RISK AND VULNERABILITY IN ETHIOPIA: LEARNING FROM THE PAST, RESPONDING TO THE PRESENT, PREPARING FOR THE FUTURE

A REPORT FOR THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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JUNE 2003

ACKNOWLEDGEMENTS

This report was funded by the USAID/DCHA/OFDA and USAID/Ethiopia, with additional support from the Mellon Foundation.

The team is grateful to the USAID/Ethiopia Mission, in particular the FHA staff, and USAID/DCHA/OFDA for their support and assistance. The team extends its appreciation to the DPPC for hosting the team in various offices, accompanying the team to the field and for availing its staff and records for this research.

In addition, the team extends special thanks to the many individuals who assisted their work including Simon Mechale, Berhane Gizaw, Teshome Erkineh, Befakadu Dibaba, Beletu Tefera, Tim Shortley, Gillian Brewin, Makda Tsegaye, Muna Bayou, Beth Dunford, Alemu Asfaw, Andrew Natsios, Bill Garvelink, Jan Wessel, Rebecca Scheurer, John Graham, Beruk Yemane, Bolko Mohammed, the Oxfam team in Jijiga, Jamal Iydahis, Sheik Mohammed, Deborah Hicks, Nigist Biru, Georgia Shaver, Paul Turnbull, Tim Waites, Tsedeku Glmariam, Laruen Carruth, Kuffasse Boane and Fikre Negussie.

Cover photo: Young girl from Afar Region, Mille, Ethiopia. Photo by Sue Lautze.

Feinstein International Famine Center

Inter-University Initiative on Humanitarian Studies & Field Practice

ACRONYMS

AAME	African Adult Male Equivalent
ACF	Accion Contra La Faim
ACK-MDO	Anglican Church of Kenya-Marasabit Diocese Office
ADLI	Agriculture Development-Led Industrialization
AIDS	Acquired Immunodeficiency Syndrome
ALDEF	Arid Lands Development Focus
ALNAP	Active Learning Network and Accountability Project
ALRMP	Arid Lands Resources Management Project (Kenya)
ANRS	Amhara National Regional State
APDA	Afar Pastoralist Development Association
APF	Africa Peace Forum
ARDA	Adventist Development and Relief Agency
ARI	Acute Respiratory Infection
AU-IBAR	African Unity-International Bureau for Animal Research
AVA	Awash Valley Authority
BDPP	Bureau of Disaster Preparedness and Prevention
BOA	Bureau of Agriculture
BoFED	Bureau of Finance and Economic Development
BOH	Bureau of Health
CBAHS	Community-Based Animal Health Services
CBAH	Community Based Animal Health
CBAHW	Community-Based Animal Health Worker
CBPP	Contagious Bovine Pleuropneumonia
CBTF	Community Based Therapeutic Feeding
CCPP	Contagious Caprine Pleuropneumonia
CDN	Canadian
CEDEP	Consultants for Environment and Development Projects
CEFIS	Care Ethiopia Food Information System
CIDA	Canadian International Development Assistance
CMR	Crude Mortality Rate
IMC	International Medical Corps
CRDA	Christian Relief and Development Association
CSA	Central Statistics Agency
CSB	Corn Soya Blend
CSM	Corn Soya Milk
CY	Calendar year
DA	Development Assistance
DART	Disaster Assistance Response Team
DASP	Disaster Assistance Support Program
DCHA	Democracy, Conflict and Humanitarian Assistance
DFAIT	Department of Foreign Assistance and International Trade
DfID	Department for International Development

DM	Dry Matter
DOA	Department of Agriculture
DOH	Department of Health
DPP	Disaster Preparedness and Prevention
DPPB	Disaster Preparedness and Prevention Bureau
DPPC	Disaster Preparedness and Prevention Commission
EARO	Ethiopian Agricultural Research Organizations
EC	European Community
ECHO	European Commission Humanitarian Office
ECS	Ethiopian Catholic Secretariat
EDP	End Delivery Point
EECMY	Ethiopian Ecumenical Church of Mekane Yesus
EFSR	Emergency Food Strategic Reserve
EGS	Employment Generating Scheme
EGTE	Ethiopian Grain Trade Enterprise
EHNRI	Ethiopian Health and Nutrition Research Institute
EMA	Ethiopian Mapping Agency
EMOP	Emergency Operations Program
ENCU	Emergency Nutrition Coordination Unit
ENI	Ethiopian Nutrition Institute
EPI	Expanded Program of Immunization
EPLF	Eritrean People's Liberation Front
EPPG	Emergency Preparedness and Prevention Group
ERCS	Ethiopian Red Cross Society
ESRDF	Ethiopian Social Reconstruction and Development Fund
EU	European Union
EW	Early Warning
EWD	Early Warning Department
EWPS	Early Warning and Preparedness SEction
EWS	Early Warning System
FAD	Food Availability Decline
FAO	Food and Agricultural Organization
FED	Food Entitlement Decline
FEWS	Famine Early Warning System
FEZ	Food Economy Zone
FFP	Food For Peace
FFW	Food For Work
FHI	Food for the Hungry International
FIFC	Feinstein International Famine Center, Tufts University
FMD	Foot and Mouth Disease
FSAU	Food Security Assessment Unit
FSU	Food Security Unit
FY	Fiscal Year
G	Gram
GAM	Global Acute Malnutrition
GIEWS	Global Information and Early Warning System

GIS	Global Information System
GTZ	*Gesellscheft Furer Technishe Zusamenarbeit* (German Technical Cooperation)
HA	Hectare
HC	Health Clinic
HCS	Hararghe Catholic Secretariat
HH	Household
HICE	Household Income, Consumption and Expenditure
HIPC	Heavily Indebted Poor Countries
HIV	Human Immunodeficiency Virus
ICRC	International Committee of the Red Cross
IDD	Iodine Deficiency Disorders
IDP	Internally Displaced Person
IFRC	International Federation of Red Cross and Red Crescent Society
IGAD	Inter-Governmental Authority on Development
ILCA	International Livestock Center for Africa
INGO	International Non-Governmental Organization
IO	International Organization
JAMA	Journal of the American Medical Association
JEOP	Joint Emergency Operational Plan
KCAL	Kilocalorie
KSH	Kenyan Shilling
LAC	Latin America and the Caribbean
LEWS	Livestock Early Warning System
LRD	Linking Relief and Development
LRRD	Linking Relief, Rehabilitation and Development
LWF	Lutheran World Federation
LWG	Livestock Working Group
MAHA	Master of Arts in Humanitarian Assistance
MDD	Micronutrient Deficiency Disease
MOA	Ministry of Agriculture
MOARD	Ministry of Agriculture and Rural Development (Kenya)
MOE	Ministry of Education
MOFED	Ministry of Finance and Economic Development
MOH	Ministry of Health
MOWR	Ministry of Water Resources
MSF-CH	Medecins Sans Frontiers, Belgium
MSF-H	Medecins Sans Frontiers, Holland
MSI	Management Systems International
MT	Metric Ton
MTCT	Maternal to Child Transmission
NASA	National Agency of Space and Atmospherics
NDVI	Normalized Difference Vegetation Index
NEPAD	New Partnership for African Development
NERDU	Northeastern Rangelands Development Unit
NFW	Nutrition Field Worker
NGO	Non Governmental Organization

NIRS	Near Infra-red Spectroscopy
NMSA	National Meteorological Services Agency
NOAA	National Oceanographic and Atmospherics Agency
NORDA	Northern Regional Development Agency
NSP	Nutritional Surveillance Program
NSU	Nutrition Surveillance Unit
OFDA	Office of US Foreign Disaster Assistance
ORDA	Oromo Relief and Development Agency
OSHO	Oromiya Self Help Organization
OTI	Office of Transition Initiatives
PCAE	Pastoral Concern Association of Ethiopia
PIP	Processes Institutions and Policies.
PP(P)D	Per Person Per Day
PPPM	Per Person Per Month
PPR	*Peste de petit ruminant*
PRSP	Poverty Reduction Strategy Paper
ReSoMal	Rehydration Solution for Malnourished Children
REST	Relief Society of Tigray
RRA	Rapid Rural Appraisal
RRC	Relief and Rehabilitation Commission
RUTF	Ready-to-use Therapeutic Foods
SAM	Severe Acute Malnutrition
SC(F)-UK	Save the Children United Kingdom
SC-US	Save the Children United States
SDPRP	Sustainable Development and Poverty Reduction Program
SERA	Strengthening Emergency Response Assessment
SFC	Supplementary Feeding Center
SFP	Supplementary Feeding Program
SNNPR	Southern Nations, Nationalities and Peoples Region
SNRS	Somali National Regional State
TAPS	Transitional Asset Protection System
TB	Tuberculosis
TBA	Traditional Birth Attendant
TF	Therapeutic Feeding
TFC	Therapeutic Feeding Center
TFP	Therapeutic Feeding Program
TIME	Technical Information Management Exchange
TLU	Tropical Livestock Unit
TOT	Training of Trainers
TPLF	Tigrayan People's Liberation Front
U5MR	Under 5 Years Old Mortality Rate
UNEUE	United Nations Emergency Unit for Ethiopia
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UNMEE	United Nations Monitoring Force for Ethiopia and Eritrea
USAID	United States Agency for International Development

USAID	United States Agency for International Development
USD	United States Dollar
USDA	United States Department of Agriculture
USG	United States Government
VAM	Vulnerability Assessment Mapping
WB	World Bank
WFH	Weight for Height
WFL	Weight for Length
WFP	United Nations World Food Program
WHO	World Health Organization
WMS	Welfare Monitoring System
WMU	Welfare Monitoring Unit
WRSI	Water Resource Satisfaction Index
WSRI	Water Satisfaction Resource Index
WVI	World Vision International

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EXECUTIVE SUMMARY

The people of Ethiopia today are managing the risks and vulnerabilities generated by a serious drought, profound vulnerability to disease epidemics (human, crop and livestock), and a combination of local and international economic forces and domestic and international policies. The combined efforts of government, donors, UN agencies, NGOs and Ethiopian communities have helped vulnerable populations to avert the worst of this crisis, but alarming losses of life, emergency levels of malnutrition and crippling losses of livelihood assets have nevertheless been experienced, particularly by marginalized communities on the periphery. Much more can be done to immediately reduce the impact of the current crisis. Although predominantly considered a food crisis, vulnerable populations in Ethiopia are facing critical threats to their livelihoods, while vulnerability to morbidity and mortality is directly linked to a crisis in health care.

This report focuses on the management of disaster risks and vulnerabilities for a range of reasons. Due to the recurrent nature of crisis, Ethiopian livelihood systems have evolved to manage diverse disaster hazards, e.g. the migration patterns of pastoralists are designed to optimally manage the impact of drought on pasture and water resources; farmers seek to mitigate covariate risks through diversifying their cropping patterns; families strategically use family members to combine production with wage labor, etc. A focus on these household risk and vulnerability management strategies leads to more effective disaster preparedness, relief, recovery and prevention -- and development – policies and interventions.

The USAID/DCHA Office of US Foreign Disaster Assistance (OFDA) and the USAID Mission to Ethiopia commissioned this report. Additional support was provided by a grant from the Mellon Foundation. This report is the result of a three-month process of consultations with key stakeholders, government officials and local administrators, reviews of key documents and studies, and travel to crisis affected regions (Tigray, Afar, SNNPR, Somali, Amhara, and Oromiya). Work commenced on April 2, 2003 and the final report was submitted on July 14, 2003.

The authors of this report are scholars and practitioners from the Feinstein International Famine Center, Tufts University and the Harvard School of Public Health with expertise in risk and vulnerability, public health, public nutrition, pastoralism, livelihoods, and humanitarian assistance. This study is influenced by a livelihoods perspective that focuses on community management of risk and vulnerability.

This report describes the systems that are in place that are designed for the early detection of crisis, the nature of humanitarian responses these systems have induced, and the outlook for the coming year. The analysis is presented in seven sections, supported by a number of annexes as follows:

Section 1 -- Introduction
Section 2 -- Early Warning Systems
Section 3 -- Livelihoods
Section 4 -- Famine Theory
Section 5 -- Crisis and Response
Section 6 -- Looking Ahead
Section 7 – Recommendations
Annexes

Introduction

The first section of the report provides an overview of historical perspectives on disaster risk and vulnerability in Ethiopia and also summarizes the food and non-food aid appeals presented by the Government of Ethiopia (GOE). Ethiopia's experience with drought and famine has generated a large body of knowledge, research and experience on all aspects of food security intervention, coping strategies, early warning indicators, modalities of relief operation, coordination, advocacy, and other familiar aspects of humanitarian field practice. Ethiopia has also a long tradition of working with donors, NGOs, and bilateral agencies. There exists an extensive corps of national personnel in country and in the diaspora with experience in disaster relief. It has also over the last 30 years had considerable UN and other donor funding variously invested into disaster management capacity and response.

Cycles of drought, famine and pestilence always have characterized the Ethiopia's past. Disasters have been a permanent factor of the Ethiopian landscape, although famines in rural areas have been better documented than those among pastoral communities. Understanding risk and vulnerability in pastoral community remains comparatively weak to this day.

The cumulative effects of repeated disasters have been described by Ethiopian scholars as "emburdenment". While there have been at times massive emergency responses to crises in Ethiopia, strategies to address the specific and lasting effects of disasters usually have not been put in place. In addition, despite the chronic nature of disasters, Ethiopian capacity for disaster prevention, preparedness and response largely has been limited to institutions of emergency food aid management. Line ministries (e.g., Health, Agriculture, and Water Resources) generally lack standing disaster detection, response and recovery capacities.

Managing famine risks and vulnerability is a process that requires sustained engagement. Agencies must remain committed, year in and year out, to ensuring that the capacity to prevent, detect, manage and recover from famines is established and supported within the systems of governance in Ethiopia, in good years and in bad. The hazards that underpin the current crisis will never fully disappear from the landscape of Ethiopia but they can be mitigated through development. Nevertheless, disasters will strike time and again, just as they do in all of the countries of the world. A critical component of Ethiopia's development strategy must recognize these hazards and a range of institutions must be capacitated and empowered to be ever-vigilant and ever-prepared to manage them. However, there appears little commitment to the agenda of building emergency response capacities, despite the chronic nature of crises in Ethiopia.

The crisis of 2002/2003 can be characterized as one of the most widespread and severe emergencies ever to strike Ethiopia. The current crisis arrived on the heels of the 1999/2000 drought, so many affected households, communities and regions did not have sufficient respite for recovery before the current crisis intensified. What we are witnessing today in Ethiopia is in part due to the inadequacies of the humanitarian responses (both locally and internationally) to the warnings of crisis in 2002. In addition, it has its roots in the combined government and donor failures to fully assist disaster-affected populations to recover from the cumulative effects of previous crises.

The complete geography of this crisis has yet to unfold. Right now, suffering is greatest where the edges of the capacities of government and humanitarian agencies dissolve into the periphery of marginalized populations. In the near vacuum of administrative capacity that characterizes these areas, we get only periodic – but startling – indications of a "hidden famine" where crisis-related malnutrition, destitution and morbidity may never be known. It should be considered that malnutrition and mortality data in Ethiopia are biased because they reflect the areas of humanitarian operations and these operations do not adequately cover all crisis areas. As a result, it is safe to assume that these data under-represent the full scale of the problem.

As is common in Ethiopia, there is a tendency to compare the current situation to recent (1997-2000) and more historical crises (1984, 1974). This is a useful exercise but it must be remembered that each situation is unique. The particular, new and different factors of this crisis must be better understood in order to devise and implement more nuanced, and hence more effective responses.

The DPPC launched an appeal in January 2002 and estimated that relief needs would peak in July 2002 at 3.6 million people. This appeal was revised in August, and then again in December, 2002 for a total of 11.3 million people requiring immediate food assistance, with a further 3.1 million people placed in the category of "close monitoring". Combined, this represented about 21% of the total population. Further upward revisions in the estimated population in need of food aid were made in April, 2003 of 1.2 million people, for a total population in need of 12.6 million, a food requirement of 1.54 million MT, and 80 million USD in non-food assistance.

In July, WFP announced that the DPPC's appeal for food aid had been fully resourced. Critically, however, this has been insufficient to prevent the continuation and deepening of serious conditions of emergency malnutrition, morbidity and mortality in many regions, including the Southern Nations Nationalities and People's Region (SNNPR), Afar, Somali, Amhara and Oromiya, among other areas. The persistence of disaster in the face of a robust food aid response has important implications, and should cause the government and the humanitarian community to analyze closely the assumptions that underpin the structure of early warning and disaster response in Ethiopia. Clearly, the emphasis on food aid must be matched by strategies of non-food assistance to address the broader causes of malnutrition and mortality, and disaster-induced destitution among vulnerable rural, urban and pastoral communities.

In addition to food aid, the GOE appealed for $75 million in emergency non-food assistance in December 2002. This appeal was later increased to $81 million by March, 2003 to cover a range of sectors including agriculture and livestock, health and nutrition, water and capacity building. The non-food appeal remains under resourced. While food aid responses from the government and donors have been reasonably robust throughout the duration of the crisis (although damagingly lacking in adequate diversity, e.g. pulses and oil), the non-food aspects of government's and donors' aid strategies too often have been missing or inadequate. In general, the energy, skill and leadership demonstrated among the key food aid actors have not been matched by key actors in the non-food aid realm; this is demonstrated in part by the lack of transparency in processes of assessment and appeal of non-food aid emergency resources.

Early Warning Systems

The GOE is to be commended for its efforts to attract the attention of the international community to the depth and breadth of this crisis. It did not wait for the donors to come forward with pledges of resources but moved aggressively to provide assistance. The humanitarian community's early (and continuing) efforts to augment these interventions were vital for keeping the most vulnerable in their communities.

A total of sixteen different disaster early warning and surveillance systems were analyzed by the team, including those managed by government, donors, UN agencies and NGOs.

A key focus of the DPPC's systems of early warning and surveillance is to prevent a repeat occurrence of the types of famines that struck Ethiopia in the 1970s and 1980s. Measured against this objective, the DPPC has been highly effective. In recent years, including this year, its information has induced government, donor, UN and NGO humanitarian responses on an adequate scale to prevent the mass migration of vulnerable populations to famine camps, thereby avoiding the worst of the famine images that were once synonymous with Ethiopia. This important and laudable accomplishment has saved many lives.

Other government bodies involved in early warning and surveillance considered in the report include a pilot program for Livestock Early Warning System (LEWS), the Welfare Monitoring Unit (WMU) and other services provided by the Ministries of Health and Agriculture, and the National Metrological Services Agency (NMSA). Although there is a plethora of systems, there at present is no capacity within government for meta-analysis of all of the data generated by the range of government institutions. Within institutions (with the exception of emergency food aid responses), information systems are not strongly linked to mechanisms to trigger appropriate and timely emergency responses. This is a particular problem within the line ministries (e.g. MoH and health-related nutrition problems, MoA and pastoralist vulnerabilities). Overall, non-food early warning and surveillance systems are inadequate for the scope and breadth of risk and vulnerabilities facing a diverse range of Ethiopian communities. Surveillance systems are not based on livelihood systems; it is therefore not possible to devise appropriate livelihoods-based emergency and recovery strategies.

Currently, the only active donor early warning system is the USAID-supported Famine Early Warning System (FEWS). Heavily dependent upon secondary data, FEWS is currently in a process shifting to a more livelihoods-oriented focus. The EU has disbanded its Food Security Unit (FSU). The FSU had been a key player in the Ethiopian Network on Food Security and its reports were influential within the EU Delegation in Addis as well as with Brussels. The closure of the FSU has resulted in a compromised capacity of the EU to obtain independent food security information. No donor actively monitors health and other non-food indicators.

The team considered three UN-managed systems, including WFP's Vulnerability Assessment Mapping, the joint Crop and Food Supply Assessment and the UN Emergencies Unit for Ethiopia (UN-EUE) periodic reports. Systematic monitoring and assessment of non-food vulnerabilities is weak, while existing systems have a heavy reliance on secondary data. The focus of the crop and food supply assessment on staple crops means that the contribution of alternative food and cash

crops are not routinely assessed. However, the UN systems have been successful in providing adequate independent verification of government food aid needs estimates, thereby strengthening confidence among some donors. This has been important for generating the massive food aid response that has successfully prevented mass distress migration.

NGO systems reviewed included those managed by CARE, World Vision International, Save the Children – UK and the NGO consortium Joint Emergency Operations Plan (JEOP). These systems are largely oriented to serving the institutional needs of NGOs and have limited geographic coverage. They are vulnerable to closure to do the waxing and waning of donor funds, as well as shifting institutional focus from relief to development and back to relief again. Many NGOs have large databases that are underanalysed.

Reviewing the whole of the early warning and surveillance systems, the team identified several areas for improvement. Key issues include *inter alia*: the weaknesses inherent in systems that are based on administrative classifications (e.g. regional boundaries, NGO area of operation) rather than on livelihood or ecological systems; the poor quality and relevance of health data; and, the limited capacity at the regional and sub-regional levels. A bias in food aid responses is due in part to the nature of the early warning systems that are nearly exclusively focused on food production indicators such as rainfall and crop yields, with relatively little focus on questions of entitlements, ecological stress, or issues of emergency health needs.

For some vulnerable communities, there are no systems of early warning or, where they exist, processes of administrative decentralization have yet to mature adequately for them to function effectively. For these communities, the "early warning" of crisis comes only after the disaster has developed. The DPPC's earliest warnings in 2002 resulted in the government's release of 45,000 MT of food from its emergency stocks, but this was inadequate to prevent a crisis from developing. Many within government, donors, the UN and NGOs took a "wait and see" attitude, with several taking decisions to upgrade their emergency assistance levels until lagging indicators became apparent. Others simply elected to dismiss the warnings and failed to develop appropriate emergency response strategies. Lastly, the early warning signals triggered inappropriate responses by focusing the emergency response on high tonnages of food aid -- to the near exclusion of non-food assistance and without mechanisms in place to ensure that the food aid that was requested could be prioritized to the most vulnerable populations in a form that was timely, nutritionally adequate and appropriate.

Livelihoods

Some of the finest work in the world on analyzing livelihoods has been conducted in Ethiopia. In its least elegant form, the term "livelihoods" can be defined as *the sum of means by which people get by over time*. Household livelihood systems are based on a range of assets (human, financial, social, natural and physical), the use of which is shaped by both formal and informal processes, institutions and policies (PIPs). Livelihood frameworks are useful for understanding household and community resilience, for analyzing vulnerability, and for designing, monitoring and evaluating relief and development policies and practice.

This report considers a select range of issues for their impact on household livelihood (and by extension, coping) systems, including recurrent drought, livestock marketing policies, *chat* production, decentralization, losses of pasture, natural resource regulation, and environmental decline. The combined effects of a protracted depression in the world coffee markets, the continuing ban on live livestock exports from Ethiopia to the Gulf States, the exploitation of a fragile agricultural base, the collapse of a range of key income earning opportunities in country, and an ambitious program of political decentralization all have coincided with and exacerbated the impact of the drought. The resulting loss of access to and availability of food, and the collapse of economic entitlements have generated widespread vulnerability to malnutrition, morbidity, poverty, destitution and mortality.

While most of these (and other similar) issues have been studied intensively in one-off works, the vulnerabilities associated with these PIPs are not routinely monitored by disaster early warning systems in Ethiopia. The various early warning systems are weak on analyzing trend data and always limit their comparative analysis to the recent past. Declines in household resilience over time due to longer-term processes are therefore systematically missed by the early warning systems. This, in part, explains the otherwise perplexing and "sudden" appearance of "hot spots" of crisis zones, especially in those areas characterized by historic marginalization and subject to long- term erosion of asset bases.

A focus on the resilience and vulnerability of livelihoods systems is needed to improve the effectiveness of emergency preparedness, response and development strategies. Food aid alone has not been – and cannot be -- sufficient for combating the multi-faceted nature of the current emergency. Where the simultaneous collapses of livelihoods systems have led to losses of lives and distressing suffering, only multiple strategies of humanitarian and development interventions will address adequately such a complex web of vulnerabilities. Livelihood strategies in Ethiopia are becoming more diverse; response strategies need to be based on a sound understanding of these strategies so that appropriate, life-saving interventions can be devised and implemented. Emergency asset interventions are needed in order to halt the erosion and promote the restoration of productive assets (oxen, plows, breeding stock, etc.). Opportunities for (local and international) market-based interventions are rarely capitalized by the government or the humanitarian community, much to the detriment of disaster-affected populations.

Ethiopia does not reside in isolation. The processes that are deepening risk and vulnerability in Ethiopia also threaten the livelihood systems of its neighbors. The ecological systems that are in crisis in Ethiopia extend throughout the Horn of Africa; the transmission patterns of animal and human diseases know no borders. As the problems of Ethiopia extend into the region, so do the solutions. Sudan, Somalia, Kenya and Djibouti are both markets and suppliers for Ethiopia. Regional resource, vulnerability and risk management are maximized by peace and stability in these countries.

Famine Theory

On a number of occasions, the team was asked "Is there a famine in Ethiopia?" Underlying this question is the assumption that famines are events that happen rather than processes that evolve. Indeed, the largest and strongest emergency response actors in Ethiopia (the DPPC, WFP and

USAID) each define famine as an event rather than a process. With a focus on averting famine as an event, inadequate attention is placed on issues of prevention, preparedness, mitigation and recovery. This is apparent in the lack of intra- and inter-ministerial short- and long-term strategies and commitments for addressing underlying famine vulnerabilities, including the specific nature of disaster-induced destitution in Ethiopia.

Leading humanitarian agencies in Ethiopia theorize famine as the outcome of food shortages leading to starvation. Termed a "food first bias," this has been the prevailing model of famine theory in Ethiopia since the 1970s. This concept has influenced the policies, institutions and processes of humanitarian response in Ethiopia that have been important for generating emergency responses adequate for limiting the (often lethal) distress migration of vulnerable populations.

However, the sources of disasters are more often related to social, economic, political and environmental processes than the vagaries of nature. The prevailing narrative of Food Availability Decline (FAD) (e.g. "drought leading to crop failure leading to starvation") does not reflect this diversity. As a result other dynamics of crises that are leading to famine-related destitution, malnutrition, morbidity, and mortality are routinely overshadowed, under analyzed and inadequately managed in Ethiopia.

Scholars of famine theory include many eminent Ethiopian academics, many of whom have emphasized that different communities hold unique definitions and understandings of famine and famine processes. Understanding, preventing, responding and recovery strategies therefore need to be contextually specific. This is not the current *modus operandi* of humanitarian operations in Ethiopia, e.g. despite the range of vulnerabilities, the government and UN have appealed for a homogenous ration of food aid for millions of crisis-affected people.

The humanitarian community of government, donors, UN agencies and NGOs would benefit from these and other considerations of the current consensus on famine theory, e.g.:

- Famines are an intensification of 'normal' processes versus an aberrant event;
- Famines are not always triggered by a decline in food availability;
- Communities affected don't always regard excess mortality as a prerequisite; and,
- Deaths during famine is related more to disease than starvation

Crisis and Response

The entire international donor community has been generous in its responses to the Government's appeals for assistance, particularly of food assistance. Humanitarian assistance has saved many lives, has kept families together, and has maintained the faith of the population in the will of the Ethiopian Government to assist people in their hour of need. Critically, it has prevented vulnerable populations from gathering together in famine camps where the risks of disease and death are greatest.

However, given the depth and breadth of the current crisis, a coordinated strategy to combat famine malnutrition, morbidity, mortality and destitution does not appear to be in place. There is in Ethiopia today an impressive array of government institutions, policies and processes that are

designed to identify, respond to and mitigate disasters. There are strategies for disaster prevention and preparedness but these are not as coherent for disaster response. Health posts, water bureaus, agriculture offices and disaster response committees exist in most of the crisis-affected areas, but too often they are fundamentally lacking in authority, technical and absorptive capacity, and resources to provide any semblance of services. While it is intended that decentralization overcome these problems, reality is lagging behind policy

The challenge to government and the entire humanitarian community is to learn from the past, respond to the present and prepare for the future. Ethiopia has been the birthplace of the technologies of humanitarian field practice: it is in Ethiopia that the humanitarian community learned about the proper management of malnutrition, became aware of the importance of coping strategies, and taught the medical profession about the particular demography of famine and diseases. It is of major concern that current relief practices in Ethiopia do not always meet the standards that its own history has served to evolve. It must be recognized that relief efforts are already one year too late or are inappropriate for many populations. For example:

- Too many livestock were left to die in the pastoralist regions without sufficient emergency interventions to either save or slaughter them; too many children lost access to milk and meat as a result;
- Too many children have not been vaccinated against preventable childhood diseases; they are now vulnerable to the deadly combinations of malnutrition and diseases like measles;
- Too many men and women who left their failed farms to seek wage labor in towns found no work in the private sector, and too few public programs filled the gap with cash-for-work opportunities; families have gone without food, water and health care as a result;
- Too many women and girls, facing destitution from asset losses, have moved to towns to make a living in the commercial sex worker industry; the associated loss of dignity and exposure to diseases such as HIV/AIDS are unacceptable;
- Too many people have had to resort to the destructive practices of cutting firewood and preparing charcoal, while farmers have turned to tilling ever more fragile lands; Ethiopia risks going the route of North Korea as a land scarred by widespread and permanent environmental devastation;
- Too many people reside beyond the reach of even a rudimentary health care system; combined with the prevalence of malnutrition, they are highly vulnerable to the assaults of endemic malaria, acute respiratory infections and diarrhea; lastly,
- Too many farmers and pastoralists, discouraged by the continued collapse of their respective coffee and livestock markets, have turned to the production *chat*, while its consumption has become more widespread across urban and rural populations alike; we have witnessed in both neighboring Somalia and in distant Afghanistan and Colombia how humanitarian crises and conflict can lead to sharp increases in narcotic activities, with related security implications for local and international communities.

Donors

There is a long history of donor relationships with Ethiopia that, like the pastoralists' boom and bust cycles, has seen both good days and bad. In the last crisis, donors were at odds with the Ethiopian Government over issues relating to the conflict with Eritrea. Relations between the

Ethiopian Government and the donors have improved since the last crisis but several issues remain outstanding, e.g., debt burdens, border demarcation, human rights, trade liberalization, and the current resettlement program. Several countries have granted Ethiopia special status for privileged access to development resources.

Donors are concerned about the impact of the current crisis on poverty reduction strategies. The poverty reduction strategy process has promoted a degree of harmony across donor strategies for Ethiopia, at least in terms of their development portfolios. Notably missing from the PRSP process is recognition that Ethiopia's disasters are endogenous, i.e., embedded, in Ethiopia's ecological, economic, political and social systems. The historical view that disasters strike at the whim of nature remains a powerful narrative in modern Ethiopian development discourse.

For the current emergency, the harmony that characterizes various donors' development strategies does not appear to extend to humanitarian assistance issues. Donor emergency response strategies for the current crisis have been influenced not only by information generated by early warning systems but also by individual donor policies and personalities, as well as by the influence of international events (e.g. wars with Afghanistan and Iraq, massive emergency appeals for assistance for Southern Africa). A powerful narrative that disasters only strike Ethiopia every ten years contributed to a lag in some donor responses to government early warnings of crisis in 2002.

Donor non-food aid responses to the current crisis have been critically insufficient. Few donors have recognized that there is a void of leadership by government for non-food interventions that has been created by institutional barriers within government. This coincides with a failure by the larger emergency non-food aid actors (OFDA, ECHO, UNICEF and FAO) to derive or implement aggressive strategies for these sectors, especially in the critical, early stages of the disaster.

The USAID mission in Ethiopia has taken a more aggressive approach in response to the DPPC's appeals than other donors. The US (until recently) and the EU have prioritized emergency food aid responses to the near exclusion of non-food responses. This has troubled some donors who are concerned about the impact and the effectiveness of food aid in Ethiopia (and elsewhere) and the absence of strong non-food emergency strategies. In addition, there are donor representatives who remain unconvinced about the severity of the current crisis and see it as a "normal" (i.e., within expectations) event requiring not emergency aid but rather stronger development assistance commitments on both the part of government and the international community.

Nutrition

Three decades of experience addressing hunger, malnutrition and death (excess mortality) as a result of famine in Ethiopia has produced a wealth of lessons learned and practical guidelines, which have had global influence on disaster response. However, Ethiopian guidelines and procedures have not always (and still do not) concur entirely with internationally endorsed recommendations.

An Ethiopian scholar has written that "Malnutrition is the nutritional landscape on which the footprint of recurrent famine is firmly etched." However, questions of nutrition are critically lacking in attention on the national emergency and development agendas. Agencies and ministries involved

in nutritional issues are focusing too narrowly on (e.g. on measuring acute malnutrition and treatment of the malnourished), and/or are failing to prioritize this critical component of sound (emergency and development) national health, food security and economic policies. In a country where malnutrition affects over one-half of the population, this is an alarming state of affairs.

The formation of the Emergency Nutrition Coordination Unit (ENCU) in late 2000 within the Early Warning Department of the DPPC was in part the result of the documented problems with nutritional surveys in 2000. A major achievement of the ENCU has been the coordination of the development of the most recent DPPC guidelines on nutritional surveys.

Malnutrition directly results from either inadequate food intake and/or from disease. There is a complex and diverse range of underlying causes leading to malnutrition. In Ethiopia, however, key institutions (including the Ministry of Health) assume malnutrition to be the result of a lack of food intake. The health and caring aspects of malnutrition are disconcertingly lacking in emergency response assessments, appeals and responses. This is further evidence of the powerful influence of the food first bias, i.e., that famine is largely a problem of failures in the food supply, resulting in malnutrition and mortality which can be addressed by better and more efficient food distribution.

Even with the strong emphasis on food aid as the primary response to malnutrition, none of the food aid rations provided by government or UN agencies conforms to current international standards. Over time, ration composition has become more a function of field adaptations of donor provided resources (and deficiencies therein), than of needs, policies or standards.

While there is active concern over issues of targeting of rations, there is less consideration of important issues of food aid distribution. Increased food basket and end use monitoring of food aid is needed, as is capacity building of regional and sub-regional authorities to fulfill these roles.

The diverse causes of malnutrition, including the multiple threats to household food security, are limiting the effectiveness of selective feeding programs for vulnerable populations. Uneven program coverage, poor monitoring and few evaluations of supplementary feeding programs are key concerns. In addition, where therapeutic feeding centers are established in the absence of supplementary feeding programs (and other strategies to improve household food security), this raises serious concerns for the effectiveness of these extremely expensive relief interventions. Other issues of concern in therapeutic feeding programs include: the poor quality and limited availability of complementary health care and follow-up of patients; the need for a centrally managed system for coordinating and monitoring; the poor coverage relative to need; and, the risk of waste or misuse of expensive therapeutic milks.

Vulnerability to micronutrient deficiency diseases (MDDs) in endemic in Ethiopia, but vulnerability has been exacerbated in the current crisis because of the nature of the single commodity (e.g. 12.5 kgs of cereal) ration, high rates of infectious and diarrheal diseases and a lack of access to fresh foods. Creative interventions to address MDDs generally do not feature in the current emergency response.

Health

Emergency response strategies designed to prevent distress migration have been important for limiting vulnerable populations' exposure to disease threats because morbidity and mortality has been proven to be higher in IDP and refugee camps than in stable settings. However, a lack of leadership from government and UN agencies to devise and implement emergency public health strategies has contributed to an alarming level of vulnerability to disease epidemics. The DPPC has inadvertently segregated the line ministries (including the MoH) from operational levels of responsibility for disaster responses.

Even in the best of times, the health system in Ethiopia is inadequate. One of the most immediate threats to life in crisis areas stems from vulnerable populations' lack of access to any form of meaningful health care. Emergency measures are still insufficient given the vast public health threats including adequate EPI coverage for vulnerable populations, sufficient quantities of clean water for consumption and hygiene purposes, satisfactorily balanced, adequate and appropriate food aid rations, and other properly conceptualized and managed nutrition interventions.

It must be noted, however, that while considerably greater attention to the health aspects of the crisis is needed, emergency health measures can only go so far in the context of such a compromised health care system. HIV/AIDS is an important element of the current emergency but the complex interplay between HIV/AIDS and acute food insecurity is not well understood. Combating HIV/AIDS is critical, but it should not distract from the larger effort of establishing a functioning, basic public health system in Ethiopia.

Pastoralists

Pastoralism in Ethiopia is both viable and vulnerable. Pastoral livelihoods systems are effective mechanisms for converting marginal lands into products valuable for households, communities and the national economy. The current crisis affected pastoralists first, e.g. Afar, but while pastoral traditional early warning systems provided early indications of this crisis, these signals were missed by the range of formal early warning and surveillance systems.

The climatic shock of the drought is only one of many sources of vulnerabilities for Ethiopian pastoralists. A ban on the export of live livestock from Ethiopia to Saudi Arabia has had particularly deleterious effects on Somali pastoralists, who have also been affected by the GoE's efforts to stop contraband trading from Somaliland. Livestock terms of trade for cereals and other staple commodities have collapsed, while pasture and water resource conflicts have increased. Livestock losses have been high for some communities due to a loss of access to water, pasture and effective, community-based animal health care. The loss of access to milk among vulnerable pastoral households has led to increases in malnutrition, morbidity and malnutrition.

Despite having the largest livestock population in Africa, Ethiopia does not have a Ministry of Livestock such as is found in Sudan and Kenya that are responsible for looking after the interest of pastoral areas and issues concerning livestock. Government, donor, UN agency and NGO interventions for pastoral communities have been late, insufficient and largely inappropriate (e.g. dominated by food aid responses rather than key livelihood interventions such as

destocking/slaughter, animal health, water, fodder, etc.) As a result, both short- and long-term vulnerability among pastoral communities is higher than it should be.

Looking Ahead

Planning for the next year will involve combining analysis of the climatological and cropping predictions with an estimate of the impact of the current crisis on household assets and other components of livelihood strategies. Planning also must factor in known and expected trends in the animal, crop and human health environment. In order to devise a reasonable estimate of the nature and extent of vulnerability in the future, it is necessary to factor predictions of likely harvests, disease transmission and economic trends together with estimates of the impact of earlier crises events. To be accurate, these estimates must be done with recognition of the context-specific nature and characteristics of each of the country's agro-ecological zones, livelihood systems and patterns of disease (human, crop, livestock) transmission vulnerabilities. Of note, this type of comprehensive assessment has never been undertaken in Ethiopia. Instead, the contingency planning process is designed to estimate crop failures and the numbers of people affected, turning these directly into estimates of food aid needs.

For the coming seasons, the current early warning systems will continue to monitor food and cash crop and livestock performance and use this as a base on which estimates of the size of the vulnerable population is built. This is an important and useful exercise. The scenarios constructed last year have subsequently served as valuable advocacy and planning tools for government, donors, UN and NGOs alike.

If the present and past are guides to the future, it is reasonable to describe the nature of risk and vulnerability affecting a range of communities in the coming months to one year. It is safe to assert that some communities in Ethiopia will face a crisis next year, regardless of rains. Field-based assessments of the *belg* performance will coincide with the release of this report. Currently, there are mixed prognosis for the harvest outlook. The June 21, 2003 Meher Crop Production Estimate produced by FEWS NET presents an disconcerting picture of projected food needs based on an analysis of the April-May rainfall totals, rains that are critical to short term crop production cycle. Should the *meher* rains fail, a catastrophic crisis unparalleled in the history of Ethiopia will evolve, entailing historically unprecedented case loads requiring a wide range of emergency interventions to save lives and protect the core elements of livelihood systems.

Even if the rains return, this will not signal an end to the crises. Rains or no, the affected populations will have deeper debts, poorer health, decreased seed stocks, fewer livestock, less savings and more burdens then they did going into 2002.

Both the general population and specific disaster-affected populations in Ethiopia will be vulnerable to serious human epidemics, including malaria, measles, meningitis, ARI, and diarrheal diseases. City and town dwellers will have comparatively better access to health facilities, but even for these populations meaningful health care may only be accessible on a fee-for-service basis in the private sector. Rural populations largely will lack access to health care, even in the event of localized epidemics. Illness will serve to limit productivity, school attendance, income, growth and household food security.

Staple crop producers will fall into two categories: those with access to land with high productive potential and (or no need for) credit who will be able to purchase fertilizers, seeds and other key inputs, e.g. labor, and those without access to credit, primarily because they already are deeply indebted. For farmers with poor or no access to credit, their production will be compromised by a lack of access to key inputs. The need to service their existing loans (from earlier seasons) will force some to sell key productive assets, e.g. oxen, or to seek wage labor. Regardless of credit standing, some farmers may view staple crop production as too risky for such low returns and turn to alternative cropping, especially *chat* where cropping conditions are favorable. Farmers and pastoralists alike will see an increase in pests with the return of the rains. Historically, post-drought pest infestations (usually of armyworm and locusts) have caused widespread losses and sharply retarded post-crisis recovery. In the event of good rains, no pests and a bumper harvest, this may cause the prices in domestic markets to once again collapse, which (when combined with a lack of adequate storage) will spell a food security disaster in its own right.

Pastoralist food security will continue to be a function of access to and quality of pasture and water resources, animal health care, domestic and international markets and indigenous, domestic and international strategies for relief and recovery assistance. The GOE appears set to increase efforts to resettle pastoral populations. Overall, the outlook for pastoralists groups is fragile with poor prospects for adequate access to milk for the pastoral households that have faced large-scale livestock losses and/or serious animal health threats. These issues pose threats to livestock-dependent crop producers as well.

Short of major climatic disasters in other coffee producing regions (e.g. LAC), coffee producers are likely to continue to face world prices well below long term averages. Overall value and volume of coffee exports ex Ethiopia will remain depressed, with negative ramifications for foreign exchange earnings. Smuggling of goods will continue, especially ex Somaliland, despite the efforts of the GOE to limit the trade. Combined with depressed livestock export activities, this will represent further losses in Ethiopian export earnings.

