217
	Machame South	7	39	3595	19080
Machame	Machame North	4	29	4294	22212
	Machame Uroki	3	15	1374	10859
	Machame West	2	12	2048	6532
Masama	Masama South	9	65	6598	30931
	Masama East	6	25	5114	27496
	Masama West	10	32	4175	22398
Siha	Siha East	5	21	2959	15867
	Siha Central	10	49	8477	44621
	Siha West	5	22	2290	12103
Total		70	342	45256	238316

Source: Hai District Council (1999a).

2.4 Potential institutions for nutrition activities

2.4.1 The village

A household is the basic institution for nutritional related actions and it is the first contact. A group of 10 households makes a ten-cell led by a Ten-cell leader. Between 10-20 ten cells form a hamlet led by a Hamlet leader. Ten-cell and Hamlet leaders are selected by the community and assist in social mobilization in their clusters. Several hamlets form a village that politically is led by an elected Village Chairperson (VC) supported by a Village Executive Officer (VEO). The VEO is employed by the District Council and is also the CSPD Programme coordinator at this level. The VC and VEO work with a village government made of members drawn from permanent village committees discussed hereafter. Village developmental activities are reviewed during an annual assembly of all adults and the village government.

Community-based workers (CBWs): Basically, there are four categories of CBWs in existence in the CSPD Programme. They are the Village Health Workers (VHW), Community Based Distributors (CBD), Traditional Birth Attendants (TBA) and Community-Based AIDS councilors. Each village is supposed to have two VHWs selected by the community members and are permanent residents to the village. They are trained on how to weigh a child, how to chart the weight in the growth card and how to interpret the information in the growth card. They are also trained on how to treat simple illnesses using a first aid kit. They are also trained to give health and nutrition education. The CBDs are trained to provide family planning services at the community level. The TBAs are normally self-selected based on their inclination and experience to help in delivery in the community. They are trained to help in deliveries at community level and are provided with delivery kits. The Community-Based AIDS councilors are responsible for counseling HIV/AIDS victims and advocating against HIV/AIDS infections.

Community-based committees (CBCs): In each village there are four committees that are oriented by the CSPD Programme. A Village Health Committee (VHC) responsible for supervising the VHWs, coordinating health issues and making follow-ups of malnourished children. Village Water Committee (VWC) responsible for coordinating and overseeing water and sanitation activities in the village. The Social Welfare Committee (SWC) coordinates and oversees social welfare and a School Committee (SC) responsible for bring about good school learning environment.

Other institutions at the village level of relevance to the CSPD Programme include health facilities where health workers (MCH Aiders, Clinical Officers and Rural Medical Assistants) are normally placed. Others are School, informal (religious) and traditional organizations, traditional healers and branch political Parties. Through this network children and woman or households at risk of malnutrition can easily be traced.

2.4.2 The ward

The ward is made of several villages (2-15) and is led by a Ward Executive Officer (WEO) employed by the District Council. WEOs are leaders of all local government activities and are answerable to The District Executive Director. In Hai District they are also the coordinators of the CSPD Programme at the ward level. The Government Extension staff responsible for agriculture, health, education, community development, water and sanitation are also placed at this level working under the leadership of the WEO. These interact with the CBWs and CBCs in the day to day activities. The Extension staff, Village Party Chairpersons and Secretaries and Councilors resident in the ward form a Ward Development Committee (WDC) to which the WEO is the secretary. An elected person from among Councilors chairs the WDC. The WDC is responsible for linking the village to the higher levels (Division and District). At this level, village plans are coordinated and discussed before being forwarded to the District Council. The WDC is also responsible for dissemination of information to the village and the extension staff has supportive, promotive and demonstrative roles.

2.4.3 The Division

In Hai District, 2-3 wards form one division (Table 4). A division is led by a Division Secretary (DS) who is also the coordinator of the CSPD Programme at that level. The DS is a Central Government employee mainly responsible for law and order of the state at the division level and is answerable directly to the District Commissioner. He also performs political mobilization and advocacy. The DS and WEO are both active in Hai District and are provided with transport facilities to perform their functions.

2.4.4 The District Council

Hai District is made of four wards (Table 4). All developmental Programmes are entrusted to the District except some that are undertaken centrally (at regional or national level). The District is responsible for delivering basic services (health, water and sanitation, primary and adult education, community development services and maintenance of District roads and bridges). The District also coordinates all services rendered by NGOs and private individuals in the District. The District is led by a District Commissioner (DC) which is a Presidential post. The DC is the chairperson of a District Developmental Committee (DDC) that is responsible for discussing and scrutinizing District developmental plans and budget including nutrition related plans developed from all administrative levels in the District. The Committee is made of Government Departmental functional officers and Party Officials at District level and elected or nominated Member of Parliament in the District.

Administratively, the District is led by the District Executive Director (DED). Under DED are ten functional sectors including finance, planning, health, agriculture and livestock development, education, works, culture, natural resources and community

development. The District Council has popularly elected District Councilors. These have legal authority to raise revenue through taxes and other means. Councilors also have a function of linking the District and villages.

2.5.5 Transport and communication

Hai District is easily accessible both from within the country and internationally. The District lies along the Dar es Salaam Arusha highway and it is also accessible through the Kilimnanjaro International Airport that is located in Hai District itself about twenty kilometers away from the District Headquarters. There is also a railway line crossing the District connecting Dar es Salaam, Moshi town (the regional headquarters of Kilimanjaro Region) and Arusha town in Arusha Region. The road network within the District itself is also good making each village accessible by car (Table 5).

Table 5: Transport and communication

Classification	Kilometers		
	Tarmac	Earth	Total
Trunk road	32	-	32
Regional roads	36.5	69	105.5
District roads	4	202	206
Feeder roads	-	194	194
Total	72.5	465	537.5

Source: Hai District Council (1999a).

3.0 METHODOLOGY

3.1 The assessment tool

The field assessment was carried out between 4th to 23rd November 1999 using a protocol developed by UNICEF/Regional Office for South Asia (UNICEF/ROSA protocol (Annex 13). The protocol is designed to assess factors that have been seen to explain success and better practices in a community-based nutrition Programme or projects. The protocol is comprised of seven sections (Annex 2) and follows the central nutrition information strategy described earlier (Figure 2 and 3).

3.1.1 Reviewing the protocol

The UNICEF/ROSA protocol was reviewed and modified. The review process involved rearranging the questions into specific themes as in Table 6.

Table 6: Rearrangement of the assessment tool

Theme	Information sort
I	Type, trend and magnitude of malnutrition
II	Household food security
III	Caring practices
IV	Basic services
V	Information systems
VI	Management issues
VII	General issues

During the review process, a critical examination was done to each question so as to understand the proposed checklist and identify source of information. The reviewed tool was translated into Kiswahili, the language that was used during the assessment exercise. The reviewing process was done in collaboration with another team that was also in the process of preparing to assess success factors and better practices in three other Community-based Projects in Tanzania with nutritional orientation under LINKAGES project.

3.1.2 Pre-testing the modified and translated protocol

Again in collaboration with the LINKAGES team, the modified tool was pre-tested in two villages (Kiroka and Kizawa) in Makuyuni ward in Morogoro Rural District, Tanzania where CSPD Programme is implemented. The pre-testing was done to determine the relevance and clarity of the questions to the proposed sources and length of time required administering. The pre-testing revealed that the tool was too long taking an average of four hours to administer. It also revealed that many questions were ambiguous

especially to the community-based sources such as community-based workers, influential people, mothers and fathers.

To amend the tool some questions in the checklist were re-phrased to improve clarity and supplementary questions were added as follow-up questions. Checklist questions were re-caste and split into different sources. Those questions that could not be answered by the community-based sources were omitted from their checklist and left only to higher sources such as project documents, project staff, extension workers, health workers and community leaders.

3.2 Research approach and structure of the field assessment

Since the purpose of the exercise was to determine success factors and better practices, three villages identified as relatively successful in terms of performance of the CSPD Programme in Hai District were selected purposefully to be included in the assessment process (Table 7).

Table 7: Villages visited

Village	Ward	Agro-economic zone
Nronga	Machame West	Upper zone
Samaki Maini	Siha Central	Middle zone
Shiri Mgungani	Machame South	Lower zone

The selection of the villages was done with the help of District project staff. The criteria for selection of the villages were ① evidence of a good nutritional outcome, ② commitment of community leaders and ③ represents one of the agro-ecological zones. Activities done and source of data are shown in Annex 3.

3.2.1 Limitations

Lack of situation analysis on some aspects at the beginning of the CSPD Programme limited the assessment of trends in such aspects. In particularly we could not get baseline data on number of health staff of different categories in the District. District specific data on production of major food crops was also not available except for regional aggregated data (Kilimanjaro Regional Situational Analysis 1990). Another data that was difficult to access to was financial reports by source and even in different years during the lifetime of the Programme. This limited assessment of cost-effectiveness of the Programme.

Data on VAD, IDA and IDD were also scanty because these deficiencies are not measured regularly. Whenever information was available on these deficiencies it was based on spot surveys done on single villages that may not say much of the situation in the District. This limited trend assessment for these deficiencies.

We could also not access to annual review reports for 1989, 1990 and 1992 to 1994 except for trends for PEM based on the community monitoring system making it difficult to know what was happening during that period in terms of activities that were undertaken, financial aspects and achievement.

Another problem was getting the pre-determined groups to discuss with. Originally it was planned to randomly select 12 mothers and 12 fathers from village registers to participate in FGDs as separate segments. This was not possible because, on the day we had gone for preparatory visits, the village government offices were closed because the VEOs had gone out in preparation for elections for local community governments that were due in the following month. Messages were instead left with some persons to pass it to VEO to make the selections of mothers and fathers and prepare for the day when the discussions were to be held. We had to relay on selections of VEOs since we were limited with time and could not go back for a second time as a preparatory visit. This arrangement affected the type of people we met. For example, at Shiri Mgungani village, four old women turned up instead of mothers, and at Samaki Maini village we obtained the village government and/or community-based workers (TBAs and VHW) instead of mothers and fathers respectively. The failure to get ordinary mothers and fathers in the two villages meant that we were not able to obtain the views of those segments and that there is a risk of the village government and community-based-workers to discuss issues to their interests. The conclusions in this assessment are therefore, drawn with these limitations in mind. However, since there were several sources of information, any exaggerations from one source could be verified from the other sources. Particularly, much of the qualitative data obtained from interviewing KIs and FDGs have been corroborated with data from the documentary sources.

4.0 INITIAL CONDITIONS AND TRENDS OF NUTRITION OUTCOMES

4.1 The CSPD Programme in Hai District

A historical background of the Programme is given in a brief report on Hai District CSPD (1991)[1] and another report on the situation of children in Hai District (Hali ya Watoto wa Hai 1999). Based on these reports, CSPD Programme in Hai District has been implemented since 1985 when it was only covering Lyamungo division with an initial support of US $ 164,000/- (start-up cost) from the government of Japan. The Programme originated from UNICEF support of Lyamungo division water supply project initiated in early 1980s. The regional office for Community Development in Kilimanjaro Region in collaboration with UNICEF did an analysis of the situation of children in Kilimanjaro region in 1982. The analysis revealed that malnutrition rate in Hai District particularly in Lyamungo division was high[2]. Infant and young child mortality was also high compared to other parts of the District (data not shown).

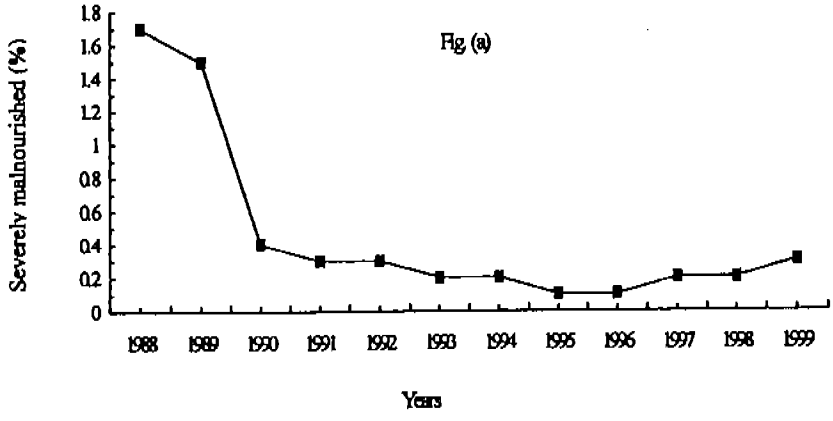
Hai District leaders noticing that malnutrition persisted despite existence of some nutrition-oriented projects in the District for decades became concerned and committed to fight malnutrition for the development of the District. According to *Hali ya Watoto wa Hai* (1999), the commitment was fueled by a visit to Lyamungo Division by UNICEF Goodwill Ambassador Mrs. Kuroyanagi in 1983. Her visit resulted in a change of the scope of the water supply project, expanding it to an area-based integrated CSD Programme. Experience learned from a Joint Nutrition Support Programme (JNSP) in Iringa Region, Tanzania, motivated Hai District Officials to reconsider the approaches and adopted the Iringa approach. This led to formulation of a District committee that drew members from different disciplines. The committee proposed an integrated intervention Programme for alleviation of malnutrition problems to cover the entire District starting from 1988 to which UNICEF agreed to support. There are five projects being undertaken in the Programme. They include water and environmental sanitation, health services, maternal and child health, household food security and project supervision and management. The objectives for each of these projects are presented in Annex 4.

4.2 Malnutrition rate (PEM)

Figure 4 shows initial conditions and trends of PEM in children under the age of five years old since the Programme was initiated in the District. The data is based on information generated from the community quarterly monitoring systems. From Figure 4,

[1] *Taarifa ya Mradi wa Hai* CSD (1991) (Report on CSD Programme in Hai)
[2] 30% of children fall below 80% standard weight for age (percent median) and 1.7% were below 60% standard weight for age.

both severe underweight (1.7%) and general underweight (30.4%) rates were higher at the beginning of the Programme (1988) than the following years.



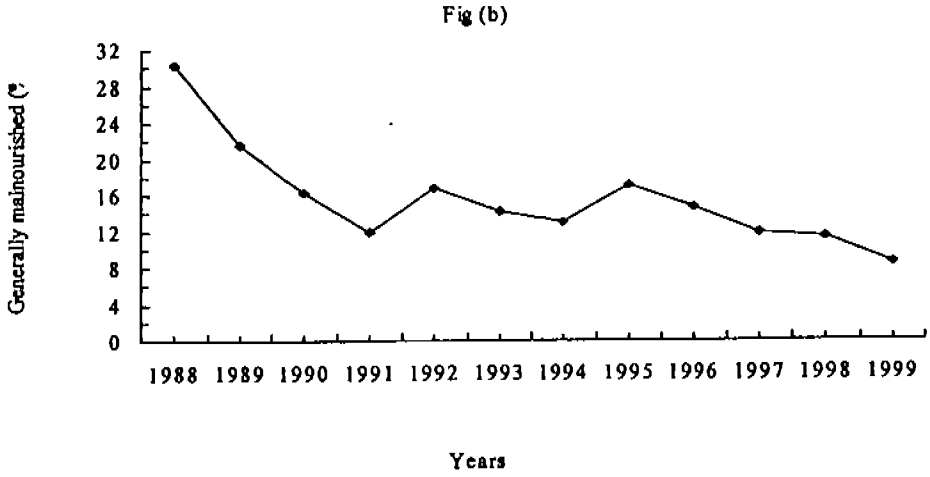


Figure 4: Trends in malnutrition rate (underweight) in young children in Hai district.
Fig. (a) proportion of children falling below 60% standard weight for age
Fig. (b) proportion of children falling below 80% standard weight for age

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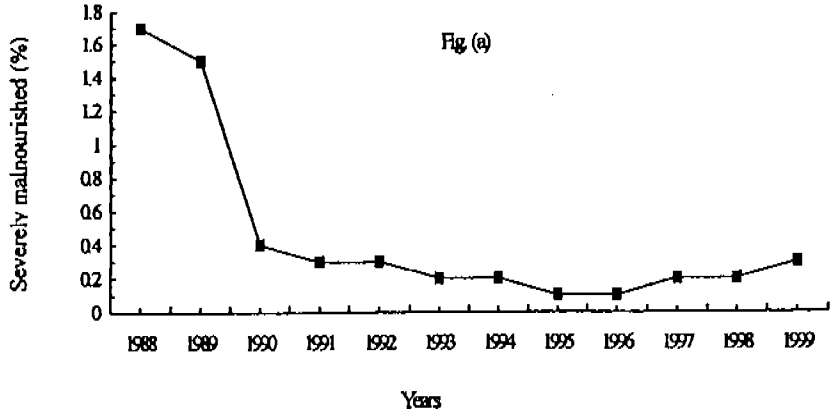


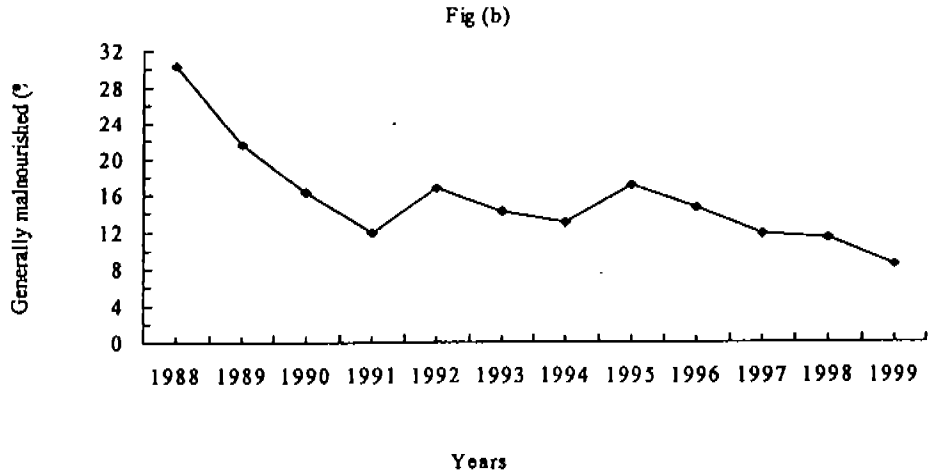


Figure 4: Trends in malnutrition rate (underweight) in young children in Hai district.
Fig. (a) proportion of children falling below 60% standard weight for age
Fig. (b) proportion of children falling below 80% standard weight for age

The Figure also shows that over 60% of malnutrition reduction took place within the first three years of Programme implementation. Comparing between divisions, Siha recorded higher underweight rate throughout the years except severe underweight in 1997 (Fig. 5b).

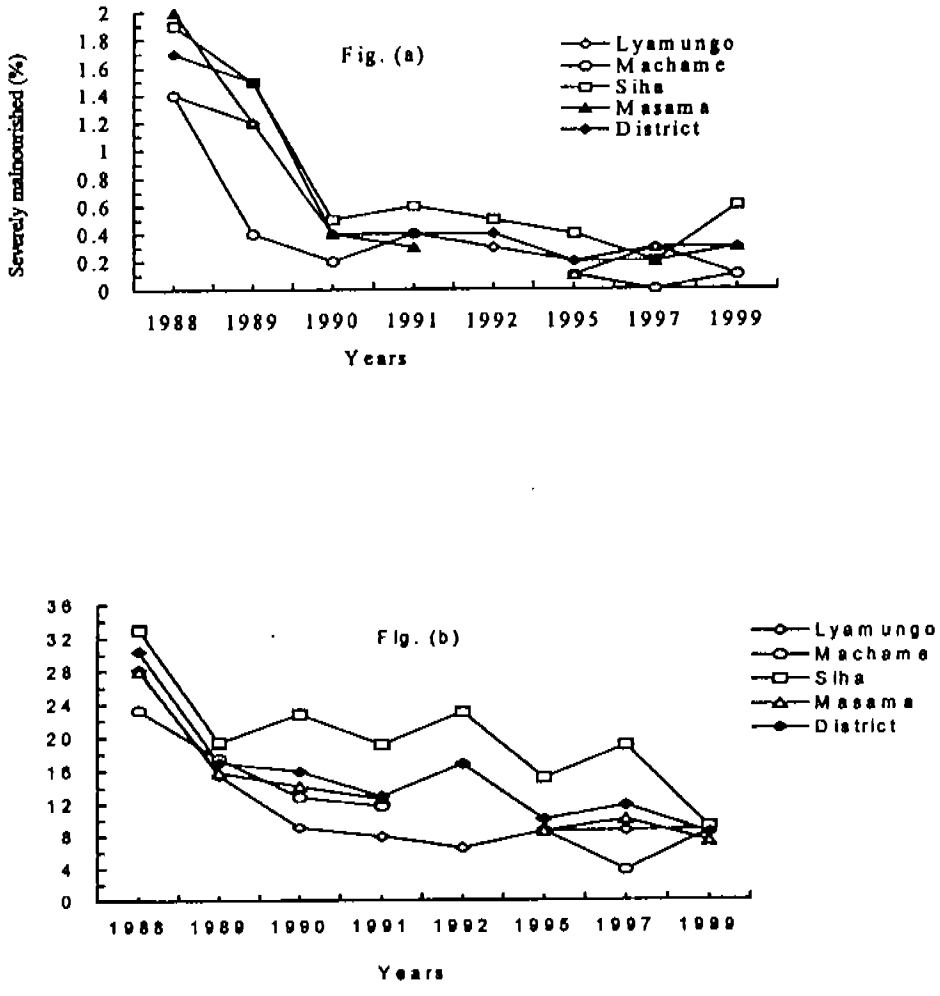


Figure 5: Trends of underweight rate in young children by division in Hai district.
Fig. (a) proportion of children falling below 60% standard weight for age;
Fig. (b) proportion of children falling below 80% standard weight for age

A bigger part of Siha division is in the Lower zone where social-economically seems to be relatively poor compared to Upper and Middle zone (Annex 1). There was no information about differences of PEM rate by gender probably because the regular and main indicator used in CSPD Programme is child growth.

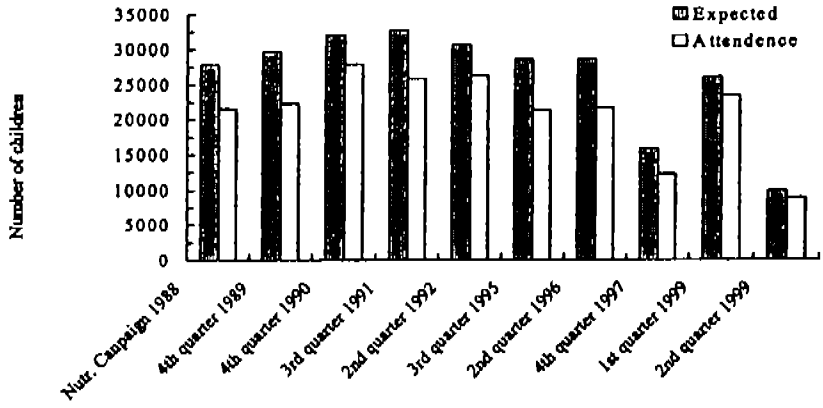


Figure 6: Number of children expected and attendance during community-based quarterly growth monitoring system.

Coverage of children assessed in each year is shown in Figure 6. The Figure is based on the sum of expected number of children in each village where a VHD was conducted and a report submitted to the District authority. From Figure 6, the coverage was over 75 percent of expected children throughout the reported quarters indicating that there was good coverage of children assessed.

4.3 Micronutrient Malnutrition (VAD, IDA and IDD)

Assessment of VAD, IDA and IDD is not done routinely and therefore it is not easy to assess the trends. Table 8 shows the rates of the three types of micronutrient malnutrition in young children, pregnant women and school children as reported by different authors based on different years and source of data. From Table 8, prevalence of VAD between the two periods cannot be compared for three reasons. ① Level of deficiency of VAD reported in 1988 is not specified, ② the sample size of VAD in 1999 is small compared with that in 1988, ③ prevalence of VAD for 1999 is based on data collected from one

village that may not say much on the situation in the District. For IDD, the data is based on different locations. With regard to IDA, the prevalence between 1988 and 1993 did not change.

Table 8: Micronutrient Malnutrition before and after the implementation of the CSPD Programme

Type of malnutrition	Year		
	1988	1993	1999
VAD: (children (0-71 months old)	% 0.14 (1435) (level of deficiency not specified)[1]	% -	% 15.8 (120) (≥ 10-20µg/dl serum retinal)[5] 3.3 (120) (< 10µg/dl serum retinal)[5]
IDA: (Hb < 11g/dl) Children (0-59 months old)	20-38% (557)[2]	27.3 (293)[4]	N.A
Pregnant women	0.6 (7185)[3]	N.A	N.A
IDD in school children (prevalence 1b and visible goitre)	40 (Hai District)[2]	33 (regional value)[5]	15 (54) (Rombo District)[7]

Source: 1. Report of nutrition campaigns in 1988, 2. Basheke & Wandema (1989)
3. Kilimanjaro Region situation analysis (1990) 4. Lorri *et. al.* (1994)
5. Kavishe (1993) 6. Ballart *et al.* (1998)
7. Preliminary report on a national evaluation of control of IDD Programmes conducted in 1999.
Values in parenthesis are number of individuals examined.
N.A = Not available

4.4 Morbidity and mortality in children

Trends of childhood morbidity and mortality are shown in Table 9. The Table shows that fever of unspecified origin, diarrhoea, ARI, malaria, measles have remained to be the major causes of morbidity throughout the years. A survey by Basheke and Wandema (1989) in 26 villages in Hai District, reported 23 percent diarrhoea cases in Lyamungo division. They also found out that fever and/or malaria was more common in Lower zone (30%). A health facility-based study between 1996 and 1998 in Hai District (Hai District Council 1999a) showed that malaria accounted for between 30 and 34 percent of total out patient (n=870,462) and 35 to 50 percent of inpatient under five years old cases (n=9574).

Table 9: Mortality and morbidity in children

Condition	1988	1993	1999	
Mortality rate: IMR (per 1000 live birth)	76[1*]	-	62[4]	
U5MR (per 1000 live birth)	166[1*]	-	93[4]	
	%	%	%	Contribution to U5MR (%)[4]
Fever	6.7 (21,620)[2]	59.5 (262)	41.4 (145)[5]	-
Diarrhoea	3.7 (21,620)[2]	25 (308)	13.1 (145)[5]	10.4
ARI	6.8 (21,620)[2]	71.3 (310)	35.2 (145)[5]	0.3
Malaria	0.3 (1435)[2]	6.1 (293)	-	24.9
Measles	0.1 (33)[1]	-	4 (145)[5]	-
TB and/or HIV/AIDS				40.2
Pneumonia				14.5

1. Kilimanjaro Region situation analysis (1990) (* = data from 1978 census)
2. Nutritional campaign report (1988) in Hai District
3. Lorri *et. al.* (1994)
4. Hai District Council (1999 and 1998)
5 Ballart *et al.* (1998)

Values in parenthesis are total number of individuals examined

- = Data not available.

Regarding mortality, Table 9 shows that IMR was reduced by about 18 percent and U5MR by 44 percent during the period of the Programme implementation. Regarding causes of mortality, the community-based survey by Basheke and Wandema (1989) indicated that diarrhoea accounted for 8-20 percent of mortality and fever and/or malaria accounted for between 16 and 36 percent of mortality cases reported depending on the geographical location. The situation now seem not to have changed except that based on Hai District Council report (1999a), TB and/or HIV/AIDS appears to be leading followed by malaria and pneumonia (Table 9). Health facility-based mortality records between 1996 and 1998 showed also that malaria accounted for 29 percent of all death (n=817) in under five years old children (Hai District Council 1999a). The information here indicates also hat mortality due to malaria and diarrhoea in underfive years old children in Hai District have not changed over the years. The problem may be aggravated by HIV/AIDS.

Table 10 presents Maternal Mortality Rate (MMR) in Kilimanjaro region between 1985 and 1991 as summarized by Kavishe (1993) and the current situation of MMR in Hai District as reported by Hai District Council (1999b). Given that the MMR of 43/100,000 to 105/100,000 shown in the Table between 1985 and 1991 are regional aggregates, the value of 306/100,000 in 1999 in Hai District indicates that MMR in Hai District has increased sharply. Reasons for the sharp increase is not clear, however, the high contribution to mortality from HIV/AIDS and TB reported by Hai District Council (1999) may partly explain the sharp increase in rate of MMR.

Table 10: Trends of Maternal Mortality Rates in Kilimanjaro region between 1985 to 1991 and 1999 (per 100,000 live births)

Source	Year	MMR
Kavishe (1993) (Regional aggregated data)	1985	68
	1986	51
	1987	105
	1990	57
	1991	43
Hai District Council (1999b)	1999	306

4.5 Access to and utilization of basic preventive and curative health services

The government, religious organizations and private individuals provide health services in Hai District (Table 11). Currently there are three hospitals, four health centres and 66 dispensaries. Forty-two (42) of the health facilities provide MCH services of which, 37 facilities provided family planning service as well (data not shown).

Based on Kilimanjaro Region Situation Analysis Report (1990), before the CSPD Programme was initiated, home visits were done that reached out 85 percent of households. These visits helped to identify health problems and provide health education. The situation analysis report for Kilimanjaro Region also pointed out that although the health facilities were many and the population served per health facility surpassed the national target (Table 11), the quality of service provided was poor particularly in facilities operated by the government. According to the report, they lacked essential drugs, medical equipment, transport, and incentives and trained personnel. Further, the importance of MCH services and immunization on nutrition was not vivid to community members.

Based on data in Table 11, access to health facilities has increased during the CSPD Programme implementation. Two health centres were build during the Programme period and dispensaries increased by two thirds. Further, 65 health posts were established and health facilities providing MCH services increased by one third. Population served per health centre and/or per dispensary has been reduced by half and population living within 10 kilometers walking distance from health facility has increased by 7.4 percent. We did not come across on information regarding status of facility-based health providers before the coming of the CSPD Programme in Hai District and therefore no comment is given with regard to change in population served per facility-based health provider. Regarding VHWs and CBDs, these were non-existent before CSPD.

TBAs and Traditional Healers existed even before the coming of CSPD Programme in Hai District. However, documents we came across were quite on numbers. The ratios of community-based workers per village and household as well as CBWs per MCH Aider are discussed in section 8.

Table 11: Health Facilities in Hai District

Item	Year			
	1988[1]	1999[2]		
		Government	Private/NGOs	Total
Health facilities:				
Hospitals	3	2	1	3
Health centres	2	3	1	4
Dispensaries	27	24	42	66
Health posts	-	65	-	65
Facilities providing MCH services	35	30	12	42
Population served per health facility:			National target	
Hospitals	66,712	70,753	100,000	
Health centres	100,060	59, 559	50,000	
Dispensaries	7,410	3,611	10,000	
Number of health staff:			Population per health staff	
Medical Doctors/Assist. Med.	N.A	5	47,663	
Doctors	N.A	58	4,109	
Public Health Nurses	N.A	44	5,416	
Nurse Midwives	N.A	51	4,673	
Rural Medical Assistants	N.A	42	5,674	
Nurse Auxiliaries/MCH Aider				
Number of community-based workers:				
TBAs	N.A	166		
VHWs	None	136		
CBDs	None	116		
Traditional healers	N.A	96		
Population living with 5-10 kilometers walking distance from health facility	80%	87.4%		

Source: 1 Kilimanjaro Region Situation Analysis (1990); 2 Hai District Council (1999a).
N.A = Data not available.

4.5.1 Service provision and utilization

Table 12 presents trends of antenatal care in the District and use of ORS as reported by TDHS (1991/92 and 1996). The Table gives an indication of improvement in antenatal service utilization in 1996 relative to 1991/92 in Kilimanjaro region and possibly Hai District as well. It also indicates that community-based antenatal care was improved. For example antenatal services and child deliveries attended by TBAs increased and coverage

of toxoid injection during pregnancy improved in 1996 relative to 1991/92. Regarding use of ORS, the data shows also that there was an increase in number of women who used ORS for treating diarrhoea in 1996 compared to 1991/92. For Hai District, the increase in health facilities that provide MCH services (Table 11), the establishment of community health posts and the complementary activities done by VHWs, TBAs and CBDs may have contributed to improvement of pre and postnatal care.