In major urban areas, towns and villages, the momentum of emburdenment will increase the overall size of Ethiopia's poorest populations. The effects of the current emergency will generate a class of newly destitute that will join the ranks of the existing destitute populations. Children and women will be among the first affected as households dissolve because they have the weakest entitlements to household and community resources. The newly destitute will include not only disposed pastoralists (as noted above) but also farmers displaced from their livelihoods because of successive crop failures and related debt burdens, resettled populations unable to establish viable livelihoods in their areas of resettlement, and increasing numbers of wage laborers competing for a diminishing number of jobs.

Processes of administrative decentralization will continue, although the effectiveness of regions and woredas on the periphery will be compromised by a lack of capacity, resources, staff turnover, etc. This will mean that there will not be early warning capacity in some vulnerable areas, e.g. parts of Afar and SNNPR. Regional and sub-regional offices of line ministries will remain weak in most of the current disaster-affected areas.

Environmental degradation and eco-system stress will deepen in (and across) many regions. Population pressures, resettlement programs, poverty, and a lack of federal control over land use management will combine to bring new, marginal lands under cultivation.

The DPPC and UN Agencies can be expected to submit appeals for continued and sizeable food assistance for vulnerable populations in Ethiopia well into 2004. For 2004, it can be expected that appeals for food aid for vulnerable populations will once again return to the 8 – 13 million mark for 2004.

Summary of Recommendations

Over the course of the past three months, the team submitted briefs to USAID that included a range of recommendations. Discussions of these recommendations and other recommendations are embedded in the text of this report. Annex VII details the recommendations the team offered the USAID/DCHA/OFDA DART team in May 2003. More detailed recommendations are found in Section Seven of this report.

Early Warning/Monitoring

It is encouraging that information systems in Ethiopia work well to achieve their intended objectives, especially of preventing the types of famine that historically have plagued the country. Further improvements to the systems, including broadening their objectives, should yield even better performance in future. Information systems need to operate independently of systems for identifying responses. Investments in systems to assess non-food aid needs are needed in both government and non-governmental institutions. The current domination of the Food Availability Decline Model of crisis needs to be augmented by other important and context-specific models, including models of entitlement decline, livelihoods crisis, and health crisis.

Context specific crises require context specific responses. In order for this to happen, the early warning, surveillance and monitoring systems need to capture and analyze a greater range of information than they presently are designed to do.

There needs to be organized in government a capacity for conducting timely meta-analysis of the full range of information generated by the host of early warning, monitoring and surveillance systems currently operating in country. In addition, findings of one-off reports and studies (e.g. the SC-UK/IDS Destitution Study) need to be expanded and integrated into systems of meta-analysis.

An accelerated and coordinated focus to build up the capacity of the DPPBs, line ministries and woreda crisis management committees is needed. Increased investments are also needed, e.g. equipment, transportation, housing/office space/telecommunication systems, manuals and references where possible in the appropriate languages, resource materials and training on international standards, humanitarian principles, and codes of conduct. Training is also needed at educational centers (e.g. the Civil Service College) and of MPs to improve understanding of issues of disaster preparedness as a component of their responsibilities towards their citizenry.

Donors should support the creation of a Center(s) of Excellence for disaster management in Ethiopia that could serve as central resource for research and training on issues related to disaster preparedness, prevention, response and mitigation. Such a center should offer refresher courses and certificate programs to further professionalize the large corps of Ethiopian specialists who have been and continue to work in humanitarian endeavors.

Nutrition

Excess mortality is occurring where there is and where there is not acute malnutrition. In areas of known high prevalence or high risk of acute malnutrition and public health crises, strategies need to be devised and implemented to augment formal relief efforts. Resources must be prioritized to the worst affected areas. In these contexts a nutritionally adequate ration in compliance with international guidelines must be provided.

Nutrition recommendations focus on three broad areas:

- Systems for prioritizing needs for disaster response.
- The need for a broader and more balanced range of strategies to protect nutrition and address all types of nutritional risk especially in priority one areas.
- Ensure the entire range of nutritional concerns in emergencies, are adequately addressed at all levels, including national policy, and within specific Task Forces and sectors.

The system for assigning priority categorization for disaster response needs to be revised, in order to more clearly distinguish groups who are suffering a near total failure in their entitlements and/or who are facing other life-threatening nutrition or health risks. Priority one areas should therefore include those areas of known high prevalence or high risk of acute malnutrition and public health crises that would be prioritized for a range of combined strategies. This system should be reviewed and supported by all relevant task forces (e.g. Food, Health, Early Warning) to ensure it takes adequate account of all types of nutrition and health risks (e.g. inadequate water, sanitation, overcrowding, lack of shelter, exposure to cold, low immunization coverage, high chronic as well as acute disease, increased dependency ratios etc) and not just those linked with food insecurity.

In Ethiopia the only groups to receive rations that are approaching nutritional adequacy are refugees and the small number of IDPs in Tigray. Provision must be made to provide nutritionally adequate rations in compliance with international guidelines to priority one groups. For example, pulses or meat need to be included in the ration to provide a source of protein, plus fortified blended food as a source of micronutrients. In areas where iodine deficiency disorders are endemic the distribution of rations should be used as an opportunity to distribute iodized salt also. All oil in the general ration must be fortified with vitamin A, with the possible exception of local purchase of oil where fortification is not currently possible. The range of general, blanket and targeted supplementary feeding rations provided needs to be reviewed urgently as the rationale is confused, widely misunderstood and rarely implemented as described in original project documents. It is also questionable whether this is the best use of resources. This review should take account of the system for prioritization (hence the needs), targeting, distribution and ration composition.

Nutrition related emergencies require a broad range of interventions that go beyond the limited package of a single commodity ration, combined with selective feeding. Until this is widely recognized at the highest level, and integrated into the policies of the MoH, DPPC and even MoA, the fight against malnutrition will continue to be piecemeal and fragmented.

Nutrition in emergencies needs a number of committed champions within key Ethiopian institutions. As the current focal point nutrition in emergencies, it is essential that the work of the DPPC ENCU is fully supported and not undermined. Considerable technical and human resources are found within International NGOs, rather than within the DPPC (although it is claimed this is at the disposal of the DPPC). This capacity should either be relocated within the ENCU, or clear lines of authority established that indicate the independent unit is a service provider to the relevant GoE task forces and units.

The processes of participatory and appropriate policy development and planning, on issues such as ration composition and prioritization, need to be informed by sound information and good analysis. This needs to be supported by a local forum for learning, teaching and training in Public Nutrition. This urgent need is not just within Ethiopia, but more widely among the many emergency affected countries of the Horn of Africa.

Health

Overall, a stronger commitment by government to addressing emergency public health crisis is important so that in future disasters the health response to emergencies can match the robustness that currently only characterizes the food aid response processes.

The Ethiopian health system would benefit from a series of short-term and long-term strategies aimed at improving its capacity to provide adequate health care in times of relative stability and its capacity to respond to the health needs of its population in times of crisis. These are summarized below:

A) Build an effective health and nutrition early warning system

1) Develop an early warning information system that links attention to indices of health and nutrition and is deployed in a consistent, routine, and population-based mode. Key features of this system would be the use of a simple but robust survey instrument and reliance on computer-based data analysis. The analytic reports to be generated from the information would support delineation of trends and variances, cross correlations with other inputs from other early warning systems, and delivery of summary reports that could be disaggregated to the kabelle level as needed.

2) Base this early warning system on a cadre of professional public health epidemiologists who are deployed in the regions and charged with the responsibility of accomplishing pre-determined circuit rides and systematic surveys throughout the countryside, supported by good transport vehicles, laptop computers, and adequate survey staff.

3) Link these public health professionals to the regional hospitals and define one of their key responsibilities to be the training of physicians, nurses, and managers in the monitoring and reporting of key health and nutrition variables relevant to early ascertainment of impending food related crises.

4) Design an information strategy at the regional level that links these improved reports from health facilities with the survey information from the public health professionals, so that the capacity to analyze and act upon these pooled sources can be based at the governance level charged with immediate response.

B) Develop a minimum level of public health outreach and prevention at the population level

1) Commit to a concerted effort to achieve a high level of EPI coverage for the entire population over the next two years.

2) Accelerate the program for recruiting, training, and deploying the health extension workers. Ensure that these health extension workers are integrated into the clinical and educational activities of the health facilities to which they are assigned. Link them to the supervisory and mentoring capacities of the public health professionals deployed in famine early warning mode. Deploy them in all EPI activities as appropriate.

3) Move plans to establish a school of public health into fast track mode and consider opening branches in regional colleges and training centers.

C) Expand clinical capacity in the countryside to manage serious malnutrition and associated medical conditions

1) In the immediate future, expand the number of *qualified* international NGOs deployed to assist in the development and management of TFCs. This is a stop-gap strategy but an essential one, given the indications of substantial unmet need in the identified crisis areas and the probable high level of need in areas not yet assessed.

2) Develop a training and resource strategy that will phase out reliance on international NGOs and build local capacity to manage issues of serious malnutrition and related medical conditions at the level of health facilities and referral regional hospitals.

3) Aim to have this strategy support an overall enhancement in prestige, pay, and recognition for health professionals employed at the level of health facilities and regional hospitals.

4) Provide opportunities for continuing medical education in the management of complex health and nutritional emergencies, either on site or in short courses held elsewhere in the country.

D) Enhance the managerial authority and competence of regional health officials

1) Insist that regional health authorities responsible for the emergency response be committed and skilled managers, with proven capacity for leadership and organizational competence. With

redoubled engagement of international NGOs in the short run, and with transition to local management of emergency response in the near term, there will be significant demands on the capacities of regional authorities to command resources, coordinate efforts, optimize skill sets, monitor and evaluate results, and advocate for new resources and programs. It is essential that appropriately trained and supported people be placed in these positions of significant responsibility.

2) Require that the mandate for emergency response in any given area include accountability for a multi-sectoral response, including at least food, water and sanitation, nutrition, and health. The regional health authorities must be held to the standard that these functions are essential to fulfill in any geographic region affected by the emergency.

3) Among other responsibilities, insist that the identified authority for emergency response at the regional level make sure that the following actions take place in the next two months:
   - Upgrade the pharmacy supply chain so that it is capable of dealing with surge demand in key drugs and supplies required to respond to famine emergencies. These resources should be in the pipeline and available in country on a routine basis, given the frequency and volume of need.
   - Refine the protocols on TFCs and supplemental and community feeding to resolve the disputes that have surfaced in the last several months.

Recommendations intended for the longer term must aim to improve the overall health system.

One key recommendation that applies to long term improvement but has a shorter time frame for completion relates to initiatives currently underway to carry out a national census in 2005 and to establish a vital registry system throughout the country in the next several years.

Livelihoods

The saving of livelihoods needs to be recognized as being as important as saving human lives in emergencies. In Ethiopia, nowhere is this more apparent than among the pastoral populations who faced large-scale livestock losses that directly translated into human malnutrition, morbidity and mortality.

Emergency livelihoods intervention strategies are needed in order to enable immediate survival as well as to promote disaster recovery. Livelihoods interventions must be based on an analysis and understanding of the characteristics and dynamics of local context specific livelihoods systems. Livelihood intervention strategies need to be oriented towards supporting the range of household assets as well as to the diverse policies, institutions and processes that impact disaster affected populations.

Examples of asset interventions include the following:
- **Human Assets**: Food aid, nutrition, health, training (vocational, administrative, humanitarian response and principles), conflict resolution; meat distributions
- **Financial Assets**: Cash grants; cash loans; Cash for work; EGS; R2D; FFW; traditional loan and credit mechanisms; local purchase of commodities (e.g. sweet potatoes in SNNPR, livestock

in pastoral communities); cash/other forms of debt relief/rescheduling; lifting of livestock export ban; livestock off-taking; livestock marketing transport subsidies; local monetization

- **Physical Assets**: seeds, livestock restocking (agriculturalists, pastoralists), emergency water points; community based animal health care; livestock disease surveillance; grain banks; grain storage; supplemental livestock feeds; tools
- **Natural Assets**: pasture recovery; afforestation; watershed management; erosion control; nurseries; fisheries
- **Social Assets**: women's livestock marketing associations; woreda administration capacity building; local NGOs, institutions, churches and mosques; traditional safety nets; technical exchanges among organizations

Diversification of livelihood strategies is greatly needed in order to enhance survival and build resilience.

All donors should:

- Initiate an international campaign to encourage Western publics to purchase Ethiopian coffee.
- Appeal to the Governments of the Gulf States and the Arab League to lift the ban on the export of live livestock from Ethiopia; simultaneously, develop an animal health certification system within the region that meets international standards.

Environment

The GoE and donors should increase focus on natural resource conservation and watershed management as emergency issues. The woreda system of administration provides an ideal mechanism for the implementation of accurate hydrological surveys of the local topography, water catchments areas and ecosystems with a view to the design and implementation of appropriate conservation measures (e.g., micro dams, water run-off catchments, bunding, terracing, afforestation, etc.) The current water harvesting campaign -- though well intentioned – may not be adequately designed for long-term sustainability. Ethiopian planners and project implementers may wish to consider the experiences of countries such as Israel, Lebanon, Spain and Pakistan (as well as Ethiopian Regions such as Tigray).

The development of alternative house building materials and alternative fuel energies should be prioritized as both an emergency and development concern. A robust program for conservation, reforestation, local development of community nurseries and tree planting campaigns must be matched by complementary development of alternative fuel sources, energy saving devices, mud brick and other alternative house construction designs. Locally-based vocational colleges of building technology should be enhanced by donors to develop these strategies.

Marketing

Donors and GoE must work in partnership to enhance marketing systems. This can be done through investment in roads, communication and marketing information systems, and storage capacities. At the same time there needs to be support for grain traders to buy surplus stock at harvest time. Equally farmers themselves need to be supported to form producer and marketing cooperatives to play a key role in marketing decisions. At the household level considerable extension work needs to

be done to improve household grain and other storage facilities, particularly in agro-pastoral areas that are increasingly turning to crop production.

Livestock

The GOE should consider the creation of a single, empowered entity such as a distinct Ministry of Livestock to oversee livestock sector development, production and marketing, as well as, animal health services. Markedly increased investment in emergency relief and recovery activities are needed immediately in pastoral areas, especially in Afar and parts of Somalia. A very detailed guide for assisting pastoralist populations in Ethiopia is found in Annex IX. Key activities include:

- Improved early warning system development
- Animal health services, including disease surveillance
- Public works to mitigate the effect of drought (cash-for-work, pasture development, ponds, borehole repair)
- Conflict mitigation
- Emergency off-take, slaughter and fresh meat distributions to vulnerable households
- Transport subsidies to traders to increase off-take and improve household income
- Grazing reserve management
- Livestock feed and water provision to preserve a viable core of breeding (and milking) stock
- Restocking

USAID

USAID disaster management strategies should be revised to a) prioritize use of food aid in emergency according to the principles of impartiality, accountability and appropriateness and b) prioritize non-food responses to prevent/control disaster-related malnutrition, morbidity and mortality, c) commit to livelihoods-based specific responses, d) recognize that long-term engagement is essential for actually achieving recovery.

USAID should be encouraged as much as possible to support local purchases of grain, especially in years of good harvest, in order to prevent food insecurity that is directly related to weak internal prices for main crops. In addition seed supplies should also focus on enhancing household horticultural production and not just focus on cereal crops.

USAID should engage in new partnerships including local NGOs, government bodies, civil society (including mosques and churches) and the private sector. Where possible, direct funding to these organizations should be pursued.

Independent monitoring of funded programs is needed (especially in pastoral areas) to determine if funded partners are able to implement the agreements they have already signed from USAID and other donors. USAID should discourage the establishment of additional early warning systems.

Support should be given to increase the base of knowledge about risk and vulnerability in Ethiopia. Ethiopian research institutions should be actively sought out to participate in the planning of

intervention strategies. In addition, Ethiopian research experts should be deployed to identify causes of current problem areas and sectors, e.g. the current crisis in SNNPR.

Lastly, USAID should encourage the formation of a forum of key government, donor, UN and NGO actors with a specific mandate to analyzing and devising strategies specifically oriented towards promoting the recovery of populations affected by the current crisis.

SECTION ONE: INTRODUCTION

Risk and Vulnerabilities in Ethiopia: Historical Perspectives

Drought, famine and related disasters have been a recurring feature of Ethiopian history and indeed the history of the Horn of Africa. They have shaped community risk management strategies and have influenced the nature and history of its political regimes. These crises contributed to the end of the Imperial era, formed the justification behind the policies of the Socialist regime, and they now constrain and challenge the achievements of the current government.

Historical accounts dating from the medieval period and the better documented accounts from 16th and the 17th centuries suggest that famine in Ethiopia has been the frequent outcome of natural and socio-economic factors. Pankhurst states that the natural causes of famine included "drought, locusts, caterpillars and in the case of The Great Famine of 1889-1892, rinderpest." Socio-economic factors leading to famine included "deforestation, soil erosion and exhaustion, fragmentation of land holdings, the subsistence economy with its primitive agricultural tools and inadequate grain storage, in-egalitarian systems of land tenure, arbitrary taxation and other dues, (and) civil wars" (Pankhurst, 1984).

While drought is commonly regarded as the main cause of famine, plagues and pests have been equally as important historically, causing various catastrophes, particularly in the northern parts of the country (Tigray, Gondar, Gojam, Wollo and Shoa). In the 17th and 18th centuries alone, locusts caused the famines of 1625-27 1706, 1747,and 1748 and at various times during the reign of Emperor Fasilidas (1632-1667). Epidemics such as *fangle* (cholera), *qachne*, *lablab* (influenza), small pox and other unspecified illness are recorded as causing the famines of 1634-5, 1683, 1685, 1693 and 1700-01 (Pankhurst, 1984). Other medical disasters have occurred in the nineteenth and twentieth centuries.

In 1876, for example, 25% of the population of Tigray was killed by an outbreak of typhus (Pankhurst, 1990.) Influenza epidemics have constantly ravaged Addis Ababa. The worst was in 1918 when one fifth of the population of Addis Ababa died of the disease (Kersala, 1997) Meningitis epidemics also have been recorded frequently specifically during and after drought periods. The drought years 1977, 1981-1983, 1988-1989 coincided with recorded widespread meningitis outbreaks. Similarly, malaria outbreaks and their incidence appear to coincide with the first rains after dry periods. Though there is no recorded history about malaria epidemics, malaria would appear as of 1958 to be a major public health threat in Ethiopia. Three quarters of the country is infected by malaria with reports of increasing prevalence into non-endemic zones (Kersala, 1997, McCann, forthcoming).

Measles is a major threat to children (specifically as the immunization coverage in Ethiopia is as low as 3%) and has been identified in association with drought, refugee, and major population displacement crises in Ethiopia and elsewhere (Shears et al., 1987, Toole and Waldman, 1990, Salama et al., 2001, Toole and Waldman, 1997) The latest public health threat with historical roots

to the 1980s is the HIV/AIDS epidemic. The study of its relationship to acute food insecurity and crisis situations is still in its infancy (DeWaal, 2003.)

Accounts and records left by contemporary palace chroniclers, clergies, residents (including missionaries) and traveling foreigners reflect that disasters such as famines and plagues have often been believed to be punishments from God for failing the true faith. The Great Ethiopian Famine in the early 19th century (1888-1892) was attributed to man, not God (Hussein, 1976). For example, following the annihilation of the Italian forces on January 1887 at Dogali, the Italians sent another expedition led by General San Marzo. Marzo landed at Massawa in November 1887, bringing 800 horses and 1,000 mules specially shipped from Naples. Ethiopian traditions blame this expedition for the introduction of the lethal cattle disease rinderpest (Pankhurst, 1984).

The rinderpest-induced famine was likely the most catastrophic the country had experienced to date. The epidemic started in the north (Hamassien) where, according to Aleka Lemma,

> all the cattle in the province were paralyzed, refused to graze, and died within three days…The epidemic swept across all the northern provinces, traveling by way of Wollo, Begemder and Lasta to Gojam reaching Shoa in four months time from Wollo." Livestock mortality reached immense proportions, according to Capucci (an eye-witness at the time) who wrote that "90% of the cattle of Ethiopia perished.

Skinner, the first US Government Envoy to Ethiopia, recorded that "not more than seven or eight percent of the livestock were spared" (Pankhurst, 1984). Even Emperor Menelik lost approximately 250,000 head of cattle "while some of the richer farmers each lost as many as 10,000 - 12,000 head." Further large-scale livestock mortalities followed in Harar, Keffa, Arsi and Somali, the disease extending as far south as Ganali beyond the Ethiopian border (Pankhurst, 1984).[1]

Households were left with no livestock in a space of few days. "Oxen and cows died all over the country, in every compound, meadow, field, and wood, and were consumed by vultures, ravens, hyenas and foxes," according to the Ethiopian writer, Afewerk Gebreyesus (Gebreyesus, 1903). Ploughing came to a halt since no plough oxen were left. The famine was further complicated by a shortage of rain (in 1888 in Begemder, Tigray and Shoa) and an influx of locusts and caterpillars in 1889. Prices of grain and plough oxen escalated dramatically due to widespread shortages, especially of cereals. According to Mashakov the price of wheat soared from 1 Maria Theresa (MT) in 1889 to 133 MT in 1890 for 200 *qunna*; barley from 1 MT in 1889 to 160 MT in 1890 for 400 *qunna*; plough oxen from 2.4 MT per head in 1889 to 60-80 MT in 1890; cattle from 1 ½ MT in 1889 per head to 30-60 per head in 1990 (Pankhurst, 1984). Drought and disease also have influenced changes in other pastoralist communities, such as the Mursi and Turkana.

[1] Almost a hundred years later a Pan-African rinderpest campaign was initiated through the African Union – Inter African Bureau for Animal Resources (AU-IBAR). This campaign has been regarded as successful. Work is on-going in Sudan and Somalia to declare the continent free from the disease.

Historical Trends in Pastoral Areas

Records of the rinderpest plague's impact on pastoral areas are incomplete. The northeastern pastoral areas of Ethiopia lie along the natural migratory route for locusts but such catastrophes as plagues, pests and famines were not recorded in the same level of detail as in the highlands. This was due to the inaccessibility of pastoral areas, fluid boundaries that contracted and expanded over time (with shifting allegiances) and, more importantly, to the concentration of the types of chroniclers who left famine records (diaries, letters, reports), most of whom were found in and around settled areas. The historical famines that have swept through Ethiopia's pastoral communities have remained hidden, a trend that arguably continues today.

Nevertheless, the few records written on the impact of rinderpest in pastoral areas (summarized by Pankhurst 1984) state that in the northwest, the nomadic Mansa Bet tribe was "reduced to great distress" and that the "whole Beni Amir country suffered". Towards the coast, "a vast number of cattle also perished in the Danakil desert," and "almost all the cattle around the trading center of Harar died at this time." To the south, "a large (herd) of cattle belonging to the Sultan of the great Somali trading center of Lugh was decimated." The "enormous areas of bleached bones of cattle" were apparent in the Juba area around 1892. Gidu Somalis were "reduced to poverty by the epidemic which had resulted in almost complete mortality." The intensity of the epidemic also was apparent to travelers at the time who reported that it decimated large numbers of wild animals (principally buffaloes and certain types of antelopes). Drought and crises also have influenced changes in other pastoralist communities, such as the Mursi and Turkana (Turton, 1984, Turton, 1985, Sobania, 1980, Johnson and Anderson, 1988).

Recent Droughts in Pastoral Areas

Close to 60% of the land area in Ethiopia is pastoral. Pastoral communities constitute some of the most vulnerable communities in Ethiopia. The three major pastoralist communities are the Somali (comprising slightly more than 50% of the total pastoral population), Afar (30% of the pastoral population) and the Oromos (10% of the pastoral population). Of the latter, the Borans of southern Ethiopia are the predominant group, followed by Bale pastoralists and the Kereyus. The other pastoralists include the Merille and the Nyamatong cluster (also called the South Omo group) of south-western Ethiopia (7% of the pastoral population), the Gambella (Anuak) and Benishangul, each making about 1% of the total pastoral population.

Ethiopia's rangelands carry approximately 28% of the cattle, 60% of the goats, 26% of the sheep and 100% of the camels in the country (Yemane, 2000). Within these, the three major pastoral groups own 95% of the cattle and sheep, 92% of the goats, and almost 100% of the camel population (Sandford and Habtu, 2000). This predominant position (e.g., in terms of economic importance, population number and land mass – including strategic locations) has enabled the three major pastoral areas to attract more government attention (including allocation of resources), donor investment and NGO interventions than other pastoral groups in Ethiopia.[2] The Somali and Afar areas each constitute regions, making them the predominantly pastoral regional states in Ethiopia.

[2] Former large-scale government and bilateral projects in these areas include the Point Four Programs and SORDU in Borana, JERDU and SERP in Somali and NERDU in Afar State.

The very production mode of pastoralism, which employs mobility as a key strategy for raising livestock, reflects that pastoral areas are prone to periodic and unexpected climatic shocks, perhaps more than sedentary farmers. Livestock dynamics in pastoral areas (especially in Afar and Somali) follow "boom and bust" patterns. The livestock population collapses following droughts but then revives within a few good years.[3] Approximation of the livestock population in pastoral areas therefore is subject to sudden and considerable variation, depending on the intensity and duration of droughts and rainfall. Logistical, administrative and "conceptual barriers"[4] between pastoralists and those who undertake census of livestock populations further limit good approximations. While understanding these limitations, Sandford and Habtu (2000) have, in their own words, "dared to guess" the pastoral livestock population (for mid-1999) as per Table 2.

Table 1. Livestock Populations in Pastoral Areas of Ethiopia (Mid-1999)

Region	Cattle	Sheep	Goats	Equines	Camels
Afar	3,600,000	2,000,000	3,000,000	200,000	900,000
Oromiya (Borana)	1,400,000	1,000,000	500,000	60,000	530,000
Other Oromiya	100,000	200,000	300,000	20,000	10,000
Somali[5]	5,200,000	6,600,000	3,300,000	360,000	1,100,000
SNNPR	450,000	340,000	500,000	40,000	{1,000
Benishangul Gambela	100,000	100,000	100,000	20,000	---
Total	10,850,000	10,240,000	7,700,000	700,000	2,540,000

Source: (Sandford and Habtu, 2000)

The Pastoral Extension Unit of the Ministry of Agriculture estimated the pastoral population of Ethiopia at 5.1 million in 1994 occupying 60% of the land. (This suggests that the non-pastoral population of Ethiopia—60 million—lives on 40% of the land). Sandford and Haptu (2000) further split the 1994 estimate into 3.4 million pastoralists and 1.7 million non-pastoralists.[6]

The first external aid to pastoralists did not take place until 1973 during The Wollo Famine.[7] Assistance included food aid and livestock restocking to Afar pastoralists through the Livestock and Meat Board with funding from OXFAM and Christian Aid. A German NGO, Malteser, also established a clinic to provide human health services, a school and an irrigated farm at Chifra,

[3] Academics disagree about the exact number of years it takes to revive livestock herd numbers following disaster-induced collapses.

[4] For example, pastoralists do not like to count their animals to strangers. In some cases, they may even not know it though they know the individual animals. Enumerators may not have the methodology to overcome such problems.

[5] There are sizeable differences between Sandford and Haptu and the Somali Regional Bureau of Agriculture's estimates of the livestock population of the region. The latter estimates the regional livestock population at 3,746,000 head of cattle, 9,053,000 sheep, 8,547,200 goats, 213,000 equines and 2,032,000 camels.

[6] To arrive at these figures Sandford and Haptu have manipulated the DPPC's estimates of the needy population in pastoral areas during the 2000 drought based on the 1994 population census. This figure should be treated with caution

[7] Available records do not show if pastoral areas received external food aid prior to this period, though there are possibilities that pastoral areas could have received some kind of disaster-related assistance. USAID records show that emergency food aid contributions to Ethiopia date back until at least 1965 but it does not appear that pastoralists benefited from these earlier interventions.

Afar.[8] Perhaps some form of foreign food assistance reached the (current) Somali Region in 1973-74 via the (then) RRC. The RRC began tankering water right after its formation in the early 1970s. Since then, additional major droughts have occurred in 1984-6, 1989-91, 1999/2000 in addition to the present crisis. Prior to the crisis in 2002, the Afars faced severe droughts in 1982-84 and 1993-1994. In recent times, the Borans have experienced one major drought in each of the *geda*[9] cycles beginning with *Geda Jilo Aga* (1977-1984) until the current one, *Geda Liben Jelbessa* (since 2001), with major droughts taking place in 1972-74, 1984-85 and in 1999-2000 (Kebebew et al., 2001).

The above data indicate that major droughts take place in pastoral areas every five to ten years. However, there are other 'medium' and 'mild' disasters that occur (either in the whole eco-system or in pocket areas) between major droughts either as a result of drought or some other calamity. The definition of drought and in particular the terms used to depict 'mild, medium, major or acute' crises are subject to the perception of the individual pastoralist depending on the numbers of livestock owned (and related capacity) to cope with the particular drought. This is well within keeping with the broader understanding of the definition of "disaster," i.e., when a crisis overcomes the capacity of a community to cope with it (Lautze and Hammock, 1997).

A 2001 survey undertaken by Hararghe Catholic Secretariat (HCS) and Alemaya University in Shinille Zone, Somali Region reveals significant variations among pastoralists regarding their perceptions about the frequency of drought. These variations were observed both across districts (within the zone) and within districts (now woredas) (HCS, 2001). Taking the Shinille Zone, the findings of this survey indicated that:

- 30.4% of the respondents agree that drought occurs every year;
- 21.7% agree that drought occurs every two years;
- 23.9% agree that drought occurs every three years;
- 17.4% agree that drought occurs every four years; and
- 6.5% agree that drought occurs every five years or above.

Despite some evidence that pastoral areas are both warmer and drier than in the past (Blench, 1998), the question is whether the recurrence of droughts truly has increased in the last few decades. One could also ask if outsiders, especially those working in humanitarian assistance, have become increasingly exposed to the recurring disasters as a result of their proximity and media coverage. Other factors also have contributed to bringing more attention to disaster-affected pastoralist communities and, by implication for increasing the perception that disasters are recurring more frequently in the last few decades. These may include:

- greatly improved information flows to government agencies, donors, the UN and NGOs;
- the will of the international community to help;
- relatively better accessibility to transport relief commodities;
- the proliferation of aid/charity agencies and
- community ability to manipulate and attract relief resources.

[8] Some of those who attended this school currently play a prominent role as regional officials and MPs in the Regional and the Federal government.
[9] A *geda* is an 8-year traditional age grade cycle.

This can give the appearance that disasters are occurring with increasing frequency. This is not to imply that recent disasters (fuelled by the ever-increasing aggravating factors such as population pressure, environmental degradation, increasing social upheavals, and access to automatic weapons) are not more complex or important than past crises. At question is if the frequency of droughts has increased.

Studies in Borana indicate that the pattern since 1980 appears to be a herd crash every six to eight years. M. Abdi (2001) reported that elders in Shinille Zone, state that there were six major droughts between 1951 and 2000 (i.e. one major drought every eight years on average). Unfortunately, no other studies are available on oral chronologies of droughts for longer periods for the pastoral areas of Ethiopia.

All communities (whether pastoralist agro-pastoralist, farmers or horticulturalists) possess narratives (e.g., stories, discourses, texts, etc.) about the history of climatic and other disasters that their communities have experienced. These are contained in written as well as oral traditions and are memorized as part of the norms and values that inform risk management and coping systems. For example a study completed by Pratt (2001) reviewed a chronology of major events for the pastoralists of northeast Kenya through exploring oral histories. These crises have been occurring more frequently over the last 100 years than one might think as shown in the following table.

Table 2. Recurrence of disasters in the Northeastern Communities of Kenya (1897 – 2000)

Clan	Year	No of Disasters	Average Recurrence of Disasters	Causes of disasters
Corner tribes	1927-1955	4	**7 years**	3 droughts; 1 heavy flood
	1956-1999	10	**4.5 years**	7 droughts and 3 unusually heavy rains resulting in flooding
Gurre	1899-1950	19	**2.6 years**	8 clan wars; 3 floods; 3 droughts; 1 yellow fever outbreak; 1 small pox outbreak; 3 cases of harassments by the authorities resulting in forced migration
	1951-2001	14	**3.5 years**	10 droughts; 1 outbreak of tick borne disease; 1 harassment by authorities; 1 clan war; 1 flood
Muralle	1921-1950	8	**3.5 years**	4 droughts; 3 floods; 1 war between the Italians and the British
	1951-2001	25	**2 years**	14 droughts; 3 heavy rains (El Nino in 1997) resulting in livestock disease and mortality; 3 clan wars; 3 cattle disease outbreaks and 2 harassments by the authorities
Ogaden	1912-1950	15	**2.5 years**	13 droughts; 1 Rinderpest outbreak; 1 cross-border movement control by the colonial authorities resulting in cattle mortality.[10]
	1951-2000	9	**5.5 years**	7 droughts; 2 cholera outbreaks
Adjuran	1897-1950	3	**16.5 years**	3 droughts
	1951-2000	7	**7 years**	5 droughts; 2 heavy floods

Source:(Pratt, 2001)

[10] Tea was introduced for the first time during this period (in 1924) and was taken for survival instead of milk.

Table 3, above, indicates that the recurrence of disasters has increased in the latter half of the century for Corner, Adjuran and Muralle communities while it has decreased for Gurre and Ogaden communities. It should be noted that some events in the first half of the century may have been forgotten due to memory lapse. In addition, some communities may perceive disasters only in terms of droughts while others listed all natural and socio-political causes. In either case, disasters, through whatever causes, have been a constant feature of pastoral life. It can be argued that crises in pastoral areas have been recurring more or less at the same rate throughout the 20th century.

Pratt's study is of significance as the pastoralists of northeast Kenya share a similar eco-system, culture, language, and ethnicity with pastoralists in southeastern and southern Ethiopia. One could assume that similar information and local traditions exist among these communities. This could well be taken into consideration in the design of early warning systems for these areas.

Over the past decade, the size of the vulnerable pastoralist populations generally has been disproportionately higher than other populations in need. The proportion of pastoralists in need of food aid generally varied from 10% to 22% between 1991 and 1999 but also peaked at 40% in 1997 and 1999. Vulnerable populations in the Somali Region reached close to 20% (expressed as a percentage of the total vulnerable population in Ethiopia) in 1992, 1997 and 1999[11]. Pastoral population in need ranged from 350,000 to 2,260,000 people annually, requiring food aid tonnages that ranged from 18,000 to 210,000 MT. On average, pastoralists have required 90 kgs of grain per person per year (equivalent to a six month ration). Requirements range from 30 kgs per person in South Omo in 1999 to 200 kgs per person in Bale and Borana in 1998 (Sandford and Habtu, 2000). Particularly in Somali Region, there has been an upward trend over time in the numbers of pastoralists who are identified as in need and the total amount of food aid required.

The Current Crisis: Summary of Joint Government UN Appeals

The year 2002/2003 is characterized by one of the most widespread and severe emergencies ever to strike Ethiopia. Of particular note is its geographic spread, especially to traditionally non-food deficit areas of SNNPR, Arsi, Oromiya and East Gojam in Amhara. The current crisis arrived on the heels of the 1999/2000 drought, so many affected households, communities and regions did not have sufficient respite for recovery before the current crisis intensified.

Assessment of the 2002 *Belg* Production – June/July 2002

The DPPC's June/July 2002 assessment of the *belg* harvest and the impact of the *gu* rains in the pastoral areas indicated serious food shortages in several parts of the country. These included parts of south Tigray, Oromiya (especially the lowlands of east Shoa, the Fentale area, East and West Hararghe, and Bale) and the Southern Nations, Nationalities and Peoples' Region (most notably Sidama, Hadiya, Kembata and Timbaro zones and the Alaba special woreda). Also identified were the northern areas of Somali (where the onset of the rain was late, it cessation early and the distribution poor) and Afar, where the February-May rains had completely failed. In Amhara

[11] The Somalis constitute close to 50% of the total pastoral population in Ethiopia.

region, the onset of the rain was favorable but as of April, the situation had deteriorated. Several areas did not receive rain as expected while select others experienced serious frost damage.

The poor rain caused failure of both the *belg* and non-*belg* long maturing crops planted in many areas. A brief summary of each of the region follows.

- In **Tigray**, belg crops are important in the southern areas of the region. The crops planted in Alamaata, Mehoni and Rayana Azebo Woredas had completely failed. Wajirat woreda reported extensive production losses.
- In **Amhara**, late plantation in several areas coupled with poor rains in April severely damaged crops. The woredas most seriously affected included Mekedela, Kutaber, Tenta and Ambassel in South Wollo. Frost damage and disease were also reported in most areas of North Wollo. The failure of the April/May rain had seriously affected long cycle crops that had been planted in May, e.g., sorghum, maize and a special variety of barley (*ginbote*). Areas seriously affected included Gishe Rabel in North Shoa.
- In **Oromiya** the assessment indicated that maize and sorghum planted in most low land areas of East and West Hararghe as well as Bale has completely failed. The performance of both crops in the rest of the region was also reported to be poor.
- In **SNNPR** the failure of the Belg rains at a critical stage of crop growth coupled with hailstorm in some areas had caused widespread damage to crops, particularly maize and beans. Areas affected included the lowland areas of Wolayta, Gomo Goffa, Kembata Timbaro, Sidama, Konso, Amaro and Alaba special woredas.

Livestock Condition

In **Afar**, the February-May rains had completely failed in most areas. The rainfall preceding this season was also poor. Serious shortages of water and pasture affected Abala, Berhale, Erebeiti, Koneba and Dalol woredas of Afar's Zone Two, Amibara, Buremedito and Awash Fentale woredas of Zone Three, and Fursi, Artuma and Semurobi woredas of Zone five. This led to extensive livestock deaths in Zones Two and Three such as the Halidege grazing area in Amibara woreda. In addition to the water and pasture shortages, serious livestock disease was also reported in zones three and four.

In the pastoral areas of **Oromiya**, the drought in Fentale woreda, the lowlands of Bale and in East and West Hararghe caused considerable livestock death and unusual migration in search of water and pasture.

In **Somali**, serious shortages of rain were reported in Shinille zone, including Meisso, Afdem, East Danbel and Shinille woredas, many which border the equally affected areas of Fentale in Oromiya and Afar. Similar problems were reported in Fik, Deghabour and Jijiga zones. Livestock were seriously affected in Shinille, Fik and parts of Jijiga.

The Food Situation and Joint Government UN Appeals – August 2002

The DPPC launched its appeal in January 2002 and estimated that relief needs would peak in July 2002 at 3.6 million people. The estimate of cereal relief for the period from July – December 2002

was 187,629 MT. This was based on a ration of 500 grams/person/day; no requests for pulses or oil were included in the January appeal.

By August, the DPPC revised its appeal. The January appeal was based on the assumption that the relief needs would decline as of July because it was hoped that many of the pastoralists, including those in Afar and Somali, would become self-supporting following the March – May rains. Despite early and positive projections, the rain failure in many parts of the pastoral areas and the failure of the *belg* crops (with significant damage to long-cycle crops, particularly in the eastern and southern lowlands) deprived the affected populations of access to food during a critical period of the year. The poor livestock condition in Afar and the neighboring pastoral areas of Oromiya and Somali severely curtailed the supply of milk; the impact on the population, particularly on children, was serious. Poor livestock conditions and increased distress sales combined to depress returns to pastoralists at a time when prices of grain increased considerably, making them unaffordable to many. Based on these developments, the DPPC estimated that the number of people needing immediate assistance would peak at a maximum of 5.7 million people by August 2002.

The relief requirement during July – December 2002 was re-calculated to total 364,635 MT. This was higher than the projection made for this period in January by 177,006 MT. The appeal in August 2002 called only for cereals, calculated at 500grams/person/day; again, no request for pulses, oil or supplementary food was made.

Assessment of the 2003 Meher Harvest – January 2003 and Assistance Requirements

Poor *belg* rains and associated poor agricultural performance was compounded by the delay of the main (*kiremt*) rain by a period of one and one-half months, aggravating the effects of the drought. Because the rains did not extend past their normal cessation date, some areas had less than one month growing season.

The November multi-agency pre-harvest assessment conducted by over 20 teams in 53 zones confirmed that the lowland areas in the north, east, south and central parts of the country were severely affected. Some midland areas were also badly affected, where long-cycle crops withered with the extended dry period between mid-April and the end of July. Maize and sorghum production failure was estimated between 70% and 100% in some lowland areas. Some surplus producing parts of the country had been adversely affected, negatively impacting the overall national food availability. The Central Statistics Authority estimated that production was 25.8% down compared to the previous year while FAO noted that production was off 25% from the 2001-2002 season and 21% from 5-year average.

Pastoral areas were also affected, especially Afar and the Shinille and Jijiga Zones in Somali Region, which experienced their lowest rainfall for five years for both rainy seasons (*gu* and *kerma*). As a result, many traditional hand dug wells and seasonal rivers dried up, leading to water shortages for both human and livestock population and shortages of pasture (as in lowland cropping areas). In mid 2002 livestock mortality increased, while remaining herds were left in poor physical condition. While water tankering continued in pastoral areas, water rationing was initiated in the lowlands of West Hararghe. The results of the multi-agency pastoral area assessment conducted in

Somali, Borana and South Omo confirmed that South Omo and most parts of Borana were self-sufficient in food.

In general, the food security situation both in the cropping and pastoral areas was poor. For the affected populations, recourses to market were limited because of weak purchasing power, cereal price hikes, and falling livestock prices. Households were expected to be able to cover only one to two months of food requirements from own sources in the northeastern escarpment of Amhara and Tigray, the lowland Rift Valley in SNNPR, East and West Hararghe of Oromiya, and the lowland pastoral and agro-pastoral regions of Afar, Oromiya and northern Somali. As a result, estimates of vulnerable populations were estimated to increase sharply starting January 2003.

The multi-agency pre harvest assessment teams concluded that a total of 11.3 million people would require food aid beginning January 2003, while an additional 3.1 million people were categorized as needing "close monitoring". In total, 14.5 million people were affected by the drought, representing about 21% of the total population.

Relief requirements in January 2003 were estimated to total 1,461,679 MT, including 1,329,344 MT of cereals, 128,070 MT of blended food and 12,000 MT of oil.

Relief Needs Updated, April 2003

At the request of 80 woredas of Amhara, Oromiya, SNNPR and Tigray Regions for additional food assistance, the DPPC led a multi-agency reassessment of emergency food aid needs in April 2003. A special Early Warning Report was issued by the DPPC on April 24, 2003. The reassessment of the food security status of the affected population, carried out by eight multi-agency teams in Tigray, Amhara, Oromiya and SNNPR, reported deterioration in the food security situation as manifested by, among other indicators, increased levels of distress migration in search of food and labor; dilution of rations at household level; and, increases in truancy.

Further upward revisions in the estimated population in need of food aid were made in April, 2003 of 1.2 million people, for a total population in need of 12.6 million, a food requirement of 1.54 million MT, and 80 million USD in non-food assistance.

Non-Food Assistance Requirements

A joint UN/Government Appeal was launched on December 7, 2002 and included a request for $75 million for non-food sectors (Agriculture and Livestock, Health and Nutrition, Water Supply and Environmental Sanitation, Emergency Education, Gender and Child Protection, Capacity Building, and Emergency Coordination). This appeal was later updated and increased in March, 2003. Of the total $81,110,808 requested, $29,585,441 was pledged leaving a shortfall of $51,525,367 as of March 18, 2003 (UN Country Team Ethiopia, 2003). Substantial non-food aid commitments have since been pledged, e.g. over $11 million from USAID/DCHA/OFDA since April, 2003.

Table 3. Summary of the Non-Food Appeal

SECTOR	AMOUNT APPEALED FOR IN $
Water	20,000,000
Health and Nutrition	28,800,000
Agriculture / Livestock	18,000,000
Capacity Building	5,600,000
Others	7,700,000
Total	81,100,000

Agriculture and Livestock

Funding priorities were based on MoA contingency plans (written together with FAO). The requirements were listed as $1,074,300 for emergency seed supplies to Tigray, Oromiya, Afar, Somali, Dire Dawa and SNNPR regions; $593,000 for animal health provisions in Oromiya, Somali, Tigray, Amhara, SNNPR and Dire Dawa regions; $1,200,000 for forage seed distribution and establishment of fodder banks primarily in Tigray and Afar regions. A further $150,000 was requested for the coordination of the above activities by FAO.

Health and Nutrition

The Ministry of Health (together with UNICEF and WHO) is the lead agency for assessment and implementation of health and nutrition. The request for these activities totaled $28,877,033. Major activities included the provision of emergency health kits ($7,646503), implementation of measles/vitamin A campaigns ($14,342,498), preparation for meningitis outbreak ($1,446,980), malaria prevention and control ($1,400,000), supplementary and therapeutic food ($1,500,000), and training of health workers in surveillance and social mobilization including HIV/AIDS ($899,000). An addition, $1,260,000 was requested for technical and project support costs.

Water Supply and Environmental Sanitation

The key implementing agencies responsible for the assessment and design of emergency water supply and environmental sanitation programs are the Ministry of Water Resources (MoWR) and UNICEF with some inputs from WHO. The total requirements were listed as $20,095,045. This covered $2,431,800 for water tankering, $5,998,710 for maintenance and rehabilitation of existing water schemes, $1,621,200 for capacity building and community mobilization, $4,377,380 for new water schemes, $1,783,600 for sanitation and hygiene education, and $1 million for water quality assessment and improvement. Requests for project support expenses totaled $363,000 at the federal level and $2,519,355 at the project level.

Emergency Education Intervention

$1,702,000 was requested for emergency education activities by the MoE, Regional Bureaus of Education and UNICEF. The program targeted 200,000 pupils in six drought-affected areas. Activities include training of teachers, provision of educational materials and school furniture, and support for temporary learning centers at food distribution points.

Gender and Child Protection

$1,111,997 was requested by UNICEF for seven regions to cover activities such as registration and reunification of orphans and abandoned children, strengthening the monitoring and protection of children, provision of psycho-social counseling, and income generating activities for children and women in drought affected areas.

Capacity Building

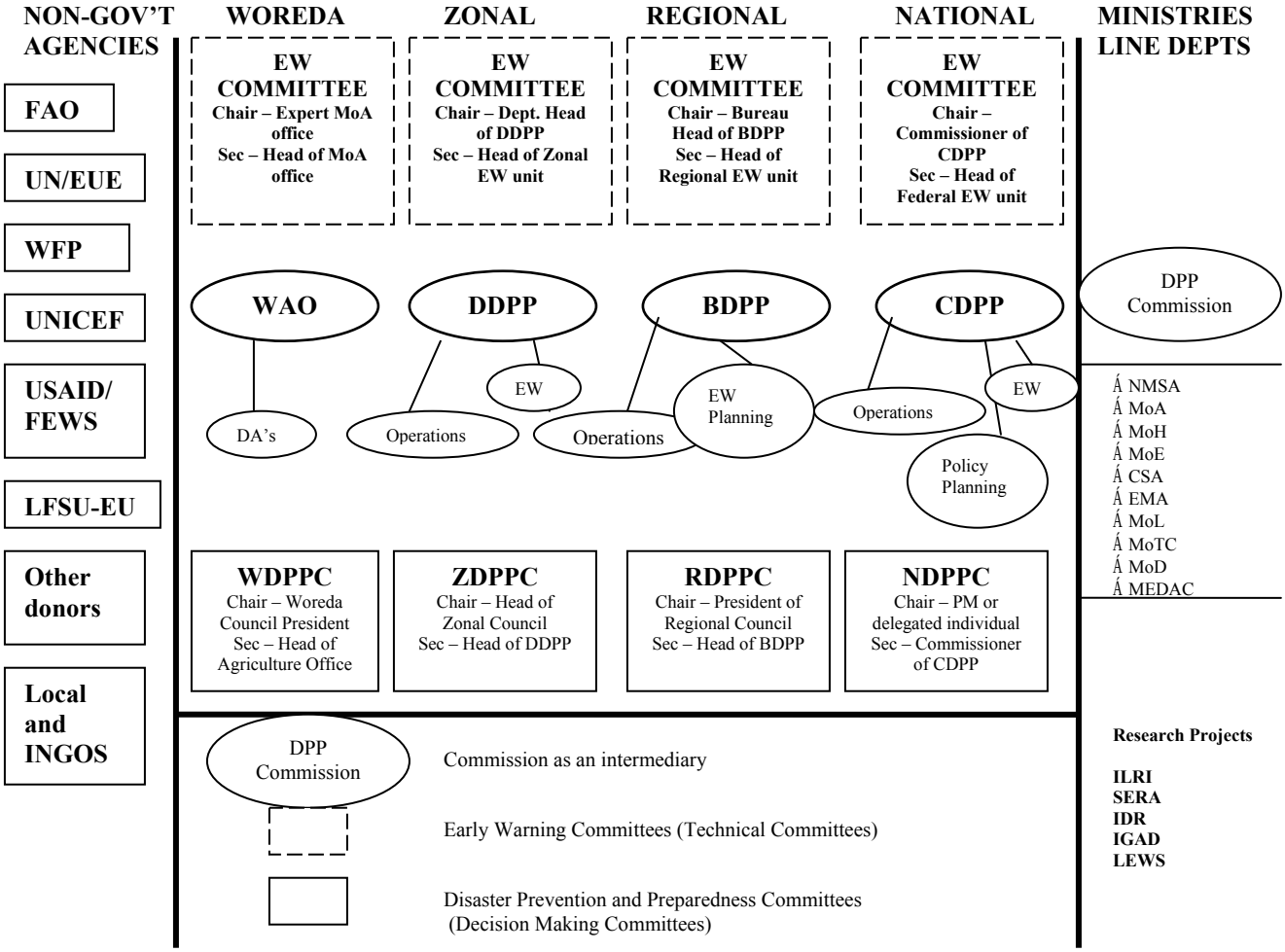
Capacity building of government for disaster preparedness and response was identified as a key sector and a total of $5,556,668 was requested to support this program. Activities under this include: support to Emergency Nutrition Coordination Unit (ENCU); provision and improvement of communication and logistics; procurement and provision of warehouses for relief food; improvement of the DPPC emergency information center; provision of updated communication technologies and training on food aid targeting.

SECTION TWO: EARLY WARNING SYSTEMS

All Ethiopian citizens have a right to aid in times of crisis. As elaborated in a range of policies, it is the obligation and duty of government officials to respond (DPPC, 1998, DPPC, 1995), while additional global commitments have been made by the world community (IDS, 1996). Information systems are critical for ensuring that government is able to uphold its responsibilities to the citizenry in an accountable fashion. However, research indicates that the relationship between policy, information and action is not as direct in practice as it is in theory (Apthorpe and Gaspar, 1996, Brown A., 1995, Gardner K. and Lewis, 1996, Hendrie, 1997a).

In Ethiopia, there is an abundance of institutions engaged in disaster early warning, baseline information and food security surveillance activities. Judith Sanford's recent *Review of Assessments Currently Undertaken in Ethiopia* (Sandford, 2002) includes 33 different types of assessments throughout the country. The management of early warning entails an impressive array of government, donor, UN and NGO bodies, as per Figure 1.

Figure 1. Early Warning Decision Making Structures



Source: adapted from (Chapman and Desta, 1998)

The team considered sixteen different systems, as per Table 4.

Table 4. Early Warning, Surveillance and Baseline Information Systems, Home Institutions, Dates of Operation, Frequency of Data Collection, and Geographic Coverage

Name of System	Institution	Dates	Frequency	Geographic Coverage
Early Warning System (EWS)	DPPC	1976 - present	Monthly & Seasonal	National, except urban areas
Strengthening Emergency Response Abilities (SERA)	DPPC	1996 - present	Once-off	Four woredas in each of four regions (Amhara, Tigray, Oromiya, SNNPR), with plans to extend to 64 woredas
Emergency Nutrition Coordination Unit (ENCU)	DPPC	2000 - present	Periodic	Select woredas, based on a sample size of 30x30 clusters
Livestock Early Warning System (LEWS)	EARO	In pilot phase	Monthly	4 woredas in Oromiya, with plans to expand Afar (LEWS also operates in Kenya, Tanzania and Uganda)
Welfare Monitoring Unit (WMU)	MoFED	1996 – present	Every 3 – 5 years	National, but does not cover all pastoral areas
Meteorological Services	NMSA	å 1950 - present	Daily & decadal	National, but stations are located in select woredas.
Famine Early Warning System (FEWS-NET)	USAID	1992 - present	Monthly	National, but limited in pastoral areas
Vulnerability Assessment Mapping (VAM)	WFP	1995 - present	Annual	All crop-dependent areas and some pastoral areas; urban areas are excluded
Crop and Food Needs Assessment	FAO/ WFP	1998- present	Biannually	National, but some areas are not covered by assessments
Global Information and Early Warning System (GIEWS)	FAO			National, but selection only cover sample woredas
Assessment Reports	UN-EUE	1985 – present	Periodic	All regions, with emphasis on covering problem areas
Nutritional Surveillance Program	SC-UK	1978 – 1998	Quarterly	Variable, but usually: 27 woredas in Tigray; 34 woredas in Amhara; 22 woredas in Oromiya
Food Security Monitoring and Early Warning System in SNRS	SC-UK	2000 - present	Monthly	Somali National Regional State
Household Food Economy Analysis	SC-UK	1998 - present	Quarterly	13 Food Economy Zones in Amhara Region and 8 Food Economy Zones in SNRS
Food Information Systems (CEFIS); Since 2003, Community Based Risk Management	CARE	1992 – 2002; 2003 - present	Monthly	Cropping woredas (9 in E/W Haraghe; 2 in South Gondar) and pastoral woredas (1 in E/W Haraghe) and agro-pastoral woredas (3 in Borana and 2 in Afar and East Shoa); East and West Hararghe (4 woredas) and South Gondar

Name of System	Institution	Dates	Frequency	Geographic Coverage
Monthly and Bi-Annual Assessments	World Vision	1994 – present	Monthly and biannually	32 woredas in five regions (3 in Afar, 10 in SNNPR, 7 in Oromiya, 9 in Amhara, 3 in Tigray)

The analysis of the range of early warning system raised a number of issues including:

- Early warning identified a major emergency and prompted a large-scale emergency food relief response that was very important for preventing mass migration and the subsequent formation of famine camps;
- A lack of meta-analysis of the universe of information generated by government, donor, UN and NGO early warning and surveillance systems;
- Weak links to humanitarian responses that conform to the humanitarian principles of impartiality and appropriateness;
- Overall weaknesses in non-food, livelihood and recovery early warning and surveillance systems, with particular concerns about the quality and relevance of health data;
- An over-reliance on secondary data;
- The limited geographic scope and frequent interruption in coverage of some early warning and surveillance systems;
- A focus on staple crop production;
- A wealth of data that are un(der)-analyzed;
- A focus on meeting the institutional needs of the agency managing the system, thereby limiting the scope of systems;
- Administrative-based (e.g. regional boundaries, NGO area of operations) early warning systems limit surveillance of eco-system and livelihood system vulnerabilities; and
- An absence of incorporation of traditional early warning indicators.

Government Early Warning and Surveillance System

Governmental bodies engaged in early warning, surveillance and baseline data information systems include the DPPC (ENCU, monthly monitoring, bi-annual crop and food needs assessments, and SERA), the Central Statistics Agency (agriculture, population & housing; demographics & health), , NMSA, the Welfare Monitoring Unit, and various line ministries.

DPPC

Monthly monitoring

A key focus of the DPPC's EWS is to prevent a repeat occurrence of the types of famines that struck Ethiopia in the 1970s and 1980s. Measured against this objective, the EWS is highly effective. The DPPC has developed a fairly credible EW system for crop producing areas and has predicted, on a number of occasions, disasters well in advance (e.g. 1984/85, 1992, 1994/95, 1999/2000, and 2002/2003). In recent years, including this year, its information has induced government, donor, UN and NGO humanitarian responses on an adequate scale to prevent the mass migration of vulnerable populations to famine camps, thereby avoiding the worst of the famine

images that were once synonymous with Ethiopia. In fact, many of the EW indicators of drought-related famine in use today elsewhere were initially developed and tested in Ethiopia (Walker, 1988).

The DPPC's system of monthly data collection is most established in crop-dependent areas. The system is weak in pastoral areas and in areas either not traditionally prone to famine or those historically marginalized. It does not cover urban areas because appropriate urban early warning indicators have not been developed to measure the specific nature of urban vulnerability (destitution, unemployment, poverty and other forms of chronic stress). In addition, the data collected on a monthly basis rarely influence major estimates of vulnerable populations; this is instead based on seasonal assessments. Therefore, the analysis of data collected on a monthly basis does not receive the same level of priority.

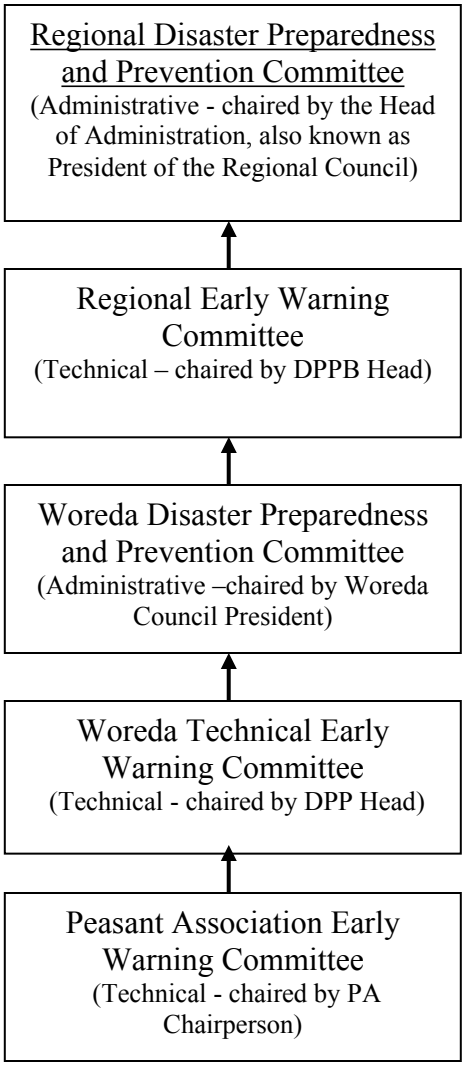
The National Early Warning Committee is chaired by the DPPC Commissioner and consists of the MoA, MoH, NMSA, CSA and EMA. The EW Department of the DPPC serves as its secretary. Early Warning Committees exist in most regions, zones and woredas. Two government officials per woreda have been (or are planned to be) trained to complete a monthly reporting format. In pastoral areas, for example, the monthly data collection form includes the following eleven indicators of production, consumption and welfare.

- Rainfall (amount, distribution, timeliness)
- Pasture and water (availability and livestock density)
- Livestock (condition, population, mortality and causes, disease types and outbreaks, measures taken)
- Human and livestock migration patterns (usual, unusual, distance)
- Crop (major crops, timing of cultural practices, deviations, crop condition, pests and diseases, measures taken)
- Food and feeds deficiency
- Other sources of income (labor, charcoal production, etc.)
- Market situation (supply and price patterns, variations and causes for all livestock species, grains, other food crops and food items)
- Coping strategies (distress migration, distress disposal of jewelry and other household items, sale of oxen, excess marketing of livestock, seeking unskilled labor, begging and crisis appeal to the authorities)
- Relief food (availability, distribution, EGS activities)
- Human health (outbreaks, persons affected, measures taken, results, mortality and causes)

To complete the monthly forms, information from Key Workers[12] at the PA level is sent to their respective sector offices at the woreda level, which is then collated by the woreda level DPP Head. Data gathered at woreda level by the EW committee is submitted to the woreda council, forwarded to the regional government through the zone, and then passed on to the Federal DPPC EW Department for analysis. This is graphically depicted (using an example from Tigray) as Figure 2.

[12] Key workers: Agriculture Development Agents (agriculture plus livestock), Home Agents, Production Cadres (farmers); Health (CHAs and TBAs)

Figure 2. Flow of information from PAs to Federal Level (Example from Tigray)



The prevailing situation in pastoral areas is (along with the situation in the rest of the country) highlighted in the monthly Ethiopian Early Warning System bulletin of the DPPC. Regional offices also have started establishing their own EW departments. Some already produce their own bulletins (e.g. the SNRS government in collaboration with SCF-UK).

The DPPC has initiated a pastoral EW system[13] by collecting baseline information from major pastoral areas and providing training for 23 woredas in Somali, 20 woredas in Afar, 3 woredas in Omo, 5 woredas in Borana and 2 woredas in Gugi. The DPPC also plans to include agro pastoral areas in Bale, Arsi, West and East Hararghe and Eastern Shoa in the near future.

[13] Following a FEWS workshop recommendation in Mombassa, Kenya (2002)

The pastoral EW group of the DPPC is a sub-group of the Federal EW Working Group. The future plan is to adapt the SCF-UK's household food economy model (currently being used in the Somali region) for all pastoral areas. The objectives of the pastoral EW system are to identify causes and magnitude of drought and epidemics, areas and population affected to determine the types and amount of assistance needed[14].

The early warning monitors and analysts face a range of challenges. Despite advances made in EW predictions, many in the profession are resigned to the fact that such predictions do not necessarily trigger responses. Donor responses, they suggest, are triggered more by a host of other factors (including the 'CNN' or 'BBC effect' or personalities in the aid business) than on the basis of advance warnings of looming crisis.

In addition, those in the business of field data collection find it difficult to obtain information on regular basis when communities are faced with protracted crisis but humanitarian aid has not been forthcoming. Conversely, there are suggestions that information coming out of some aid-dependent areas may be biased by respondents being "too familiar" with the questions. Commonly used indicators such as 'below normal' rainfall also fail to provide meaningful information since this range lies between what is normal and the total failure of rainfall. Collecting and collating EW indicators from pastoral areas is difficult because of high mobility of pastoralists,[15] security considerations (e.g. in some areas of Somali Region), inaccessibility and the complexities involved in measuring deviations – for example, dry matter weight (DM) per hectare.[16] Lastly, the focus on highland cropping areas has hampered the parallel development of EW systems for pastoral areas.

Emergency Nutrition Coordination Unit (ENCU)

The formation of the Emergency Nutrition Coordination Unit (ENCU) in late 2000 within the Early Warning Department of the DPPC was in part the result of perceived problems with nutritional surveys in 2000 including, outdated guidelines for surveys, lack of coordination of NGOs, duplication of efforts between NGOs, allocation of resources based on unreliable data (Spiegel et al., 2002). Funding for the ENCU was provided by UNICEF and WFP (original source USAID) for a period of 3 years covering 3 phases; the long-term sustainability of the unit has not yet been secured. Today, the ENCU (with the support of UNICEF) maintains a database of all nutritional surveys undertaken by NGOs, UN-Agencies and DPPC. The surveys and database are used for initiating nutritional responses including supplementary and therapeutic feeding.

The ENCU participates in a range of early warning committees, coordination meetings and seasonal assessments. It produces monthly situation reports as well as quarterly nutrition activity reports. The strength of the ENCU lies in providing a coordination center where all nutrition surveys are analyzed and reported on a regular basis to the nutrition-working group and to those who need it for decision making. It also provides a forum where issues are discussed, debated and consensus

[14] Presentation made by W/t Beletu, Pastoral EW group, DPPC, Addis Ababa

[15] Mobility makes it difficult even for nutritional surveys of short duration since a 30x30 cluster is required. Some worry that a number of nutritional surveys are carried out in IDP areas and then extrapolated to the population.

[16] The LEWS system based on using near infrared spectroscopy (NIRS) and faecal profiling technology supported by advanced grazing land and crop models may solve this problem if used on large-scale in the near future.

reached. At present, it is still highly centralized, with no presence beyond the federal level. The ENCU is a three-year project and its continuation into the future is not ensured. The DPPC's leadership in the field of nutrition has not been matched by nutrition surveillance efforts by the Ministry of Health.

Strengthening Emergency Response Abilities (SERA)

The objectives of the DPPC's SERA are to develop vulnerability profiles of selected disaster pone areas; to conduct in depth research on particular causes of vulnerability (e.g. drought, disease); and to development of response package in collaboration with various stakeholders. The project is operational in sixteen woredas in four regions. The DPPC is now planning an expansion phase that will include an additional 64 woredas over six years.

The SERA project uses three main data collection methodologies for their vulnerability profiles:

- Review of secondary data
- Rapid Rural Appraisal (RRA)
- Interviews using household questionnaires (undertaken by CSA employees)

The aim of the review of secondary data (including WMU sources) is to provide and analyze data on the setting of a woreda (both administrative and geographic) and to identify those sectors of the population that are most vulnerable. SERA has had difficulties obtaining historical literature on the pilot woredas.

RRA techniques provide knowledge about target areas and groups with a minimum investment of time and resources. The household questionnaires provide quantitative information which is representative of households and individuals within the target area. These data are housed and analyzed at the Federal DPPC's database. Vulnerability profiles are developed and disseminated to the Federal and Regional DPPC/B and relevant line ministries.

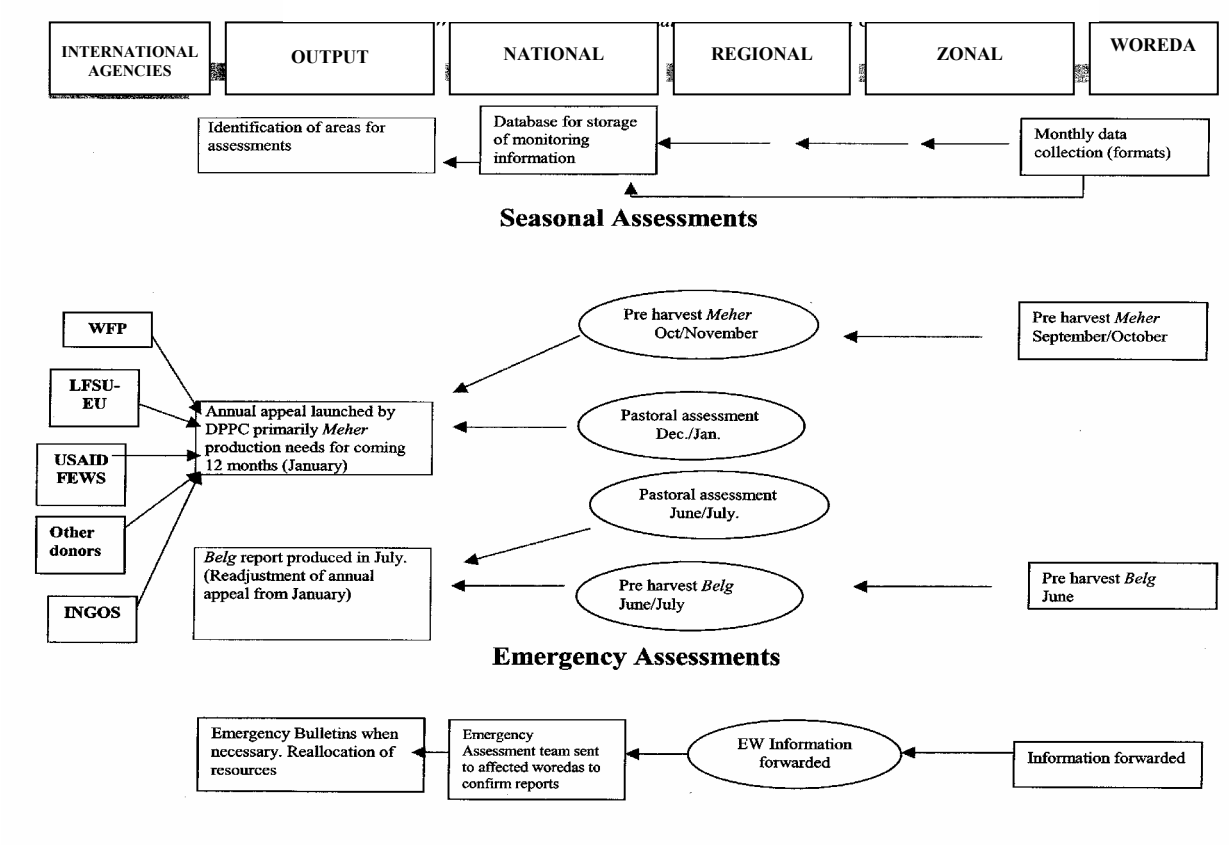
While this program is implemented by DPPC, it has worked to build collaborations with the relevant line ministries that are represented on "Vulnerability Working Groups" at federal, regional, zonal and woreda levels. In addition, data collection teams usually include representatives of zonal DPPBs, and zonal and woreda-level BoAs and BoHs.

The SERA format requires an extensive investment in data collection, and is intended to be conducted once-off. Based on the recommendation of an evaluation, the DPPC intends to reduce the number of indicators for the expansion phase. In Tigray, the Food Security Unit has expressed a commitment to updating these profiles, but concrete proposals are not yet available there or elsewhere (although there is discussion that all participating woredas should update the information, on time intervals to be determined by the zones).

Crop and Food Needs Assessments

Lastly, the DPPC takes the lead on multi-agency seasonal assessments, as per Figure 3. These exercises can be vulnerable to political influence at all levels.

Figure 3. Early Warning Data Collection and Information Flow



Source: (Chapman and Desta, 1998)

EARO - LEWS

The Livestock Early Warning System (LEWS) is currently in a pilot phase in Borana (near Yabello) with plans to hand over the system to the DPPC in the near future. LEWS is specifically designed to assess risks in pastoral areas and is intended to provide monthly projections of developing situations (Seleshi, 2003). The program combines predictive and spatial characterization technologies with a network of collection and measurement sites. The Ethiopian Agricultural Research Organization (EARO) is currently testing the system. The LEWS system is based on near infrared spectroscopy (NIRS) and faecal profiling technology, supported by advanced grazing land and crop models. Its main products are:

- spatial analysis of weather, soils, terrain conditions and human and livestock populations,
- nutritional analysis of free-ranging animals (through faecal samples)
- analysis of the impact of weather on forage supply and crop production among selected groups of households (Smith, 2001).

The focus is on accessible pastoral households that share common climatic, edaphic[17] and production system attributes throughout a give region. Once projections are made of animal performance and body condition, information is provided to livestock owners, pastoral organizations and village institutions through the World Space Radio, thereby linking biophysical models with satellite imagery (Smith, 2001). To date, LEWS has not been able to link the information generated with pre-planned responses.

National Metrological Services Agency (NMSA)

The objective of the NMSA is to provide weather forecast information for government agencies engaged in civil aviation, agricultural and weather dependent activities. The NMSA provides short-term (3 day), medium-term (10 day), monthly, and seasonal forecasts. Maps are produced along with descriptive forecasts. The forecasts of the NMSA indicate the amount of precipitation and are not designed to monitor soil moisture in the soil. Daily forecasts are disseminated by radio and television. The NMSA is reputed to provide fairly adequate forecasts that are widely used by government offices, other early warning systems, NGOs and farmers.

The NMSA is a federal agency and its coverage is national. The agency has 17 class "A" station and 45 indicator stations. Branch Offices are being established in Jimma, Mekele, Kombolcha, Semera, Assosa, Bahir Dar and Jijiga. The plan is to strengthen the branches to conduct regional forecast, as per Table 5. For now, however, metrological stations are unevenly distributed between crop and pastoral areas (the former have far more than the latter, although some cropping areas are not adequately covered), as well as within pastoral areas.[18] Existing stations in pastoral areas are far below the required number to provide the critical data required in most pastoral areas. The agency reports capacity constraints its ability to analyze all of the data it collects.

Table 5. Operational Weather Stations and Those Planned for the Next 10 Years in Pastoral Areas

Region	Currently operational stations			Additional planned in the next 10 years		
	Principal*	Ordinary	Precipitation**	Principal	Ordinary	Precipitation
Somali	3	2	2	8	13	20
Afar	5	4	5	-	3	-
South Omo	1	2	4	-	2	2
Oromo	7	3	7	-	3	2
Total	16	11	18	8	21	24

Source: NMSA
*Principal stations are equipped with communication radios
**Such stations are equipped with rain gauge only

To compensate for the critical shortage of weather data in its operational area, HCS has recently established five automatic weather stations in the Shinille zone of the Somali region. Similarly,

[17] i.e., of or relating to the soil, as opposed to the climate.
[18] It should noted that a given metrology station in a lowland area could represent a wider area (due to similarity of low-lying topography) than in highland areas. For example, a precipitation station in a lowland area can represent an area of 50-100 kms whereas a similar station in highland area represents an area of 10-30 kms.

PCAE has installed two rain gauge stations in Afder and Liben zones. The NMSA encourages NGOs to establish metrological stations where possible.

Ministry of Agriculture

The Ministry collects data on crop production by using such indicators as land preparation, timing of planting, seed availability, germination rate, dry planting, area coverage, market prices, etc. Prior to the federal government's program of decentralization, the zonal bureaus served as sources of data. The MoA has not yet implemented a plan to collect data from the approximately 512 woredas since communication equipment is generally not available in most woredas. Currently, as a result of the drought, the MoA collects weekly assessment reports from crisis-affected regions, although it is unclear how this system is linked to the DPPC's system of routine data collection.

The Ministry plans to set up a National Agricultural Information System where all agricultural related info will be put in one form. The Ministry also plans to use World Space radio by selecting two sites for pilot broadcasts to farmers. This unit is located under the Crop Production and Regulatory Department of the MoA.

The MoA is responsible for gathering data on livestock (TLUs). The Livestock Department has not put in place a disease surveillance system for livestock either in the highlands or lowlands due to the decentralized system of operation. This is done either on ad-hoc basis, when a crisis of the current magnitude surfaces, or done haphazardly by the regional BoAs. In either case, given the levels of disease-related mortalities in the current crisis, neither approach is adequate.

Ministry of Health

There are two ways that the health systems at the regional and central levels learn about health conditions: weekly reports aggregated from the health posts and health facilities (numbers of people seen, categories of diseases, conditions presented) and occasional health and nutritional surveys undertaken by (non-MoH) agencies and organizations, e.g. NGOs, DPPC. Data is collected on an opportunistic basis, i.e., only from those who have access to health facilities. The resulting selection bias underestimates the true nature of health conditions in Ethiopia.

Health reports are required to be submitted from the health posts and health facilities to woredas, and are then forwarded to the regional level on a weekly basis. These reports include information on budget and clinical activity, including patient volume and flow. Given the distances involved and problems with communications, these reports are transmitted either in hard copy (e.g. driven to the zonal or regional office) or delivered by telephone or radio. These documents are then prepared as aggregated reports that are submitted from the regions to the federal Ministry of Health. There are frequently delays at every level of data transmission. What eventually arrives to the MoH is a highly aggregated report regarding clinical activity at the regional level. It is unclear whether these reports include trend lines or narrative assessments from the region.

Information regarding intermediate outcome (with such indices as utilization of health facilities, full and appropriate staffing, and fulfillment of annual action targets) is only minimally available. Information regarding ultimate outcome, as seen in the health care indices of the population, is not routinely tracked or gathered at any level. Without such information, it is difficult to arrive at a systematic or evidence-based assessment of the health system.

Gaps in providing care to marginalized communities (pastoralists, resettled populations) or to people falling into particular diagnostic categories in specific geographic areas (such as those *kala azar* in Humera) are intermittently filled by international NGOs, whose own strategies and program interests overlap with health needs in the community. These NGO efforts are minimally coordinated at the regional level by the BoHs. Their reports on activity and outcome are shared with the regional health authorities but it is unclear how this information is integrated into the reports from the regions to the central MoH.

Welfare Monitoring Unit/CSA

The Welfare Monitoring System (WMS) was established to measure the impact of poverty reduction strategies and activities, as well as to assess the impact of the Ethiopian Social Reconstruction and Development Fund (ESRDF). The Household Income, Consumption and Expenditure Survey (HICE) and the Welfare Monitoring System come under the Welfare Monitoring Unit of the Ministry of Finance and Economic Planning. The unit operates under the new Economic Policy and Planning Department. The ESRDF funds the Welfare Monitoring System.

The CSA is responsible for the data collection of the WMS and plays key roles in designing questionnaires. Indicators monitored include household assets, income sources, access to facilities, education levels, health status, consumption and production. The Welfare Monitoring Unit assumes responsibility for most of the analysis on these indicators. The analysis is conducted by highly skilled analysts. The resulting documents are much demanded by donors and government institutions. They are used for influencing policy, although they also assist with upward accountability. The key users are the Ministry of Finance and Economic Development (MoFED), the Prime Minister's Office, Donors, Regional Councils and Regional BoFEDs.

The surveys are repeated twice in selected years, the first time during the lean period (July/August) and the second during the post-harvest period (January/February) in order to account for seasonal variations in welfare. The first surveys were undertaken in 1996 but reports were not issued until 1999 due to initial capacity constraints with data analysis. The second surveys were undertaken in 1999/2000 (sample size for the WMS of 25,000 households and for the HICE of 17,000).[19] For the HICE survey there are 1,294 enumeration areas in the country. Within each enumeration area, twelve households are randomly chosen in rural areas and sixteen households are selected in urban areas. The WMS data can be analyzed for groups of zones, although there is not much demand for this level of analysis as institutions tend to work either at one regional, zonal or woreda level only. The HICE data is only representative to the regional level

[19] A subset of the WMS are selected for the HICE extended questionnaire.

FEWS-NET

FEWS-NET relies heavily on the convergence of independent variables generated through the Early Warning Working Group consisting of DPPC, SC-UK, WFP/VAM, CARE, SC-US, UN-EUE, MOH, NMSA, MOA and NGOs. This reliance on secondary sources is both a strength (in that is strives to conduct a form of meta-analysis on existing data) and a weakness (in that it has no capacity for independent verification). Its similarity to both the WFP/VAM and DPPC EWS makes it difficult at times to distinguish the particular contributions of each system.

FEWS-NET makes use of satellite imagery for spatial analysis (NDVI and Meteosat/Rainfall Estimation), which it receives directly from NASA and NOAA every ten days. FEWS-NET staff undertake frequent field trips to assess food security (availability and access) conditions in collaboration with WFP, government partners and NGOs. FEWS-NET has databases of cereal prices, rainfall, agricultural production as well as population and other demographic data from statistical centers. Geographic Information Systems (GIS) is used to do spatial analyses of available data. FEWS-NET works closely with the DPPC's Early Warning System and the Ethiopian Grain Trade Enterprise (EGTE). The latter collects price information from 23 markets. Technically, it is able to gauge pasture quality and quantity using vegetation satellite imagery and the longer term (1982 – 1995) NDVI averages (Sandford, 2002). However, the institution's ability in assessing risk for pastoral areas is limited as it is designed for assessing food availability in the mainly crop producing areas.

FEWS-NET produces a monthly food security report that is widely distributed. They also issue alerts and harvest assessment reports. Located on the same compound as the USAID/Addis Ababa mission, FEWS enjoys a high level of access and influence to USG relief and development decision makers. Looking ahead, FEWS-NET is shifting its focus from food security hazards to closer monitoring of food security outcomes, using livelihoods-based frameworks.

United Nations

WFP Vulnerability Assessment Mapping

The World Food Program's (WFP) Vulnerability Analysis and Mapping (VAM) department uses state of the art mapping technologies to identify areas where people are most vulnerable to hunger and to estimate their needs. It is one of several systems WFP manages. (Others include site and project monitoring and woreda profiles.) The role of WFP's VAM unit in early warning can be divided into three categories: (1) assessments for triggering intervention, (2) analysis for advocacy and resource mobilization, (3) contingency to strengthen preparedness.

The VAM unit uses a range of monitoring indicators including satellite imagery of rainfall and crop conditions and food prices in local markets. WFP obtains food security information from WFP field officers based in the regions and external sources, e.g. DPPC-EWS, FEWS-NET, UN-EUE and NGOs. Through the WFP field offices, VAM collects data on pastoral areas using such indicators,

inter alia, as pasture and rainfall condition and market prices through its field offices with an aim to generating data for food requirements.

WFP plays an active role in the various early warning sub-groups and conducts seasonal and emergency assessments, either independently or jointly with other agencies, the government of NGOs. The institutional objectives behind these assessments are to estimate food aid needs, to develop assessment methodologies, and to build up a database through the storage of monitoring information. The WFP-VAM Unit has a well-developed system for analysis and reporting, and produces various reports including Early Warning Alert, Monthly Field Summary on Food Security Situation and assessment reports. It also produces Maps of various sizes. VAM's analysis is done using computer programs, e.g. GIS and Database Manager.

VAM, like the DPPC's EWS and FEWS, has a large database and enjoys a reasonable level of donor confidence. Like the other early warning systems, however, it is prone to over-reliance on secondary data, inadequate coverage of pastoral areas, and heavy reliance on crop-related data, especially rainfall-dependent crops. WFP is dependent upon donor funding to support the VAM unit. Staffing therefore is lowest in non-crisis years, as well as the early stages of crisis years. This limits the ability of the VAM unit to conduct short- and long-term trend analysis.

FAO – Crop Assessment

The annual FAO/WFP Crop and Food Supply Assessment mission (October/November) estimates national cereal and pulse production, import requirements and needs for emergency food aid (FAO/WFP, 2002). The assessment is designed to calculate the "food balance," i.e., the overall staple food (cereals and pulses only) surplus or deficit. The food balance is an estimate of the total quantity of cereals and pulses produced nationally minus 160 kg per person per year. Livestock and root and cash crop performance are not considered.

The main multi-agency post-harvest assessment (WFP and other UN agencies, donors, NGOs and regional authorities) determine the number of people requiring food assistance at district level and the duration of assistance for the following year. Around 20 teams participated in the multi-agency assessment with approximately 80 assessors from over 15 agencies. In 2002, this took place after the Government had already issued an "Appeal for Immediate Food Needs and Scenarios of Likely Emergency Needs 2003" (DPPC, 2002a).

Information considered includes (Sandford, 2002):

- weather data (onset, cessation, amount and distribution, and any gaps for both the Belg and Krempt seasons);
- timeliness of land preparation and planting;
- crop pest and disease outbreaks;
- input supply situation (improved seed and fertilizer with a greater emphasis on the latter);
- weather-related events, e.g. landslides, flooding, hailstorms, frost
- human and livestock disease
- migration (forced or unforced)

- market prices and supplies of crops and livestock
- pasture and water for livestock availability
- level of grain production (qualitatively)
- physical condition of livestock

The assessment is intended to cover all regions and zones through sampling a select number of woredas. The assessment teams' field work lasts approximately two weeks, during which they consult a range of key informants (development agents, NGO staff, farmers, traders, officials). Prior to their arrival, the zonal Departments of Agriculture are charged with gathering data from the woredas on a range of indicators.

UN-EUE Assessment Reports

UN-EUE staff travel to crisis areas in Ethiopia, producing reports that are widely available in Ethiopia and, through their website, abroad. The EUE does not use a standard format or a set group of indicators. Their reports are grounded in desk studies (the UN-EUE houses a valuable grey literature library) and are written in a fairly journalistic style. UN-EUE staff often participate in national harvest and needs assessments. According to the UN-EUE, their reports enjoy wide acceptance by donors and are valued for their attempts to get at the "root causes" of crisis. The office does have a high degree of staff turnover.

NGOs

CARE-Ethiopia – Food Information System (CEFIS)

CARE undertakes nutrition surveys on an emergency basis and also does one-off woreda studies (3 in Amhara and 6 in Oromiya). CARE-Ethiopia's early warning system, operational from 1992 – 2002, was known as Food Information System. Its objectives were twofold:

(1) To monitor transitory and chronic food insecurity situation in order to enhance timely response in CARE's operational areas.
(2) To build and improve the capacity of government institutions at different levels to generate reliable early warning information.

CEFIS was a member of the various early warning groups, which includes DPPC, ENCU, SCF-UK, WFP, FEWS-NET, and UN-EUE. It geographic coverage included nine woredas in East and West Hararghe and two woredas in South Gondar.

CEFIS's analytical framework was based on HH livelihood security, risk management in the context of vulnerability, and community based preparedness and response. It collected information through interviews of farmers, agricultural workers and administrators. Its key indicators included: crop performance, livestock condition, market prices, and other sources of income. The system was stronger for crop producing areas than for livestock populations.