Table 12: Health services and utilization[1]

Service	TDHS (1991/92) (N=368)	TDHS (1996) (N=281)
Pregnancy cared by (%)		
Facility-based health workers	98.8	87.7
TBA	0.0	11.3
No one	0.5	0.4
Toxoid injections given to mothers during pregnancy (%)		
None	6.1	3.9
One dose	21.0	19.4
Two doses	71.7	76.3
Place of delivery (%)		
Health facility	75.7	64.3
At home or other place	24.3	35.7
Delivery attended by (%)		
Facility-based health worker	78.9	65.4
TBA	6.6	10.6
Relatives or others	14.5	24.1
Use of ORS (%)		
Know about ORS	95	91
Use ORS	71	87

1. Regional aggregated data

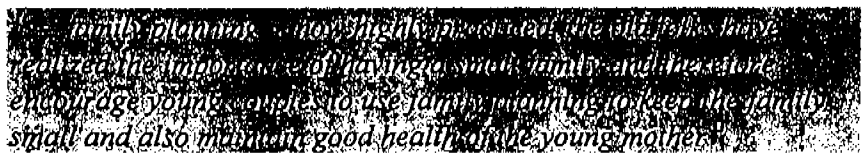
Discussions with KIs and FGDs also indicated that the CSPD Programme has improved accessibility and utilization of the basic preventive and curative services. At Nronga Village for example discussing with a group of VHWs they said:

"... since we live within the community, people find it easy to come to

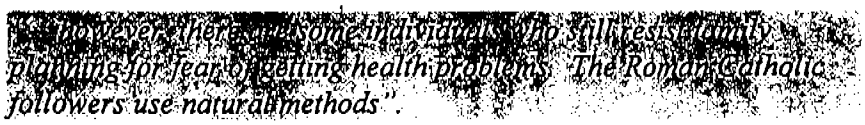
Interviewing the Village Party Chairman at Shiri Mgungani he said:

Discussing with a focus group of extension workers and village government at Nronga village they reported:

Regarding use of family planning, Lorri *et al* (1994) reported that 99% percent of women (n=280) in two villages studied in Hai District knew about family planning but only 60 percent were using any type. The leading reason given by the non-users was that the spouse did not approve indicating that there was some resistance in use of family planning during the time the Programme was being initiated. Information on the situation now after the implementation of the CSPD Programme is based on discussions with KIs and FGDs and indicated that use of family planning has improved. While discussing with a group of TBAs at Samaki Maini for example one said:



But another one said:



4.5.2 Immunization coverage

Immunization is the major activity in controlling five killer diseases in young children including tuberculosis, polio, diphtheria, pertutises, tetanus and measles. The Essential Programme for Immunization (EPI) was launched in Tanzania in 1975. It is conducted in all regions and aims at achieving Universal Child Immunization (UCI). It is provided as part of MCH services. Information regarding immunization coverage at the beginning of the Programme is based on a report of nutrition campaigns in Hai District in 1988 and the Kilimanjaro Region Situation Analysis report (1990). The Kilimanjaro Region Situation Analysis (1990) reports also that immunization activity went along with distribution of IEC materials, supply of vaccines, kerosene, refrigerators, cold chain flasks, stoves, sterilizers, syringes and MCH cards. Vehicles were also allocated to Regional and District Cold Chain Operators (DCC). Refresher courses were also conducted for RMA, MCH Aider and Nurse Auxiliaries.

Table 13: Amount of vaccines received and distributed in 1988

Type of vaccine	Vials Received	Vials distributed	Balance December	Vials destroyed
BCG	13,650	8443	6627	-
DPT	15700	14755	1,496	305
POLIO	20,000	18,340	1,660	-
Measles	11,750	12,695	1,001	14
TOXOID	16,850	10,519	6,749	862
Anti rabies	5,026	3,505	2,165	-

Source: Kilimanjaro Region Situation Analysis (1990)

Table 13 shows that availability of vaccines in 1988 in Kilimanjaro Region and most likely in Hai District as well when the CSPD programme was being initiated was adequate. However, immunization coverage was only about 60 percent (Kilimanjaro Region Situation Analysis 1990). Among the problems reported to have contributed to the lower coverage were that community members did not know the importance of this service (Kilimanjaro Situation Analysis Report 1990).

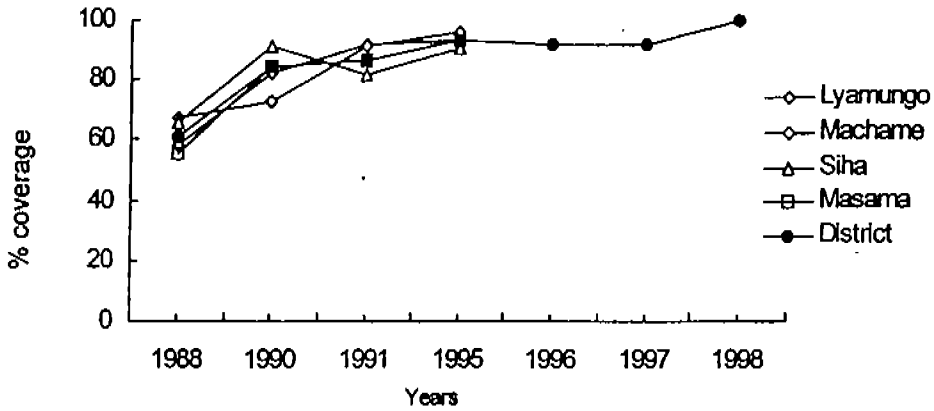


Figure 6: Immunization coverage by division in Hai district (fully immunized)

Source of information for the trends on immunization coverage during the CSPD Programme implementation is based on data from community quarterly monitoring system in the District. The data shows that total immunization coverage rose from 60 percent at the beginning of the Programme to over 90% by the year 1998 (Figure 6).

5.0 PRACTICES AND PROCESSES WITH NUTRITION IMPACT

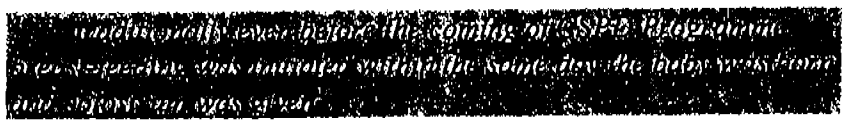
5.1 Infant feeding

Early initiation of breast-feeding (within one hour) is important for effective establishment of lactation, baby rooting and mother child bonding. Further, colostrum is important for the baby's immunity and it is rich in micronutrients particularly vitamin A. During the first 6 months of life, breast milk alone is enough to support adequate growth and health of an infant. During that period, the baby does not need any additional food, not even water because a greater part of breast milk is water that is enough to quench the baby's thirsty. Giving additional foods and even water at this age may even harm the baby by causing diarrhoea. It may also affect breast feeding performance by reducing the desire for the child to suck thus resulting in malnutrition in the infant.

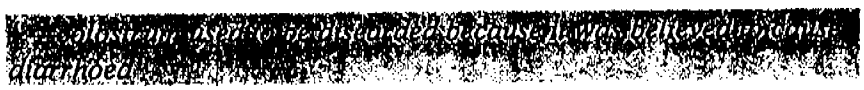
After 6 months, however, infants require additional food to complement breast milk that still remain to be the best food a baby can get during the first 2 years of life. During the complementary feeding period, young children need to feed frequently and the food given needs to be rich in energy and nutrients to satisfy their nutritional needs. This is because they cannot consume large amounts of food per meal yet their nutritional requirements per kilogram body weight are high.

5.1.1 Breast-feeding practices

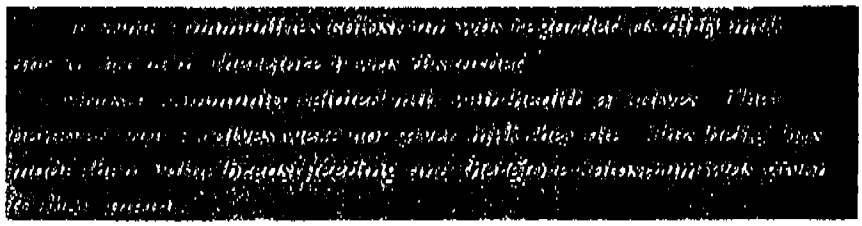
Information gathered from discussing with KIs and FGs revealed different situations regarding use of colostrum. Focus groups at Nronga and Shiri Mgungani villages, Ward Extension Workers in Machame West and South Wards said:



However, some KIs at Shiri Mgungani, reported that:

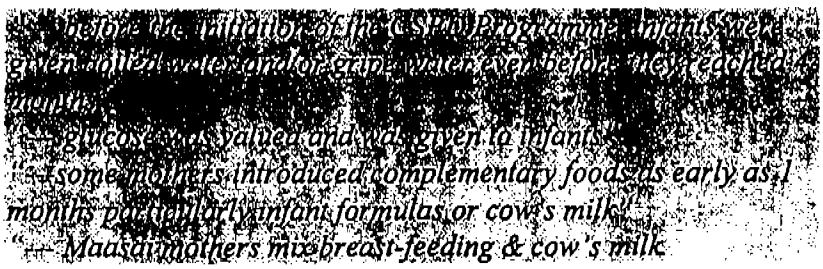


Information gathered from KI at District level, Siha Central Ward and FGDs from Samaki Maini and Nronga villages, was that:



Regarding initiation of breast-feeding they said:

Regarding exclusive breast-feeding, a positive practice learnt from discussing with KIs and FGs relating to infant feeding was that during the first three to four months after delivery, a Chagga women was confined at home, and left to stay with her infant all the time. This practice facilitated breast-feeding. According to the Kilimanjaro Situation Analysis (1990), culture insisted that during that period, the women should eat special diets such as local soup, porridge prepared from mashed bananas (locally known as *ntori)* or porridge prepared from germinated finger millet flour mixed with blood from goat (locally known as *kisusio*). However, despite this practice that provided a good opportunity for exclusive breast-feeding, they also said that:



According to Materu (1985), about 18 percent (N=147) infants in Hai District were already getting solid food at 3 month and 71 percent were on solid foods at age between 3 and 6 months. A study by Basheke and Wandema (1989) in 26 villages selected from each ward in Hai District indicated that breast-feeding was erratic, particularly among employed mothers (54% of mothers in Lyamungo division were not breast-feeding on demand). Between 10-20 percent of mothers interviewed (N=620) stopped breast-feeding when the baby was at age less than 18 months.

5.1.1.2 Situation after the CSPD Programme

Table 14 gives a summary of information regarding infant feeding practices based on TDHS 1991/92 and 1996. Although TDHS base its data from the region, it is reasonable to assume that these developments were also applicable in Hai District. Table 14 shows that there might have occurred some improvement in initiation of breast-feeding practice and use of colostrum during the CSPD Programme implementation. Already as early as 1991 when the Programme was just two years 35 and 85 percent initiated breast-feeding within one hour and one day respectively. The situation improved even more in 1996 when those who reported to have initiated breast-feeding within one hour rose to 89 percent and 96 percent reporting to have initiated within the first day. This may indicate that colostrum was being given since colostrum is available within the first week after delivery. Based on TDHS (1991/92) the median duration of breast-feeding was also long (23 months) and children were breast-fed on demand (6 times or more in 24 hours). However, exclusive breast-feeding was a problem since the median duration of 0.5 months is too short.

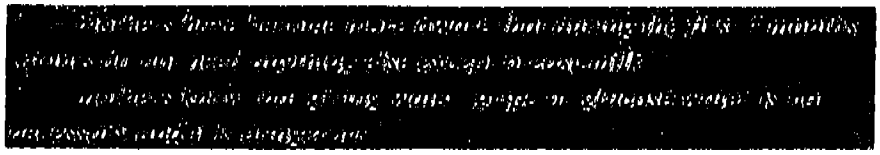
Table 14: Infant feeding practices (regional aggregated data)

Practice	TDHS (1991/92)	TDHS (1996)
Initiation of b/feeding after delivery: Within I hour Within 1 day Giving colostrum	 35% (n=253) 85% (n=253)	 89% (n=281) 96% (n=281)
Ever breast fed	96% (n=372)	98% (n=281)
Exclusive breast feeding (for the first 6 months)	Median duration for exclusive breast-feeding is 0.5 months (n=220)	not mentioned
Breast-feeding duration	Median duration of breast-feeding is 23 months (n=220)	not mentioned

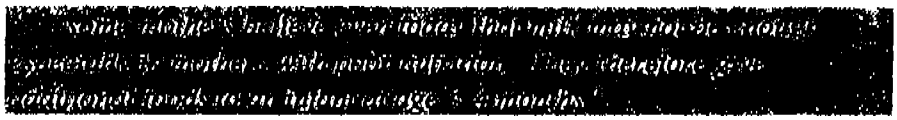
Results of discussions with KIs and FGDs at all levels indicated that there have been some changes in the knowledge, attitudes and practices of key actors regarding use of colostrum that may partly be attributed to the implementation of the CSPD Programme. For example in one of the focus group discussions one said:

Yet a study conducted in one village in Hai District by Ballart *et al.* (1998), reported that 13 percent of women (n=145) discard colostrum and the reason given was that colostrum is dirty milk, child became sick (diarrhoea) and/or culture prohibited. This indicates that, the practice of throwing colostrum still exists.

Regarding exclusive breast-feeding, some KIs and FGs reported that:



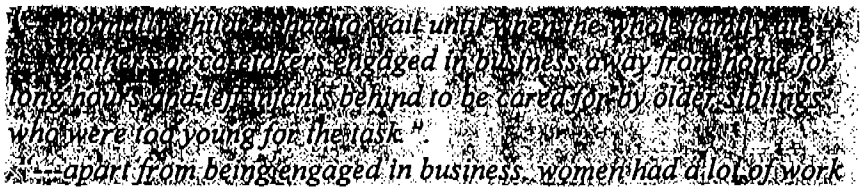
This information marched well with information from Hai District Council (1999), that report that 90% of infants are now exclusively breast-fed at least for the first 4 months of life. Yet a member participating in an FGD at Samaki Maini reported also that:

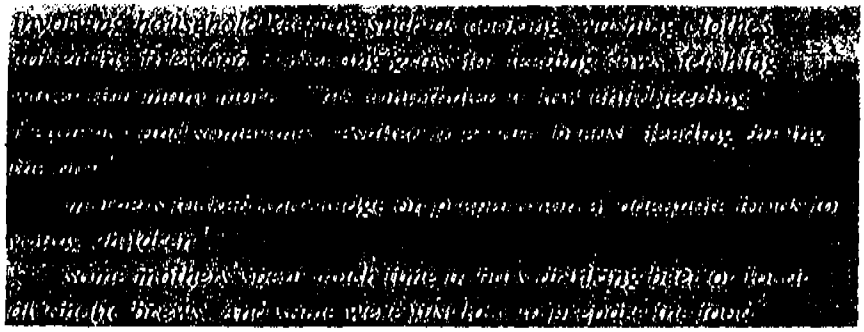


It was also reported that the Maasai community still mix cow's milk and breast-feeding from very early in life.

5.1.2 Complementary feeding

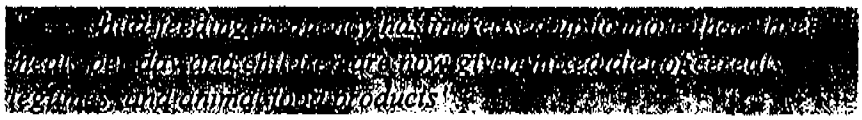
According to the Kilimanjaro Region Situation Analysis Report (1990), before the Programme started, child feeding frequency was low (< 4 meals/day). The complementary foods were prepared bulky with low energy and nutrient density and were based on staple foods (maize, mashed banana or rice pudding). In some families, however, milk alone or mixed with porridge was also given. A study by Basheke and Wandema (1989) in Hai District showed that about 30 percent of young children in Machame and Lyamungo divisions and about 50 percent in Masama and Siha divisions were getting 3 or less meals per day. The study also established inadequacies in the quality of the food given. For example according to Basheke, the common food given were stiff porridge with vegetables, tea with or without snacks, cooked plantains mixed with beans, sometimes with meat or milk, plain thin gruel with or without sugar was common and few mothers added fats to the child's food. Fruits and green leafy vegetables were uncommon particularly in Lower zone. Among the pastoralists, however, milk was the most common food given. In some families, however, milk alone or mixed with porridge was also given. Further, no food was prepared specifically for young children. Interviewing KIs and discussing with FGDs regarding complementary feeding they responded as follows:



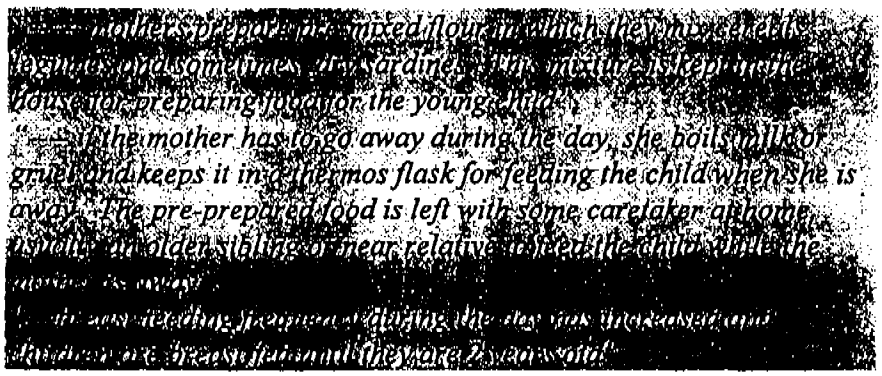


5.1.2.1 Complementary feeding during the CSPD Programme implementation

Regarding the current situation, there is no recent study that looked into the complementary feeding practices in Hai District to which a contrast can be made with the situation before the implementation of the CSPD Programme. Therefore, information here is based on discussions with KIs and FGDs. The results of the discussions indicated that complementary feeding has improved over the years. During one of the sessions at Nronga village one member of a FGD said:



At Shiri Mgungani village a VHW said:



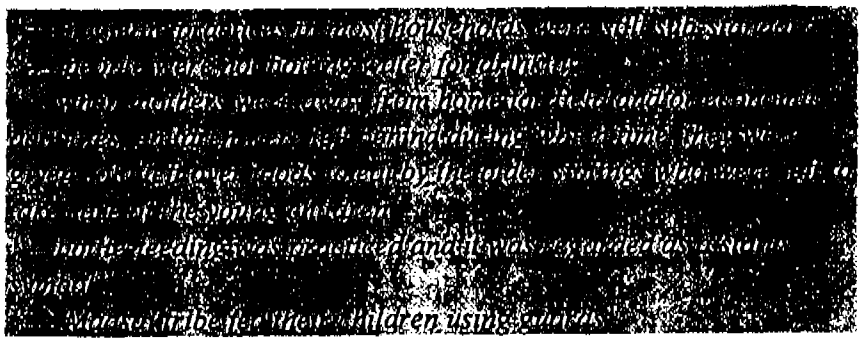
5.2 Food hygiene

Young children normally suffer repeated diarrhoea episodes much of which is of bacterial origin that contaminates foods specifically prepared for young children and/or unsafe water that is given to the infants to drink (Rowland *et al* 1978, Black *et al.* 1982 and 1989, Reddy *et al.* 1988). Therefore it is crucial to prepare the child's food in hygienic

way to reduce risks of young children to get diarrhoea infections. It is also crucial to ensure that water given to young children is safe. The easiest way to make water safe is boiling before drinking. In this regard, Tanzania through the MoH (Primary Health Care) has been advocating boiling water for drinking for decades.

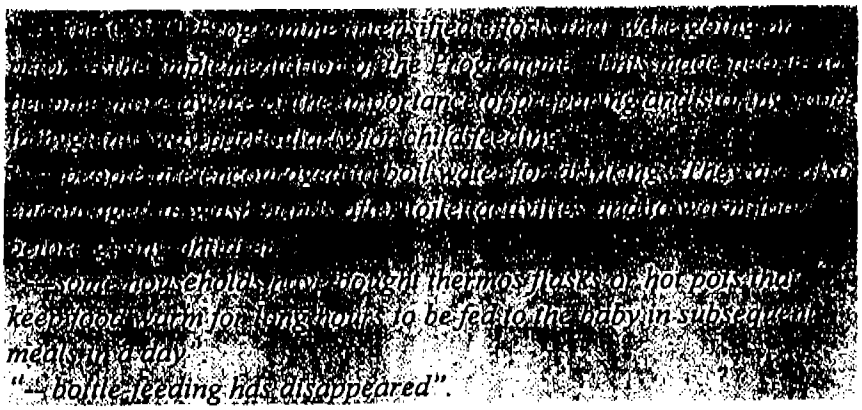
5.2.1 Situation of food hygiene prior to the implementation of the CSPD Programme

Information regarding hygienic practices before the implementation of the CSPD Programme is based on discussions with KIs and FGDs. They reported that prior to the implementation of the CSPD Programme, there were some efforts to improve people's hygienic practices in food handling. Community Development Officers and a health committee under the Lutheran church from time to time conducted health education sessions. In such sessions, topics addressed included hygienic preparation and storage of food for child feeding, cleanliness of utensils, keeping the household compounds clean and the need to boil water for drinking. Despite these efforts they said:

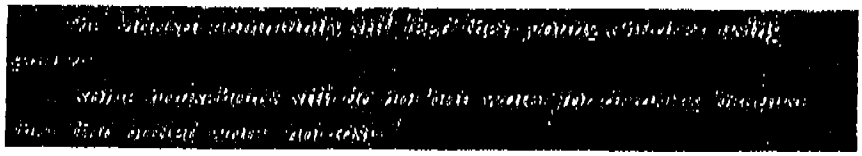


5.2.2 Situation after CSPD Programme implementation

Information here is also based on discussions with KIs and FGDs and indicated that there has been some improvement in food hygiene. These are some statements we recorded from discussions:



There were also who said:



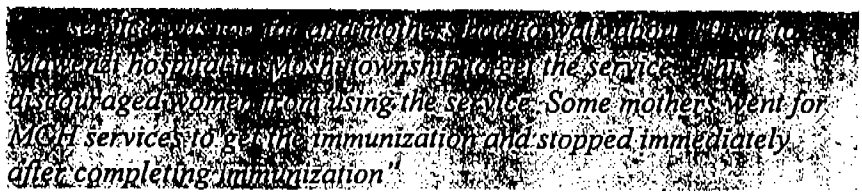
Based on these responses, it appears that the Programme did have some positive impact with regard to food hygiene particularly for young children.

5.3 Pre- and postnatal care

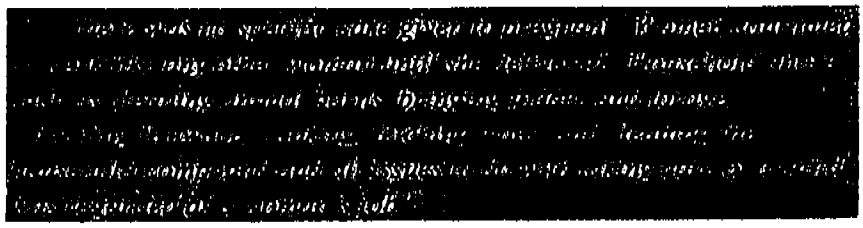
Care for pregnant and lactating mothers and infants under the age of five years is crucial for good maternal nutrition and pregnancy outcome and child health. The heavy woman's workload involving reproductive and productive roles, undertaken with minimal supportive system affects the mother's nutritional status and that for their young ones. During pregnancy, women need to eat at least $1\frac{1}{2}$ times the normal food intake when they are not pregnant. Pregnant women need to book early (at least 20 weeks of gestation) for pre-natal services and attend regularly so that developments of the pregnancy and her own health is monitored. Pre-natal services also give an opportunity for detection of any complication that may lead to poor pregnancy outcome. It also gives an opportunity for the mother to be immunized and given micronutrient supplements to improve pregnancy outcome. The growth of children under the age of five years old need to be monitored also through regular weighing and charting in a growth chart and observing the directions of the growth lines. In this way it is possible to identify problems and appropriate actions taken in time.

Based on the Kilimanjaro Situation Analysis Report (1990), there was no specific care given to pregnant women except for MCH services that were provided in health facilities where immunization was also given and child growth monitoring was done monthly. Results of discussions with KIs and FGDs, indicated that utilization of MCH services was poor due to ignorance. This is what one said:

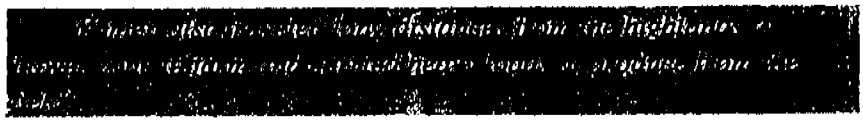
At Shiri Mgungani, a TBA said:



At Samaki Maini Village, a TBA said:



Another one said:



Regarding women workload, Table 15 shows that division of labour between men and women in Kilimanjaro Region before the implementation of the CSPD Programme was skewed against women. At Nronga village however, a key informant reported:

Table 15: Division of labour between male and female members in a household in Kilimanjaro Region

Activities	Adult		Adolescents	
	Men	Women	Boys	Girls
Agriculture				
Farm preparation	x	x	x	x
Tiling/cultivation	x	x		x
Sawing		x		x
Weeding		x	x	x
Carrying and manure the field		x		x
Harvesting and carrying the harvest for storage	x	x	x	x
Preserving harvested food		x		x
Processing food		x		x
Home gardening		x		x
Household chore				
Fetching water, firewood and cooking		x		x
Cleaning household compound		x		x
Washing utensils and cloth		x		x

Source: 1. Kilimanjaro Region Situation Analysis Report (1990)
2. Hai District Council (1999a)

5.3.1 Situation of pre- and postnatal care after CSPD Programme implementation

According to Hai District Council (1999a) the situation of women workload has not improved over the years and there are also cultural practices and beliefs that have negative effect on the health of women and children (Table 16).

Table 16: Other cultural practices and beliefs affecting health of women and children by ethnic group

Ethnic group	Practice	
	Boys/males	Girls/women
Chagga and Pare	Eat together and given more food/meals.	Eat the remaining food in the kitchen.
	Circumcised at hospital and treated well.	Mutilated[1] at home and treated locally
Maasai	Circumcised at home and treated locally.	Mutilated[1] at home.
	Allowed keeping presents given to them during celebrations after circumcision.	Given presents as boys but not allowed to carry them to her husband once married.

1. Rate of female genital mutilation is 22%.
Source: Hai District Council (1999a)

Discussions with KIs and FGDs indicated that the practice of confining a Chagga woman at home for the first 2 to 3 months after she has delivered and giving her special treatment is still in practice. However, there were mixed opinions with regard to women workload as the following statements show:

Based on the preceding discussion, there seems that no much change has occurred on reduction of women workload.

5.4 Household food security

Food insecurity is one of the underlying factors for malnutrition afflicting women and children. Household food security is determined by individual accessibility to quantity and quality food supply throughout the year. Some of the essential factors of food security are food production, storage and preservation, processing, distribution, household size and income.

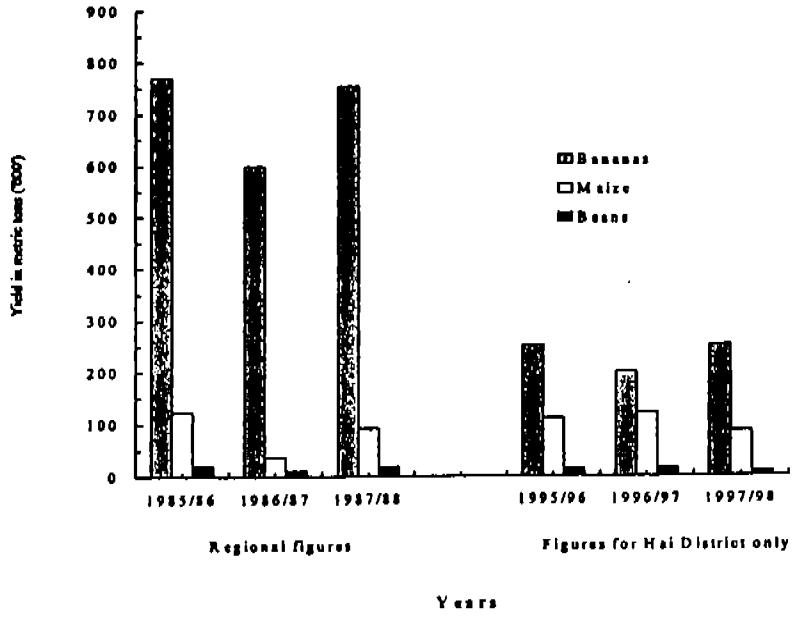
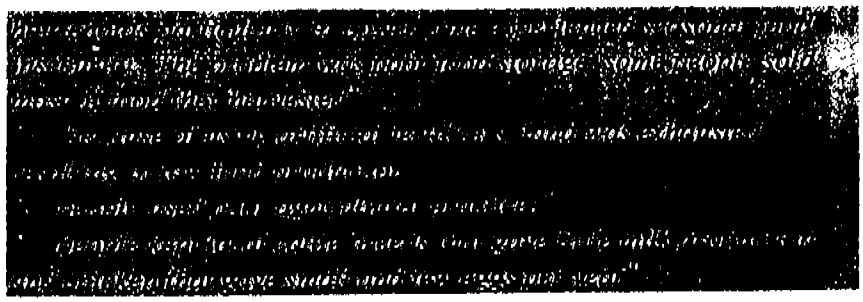


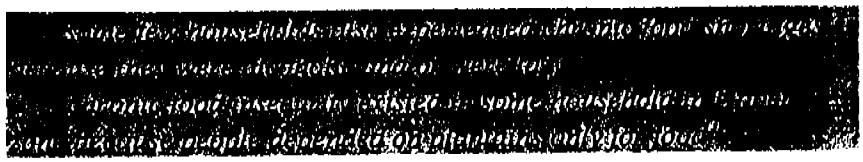
Figure 7: Food production 1985/86 – 1986/87 and 1995/96 –1997/98

Figure 7 shows production of major food crops in the region between 1985 and 1988 and in Hai District between 1995 and 1998. Food production specific for Hai District between 1985 and 1988 was not available and therefore values for those years are based on regional aggregate adopted from the Kilimanjaro Region Situation Analysis Report (1990). Information gathered while discussing with a KI at District level was that:

"Food was not [illegible] a problem except during backward when some



In addition to information gathered at District level, at Samaki Maini village, a group of TBAs reported:



5.4.1 Situation during and after CSPD Programme implementation

While food production between the two reference periods in Figure 7 can not be directly compared, it is however, reasonable to assume that food production in Hai District between 1995 and 1998 was higher compared to the period between 1985 and 1988. This assumption is based on the fact that production between 1985 and 1988 shown in Figure 7 is an aggregate of five Districts (Hai, Mwanga, Rombo, Same and Moshi Rural)[1]. Assuming that the production between 1985 and 1988 was equally distributed between the five Districts, then production per District during that period would be less than the production reported for Hai District between 1995 and 1998. Further number of diary cattle that contributes to the quality of diet particularly for young children also increased from 19,264 in 1988 (Kilimanjaro Region Situation Analysis report 1990) to 77,341 in 1999 (Hai District Council (1999) an increase of over 4 times.

Some key informants at District level were of the opinion that household food insecurity in the Upper zone has disappeared and that food insecurity can still be seen in the Lower zone particularly so among the Maasai communities since they normally do not farm instead depend on buying food. Annex 1 also indicates that food insecurity is likely to occur in Lower zone due to unreliability of rains and also soil degradation due to overgrazing.

At Samaki Maini, a TBA said:

[1] All the districts producce all the types of food crops presented in Figure 7 in varying degrees.

Table 17: Fruits and vegetable growing in Hai District between 1985 and 1989

Type of vegetable/fruit grown	Materu (1985) (N=150) (%)	Basheke & Wandema (1989) (N=160) (%)
Vegetables		
Amaranth	81.3	81.3
Cabbage	44.4	44.4
Cow pea leaves	22.5	22.5
Pumpkin leaves	13.8	13.8
Spinach	18.8	18.8
Cassava leaves	10	10
Sweet potato leaves	3.1	3.5
Salad	23.1	23.1
Fruits		
Orange	52.5	52.5
Papaw	35	38.0
Avocado	59.3	59.3
Lemon	72.5	72.5
Pineapples	4.3	6.9
Tangerines	4.3	4.3
Guava	11.3	11.3
Mangoes	24.3	24.3

Table 17 presents fruits and vegetable that were grown in Hai District based on Materu (1985) and Basheke & Wandema (1989) and shows that there was a variety and good source of vitamin A. Table 18 shows the current situation of production and consumption based on a study in one village of Hai District by Ballart *et al.* (1998). The two Tables indicate that fruits and vegetable had not been a problem in Hai District even before the coming of the CSPD Programme. However, discussing with FGDs at Samaki Maini one said:

Table 18: Fruits and vegetables growing and consumption

Source of vegetable (n=145)	%	Type grown and consumed (n=145)			
		Vegetables	%	Fruits	%
Own garden	33.8	Amaranth	18.6	Papaw	20
Own farm	38.6	Pumpkin leaves	16.6	Guava	11.7
Market	49.6	Spinach	15.9	mango	23.4
Wild	4.8	Cow pea leaves	18.6		
		Sweet potato leaves	5.5		
		Others	11.7		

Source: Ballart *et al.* (1998)

5.5 Sanitation and water supply

Poor environmental sanitation is a source of infectious diseases including diarrhoea, ARI and worm infestation. Disease and inadequate food intakes are the immediate causes of malnutrition. For this reason, sanitation needs to be addressed as well if nutrition security is to be achieved fully. Among the major elements of household sanitation are the method used to dispose excreta and refuse. Households need to use latrines for disposing excreta. They also need to keep households compounds clean by disposing refuse properly.