WVI – Monthly and Biannual Assessments

The objective of the WV-monthly and biannual assessments is to monitor the food security situation in WV's Area Development Program in 32 woredas in five regions (3 in Afar, 10 in SNNPR, 7 in Oromiya, 9 in Amhara and 3 in Tigray). WV monitors market information, rainfall, crop and livestock condition, and disease outbreaks on a monthly basis. During the biannual assessment (November and May), health information (morbidity, mortality and EPI coverage) is collected and nutritional surveillance is conducted. Data is gathered by WV staff who have been trained to complete questionnaires that are processed in Addis. Reports are produced and disseminated on a monthly basis; biannual reports are also generated and distributed.

WV is a member of the EW Working Group, the Emergency Assessment Methodology Group and the Pastoral Early Warning Group. WVI criteria follow the DPPC's system (i.e., beneficiaries are categorized into those needing immediate assistance and those requiring close monitoring).

Both the monthly monitoring and the biannual monitory have undergone a change in methodology in the past few years. The monthly monitoring went through a minor review (for example incorporating data from woreda weather stations), but the nutritional surveys undertaken have undergone a major change. Instead of a stratified sampling of 20% of PAs in the agro-ecological zone, it has adopted a 30x30 cluster survey as per ENCU guidelines.

According to WV, its database has not been geared for trend analysis and its relies heavily on secondary data. WV's monitoring system is food focused and generally does not consider other socio-economic indicators. The system is particularly valued by WV for its own operational purposes.

SC-UK - Nutritional Surveillance Program and Household Food Economy Analysis

Household Food Economy

SC-UK has been developing its household economy system in Ethiopia (and elsewhere) since the 1980s. SC-UK uses this approach in SNRS where food economy zones are defined on broad terms and within which livelihoods are considered to be similar. Household Food Economy Analysis has three objectives: to provide baseline information on how households earn a living in "normal" years, to provide insight on coping mechanisms in crisis years, and as a tool for targeting relief distributions and food security interventions. SC-UK has completed baseline food economy studies in North and South Wollo and in the Somali Region.

SC-UK works in collaboration with the Disaster Prevention and Preparedness Bureau at the zonal and regional level with a consortium of fourteen member organizations (government bureaus, UN, INGOs and NGO) who oversee the implementation. There are plans to establish woreda committees and this could be a challenge for the system, which thus far has been operating at zonal level. SC –

UK produces quarterly bulletins for each zone, including monthly highlights where necessary. SC-UK collects information on similar groups of indicators as the DPPC (with the latter adopting its indicators from the former) but also includes security situation indicators. Assessments are qualitative, based on scoring from range 1 to 5 (1 = very poor, 5 = very good). The SCF-UK model is being adapted by DPPC for the other pastoral areas.

Nutrition Surveillance Program - NSP

The NSP was formally linked to the national Early Warning System, providing most of its data since its inception in 1978. By the end of 1980, the nutrition field workers (NFWs) were undertaking monthly longitudinal monitoring of children under five years old, plus grain prices in a number of PAs,. In 1983, as a result of the drought and famine, they were withdrawn from the field to work in feeding camps until the end of 1985. The NFW program grew and expanded to other regions (Wolayta and Hararghe Region*)*. From 1986 the main function of the NSP was to monitor indicators of food availability and anthropometric status in order to help identify existing or potential areas of food insecurity. Physically insecure *awrajas* (districts) were excluded as well as those with nomadic populations, as they were considered inaccessible.

In 1988 it was estimated that the cost of the anthropometric surveillance component was equal to less than 1 percent of the average annual cost of providing food assistance in Wollo (Kelly, 1993). In Wollo, in the late 1980s, anthropometric data were gathered in two ways: monthly longitudinal surveys of random samples in selected PAs, and *awraja*-level cluster surveys carried out at intervals of approximately four months. For each cluster survey, 12 – 15 villages (clusters) were randomly selected (PPS) from each awraja. Originally all children and subsequently 50 children between 70 - 110cm in each village were randomly selected and their nutritional status monitored. Eighty five PAs were selected for longitudinal surveillance non-randomly to ensure that various altitude zones found within each woreda were adequately represented.

Unusually, anthropometric data was based on length measurements of all children (the usual practice is to measure height of children > 85cm), and expressed as the mean weight-for-length. (This approach has now been discontinued and superceded by the internationally endorsed two stage cluster sample design, although there is increasing interest internationally in reviewing the use of the mean nutritional status (Golden and Grellety, 2002).)

In addition, household and village questionnaires were completed and analyzed, and presented in quarterly reports. The NSP Focus, produced biannually, provided a more in-depth analysis of areas of concern.

Financial pressures combined with an growing awareness of the need to handover the surveillance system to the DPPC led to SC-UK's decision to phase out the program (1998-2001). During this period SC-UK worked closely with the DPPC to transfer skills that would enable staff from federal, regional and zonal levels to conduct rapid emergency assessments as required. Unfortunately, due to restructuring and high staff turnover it has been very difficult for the DPPC to maintain these staff.

The work of SC-UK has contributed a wealth of understanding to the role of nutrition data as an adjunct to famine early warning (Kelly, 1993, Kelly, 1992a, Kelly, 1992b, Lawrence et al., 1994), which recently culminated in their support of the DPPC in the development of national nutrition survey guidelines (published in 2003). SC-UK currently maintains a "Rapid Assessment Team" of experienced individuals who are available to undertake emergency nutrition assessments and build the capacity of partners simultaneously. However, the demand for their services exceeds their capacity and the team can only cover a limited area.

JEOP – Nutrition Surveillance Unit

In response to the most recent drought and resultant food shortages, a consortium of NGOs formed the Joint Emergency Operations Plan (JEOP). The JEOP consortium, led by NGOs managing USAID FFP Title II aid programs, proposed the formation of a nutrition surveillance unit (NSU) for a 10-month project period (total budget $1.55 million). The JEOP (p.2) proposed

> to work directly with the ENCU of the DPPC, build capacity of partner NGOs, standardize nutrition survey methodology and emergency nutrition programming, monitor surveys and improve nutrition coordination between JEOP partners, the ENCU and UNICEF (SC-US, 2003).

The proposal identifies areas which need to be addressed (e.g. problems of prioritization of areas for emergency response). However, there are concerns that the JEOP seeks to work on early warning independently of the DPPC (and may have overlooked the wealth of expertise and experience). In addition, there appears to be duplication/overlap with the DPPC, UNICEF and the MoH, which at the time of submitting the proposal had not been fully worked out. For example, the JEOP proposed a range of micronutrient and infant feeding interventions known as "Essential Nutrition Actions" without due consideration given to existing policies and practice or discussion with relevant ministries. The DPPC's ENCU has stated recently that it perceives the role of the JEOP NSU to be one of a service provider, while the central coordination functions remain within the ENCU.

Systems for prioritizing drought-affected areas

Systems for prioritizing areas are intricately linked with the process of assessing needs, estimating numbers and subsequent targeting of relief, including both geographic targeting and targeting of specific households within communities. The National Food Aid Targeting Guidelines (DPPC, 2000) are principally concerned with targeting that occurs within communities by PAs, managed by specially assigned committees. Initial or geographic targeting occurs before this, and is based on assessments, associated appeals and subsequent systems for prioritizing areas where food supplies are inadequate. Three separate processes were identified:

i. Multi-agency assessments that estimate numbers of beneficiaries, amount of food requirement and duration of need
ii. WFP's system of assessing "priority drought affected areas"

iii. ENCU's prioritization of woredas based on a combination of nutritional survey data, and famine indicators (developed recently with assistance from WFP)

Estimates of numbers of beneficiaries – Multi-agency assessments

The process of estimating numbers of beneficiaries is not at all straightforward, as methodologies are not consistent across woredas.

Two examples are given here, the first based on the report of a member of the pre-harvest *belg* assessment 2001 in Werebabu, Dessie Zuria and Kallu, and the second from the sole member of the June/July "multi-agency" assessment in Fik Zone in 2002. The first example shows the methodological inconsistencies that occur even within the same area, while the second example shows how the estimates evolve as they pass through the various levels of committee. This latter example suggests that a major determinant of the current year's figures and the previous years estimates. This was also the conclusion of a much earlier review of food aid targeting (Clay et al., 1999a).

The process of estimating numbers of beneficiaries is a process of both technical assessment and analysis and of negotiations among different parties through various layers of the system. A fair degree of pragmatism informs these negotiations. They appear to take account local perceptions of what appears acceptable from a regional perspective as well as the perceived views of federal level officials and institutions.

Box 1. Harvest Assessment – Select Issues in Estimating Needs

Example One, Pre-harvest Belg Assessment 2001

The multi-agency team had only one day to spend in each woreda, and this was taken up with discussions with woreda sectoral experts and a field visit to a crop growing areas. The woreda and the multi-agency assessment teams each sat separately and calculated beneficiary numbers. The two sets of figures were compared and discussed, and consensus reached. For each of the different woredas a somewhat different method of calculation was used. Additional problems were highlighted, including,

- Information from the woreda experts did always add up.
- The lack of direct information from (or cross-checked with) households or farmers.
- No use of baseline information
- Calculations assumed that households obtained 100% of their food from own crop production, rather than a mix of own production and other sources. (In Dessie Zuria other income sources were considered but arbitrarily estimated at 10%)
- Beneficiary calculations were based on the total yield losses, i.e., the total loss was divided by the annual household need (1.8 quintal) in order to determine number of beneficiaries. This underestimated needs because clearly the loss was spread over a larger number of households.

Example Two, June/July 2002 Multi-Agency Pastoral Assessment Fik Zone

The multi-agency assessment team in Fik Zone consisted of one individual (the local food security monitor from Save UK) as neither the regional DPPB nor WFP were willing/able to send anyone for this mission. Fik Zone is known to be insecure. The Food Security Monitor made recommendations to the zonal administration partly based on reviewing the previous year's figures. The administration was concerned that these estimates were too low, and wanted to double them. However, using the information from the early warning system, the food monitor convinced them of the need to prioritize and to "be pragmatic" (i.e., recommend something that would be accepted). Eventually the Zonal Administration agreed to the figure of 120,000 people, and presented this to the Somali Regional Coordination team for the multi-agency assessment. Despite presenting a justification for the Zonal Administrations figure, the Regional Coordination team wanted to bring the Fik estimate down to 100,000, which was the final decision sent to the Federal DPPC.

Previous years estimates of numbers in need:	98,000
Multi-agency assessment (1 person!) presented to Fik Administration	110,000
Fik Administrations recommendation to Regional Administration	120,000
Regional Coordination team recommendation to Federal DPPC	100,000

WFP's System for Assigning Priority Districts/ Woredas

The VAM Unit of WFP have developed a system to prioritize food aid and food security monitoring activities and for allocation of scarce resources such as blended food. According to WFP, in addition to estimating the number of beneficiaries and duration of need, the multi-agency teams

> distinguish needy areas by categorizing them into "moderately", "severely" and "very severely" affected districts/ woreda. In addition to this, WFP ranks district/woredas by singling out those districts with a percent of population in need which is greater than 50% and a baseline chronic food insecurity status of 4 or 5 in a ranking of 1 – 5 where 5 is most vulnerable. Finally, given ongoing early warning data such as market prices, migration and nutritional status, the list is updated as required (VAM/WFP, 2002).

Thus the assigned categories of priority change from month to month as new information is obtained and published in the monthly updates produced by the WFP/VAM Unit. In 2000 and 2001 the DPPC generally agreed with the priority zones according to this system. However, in 2002 there were disagreements over classification of woredas in Tigray. For example, Wukro was not categorized by WFP as first priority but was considered by REST and DPPC to be priority one. Wukro remains priority two in WFP updates. According to WFP, the DPPC will assign the regional DPPB to assign priorities at regional level. Meanwhile, WFP's system is unable to distinguish variation in vulnerability below the woreda level.

Box 2. A Note on Chronic Vulnerability Analysis

Chronic Vulnerability Analysis was first undertaken based on data from 1994 -98 and published in 1999. This was used principally to inform and prioritize areas for the more developmentally oriented EGS (MERET) program and also school feeding. All the data used for this CVA was based on secondary sources and included 9 indicators. A new CVA is now underway based on approximately 20 indicators, and will cover pastoral areas. Preliminary results are expected to be finalized this year. It should be noted that although chronic vulnerability has been used to inform the prioritization of districts/ woredas, chronic vulnerability does not necessarily equate with acute vulnerability.

ENCU Prioritization of Woredas for Geographic Targeting of Supplementary Feeding

Since February 2003 a new system or decision-making tool has been introduced by WFP VAM and adopted by the ENCU of the DPPC (ENCU-led Nutrition Working Group, 2003), particularly for geographic targeting of supplementary feeding. There was considerable debate as to whether nutritional status data could be used in isolation or should be combined with other indicators for assigning priorities. This system categorizes affected woredas as either priority one (critical), two (serious), and three (poor). The indicators used for this are summarized in Table 6. At least three indicators must be present simultaneously to meet the criteria for prioritization, and each must have been objectively verified by at least two different sources. For priority one areas a nutritional survey should be done within two months.

Although this is a step in the right direction in that ENCU are working closely with WFP on developing this prioritization system, the system as described (ibid) is very confusing as it combines phases of famine indicators which have been modified from the DPPC Nutritional Survey Guidelines, with the WFP Cuny Pre-famine and Famine Indicators. Two examples of this confusion are,

1. The justification for changing the decision-making tool from the phases as described in the current National Nutrition Survey Guidelines is not self-evident.
2. The new system refers to "aggravating factors" as one of the indicators, but does not explain what this means. Aggravating factors are elaborated upon in the survey guidelines and include factors relating to inadequate food, health and care (the three groups of underlying causes).

Thus two independent and separate processes; the work of the WFP VAM Unit on pre-famine indicators, and the work of the Multi-agency nutrition working group on the Nutrition Guidelines have been clumsily combined in such a way, that the importance of an analysis of the three groups of underlying causes relating to food, health and care is all but lost. In keeping with the 'food first' model food security and famine indicators appear to dominate the analysis, with the risk that the health determinants of acute malnutrition are overlooked.

There is also a major discrepancy with the new UNICEF Guidelines on Treatment of Moderate Malnutrition (Grellety, 2003a) which indicate that supplementary feeding should be implemented when prevalence of acute malnutrition (GAM) is > = 10%. Given that the Ethiopia Demographic and Health Survey found the prevalence of acute malnutrition (GAM) in rural areas to be 11.1% this would suggest a massive scale of supplementary feeding for hundreds of thousands of children. In practice coverage is far lower, and although expanded coverage of supplementary feeding to all of the worst affected areas would be beneficial, coverage at the level suggested by the guidelines is nothing short of absurd. The main reason being that there are far more appropriate ways of supporting and protecting nutrition, including a wide range of food security and public health strategies discussed elsewhere in this report.

Table 6. Summary of the ENCU Guidelines (draft) for Prioritization of Woredas for Geographic Targeting

(ENCU-led Nutrition Working Group, 2003)

Priority Group	Indicators
Priority One 'Critical'	∈ GAM >= 15% with aggravating factors[20] and/or 3% SAM ∈ Phase III Famine Indicators[21] o Migration of entire households in search of food o Excess unseasonable morbidity o Excess under five mortality >2/10000/day o Community structure collapse o Consumption of life-threatening famine foods o Widespread sale of oxen, milking cows, camels and fall in livestock prices o Widespread death of livestock in pastoral areas o Political instability as a result of food shortage ∈ Presence of therapeutic feeding center

[20] Aggravating Factors: These are not listed in the ENCU document but are described in the National Nutrition Survey Guidelines (p 128) and include:

- Poor household food availability and accessibility
- Epidemics of measles, cholera, shigella and other important communicable diseases
- Inadequate shelter and severe cold

Priority Group	Indicators
Priority Two 'Serious'	∉ GAM >= 10% with aggravating factors and < 15% ∉ Significant change in nutritional status as compared historically ∉ Phase II Famine Indicators o Increase in livestock deaths o Widespread sale/ leasing of land at abnormally low prices o Increase in school dropouts o Widespread consumption of seeds o Significant numbers of family sending less productive members to live with relatives/ friends o Significant increase in begging, stealing crops o Reduction of support to less productive members of HH
Priority Three 'Poor'	∉ GAM < 10% with aggravating factors ∉ Phase I Famine Indicators o Increase in sales of livestock and decrease in average sale price (other than oxen an other productive livestock) o Reduction in number and size of meals o Decline in community funds for funerals and weddings o Declines in Terms of Trade o Consumption of wild or famine food

A further use of nutritional status data is the prioritization of woredas to receive scarce supplementary food resources (see Section Five). While this may work to a degree, it has two major downfalls. First, it risks failing to identify the real cause of malnutrition, and thus children continue to suffer despite an apparently adequate response, and second, it fails to recognize the multiple strategies that are likely to be both more cost-effective and also more appropriate for the affected population than targeted supplementary feeding.

The current anthropometric benchmarks used in the prioritization of woredas of 10 and 15% are extremely crude and take no account of the locally specific seasonal patterns of nutritional status, nor the confidence interval around these sample prevalence estimates. The confidence interval is the range in which the true population estimate lies. Because of the errors of sampling it is likely that

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- Low levels of measles vaccination and vitamin A supplementation
- Inadequate safe water supplies (quality and quantity) and sanitation

[21] Phases of Famine Indicators are modified from the DPPC Nutritional Survey Guidelines and from the WFP Cuny Pre-famine Indicators. WFP (2002), Pre-Famine Indicators (Cuny) 12/12/02 (unpublished), World Food Programme, Addis Ababa.

estimates of acute malnutrition that are no more than 5% apart are in fact not statistically different from each other. Thus an estimate of 9% would be priority two but might not be significantly different from an estimate of 15%, which would be classed as priority three under the current system. For this reason it is important to include other indicators showing the underlying causes of malnutrition and the general severity of the situation. However, these must be based on tried and tested experience and not a mish mash of randomly selected models.

To be fair and to reflect the difficulties of developing such decision-making tools, internationally there is little consensus on classifying a nutritional situation based on population nutritional status. The system proposed by the World Health Organization (WHO, 2000) was dismissed as unsuitable for the Ethiopian context in the national survey guidelines because it does not include nutritional edema, which must be reported in any estimates of acute malnutrition. Secondly, it was rejected because it did not include any aggravating factors, which were felt to be imperative(ENCU led Nutrition Working Group, 2002). The Sphere Project state that "decisions about whether levels of malnutrition are acceptable require analysis of the situation in the light of local norms".

A further problem with the ENCU guideline on prioritizing woredas for supplementary food is that it focuses all attention on supplementary food at the expense of all other nutritional interventions. No similar decision-making framework is available for prioritizing areas for therapeutic feeding programs, or for exploring other alternative strategies for addressing moderate malnutrition.

The most serious category of an emergency, Priority one, requires a range of nutritional interventions and strategies to address malnutrition and protect nutrition generally, not just the very limited targeted supplementary feeding. The range of essential nutrition actions in emergencies are considered in the next chapter. How these are designed and implemented will vary according to the severity of the emergency and the priority accorded to it. Any system of prioritization has to differentiate more clearly between the range of emergency needs encountered in Ethiopia.

It is essential that any system of prioritization based on nutritional status data makes the analysis of the underlying causes of malnutrition explicit, as it is failure in all three that produces the massively elevated rates of malnutrition, morbidity and mortality. It is also important to recognize that all stakeholders must be involved in developing these systems of prioritization, and that this critically important task cannot be tasked to any one group, unless it has been accorded the appropriate authority.

Issues in Early Warning

As the previous section demonstrated, there are numerous early warning and surveillance systems generating a wealth of data. Despite the long history of development of early warning systems in Ethiopia, several key issues are of concern.

The data are not standardized. There is no working capacity for meta-analysis of the data that are produced, and no single organization utilizes the full range of information generated. Even within agencies, data are under-analyzed. The purpose of each early warning and surveillance system is

closely tied to the organizational function and mandate of the hosting institution. Despite the use of a host of indicators, the current EW systems are designed to achieve the DPPC's, the WFP's and many of the NGOs' primary mandate and concern – the provision of food aid. Many systems are designed for a particular area only. Trend data is limited to the last "good year," usually extending historically no further than the previous five to seven years. The DPPC indicators generally do not consider the security situation (or other similar political indicators) of the area from which data are collected.

A number of NGOs, at different times, have set up their own EW systems in their respective operational areas. These NGOs collected information on market prices, pasture and water condition, migrations, etc. However, many of the NGOs (ACF, HCS, PCAE, CARE, GTZ) have discontinued data collection because of the expensive and time consuming nature of the operation (or when donor funding dried up). In addition, they were resigned to the fact that their advance warnings failed to trigger responses, while many lacked capacity for analyzing and using collected data.

Some NGOs monitor early warning indicators on an as-needed basis (when crisis happens) only for short durations. For example, SC-US conducts need-based food security assessments from time to time as and when required on monthly basis. Such assessments do not constitute a regular part of SC's activities, so understanding of general trends is limited. SC-US' current food assessments take place only in the drought-stricken zones of Shinille (Denber, Aysha, Erer and Shinille woredas) and Gode (East Emi, Gode, Denan and Adadile woredas). These assessments are not undertaken in SC-US' other operational areas (Afder - 5 woredas, Liben -3 woredas and Borana -6 woredas) as the situation in these areas is considered normal.

USAID has funded another group of organizations, the JEOP, to establish its own early warning system. The Joint Emergency Operation Plan (JEOP) consists of World Vision, CRS, FHI, REST and CARE plan to develop a standardized early warning system for use by member NGOs. The JEOP also plans to extend the standardized system to nutritional surveys, emergency guidelines and measles vaccinations and vitamin supplementation. This approach is intended to enable the members to identify the "hot spot" woredas among the 76 woredas they operate in and is supposed to last between May 2003 and January 2004.

Although several systems claim to have national coverage, there are large areas, especially in regions on the periphery, that are not covered by the systems. Taking crop production as an example, the maps below compare coverage of this single best monitored indicator in the country in Tigray with coverage in SNNPR. In Tigray, five systems (including the now defunct SC-UK nutritional surveillance program) have been active, covering the entire region. In SNNPR, three systems cover only a portion of woredas in the central part of the region. In Oromiya and Amhara (neither shown), each region is entirely covered by six and ten systems, respectively. Although there are different systems for assessing crop production, most of these systems rely on a single source: the Woreda Offices of Agriculture (Sanford 2002: 2).

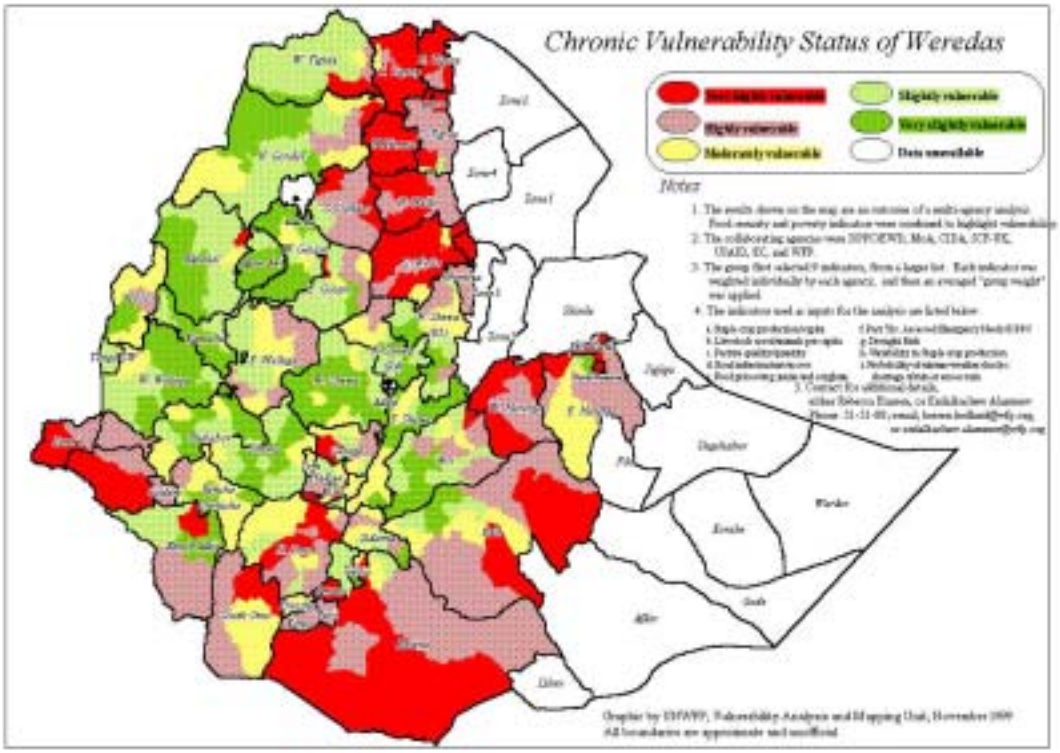
Map 1. Crop Production Assessment and Surveillance, Tigray Region, showing complete assessment coverage (Sandford, 2002) (Varying shades of blue indicate different systems.)

Map 2. Crop Production Assessment and Surveillance, SNNPR, white areas indicate systematic exclusion (Sandford, 2002) (Varying shades of lavender indicate where systems operate; clear areas indicate no systems.)

To take another example, it is notable that crop-livestock terms of trade are not routinely monitored throughout much of the pastoral areas of Afar and Somali. The historical exclusion of Afar and Somali from surveillance systems also is demonstrated graphically by WFP's Chronic Vulnerability Index map.

Map 3. Monitoring Systems of Crop – Livestock Price Ratios, showing systematic exclusion of pastoral areas (Sandford, 2002)

Map 4. Chronic Vulnerability Status of Woredas, showing systematic exclusion of pastoral areas.



Limitations of Administrative–Based EW Systems

Disasters do not respect political boundaries, either within Ethiopia's regions, zones and woredas or with the country's (equally disaster-prone) neighbors. The exchange of data among regions (and at the central level) is important for cross-referencing critical indicators that could bring certain implications to the other region(s). In the process of decentralization, however, the current region-focused EW systems are not structured with adequate flexibility to accommodate the cross-boundary nature of most crises.

Usual and distress migrations of livestock within and between regions spread diseases in addition to depleting natural resources. Topographical variations impact neighboring regions, e.g., the current flood in Gode is caused by high level of rainfall, outside of the SNRS, in Bale and possibly the west Hararghe mountains. Similar flooding occurs in Afar when it rains heavily in Wollo.

Inter- and intra-regional markets play an important role in creating and responding to vulnerability. The SNRS region depends for its livestock market on Somaliland, which in turn depends on the Middle East markets. Livestock market prices in Nairobi affect Borana herdsmen more than the prevailing livestock price in the nearby Dilla. The Afar region is economically tied to the Oromo, Amhara and Tigray regions. Grain and livestock price indicators in Bati and Senbete (Oromiya), Robit (Amhara), Kobo, Alamata, and Chercher (Tigray) are as equally, if not more, relevant to the adjacent Afar regions.

Link to Response

Despite the complex nature of sources of vulnerability among diverse livelihoods systems in Ethiopia, emergency early warning systems universally identify only numbers needing various levels of emergency food aid. This is almost habitual in nature. Although the power to declare a disaster rests with the Disaster Prevention and Preparedness National Committee, it is the DPPC Commissioner, in his capacity as the secretary of the National Committee, who makes the appeal. Emergency food aid appeals have been made in years of bumper harvest and critical deficit alike in almost ritualistic fashion. In its 27 years of existence, not a single year has passed when the RRC/DPPC has not made an appeal for emergency food aid. This indicates a rather permanent marriage of the early warning and appeals process with relief responses, all of which are to a large extent focused on food aid.

The humanitarian principles of impartiality and appropriateness, i.e. that aid is to be provided on the basis of actual, assessed needs, appear not to inform the information systems' links to responses at either federal, regional or woreda levels. In pastoral areas, for example, the current EW systems operate in the absence of pre-planned responses for pastoralists that are linked to the varying nature of a crisis (alert, alarm or emergency stages) that focus on pastoral and agro-pastoral livelihoods. For example, the system does not indicate at what stage of the crisis appropriate measures such as destocking, restocking or the provision of cattle feeds should begin. For example, SC-UK was caught unaware by the current drought while implementing a restocking program in Fik. This problem stems from the way the data are analyzed. EW bulletins, issued by various agencies, provide descriptive accounts of the situations in the areas of coverage rather than objective analysis

equating the prevalent situations with the types and amounts of assistance required to address the range of vulnerabilities identified by specific livelihoods, eco-systems, administrative boundaries, etc.

Ownership

EW information flows only in one direction, from the sources to government agencies, donors and NGOs. Almost all analysis and key decisions are made at the central level. The very communities intended to benefit from this information are excluded (with the exception of LEWS) from these processes. This deprives communities from participating in the planning process of the response measures to be taken. For pastoral communities, this is significant; they can often suggest better ways of handling the crisis than most outsiders.

Adaptation of the SC-UK model

The SC-UK model is based on food economy zones that are intended to account for some of the nature of livelihood systems and related vulnerabilities that cross administrative boundaries. There are plans by the DPPC to adapt the SCF-UK EW model for all the pastoral areas. This is a welcome improvement, but should only be considered after factoring in the following points.

The household economy model has both strengths and weaknesses. The wholesale adoption of the model would assume that all pastoral areas are similar. However, there are important regional variations (cultural, economical, physical, political, historical) among different pastoral areas. The Somalis are highly trade oriented, unlike the Borans and the Afars. In Somali, where the system was developed, household income is reasonably augmented by remittance; this is not the case for Borans and Afars. Surface water is a major constraint in Borana whereas the major constraint is pasture in Afar. Many of the Somali and Afar agro-pastoralists use rivers and floods whereas the agro-pastoralists in Borana rely on rain for farming. Livestock trade routes from the three major pastoral areas take different directions. The livestock trade ban imposed by the Middle East countries has had an immediate and lasting impact on Somali pastoralists while dampening future prospects for Afar and Boran pastoralists. The implication of the SCF-UK model vis-à-vis the regional variations should therefore be taken into account before its adaptation for all pastoral areas.

If possible, small-scale pilot EW systems (perhaps at the zonal level) should be initiated in other pastoral areas through other NGOs (FARM AFRICA, CARE, SCF-US, ACF, etc.) This will provide important opportunities to test the current SCF-UK model and adapt it for the specific needs of different pastoral areas.

Capacity Issues

While DPPC's national policy of disaster prevention and management describes an adequate base for drought early warning in pastoral areas, the reality is that most woredas lack the financial, technical and physical resources to adequately monitor their districts. NGO capacity to fill the gap is constrained by their uneven representation in pastoral areas and (for some) lack of experience and

resources. Such constraints have in turn affected the quality of baseline vulnerability and poverty analysis conducted amongst Ethiopia's pastoral communities. In addition, the collection and flow of data has been hampered by budget and communication problems.[22] Many pastoral woredas lack telephone, fax or radio services, making both collection and verification of data difficult.[23]

Despite the DPPC's view (Irkneh, 2003) that woreda-based EW systems will provide better information (which is true given their proximity to local information sources, provided they have the capacity), most agencies are concerned (FEWS, the Multi Agency Assessment Team, the MoA) about the practicalities of collecting information from the approximately 512 woredas nationwide. This could be a taxing assignment for the Multi Agency Assessment teams and for others both in terms of time and expenditure.

Subjective Interpretations

Except for market prices, weather data and crop yields, the use of semantic and likert scales in many of the EW formats may lead to subjective interpretation which, at times, may not reflect the reality on the ground. A score 3, for example, may not have the same meaning or weight in Somali region (a region that is relatively better integrated into cash economy) as in Afar.

Inadequate coverage

Rapid assessments, due to the time bound nature, can not cover all issues or all areas . The current Multi Agency Assessments exclude other income and food sources such as cash crops (chat or charcoal, for example), enset and other root crops (e.g. sweet potatoes, Irish potatoes), or other non-staple commodities. These sources of income represent a substantial proportion of the household income in some areas.

Health Data Quality and Relevance

The weekly health forms completed at the woreda, zonal and regional levels are often not fully filled out and no penalty appears to apply for incomplete reporting. Notations for visits involving a set list of diagnostic categories (involving a battery of communicable diseases and other specified conditions) is required; no information is sought in terms of clinical intervention or outcome, including whether the patient was admitted, discharged, or transferred to another facility. There is space to note nutritional status of children; and mention is often made of tracking a growth chart that mothers are supposed to carry with them. Spot checking of these notations and inquiry with informed participants at the field level suggests that these nutritional points of information are very rarely sought or recorded and do not show up as data on the weekly reports.

The weekly reports do not cumulate averages or trend lines; no assessment is made in a quantitative fashion of departures from expected incidence of various conditions. All data entry and

[22] On average, only 13 of the 20 woredas report every month in Afar, fewer than 10 submitted reports for February 2003. Interview with Ato Tamrat, DPPB, EW Department, Asaita.
[23] For example, due to the mobility of pastoralists data is collected from people who come to the weekly market at Chifra.

transmission is accomplished by hand. There appears to be no independent system in place to monitor the accuracy or validity of the information that is being relayed from these outlying sites: no spot checks, no quarterly assessment.

Given the fact that these reports are based on facility registries, located at sites accessible to populations within walking or driving distance of main roads, it is difficult to estimate the extent to which health data are representative of the condition of the general population in a given geographic area for any given time. Were these reports to be analyzed in a systematic fashion, showing trends and departures from expected incidence by disease category, they might be useful in a passive early warning mode for at least the mobile and most accessible sections of the rural population. Since these reports are not used in this way, however, the early warning they might provide is lost.

The dearth of reporting, registry, and surveillance information reflects a more fundamental problem. The state obligation to care for the health of its citizens cannot be fulfilled without timely, accurate, and appropriately comprehensive information about key health parameters of the population and key indicators of system performance. This information, however, is either lacking (in terms of surveillance and vital registry data) or only minimally available at inconsistent times and at highly unhelpful levels of aggregation (in terms of health facility reporting).

Incorporating Traditional Early Warning Indicators

Few of the existing systems formally incorporate traditional early warning indicators. This is a conspicuous gap, especially in pastoral areas. SC-UK and CARE are working to incorporate traditional early warning indicators into their systems. Pastoralists have well developed traditional early warning indicators that should be integrated into formal systems. For example, the Kereyu elders in 2001 requested their respective authorities to monitor the situation about the impending crisis nine months in advance before the conventional EW system picked the situation (Beyene, 2003). According to the wisdom of Afar elders, mild droughts are likely to occur if a series of short rains (*connoitu, debdeyb, dedaa, dira,* and *sugum)* fail despite the previous good *karma* rains. The forecasting system for these short rains is based on the appearance of five particular stars (hence the name, *connoitu*) during October to November. If there are no showers with the appearance of the first star, there is a likelihood of all the short rains failing. If this is followed by a partial failure of the *karma,* this is considered as average drought. Two consecutive failures of *karma* make an acute drought (Kebebew et al, 2001). Satellite image readers, weather people or EW data collectors currently do not focus adequately on the nuance of the timing and meaning of different rains.

This type of wisdom is not limited to the Afar region. *Neru* is the transitional sign observed in the last night of *Gu* for Somali pastoralists. If clouds and thunder are observed on the *Neru* night, summer time will be hot but there will be plenty of rain in the *Dayr* season. If the *Neru* night is cloudless, the summer will be a bit colder and *Dayr* will be fine -- but not great. The recent *Gu* was *Neru's* Sunday, which is good for camels and goats -- but not for sheep.[24] Pastoralists in Harshin believe that is why they lost so many sheep in the first 3-4 months of 2003(Ishmael, 2003).

[24] See Annex IX for further details on pastoralists multi-year calendar cycles and other traditional early warning issues.

SECTION THREE: LIVELIHOODS

In its least elegant form, the term "livelihoods" can be defined as *the sum of means by which people get by over time*.[25] The term "*livelihoods"* refers to the courses that ordinary people pursue to manage risk and vulnerability. The term "livelihood" is merely descriptive: a person's livelihood can be "good," "sustainable" or "productive" just as easily as it could be "dangerous," "harmful" or "illegal".

More formally, livelihoods specialists, particularly those working in development, frequently refer to the Chambers and Conway definition: *A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living* (Chambers and Conway, 1992). Masefield defines livelihoods as *the activities, the assets and the access that jointly determine the living gained by an individual or household* (Masefield, 2001b). The Feinstein International Famine Center has developed a livelihoods definition more suited for disaster settings, particularly those characterized by conflict. (Feinstein International Famine Center, 2002) refers to livelihoods as *the ways in which people access and mobilize resources that enable them to pursue goals necessary for their immediate and longer-term survival.*

The protection of or support to livelihoods in times of crisis enables individuals and households to rely on their own coping strategies (which are embedded in livelihoods systems) in order to survive. Enhancement of livelihoods systems allows people to build resilience to hazards and minimize their risks, thereby reducing suffering and saving lives over time.

There is no standard model or method of analysis for livelihoods, or for integrating livelihoods perspectives into early warning systems. Most livelihood models focus on the interaction between the two main determinants in livelihood strategies and outcomes:

a) the bundle of assets that households own, control or can access, and,
b), the policies, institutions and practices ("PIPs") that relate to how households are able to use these assets to pursue their livelihood strategies over time.[26]

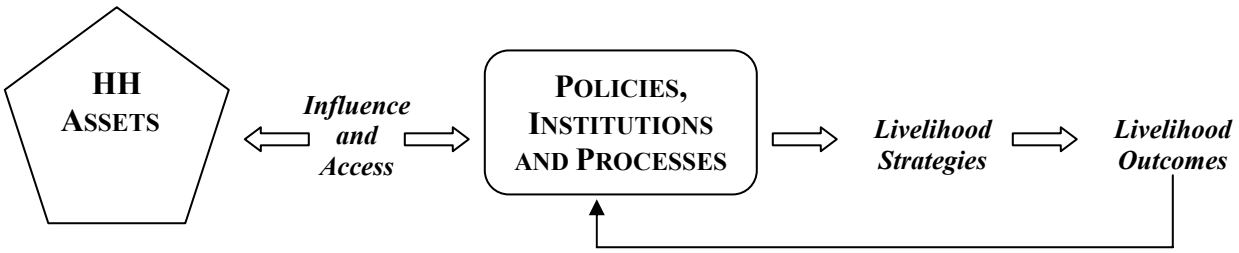
A simplified model of a livelihoods framework is presented as Figure 4. The figure illustrates the interaction between a household's assets and society's policies, institutions, and processes ("PIPs") that shape both the strategies a household pursues and the outcomes it attains. The assets that the household owns, accesses and control will determine their ability to influence and access formal and informal processes, institutions and policies, and vice versa (i.e., the nature of these PIPs will influence the household's portfolio of assets, e.g. land tenure policies, credit institutions or gender relations).

The combination of assets and PIPs shape livelihood strategies employed in pursuit of livelihood outcomes. These livelihood strategies might include farming, pastoralism, midwifery, participating in armed groups, migrating for work, running a restaurant, joining the priesthood, tin smithing,

[25] The following sections are based on Lautze, S. and Stites, E. (2003), More than Seeds and Tools: An Overview of OFDA Livelihood Intervention 1964 - 2002, The Feinstein International Famine Center, Medford.
[26] One such model is the DFID Sustainable Livelihoods Model. See www.livelihoods.org

shining shoes, growing *chat,* repairing tractors, selling *tella,* working for an NGO, begging, etc. Examples of livelihood outcomes include individual, household and communal survival, the attainment of food security, the accumulation of wealth, or the defense of personal and family honor, and social standing.

Figure 4. Simplified Livelihoods Framework



Livelihood strategies should not be assumed to be homogenous across households, or even among individuals within households. Livelihood strategies and outcomes are sensitive to combinations of age and gender, as well as to other socially constructed identities/institutions such as class, education, ethnicity, and religion. For example, families attempting to cope with disaster will seek to rearrange household roles and labor patterns by pulling girls and then boys out of school, the elderly out of retirement, and women out of the home to seek employment, intensify agriculture production or increase natural resource utilization (collecting water, wild foods, and fuel) (Pain and Lautze, 2002). Intra-household allocations of food resources may also be sensitive to gender and generational tensions related to the distribution of power in the household as well as the customs and norms regarding children, the elderly and women, for example.

Assets, Emergencies and Livelihoods

Assets, also called capital, are usually categorized as human, financial, physical, natural and social. Collections of assets are central to disaster-affected households' strategies for managing risk and vulnerability in times of crisis. The quality of asset bases is important for shaping and sustaining – or, when insufficient, for limiting -- the livelihoods strategies that individuals and households use to prevent, prepare for, survive and recover from disasters.

In Ethiopia, a key asset for most farming households is the plot of land they cultivate. The declining per capita agrarian base and related issues of land tenure for rural families has been the subject of much debate, especially since these assets form the foundation of the government's Food Security Strategy.

Usually, households that have broader and deeper endowments of assets are less vulnerable than those that have fewer stocks and less diverse capital flows. There are important exceptions. For instance, under conditions of war or violent political instability, some assets can be a source of

vulnerability, such as when pastoralists face raids *because* of their cattle herds, when ethnic groups experience discrimination *because* of their historical access to political power, or when landowners fear targeting by the landless. Under these conditions, such assets become liabilities. Definitions of the types of capital follow:

- **Human Capital** refers to the numbers of people available for productive processes, as well as the measure of people's skills, education, experiences and capacity for work and participation in social networks, including their health and nutritional status.
- **Financial Capital** includes "the financial resources that people use to achieve their livelihoods objectives."[27] In times of disasters, financial resources are vital for survival, and include savings as well as income from regular jobs or emergency cash-for-work programs.
- **Physical Capital** encompasses all of the structures, infrastructure and equipment used for production.
- **Natural Capital** can be thought of the earth's equivalent of "goods and services," and includes, for example, forests, rivers, and oceans. Natural capital also includes the functions these resources provide (such as ozone protection, watersheds, erosion control, grazing lands, and fishing grounds).
- **Social Capital** can be thought of as membership in groups or voluntary associations. In times of crisis, people turn to social networks for support, and social coping strategies include borrowing from relatives, communal childcare arrangements, participation in revolving loan societies, and the use of community-based self-help networks. More formally, the World Bank refers to social capital as "the institutions, relationships, and norms that shape the quality and quantity of a society's social interaction."