Sanitation goes along with availability of adequate, clean and safe water. Inadequate water supply and sanitation leads to high prevalence and frequency of disease episodes especially diarrhoea. It is therefore necessary to protect water sources to prevent the water from drying up and/or getting contaminated with deleterious material that can cause ill effect to the health of those using it. Piped water or water from open wells or streams may look clean, however, that does not guarantee its safety for drinking. It needs further treatment to make it safe for that purpose.

5.5.1 Situation of sanitation before and after CSPD

According to the Kilimanjaro Region Situation Analysis report (1990) before the implementation of the CSPD Programme, heads of some families found difficult to share a latrine with children. The report also states that some families shared a house with livestock an indication that sanitation in some families was poor.

Latrine coverage: The situation of latrine coverage before the coming of the CSPD Programme can be seen in Table 19. The Table shows that latrine coverage (functional latrines) increased by 10 percent and households with temporary or non-functional latrine dropped by 10 percent. Figure 8 show the current latrine coverage by ward and reveals that, latrine coverage is particularly higher (> 70%) in Upper zone and parts of Middle

zone (Machame West, North and Uroki wards, Masama West and East wards and Siha West and East) and low (< 60%) in Lower zone (Lyamungo division, Masama South and Siha Central). Damaged latrines are also more common in Lower zone (37 – 54%) than Upper zone (Figure 8). Key informants and FGDs, at Nronga, Machame South and Siha Central also reported that coverage of latrines and utilization is particularly lower among the Maasai communities.

Table 19 Latrine coverage and water supply

Item	1988[1]	1999[2]
Proportion of population with latrines (%)		
Permanent/functional	54	64.5
Temporary or out of order	18	8
Under construction/new	-	1.2
Water supply:		
Population served with improved water supply (%)	54	72
Water source (number)		
Shallow well	-	3
Bore holes	-	23
Spring water	-	20

Source: 1. Kilimanjaro Region Situation Analysis Report (1990)
2. Hai District Council (1999)

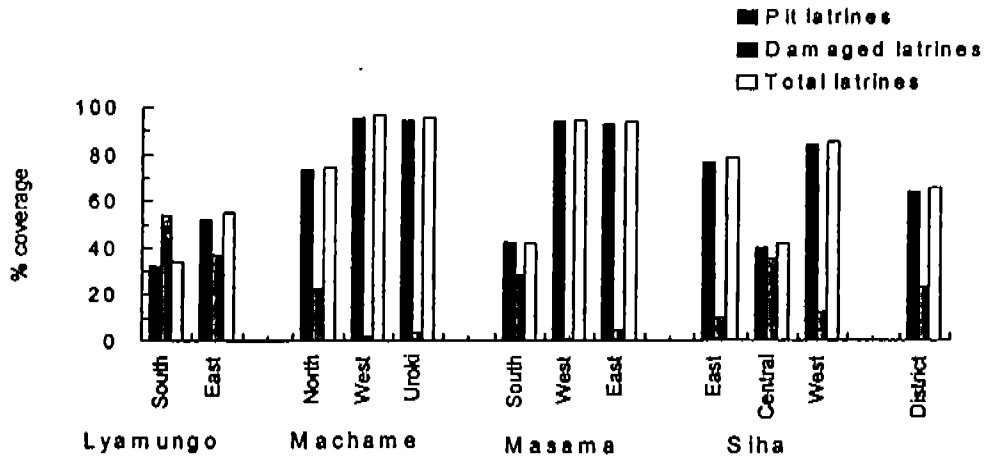
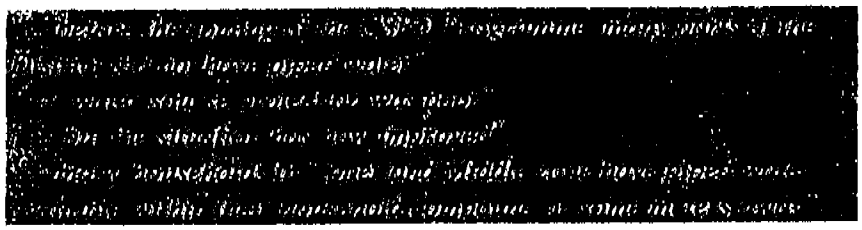


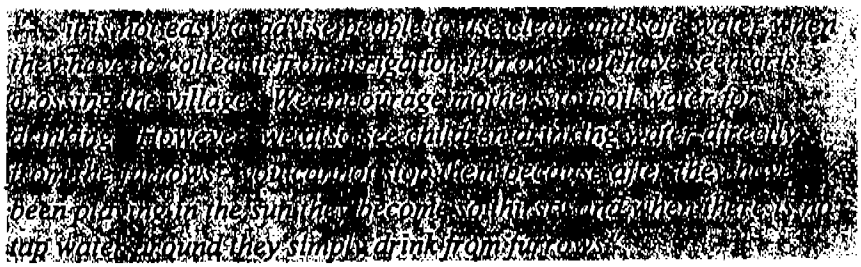
Figure 8: Latrine coverage, 1999

Water supply: The situation of water supply before and after CSPD Programme implementation is also presented in Table 19. From Table 19, total population served with improved water supply increased by 18 percent. Based on Hai District Council report (1999), some villages now keep funds for improvement of water service, a system that was non-existent before the CSPD Programme started. Water sources include 3 shallow wells, 20 traditional (natural springs) and 23 bore holes. Discussions with KIs and FGDs complemented the information in the documents by pointed out that:



The KIs and FGD also revealed that coverage of piped water in Lower zone is still not good. One said:

At Shiri Mgungani village key informants and FGDs complained on the fact that people still depend on water from irrigation furrows. The VHW said:



Apparently, according to the VEO at Shiri Mgungani village, the VWC has been making a close follow up from the District Council to hasten the process of bringing piped water to Shiri Mgungani from the existing schemes. People have also been made to contribute financially for the purpose. The project is yet to be undertaken. This information here indicates that there have been improvements in sanitation and water supply during the Programme implementation. However, the situation in Lower zone has not improved much.

5.5 Literacy rate

Literacy is another necessary condition for nutritional security. Illiteracy especially of women may lead to unwise choices and decisions of use of available resources potential for improvement of nutrition well being. Table 20 shows that on average there were two

primary schools in each village in 1998 and the situation has not changed much over the years. Number of pre-schools is likely to have increased because the value shown for 1988 is a regional aggregate. Enrollment rate for primary school does not seem to have improved however, there more pupils joining secondary and or colleges then in 1988. According to Nyang'ali (1995), school attendance during the early years of the Programme implementation ranged between 75 and 80 percent during the harvesting period and went down to less than 50 percent during rain seasons. Among the Maasai, the situation was worse because the boys were involved in taking animals to graze and girls are kept away undergoing a special training called 'lobula' (a traditional training involving young girls being initiated into adulthood). Based on Hai District Council (1998) school attendance in Coffee Estates areas and areas surrounding market centres was not satisfactory (level not specified). Reasons advanced are that children might be involved in offering cheap labour to the farms or entrepreneurs in the market centres. Early marriage for girls was another reason mentioned.

Table 20: Status of pre-schools and primary school education in Hai District (1988 -1999)

Indicators	1988	1999
Number of pre-schools	114*	118
Number of primary schools	139	141
Primary school enrollment (%)	81.9	76
Primary schools providing lunch (%)	72.2	100
Pupils selected to join secondary school/colleges after completion of primary school (%)		
Girls	1.0	14.5
Boys	1.7	12.3
Total	2.7	13.4

Source: 1 Kilimanjaro Region Situation Analysis (1990) (* = regional aggregated value)
2. Hai District Council (1998)

Table 21 shows that literacy rate particularly of women has improved from 66% in 1988 to 75% in 1999. The rate in Upper and Middle zones particularly Machame division, Masama West and East is relatively higher (> 80%) than Lower zone (Figure 9).

Table 21: Adult literacy

Literacy rate	1988[1]	1999[2]
Male	-	80%
Female	66%	75%
Total	95%	77%

Source: 1. Kilimanjaro Regional Situation Analysis Report (1990)
2. Hai District Council (1998 and 1999)
- Not indicated

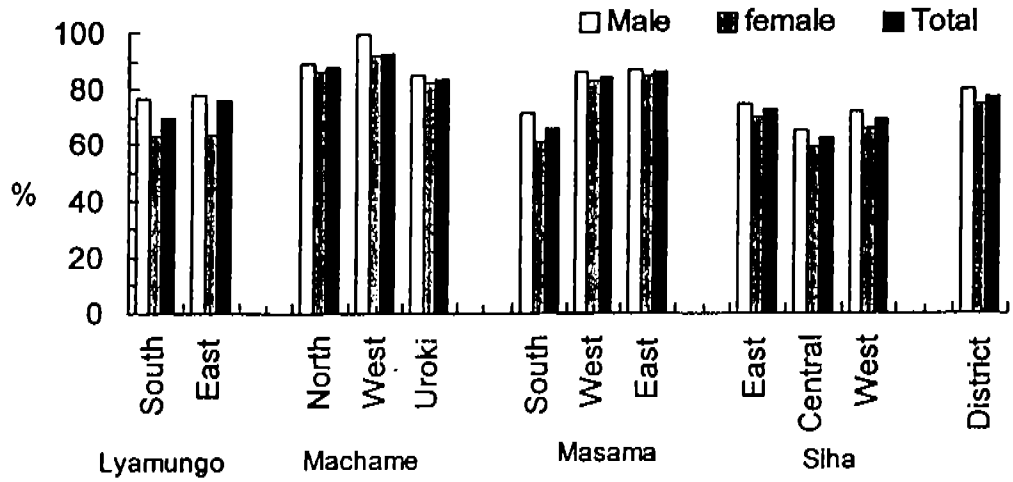
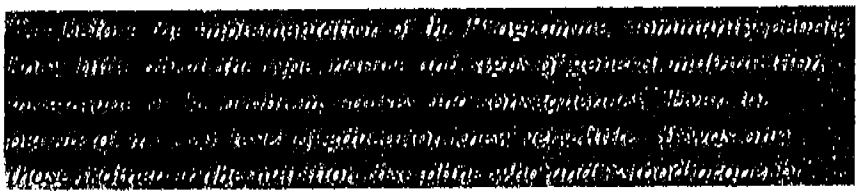


Figure 9: Literacy rate by ward, 1999

6.0 EFFORTS MADE BEFORE THE CSPD PROGRAMME IMPLEMENTATION

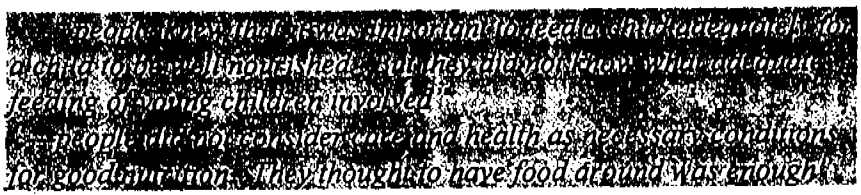
6.1 Knowledge, perception and attitudes (KPA) of key actors

Knowledge, attitude and perception of key actors about malnutrition and its consequences are important for taking necessary actions to control the problem. Information regarding the status of KPA and commitment of key actors before and after Programme implementation is based on what was reported by KIs and FGDs. The information that was gathered from these sources indicated that KPA of key actors at the beginning was poor. For example, regarding knowledge of malnutrition among community people as key actors, a key informant at the District level had this to say:

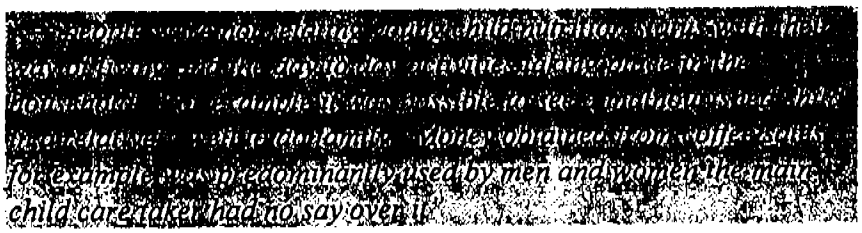


In another session a key informant said:

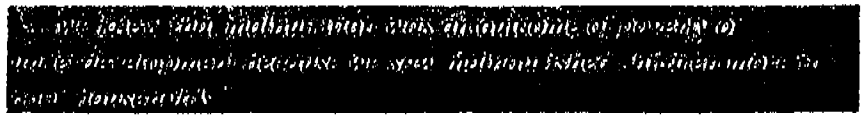
And another informer said:



On whether people related child nutrition with processes in the society, or considered human, economy and organization resources available as having a role in improving the health and nutrition of the people, a key informant at the District level responded:

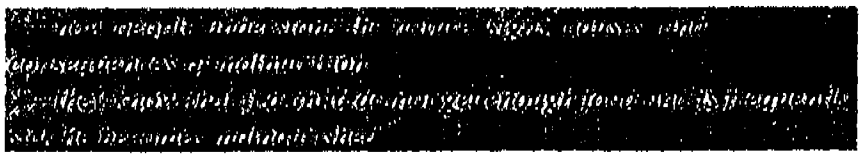


In some FGDs, they said:

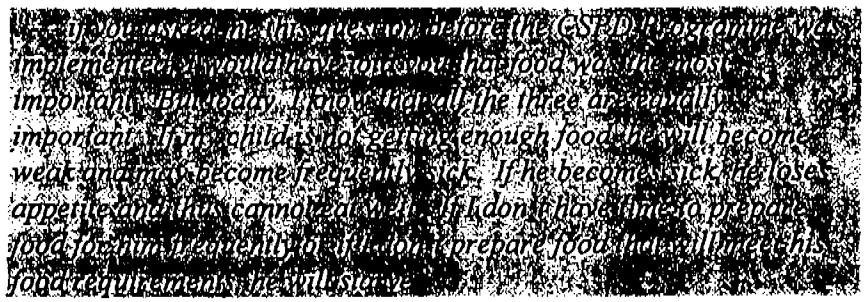


6.1.1 Situation of KPA after the implementation of the CSPD Programme

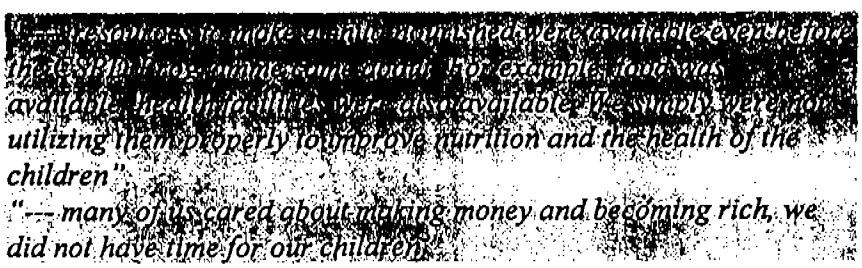
Responses from KIs and FGDs indicated that there has been some improvement in the understanding among key actors on issues related to malnutrition after the implementation of the CSPD Programme. These were some of the responses given:



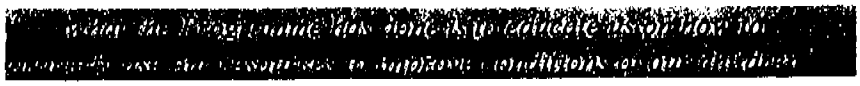
A response given when a question posed to a focus group of mothers at a village regarding what they thought was important for good nutrition between food availability, care or health, indicated that they considered all the three conditions to be important. For example in response one said:



While discussing with KIs and FGDs, it was also evident that young child nutrition status is identified as an outcome of processes in society and people have realized that human, economy and organization resources have a role in improving the health and nutrition of the people. Many recognized that PEM and micronutrient malnutrition is an outcome of ignorance rather than poverty. In one of the FGD sessions, one said:

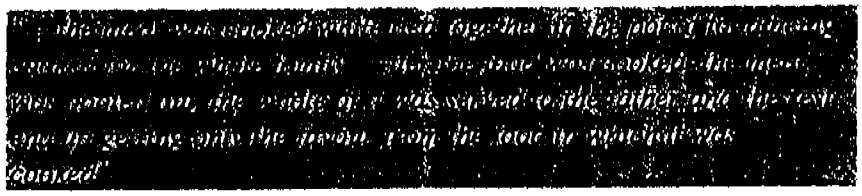


Another said:



6.2 Myths and mis-information

Based on information gathered from KIs and FGDs, before the coming of the CSPD Programme, there existed some myths and mis-information (Table 22). There were also some attitudes and practices with negative implication to nutrition security. For example according to the discussions, meat was meant only for men and fruits and vegetables meant for women, particularly so among Maasai tribe who eat wild fruits for medicinal value only. In this regard, men ate meat in bars while drinking alcohol. If meat was brought home one said:



Regarding food intake in pregnant women one said:

6.2.1 Situation after the implementation of the CSPD Programme

Based on information gathered from discussions with KIs and FGDs, the myths and mis-information seem to have been corrected. They said:

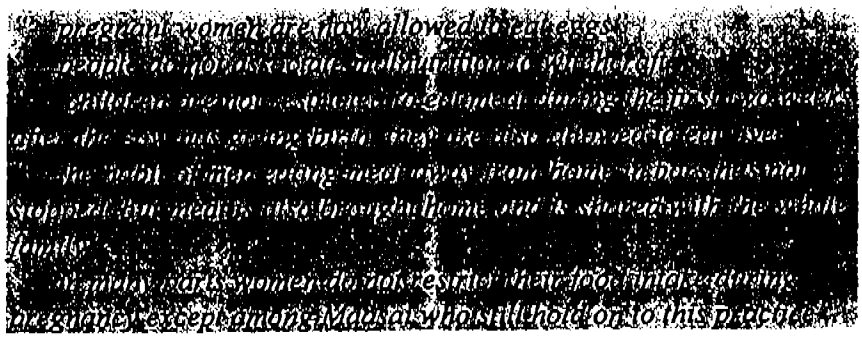


Table 22 Myths and mis-information

Practice/condition	Belief
Pregnant women are not allowed to eat eggs.	May deliver a bald baby.
Young children not allowed eating liver.	They will become arrogant or the child will become too heavy like liver itself and become inactive.
The first two weeks after a cow has given birth, children are not allowed to eat meat.	The cow will not give milk.
A child with measles must not get an injection.	If injected, the child will die.
A child with big belly.	A sign that the child will become rich in adulthood (among Maasai tribe).
Malnourished children/sick child.	♦ Have been bewitched ♦ It is a punishment from unhappy dead ancestor. ♦ Child not given the appropriate name (need to be named after a grand parent or ancestor).

Other cultural practices and beliefs affecting health of women and children by ethnic group have been presented in section 5 (Table 16).

6.3 Previous experiences from nutrition-oriented Programmes

Before the CSPD Programme was initiated in Hai District, at the national level, there were various Programmes that directly dealt with food and nutrition issues under the Ministries of Agriculture, Health, Community Development, Women Affair and children, Education and Administration and Local Governments. There were also sectors that dealt on it indirectly such as transport and communication, water and sanitation and media. Hai District being part of the nation was also influenced by these Programmes. For example, MCH services were provided under the MoH and food in the form of dried schemed milk or cooking oils was given to children attending the service as food supplements. There were also institutional rehabilitation units (NURU) based in health facilities where severely malnourished children were admitted for rehabilitation. At NURU, mothers stayed with their children and were taught how to prepare improved child food recipes and growing vegetables in small home gardens. The District council also provided education, agricultural extension, water, sanitation and community development services.

6.4 Nutrition information systems (NIS) that existed

Prior to the initiation of the CSPD Programme, a health facility-based GMP was in place done monthly under the Ministry of Health. The health providers without full involvement of mothers who are the decision-makers did the assessment, analysis and designing of actions. Since the mothers and/or caretakers did not know the nature, magnitude, causes and consequences of malnutrition problems, they did not understand the purpose and importance of the system and the role they had to play to make it effective. According to key informants, traditionally mothers or caretakers used visual assessment (growth in volume) or lifted the child to feel the weight. They also used child developmental milestones to monitor growth of the child. These methods are in consistence with the conventional method (weighing and charting in growth cards). Another form of information system that existed was collection of food production to monitor food availability. This was collected by Agricultural Extension Workers and was used to plan an intervention according to the situation or solicit for food relief.

6.5 Institutional and organizational resources that existed

Institutional and/or organizations that operated in the District that had nutrition-oriented activities prior to the implementation of the CSPD Programme can be seen in Annex 5. Religious organizations, in particular were active in a variety of services including health and education. According to the Kilimanjaro Situation Analysis Report (1990) Christian missionaries were well established in the region and encouraged construction of most of the health facilities and schools that existed in the region before the CSPD Programme begun.

6.6 Poverty-eradication policies

Before the CSPD Programme was initiated in Hai District, there were several national policies that presented opportunities for nutrition improvement. They include a policy on ***reduction of economic inequalities***. This emphasized equity among Tanzanians and was implemented by regulating wages to minimize the gap between minimum and higher wage earners. This policy introduced progressive taxation system in favour of low-income groups and provision of subsidies for farm inputs and basic food to urban dwellers. The government statement on ***food security for all*** had an objective of attaining food self-sufficiency. A number of campaigns, Programmes and reforms have been undertaken in this regard. They include *Siasa ni Kilimo* (Politics is Agriculture), *Chakula ni Uhai* (Food is Life) and *Kilimo cha Kufa na Kupona* (Agriculture is a Matter of Death and Life) to mention but just a few. All these were to make sure that the nation has enough food even in bad times a goal that was to be achieved primarily by increased food production.

6.7 Other policies with indirect impact on poverty eradication

Basic and social service policies that existed before the coming of CSPD Programme in Hai District included provision of health service, clean water and sanitation, education (Universal Primary Education and Adult and/or Continuing Education), primary health care and family planning Programme. Adult education was meant to facilitate increased literacy rate among adults who did not get a chance to go to school during their childhood and/or youth. Universal Primary Education (UPE) in 1974 meant to enable all children of school-going age to enter primary school. Water development aimed at providing the rural population with adequate clean water supply by 1991. Villagization policy in 1976 that called for all citizens of Tanzania to live in structured villages facilitated provision of basic and social services. Nutrition education and intervention that has an important role in changing the knowledge, attitudes and practices of people about nutrition has also been implemented since as early as the 1920s (TFNC 20th Anniversary 1973-1993). In the mid 1980s national nutrition Programmes including control of micronutrient malnutrition such as VAD, IDA and IDD and improvement of infant feeding and young child nutrition were initiated. These are coordinated by consultative national committees and adopt a multi-sectoral approach.

6.8 Poverty-eradication Programmes that existed

Community Development in Tanzania is an institution that helps communities in the process of developing capacities for self-reliance. The institution is organized from the national level to the ward and/or village level. Like in other Districts in Tanzania, this institution was formerly established in the District to the ward and/or village level with trained personnel (Kilimanjaro Situation Analysis Report (1990). The operation of community development activities emphasized improvement of living standards through income generating activities. More emphasis was put in encouragement of women economic groups. At the time the CSPD Programme was being initiated in Hai District there was a total of 72 women economic groups operating (Kilimanjaro Situation Analysis Report 1990). These operated shops (56), cereal milling machines (4), local bars (4), collecting, processing and selling milk (3), hotel and/or restaurant (2), transport (1) and farming (1).

6.9 Sources of nutrition information

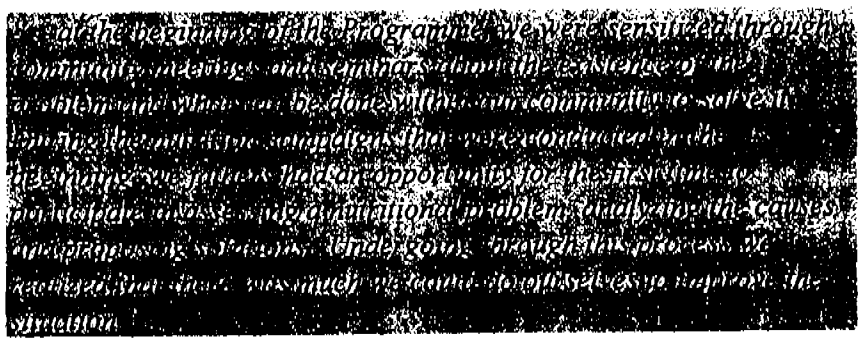
Dissemination of nutrition information is necessary for bringing about change in knowledge, attitudes and practices of people on nutrition. Source of information before and after the implementation of the Programme included newspapers, magazines, radio pamphlets, films and posters (Annex 6). With the coming of the multiparty system in Tanzania in the 1990s, there have been numerous newspapers in circulation that from time to time carry articles with nutritional orientation. Of those, the Kiswahili papers

such as "Majira", "Mtanzania", "Nipashe" "Mfanyakazi" and "Rai" have a wide circulation in rural areas including Hai District. Information also is obtained through seminars, in-service training, workshops, village meetings, health days and personal contacts with extension workers, health providers, VHWs, CBDs and other service providers operating in the District.

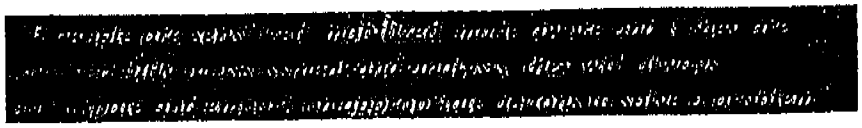
6.10 People-centered approach and commitment of leaders

The policies and social plans in Tanzania lay down explicit goals that recognize malnutrition as the underlying cause of morbidity and mortality in women and children. Further, the policies emphasize a people-centered approach that encourages self-reliance. Its decentralized Programmes also aim at strengthening of services in rural areas. However, results of focus group discussions indicated that before the CSPD Programme was initiated, the implementation of the self-reliance policies that were being advocated was poor. Community people were regarded as just beneficiaries who had little to offer to improve their situation. Many projects adopted a top-down approach with little if any involvement of the recipients of the projects. Examples of such projects are family planning, MCH services, micronutrient supplementation, UCI, ORT, NURU, immunization and even projects that were meant to improve food production such as use of fertilizers and pesticides. Moreover, according to the KIs and FGDs, there was no clear indication of commitment of political and traditional leaders to fight nutritional problem.

Regarding whether there has been a change during the CSPD Programme with regard to how community people are considered in the Programme activities, the FGs were of the opinion that the CSPD Programme emphasized community participation at all stages of Programme implementation. The discussions also indicated that political and traditional leaders consider that it is their obligation to improve the livelihood of the people in the area under their jurisdiction. For example while discussing with a group of fathers at Shiri Mgungani village one man said:



Another indication that the Programme fostered a people-centered approach was seen in one of the Programme reports (Annual progress report of Jan-Dec. 1995) that reported:



6.11 Signs of felt pre-existing call for children

Existence of day care centers in a community is an indication that people give priority to children. According to a Programme review report (*Taarifa ya Mradi wa* Hai CSD 1991) 48 child day care centres were reported to have existed already by 1991 (only two years of Programme implementation)[1]. These have now increased to 154 (Hai District Council 1999a).

[1] Based on the Kilimanjaro Situation Analysis (1990), it is likely that some of these were already in existence before the coming of the CSPD Programme.

7.0 ANALYSIS OF OUTCOMES

7.1 Inputs

Availability of adequate inputs is another factor that will determine the performance of a Programme. In Hai District, the commitment of the political and traditional leaders at various levels has motivated different partners to support the Programme financially, materially and technically. The main supporters are UNICEF in partnership with the District Council. The details of support from both UNICEF and the District Council can be seen in Annex 7-9 and other supporters are presented in Annex 10.

It is not easy to state the status of Programme cost since its inception so that per capita cost for beneficiaries can be assessed. This is because it was not possible to get financial reports that could give financial input continuity by source and type over the years of the Programme implementation. The Programme review reports that were available give some figures but discretely. Moreover, reports covering the period before 1998, presents support acquired in terms of types and amount of materials acquired, technical assistance obtained and training activities that were undertaken without showing the amount of funds used and source (Annex 7, 8 & 9). However, Table 23 shows amount of funds allocated and/or spent for children and women in Hai District between 1994 and July 1999 as reported by Hai District Council (1999a) and shows that the amount of funds allocated increased steadily between 1994 and 1996 after which it dropped sharply.

Table 23: Amount of funds allocated/spent for children and women

Year	Amount (Tshs.)
1994	2,900,000.00
1995	5,938,000.00
1996	12,830,000.00
1997	2,674,710.00
1998	2,200,000.00
1999 up to July	2,337,600.00

Source: Hai District Council (1999a)

In another Programme progress report[1], it is stated that total support in terms of cash from UNICEF since the Programme was initiated up to July 1997 was US $ 614,000 (approximately US $ 3.21 per child per year).

[1] Source. A short report prepared for the Mid-term review of the Tanzania Government/UNICEF Country Programme Plan of Operation (1997-2001)

7.2 Programme implemented and institutional resources available

Annex 5 shows institutions that operated and continue to operate in the District and Annex 10 shows different institutions that started operating in the District during the lifetime of the CSPD Programme. Activities by these institutions may in part explain the nutritional outcomes discussed earlier. For example according to a representative of the Lutheran Church of Tanzania Northern Diocese, the Church have three departments namely the department of education and health, the department of women and the department of youth. These departments conduct activities that have nutrition orientation as follows:

*① Education and Health department: D*o home visits to inspect on environmental sanitation, toilets, up keeping of the household compound and food availability. They also do follow ups of malnourished children, analyze the problem with the household members and advice accordingly. If the problem persists, they pass on a message to the village government for further action. The department also conduct community-based seminars at ten-cell and/or hamlet level discussing health issues, making demonstration of good childcare, food preparation, preservation and hygienic practices.

② The department of women: This counsel couples for stable marriages, advice against laziness or loitering particularly for women and advocate for abidance of religious teachings for maintenance of good habits. They also do communal farming; the harvests are sold to any household that is identified to have food shortage at a low price or donate to households identified too poor to afford buying food. The income is deposited in a joint account they keep and used to loan members when in need. They hold annual conferences. During this occasion, they do demonstrations of food preparations, storage and preservation methods. The purpose is to educate women on preparation of adequate food for different age groups particularly young children, sick and old people. Also to educate people on improved food storage and preservation methods.

③ The department of youth: This advice against alcoholism, hooliganism/juvenile delinquency, does communal farming and polytechnic activities. Money obtained from these activities is used to support members when in need.

7.3 Changes in national policies and available institutional/resources

During the lifetime of CSPD Programme, Districts were empowered to plan and execute developmental activities. This resulted in different extension services such as for agriculture, health, community development and education being placed at ward and in some cases at village level. This made these service more accessible to community members. Regarding poverty-eradication, a national policy under the Ministry of Community Development, Women Affairs and Children was formulated and passed. The policy requires District Councils to allocate 10 percent of its revenue for women development particularly for giving soft loans. This policy requires also income

generating group leaders to undergo training to impart skills for better management of the group income generating projects.

On the other hand the political adjustments that came about with the coming of multi-party system and the first multiparty general elections in 1995 called for re-orientation in the way various agencies have been operating under a single party system. In some cases it was a blessing but in some retrogressive. For example there were reports of new community leaders from the non-ruling party who undermined developmental plans and activities under the ruling party (such as discouraging people to pay tax) for political reasons (Annual Progress Report on Hai CSPD January-December 1995). The change of leadership by itself necessitated re-training and orientations about the Programme to orient the newly elected leaders on the Programme. About mid-1990s, the National Food and Nutrition Policy (NFNP) was approved. This was followed by formulation of a National Plan of Action for Nutrition (NPAN) to operationalize the NFNP. New institutions and organizations also started operating in the Programme area during the CSPD Programme lifetime (Annex 10). Their activities did have some impact on changes that were discussed in section four and five.

8.0 ASSESSMENT AND ANALYSIS OF PROCESSES

8.1 Nutrition information systems

8.1.1 Community-based growth monitoring and promotion (GMP)

A community-based GMP conducted after every three months was initiated by the CSPD Programme. The community-based GMP involves community members in assessing analyzing and taking actions for improvement of conditions of children. VHWs are key organizers and implementers of the community-based GMP under the supervision of the VHCs and in collaboration with facility-based health workers particularly the MCH Aider. Each VHW is provided with weighing equipment for conducting the GMP.