Processes, Institutions and Policies – The PIP Box

POLICIES, INSTITUTIONS AND PROCESSES

Assets alone do not determine or delimit the nature of disaster vulnerability or the range of livelihood strategies that households pursue. Formal and informal processes, institutions and policies (PIPs) also enable or hinder livelihood strategies, thereby generating or reducing vulnerabilities.

All individuals and households live within, shape and are shaped by a set of informal and formal practices, norms and rules that constitute the institutional environment. As Pain and Lautze (2002) explain:

> These influencing factors play a key role in mediating access to resources, shaping the context of vulnerability, and setting opportunities or constraints to pursuing various livelihood strategies. Customary practices related to marriage, gender roles, inheritance, ownership, management of and access to resources (land, water) and 'real' markets all fall within the sphere of informal institutions. These are dynamic rather than fixed institutions, and are subject to continual re-negotiation and change according to context and power. Formal institutions relate to the role of the state, for

[27] See the DFID livelihoods framework at www.livelihoods.org for more in-depth explanations and examples.

instance in setting and enforcing laws, regulating markets or extracting taxes. There is a constant interplay between the informal and formal institutions.

In addition, institutions themselves can be vulnerable in times of disasters. Government ministries for the provision of social welfare (e.g. the Ministries of Health, Agriculture, or Education) are often drained of resources when governments redirect domestic budgets towards war efforts or when implementing structural adjustments programs. Ethiopia's war with Eritrea that coincided with the 1999/2000 crisis, reducing economic growth to just 1%, serves as an example (The World Bank, 2003).

The policy environment in Ethiopia has been both a source of resilience and vulnerability for Ethiopian households over time. The PIP box of the livelihood framework is useful for understanding the nature of the impact of a range of policies and institutional changes that have characterized successive Ethiopian governments. The GOE's policy of Agriculture Development-Led Industrialization has led to an intensification cereal cropping, bringing increased total outputs to some and unmanageable debt burdens for others. Land tenure policies have yet to successfully provide an adequate level of security to induce farmer investment in ecological protection. There have been a range of policies regarding land use (e.g. development of State Farms: villagization, resettlement, private investment) that have prompted large scale population movements; construction, deconstruction and reconstruction of villages and settlement sites; creation and later abandonment of institutions such as producer cooperatives, etc.

International policies also affect households' ability to access and utilize assets, such as when the US Governments anti-terrorist concerns prompted the closure of some channels used to send and receive remittances to the Horn of Africa.[i] Other processes that generate household vulnerability include religious extremism, health crises (e.g. HIV/AIDS), militarization and globalization (Rashid, 2000, Enloe, 2000, Duffield, 2001).

In addition to policies and processes, the livelihoods framework requires analysis of both formal and informal institutions. The utility of the framework can be demonstrated through an example of the institutions of gender and generation in Ethiopia, both of which are strongly socially defined.

All Ethiopian agro-ecological livelihood and production systems depend upon a division of labor based on gender, age and (in some cases) occupational caste and ethnicity. Divisions of labor are subject to vulnerability relating to natural and man-made hazards. A livelihood framework and mode of analysis enables a better understanding of the dynamics of the household economy as well as the distribution of power (and related resources) within the household. Livelihoods-based early warnings system should be able to identify who is affected (and how) by a crisis within households (and communities). Gender and age-disaggregated data can then be used to inform appropriate responses. This is in rather sharp contrast to current practice in Ethiopia. For example, gender mainstreaming *across* sectors is a vital aspect of program implementation and analysis; it should not exist as a separate sector as it is currently presented in the GOE/UN appeal documents. While it is important to protect socially vulnerable groups (e.g. women and children from HIV/AIDS, domestic violence and other abuse), it is also necessary to address in a multi-faceted manner issues of women's access to land, credit, jobs, marketing opportunities and skills, agriculture packages and

rural extension services. Further, legislation in Ethiopia on women's and children's rights is poorly understood and poorly implemented. The livelihoods framework enables a holistic and focused approach to ensuring that these rights are disseminated, respected and fulfilled, while also providing a mechanism through which all duty bearers (ranging from family to community to national institutions) can meet their obligations. These types of approaches better supports women's role in the domestic and rural economies, and empowers them to participate fully in both community and national level institutions and processes, thereby addressing some of the root causes of their vulnerability.

Livelihoods and the Current Crisis

Livelihood frameworks are useful for understanding household and community resilience, for analyzing vulnerability, and for designing, monitoring and evaluating relief and development policies and practice. In the context of Ethiopia, livelihoods analysis highlights a series of processes, institutions and policies. Some of the finest work on livelihoods worldwide has been conducted in Ethiopia (Amare, 2001, Carswell, 2000, Hussein and Nelson, 1998, Masefield, 2001a, WFP, 2001, Rahmato, 1992, Rahmato, 1990, Rahmato, 2003, Sharpe and Devereaux, 2003, Carswell et al., 1999).

A select range of processes, institutions and policies are considered in this section for their impact on household livelihood (and by extension, coping) systems, including recurrent drought, livestock marketing policies, *chat* production, decentralization, losses of pasture, natural resource regulation, and environmental decline. Many other equally important PIPs have not been examined here, e.g. access to credit, kinship and reciprocal exchange networks (i.e., traditional mechanisms for accessing livestock, labor and credit), migration, agriculture extension and research policies, gender relations, etc.

While most of these issues have been studied intensively in one-off (and often academic) works, the vulnerabilities associated with these PIPs are not routinely monitored by disaster early warning systems in Ethiopia. The various early warning systems, as noted earlier, are weak on analyzing trend data and always limit their comparative analysis to the recent past. Declines in household resilience over time due to longer-term processes are therefore systematically missed by the early warning systems (see Box 3). This, in part, explains the otherwise perplexing and "sudden" appearance of "hot spots" of crisis zones, especially in those areas characterized by historic marginalization and subject to long- term erosion of asset bases.

Box 3. Enset farming systems, Livelihoods Analysis and Signs of Vulnerability in the Early 1990s, Wolayta
(Quoted from Carswell et al 1999:224)

> The enset farming systems of highland Wolayta benefits from greater resilience than agricultural systems based around cereals (Rahmato, 1994) and there are fewer lean months in the enset zone. But, while an enset-based system provides greater food security, enset is a protein-poor crop...The enset system is 'made up of a chain of delicately linked activities…the anchor which holds the system together and gives it resilience is enset cultivation. Serious damage to enset will destabilize the system with serious consequences' (ibid). (Kefala and Sandford, 1991) note that the combination of drought and bacterial wilt has led to unbalanced age structure in enset plantations, and there also appear to be imbalances due to premature cutting: 'it looks as though hunger is forcing them to nibble away at their capital stock of enset'.

Successive Droughts and Pastoral Vulnerability

In Ethiopia, agriculture contributes more than 55% to the national economy. Livestock contribute about 40% to agricultural GDP or more than 20% of the total GDP (or even more if other intermediate values of livestock are properly assessed) (EC/IGAD, 2000). Access to livestock (especially oxen) is critical for farming communities, both for animal traction and transportation. Pastoral communities, depend upon livestock for a range of production, consumption, social and political activities (Cately, 1999).

Despite the significant contribution of livestock resources to the national economy and their importance to a range of Ethiopian households, inadequate financing has hindered the provision of animal health services in the country. A study undertaken by AU-IBAR indicate that between 1993/94 and 1998/99 the GOE allocated only 5% of its recurrent expenditures on agriculture and less than 0.3% on livestock (or 3% of the recurrent agricultural expenditures) (Tambi and Maina, 2000). Further data was not available after 1999 as regional governments allocate resources for veterinary services is not available at central level. Nevertheless, the common outbreak of diseases even before the drought suggest that vaccinations campaigns are not taking place on regular basis and that many areas are served by adulterated and sub-standard drugs[28].

Recurring droughts combined with significant socio-economic changes are increasing the vulnerability of pastoralists over time. Desta et al have assessed the associated reductions in wealth of all households within a 35 km radius of four towns in Borana (Desta and Coppock, 2002).[29] Their findings indicate that the loss incurred by Borana pastoralists as a result of drought over a period of 17 years (1980 – 1997) totals over $300 million. This translated into a total loss of USD$384 per household, nearly three times the average annual cash income of USD$135 (Desta et al 2002 and Coppock 1994).

[28] According to Dr Ahmed (OXFAM) the last sheep and goat pox vaccination in Harshin took place 3 years ago. Pasteurolosis vaccination was carried out last year.

[29] Desta included all rural households within 35 km of Arero, Mega, Negele and Yabelo towns in the sampling frame and further stratified households by wealth class (wealthy, middle class and poor) based on modal ratios.

Furthermore, successive droughts coupled with population growth are showing an increasing trend in the decline of herds per household, while herd compositions have also changed. The mean herd size of Borana pastoralists declined from 128 cattle per household in 1980-81 to 91 in 1996-97, and dipped as low as 72 head in the drought year of 1992-93 (Lybbert et al., 2001). The authors suggest that these figures may understate the overall decline in mean herd sizes since the 1997 survey omitted those who have exited the pastoral livelihood system prior to 1997 (i.e., those who have joined the ranks of the absolute destitute). Desta et al (2002) further add:

> Half (50%) of Borana households reported that they have experienced a major downward shift in wealth class in recent years. A very small percentage (6%) of sample households made an upward movement. The remaining 44%, which mainly include poor and middle-class households, have remained in the same wealth class. There is a growing trend of wealth class polarization among the Borana. According to most respondents, a major downward shift in wealth class occurred in 1968-69 due to a severe drought. Added impact occurred from droughts in 1983-85 and 1990-2. The Borana perceive that their cattle-based pastoral production system is facing a serious long-term problem; the emerging situation forcing the Borana to include more camels and small ruminants in the herd structure

These findings are echoed in numerous other studies (Coppock, 1994) Hogg (1996), and Helland (1997).

Livestock Marketing Policies

While the assets of the Borana have eroded, the ban on export of live livestock from Ethiopia has had particularly deleterious impacts on Somali pastoralists by negatively influencing their access to income, limiting off-take rates and inducing alternative livelihood strategies, e.g. the production of *chat,* charcoal, and firewood (Ahrens, 1998). The Saudi's import ban, however, has intensified the negative effects of other processes, institutions and policies affecting the capacity of pastoralist households' ability to profitably market their livestock.

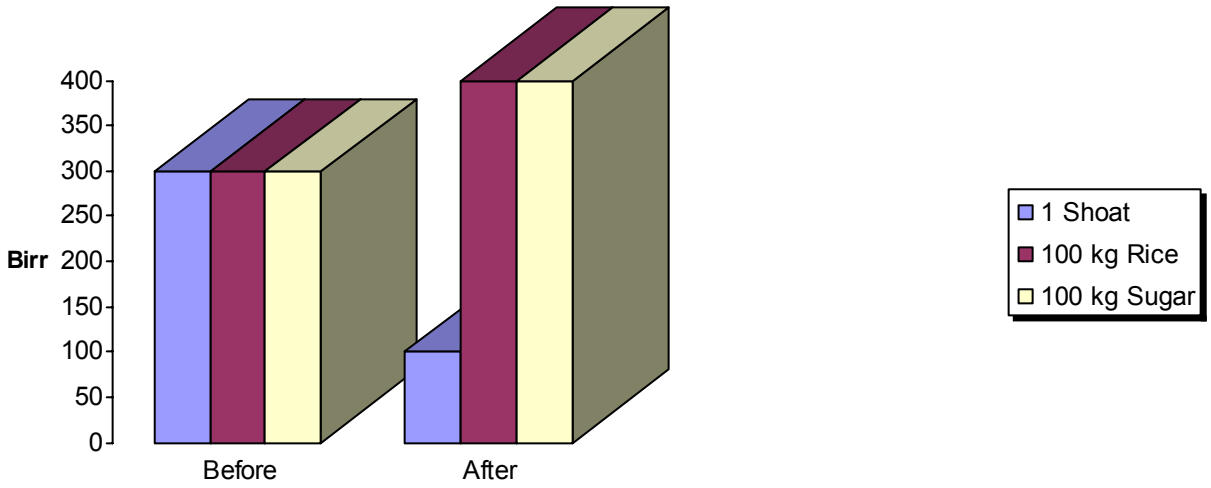
From the 1960s until the mid-1970s, Ethiopia was a one of Africa's major exporters of live livestock, chilled and frozen beef, and mutton and canned meat. Most of the export animals were sourced from pastoral areas. However, the volume of livestock-related exports declined significantly following the introduction of the socialist system in the mid 1970s.

Today, livestock exports have been limited to small quantities of chilled and frozen mutton or goat meat. In addition to the ban by the Gulf countries, Ethiopia's potential to export large number of live animals has been constrained by its lack of a port, lack of government investment in the livestock sector, and poor veterinary services. Even if the ban is lifted for live animals by the Gulf States, the benefits would be limited by these political and technical problems[30].

[30] This is not to imply that the lifting of the ban should not be vigorously pursued; to the contrary. This team has urged the highest levels of government to engage with the Saudi Government on this issue. Lifting the ban should be

Domestic levels of consumption are constrained more by weak purchasing power than by effective demand. The domestic market that does exist for livestock products is dominated by suppliers from highland areas, unlike in Kenya or Somalia where pastoral suppliers dominate local markets. Afar pastoralists in particular have no access to markets in Ethiopia while the Borana livestock are usually undersold in Kenya. The Somalis' loss of access to the Gulf markets has resulted in deteriorating terms of trade (TOT), as per Figure 5.

Figure 5. Terms of Trade, Harshin Before and After Saudi Ban on Import of Live Livestock ex Ethiopia



Source: Team interviews with Woreda officials, Harshin, May 2003. Note that, in addition to the loss of value for sheep and goats, the price of rice and sugar has increased due to the shortage of foreign exchange in Somaliland, further eroding household purchasing power in the Somali Region.

The impact the Saudi livestock import policy on Somali households has economic, environmental and social implications. The ban, when viewed through the lens of livelihoods, is seen to influence Ethiopian Somali households' portfolio of:

- *financial assets*, e.g., income, wealth held in livestock units, savings, opportunity cost of livestock losses;
- *natural assets*, e.g., through environmental decline due to overgrazing, loss of tax revenues otherwise available for investment in environmental programs;
- *physical assets*, e.g., through loss of resources needed for investment in production, loss of tax revenue for investment in roads, marketing, and livestock health services, etc.;
- *human assets*, e.g., (nutritional status declines due to loss of food security, loss of health status because of limited income to purchase health care, inability to afford school fees, etc.); and,

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accompanied by concomitant increases in efforts to establish effective animal health and phytosanitary measures in Ethiopia.

- *social assets*, e.g. increasing reliance on *chat* for both production-based income and coping-related consumption (while legal, for some communities, the use of *chat* is morally problematic and the transport and sale of chat is associated with increased insecurity).

Loss of Grazing Land

Yemane (2000) estimates losses of prime grazing land (the dry season grazing reserves) to irrigation projects and national parks as per Table 7.

Table 7. Estimates of prime grazing land lost to large-scale projects (in hectares)

Region	Irrigation schemes	National Parks	Feasibility Studies Completed For	Total Hectares of Grazing Land Lost
Afar	55,000	353,730		**408,730**
Kereyu	22,000			**22,000**
Somali			28,000	**28,000**
South Omo		62,300	10,000	**72,300**
Gambela		50,610		**50,610**
			Total	**581,640**

Source: (Yemane, 2000)

Apart from large-scale irrigation schemes and the allocation of large tracts of land for national parks, trends in land use system also indicate a shift towards converting rangelands to croplands. This is occurring despite the marginal potential of the rangelands for sedentary agriculture under the current production system. In these marginal areas, the average annual rainfall in the upper limits of the escarpment is both highly variable and overall low, averaging between 500-700 mm annually. Yemane (2000) has compiled estimates of the area under crop production in pastoral areas (Table 8).

Table 8. Estimated crop lands farmed by agro-pastoralists

Region	Hectares	Source
Afar	178,000	CEDEP (1999)
Somali region	390,000	Regional BoA (1999)
Borana	1,332,900	Zonal DoAs
South Omo	58,103	SNNPR (2000)
Gambela	32,452	Socio-economic study (1996)
Benishangul	38,717	WARDIS, 1998
Total	2,030,172	

Source: Cited in Yemane (2000)

These trends are alarming. A 1984 ILCA study indicates that there was little cultivation in Eastern Hararghe until the 1940s. In the 1970s, 10% of the area was converted to crop cultivation. Today, a joint socio-economic and resource base survey by HCS and Alemaya University (2001) shows that over 90% of the households in Dembel woreda and 95% of the households in Afdem woreda of Shinille zone are agro-pastoralists. A CEDEP (1999) study cited by Yemane (2000) also

demonstrates the alarming expansion of crop lands in Teferi Ber and Kebribeyah in the Somali region. In Teferi Ber 127,000 ha out of 339,688 ha (36% of the total land) has been converted into cropland. In Kebri Beyah, 220,000 ha out of 619,940 ha (32% of the total land) is now farmed. A SCF-UK survey from the 1990s shows that 32% of the population has become agro-pastoralists.

In addition to the deliberate conversion of grazing land to cropped areas, successive droughts have resulted in the permanent loss of pastures because of the encroachment of bushes on grasslands, e.g. Prosopsis Julifora in Afar, Partinium, *Acacia drepanolosium* in Borana, and other Acacia species in Somali. Acacia species have claimed 40% of the rangeland in Borana over time. These plants are largely incompatible with most ruminants.

Picture 1. Acacia drepanolosium - Borana

Photo: Yacob Aklilu, FIFC

Increased farming activities leading to losses of communal grazing land introduce new forms of private land ownership. Inter-clan conflicts have resulted, e.g. when communal grazing land between Jijiga and Kebribeyah was taken by individuals for *chat* production (Telahun, 2003). While farming in riverine (including flooded) areas and those areas adjacent to the highlands (such as Jijiga) could theoretically increase local food production, farming in marginal areas can only lead to the permanent destruction of fragile ecosystems, representing permanent, net losses in food security. In addition, increased local food production (even in the potential riverine and highland-adjacent areas) does note necessarily entail increased access to food for those communities with no access to arable lands and those pastoralists who have also lost crucial dry season grazing reserves to existing and emerging agro-pastoralists.

Shrinkage of the resource base coupled with the availability of automatic weapons has fuelled ethnic conflicts in almost all adjacent pastoral areas. The gradual migration of the Itus into Kereyu areas has resulted in the former outnumbering the latter (Beyene, 2003). The Issas and other Somali clans (probably the best armed group among pastoralists) have taken large swathes of land from the Afars while constantly skirmishing and pushing the Borans to the southwest and the Gedabursis, the Ittus and the Kereyus to the center. The findings of an anthropological survey by HCS and Alemaya University (2001) in the Shinille zone indicate that "the Issa clan are more involved in conflict

compared to other clans in the area." Furthermore, the report adds that "conflict has become a tradition of the Somali clans and it exists even when there is no scarcity of feed and water resources." That conflict has become a tradition even when there is no apparent motive for conflict indicates that ethnic conflicts are reaching new dimensions. This is a frightening phenomenon when viewed from the point of the human sufferings it entails: killings, abductions, cattle rustling, destruction of properties, the break up of families, movement restrictions, etc.

Chat Production, Marketing and Consumption

The expanding geographic and social distribution of the production and consumption of *chat* (*Catha edulis*)[31] has specific implications for food security. Originally used as a social pastime among predominantly Muslim populations, more women and children are now consuming *chat*, while its use is now widespread among many Christian and Muslim and rural and urban populations alike.

Box 4. Expanding Chat Production, Results of a Study in Habro District, Western Hararghe

Quoted from (Feyisa and Aune, 2003)

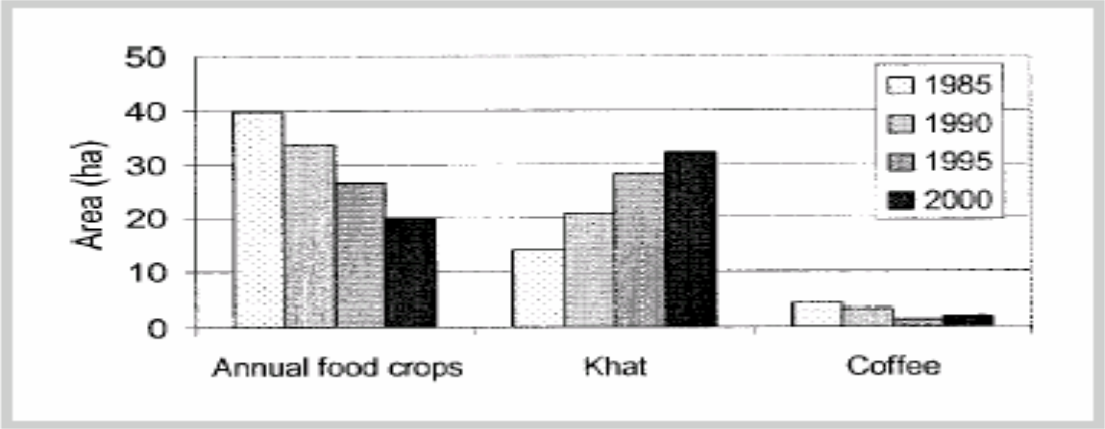
Khat production in this district is rapidly replacing cereal production and to some extent coffee production. About 70% of farmers' income in the study area is currently obtained from khat. One important reason for the expansion of khat production is that the khat-maize intercropping system is 2.7 times more profitable per hectare than maize monocropping. Khat is also less risky to grow than cereals and coffee because it is less vulnerable to drought. Increased production leads to changes in livestock composition because oxen are far less needed for ploughing in the khat-based system; moreover, availability of crop residues for fodder is reduced when khat expands. Khat growing farmers, therefore, give more emphasis to milk-producing animals such as cows and goats. It was found that khat producers also are consumers of khat and that khat consumption has become widespread in the nearby secondary school. Khat consumption negatively affects peoples' working capacity. Hence, unskilled khat consumers in urban areas are paid 7 birr (US$ 0. 84) per day, whereas non-khat users are paid 10 birr (US$ 1.22). Measures to control further khat expansion will need to address both supply and demand.

Chat is a narcotic that grows on drought-resistant perennial bushes. The expansion of *chat* cultivation to unprecedented levels poses a dilemma for food security. Some suggest that the cultivation of chat will grow unabated at the expense of other crops in the next 10-15 years, thereby reducing both household and national production of staple foods. Tracts of communal grazing land between Jijiga and Harshin in Somali have already been devoted to *chat* cultivation. Regrettably, however, the SNRS Bureau of Agriculture does not collect statistics on area of land under *chat* cultivation, so it is not possible to quantify the area lost to crop production and livestock pastures in Somali. This is important for other assessment exercises, e.g. the FAO/WFP annual harvest assessment that considers only cereals and pulses. Staple crop losses due to increasing *chat* production will look on the national balance sheet as though there has been a straightforward loss in food security due to an apparent decline in food availability rather than taking into consideration positive income effects associated with *chat* production. If the results of a survey conducted in

[31] Also spelled *khat* or *qat.*

Hararghe are any indication, this could lead to large biases in the FAO/WFP annual harvest assessment (see Figure 6).

Figure 6. Chat Production Supplanting Food Crops and Coffee, Results of a Survey, Habro District, Hararghe



Source: (Feyisa and Aune, 2003)

It is likely that this practice will expand to the low lying riverine areas in the near future. As a cash crop, the assumption is *chat* could provide the means to access more food than is otherwise available to those who cultivate it.[32] For producers who are heavily reliant on income from *chat*, they are also vulnerable to production losses should a major plant disease attack the *chat* plantation areas.

However, it could be argued that the availability of chat in previously unavailable areas may induce non-chat producing populations to spend more money on *chat* consumption that otherwise would have been used on food, health care, water, education, or any of a number of needed goods and services for the family. The sums of money involved for households are not inconsequential. Retail prices of *chat* appear to average 10 Birr/bundle, with a bundle being adequate for one person for one day. *Chat* production also raises a concern for donors. The marginal propensity to consume[33] *chat* is not known, although this is important for the design of any relief or development strategy that provides assets (e.g. cash, food aid, credit, etc.) In addition, *chat* is an appetite suppressant and therefore likely induces negative nutritional side effects, although this remains under-studied.

The government has a policy of non-engagement with questions of *chat* production, marketing and consumption (Feyisa and Aune, 2003). Where economies have been devastated by the collapse in livestock and coffee markets, this perhaps is understandable. However, the questions associated with *chat* extend beyond the borders of Ethiopia into the globalized economy. Chat is being

[32] The income from *chat* theoretically could be relatively higher than from other crops. However, chat traders/exporters have a cunning way of keeping chat producers under their control through a system that allows them to contract the *chat* trees in the highlands of Hararghe. Under this arrangement, traders provide advance loans and inputs to producers to ensure that the harvests are not collected by anyone but them. This system strengthens the perpetual dependence of producers on specific traders and deprives the former from taking initiatives to switch to any other cash or cereal crops – since traders in advance contract the chat trees and by extension the land under chat production.

[33] i.e., the portion of additional income that would be spent on *chat* for a given increase in income.

produced and traded not only within the Horn of Africa but is also exported to Europe and North America including to the US, where *chat* has been classified as an illicit narcotic. From neighboring Somalia to distant Afghanistan and Colombia, the global community has become increasingly concerned about how humanitarian crises and conflict can lead to sharp increases in narcotic activities, with related security implications for local and international communities.

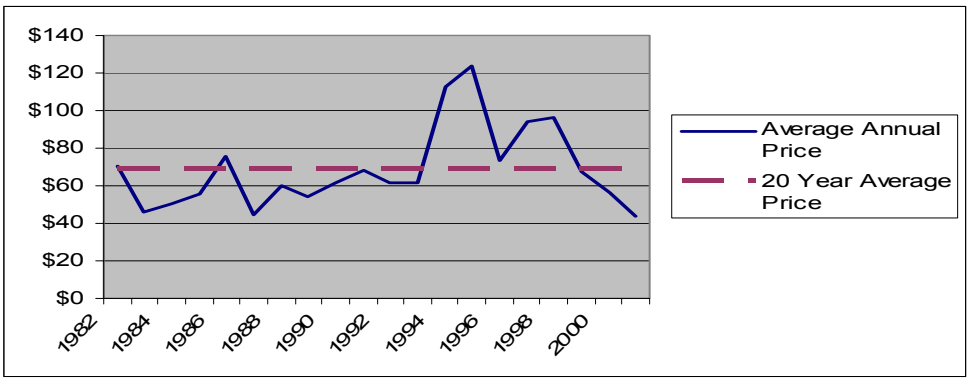
Loss of Wage Labor Opportunities

Already, by 1996/1997, over 60% of Ethiopian farmers lacked access to the requisite amount of land necessary for cultivating enough cereals to feed a family of five people (FDRE, 1999). Restrictions on land tenure and population growth have combined to continue to diminish farm sizes while improvements in yields have not been realized by all farmers (Masefield, 2001b). Combined, this increases the demand for alternative income opportunities.

Rural livelihoods throughout Africa are becoming more diverse, and Ethiopia is no exception (Francis, 2000). While alternative income sources for rural households in Ethiopia (as a percentage of total income) remain smaller by comparison to the rest of Africa, they are significantly important for the households most vulnerable to food insecurity (European Food Security Network, 2000). However, in addition to losses of household income related to the livestock export ban, other wage labor opportunities have been lost due to the collapse of international coffee prices the effects of the drought, and the failure to successfully privatize (or otherwise make productive) State Farms. After enjoying historic high prices, world prices for Ethiopian coffee have reached historic lows and are far below long term averages, as per Figure 7. Ethiopia has lost nearly $167 million in export earnings over the last three years, mostly due to low world prices (Robinson, 2003). The declining world coffee prices have affected not only producers but also seasonal laborers who traditionally would be employed to pick, clean and sort coffee harvests.[34]

[34] Of note, Ethiopian coffee traders have not been adversely affected as they have protected their marketing margins, i.e. the declining returns for Ethiopian coffee have been borne exclusively by producers, thereby limiting their resources available for production activities, including hiring seasonal labor.

Figure 7. Annual and 20 Year Average, World Market Price of Ethiopian Coffee, 1982 – 2001



The drought is affecting production in some coffee areas (e.g. Haraghe), as well as other forms of small-scale cash crop farming, e.g. pepper farms in Gurage and Silte. These and other surplus producing farms traditionally employ seasonal labor from the profoundly disaster-affected Kambata and Wolayta areas of the SNNPR for weeding and harvesting. The loss of these wage labor opportunities in recent seasons due to drought has deepened vulnerability throughout the SNNPR. Similar losses of wage labor opportunities have affected Kobo (Amahara), and Meiso, West Hararghe, Arsi and Bale (Oromiya), among other areas.

Across the nation, very few of the original State Farms are still functioning, either privately or as state owned enterprises (See Picture 2 and 3 as examples.) For example, Jijiga was once a major maize and sorghum producing areas before the Derg nationalized some 110 tractors in 1967 from individual farmers and subsequently established a State Farm under the name 'Rapid Farm'. This rain-fed farm was abandoned some years later.

Picture 2. Abandoned Cotton Plantation, Afar

Photo: Sue Lautze, FIFC

Picture 3. Abandoned State Commercial Sheep Operation, Somali

Photo: Sue Lautze, FIFC

A case in point is the Angelele irrigated pasture project. The Ethiopian government invested 20 million Birr in 1987 and installed 10 water pumps (with a capacity of 500 liters/second) for forage production on 1,000 hectares. It was handed over to the regional Afar government that, in turn, sold it to a private investor, leaving 100 hectares under the region's care. The farm was never operational (MoA, 2002). Had the Angelele irrigated pasture project been used for forage production, numerous animals could have been saved in the current drought.

Environmental Impact

Unregulated use of natural resources is gaining momentum in the name of a free market economy in Ethiopia and elsewhere. Ethiopia's environmental policies have been in flux for over one decade. Ethiopia's environmental policies began with a national conservation strategy in 1989 – 1990, which later evolved into the Conservation Strategy of Ethiopia in 1995. In 1997, the strategy was again revised as the Environmental Policy of the GOE. Responsibility for environmental protection has been devolved to the regional and sub-regional levels, although there remain problems of adequate technical capacity and financial resources at these levels, with limited incentives for line ministries to prioritize environmental issues (Carswell et al., 1999).

The exploitation of natural resources in fragile ecosystems has wider implications beyond the physical boundaries of the regions. The impact of unregulated use of natural resources, although visible in every part of the country, is profoundly evident in the areas surrounding the Awash River. The river is changing its course (Dubti), losing volume through seepage (reaching only ankle level in Asaita), forming ponds that may expand into lakes (Bure Medaitu) and forcing small-scale riverine farmers to abandon their farms (Afambo and Det Bahri). Historically, the government's Awash Valley Authority (AVA) was responsible for regulating upstream and downstream use including tributaries in the far-off highland areas. Today, riparian use is nearly completely unregulated because the AVA has been disbanded. As a result, private investors have been able to independently divert tributaries at multiple sites for inefficient irrigation (e.g. lack of proper drainage, use of excess water leading to salinity, improper gradients leading to erosion). The future

of the Awash River, on which nearly the entire Afar economy depends, has been jeopardized by these processes.

In order to cope with drought, loss of wage labor opportunities and shrinking pastures, many of the destitute and the impoverished have turned to charcoal production, another form of the unregulated use of natural resources.

Picture 4. Charcoal and Firewood Production, Somali Region

Photo: Sue Lautze, FIFC

In the past, charcoal production in pastoral areas was mainly done by highland farmers. Today, informal concessions are made between pastoralists and charcoal producers where the dividend is shared between the two parties. In other areas, pastoralists themselves are increasingly getting involved in fuel wood and charcoal production (Borana and Somali). This has reached unprecedented levels particularly in some areas like Harshin (with strong economic ties to Somaliland) where charcoal became the main export commodity in the wake of the trade ban on live animals. About 15,000 sacks of charcoal a month are exported (by smuggling) through Harshin woreda to Somaliland for re-exportation to the Gulf. With the loss of brush and trees, it is no surprise that camels between Kebribeyah and Harshin have become grazers because of a loss of browse.

New towns and woreda capitals are also exacting a heavy toll on the environment, with associated increases in demand for wood to build houses for local officials, shops for traders and other new buildings. In the Afar areas, for example, new houses are currently under construction utilizing traditional highland wattle (wood and mud) building designs that are both inappropriate to the environment (excessively hot) and costly to the sparsely wooded environment.

Another issue of concern is the implementation of project activities based on administrative boundaries (zones or woredas) or federal directories without giving due attention on the implications of project outputs on the eco-system as a whole. The construction of ponds, *birkas*, cisterns, shallow wells or boreholes without taking into account livestock populations, migratory

patterns, and the grazing capacity increases desertification. In addition, the concentration of water points is likely to disturb migration patterns and increase the tendency to sedentarize. Encouraged by the income from selling water to livestock traders, the people of Harshin have built around 4,000 *birkas* in the woreda. For a population of 72,000 this amounts to 1 birka being owned by 2.5 families. The impact of these *birkas* is visible from the denuded grazing areas and lack of any substantial shrub coverage, particularly between Kebribeyah and Harshin. The Third Livestock Development Project, which was perhaps the most experienced institute in managing pastoral eco-systems in Ethiopia, used to build ponds at least at 25 kilometers apart and boreholes at 30 kilometer intervals. Of the various agencies visited in the field, only HCS seems to apply the concept of eco-system in its operation.

Decentralization

The government has embarked on a vigorous program of administrative decentralization. This is a development that encompasses processes, policies and institutions. In theory, decentralization will yield effective early warning and community-based disaster response systems. An adequately resourced and empowered decentralized system should enjoy a comparative advantage in the collection of nuanced and context specific information, including the understanding of the dynamics (and particular variability of) local agro-ecological systems and production systems.

Beyond the immediate provision of assistance, there is in Ethiopia today an impressive array of government institutions, policies and processes at all levels that are designed to identify, respond to and mitigate disasters. There are strategies for disaster prevention and preparedness but these are not as coherent for disaster response. Health posts, water bureaus, agriculture offices and disaster response committees exist in most of the crisis-affected areas, but too often they are fundamentally lacking in authority, technical and absorptive capacity, and resources to provide any semblance of services. While it is intended that decentralization overcome these problems, reality is lagging behind policy.

For communities on the periphery (e.g. Afar, Somali and SNNPR), the policy of decentralization has brought both fresh improvements and new problems for the management of disaster hazards, risks and vulnerabilities. For the Afar especially, there is a palpable feeling of pride and optimism in the new government. In addition, where officials are being paid, this has increased not only household income but also has enabled officials to support large kinship networks.

However, in Afar and elsewhere, the process of decentralization has resulted in a dramatic mismatch between administrative responsibility and institutional capacity. The resulting inability of new institutions to handle the crisis in some areas has been interpreted as a failure on the part of government officials in the regions (e.g. SNNPR), and is a topic of official sessions for self-criticism (*gemgema*). In rare instances, this has led to the imprisonment of officials.

As many others have noted, there is a critical need for capacity building at the regional and woreda levels. This entails investments in communication equipment (preferably solar-powered in the pastoral areas), training of personnel, providing office materials and supporting transportation. It also should include measures to empower government officials to engage with the management of disaster hazards, risk and vulnerabilities through rewarding positive performance and encouraging

the adoption of a humanitarian ethos in all matters of government. This not only requires a common understanding of methodologies and assessments but must also be based on trust that the center will respond appropriately to the periphery. Timely and accurate assessments and communication of disaster vulnerabilities should not be taken as reflections of failure but rather as encouraging signs of responsibility, accountability and good governance. To achieve this, officials at all level have to be trained in and sensitized to both a culture of disaster preparedness and response as well as to the humanitarian laws and principles that inform humanitarian endeavors.

For this to be accomplished, the entire body of government needs to become engaged in disaster management, rather than leaving this to the narrow mandate of the DPPC/B. This is particularly critical for the line ministries of health, agriculture and water resources, each of which would be well advised to establish standing capacities for addressing disasters. A host of government agencies must remain committed, year in and year out, to ensuring that the capacity to prevent, detect, manage and recover from famines is established and supported within the systems of governance, in good years and in bad. The hazards that underpin the current crisis will never fully disappear from the landscape of Ethiopia but they can be mitigated through development. Nevertheless, disasters will strike time and again, just as they do in all of the countries of the world. A critical component of Ethiopia's development strategy must recognize these hazards and a range of institutions must be capacitated and empowered to be ever-vigilant and ever-prepared to manage them. However, there appears little commitment to the agenda of building emergency response capacities, despite the chronic nature of crises in Ethiopia.

SECTION FOUR: FAMINE THEORY

Whether it is sheep losses in Shinille, premature consumption of enset in Sidamo, crop failure in Haraghe or distress migration to Dire Dawa, the disaster response effort has not been adequate to prevent the emergence of acute malnutrition or rates of mortality elevated to emergency levels.[35] Other measures (including asset erosion, distress migration, delayed marriage, and the use of other emergency coping strategies) have signaled that various vulnerable populations are facing serious crises. From an early warning perspective, there is only a limited range of explanations for why this situation exists:

1. There was not adequate early warning
2. Early warning signals were ignored or triggered insufficient responses
3. Early warning signals triggered inappropriate responses
4. The early warning systems are not adequately designed to capture the full range of vulnerabilities

Elements of each of these explanations hold true. For some vulnerable communities, there are no systems of early warning or, where they exist, processes of administrative decentralization have yet to mature adequately for them to function effectively. For these communities, the "early warning" of crisis comes only after the disaster has developed. The DPPC's earliest warnings in 2002 resulted in the government's release of 45,000 MT of food from its emergency stocks, but this was inadequate to prevent a crisis from developing. Many within government, donors, the UN and NGOs took a "wait and see" attitude, with several taking decisions to upgrade their emergency assistance levels until lagging indicators became apparent (e.g. thousands of cattle carcasses in Afar, emergency levels of malnutrition in the under five population)[36]. Others simply elected to dismiss the warnings and failed to develop appropriate emergency response strategies.

Lastly, the early warning signals triggered inappropriate responses by focusing the emergency response on high tonnages of food aid. This was problematic for a number of reasons. There was a near exclusion of non-food assistance in the processes of early warning, assessment and response. Further, adequate mechanisms were not in place to ensure that the food aid that was requested could be prioritized to the most vulnerable populations in a form that was timely and nutritionally adequate for the specific (and highly variable) vulnerabilities of the assisted populations. Critically, there was no way of determining if food aid was the most appropriate response to identified vulnerabilities (e.g. as opposed to cash, emergency public health, livestock support or other emergency measures).

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[35] There are four important caveats to interpretation of these data: 1) Confidence intervals are not available at this time, making interpretation difficult, 2) Some surveys may have underestimated mortality through errors in methodology. 3) Some surveys may have used a sampling frame, which excluded households that were mobile. 4) There are no mortality data for the majority of drought-affected districts. Brennan

[36] For example, although the DPPC appeals were released in December and March, food aid pledges were not fully announced until July, 2003, while non-food aid appeals remain under-resourced at the time of writing.

Globally, sources of disasters are more often related to social, economic, political and environmental processes than the vagaries of nature (Blaikie et al., 1994). However, in Ethiopia, the early warning systems do not issue warnings of major crises (and/or their warnings are not perceived as credible) in the absence of drought. When successive rains fail, Ethiopia is announced as a disaster; when they return, Ethiopia becomes officially "ready" to return to the tasks of development. These clinical and climatic definitions of emergencies downplay important political, social and economic aspects of vulnerability, e.g. the continuing marginalization of pastoralist communities and ethnic minorities, the prolonged impact of the ban on the export of live livestock and the global recession for world coffee producers (de Waal, 2000).

Table 9. DPPC, WFP and USAID Early Warnings Systems, Objectives and Analytical Frameworks, as Reported by Agency

Early Warning System	Objective of Systems, as Reported by Agency	Key Analytical Frameworks, as Reported by Agency
DPPC	Provide assessments of food prospects within the country and detect the likelihood of deterioration in food security or impending disasters; Monitor prospects of food supplies and predict or prevent wide spread famines like that which occurred in 1974/75, and 1984/85; Define priority areas to be visited by bi-annual and seasonal assessments; Determine the magnitude of the problem and likely impact upon the population and formulate contingency plans; Determine the number of people likely to need assistance, amount and duration of assistance required.	Food availability or famine sequences model (Dyson O'Grada 2002).
WFP/VAM	Provide the factual basis for WFP country program design, in both relief and development; Characterize vulnerability and food security in Ethiopia; Provide ongoing additional information and analytical support as needed during relief and implementation of development program, monitoring and evaluation phases; Provide early warning data in partnership with other actors by monitoring a range of indicators; Develop and introduce new assessment methodologies; Improve geographical targeting, beneficiary targeting, and to identify potential sectors of intervention.	Chamber's model of risk and vulnerability (risk + coping = vulnerability)
USAID/FEWS	Analyze monthly data which will provide an early indication of potential food shortages in Ethiopia; Improve response planning based on relevant food security information; Monitor vulnerability of rural HHs to food insecurity; Improve local monitoring and analysis; Network development and capacity building; Contingency and strengthening response plans.	Food economy and livelihoods

Food aid contributions represent massive transfers of resources, only a portion of which actually reach targeted populations. Masefield estimated that the total value of food aid requested by the government for the 1999/2 crisis was valued at between $300,000,000 and $500,000,000 (Masefield, 2001b). In any given year, food aid accounts for 2% - 18% of domestic supply (Habtewold, 2001).

In order to understand how food aid (particularly cereals) has come to play such a central role in disaster response in Ethiopia, a close look is needed at *who* defines vulnerability and *how* vulnerability is defined. The prevailing model of crisis in Ethiopia privileges the role of food availability (both the decline of food due to drought-induced production failures and the role of food aid in alleviating crisis) over broader issues of access and entitlements. In addition, the primary actors (DPPC, WFP and USAID) that monitor and report emergency vulnerabilities all are strongly biased towards food aid (see Table 9). In the context of crisis, these institutions are also organizationally more powerful than institutions dealing with non-food aspects of emergencies (e.g. the Ministries of Health, Agriculture and Water Resources, UNICEF, FAO).

In Ethiopia, food aid holds specific political, social and economic significance that is unmatched by other forms of emergency assistance. The government implicitly measures donor confidence by the quantities of food aid pledged against its appeals. Higher contributions are taken as a signal of donor approval of the government; lower contributions as a signal of concern. Given the deeply politicized nature of food aid historically in Ethiopia (e.g. the use of food aid from the USG as strategic support to the TPLF and the EPLF in the 1980s/1990s), this is not surprising (Duffield and Prendergast, 1994). Similar views are held by the public, both in Ethiopia and abroad: disaster assistance is equated with (media-friendly images of) sacks of food aid.

For many disaster-affected communities in Ethiopia, requesting food aid is also a pragmatic response: in many of the most marginalized areas of the country, the DPPC/B is the only body of government capable of delivering any form of emergency services. Over time, food aid has evolved as the primary form of welfare for the most impoverished, for lack of other resources. This "chronically vulnerable" population totals between four and five million people each year. FFW schemes are termed as "employment generation," while experimentation is underway for using elevated rations of food aid in order to promote "relief to development" in select communities. The idea of using other resources, e.g. cash, to fulfill these roles appears wholly absent from relief and development discourse in Ethiopia. Despite (or perhaps in spite of) food aid's multiple functions, there is very little discussion of questions of "errors of inclusion", i.e., populations that have received emergency food aid for reasons other than potential acute food insecurity (Rami, 2003, Sen, 1981, Young and Jaspars, 1995a). Analysis of these issues, such as the work of Clay et al., has been discredited by government and UN bodies.

A range of vulnerabilities to emergencies in Ethiopia is assumed to be controllable primarily through the injection of (at times massive quantities of) food assistance. Writing in September 2002, the DPPC clearly articulated this:

> Meeting food needs for the remainder of 2002 is critical for the containment of a highly volatile situation from which the slightest departure from planned assistance schedules or interruption in delivery of basic and supplementary food will result in a rapid deterioration in nutritional status…While it is important to highlight that the needs arising from the current drought cross all sectors (water, health, agriculture and livestock), and that response to them is inherently important to life saving and sustaining interventions, *the single most prominent and demanding need - and the one for which resources must be mobilised well in advance for logistics and allocation reasons - is for food* (DPPC, 2002b) (emphasis added).

The donors have responded to this and other appeals with remarkable contributions of food aid.

Table 10. Donor Pledges of Food Aid as Percent of Total Food Aid Request ***(Hicks, 2003)***

Relief Food Assistance to Small Scale Farmers and Drought Affected Pastoralists 1 January to 31 December 2003						
2003 REQUIREMENTS	**CEREALS**	**BLENDED FOOD**	**VEG. OIL**	**PULSES**	**TOTAL TONES**	**TOTAL US$**
GOVERNMENT (DPPC)/UN JOINT APPEAL						
Gross Requirements	**1,399,214**	**135,375**	**6,750**	**10,000**	**1,551,339**	
Contributions via WFP	464,830	79,384	6,232	9,994	**560,440**	$239,797,056
Contributions via UNICEF	-	4,000	-	-	**4,000**	$3,000,000
Contributions via DPPC	360,719	5,536	-	-	**366,255**	$93,231,840
Contributions via NGOs	574,984	38,666	7,790	-	**621,440**	$187,475,899
Total Contributions	**1,400,533**	**127,586**	**14,022**	**9,994**	**1,552,135**	**523,504,795**
Resourced Amount	**100%**	**94%**	**208%**	**100%**	**100%**	

In government and media and among many in the humanitarian community, it is widely assumed that such a robust food aid response should arrest malnutrition, increase food security and reduce emergency levels of mortality, as the following typical excerpt from a WFP document demonstrates:

> Due to a prolonged lean season in crop-dependent areas as well as poor rains in between March and May in northeastern pastoral areas, crop and livestock products were not available for consumption. In most areas, after a good harvest in 2001/2, stocks were sufficient to fill the gap. However in chronic food insecure areas, such as West Haraghe, the children were the first to suffer. At the peak of the crisis, child mortality rates were substantially above the 1/10,000/day cut-off (sic)[37]. Since then mortality rates have been controlled with significant humanitarian efforts…Since November 2002, food aid distributions and a small harvest have largely contained the problem…Adequate food distributions must continue or the food security situation risks very quickly deteriorating (World Food Programme, 2003).

[37] The international standard cut-off for emergency levels of mortality for the under five population is 2/10,000/day. For the general population, crude mortality rates above 1/10,000/day indicate emergencies. There is a notable lack of consistency in applying these cut-offs: in other WFP and ECHO documents, for example, cut-off rates for mortality in emergencies were quoted as high as 3/10,000/day. In interviews with the team, some donor officials expressed skepticism about the relevance of emergency cut-offs in Ethiopia, gives the appalling overall state of health in Ethiopia. Brennan conducted a technical examination of these questions and determined that the baseline CMR for Ethiopia is 0.85/10,000/day. This was based on CSA data collected in 2000, a crisis year; therefore it can be assumed that this CMR therefore is greater than the baseline CMR for Ethiopia in a non-crisis year. CMRs in excess of 1/10,000/day in Ethiopia should be interpreted as lagging indicators of great distress.

Where problems of emergency malnutrition and mortality have emerged, this has been attributed strictly to insufficient distributions of food aid. Emergency conditions have been attributed to government and donor policies regarding the food aid basket (SC (UK), 2003), dilution of rations due to sharing, underestimation of food aid needs in the annual assessment processes, and political pressures (both domestic and international) to reduce food aid numbers. These assumptions are perpetuated by continued "under-deliveries" of food aid, compared to assessed needs (see Table 11).

In interviews with WFP staff in Addis, the team was challenged to "find a place where the 12.5 kg/person/month ration had been provided and still had malnutrition," i.e., the working assumption is that so long as food aid rations are supplied on a timely basis, malnutrition can be controlled. This assumption downplays both the inadequacy of the ration (in terms of both caloric composition and nutritional balance) as well as the other factors leading to malnutrition, especially the underlying causes of malnutrition (e.g. health issues, social environment of care, livelihood stresses, etc.) (Dyer, 1996). Further, this line of reasoning tends to cause institutions to assume a neat and linear relationship between malnutrition and mortality but both recent data from Ethiopia and research from other crises show that this relationship can be quite complicated (Young and Jaspars, 1996, Toole and Waldman, 1997, Tonglet et al., 1999, Rice et al., 2000, Brundtland, 2000).

For the current crisis, several nutrition surveys have found levels of emergency mortality even in the absence of emergency levels of malnutrition, as per Table 11. However, because anthropometry data are used as the primary indicators of emergency, these mortality crises tend to be overlooked, e.g. the August and September 2002 surveys (highlighted in bold, below) indicated a serious crisis in SNNPR, but emergency operations for this region have only recently begun in earnest and only after *nutritional surveys* demonstrated emergency levels of malnutrition.

Table 11. Emergency Mortality, Low Malnutrition, Select Areas of Ethiopia, 2002 – 2003 (DPPC, 2003)[38]

Agency	Region	Zone	Woreda	Date of Survey	GAM (95% CI)	SAM (95% CI)	Mortality/ 10,000/day	
							CMR	U5MR
World Vision	Afar	Zone 1	Dubti	Feb '03	10.3% (7.3%,14.3%)	1.54% (0.5%, 0.7%)	1.05	2.82
World Vision	Afar	Zone 1	Afambo	Feb '03	9.9% (7%, 14%)	0.32% (0.02%, 2%)	1.55	--
DPPC, BDPP, SC (UK)	Somali	Shinille	Afdem & Mieso	Dec '02	13.7 (10.8%, 16.7%)	0.3% (0%, 0.7%)	0.97	2.53
DPPC, BDPP, SC (UK)	Somali	Shinille	Dembel, Aisha, Erer & Shinille	Dec '02	16.4% (13.1%, 19.7%)	1.2% (0.4%, 2.1%)	1.09	3.66
DPPC, BDPP, SC (UK)	Somali	Shinille	Dembel, Erer & Shinille	Dec '02	18.0% (14.3%, 21.7%)	2.0% (0.9%, 3.1%)	1.09	3.66
DPPC, WFP, CARE, SC-	Oromiya	W. Haraghe	Chiro, Goba Koricha, Habro,	Sept. '02	7.9% (6.4%, 10%)	1.6% (0.9%, 4.5%)	.97	3.01

[38] International standards of emergency cut-offs are GAM > 15%; U5MR > 2/10,000/day; MR > 1/10,000/day.

Agency	Region	Zone	Woreda	Date of Survey	GAM (95% CI)	SAM (95% CI)	Mortality/ 10,000/day	
							CMR	U5MR
UK			Darolebu and Kuni					
DPPC, WFP, CARE, SC-UK	Oromiya	W. Haraghe	Mieso, Goba Koricha Habro, Darolebu, Boke	Sept. '02	15.1% (12.9%, 17.6)	3.6% (2.6%, 5.1%)	1.64	3.5
DPPC, SC (UK)	**SNNPR**	**Hadia**	**Badawacho and Soro**	**Sept. '02**	**10.3% (7%, 13.6%)**	**1.2% (0.3%, 2.2%)**	**0.53**	**2.55**
CONCERN	**SNNPR**	**Wolayta**	**Damot Weyde**	**Aug. '02**	**7.2% (5%, 10.2%)**	**0.8% (0.2%, 2.3%)**	**0.6**	**2.1**
SC (UK)	Amhara	N. Gondor	Belesa	Jul. '02	13% (10.2%, 15.7%)	0.8% (0.2%, 1.4%)	1.67	2.96

Famine Theory and Definitions of Crisis

There is particular interest within the U.S. Government regarding how to classify the current crisis in Ethiopia. On a number of occasions, the team was asked "Is there a famine in Ethiopia?" Underlying this question is the assumption that famines are events that happen rather than processes that evolve. As the anthropologist Barb Hendrie (1997) writes,

> Typically it is the *fact* of famine's occurrence, and particularly its biological manifestations, to which institutional attention is overwhelmingly directed. The specificity of the context in which famine develops, and the means by which it progresses, receive far less attention.

To understand famine as a process, as opposed to an event, highlights not only the processes leading to its critical juncture but also underscores the importance of recovery. In Ethiopia, the DPPC is, at least in name, charged with disaster prevention and preparedness. It is unclear where institutional responsibility for prevention of livelihood erosion and post-crisis recovery rests.

Communities have their own ways of determining and defining famine. For some communities, vulnerability, emergencies, disasters or crisis can exist in the absence of alarming levels of human malnutrition, morbidity or mortality, and they can happen with or without rainfall. Table 12 provides examples from Kenya of community perceptions of drought-related crisis.

Table 12. Select Community Descriptions of Selected Droughts, 20th Century Kenya (Pratt, 2001)

Year	Tribe	Nature of Crisis	Community Name of Crisis	Explanation of Name of Crisis
1922	Gurre	Drought	*Kamis Nyatu*, "Thursday of Eaters"	People reached stage of slaughtering water transport animals as all other available livestock had either died or was previously eaten.
1958	Muralle	Drought	*Septi Wantwale*,	Drought led to irregular patterns of

Year	Tribe	Nature of Crisis	Community Name of Crisis	Explanation of Name of Crisis
			"Saturday of Confusion"	migration, as no one knew where to go.
1959	Muralle	Drought	*Ahad Jerjarau*, "Sunday of Cuttings"	Much dry cold wind with severe drought led to severely chapped skin (i.e. cuttings) – Sheep were slaughtered and the oil applied to people's skin
1975	Muralle	Drought	*Talaatha Du Kawein*, Tuesday Greater than Old Men	No one living had ever seen a drought as severe.
1991	Corner	Drought	*Kamis Galas Kat* "Thursday of Containers"	People took *galas* to Mandera to beg for food
1999	Muralle	Drought	*Maqal*, "We have never heard or seen"	A drought of this duration has never been heard of or seen previously.

The existence of famine, or not, in Ethiopia is not simply a technical question. Alex de Waal once wrote, "Who defines an event as a 'famine' is a question of power relations within and between societies." The concept of famine has long held political significance in Ethiopia. For the US, the genesis of this question extends far beyond the borders of Ethiopia. USAID staff from Washington to the field missions are keenly aware that US President George W. Bush has declared that there is to be "no famine on my watch".

How crises are developed and defined, why they occur and what type of impact they have on different segments on populations is part of the body of knowledge referred to as famine theory. The existence, or not, of famine in Ethiopia depends in part on how the term is defined. Ethiopian scholars concerned with the specific context of livelihoods crises focus on the cumulative effects of continuing structural changes in the country's farming systems. These scholars analyze how poverty leads to increasing destitution and the processes of "virulent famines" (where starvation is widespread and evident) and "hidden famines" (where starvation is not observed and may only be detected in annual statistics) (Rahmato, 2003).

Issues of definition are important because they both reflect and inform institutional understandings of crises. As Hendrie wrote (with reference to Tigrayan refugees in Sudan):

> Different discourses on 'famine' can lead to the dominance of certain kinds of institutional practices, and the prioritization of special kinds of knowledge, at the expense of other modes of understanding and action.(Hendrie, 1997b) p. 57

In humanitarian, development and political communities, there is at present no universally accepted, single definition of famine, although debates abound (Devereaux, 1993, Sen, 1981, Von Braun et al., 1998, Devereaux, 2002, de Waal, 1990, de Waal, 1989b). Different disciplines each draw on different definitions of famine. Nobel Laureate Amartya Sen, for example, wrote that

"starvation…is the wider sense of people going without adequate food while famine is a particularly virulent manifestation of its causing widespread death" (Sen, 1981).

In Ethiopia, current definitions of famine are based on ideas of food availability. Food Availability Decline (FAD) theories of famine posit that disasters are caused by production failures or population growth. Vulnerability to crisis in Ethiopia is widely described using a FAD model. As Hendrie (1997) would have predicted, this particular discourse has led to a specific form of institutional response. The characterization of the crisis in this manner rather naturally induces an overwhelmingly biased food aid response. For example:

> Ethiopia, like other countries in the Horn of Africa, is subject to highly variable and erratic climatic conditions. Drought is a recurrent problem. Most parts of the country "normally" have at least two rainy seasons in a year, but one or even both of these frequently fail. When this happens harvests are poor and livestock may die. During prolonged droughts many households exhaust their own food supplies and have to sell what assets they have to buy more. When their assets run out they become dependent on food aid and if this does not reach them deaths from starvation result (DFID 2003:12-13).

The DPPC (DPPC, 1995) refers to the Webb, et al., definition of famine:

> famine is defined as extreme, geographically concentrated food-consumption shortfalls that result in loss of body weight and a rise in mortality. The key symptoms of famine include sharp shortfalls in food consumption (even when starting from low levels in absolute terms), increased reliance on foraged foods that are unusual to the diet, irretrievable disposal of productive assets, community dislocation (increased distress migration and out-migration of entire families), and a jump in excess mortality above "normal" rates due to undernutrition (Webb et al., 1992).

For USAID, the most influential writer on famine remains the late Fred Cuny. Cuny defined famine as, "A set of conditions that occur when large numbers of people in a region cannot obtain sufficient food, and widespread, acute malnutrition results." (Cuny, 1999).

As a further indication of the Cuny's influence, USAID/Addis, WFP/Ethiopia and the DPPC have adopted thirteen "pre-famine indicators" based on his work and use these as one tool to monitor food security as well as to determine priority areas for distributions of limited relief resources (e.g. CSB). Performance against these indicators has even been mapped by WFP using GIS mapping.

The indicators used by these institutions are very close to Cuny's "Indicators of Imminent Crisis" that were published posthumously in 1999 (Cuny, 1999). Although there is tremendous interest in these "pre-famine indicators", they represent only a selection of Cuny's indicators. (See Table 13 "Indicators of Vulnerability" and "Indicators of Famine."). One indicator has been borrowed from the Indicators of Vulnerability "political instability" and incorporated into the list of "Pre-Famine Indicators" routinely analyzed by the major food aid organizations. A new indicator "widespread

sales of land"[39] has also been added while "crop failure" has been (rather oddly) excluded. Importantly, none of Cuny's indicators are specific to pastoral risk and vulnerability. Cuny also defined "indicators of famine", also repeated in Table 13, below. None of the institutions that are using the "pre-famine" indicators have adopted Cuny's "indicators of famine." By Cuny's definition, Ethiopia was and is experiencing a famine.

Table 13. Cuny Indicators of Vulnerability, Imminent Crisis and Famine and WFP/DPPC Pre-Famine Indicators

Cuny "Indicators of Vulnerability"	Cuny "Indicators of Imminent Crisis"	WFP/DPPC "Pre-Famine Indicators"	Cuny "Indicators of Famine"
Subsistence cultivation	Prolonged drought	Effects of political instability on food availability and access	Increased rates of death
Recurring rainfall shortages	Onset of a natural disaster (flood, infest infestations)	Prolonged drought/ Onset of a natural disaster	Migration
Heavy debt burden among farmers	Crop failure		Some family members going to urban areas to work
Low food reserves	Increased price of staples	Increased price of staples	Increased rates of low or abnormal growth in children
Political instability	Rise in price ratio of staple grain to prevailing wages	Rise in price ratio of staple grain to prevailing wages	Increased rates of famine-related diseases such as measles
Farmers required to work part time off their lands	Increase in lending rates in the informal lending sector	Increase in lending rates in the informal lending sector	Edema in young children
Increasing desertification, soil erosion, or deforestation	Increase in sales of livestock and decrease in average sale price	Increase in sales of livestock and decrease in average sale price	Increased rates of vitamin deficiencies
Increasing salinity of soils	Increased distress sales	Increased distress sales	Increased rates of nutritional disorders
	Increase in deaths among livestock	Increase in deaths among livestock	Sale of traction animals such as oxen
	Unusual sales of possessions such as jewelry, ornaments, etc.	Unusual sales of possessions such as jewelry, ornaments, etc.	Consumption of seeds
	Seed shortage or increased cost of seeds	Seed shortage or increased cost of seeds	
	Widespread hoarding of grains by dealers	Increased hoarding of grains by dealers	
	Consumption of animals by pastoralists	Consumption of animals by pastoralists	
	Consumption of famine foods	Consumption of famine foods	
		Widespread sales of land at abnormally low prices	

Both the Webb, et al., and the Cuny definitions are based conceptually on famine as an event (rather than a process) associated with sharp decreases in food consumption. The institutions' choices of

[39] An unusual indicator given institutional constraints in selling land in Ethiopia.

definition partly explains their heavy emphasis on food-based intervention (and relatively weak non-food – especially health) strategies for crisis prevention, mitigation and response. That these major disaster relief organizations conceptualize famine as the product of natural disasters and food shortages is not unusual (Keen, 1994), however, it is particularly problematic in Ethiopia given the broad range of vulnerabilities facing disaster-affected populations.

Other authors that have written on famines also emphasize how famines are characterized by a loss of availability and/or access to food, with malnutrition emerging as a result. However, some authors also emphasize the role that diseases play in famine mortality and the concept of famine as a process (with mortality and malnutrition as only the final stage of famine) e.g.:

- The regional failure of food production or distribution systems, leading to sharply increased mortality due to starvation and associated disease. (Field, 1993)
- Extreme and general shortage of food causing distress and death from starvation among the population. (Dyson and O'Grada, 2002)
- The **later stages of food scarcity** when people become destitute and many more than normal die because of the conditions produced by famines which encourage the spread of disease. (Young, 1992) emphasis in the original)
- Famine is a socio-economic process which causes the accelerated destitution of the most vulnerable, marginal and least powerful groups in a community, to a point where they can no longer, as a group, maintain a sustainable livelihood. Ultimately, the process leads to an inability of the individual to acquire sufficient food to sustain life (Walker, 1988).

Box 5. Demography and Famine

Demographers bring a different focus to the study of famines. A recent work by Dyson & O' Grada (2002) summarizes the demographic impact of famines, based on historical reviews of mortality, fertility and migration patterns.

Demographic Effects of Famine – Mortality

- Mortality increases during famine
- 'Normal' seasonal distribution of death is amplified
- Increased under-nutrition is the principal underlying cause of famine mortality; it reflects a lack of access to food among a part (or, rarely, all) of the population.
- Famines and epidemics often operate synergistically
- The largest number of famine deaths happen to young children; this age group and the elderly experience the greatest absolute increases in death rates
- The greatest proportional increases in death rates tend to occur in ages where death rates are relatively low during normal times
- The mortality of males increases by more than that of females
- The frequency of suicide increases during famines
- Famine mortality varies inversely with socio-economic status

Demographic Effects of Famine - Fertility

- The build-up of famine conditions causes a lagged decline (lag duration approximately 9 months) in births
- Famines induce a decline in the frequency of marriages
- Social and psychological factors contribute to fertility decline in all famines; biological factors tend to operate only in the most severe and lengthy crises
- Soon after the end of the famine there is usually a short-term increase – 'rebound' – in births

Demographic Effects of Famine – Long Term

- The post-famine populations age structure has proportionally more people aged 10 – 45 than applied pre-famine
- The post famine population structure is more feminine than applied pre-famine.
- The rate of natural increase over the medium-run is boosted, speeding the demographic recovery
- Famines have long-run consequences for the health of affected survivors.

Understanding Famine

Defining famine is different from understanding why famines happen, or how best to address them when famine vulnerabilities arise. According to Devereaux, there is some general agreement (at least in academic circles) about understanding famines:

- Famines are an intensification of 'normal' processes versus an aberrant event (Rangasami)
- Famines are not always triggered by a decline in food availability (Sen)
- Communities affected don't always regard excess mortality as a prerequisite (Iliffe)
- Deaths during famine is related more to disease than starvation (de Waal)

There are three general theories to explain why famines happen: population pressures (neo-Malthusiasts), economics (entitlement failures, including those relating to supply, e.g. droughts, flood), and politics (complex emergencies). Despite considerable work on famine theory, the idea of drought-induced production failures and/or overpopulation continue to exert strong influence over institutional understanding of famines.

The oldest theories about famines originate from Thomas Malthus' writings at the end of the eighteenth century (Malthus, 1798). Malthus argued that the fixed amount of land sets an absolute limit to the increase in the population. By extension, he wrote, famines were 'natural checks' that bring population and the supply of (productive) land into balance (Backes and Meier-Ewert, 2002). Specifically, Malthus (1798:4) wrote:

> *Population, when unchecked, grows in geometrical ratio. Subsistence increases only in arithmetical ratio. A slight acquaintance with numbers will (show) the immensity of the first power in comparison to the second.*

In the Malthusian model of famine, population growth outpaced agriculture output. Starvation then resulted in famine deaths. (see Figure 8).

Figure 8. The Malthusian Model of Famine*

POPULATION GROWTH > PRODUCTION

↓

STARVATION

↓

DEATH

* Arrows indicate "increased risk of"

Malthusian logic was used to justify inaction in the face of devastating famines in Africa and Asia at the end of the 1800s. It was believed that massive starvation would continue until the population was once again balanced with the carrying capacity of the land. To interfere with this process, it was argued, was irresponsible. For example, in 1881 the British Finance Minister, reviewing his government's response to famines in India from 1876 – 1879, wrote "Every benevolent attempt made to mitigate the effects of famine and defective sanitation serves but to enhance the evil resulting from overpopulation" (Davis, 2001).

Malthus grossly underestimated expectations for technological innovation and he did not take into account the relationship between increased standards of living and reduced population growth. Watkins and Menken, writing in 1985, proved that famines historically have not slowed population growth because they are always followed by a post-famine population boom. This is logical. Historically, famine mortality has been concentrated around the very young and the very old (Dyson and O'Grada, 2002). Whether these patterns of mortality will continue where famines occur in areas with high HIV/AIDS prevalence is still very much open to debate**.**

Although Malthus' core arguments have been discredited, his ideas still influence the humanitarian community.[40] There remains a Malthusian legacy in the practice of famine relief, especially

[40] Even UN documents occasionally show Malthusian logic. A (since retracted) UN-EUE report in April 2003 called for the sanctions to enforce population control in Ethiopia as a way of preventing future crises.

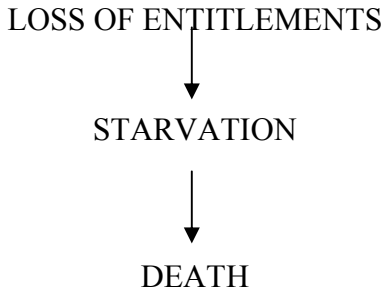
relating to dominance of technical approaches to famine management, as opposed to political or social responses. De Waal explains:

> The criterion of famine became a measurable increase in the death rate of an aggregation of individuals, diagnosed by medical practitioners as being due to starvation and causally related to the measurable decrease in the availability of food. Demographers, physicians, and agriculture statisticians were now needed to diagnose famine. The tendency to treat famine as a technical malfunction rather than a social manifestation has been with us ever since (de Waal, 1989b).

Amartya Sen and Alex de Waal are individually credited for offering substantial improvements to the strictly natural disaster-induced Food Availability Decline theory of famines. Sen and de Waal each explained how famines could occur, even in times of plenty. Sen considered famine vulnerability through the lens of economics, and described four types of "entitlements", failure of which (alone or in combination) could lead to a crisis, also referred to as a Food Entitlement Decline (FED). Sen described four legal "entitlements" by which households obtain food: a) a production-based entitlement, b) an exchange-based entitlement, c) an own-labor entitlement, and, d) an inheritance and transfer entitlement, i.e., households have claims on others/institutions to assist them in accessing food). Sen famously wrote that "Starvation is the characteristic of some people not having enough to eat. It is not the characteristic of there not being enough to eat." (Sen, 1981) page 1. While Sen is credited with formalizing FED theories, awareness of the role of a loss of *access* to food dates back over 100 years (Davis, 2001).

The fundamental assumption that famine deaths were primarily attributable to starvation remained unchallenged by Sen (see Figure 9. Sen's Starvation Model)

Figure 9. Sen's Starvation Model of Famine (de Waal, 1989a)*

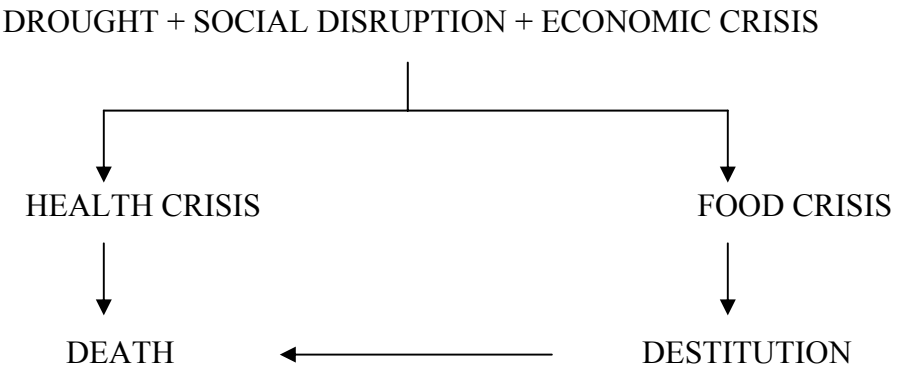


* Arrows indicate "increased risk of"

De Waal improved upon Sen's theories, showing how households elect to forego food consumption in order to protect essential assets in times of stress, thus challenging the assumption that distressed household's first priority is always to obtain food. In addition, de Waal's work on the crisis in Sudan in the 1980s added to literature on the demography of famine by demonstrating that, in most famines, deaths are due to disease rather than outright starvation. This "health model of crisis" is important for understanding the particularly lethal relationship between malnutrition and diseases,

especially malaria, measles, acute respiratory infections and diarrheal diseases, that, with malnutrition, are usually the leading causes of mortality in disasters (Toole and Waldman, 1997). The health model of crisis is depicted as Figure 10.

Figure 10. Health Model of Crisis, adapted from (de Waal, 1989a)



* Arrows indicate "increased risk of"

This model does *not* dismiss the relationship between the risk of starvation and death; rather, it improves upon our understanding of the multiple pathways to disaster-related mortality. Food crises and destitution are linked to risk of death. Food crises lead to malnutrition, and in some cases outright starvation. Malnutrition greatly exacerbates the risk of morbidity and related deaths. This has been the case historically as well. Reviewing mortality in the Irish Famine from 1845 – 1850, the authors asked:

> What did people *really* die of during past famines? The short answer to this question is that they died mainly of infectious diseases…Hunger and infectious diseases interact in complicated ways, some of which operated through the human body and some through the fabric of human society. (Mokyr and O'Grada, 2002).

According to Devereaux famines, then, are associated with increases in both the susceptibility (through malnutrition and other stresses) as well as the exposure to diseases (through displacement, epidemics, gatherings for community discussions of the crisis or for relief distributions, etc.) Importantly, in the presence of communicable diseases, mortality can increase (at times sharply) even for individuals not usually assumed to be affected by disasters, e.g. men and women of working age, the wealthy and the powerful.

Sen (1981) and de Waal (2000) have both written about the role of democratic institutions and famines. Other theories of famine elaborate why markets often fail to address food shortages in times of famine, attributing this to weak purchasing power, transportation costs that lead to spatial segmentation or informational asymmetry that leads to vulnerabilities to speculation and hoarding (Ravallion, 1987, Seaman and Holt, 1980, Backes and Meier-Ewert, 2002).

To conclude, there is marked room for incorporating these and other innovations in famine theory into the processes, institutions, and policies informing disaster preparedness, prevention, mitigation, and recovery.

SECTION FIVE: THE CURRENT CRISIS AND RESPONSES

Donors

Although often characterized as dependent on foreign aid, Ethiopia has diverse community and cultural traditions for giving aid and succor to the destitute, displaced and disabled. These processes are found in the various religious institutions' alms systems, in the systems of fostering, adoption and extending fictive kinships to those facing troubled times, and in other community aid mechanisms and reciprocal systems of social welfare. As a state, Ethiopia has one of the oldest Red Cross Societies in Africa (the 48th society to be established globally) and has an extensive history of disaster and conflict related response systems. Ethiopia has extended aid to people from other countries including, *inter alia,* persecuted Muslims, Armenian refugees, White Russians fleeing the overthrow of the Czar, South African victims of Apartheid, and refugees from Sudan, Somalia and other war affected countries. Ethiopia has contributed to various peacekeeping missions beginning with Korea in the 1950s, Congo in the 1960s, Rwanda in the 1990s, and, most recently, Burundi in 2003. The Ethiopian public needs to be reminded periodically of these generosities as they berate themselves unnecessarily for being "victims", "beggars" and "dependent on foreign aid".

An element of the teams Terms of Reference is to, "Review key donors'…humanitarian strategies and assistance portfolios for the immediate to medium-term crisis in Ethiopia." There is a long history of donor relationships with Ethiopia that, like the pastoralists' boom and bust cycles, has seen both good days and bad. For example,

> In 1996, Ethiopia became one of the main recipients of Norwegian development assistance. Since the Ethiopian–Eritrean war (1998–2000), however, Norway has not signed any agreement on bilateral cooperation, and the program is temporarily suspended… It is expected, however, that during this year Norway and the Ethiopian Government will start a dialogue on future cooperation (Royal Ministry of Foreign Affairs, 2002).

In the last crisis, donors were at odds with the Ethiopian Government over issues relating to the conflict with Eritrea (Ministry of Foreign Affairs, 2003, Johnson, 2002). These tensions primarily affected development rather than humanitarian assistance portfolios. Relations between the Ethiopian Government and the donors have improved since the last crisis but several issues remain outstanding, e.g., debt burdens, border demarcation, human rights, trade liberalization, and the current resettlement program (DFAIT, 2003). Several countries (e.g. Ireland and Canada) have granted Ethiopia special status for privileged access to development resources.

In Ethiopia today, donors are concerned about the impact of the current crisis on poverty reduction strategies. The PRSP process has promoted a degree of harmony across donor strategies for Ethiopia, at least in terms of their development portfolios. The process has provided a forum for dialogue and engagement between the donors and the Government. The PRSP's agenda "includes the ADLI strategy, reform of the civil service and the judiciary, decentralization and empowerment

and capacity building…to stimulate a poverty-reducing growth strategy by creating an enabling environment to support private sector development and provide more efficient delivery of public services" (European Food Security Network, 2001). Many donors have adopted elements of this strategy to mirror their own.[41]

Disasters generally are viewed by donors (and government) as exogenous events, something that must be dealt with in order to return to the tasks of development (Duffield, 2001). Notably missing from the PRSP process is recognition that Ethiopia's disasters are endogenous, i.e., embedded, in Ethiopia's ecological, economic, political and social systems. The historical view that disasters strike at the whim of nature remains a powerful narrative in modern Ethiopian development discourse.

For the current emergency, the harmony that characterizes various donors' development strategies does not appear to extend to humanitarian assistance issues. The team indicated in its April briefings to USAID and the DPPC that:

> There are marked differences in the way donors perceive the current situation in Ethiopia, and this is contributing to a lack of cohesion across donor emergency relief strategies. This is partly due to internal donor organizational policies, personality conflicts among donors, systematic bias in assessments that under-emphasize non-food aid-related vulnerabilities and larger geo-political tensions among select Western donor governments, as well as historical and current relationships between donor countries and the GOE (Lautze et al., 2003)

Donors have provided generous contributions of humanitarian assistance to Ethiopia for the on-going crisis, especially of food aid. However, acute crises continue in several regions of the country, raising questions about the implicit message of the Government's appeal, i.e., if you provide us *x* MT of food aid, there will be no crises. This raises further questions about the nature and substance of the appeal process. Here, the nature of the donor response is examined.

The non-food aid responses to the current crisis have been critically insufficient. This is due to both the lack of focus on issues of emergency health (including infectious diseases, nutrition, and water/sanitation) and emergency livelihood interventions (e.g., agriculture, livestock, markets, purchasing power). Few donors have recognized that there is a void of leadership by government for these types of interventions that has been created by institutional barriers (e.g. the line ministries have no standing capacities for emergency response while DPPC's primary emergency relief responsibilities are oriented towards food aid). Unfortunately, this coincides with a failure by the larger emergency non-food aid actors (OFDA, ECHO, UNICEF and FAO) to derive or implement aggressive strategies for these sectors. Across the board (in government and the humanitarian community), there appears little commitment to the agenda of building emergency response capacities, despite the chronic nature of crises in Ethiopia.

The USAID mission in Ethiopia has taken a more aggressive approach in response to the DPPC's appeals than other donors (or some UN agencies and NGOs). The US (until recently) and the EU

[41] See, for example, the priorities of CIDA detailed later in this section.

have prioritized emergency food aid responses to the near exclusion of non-food responses. USAID, WFP and the DPPC have pushed food aid as the primary response to the current crisis. This has troubled some donors who are concerned about the impact and the effectiveness of food aid in Ethiopia (and elsewhere) and the absence of strong non-food emergency strategies. In addition, there are donor representatives who remain unconvinced about the severity of the current crisis and see it as a "normal" (i.e., within expectations) event requiring not emergency aid but rather stronger development assistance commitments on both the part of government and the international community.

These issues, while important, do not alone explain the level of discordance among donors. In order to understand the range of responses by the donor community to the current crisis in Ethiopia, it is important to consider recent events both in Ethiopia and worldwide, starting with events that unfolded in the last crisis that began with the drought's onset in 1997.

Going into the 1999/2000 drought, donors felt that "Ethiopia's food shortages were finally a thing of the past" due to a few seasons of good harvests (Hammond 2001:8). US Government emergency food aid levels had been under 100,000 MT since 1995. The period between 1992 and 1998 were considered as "transition years," implying that there was optimism that the historical patterns of crises would not be the same in the future. In this period, important national capacities for responding to disaster risks and vulnerabilities were reorganized or dismantled. The government mandated that NGOs focus exclusively on development. As a consequence, the NGOs with long experience in disaster relief no longer had sufficient capacities to respond when crises returned in the late 1990s.

In hindsight, however, the mid 1990s may well be considered as a historical anomaly. The drought that commenced in 1997 did not break until 2001. One in six Ethiopians were identified as needing emergency assistance (Hammond, 2001: 1) and the US provided over 600,000 MT of food aid, which was at the time the largest ever contribution of emergency assistance by the US Government to Ethiopia.

Following the 1999/2000 crisis, the official donor community (and other humanitarian institutions) was fairly exhausted from managing the enormous relief effort. Hammond and Maxwell (2002) remind us that:

> Ethiopia was brought to the edge of a major disaster, with some 10 million people estimated to be in need of food assistance at the height of the crisis. A repeat of the catastrophic famine of 1984/85 was avoided, but the numbers of people affected, the loss of life and the destruction of livelihoods made this one of the most serious crises in the Horn of Africa in the past 15 years.

The humanitarian community in Ethiopia emerged from the drought relief operation bruised by the external academic and public criticisms of the humanitarian responses (Salama et al., 2001, Hammond and Maxwell, 2002, Jayne et al., 2000, Clay et al., 1999a, Sandford and Habtu, 2000). Several of these reviews criticized the relief efforts for failing to effectively save lives through the timely and/or appropriate use of relief resources. By contrast, the internal donor evaluations of the response to the 1999/2000 crisis were more positive. This led to a feeling among many in the

humanitarian community that the external evaluations and studies were "unfair" or "inaccurate".[42] For example, emotions still run high, especially within the UN agencies and among some donors, about the work of Dr. Peter Salama in Gode, Somalia (Salama et al., 2001).[43] [44]

The resistance by agencies to external critique is not limited to Ethiopia. Studies of organizational behavior reveal that there are complex processes by which organizations learn, including their responses to critiques (ALNAP, 2001, Escobar, 1995, Apthorpe and Gaspar, 1996). As a consequence, however, going into the current crisis there were few incentives for disaster preparedness, prevention, response or mitigation institutions (either domestic or international) to review and reform their emergency strategies. The current crisis has been characterized by a markedly poor emergency health response, including basic emergency EPI strategies. This is precisely the issue that the Salama et al study highlighted. Health crises have been responsible for extremely high levels of mortality in Ethiopian crises historically. Writing less controversially but equally as competently, Cuny (citing Toole et al 1989) notes that

> Measles killed as many as 50 percent of the Ethiopian children who died in refugee camps in Sudan during the famine of 1984 – 85. Immunization against measles should always be carried out as a precaution, especially in Africa, where the disease among the malnourished is often fatal.

Instead of engaging with the critique of the 1999/2000 crisis, donors felt as though the ending of the 1999/2000 crisis would usher in a period of relatively stability, akin to the 1992 – 1998 period. The hope was that it was both "safe" and prudent to return their focus to pressing issues of development. This was despite the concern expressed by Hammond (writing for USAID/Ethiopia in January 2001) that:

> There is a danger that Donors may become complacent in CY 2001 based on satisfactory agricultural production levels. However, improved agricultural production will not help pastoralists and most *belg* farmers, who do not have access to this harvest and lack the purchasing power to obtain food through the market. There will also be *meher* farmers whose crops did not perform well, who will lack the purchasing power to obtain grain from the local markets (Hammond 2001:27).

Complacency following major relief efforts appears to follow historical patterns. A review of US Government Title II emergency food assistance to Ethiopia (1983 – 2003) shows how emergency assistance tapers off dramatically following acute crises. When the DPPC began to issue warnings about the crisis in 2002, many in the international humanitarian and diplomatic community felt that,

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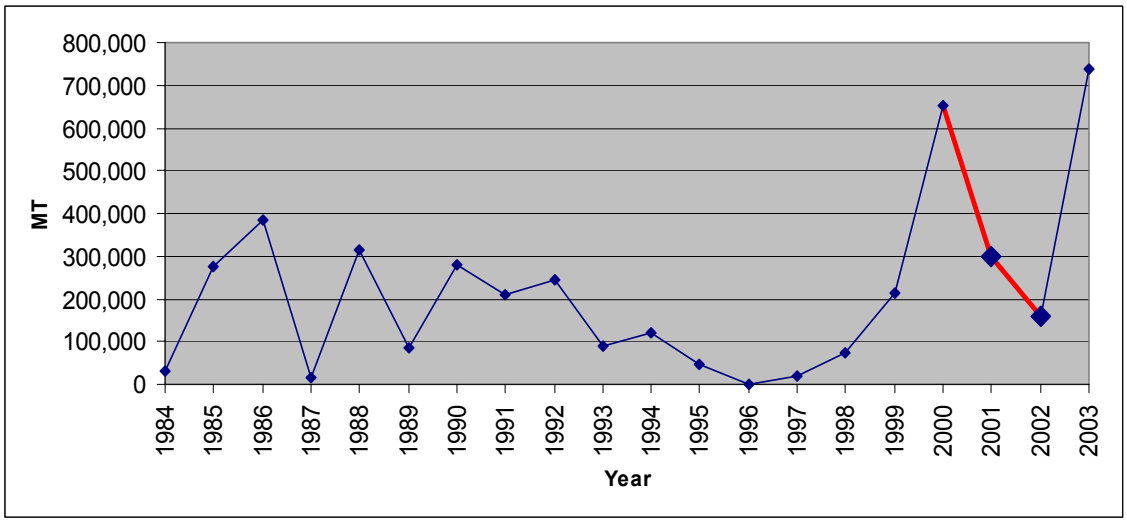
[42] Or, as one donor representative told the team, "Salama's report is the worst bit of work I have ever seen" (expletives deleted).

[43] Given the weakness of the overall non-food aid response to the crisis (especially in the early stages), it can be argued that the government and the humanitarian community in Ethiopia remains vulnerable to the same types of critiques. A key question remains if these actors will be motivated in future to pursue emergency response strategies that are up to international standards.

[44] In the interest of transparency, it is noted here that Dr. Salama works closely with several members of the team and other faculty at the Feinstein International Famine Center.

surely, "this cannot be happening again", i.e., that it was "too soon" for another major crisis to evolve in Ethiopia in 2002. By 2002, levels of US emergency food assistance were trending sharply downward, as the following table indicates (note area highlighted in red).