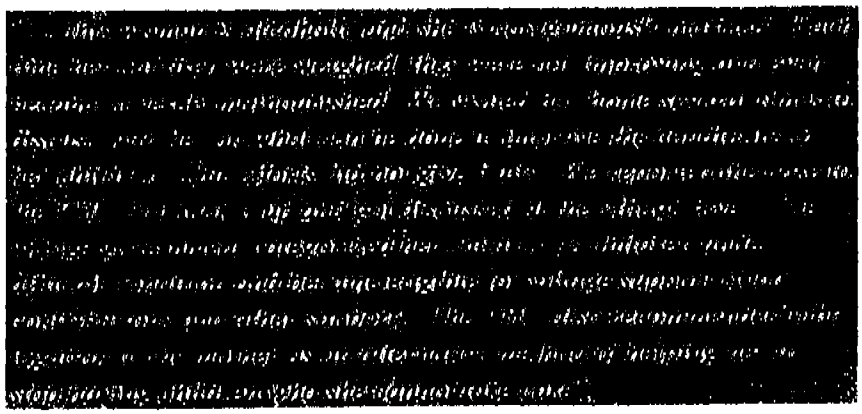
A day referred to as a VHD is appointed for doing the community-based GMP. It is normally done in the community at an appointed site such as a school, a day care centre or any other place in the village considered convenient. Sometimes, health facilities may be used for the occasion. According to KIs and FGDs, for each approaching VHD, announcements are made in churches, mosques and schools calling people to attend. All children under the age of five years are brought for weighing on the VHD. A Ten-cell and/or Hemlet leader has a responsibility of ensuring that all the children registered under their area attend the occasion. During VHDs, health education is also given including demonstrations on preparation of improved home-based complementary foods including use of power flour.

8.1.2 Use of GMP

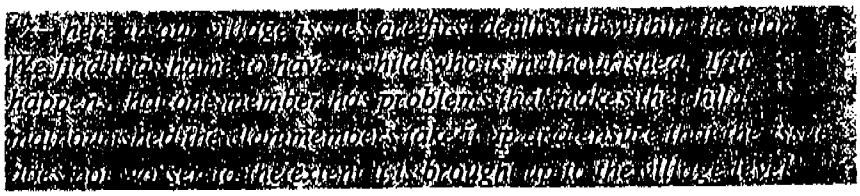
GMP data is used by VHWs to advice parents or caretakers for improvement of young child nutrition. Normally the VHW alone or accompanied by the VHC members make home visits to households to make a follow-up of children identified malnourished during VHDs or from health facility-based GMP. Home visits are made for the purpose of analyzing and proposing and/or undertaking home-based resource-relevant actions in collaboration with parents or caretakers towards improvement of nutrition status of the child. At the household level, parents or caretakers use the GMP data to make decisions for allocation of resources to improve the situation of their children.

Based on information obtained from discussions with KIs and FGDs, VHWs compile a report that summarizes the GMP data from the VHD (Annex 11) and presents it to the VHC. At this level, the report is discussed by the VHC and community-based resource-relevant actions identified and undertaken. Village members also get an opportunity to discuss the report during village meetings organized by the VHC or the village government where they participate in assessing the situation, analyzing the problems,

identifying and proposing resource-relevant actions at the community level. In this way cases that could not be solved at the household level get a chance to be solved at the community level by identifying and mobilizing resources within the community. This could be for example food contribution if the problem is food or enforcing by-laws if the problem arises from negligence and/or bad practices of the child's caretakers. For example in a FGD at Samaki Maini village one member narrated an incidence that involved an alcoholic woman in their village as follows:



According to KIs and FGDs at Nronga village, people consider it a shame for a family in their clan to have a malnourished child. A retired Teacher said:



Apparently, according to the retired Teacher, this habit has been in existence among Nronga people even before the coming of the CSPD Programme.

The compiled GMP report is also sent to the ward level where the WDC discuss it and resource-relevant actions at that level identified and undertaken. Eventually, the report is also sent to the District Developmental Committee (DDC) where it is discussed during District Council meetings. Reports from different villages are then compiled by the DDC for surveillance for Programme management.

8.1.3 Coverage of community-based manpower

The coverage of community-based manpower is presented in Table 24. According to Hai District Council (1999a) currently there are a total of 136 VHWs at least two in each village, 166 TBAs (2 per village) and 116 CBDs (1-2 per village).

Annex 8: Continued

Year	Personnel trained	Number	Training given
1998	Health worker	30	On safe motherhood
	Primary School Teachers	223	Basic education
	Ward Education Coordinators	154	Management seminars
	Head Teachers	25	Management seminars
	Assit. Clinical Officers, Village leaders, Head Teachers, School Teachers teaching health education	Not specified	On VAD and other micronutrients in 4 villages. Emphasized on home gardening and cultivation of drought resistant crops
	Primary School Teachers	58	Refreshed on how to teach a subject on HIV/AIDS in schools
	District and Regional Departmental Heads	All Departmental Heads	On how to carry out annual reviews and planning for year 1999
	Heads of Departments	15	On PRA methodology and on how to incorporate CSPD in District developmental plans
	School Committees	140	Retrained on management and supervision of school structures and performance

Annex 9: Other specific activities reported to have been undertaken over the years of Programme implementation

Year	Activity undertaken	Number/When done	Expected impact
1987/88	Established village registers	In Lymungo division in 1987, Machame, Siha and Masama in 1988	Improved knowledge of social aspects of the community for better planning
1989	Survey on child feeding practices	26 villages	Improved knowledge on child feeding practices
1991	Constructed and rehabilitated health facilities: New construction Rehabilitation Under construction	 3 1 & 2 staff houses 1	Improved access and utilization of basic preventive and curative health services Improved GMP
	Initiation of ORS activities	Whole District	
	Supplied deworming drugs	All dispensaries	
	Conducted training on good care for pregnant and young children	Whole District	
	Health education		Improved knowledge of key actors on health issues
	Established day-care centers	48 day-care posts	- Improved child care - Adequate younger child food intake - Reduced women workload
	Constructed ferro-cement tanks (jars) for rain water harvesting	2 tanks at one dispensary	Improved sanitation and water supply
	Trained artisan(s) for making the ferro-cement tanks	Number not specified	
	Conducted sensitization seminars on environmental sanitation	All VHCs and WEOs	
	Established a workshop for making slabs used to make VIP	At Fuka multi-purpose training center	
	Constructed dip and double Voult Pit Latrines for demonstrations	At all Ward headquarters	
	Distributed edible oil seeds (sunflower) and vegetable seeds	To all day-care posts	Improved household food security.
	Conducted sensitization training: - on improved household level food storage, need for storing enough food to last the family for the whole year, need for use of mixed diet, improved agricultural practices and animal husbandry	Whole District	
	Distributed improved cocks to interbreed with local breeds	To resource poor households (number not specified)	
	Distributed edible oil seeds (sesame and ground nuts)	Villages of lower zone	
	Promoted use of improved stoves (stoves made in the District)	Whole district	- Reduced dependency on firewood - Reduced women workload

Annex 9 continued

Year	Activity undertaken	Number/When done	Expected impact
1995	Continued advocating for rearing of small animals to improve protein intake	In poor resource households	Improved household security Improved consumption of vegetables and variety of foods
1996	Distributed vegetable seeds (swiss chard, cabbage, eggplant, and onions).	- 20 households in 10 villages in lower zone - Child day-care-centres	
	Continuous advocacy for cultivation of drought crops	Lower zone	
	Conducted educational activities to farmers and provided improved seeds	Target group not specified	
	Promoted production and consumption of traditional vegetables (cassava leaves, amaranth, and pumpkin leaves)	Lower zone	
	Promoted maize production	Selected households in 7 villages	
	Trained farmers and extension workers on how to construct an improved household storage structure.	Lower zone	
	Continued advocating for use of vitamin A rich foods	Whole District	
	Provided an ambulance for one RHC	1	Improved provision of health service
	Acquired a cold facility at the temporary District hospital (Kibong'oto) and an ambulance	1	
	Study of prevalence of lower birth weight and causes and effect of FGM	26 villages	Improved understanding of the situation
	Done film shows	Target and theme not specified	Improved awareness
1998	Done supervisory visits to inspect water and environmental sanitation	53 villages	Improved sanitation
	Developed a District profile to serve as a quick reference		
	Advocated for change of sexual behavior and distributed condoms	General public	Control of HIV/AIDS
	Survey on prevalence of VAD, availability and consumption of vitamin A rich foods in on village	In one village in lower zone	Improved understanding of the situation for appropriate intervention
	Reorganized VHCs for gender balancing	All the 70 VHCs	Gender balancing

Annex 9 Continued

Year	Activity undertaken	Number/When done	Expected impact
1999	Acquired school equipment and materials	- Acquired 1350 classroom desks, 92 tables, 132 chairs and 55 cupboards for 15 schools - Received 254650 exercise books Received building materials, furniture and teaching materials for schools in the rehabilitation Programme	Improved school learning environment
	Provided 1500 roofing sheets and 60 bags of cement enough to repair 26 classrooms	21 Primary schools	
	Introduced new registers	All 70 villages 190 village registers and 190 under five registers	Improved understanding of social economic factors in the village for better planning
	Survey on integrated management of childhood illness (IMCI)	6 villages from all the three zones covered	Improved understanding of child illnesses
	Survey on latrine coverage	Whole District	Improved understanding of the situation for better intervention
	Survey on morbidity and mortality associated to malaria between 1996 & 1998	Health-facility based	
	□ Continued providing agricultural extension services - Sold 20,000 coffee seedlings to farmers at reduced price	20,000 seedlings	Improved household food security. Opportunity for income earning
	Returned revenue as per the by-law of returning 40% of developmental levy, 20% of business license and 10% of market fees back to respective villages.	Total of Tshs. 5,845,435.00	Empowerment of villages to meet costs of developmental activities
	Conducted school inspection	34 schools inspected	Improved learning environment
Entire period	Acquired transport	26 motorcycles, 9 vehicles 100 bicycles (during entire Programme period)	Facilitated Programme follow-ups

Source:
1. *Taarifa ya Mradi wa Hai* CSD (1991)
2. Annual progress report on Hai CSPD, January -December, 1995
3. 2nd Quarterly physical and financial report on Hai CSPD Programme, April - June. 1996
4. Hai District Council - 1998 CSDP Annual Review and priorities for 1999
5. Hai District Council, CSDP (Community Based Programme). District Annual review Report 1999b

Annex 10 Partners that started operating during the CSPD Programme life time

Name	Activity	Area of operation
KFW-Germany	Water supply- rehabilitation and completion of gravity schemes	Whole District
SVILUPPO 2000 (Italian)	Diary cattle, cereal (grinding mill) processing and creaming	Kilali women economic group
DFID	Adult morbidity and mortality project	Masama, Machame and Lyamungo divisions
JIICEP (Integrated project)	De-worming and family planning	Whole District
Poverty Africa (POA)	1□ Afforestation 2□ Loans to economic groups	Rundugai and Mkalama villages Whole District
PHC Ambassoador Foundation	Sanitation and health education, VIP latrines and rain water harvesting	Machame and Lyamungo divisions
Bonite Bottlers (IPP)	Afforestation – individual groups competition	Whole District
AMREF	Advocacy and supply of condoms to highway and commercial sex workers and deworming	Hai town area
FHI-Hai cluster	HIV/AIDS and STIs	Masama South, Siha Central and Machame North wards
World Vision Tanzania	Rehabilitation and construction of dispensaries, school buildings, provision of furniture, health education and nutrition	Siha Central, Siha East and Masama South wards
Austria HOPE 87	Water and youth economic activities	Nshara village
Foo Development Association (FODA)	Village development	Foo village
Sans Medicine Frontier	Supply of chlorine for treating water during cholera outbreaks	Whole District
KCMC	Pediatric education	
SFG 2000 German	Water project construction	
District Counsel	Traditional farrows construction for environmental conservation and increased production	
AEFA project International	Diary production	
Global 2000/Sasakawa Project (Japanese)	Improved cereal production	
Global 2000/Sasakawa Project (Jimy Carter, American)	Improved cereal production	
ILO/SIDO	Support Youth economic activities	3 wards – Sanya Juu. Hai town and Kilanya

Source: 1. Hai District Council - 1998 CSDP Annual Review and priorities for 1999
2. Hai District Council . District situation analysis from child rights perspective, November, 1999a
3. Hai District Council, CSDP (Community Based Programme). District Annual review Report 1999b

Annex 11: COMMUNITY-BASED GMP QUARTERLY REPORT FORM

Name of village----------
Quarter number ---------- (1st, 2nd, 3rd, or 4th)
Name of the VHW/reporting----------
Total number of children (0-5 years)----------

Ward ----------
Date ----------
Total village population----------
Total number of women (15-45 years)----------

1. NUTRITION SITUATION OF CHILDREN

Age (months)	Number of children						Total	
	Green		Gray		Red		1□	
	No.	%	No.	%	No	%	No	%
0-12								
13-36								
37-60								
Total								

2. CHILD MORTALITY AND REASONS FOR DEATH

Age (months)	RESOANS FOR DEATH			Others
	Fever	Measles	ARI	
0-12				
13-36				
37-60				
Total				

3. Number of children (1-5 years) who have not completed immunization----------

Annex 12 A VILLAGE REGISTER

VILLAGE REGISTER FORM NUMBER 1: (TOBE FILLED BY THE HEMLET LEADER)

IDENTIFICATION

1. Year----------
2. Household ID----------
3. Name of village----------
4. Name of hamlet----------
5. Name of the Hemlet leader----------
6. Name of household leader----------

Information about household members

Name of the h/hold members List as follows: 1. H/hold leader 2. Spouse 3. Name of children starting from oldest		SEX		DATE OF BIRTH			EDUCATION		EVENTS							
							Illiterate	Number of years in school	IMMIGRATION				DEATH			CAUSE OF DEATH
									To the village		From the village		Date of death			
									mooth	year	month	year	day	mooth	year	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

Annex 12: A VILLAGE REGISTER

Annex 13: The ASSESSMENT TOOL

Modified UNICEF/ROSA
Protocol for LINKAGES Review of Success Factors and Better Practices for Nutrition In Community Programmes and Projects

1. Initial Conditions

Three issues have to be explored. (1) What was the nutritional status of young children before or at the start of the programme/project?, (2) What deliberate efforts had been made by the households the community and the higher level administrative structures to improve the nutritional status? , and (3) what was the prevailing knowledge, perceptions, commitment and attitudes of those who could/should have done something in order to improve the nutritional conditions, i.e. the existence of a 'nutrition culture'.

1.1 The situation of young children

1.1.1 What was the prevalence and what were the trends of malnutrition (PEM, micronutrient deficiencies, when the programme/project got under way? (Ideally by age, gender & socio-economic group).

1.1.2 What was the access to and utilization of basic preventive and curative health services (both for children and women) including issues, such as:

- ⇒ the coverage of UCI, ORT and AIR activities?
- ⇒ the kind of community health structure (e.g VHW/CHW, TBAs)
- ⇒ the access to and utilization of the existing health delivery system?

1.1.3 What was the situation regarding caring practices (see LINKAGES Guidelines)

- ⇒ Exclusive breast-feeding from 0 to 4-6 months
- ⇒ Initiation of breast-feeding within 1 hour of birth
- ⇒ Colostrum given to new born
- ⇒ Adequate complementary food given to infant from 4-6 months with continued breast-feeding up to 24 months
- ⇒ For infants 12-24 months, at least 4-5 meals/day given in addition to breast-feeding See LINKAGES guidelines on Complementary Feeding for questions on HYGIENE
- ⇒ Pre-and post-natal care practices/services for women

1.1.4 What was the household food security situation[1]? Was there insecurity? If yes, was the insecurity

[1] Household food security is defined as 'a family having access (via own production, purchases or other exchanges) to adequate food (in quantity and quality) for all household members to maintain an active and healthy life

chronic, seasonal or acute (due to an emergency)?

1.1.5 What was the sanitation situation? (Excreta disposal, refuse disposal)

1.1.6 What was the drinking water situation? (Protected water source, boiling water...)

1.1.7 What was the literacy rate (for women and men)?

1.2 Efforts made to improve the nutrition situation before the programme/project

1.2.1 What kind of previous experiences from nutrition-oriented programme/projects existed in the area?

1.2.2 What form of nutrition information systems existed (including Growth Monitoring & promotion, surveillance systems, administrative/clinic-based systems, etc)?

1.2.3 What institutions (organizational resources) existed that either did or could have done work to improve the nutrition situation?

1.2.4 What kind of poverty-reduction policies were in place before the programme/project?

1.2.5 What kind of poverty-reduction Programmes were in place before the programme/project?

1.2.6 What were the sources of nutrition information before the program/project began?

1.3 Knowledge, perception, attitudes and commitment (practice)

1.3.1 Why was the new programme/project started?

1.3.2 What was the knowledge among the key actors of the severity of the PEM (or micronutrient) problem?

1.3.3 What was the knowledge and perception among key actors of the nature of the PEM-problem (or micronutrient problem)? (food/health/care causes: consequences of PEM; consequences of micronutrient malnutrition). What myths and mis-information existed about it?