Table 14. USG Emergency Food Assistance to Ethiopia, 1984 - 2003



Data Source: USAID, ND.

By 2001, much of the Mission's focus had returned turned to important longer term issues of food security, of the HIV/AIDS crisis and of addressing and distinguishing chronic from emergency acute vulnerabilities. A great deal of effort was invested in the Conflict Vulnerability Analysis and of ending the cycle of short term emergency relief to Ethiopia (Raisin, 2002). This was understandable, given the widely accepted, popular narrative that major disasters in Ethiopia only happen about once a decade, e.g. 1973/74, 1984/85, 1991/92/94/95 and 1999/2000. The "once a decade" narrative is also rooted in the 10-year cycle where droughts have coincided with changes in the nature of Ethiopia's political leadership and its governance systems (e.g., 1974 and the fall of the Imperial Regime, 1984 and the change from military dictatorship to communist party based system; and, 1991 and the Transitional GOE).

The "once a decade" narrative, while seductive, is nevertheless ahistorical. In addition to the recurrent crises affecting pastoralist communities, farming populations in Ethiopia has been vulnerable to cycles of disasters that include droughts, usually followed by pests and floods that are frequently exacerbated by conflict.[45] The "once a decade" narrative also is not accurate for US Government emergency responses that exceed $100,000,000 in a fiscal year, which have been necessary nine out of nineteen years, i.e., every other year on average (e.g., 1985-1986; 1988; 1990-1992; 2000-2001; 2003). A review of the history of US Government emergency assistance for Ethiopia demonstrates that (excluding FY 1973 – 1982) there have been only three years since 1965 that disaster assistance has *not* been provided by the USG in Ethiopia: 1966, 1967 and 1996 (See Table 15)

[45] In some areas, e.g. Tigray, repeated exposures to disasters and a high level of investment in disaster management has engendered strong disaster response institutions, e.g. the DPPB of Tigray and REST. In other crisis prone areas, such institutions are weak or absent.

Table 15. Nature of Disaster, Areas affected and USG Emergency Response to Crises in Ethiopia, 1965 – 2003[46]

Year	Nature of Disaster	Area Affected	Type of USG Assistance	Amount of USG Assistance
July – December 1965 (USAID, 1967)	Drought/ Famine	All provinces except Kaffa, Wolega and Illubabur, particularly acute in Wollo	FFP 10,000 MT sorghum and 40,000 bulgur AID funded transport of Church World Service vitamin supply	$6,000,952
1966				$0
1967				$0
May 7, 1968 (USAID, 1968)	Flood	Southeast Ethiopia (vicinity of Kelafo)	Airlift of food; Provision of CSM, non-fat dry milk, wheat	$30,090
1969 (USAID, 1970)	Drought	Hamasion Division, especially the city of Asmara	Water pumps, typhoid medicine, medical personnel, 5,000 MT of grain	$640,000
October 29, 1970 (USAID, 1971)	Cholera Epidemic	4,000 cases with 500 deaths	Medical supplies	$46,865
No data available from FY 1973 – FY 1982				
1983 (USAID, 1983)	Drought/ Famine (also conflict, hail, flashfloods and insect infestations)	Northern provinces of Eritrea, Gondor, Tigray and Wollo	Food aid (mostly through CRS) and cash grants to international organizations	$8,397,991
1984 (USAID, ND, USAID,	Drought/Famine/ Conflict	More than 300,000 dead (between 1983 and 1985) and 6,492,180 people at risk in 1984.	29,635 MT of Title II Emergency food aid. Value of non-food aid likely included in totals for 1985.	$11,107,800

[46] Does not include value of assistance provided to refugees. There are discrepancies in MT and value of food and value of non-food emergency assistance provided to Ethiopia in various USAID reports. For some years, information is incomplete. Where possible, the value and tonnages of food aid were taken from the USAID/Addis mission records and value of non-food assistance was taken from OFDA/Washington records. Value of cross-border, emergency non-food assistance provided to the Emergency Relief Desk (ERD), based in Khartoum that channeled assistance across the border from 1985 to 1991 is not known to these authors.

Year	Nature of Disaster	Area Affected	Type of USG Assistance	Amount of USG Assistance
1985, USAID, 1987)				
1985 (USAID, 1985, USAID, ND, USAID, 1987)	Drought/Famine/ Conflict	Tigray, Wollo and Eritrea plus northern Shoa, Haraghe, Sidamo and Eastern Gondor (while surpluses in Arsi, Western Gondor, Eastern Wollega and Bale, Gojam were 'sharply reduced') 10,803,080 people at risk	385,700 MT emergency food aid (including 202,008 MT of Title II), transportation, feeding centers, food monitors, medical personnel, airlifts, emergency water programs, water tanks, plastic sheeting, blindness prevention, truck purchase, airlift of trucks, truck leasing and tires, coordination mechanisms (UN), blankets, purchase of oxen – Non food assistance totaled over $44 million. An addition 43,429 MT of food aid was provided in cross-border operations.	$293,105,240
1986 (USAID, 1986, USAID, ND, USAID, 1987)	Pests (armyworms, grasshoppers, tree locusts, desert locusts and African migratory locusts, conflict	Wollo, Gondor, Tigray, Eritrea, 6,450, 410 people at risk (including nearly 900,000 pastoralists). Overall 12 out of 14 provinces were affected, except Gojam and Wollega	Pesticides, entomologists, agriculture packages, feeding programs and logistics support, 315,138 MT Title II Emergency food aid (Non-food totaled $15 million, over half of which was for agriculture recovery). An addition 45,000 MT of food aid was provided in cross-border operations.	$171,599,207
1987 (USAID, 1988, USAID, ND)	Drought and pests (locusts and grasshoppers), conflict	2.5 million people (including 660,000 pastoralists) affected. 12 out of 14 provinces were affected, except Gojam and Arsi.	Helicopter transport, face masks, pesticides, camping equipment worth $75,000, 10,000 MT Title II Emergency Food aid. An addition 5,900 MT of food aid was provided in cross-border operations.	$11,020,000
1988 (USAID, 1989, USAID, ND)	Pests, drought, conflict	Tigray, Eritrea, Hararghe, Wollo, northern Shoa, Eastern Gondar and localized areas of Arsi, Bale, Gama Goffa and Gojam. Total affected population was 7.7 million.	145,802 MT of Title II Emergency Food aid. An addition 43,429 MT of food aid was provided in cross-border operations. Non-food assistance totaled $380,516.	$125,796,816
1989 (USAID, 1990, USAID, ND)	Meningitis epidemic, conflict	Nationwide	Immunization support worth $258,500, 45,456 MT of Title II Emergency Food aid. An addition 30,000 MT of food aid was provided in cross-border operations.	$44,414,400
1990 (USAID,	Drought, conflict	Northern Ethiopia, principally Tigray, Eritrea, Hararghe, Wollo	281,090 MT of food aid (including 121,090 of Title II food aid) , Non-food aid totaled $9, 870,773 for surgical	$171,385,673

Year	Nature of Disaster	Area Affected	Type of USG Assistance	Amount of USG Assistance
1991, USAID, ND)			teams (ICRC), airlift, emergency health and nutrition programs, water and fuel tanker truck support, funding of EPPG (now UN-EUE), local purchase of food ($4,000,000 through Redd Barna), purchase trucks and spares, blankets, plastic sheeting, umbrella grant (CRDA). An addition 158,691 MT of food aid was provided in cross-border operations.	
1991 (USAID, ND)	Drought, Conflict	Nationwide	208,480 Title II food aid (non-food assistance probably included in 1990 figures).	$108,925,000
1992 (USAID, 1993, USAID, 1992)	Drought, conflict displaced persons, malaria epidemic, pests (locusts)	All regions, except North Omo, East and West Gojam and Metekel. 7.8 million people were affected, including farmers, pastoralists, IDPs, families of ex-soldiers and returnees.	281,000+ MT of food aid (including 229,600 of Title II food aid), grants to NGOs and UN agencies and $6,605,994 in non-food assistance	$129,054,500
1993 (USAID, 1994)	Drought, food shortages and returnees, locusts	Tigray, Haraghe, Afar, Gondor, Wollo, Wellaga, Dire Dawa, Illubabor, Borena, Ogaden. 2.7 million people affected by drought; other disasters 2.2 million in all regions (except Afar)	100,398 MT of food aid, seeds and tools, emergency nutrition programs. For locust emergency Pesticides, radios, protective clothing, 87,400 MT of Title II food aid. Non-food aid totaled $6,469,218	$88,437,688
1994	Food shortage (prolonged dry season, inadequate fertilizer and insufficient pesticides), conflict	All regions, with 5.6 million affected by drought and 1.1. million affected by conflict and displacement.	121,410 MT of food aid, seeds, emergency medical program. Non-food emergency assistance totaled $886,917.	$44,227,717
1995 (USAID, ND)	Drought	3.9 million affected in most regions, particularly lowlands of Tigray, highlands of N and S Wollo, NW Shoa and E Hararghe	45,840 MT of Title II food aid, no emergency non-food aid	$16,131,500
1996	Drought and conflict	2.9 million drought affected and 161,000 conflict-affected in all regions	0 MT of Title II food aid, no emergency non-food aid	$0
1997 (USAID, ND)	Drought and conflict	1.7 million for drought and 151,000 conflict-affected	20,000 MT of Title II food aid	$6,365,600*
1998 (USAID,	Drought	4.2 million drought affected in 9 regions, 17,600 displaced in Addis alone	75,000 MT of Title II food aid and $1,055,266 in non-food assistance	$26,534,266

Year	Nature of Disaster	Area Affected	Type of USG Assistance	Amount of USG Assistance
ND)				
1999 (USAID, ND)	Drought/complex emergency	Six different appeals were launched with a wide range of numbers affected (2.5 million in January – 7.2 million in July)	92,160 MT of Title II food aid and $1,732,058 in non food aid	$77,906,656
2000 (USAID, ND, Ferris-Morris, 2003)	Drought/complex emergency	January appeal (7.7 million affected in all regions); July appeal (10.2 million)	Shelter, water, sanitation, health, logistics totaling $14,663,905 652,380 MT of Title II and Section 416 food aid	$277,664,678
2001 (USAID, ND, Ferris-Morris, 2003)	Drought/complex emergency	All regions affected. January appeal (6.2 million) and July appeal (4.6 million)	299,280 MT of food aid and $3,894,392 in non-food assistance	$132,637,240
2002 (USAID, 2002b, USAID, ND)	Drought/complex emergency	All regions affected, especially Afar, Shinille and Fik in Somali, E&W Hararghe and Arsi in Oromiya, E. parts of Amhara, most parts of SNNPR and Tigray. January appeal 5.2 million and July appeal for an additional 2.2 million (total 7.4 million)	82,383 MT of Title II food aid plus $1,278,970 emergency non-food aid	$71,113,974
2003 (USAID, 2003b)	Drought/complex emergency	Pastoral and agricultural areas, particularly the lowlands and midlands of Afar, Southern Nations, Nationalities, and Peoples (SNNPR), Tigray, Oromiya, and Amhara regions.	737,020 MT of Title II food aid, $17 million in reprogrammed development assistance and $17,392,944 in non-food assistance.	$374,505,719

* denotes value of non-food emergency assistance unknown.

Going into 2002, other donors also felt that Ethiopia had passed through the emergency phase and was, once again, safely on the path to development. Donor staff with emergency response experience moved on to other countries and were replaced by development specialists. Staff turnover in the donor agencies meant that, by the early days of the crisis in 2002, there were few staff present who had managed the 1999/2000 response. Although rarely documented in the literature on coordination, personal relationships among key actors often are integral to smooth and effective rationalization of donor resources and strategies across organizations (Lautze et al., 1998). According to Hammond (2001:54), "One of the great successes of the emergency operation was the strong cooperation and coordination between the major Donors working in Addis Ababa." The informal networks of association that had been strong among the major donors (e.g. USAID, EU) in 1999/2000, had been weakened by the changes in staff by 2002/2003. The important personal relationships among some key actors in the humanitarian community that had contributed to a high degree of collaboration did not exist to the same degree going into 2002.

The early (and later) warnings of the current crisis coincided with larger geo-political concerns. By May 2002, when widespread deaths of livestock in Afar began to erase questions about the existence of a drought in at least parts of Ethiopia, in Afghanistan the "honeymoon" period of post-Taliban euphoria had begun to give way to the enormity of the relief, development, political and security challenges (Pain and Lautze, 2002, Lautze et al., 2002, Sharp et al., 2002). In addition, US President George W. Bush's reference to an "Axis of Evil" in the State of the Union Address in January 2003 signaled the beginning of a shift of focus onto Iraq that continues to the present. It is acknowledged that the subsequent tensions that played out in the UN Security Council between the US and UK on the one hand, and France and Germany on the other (coupled with US Secretary of Defense Rumsfeld's categorization of "Old Europe" and "New Europe") damaged some US-European relations.

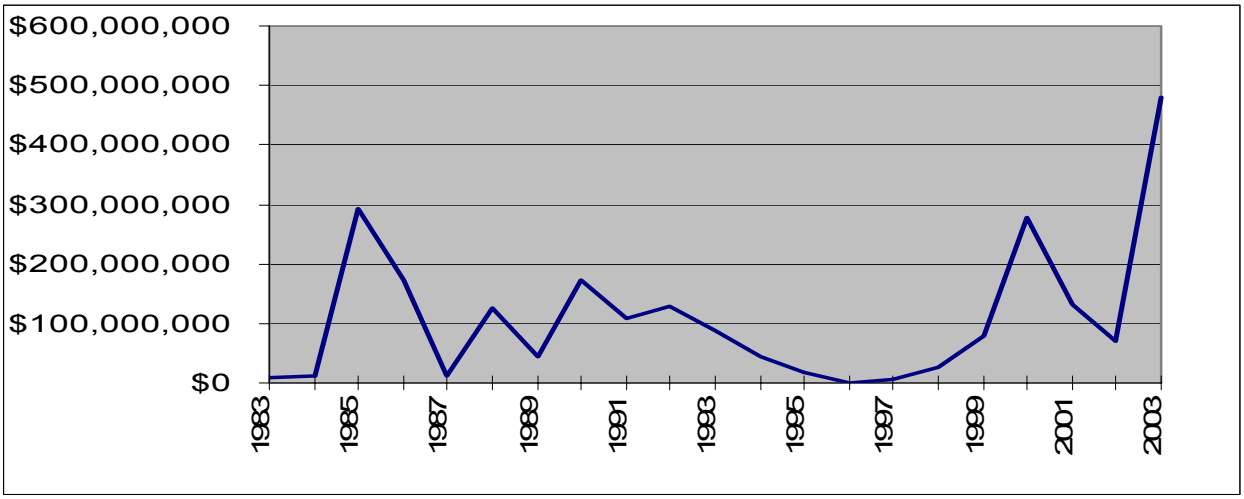
The merging of international political and security issues with questions of humanitarian policy have been analyzed elsewhere under the rubric of "coherence" (Macrae and Leader, 2000). While perhaps seeming irrelevant to the crisis in Ethiopia, these tensions extended to the donor community representatives based in Addis Ababa. One donor representative was only slightly exaggerating when he told the team that many today within his office "feel obliged to be contrary to the Americans on everything".

Perhaps more importantly than the tensions of modern high politics or the personal relationships among donor representatives were the respective formal and informal policies, institutions and processes that informed the range of options and strategies each donor agency followed, in light of the information provided by the early warning systems, among other sources. A select number of donor agency issues and strategies for the current emergency are summarized in the remainder of this section in order to demonstrate and explain some of the current similarities and differences among donors in Ethiopia today.

USAID

USAID is particularly concerned about the current crisis in Ethiopia. Table 16 indicates that current USG emergency assistance to Ethiopia is at an all time high.

Table 16. USG Emergency Assistance to Ethiopia, 1983 - 2003



By mid-2002, the USAID/Ethiopia Mission overcame a general feeling of disbelief about the current crisis and drafted a contingency plan that it has used to inform its responses as the crisis has subsequently unfolded. By July, USAID/Ethiopia was sending in cables to Washington to attract attention to the crisis, e.g. "DPPC Special Alert to Donors on Emerging Threat in Pastoralist and Lowland Areas of Ethiopia;" "Ethiopia: Deteriorating Humanitarian Situation in Afar Region;" "Helicopter Assessment to Afar;" etc. Today, responding to humanitarian needs in Ethiopia is the top priority of the USAID Mission in Addis (Lewellen, 2003). The emergency food aid response from USAID has been particularly robust, dwarfing all previous USG emergency food aid responses to Ethiopia.

Based on a range of interviews held with USAID staff in Washington in March and April 2003, it appears that globally the crisis in Ethiopia today ranks only behind USAID's current efforts in Iraq and Afghanistan. USAID has committed $340,112,775 from FFP in emergency food aid, $17,392,944 from OFDA in non-food emergency assistance and has reprogrammed $17 million in development assistance funds for emergency activities (USAID, 2003b, USAID, 2003a). This response – especially in terms of food aid -- is overwhelmingly more robust than other donors'. There are a range of reasons that help to explain the particularly vigorous USAID (food aid) response, including, *inter alia*:

1. The advocacy by American staff in the USAID/Addis mission (especially FHA) who were present during the 1999/2000 crisis and who believed they recognized the signs of widespread crisis in Ethiopia;
2. A USAID/Addis Mission-wide ethos of humanitarianism;
3. The close relationship between USG and the GOE which is based partly on historical ties but also is evolving as the US seeks new allies in the War on Terror;
4. A history of robust USG food aid responses to crises in Ethiopia;
5. The attention of concerned individuals in Congress, e.g. Rep. Frank Wolfe (R-Virginia) and the tendency of elected US Officials and the US public to want to respond to observable disaster vulnerabilities (e.g. starving children) with sacks of USAID food aid;

6. USAID-wide adherence to a Washington-based (albeit unwritten) directive that there is to be "no famine on my watch" during President George W. Bush's tenure;
7. The Mission's relatively high degree of credibility it places in information provided by government institutions, such as the DPPC and the office of the Prime Minister;
8. Frequent visits to the field by national and international staff;
9. Close proximity to (and confidence in) the USAID-supported Famine Early Warning System (FEWS);
10. A desire within the Mission (especially FHA) that there not be any room for the type of academic and technical post-crisis criticism that characterized the period following the 1999/2000 crisis;
11. The use of "real-time" technical teams to immediately improve response strategies (e.g. DART, CDC, Tufts);
12. A lack of technical understanding within the Mission (and a lack of advocacy from USAID/Washington) about the role of emergency non-food assistance in saving lives and preserving livelihoods; and,
13. A relatively high degree of concern about the potentially (politically) destabilizing implications of a widespread famine in Ethiopia.

AID's relative food aid focus has been criticized in the past. With reference to USAID's food aid response to the 1986 crisis, Fred Cuny wrote:

> A Congressional ban prohibited development assistance. The U.S. mission in Addis Ababa interpreted this ban to mean that assistance was limited to providing food aid directly to the famine victims – approaches such as cash for work were strictly prohibited. Such political obstacles only penalize the poor and are shortsighted (Cuny, 1999).

Today, a concern for disasters is institutionalized within the USAID/Addis Mission. Mitigating the effects of disasters is one of five strategic objectives (SO) of the USAID Mission in Ethiopia[47] (USAID, 2001c). This SO is indicative of USAID's intention to work with institutions in Ethiopia to build capacity to manage risk and vulnerability. It reflects the USG's acceptance that the risks of disasters in Ethiopia are serious enough to warrant integration into AID's long term program of development. It is important to note the Mission's orientation in order to contrast its policies with other donors, some of whom appear to be de-emphasizing concepts of disaster mitigation and response in favor of more concentrated focus on improved food security among "chronically vulnerable" populations (e.g. the European Union) or general development of the health sector (e.g. DfID).

Going into (and throughout) the current crisis, various USAID offices in Washington and Addis Ababa had commissioned analytical strategies, policy papers and evaluations. The range of recent analytical works on which USAID/Ethiopia can draw to inform their current humanitarian strategy is summarized in Table 17.

[47] The others are: Improved Family Health; Quality and Equity in Primary Education Enhanced; Rural Household Production and Productivity Enhance; and, More Effective Governance and Civil Society Developed. There is an additional Special Objective (SpO) for Improved Livelihoods for Pastoralists and Agro-Pastoralists in Southern Ethiopia.

Table 17. Key USAID Analytical Works 2002 - 2003

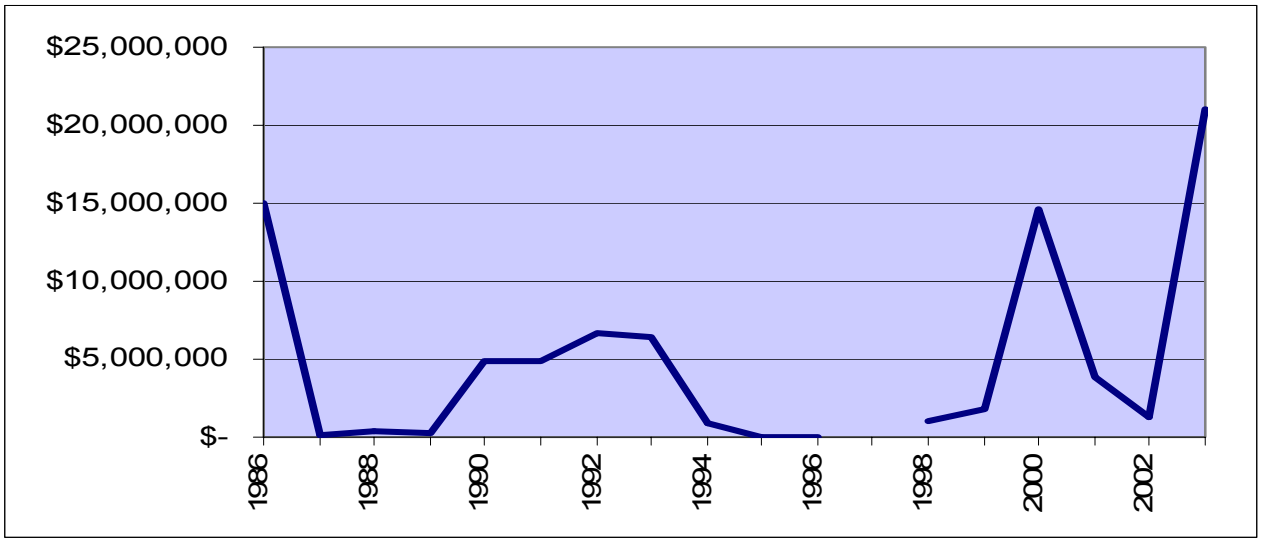
Report	Date	Sponsoring Institutions and Author(s)
Summary Report: Ethiopia Conflict Vulnerability Assessment	**Not yet released**	**USAID/DCHA; MSI: Willet Weeks, Mary Hope Schwoebel; Christopher Clapham; John Markakis; Ted Morse; Abdi Abduallahi Hussein; Jalal Abdelatif; Abdi Rashid Hussein, and Stephen Schwenke; APF: Josephine Odera; REDSO/ESA: Leonora Foley (Weeks et al., 2003)**
Key Issue Summary Not Available		
Planning for the Next Drought: Ethiopia Case Study (An Assessment of the Drought Response1999 – 2001 and Current Preparedness)	**March 2003**	**USAID/DCHA/PPM; Margie Ferris-Morris (USAID, 2003c)**
***Planning for the Next Drought: Ethiopia Case Study* - Key Issues**		
The report covers three areas: 1) partner capacities: areas of need in terms of preparedness for future disasters and specific, actionable recommendations for DCHA and other USAID resources that can be tapped to strengthen capacities now and in the future; 2) health and nutrition programming preparedness not currently addressed (including nutrition surveillance, nutrition indicators for early warning, partner training in monitoring and reporting, standardization among USAID partners, and recommendations for DCHA programming and other USAID resources to address these chronic problem areas); and 3) the USAID, donor, and host government policy.		
The 1999–2000 drought emergency resulted from: poor rains for three years; low agricultural productivity, a poor household asset base, land management and degradation, market failure, and a temporary ban on the trade of livestock in the region; the border conflict, slow European donor response, and slow reconstitution of grain reserves; the GOE's weak infrastructure (administration, human resources, and policies) and lack of adequate early warning information; and the general political and/or ethnic conflict with some of the affected populations; high fertility rates, ethnicity, and land fragmentation resulting in increased food and environmental degradation.		
Strategy for Mitigating Effects of Disaster: FY 2001-2006	**November 2001**	**USAID/FHA (Ethiopia Mission) (USAID, 2001c)**
***Strategy for Mitigating Effects of Disaster: FY 2001-2006* – Select Key Issues**		
USAID's long term strategic goal in Ethiopia is "to reduce chronic food insecurity, including helping to enhance Ethiopia's capacity to respond effectively to emergency food crises with its own resources"		
Mitigating Effects of Disasters is one of five Strategic Objectives that guides the USAID/Ethiopia Mission.		
The Mission focuses on four areas: alleviating immediate crises with food and non-food support; building capacity within the GOE to improve emergency response; reducing HH vulnerability to future crises and improving the nutritional levels of children; and, increasing local capacity to deal with issues of disaster and chronic food insecurity.		
Key assumptions in the strategy include: populations affected by crisis will not recover in the short to medium term without external assistance; widespread destitution has resulted in increased vulnerability to shocks; climatic shocks and population pressures will negatively impact crop production; conflict will be reduced		
Beyond the Merry-Go-Round to the Relief-Development Continuum (and other documents on TAPS)	**May 2001 (See also the Policy Matrix, January 2001)**	**USAID (Ethiopia Mission); Jo Raisin (Raisin, 2001)**

Report	Date	Sponsoring Institutions and Author(s)
***Beyond the Merry-Go-Round to the Relief-Development Continuum* – Select Key Issues**		
Chronic/predictable food insecurity must be distinguished from acute/emergency food insecurity		
FFW & EGS have not developed sustainable livelihood assets		
Food aid arrives too late to arrest destitution		
Food aid needs will increase as chronic food insecurity increases in the future; development has not kept pace with population growth		
Coping strategies have been eroded, leaving people with reduced resilience to shocks		
A pilot "LRD" program was designed and funded for ANRS		
Ethiopia Drought Emergency 1999 - 2000	**January 2001**	**USAID/Ethiopia (FHA Office) (Hammond, 2001)**
***Ethiopia Drought Emergency 1999 – 2000* - Select Key Issues**		
This report summarizes the strengths and weaknesses of the 1999-2000 response.		
Strengths included: Early warning information on agricultural areas available; Timely provision of relief food in 2000; Distribution effective in most areas; Pre-positioning of food effective in many remote areas; Provision of essential emergency support in the nutrition, health, water, and logistics sectors; Visits by high-level officials; Smooth port operations; Effective food aid transport system; Importation of Somali trucks; Air service to Somali region; Increased attention to improved nutritional surveillance; Tripartite Agreements between the DPPC, WFP and eight NGOs enabled targeted distribution of supplementary food; Increased capacity of local actors involved in emergency nonfood assistance; Renewed focus on pastoralists		
Weaknesses included: Weak link between early warning information and response; Lack of pastoral early warning system; High tax rate on commercial food; Lack of standards in nutritional assessments; Shortage of implementing partners in Somali region; Limited regional and sub-regional government capacity; Lack of robust targeting and distribution monitoring system; Specific failure in Denan (Somali Region); Lack of cross border/parallel programming between Ethiopia, Kenya, Somalia; Delay/inability to repay the EFSR; Lack of links between relief and development.		
Ethiopia-Eritrea Complex Emergency Humanitarian Response (May 2000-September 2000), The Ethiopia – Eritrea Humanitarian Response After-Action Report	**January 2001**	**USAID/DCHA/OFDA and USDA/DASP (USAID, 2001a)**
***Ethiopia – Eritrea Humanitarian Response After-Action Report* – Select Key Issues**		
USAID/DCHA/OFDA's responses to emergencies are built upon the lessons learned in previous emergencies		
The USG emergency response to the Ethiopia and Eritrea Complex Emergency was deemed to be overall "appropriate and successful"		
The USAID field missions involved had an excellent awareness and understanding of humanitarian response		
FEWS was a critical element in the success; the field missions began implementing disaster responses before the height of crisis		

The last study, OFDA's "After-Action Report" is notable for its lack of criticism of the non-food response to the 1999/2000 crisis. OFDA's mandate is to save human lives, reduce suffering and mitigate the economic impact of disasters (USAID, 2001b). This mandate implies a need for the office to intervene in the early stages of disasters. However, even though the drought began in 1997, OFDA emergency assistance for Ethiopia remained limited until increasing exponentially in 2000, the last year of the drought, as per Table 18, below.

This pattern has been repeated in the current crisis. Until the DART team's arrival in Ethiopia in May, 2003, the relative scale of USAID non-food assistance commitments lagged behind emergency food aid commitments.[48] As with USG contributions of food aid, the USG non-food emergency budgets for Ethiopia were trending sharply downward by 2002, even as the DPPC and the USAID/Addis Mission were signaling a deepening crisis. USAID/DCHA/OFDA's contributions to Ethiopia in Fiscal Year 2002 totaled just over $1.2 million for three organizations (GOAL, SC-UK and IRC), over two-thirds of which were not programmed until September 2002. For much of 2002, USAID relied on emergency non-food aid commitments from FY 2001 (of $3,894,392) (USAID, 2002a). OFDA funding picked up sharply in the period October – April ($11,000,000) Since May, OFDA funding for Ethiopia once again has increased exponentially, and currently totals over $21 million (USAID, 2003a), the highest level since the 1984/85 crisis (when OFDA funding reached over $44 million).

Table 18. USAID (OFDA) Non-Food Emergency Assistance to Ethiopia, 1986 - 2003[49]



[48] Of course it is not a useful exercize to compare the absolute value of food and non-food commitments; hence, the emphasis here is on relative scale.

[49] OFDA's contributions to the 1984/85 emergency in Ethiopia totaled over $44 million, at least $31 million of which was spent on logistics, including $10,500,000 to CRS for inland transport of food and $16,600,000 to Transamerica for airlifts USAID (1987), Final Disaster Report, Ethiopia Drought/Famine, FY 1985-86, USAID/Addis Ababa, Addis Ababa. These figures have been excluded from this chart in order to provide better details of the scale of recent USG non-food emergency responses.

The European Union

The EU has pledged approximately 360,000 MT of food aid since October 2002 in support of relief operations in Ethiopia, in addition to 100,000 MT made available earlier in 2002. Despite the respectable size of the EU food aid response, the EU has been singled out for criticism in recent months for delays in the delivery of food aid. The EU has charged that the criticism is unwarranted and that they are on track for both timely deliveries of food aid in the coming months as well as increased contributions to bring their total pledges of food aid to 400,000 – 450,000 MT.

ECHO's non-food aid strategy for Ethiopia has received less scrutiny. It is apparent that ECHO did not anticipate a major crisis in Ethiopia going into 2003. A careful reading of the ECHO global strategy for 2003 shows that ECHO assumed that a crisis in Ethiopia was only a "possibility". For 2003, Brussels prioritized other crises in Africa for particularly intensive ECHO-funded activities, including the Great Lakes, West Africa and Southern Africa. This relative prioritization is reflected in ECHO's indicative budgets for 2003. Out of 13 countries in Africa targeted for ECHO assistance, only one country (Eritrea, at €1,000,000) was scheduled to receive less assistance than Ethiopia (with an indicative budget of €2,500,000). Globally, ECHO's budget was €442.5 million in 2003; Ethiopia ranked 32 out of 37 countries/regions that ECHO anticipated assisting in 2003. This is in sharp contrast to the USG's high prioritization of Ethiopia noted earlier. Writing about Ethiopia and Eritrea, ECHO stated that it would "intervene again to address the acute critical needs arising from this drought as it continues into 2003, taking into account the broader response at EU level" (European Commission, 2003). ECHO has responded to the evolving crisis in Ethiopia by raising its current assistance levels from the indicative budget of €2,500,000 to €4,000,000.

As with USAID's relative distribution between food and non-food assistance levels, the EU's non-food aid response has been a modest €4,000,000. Of the ECHO emergency non-food aid contribution, €1,712,000 had been obligated as of May 2003, in support of health, water, sanitation, nutrition, emergency pastoralist projects, non-food item supplies and disaster preparedness. The remaining €2,288,000 had not yet been programmed. Since the onset of the emergency, the EU Delegation in Addis had rejected the majority of proposals submitted to it by NGOs in country, because they failed to link adequately with longer term issues (Waites, 2003). This is in keeping with ECHO's strategy to be "actively engaging in designing and implementing LRRD strategies" (European Commission, 2003). In addition, it reflects the lessons learned by the EU in the 1999/2000 crisis. An October 2002 evaluation of ECHO's response to the 1999/2000 crisis was generally positive, and the office was praised for its two-phased strategy of supporting rapid and immediate assistance, followed quickly by recovery and future drought preparedness activities (Pellegri and Kormoss, 2002). However, it also concluded that

> …severe drought periods are only exacerbating the existing Global Acute Malnutrition rates and health status of communities. Therefore, it is advisable to enhance a multi-sectoral approach in drought emergency projects by integrating multi-sectoral small-scale projects into longer-term programs and structures…An integrated approach may be more effective in terms of impact and long-term sustainability of the projects (Pellegri and Kormoss, 2002).

As with other non food-aid donors, ECHO's funding levels have fluctuated annually. ECHO provided emergency non-food assistance worth €8,760,000 in 2000, and a further €4,251,000 in 2001. By the time of the October 2002 ECHO evaluation, funding levels for Ethiopia had dropped to €300,000, one-third of which was spent on water and sanitation, with the remaining two-thirds on early warning, as per Table 19.

Table 19. ECHO Budget for Ethiopia by Year and Distribution by Sector 2000 - 2002

Year	Budget Million €	Sector (excluding flights) In % of Budget/Year					
		Nutrition/Health	Livestock	Water/ Sanitation	Food Security	Coordination	Early Warning
2000	8.760	74%	6%	14%	0%	4%	2%
2001	4.251	0%	56%	22%	14%	2%	5%
2002*	0.300	0%	0%	33%	0%	0%	66%

* Through 10/2002 only
Source: (Pellegri and Kormoss, 2002), all errors due to rounding.

ECHO's response to the current emergency appears more conservative than its response to the 1999/2000 crisis. This may be due in part to the fact that ECHO withdrew its staff presence from Ethiopia in mid-2002. Despite the evaluation's recommendations for ECHO to re-instate a representative in Addis, this does not appear to be in the offing. This, in effect, leaves EU development specialists with the dual tasks of managing the EU development portfolio while also assessing and managing the EU's emergency response for Ethiopia.

In addition, the EU in Addis has lost (temporarily) a trusted source of information. The EU reorganized the delegation in the fall of 2002. In the process, the EU Food Security Unit (FSU) was disbanded. Similar to the relationship between FEWS and USAID, the FSU was located within the EU compound but was managed under separate contract. The FSU had been a key player in the Ethiopian Network on Food Security and its reports were influential within the EU Delegation in Addis as well as with Brussels. The closure of the FSU has resulted in a compromised capacity of the EU to obtain food security information from what it perceives to be independent sources that once "counter balanced" the (perceived) interdependent relationship among the DPPC's EWS, USAID's FEWS and WFP's VAM (Waites, 2003).

This is not a minor point: rightly or wrongly, the major donors *always* privilege information gathered and analyzed through their own sources (e.g. USAID and FEWS, field teams such as DARTs, CDC teams or the authors of this report, or NGOs whom they fund extensively; DfID and its staff seconded into other organizations, EU and its field monitors, etc.) over information gathered by other institutions, either host government, (non-funded) NGOs, UN agencies or other donors. The EU's loss of FSU-generated analysis has forced the institution to rely more heavily on other sources of information, sources that it suspects of lacking objectivity and/or technical rigor.

UK Government

As of May, 2003, DfID had provided over £37 million in food and non-food assistance to Ethiopia since 2002 and considered the current crisis as a "matter of concern". As with USAID, the UK's

robust emergency response to the current crisis is due, in large part, to a vocal and active field post, as well as support from key individuals within the Foreign and Commonwealth Office in London. The main recipient of DfID emergency assistance is WFP (51% of contributions), followed by ICRC (19%), UN agencies (16%) and European NGOs (13%). When compared to other donors, DfID provided unusually early contributions for emergency operations (e.g. £3 million to ICRC in December 2001).

Within DfID in London, anthropometric data are given relatively greater weight, while less confidence is given to other forms of early warning and surveillance to inform emergency responses. Compared to other situations in Africa, some London-based DfID officials rank the Ethiopian crisis in the top 33%-50% in importance because it is assumed that the available data on malnutrition in Ethiopia is "within normal variation" given recent and historical levels of malnutrition (Mansfield, 2003). Where "pockets" of critical malnutrition exist, these have developed "due to initial under-allocation of food to some woredas, poor targeting and shortage of supplementary food" (DfID, 2003b).

The development activities of the UK's Department for International Development (DfID) are guided by its Country Assistance Plan for Ethiopia. The main areas of development focus are food security, education and capacity building within government and civil society (DfID, 2003a). The assistance plan is intended to complement the SDPRP. The recurrence of drought is viewed by DfID as a threat to development strategies. Droughts, it is assumed, are "external, and outside the control of the Ethiopian Government" (DfID, 2003:9).

DfID places value on the need to improve efforts to distinguish the chronically food insecure from the processes to identify emergency needs, especially of food aid in Ethiopia. They "believe faster progress could be made towards helping (the chronically vulnerable) by replacing annual 'emergency' assistance by a longer term safety net program to help people conserve their assets (such as animals) during difficult periods" (DfID, 2003:10). DfID has described targeting of food aid to the most vulnerable as "notoriously problematic." DfID's concerns about food aid in Ethiopia are, in part, based on studies of food aid targeting practices in Ethiopia conducted by Michigan State University, e.g. Clay et al., 1999 and Jayne et al., 2000.

Canadian Government

In February 2003, Ethiopia was declared as a "Country of Enhanced Partnership" by the Government of Canada. Nine countries worldwide currently have this status, including six in Africa. This mechanism allows for CIDA to increase focus and resource (especially development assistance) on these countries. Canada has also provided a mechanized division in support of the UN Mission to Ethiopia and Eritrea (UNMEE) (DFAIT, 2003).

The Government of Canada has given high priority to responding to emergency needs in the current crisis in Ethiopia. Since its first emergency contribution to the current crisis in August 2002, CIDA has contributed approximately CDN $40 million in emergency food (CDN $22 million) and non-food (CDN $18 million) assistance, an exceptional contribution given the overall size of CIDA's emergency assistance budgets. Non-food assistance includes contributions for water, agriculture

(seeds), livestock (animal health and restocking) and human nutrition and health. The Canadian responses are based on the government's emergency appeals.

CIDA has adopted a global policy to reduce its levels of emergency food assistance. An exception has been made for Ethiopia this year, given the level of needs for the current crisis. CIDA intends to reinforce its focus on issues of emergency nutrition (including issues of micronutrient deficiencies) and health (especially measles).

The Canadian Embassy and CIDA offices have been active in reporting and advocacy around the current crisis. Several ranking Canadian diplomats have visited Ethiopia, including the Prime Minister in April 2002 and two visits by the DFAIT Minister. The Canadian hosting of the G-8 in 2002 and its support of NEPAD have further strengthened Canadian commitment to Africa, including Ethiopia. Importantly, the Minister appears to have taken an extraordinary interest in the current crisis.

Irish Government

For the current emergency, Ireland has contributed $2,850,000 to support humanitarian food and non-food assistance. WFP receives 55% of these funds, the Irish NGOs CONCERN and GOAL receive 33%, and UNICEF benefits from the remaining 11%. All but $400,000 of the Irish contributions were against the 2002 appeal. The Minister of State responsible for Overseas Development Assistance visited Ethiopia in January, 2003, to "review the extent of the famine gripping the country" (Ireland, 2003).

Irish Aid began providing assistance to Ethiopia in the mid-1980s (Ireland, 1997). Like the Canadian Government, the Irish Government has prioritized Ethiopia since 1994 as one of six priority countries for development assistance (Ireland, 1998). The Irish Government provides approximately $30 million in development assistance to Ethiopia annually. Due to limitations in absorptive capacity, the full amount of development assistance available for Ethiopia is not always programmed (Fitzpatrick, 2003). In addition to providing financial assistance, the Irish are strong advocates of health policy and institutional reform. The question of the institutional management of nutritional issues within the GOE is a particular concern. In addition, the Irish have advocated strongly for emergency health needs assessments and thus far have participated in two assessments (Afar, Somalia).

The World Bank

The World Bank is quick to point out that it is not an emergency relief donor. Nevertheless, with initiatives like its Post Conflict Fund, the Bank is moving more aggressively towards involvement with countries in times of crisis, rather than waiting for an identifiable period of stability to resume assistance activities. Two major emergency programs have been funding over the past year for the southern Africa crisis, for example.

The Bank has a history of responding with dedicated operations to previous crises in Ethiopia. During the drought of 1974, the Bank provided $10 million for Tigray and Wollo that was directed towards crisis recovery. In 1985, the Bank provided $30 million for a second Drought Recovery Project that benefited 6 – 10 million people in Tigray, Wollo, Eritrea, Gondar and Sidamo (The World Bank, 2003).

In May 2003, the World Bank approved a $60 million grant for an Emergency Drought Recovery Project. The objective of the project is to "enable Government to help affected families survive the crisis, retain productive assets, and develop sustainable livelihoods, as well as to contribute to stabilizing the macroeconomy" (The World Bank, 2003: 15). The project will be managed by the Food Security Department of the Ministry of Rural Development, and has four specific components, including to:

1. Defend critical human development expenditure by Government during the next year from the pressures caused by the current crisis;
2. Maintain the availability of critical economic inputs (particularly those needed in rural areas) and support the economic recovery process;
3. Rehabilitate and/or create communal assets using community labor of the affected population, and
4. Provide income supplements, and protect private assets of the affected populations.