1.3.4 Was PEM (or micronutrient malnutrition) recognized as an outcome (results) of poverty or underdevelopment?

1.3.5 Did the prevailing ideology favour a people-centered approach? (i.e 'poor people as actors versus passive beneficiaries?')

1.3.6 Was there any clear indication that the political leaders) and other traditional leaders) were committed to addressing the problem of malnutrition before the project started?

1.3.7 Was there any sign of a felt pre-existing 'first call for children'?

2. Assessment and Analysis of Outcomes and Processes Used

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throughout the year.

The assumption is that sustainable nutrition improvement can best be achieved by strengthening existing or initiating new triple-A processes. This requires improving the capabilities of facilitators, of mobilizers and of the people themselves to assess the magnitude of the problem, to analyze the causes of the problem and to design actions commensurate with the resource base.

The key issues here are: (1) To what extent have poor people been recognized as key actors in improving their nutrition situation rather than as being passive beneficiaries of transfers of commodities and services?; (2) to what extent have poor people's own coping and survival strategies been identified, understood, recognized and considered for further use?

In general terms, a programme/project should have an impact. i.e. its outcome should contribute towards achieving a goal. A programme/project should also encourage, support and catalyze a process that ensures local ownership for sustainability. A programme/project with a strong outcome and a good process is the best scenario; one with a week or no outcome and a bad process is the worst scenario. The four extreme cases are illustrated below:

Outcome		Process "bad"	Process "good"
G O	"Strong" (good)	B	A
A L S	"Weak" (bad)	D	C

Very often, at the start of a programme/project, the situation is at D. The overall purpose is to move from D to A. The route from D to A may go via B) highly goal-oriented as in some UCI-Programmes in the 1980's), via C (highly process-oriented as in some of the Triple A type Programmes/projects) or directly from D to A (suing a rights centered approach that emphasizes both goals and process equally).

The aim of this part of the appraisal to assess and analyze the outcomes and the process.
The assessment of the outcome will focus on estimating nutritional outcomes (e.g. PEM and micronutrient prevalence, nutrition relevant behaviours, awareness of malnutrition) during and at the end of the programme/project. The analysis of the outcomes will explain the relationships between inputs and Outcomes, including a resource (cost) analysis.

The assessment and analysis of the process is much more complicated. The assumption is that a 'good process' is a 'good triple-A process'. This means that we have to assess and analyze Triple-A processes set in motion. This ink turn means that we have to assess and analyze:

The quality of each of the stages of assessment, analysis and action in the processes utilized. The presence or absence of factors that influenced determined or affected each Triple-A process.

Here is how outcomes and process can be assessed and analyzed:

3. Assessment of Outcomes

3.1 Nutrition outcomes (e.g growth of young children; micronutrient status; nutrition relevant behaviours; awareness of malnutrition)

3.1.1 How did nutrition outcomes change over the period of implementation? How has it changed after the programme/project, if the latter has ended? (ideally by age and socio-economic group).

3.1.2 How did the access to and utilization of basic preventive and curative health services change? (both for children and women).

3.1.3 How did caring practices change? (use same categories as 1.1.3).

3.1.4 How did the household food security situation change?

3.1.5 How did the sanitation situation change?

3.1.6 How did the drinking water situation change?

3.1.7 How did the literacy situation change? (for women and men).

3.2 Knowledge, perceptions, attitudes and commitment (practice)

3.2.1 How did the awareness of the problem of PEM (and micronutrient malnutrition) change among key actors during the implementation period (and after)?

3.2.2 How did knowledge and perception of the nature of the PEM problem (and micronutrient malnutrition) change among key actors? (see 1.3.3. causes and consequences). What myths and mis-information still prevail?

3.2.3 Was there any change in recognizing PEM (and micronutrient malnutrition) as an outcome of processes in society?

3.2.4 Was there an increased recognition of the 'poor as actors' during the life of the programme/project.

3.2.5 Did the commitment of political leaders (and other traditional leaders) towards improving nutrition change?

4. **Analysis of Outcomes**

Questions here below aim at establishing a relationship between inputs and outcomes.

4.1 Inputs

4.1.1 Which types of inputs were used? (Supplies, technical assistance etc...used categories given in programme/project documents)

4.1.2 What were the actual costs of the programme/project?

⇒ By type of input

⇒ By source of financing (i.e. Government, UNICEF, other agencies, community, households).
⇒ At 'start-up', during 'expansion' and overall 'running costs'.
⇒ Approximate per capita expenditures (can be calculated using total number of beneficiaries per year).

4.2 Other interventions with potential impact carried out

4.2.1 How did the coverage of basic health services change? (e.g UCI, ORT and ARI)?

4.2.2 How did the access to and utilization of basic health services change?

4.2.3 Was a community health programme (e.g. with VHW/CHWs) carried out? What changes did it bring about?

4.2.4 Were other Programmes/projects implemented at the same time in the area which could explain part of the positive nutritional impact?

4.2.5 Did national policies change during the life of the project, for example poverty reduction polices, food price policies, etc.?

4.2.6 Did available institutional resources, relevant for nutrition-oriented support, changes?

5. Assessment and Analysis of Process

Questions here below help understand the extent to which the programme/project managed to set in motion a sustainable process of assessment, analysis, action, re-assessment, etc. (Triple A process). Growth monitoring and Promotion (GMP) and Nutritional Surveillance are two common, exogenously introduced systems in nutrition-oriented programme/projects. The UNICEF evaluation of these two types of systems, a few years ago, concluded that these systems work, and only if, they contribute to a full tripe A process.

5.1 Nutrition information systems

5.1.1 How is growth monitoring and promotion (GMP) used in the community?

5.1.2 Who is involved in the GMP program (e.g. VHWs/CHWs, health facility staff, etc...)?

5.1.3 Describe the organization of the GMP (e.,g. how was it established, who was involved, how was it organized, how often are children weighed, etc..)

5.1.4. What is the quality of the GMP (e.g. Availability and quality of weighing equipment, accuracy of weight measurements, accuracy of recording weights onto growth charts, accuracy of summary statistics that may be kept)?

5.1.6 How is the GMP used to take action at the individual child level? (e.g types of actions taken

by mothers/child caretakers, VHWs/CHWs or health workers)?

5.1.7 What is the quality of the actions taken at the individual child level? (e.g. quality of advice given by VHWs/CHWs or health workers on child feeding or child care taking)

5.1.8 How is the GMP used to take action at the community level?

5.1.9 How have the data from the GMP been used to allocate resources within the community?

5.1.10 How have the data from the GMP been used to allocate resources by high authorities to that community?

5.1.11 What other nutrition information is available at the community level apart from the GMP? How is this information collected and by whom? How is this information used by the community and the program staff?

5.2 Quality of process assessment

5.2.1 What kind of assessment of the nutrition situation was made prior to the start of the programme/project (e.g. if appropriate, in regard to the participatory nature of the process to involve the community)? Who did the assessment?

5.2.2 What was the quality of the data obtained?

[The issue of continued assessment/monitoring is to be covered under 5.1 above (Nutrition Information Systems)].

5.3. Quality of process analysis

Questions here below help identify the conceptual framework, consciously or un-consciously used for assessment and analysis. This is absolutely crucial to assess. The framework (hidden or not) should be described and similarities and differences with the Conceptual Framework identified. Some guiding questions are:

5.3.1 Was young child nutritional status identified as an outcome of processes in society?

5.3.2 Were inadequate dietary intake and disease recognized as the immediate causes of PEM?

5.3.3 Were 'food', 'health' and 'care' recognized as (equally) necessary underlying conditions for good nutrition?

5.3.4 Was there any analysis carried out of the relative difficulties to fulfill the 'food', 'health' and 'care conditions'?

5.3.5 Was the synergism between PEM and disease recognized?

5.3.6 Was the synergism between inadequate energy intake and diarrhoea recognized?

HFS-interventions or actions in the project area should be described using this matrix, both by defining in which category the target group started and where the programme/project moved them and how. [Food insecurity can be acute (in disasters), chronic (year-round) or seasonal. The cut-off and point for small or large percent of use of resources is more subjective, but relates to the % of income of expenditures (in cash or in kind) used to feed household members].

5.4.9 Is the project area is/was food insecure. If yes, state which type (acute, chronic, seasonal) both before the project started and at the present time.

5.4.10 Has the programme/project made a 'difference' to the household food security situation in the area? If yes, in what way?

5.4.11 Did the programme have a food supplementation component? Under ideal implementation how many kcal/cap/day extra would the project have provided?
What was the intended target group? And who actually benefited?

5.4.12 If there was a horticultural intervention to address micronutrient deficiencies, what were the micronutrients being targeted?

Caring Practices

Out of the three necessary conditions - food, health and care - care has been the most neglected. This rapid review should, therefore, pay special attention to the role of caring practices in Young child nutrition. [Refer to the UNICEF Strategy for Care].

5.4.13 How did the project address the key care components? (e.g did they or did they not address these issues as explicit actions)

- ⇒ feeding practices
- ⇒ hygiene practices
- ⇒ home-health care practices (incl. ORT and continued feeding during illness)
- ⇒ psycho-social practices (e.g. playing with the child, etc...)

5.4.14 How did the project promote, protect and support breast-feeding, especially exclusive breast-feeding up to 4-6 months? (e.g. through behaviour change communication strategies using counselling techniques, radio women's groups etc...)

5.4.15 How did the project promote appropriate timing of initiation of complementary feeding? (at about 6 months).

5.4.16 How did the project promote increased feeding frequency?

5.4.17 How did the project promote energy dense diets?

5.4.18 How was reduction of women's workload addressed?

5.4.19 How are fathers involved in caring for the child?

Health Services and Sanitation

5.4.20 What kind of health interventions ere carried out and HOW were they carried out (e.g in regard to what actions ere taken that made a difference to the success of that actions)?

- ⇒ child health clinics
- ⇒ pre and post natal care for women
- ⇒ malaria control (e.g prophylaxis during pregnancy; bed nets, etc..)
- ⇒ HIV/AIDS activities)e.g. VCT; education on breast-feeding and HIV/ADIS...)
- ⇒ micronutrient supplementation (e.g. including compliance)
- ⇒ ant-helmintics for children and women etc....

5.4.21 Were improved feeding and control of diarrhoea addressed simultaneously?

5.4.22 What actions were taken to improve the sanitation situation?

5.4.23 What were the actions to address the water situation (e.g. for drinking, for washing, etc...)

Training

5.4.24 Who was trained (and how were they selected for the training)?

5.4.25 What kind of training did they receive from the programme/project Competence-based, mostly in-service?

5.4.26 What kind of skills did the training provide (e.g. inter-personal communication skills; service delivery technical skills; etc...?

5.4.27 What kind of training in supervision and in management was provided?

5.4.28 Was a Training Needs Assessment carried out before the training was initiated?

5.4.29 Were training materials (e.g. manuals, training aids, etc....) developed and made available? local talent, skills and human resources?

5.4.30 Were literacy activities carried out. If so, for whom?

Basic Causes

5.4.31 Were there any actions implemented to reduce the workload of women?

5.4.32 Were there any actions implemented to provide opportunities to earn income and/or have access to credit? (e.g. probe to identify activities targeting women)

5.4.33 To what extent was nutrition advocated as a right?

5.4.34 To what extent did the Programme/project or other Programmes improve the living standards in that location? What were the linkages (e.g. planning, implementation, etc...) between the present programme/project and these other Programmes aimed at improving living standards?

5.4.35 Were the necessary resources identified? Which were available to the programme/project and which were not? Were sources for additional resources not available identified including their control?

5.5. Quality of the Process

Most actions in a programme/project can be divided into five categories:

- ⇒ Advocacy
- ⇒ Information
- ⇒ Education — Capacity building
- ⇒ Training
- ⇒ Service delivery

Advocacy primarily aims at awareness creation and seeks commitment (new ethics): information aims at improving assessment; education at improving analysis; and training and service delivery at directly improving actions.

A good process implies that a mix of these interventions is used, based on a proper analysis of needs, opportunities and constraints.

Advocacy, capacity building and direct service delivery can be designed and implemented in amore or less empowering way. A good process implies that the interventions chosen and the way they are implemented lead to the empowerment of people and communities. Direct community participation is the key aspect of empowerment. Therefore, a more detailed analysis of the degree and type of participation is suggested.

5.5.1 What was the degree of participation in needs assessment, organization, selecting leaders, training, resources allocation, community contribution, management, orientation of actions and monitoring? (if possible, use the approach developed by Roger Shrimpton to rank the community involvement/participation).

5.5.2 What has been the de-facto project sustainability?

[For area-based programmes the following criteria should be used:

- ⇒ The programme has expanded after 3-4 years (by more than 50%)
- ⇒ The post per capita or per beneficiary has gone down.
- ⇒ The original area has become less dependent on outside support.]
- ⇒ Local administration has incorporated programme/project costs into their plans
- ⇒ Increased level of contribution from community
- ⇒ Proportion of the local staff has increased

There are a number of ways in which sustainability can be assessed and analyzed. Apart from participation, a good process is characterized by decentralized decision-making, increased bottom-up demands, community ownership, and self-confidence. Below is a set of guiding questions. Additional ones may very well emerge during the actual appraisal work. This will contribute to more precise definition of a good process.

Ideally, the 'path' followed by the programme/project should be described using the process/outcome 2 x 2 table above.

5.5.3 Did the project increase the self-esteem and empowerment of people, households and communities leading to households and communities acting more on their own to improve the situation? (e.g. new community initiatives that may have been started since the project began, etc...)

5.5.4 Were facilitators and community mobilizers identified, trained, kept informed, and supported?

5.5.5 Did the project generate an increased demand for information for nutrition relevant decision-making by higher administrative levels?

5.5.6 To what extent were community organisations established or strengthened by the programme/project? (e.g giving examples)

5.5.7 In the programme/project location, are decisions related to nutrition made at the local government level?

5.5.8 How did the government facilitate the planning and implementation of the programme/project

6. Monitoring (Re-Assessment)

The review of existing surveillance/GMP systems (under 5.1) will also provide an idea about monitoring activities. In addition:

6.1.1 What kind of indicators were used on an on-going basis to monitor nutritional status and any of the causative factors?

6.1.2 Was a decision audit (e.g. information user's survey) carried out?

6.1.3 Describe the sentinel surveillance systems that may have been set up.

6.1.4 Are births and deaths registered in this community? (e.g. adapt for country circumstance). How is this information used by the community?

6.1.5 If data was obtained from the community, what was the feedback mechanism?

7. Management and costs

7.1.1 What degree of decentralization of decision-making in resources allocation existed in the programme/project?

7.1.2 Did the programme manager/coordinator live in the programme area? If not, how often and for what periods of time did he/she visit the area?

7.1.3 How well did the programme manager/coordinator know the area (language, religion, culture, etc.)?

7.1.4 Did the key programme staff change during the period of implementation? If so. how often and why?

7.1.5 What kind of supervision/support structures were set up?

7.1.6 What degree of flexibility existed in the use of outside (incl. donor) funds?

7.1.7 What were the 'start-up', 'expansion' and 'recurrent' costs of the programme?

7.1.8 How did the internal programme/project management information system function?

7.1.9 What mechanism was used to 'sell the successes?

7.1.10 To what extent, and how, did senior government people participate in the conceptualization, planning and implementation of the programme/project?

7.1.11 To what extent, and how, did local government people participate in the conceptualization, planning and implementation of the programme/project?

7.1.12 Has the programme/project been able to sustain itself? If so, to what factors (or strategies) can this be attributed?

7.1.13 How has been the relationship between project management and donors?

7.1.14 How has been the relationship between project management and the community?

7.1.15 Did the programme/project search for and use existing local talent, skills and human resources?

8. Further Considerations

8.1.1 Has the programme/project formally evaluated (mid-term, final)? If so, which recommendations

8.1.2 were adopted that actually changed the programme/project? Which were not adopted and why?

8.1.2 To what extent did the program/project change knowledge, perceptions, attitudes and practices of policy-markers/implementators facilitators, mobilizers and the community?

8.1.3 Did the Programme/project expand or has it been replicated? If so, when, where, by whom and at what costs?

8.1.4 If donor-funding, has ceased, how has the programme/project been able to sustain itself. Why did fund increase?

8.1.5 What has/or will be the process of handing over the programme/project? Describe.

8.1.6 Did the programme/project result in new/additional government budgetary allocations for nutrition-oriented work? (e.g at the district level). If so, how did this come about?

8.1.7 Did the programme/project influence national policy and local political leadership in nutrition? If so, how did this come about?