The Bank's analysis reveals its concern for how the current crisis may threaten the SDPRP that was issued in July 2002.[50] Based on the GOE (especially DPPC) appeals, the Bank estimated in December that the crisis would halve the growth rate of GDP, increase inflation by about one-third and worsen the trade deficit by nearly 20%. The Bank's revisions to its macroeconomic forecasts for 2002/03 based on the impact of the drought are found in Table 20, below.

Table 20. World Bank Revisions in the Macroeconomic Forecasts for Ethiopia for 2002/03 due to Impact of Drought

Item	SDPRP	Including Drought Impact	Difference
Growth in GDP at factor costs (at constant prices)	6.0%	3.0%	50% lower
Change in consumer prices	4.5%	5.9%	31% higher
Trade deficit	US$1,252,000	US$1,487,000	19% increase
Revenue	21.8% GDP	21.9% GDP	Unchanged
Expenditure	34.9%GDP	42.9% GDP	23% higher

Source: The World Bank 2003:5, citing a report to the Consultative Group, December 2002 "Partnership for Accelerated and Sustainable Development and Poverty Reduction".

In funding the program, the Bank noted its concern that "few donors (are) able to provide large amounts of money at short notice to be used in financing the foreign exchanges needs of the response" (The World Bank 2002: 5). The bulk ($48 million) of the $60 million grant will go to the

[50] The four pillars of the SDPRP are (i) Agricultural Development-led Industrialization (ADLI) and food security; (ii) Governance, Decentralization and Empowerment; (iii) Reform of the Justice System and the Civil Service, and (iv) Capacity Building.

government for "quick disbursing assistance" to reduce the fiscal deficit by making foreign exchange available to be used against a "positive list of imports". Up to $12 million is available to fund retroactive import expenditures dating back to December 7, 2002 (the date of the DPPC launch of the post-*meher* appeal). Some $1,500,000 million is available for project management while $16,500,000 is available for community initiatives. The community interventions are targeted at 35 woredas and are intended to complement ongoing EGS and gratuitous relief programs by providing cash to complement food aid activities, increase the availability of supplementary food items, and provide additional food allowances per girls attending schools (The World Bank 2002: 16 – 17).

Nutrition

Nutrition in Emergencies; Ethiopia paves the way

Three decades of experience addressing hunger, malnutrition and death (excess mortality) as a result of famine in Ethiopia has produced a wealth of lessons learned and practical guidelines, which have had global influence on disaster response. However, Ethiopian guidelines and procedures have not always (and still do not) concur entirely with internationally endorsed recommendations.

This next part of the report describes the evolution of nutritional assessment, linked with the provision of emergency food assistance, including selective feeding programs. The impact of all this continuous activity in emergency nutrition on institutional and technical capacity within Ethiopia is then considered.

Evolution of Nutritional Assessment and Surveillance in Ethiopia

Ethiopia has a long history of implementing nutritional surveillance as part of famine early warning. As far back as the 1972-74 famine food and nutritional surveillance was regarded as a way of monitoring the performance of food supply systems (ibid). SC-UK were requested by the Government's Relief and Rehabilitation Commission (now DPPC) to undertake nutrition surveys of Wollo and Hararghe regions (Seaman and Holt, 1975, Seaman et al., 1978, Kelly, 1992a, Kelly, 1993, Kelly, 1992b). The experience of the famine relief program in the seventies prompted the Ethiopian Nutrition Institute (ENI) to publish the first Ethiopian Guide to Emergency Feeding in 1974.

In 1978 Save the Children with the RRC and MoH started the Nutrition Field Worker (NFW) program in Wollo Region; 25 high school graduates were given theoretical training by the Ethiopian Nutrition Institute and were based in rural centers. NFWs started regular weighing and measuring of samples of children. "Their measurements showed a norm of about 10% wasting" (Appleton and with the SCF Ethiopia Team, 1987).

Following the major famine in 1983/84, the Nutrition Field Worker program evolved into the Nutritional Surveillance Program (NSP), implemented by Save the Children Fund UK on behalf of the RRC (and later the DPPC) (Kelly, 1992a, Kelly, 1993, Kelly, 1992b). The aim of nutrition surveillance in Ethiopia was to detect transitory food security (Gizaw, 1995), which explicitly linked acute malnutrition (wasting) to transitory food security. By the early 1990s, nutritional status data was being collected by NGOs in the most drought-prone, accessible parts of the country, including Wollo, Hararghe, Shoa, and parts of Arssi and Sidamo. In 1989 the RRC established its own nutrition data collection program covering selected areas of the Western Regions of Gojam, Illubabor and Wellega (RRC, 1989), although it still depended on NGOs to provide most of the nutritional status data.

In addition to the SC-UK's NSP, many other NGOs also undertook nutritional assessments and surveys in order to estimate the prevalence of acute malnutrition associated with drought and food insecurity (Lindtjorn, 1990, Lindtjorn, 1987). The general experience of the 1984/85 famine was that the highest concentrations of cases of severe acute malnutrition and mortality were found in relief shelters or among those who were resettled by the government (Kloos and Lindtjorn, 1994). An extensive comparative nutritional survey of nearly 15,000 children at 24 food distribution centers inside shelters and in home areas in the Boran and Arero *awrajas* in Sidamo reported the mean prevalence of wasting ranged from 5.7% to 13.7% among children of pastoralists in shelters, but only 3.7% to 4.1% percent among non-shelter pastoralists (Lindtjorn, 1990).

The Emergency Nutrition Coordination Unit of the DPPC

Despite a long history of conducting nutritional surveys, a review of all available nutritional assessments and surveys undertaken in Ethiopia from May 1999 through July 2000 (127 in total), concluded that many of the data were of insufficient quality to use as decision-making tools (Spiegel et al., 2002). This was a result of methodological errors including convenience sampling and lack of standardization of key aspects of survey design (e.g. indicator of acute malnutrition) among different agencies. Of the 109 population-based nutrition surveys, only nine recorded measles immunization status (ibid). Such data is critical for understanding the risks associated with acute malnutrition and for program-decision making.

The formation of the Emergency Nutrition Coordination Unit (ENCU) in late 2000 within the Early Warning Department of the DPPC was in part the result of the documented problems with nutritional surveys in 2000. Funding was provided by UNICEF and WFP (original source USAID) for a period of three years, covering three phases.

Today, all nutrition data linked with emergency response are derived from one-off nutritional surveys conducted by a number of NGOs and the DPPC. It is now widely accepted that routine collection of nutrition data may not be practical, and instead rapid nutrition assessments on an "as needed" basis in an emergency situation are considered more appropriate (ENCU led Nutrition Working Group, 2002). These assessments are principally used to confirm a problem by triangulating other evidence, or to assess relative severity, and then to advocate for a response.

There are currently three technical staff (two national and one international) within the DPPC ENCU. The ENCU is widely supported by DPPC and NGOs, (although it is perceived by some to be an overly technical nutrition unit). Responsibilities of the ENCU include coordination of nutritional assessments conducted by DPPC and NGOs, maintaining a database on all surveys, and organizing multi-agency nutrition task force meetings. At these meetings, information about survey results and point prevalence is disseminated, and priority areas for further assessments and for supplementary feeding are set. This multi-agency nutrition task force meets monthly and is chaired by the Head of the ENCU. The task force reviews proposed survey methods and completed survey

reports. No figures are available on the numbers accepted or rejected, although it is felt that few are rejected in part because of the facilitation of good practice.[51]

Assessment missions and training of DPPC staff and recruitment of additional staff for three regional ENCUs (Somali, Oromiya and SNNPR) have been underway during the year. The ENCU has undertaken 12 – 15 day trainings linked with the national survey guidelines in SNNPR and Oromiya, and has plans for Tigray, Afar, Amhara and Somali Regions. In future as decentralization continues, the Regional DPPBs will take on more responsibility as part of their early warning role and emergency response management roles. The plan is to establish regional ENCUs with capacities for surveys and other emergency nutrition related work.

New National Survey Guidelines

A major achievement of the ENCU has been the coordination of the development of the most recent DPPC guidelines on nutritional surveys, which were finalized in 2002 (ENCU led Nutrition Working Group, 2002). SC UK made available one of their international nutritionists who managed this process over nearly two years and drafted the guidelines based on a broad process of consultations. The importance of having a fully consultative and participatory process cannot be over-estimated. As a result, there appears to be a wide sense of ownership and subsequent compliance with the guidelines. The problems of poorly coordinated and implemented surveys in 2000 have not been repeated in 2003, with the exception possibly of surveys in pastoral areas.

Based on the guidelines, the ENCU Working Group reviews proposed survey plans to ensure they comply with the guidelines and then reviews the reports before incorporating their findings into the ENCU database of survey results. Critical to the successful use of nutrition data is the ENCU's role in maintaining the database and facilitating good practice in undertaking representative and comparable nutrition surveys.

The National Nutrition Survey Guidelines are principally for surveys of vulnerable populations living in settled agricultural areas rather than for pastoral areas. Applying the standard 30 x 30 cluster survey methodology has long been known to be difficult in pastoralist areas and it remains a major challenge. For example, during the recent survey in Fik woreda only settlements of more than 50 households were listed. This excluded the large numbers of small communities and more mobile groups common in pastoral areas. It also favors sampling of the more built-up areas, for example in Fik town and Gasangas, 7 clusters were selected. The resulting findings can be interpreted as being representative of larger settlements within the woreda, rather than being representative of the entire population of the woreda. In Afar Region, World Vision are using a modified methodology on the advice of CDC, which is justified in relation to the problems of insecurity and highly mobile populations.

Currently the ENCU is in the process of developing guidelines for the management of supplementary feeding and general food distributions through the regular meetings of the multi-agency nutrition task force. These guidelines are badly needed, and the consultative process used for nutrition survey guidelines should be replicated. Drafts need to be made available to all stakeholders as they have implications far beyond the membership of the taskforce. In particular

[51] The nutrition survey review by CDC included some surveys that had not been accepted by the ENCU.

they are needed for informing decision-making and trigger mechanisms for prioritizing areas and triggering specific interventions. If this is to be effective the new guidelines must be agreed and actively supported by the other emergency task forces, including early warning methodology, water, health and food.

The link between nutrition data and early warning systems

In Ethiopia there is a long history of using nutrition survey data in relation to famine prevention (through early warning) and in targeting assistance in a systematic way. The theorized relationship between predicting famine and anthropometric decline hinges on the pervasive misconception (or at least over-simplification) that famine is largely a problem of failure in food supply, resulting in malnutrition and mortality, which can be addressed by better and more efficient food distribution.

This has been termed as a "food first" bias (Pelletier et al., 1995) and can be traced back at least to the 1972 – 74 famine in Wollo and Hararghe, where the famine was related officially to a failure in food supply, precipitated by drought (Hay, 1978). According to Kelly (p. 326), "The NFW/NSP used children's anthropometric status as a proxy for household food consumption" (Kelly, 1992b).

In 1987/88, the RRC/EWPS apparently did not use either anthropometric or socio-economic data collected by the NFW/NSP (Kelly, 1993). Nonetheless, in terms of donor decision-making, the nutritional information was thought to play a critical role. However, a lack of consensus among donors about the validity of the RRC/EWPS estimates of needs for assistance contributed to delays in response, while donors called for more and better information. It was generally felt that the NFW/NSP helped to provide an "objective point of view as well as a great deal of technical expertise" (Kelly, 1993). The main drawback at the time was considered to be inability to cover the most food insecure *awrajas* (e.g. Wag and Lasta) due to civil conflict (ibid).

The role of anthropometry in emergency response is documented in a series of guidelines and policy statements (see Boxes 6-8). In Ethiopia, since the first RRC Guidelines on Nutritional Status and Food Relief were published in 1989, acute malnutrition has been explicitly linked with "transitory food insecurity [which] is addressed through short-term relief programs [food aid relief]" p5 (RRC EWD, 1995). These guidelines included a method to translate nutrition survey data into food aid needs, which continues to be recommended in the current 2002 National Survey Guidelines. The close ties between nutritional status, early warning and food relief thus dates back to the first large scale international response to famine in Ethiopia in 1984 and the 1989 guidelines. The failure to properly incorporate health issues as a potential underlying cause of high levels of acute malnutrition in the pre-2000 guidelines is evidence of the narrow vision and food bias of both the nutritional surveys and the early warning system.

Box 6. 1989 RRC Guidelines for Food Relief Rations

The 1989 RRC Nutritional Guidelines for Food Relief Rations, by the RRC Nutrition Unit within the EWPS established "nutritional standards for general food rations and for selective feeding (supplementary rations).

I. Full General Ration provided when:
   - mean WFL% is > 90% and the percent of children < 80% WFL is <10%
   - household food supplies are depleted
   - purchasing power is reduced
   - the next harvest is far away but people remain in their homes

II. Full General Ration + Selective Feeding provided when:
   - nutritional status is "poor" i.e., mean WFL% is between 85-90% and the percent of children < 80% exceeds 10%.
   - Other circumstances as I, above; and when beneficiaries live in emergency shelters.

III. Increased General Ration (600g cereal) + Selective Feeding provided when community nutrition status is "serious" (i.e., emergency) when
   - mean WFL is < 85%
   - Beneficiaries are displaced
   - The age/sex distribution is biased towards at risk groups
   - Insufficient supplementary food is available

IV. Reduced general ration (3/4 or ½ ration); distributed to avoid creating dependency or flooding the market at the beginning or end of a food shortage crisis.

Box 7. RRC Guidelines on Nutritional Status Data and Food, 1990 – 1995

Three editions of the RRC Guidelines on Nutritional Status Data and Food Relief were published (January 1990, June 1990 and May 1995) These guidelines grouped early warning indicators into three levels:

1. Food supply indicators (rainfall, area planted, yield forecasts, crop production)
2. Social stress indicators (market prices, amounts in market, amounts sold, labour patterns, migration of some family members)
3. Individual stress indicators (nutritional status, disease, mortality, migration of all family members

These levels were thought to operate in a temporal sequence.

> *"With each progressive level, the lead time as an indicator of food insecurity and the time available for action is decreased but the specificity as an indicator of food insecurity is increased.*

Situations were categorized according to the mean Weight-for-Length:

- ∉ Good: at least 95% of NCHS median value
- ∉ Satisfactory: 90- 94%
- ∉ Poor: 85-89%
- ∉ Serious: less than 85%

In terms of planning relief, nutritional status was felt to indicate no need for food relief if the mean WFL% was 'good', or if the percent less than 80% WFL is 5% or less. Interventions were to be made (whether food aid, health or some other as relevant), if the percent < 80% was more than 10%, or the mean WFL% was less than 90%.

In producing these Guidelines the RRC recognized the need to maintain some standardization between otherwise autonomous NGOs. Although the standard procedures that were recommended did not concur with WHO guidelines, for example the age group monitored in Ethiopia were children aged 1 to 5 years (70 to 110cm) and the reference population was adapted to so that weight-for-length could be measured on all children up to 110cm (usual practice was and still is to measure height on children above 85cm).

Box 8. 2002 National Nutrition Guidelines

2002 National Nutrition Guidelines (ENCU led Nutrition Working Group, 2002) ensure that recommended survey procedures are compatible with the current internationally accepted standards. Drafted by a national level Task force chaired by the EWS of the DPPC over a period of 2 years.

Current uses of nutrition data are described in the Guidelines, include:

- To predict food insecurity and food aid needs (requires historical database on nutrition status and causes, and a method for translating nutrition data into food needs e.g. RRC, 1989 Guidelines)
- To monitor deteriorating food security
- To confirm an emergency or advocate for a response (and also target relief)
- To assess the impact of interventions (before and after surveys)

Research shows that anthropometric status is not necessarily a late indicator of famine

The 1996 RRC Guidelines generally considered that nutritional status was a late indicator of famine,

> Nutritional status… does not help to predict food insecurity, except as a component of historically derived vulnerability profiles or risk maps. It is most useful in targeting and monitoring the effects of famine relief or famine prevention operations; it also provides a "safety net" (in identifying areas of food insecurity not detected by other indicators), and a basis for advocacy.

Studies have shown, however, the situation is not as clear cut as assumed. Marion Kelly's work from the late eighties clearly shows inconsistencies in the behavior of typical early warning indicators in relation to anthropometry. Kelly demonstrated that a deterioration in one indicator (e.g. harvest failure, or increase in grain prices) does not always coincide with a deterioration in nutritional status. In Kelly's work changes in different indicators were not well correlated at the sub-district level. She stressed that all indicators must be interpreted in the local context, taking into account wider determinants of food security and nutritional status. This did not conform to the conventional wisdom of the time that acute malnutrition is a late indicator of famine, i.e. that by the time nutritional status deteriorates, famine and excess mortality are already evident (Mason et al., 1984). Of critical importance is her conclusion that "deterioration in anthropometric status is not a particularly late indicator of acute food insecurity in Wollo[52]" p.336 (Kelly, 1992b).

Although nutritional status may be an early indicator of food insecurity in some circumstances, this cannot be generalized to all contexts; therefore, nutritional status cannot be used to predict famine. This is supported in the most recent National Nutrition Survey Guidelines which state that data from nutrition surveys in problem areas as part of emergency response are to be used "to confirm a

[52] She found that the clearest indicators of food insecurity in Wollo in 1987-88 were the 1987 *meher* crop yield estimates, the change in grain prices, and the change in children's mean weight for length. Over the same period livestock prices, livestock sales volume, migration rates and mortality changed little, suggesting these indicators did not respond as early as the other three in the area studied.

problem and advocate for a response." Thus it would appear that in current international standards, nutrition data is not considered to have a role in the prediction or prevention of famine.

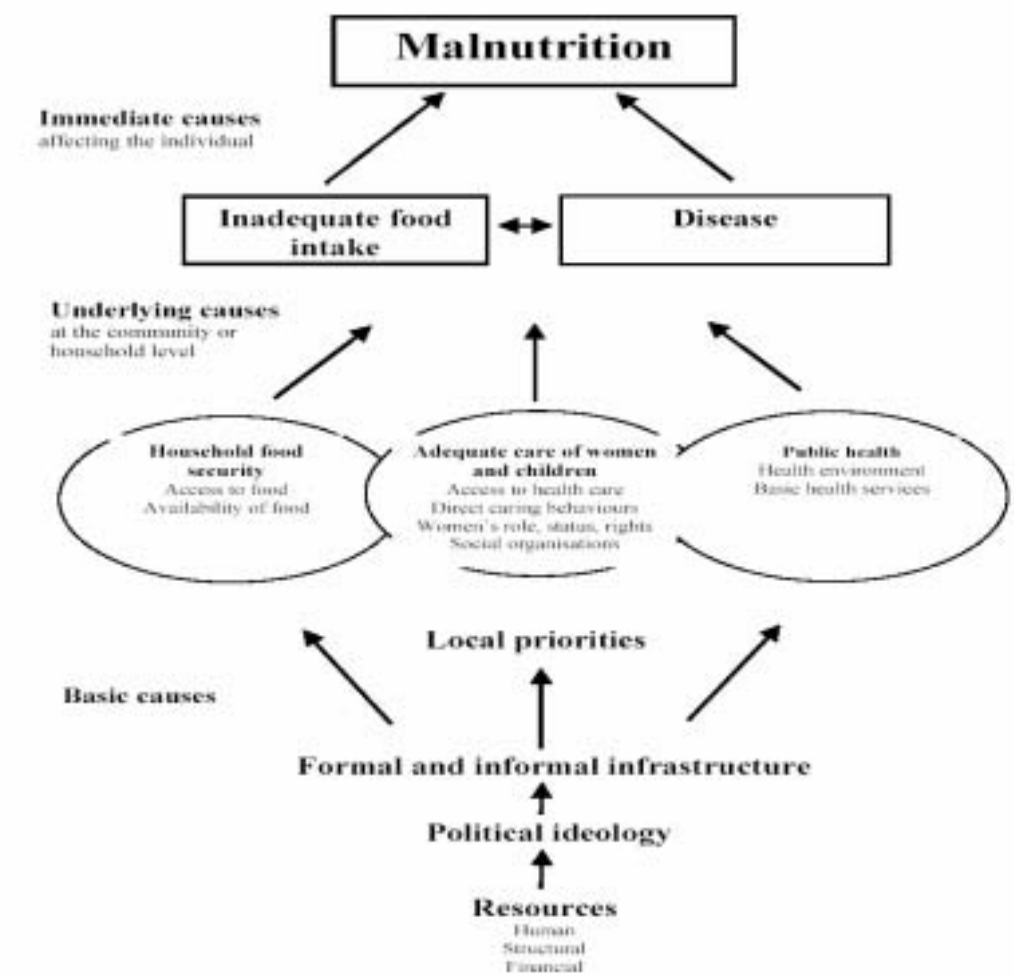
Although the DPPC/DPPB does not systematically collect nutrition data as part of the EW system, it does use nutritional data as background or supporting information.

Malnutrition and mortality do not necessarily increase in tandem

According to Kelly's work in Ethiopia in some contexts, "a decline in WFL was detectable, however, when no increase in mortality was evident" p.335. This observation raises a second critical point regarding the interpretation of nutritional status: acute malnutrition and under five mortality do not necessarily increase in tandem, unless food insecurity, health or care factors are contributing simultaneously to acute malnutrition and high mortality.

This relationship is articulated in the now commonly used conceptual framework for malnutrition, Figure 11 below.

Figure 11. The UNICEF Conceptual Model of Causes of Malnutrition



Situations have been recorded of high mortality where acute malnutrition was relatively low. For example a survey of Kurdish refugees in 1991 found a prevalence of acute malnutrition among children under five years of 4.3%, while the crude mortality rate was reported as 8.9/1000/month (equivalent to 3 per 10,000 per day) (Yip and Sharp, 1993). Such differences are usually attributable to a health crises (outbreak of acute diarrhoeal disease) contributing to excess mortality, but not greatly influencing nutritional status.

Longitudinal monitoring of children between 70cm and 110cm in Wolayta by the NSP between 1988 to 1991 found a trebling of mortality in years of harvest failure as compared to the year of good harvest (Lawrence et al., 1994). This trebling occurred even before mean nutritional status reached 90% (the GOE's cut-off point for intervention at that time). The mortality risk associated with any given weight-for-length in years 1 and 3 were very roughly twice that observed in year 2, i.e. much of the increase in mortality in these years resulted from a general increase in mortality risk, rather than from changes in WFL *per se*. This points to the importance of assessing wider health risks, not just nutritional status as expressed by weight-for-length.

There are also documented cases where U5MR is reportedly stable or not exceptionally high, while acute malnutrition is very high (Young and Jaspars, 1995b). This is usually attributable to acute food insecurity in the context of a relatively stable health environment, and adequate access to health services and preventive health care.

In conclusion, in order to determine the causes of malnutrition in a given context it is necessary to consider the impact of all three aspects of the underlying causes of malnutrition (food, health and care factors) in order to assess their relative importance.

Table 21. Mean Mortality And Malnutrition Over Three Years, Two of Which Were Harvest Failures

Year	Harvest	Mean WFL%	Mortality
1988/89	Harvest Failure	92 (and rapid decline in nutritional status)	9.1 per 1000/60 days (equivalent to 1.51/10000/day)
1989/90		94	2.9 per 1000/60 days (=0.48/10000/day)
1990/91	Harvest Failure	90 (and rapid decline in nutritional status)	8.9 per 1000/60 days (=1.48/10000/day)

Source: (Lawrence et al., 1994)

In the most recent national survey guidelines, the debate on the use of nutrition data for monitoring deteriorating food security continues (ENCU led Nutrition Working Group, 2002). The Guidelines provide arguments both for and against using nutrition status data for monitoring deteriorating food security. They also state that

> The DPPC views nutritional status data as a relatively late indicator of a food security "problem" in comparison with other socio-economic and agricultural data (p. 30, ibid).

Current Analysis of Nutrition

The DPPC's main use of nutrition status data is for verifying nutrition related problems (which they know already exists) and for advocating to the international community for an emergency response (ENCU led Nutrition Working Group, 2002). In addition the ENCU is proposing that nutrition surveys should be used to assess impact of supplementary feeding, by incorporating before and after surveys.

Although the first application might be the most pragmatic use of nutrition data, it means that it is reduced to little more than a blunt tool with no recognition for the importance of interpreting severity. For example, the 1989 RRC Guidelines for general rations in Ethiopia prescribe a full general ration wherever prevalence of acute malnutrition exceeds 10%.[53] **Given that national nutrition surveys have estimated the prevalence of acute malnutrition to be 11.1% in rural areas (CSA and ORC Macro, 2001), this suggests the entire rural population is entitled to a full general ration!** Clearly some clarification is needed and this may come in the current work on nutrition intervention guidelines in preparation by the ENCU multi-agency nutrition task force.

The current uses of nutritional data, and the response to nutritional decline suggests that embedded in the institutional subconscious of most stakeholders, including the DPPC Early Warning System, the Ministry of Health and the vast majority of INGO's is the belief that a decline in nutritional status (weight-for-height) is a food problem, rather than a care or health issue, which is addressed by food relief.

A clear example of this 'food first' bias is the recent emotive appeal by a group of INGOs for a full ration to be provided to drought victims to prevent the 'slow starvation' associated with the regular ration in Ethiopia (Save the Children Alliance in Ethiopia and Members of the British Overseas Action Group, 2003 (although undated)). The appeal quotes the high rates of chronic malnutrition or stunting (more than 60%) throughout Ethiopia in their arguments, despite some evidence that chronic malnutrition is not associated with food availability (Pelletier et al., 1995). It is almost beyond belief that informed and experienced INGOs can present such a narrow analysis of the current nutrition situation in Ethiopia, particularly given their recent successes in improving the practice of nutritional surveys.

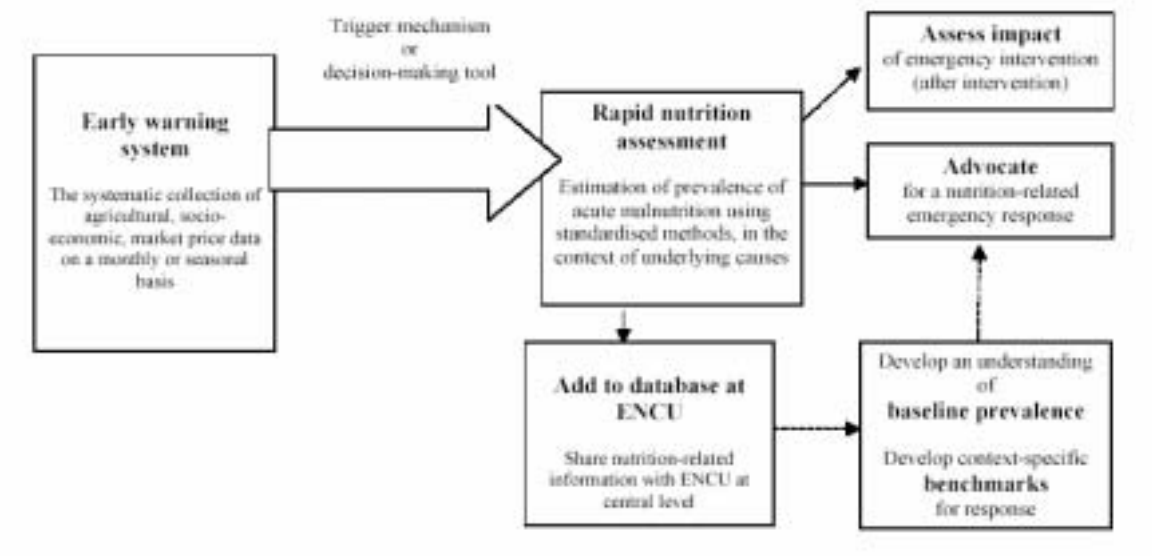
The process of developing the National Survey Guidelines and their subsequent implementation has led to considerable improvements in the quality of nutritional surveys, particularly in terms of the reliability of anthropometric data. However, some of these successes have been eroded by a rather narrow and inflexible concentration on the estimates of acute malnutrition at the expense of a more comprehensive analysis of all three groups of underlying causes. The Guidelines clearly explain the main uses of nutrition data are for verifying nutrition related problems and for advocacy.

The survey guidelines include a decision-making tool to help decide when to undertake a nutrition assessment and provides a framework for integrating nutrition assessments into the DPPC's EW (Figure 12). This clearly shows a system that is responsive to available EW information and only

[53] Please note that this is an Ethiopian policy, not an international standard.

undertakes a survey if it appears from available information that the nutrition situation has deteriorated, and further verification of the situation is needed. Given the controversies over the use of nutritional data for early warning (i.e., the nuanced and contextually specific conditions that determine if anthropometry is either an early or late indicator) and the high cost and difficulties of collecting nutritional data, this appears to be the most useful approach to deciding when to do a survey.

Figure 12. Framework for using data from emergency nutritional assessments (ENCU led Nutrition Working Group, 2002)



However in practice, in reporting the data the emphasis is primarily on the estimates of acute malnutrition with limited emphasis on supporting information on underlying causes. This is a major oversight, as without this information the relative importance of food, health or care factors as underlying causes cannot be determined.

In conclusion, the analysis of nutrition in emergencies in Ethiopia has indeed much improved in terms of quantitative estimates of acute malnutrition, but this has not always been matched by an improvement in the more qualitative analysis of underlying causes linked with decision-making and planning a more appropriate response (food aid and more). (See also the discussion on the decision-making tool for the prioritization of woredas).

Emergency Food Assistance – General Food Distribution

Emergency food assistance in Ethiopia currently consists of three programming strategies:

- General food distribution of a general ration for all affected,
- Blanket feeding of a complementary ration for specific at risk groups,
- Targeted supplementary feeding for moderately malnourished children.

In order to appreciate the current ration scales and composition of rations it is helpful to review how food distribution has evolved over the past two decades. Here, two key areas are considered, ration scales and composition of rations and distribution and targeting of assistance. It is worth noting that historically, far less attention is generally given to the nutritional aspects of interventions than to nutritional assessments in Ethiopia.

Ration scales and nutritional composition of rations

In 1985, for general rations, the RRC used three ration scales according to the age of the beneficiary (under 6 years, from 7 to 15 years, and above 15 years). The latter group received 15kg wheat grain per person per month, which still remains the standard general ration prescribed by the DPPC and thus has not changed for nearly 30 years (despite considerable changes in the international recommendations for rations).

At that time adolescents and younger children received only 7.5kg and 3 kg of wheat respectively. At that time a number of other agencies also distributed general rations, most of which were of a markedly higher nutritional quality than the RRC rations as they also included a source of protein (pulses) and fat (oil) (see Table 22).

Table 22. Examples of Rations Distributed During the 1984/85 response to the Ethiopian Famine

Distributing Organization	Quantity pppm	pppd g	Commodity	Total KCal
RRC for those > 15 years	15kg	500	Wheat	1650
Coordinating body of LWF, CRS, EECMY and ECS	Per family of 5			
	45 kg	300	Wheat	
	4 kg	27	DSM	
	3.6 kg	24	Oil	
Total kcal				1300
World Vision	15 kg	500	Wheat	
	1kg	33	Oil	
Total kcal				1942
ICRC	12 kg	400	Wheat	
	2 kg	67	Beans	
	1.2 kg	40	Oil	
Total kcal				1900

Source: (Young, 1987)

Recommendations in the 1989 RRC Guidelines broadly concurred with the international guidelines available *at that time* (minimum average energy requirement: 1900 kcal pppd; 12% of energy to be provided by protein; and 10% of energy from fat) (RRC, 1989).

Table 23. Composition of the General Ration as Recommended by the RRC 1989 Guidelines

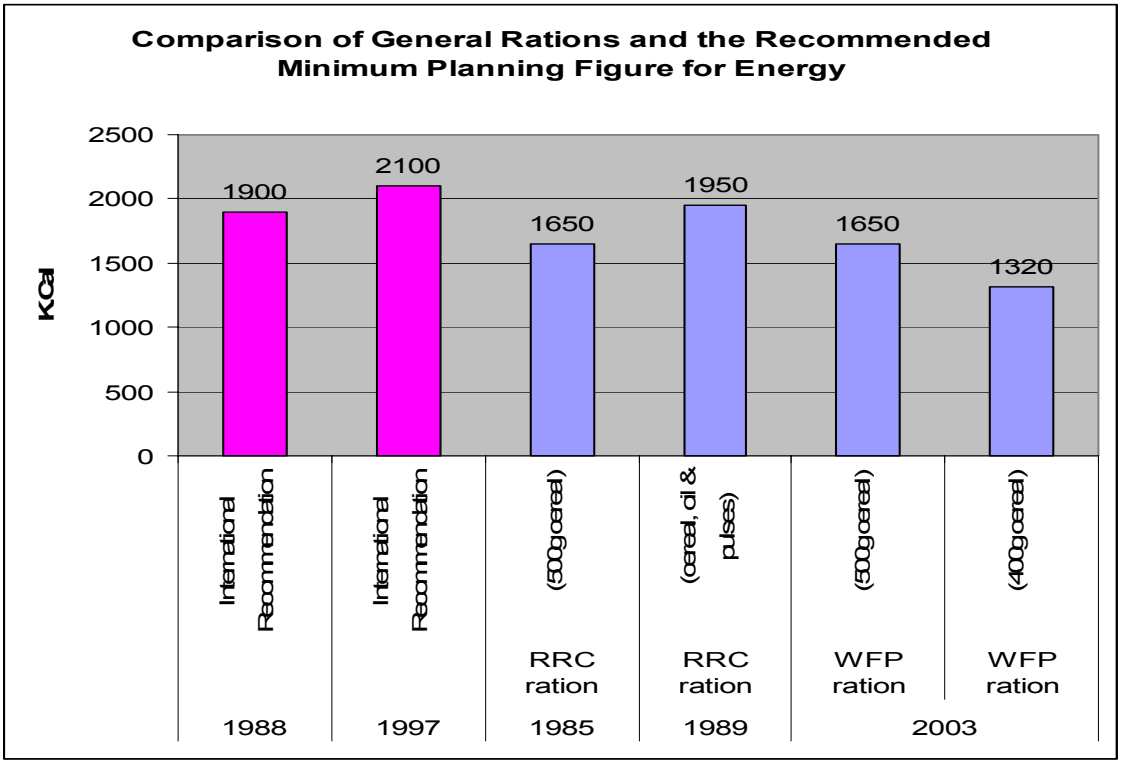
	Quantity pppm	Quantity G	Energy KCals	Protein G	Fat G
Wheat	*15 kg*	500	1650	61.5	7.5
Pulses (or CSM)	*1.5 kg*	50	167.5	10	0.6
Oil	*0.45 kg*	15	132.75	0	15
			1950.25	71.5	23.1
Percent of energy				15%	11%

The calculations of total energy, g protein and fat and slightly lower here than in the original guidelines as they have been calculated using the WFP Food Basket calculator, which has slightly lower values than the composition tables in the RRC Guidelines. CSM: Corn Soy Milk

These international guidelines were superceded in 1997 by the new Minimum Planning Figure for Energy of 2,100 Kcal, which was first agreed by WFP and UNHCR, and later endorsed by WHO and the IFRC in 2000 (WFP/UNHCR, 1997, WHO, 2000)[54].

Neither the RRC 1989 ration nor the current WFP rations in Ethiopia concur with the international recommendations for nutritionally adequate rations. These rations fall short on total energy and amount of fat provided, and are over-supplying protein in relation to the energy (see Figure 13).

Figure 13. Comparison of General Rations and the Recommended Minimum Planning Figure for Energy, RRC and WFP, 1985 - 2003



[54] Energy 2100 KCal pppd; Protein 10 – 12% of energy; Fat > = 17% of energy

It appears that the Ethiopian food aid rations have never been reviewed by the DPPC in the light of these new international recommendations, as **no evidence was found that these new international recommendations have been incorporated into Ethiopian policies or guidelines.** It should be noted that the planning figure of 2,100 kcal per person per day is the minimum average energy requirement, which is not necessarily provided only in the form of food assistance and therefore it is common to find rations that provide less than this, but this is usually based on an assessment of access to other sources of food.

Since the 1989 Guidelines, the only records found of the planning ration process were the recommended rations described in the project documents of WFP (which must be approved by DPPC) and also in a consultancy commissioned by WFP to review the food basket in 1999. Rations are also described in the JEOP proposals, and are different again and include 15 kg cereals, 0.5 kg oil, and 1.5 kg pulses or CSB (SC-US, 2003). Although JEOP states that,

> However, due to limited resources only grain will be distributed as part of the general distribution and CSB (4.5kg) and 1.5kg of vegetable oil will be targeted to the most vulnerable or 35 % of the population as per the DPPC targeting guidelines for supplementary feeding (p22, (CRS, 2002).

In 1999, the WFP EMOP 6143 describes two scales of rations; Class A intended for beneficiaries who require that 100% of their food needs be met by the ration, consisting of 13.5 kg cereals; 3.0 kg blended food and 1.8 kg pulses (daily ration of 450g cereals, 100g blended food and 60g pulses). Class B rations were intended for those affected by the *meher* crop failure, and consisted of 500g cereals. Clearly a review was needed as Class A ration clearly does not approach the nutritional requirements of an individual. Furthermore, according to Oman (1999) even though this was WFP's strategy, the field reality was very different,

> …as the woreda level officials of the DPPC reverted to a far more traditional way of delivering the (blended) food – by ensuring it was made available to children under five, and pregnant and lactating women from the identified families entitled to receive general relief rations (p9 Oman, 1999).

The origins of the current blanket supplementary feeding as practiced today lies in the modifications made by the DPPB at field level in 1999. This was also supported by NGOs, including SCF (UK), who had resourced FAMIX in an attempt to get blended food into the most at risk woredas. A WFP consultant in 1999 recommended the strategy of separating the distribution of cereals from the distribution of blended food stating that "WFP would be most effective if it focused on giving the full 15 kg.…[this] would be a large first step in stabilizing the food needs of the poorest of the poor" (Oman, 1999).

It is worth noting that rations are not decided on the basis of the "minimum planning figure for energy" alone. A range of other factors have to be taken into account (see WFP/UNHCR, 1997, (UNHCR et al., 2002)). The rationale underlying the RRC's 1989 recommendations for rations explicitly relates to the availability of food aid commodities for disaster response:

Underlying this decision [to provide 500g cereal] are practical considerations of availability and access to cereals in food aid. Cereals are usually more readily available than pulses or oil…oil tends to be in short supply in food aid. Therefore, it would be unrealistic to aim for a higher amount than 15 grams [oil] p 5 (RRC, 1989).

Thus, the government's long and consistent experience of not receiving adequate amounts of either oil or pulses or even cereals has meant that the composition of actual rations distributed have become more a function of availability of food aid commodities than a consideration of nutritional requirements. The WFP consultant in 1999 reported that,

> it is not feasible to offer a full ration package given the clear distribution and targeting constraints, nor does it seem feasible to offer a specialized ration to one group. At the end of the day, the region, zones and woredas determine who will eat and what they will eat, and so to try and tailor a package is not realistic (Oman, 1999).

This view is widely echoed in Ethiopia today; irrespective of need, the system is only capable of providing 12.5kg of cereal. This must be seriously questioned and the entire system of food aid provision reviewed and revised as necessary. In the food relief response in 2000, lack of resources and increasing numbers of beneficiaries meant that the recommended ration of 15 kg per person per month (pppm) of grain was reduced to 12.5kg (SC-US, 2003). At that time the plan was to provide a three commodity general ration.

Current rations in 2003

The current strategy is to provide a single commodity general ration, combined with blanket and targeted supplementary feeding in the same areas (which effectively are forms of administrative targeting). The general rations and the blanket supplementary ration are shown in Table 24.

The WFP EMOP justifies their decision to provide only 500g in the general ration thus:

> cereals provide the bulk of calories in the diet...Cereal production most affected by erratic weather...Pulses and oil seeds are locally available at relatively low prices…Furthermore, 35% of the population requiring food assistance is considered particularly vulnerable (children under five, pregnant/nursing women, the sick and elderly) (WFP, 2003b).

WFP therefore agreed to provide blanket supplementary feeding to particularly vulnerable groups, based on the following ration:

4.5 kg blended food per month (150g pppd)
750g Vitamin A fortified oil (25g pppd)

According to WFP the validity of the food basket has been confirmed by the ENCU and also endorsed by WFP nutritionists both at country office and regional bureau levels in late 2002.

The current JEOP proposal (CRS, 2002) describes a full ration as providing 15 kg cereals, 0.5 kg oil, and 1.5 kg pulses or CSB, which is different again from the WFP ration. Although the JEOP proposal also states that,

> However, due to limited resources only grain will be distributed as part of the general distribution and CSB (4.5kg) and 1.5kg of vegetable oil will be targeted to the most vulnerable or 35 % of the population as per the DPPC targeting guidelines for supplementary feeding (p22, (CRS, 2002).

With this type of anomaly within a proposal, it is not surprising that there is considerable confusion about the ration scales in Ethiopia.

Table 24. Current Ration Levels per person per day (PPPD) and their nutritional composition

Ration Type and Persons Eligible	Quantity pppm	Quantity G	Energy KCals	Protein G	Fat G
1. General Ration *for all affected (WFP 2003 / DPPC)*					
Wheat	*15 kg*	500	1650	61.5	7.5
Total			1650	61.5	7.5
Percent of Total Energy				14.9%	4.1%
Or… Wheat		400	1320	49.2	6
Total			1320	49.2	6
2. Blanket Supplementary Ration pppd *"35% of the population requiring food assistance is considered particularly vulnerable (children under five, pregnant/nursing women, the sick and elderly)"*					
Blended food	*4.5 kg*	150	570	27	9
Oil	*.75 kg*	25	221.25	0	25
Total Quantity			791.25	27	34
Percent of Total Energy					
3. General and Blanket Supplementary Combined					
Wheat	*15 kg*	500	1650	61.5	7.5
Blended food	*4.5 kg*	150	570	27	9
Oil	*0.75 kg*	25	221.25	0	25
Total			2441.25	88.5	41.5
Percent of Total Energy				14.5%	15.3%
4. JEOP Recommended Full Ration					
Wheat	*15 kg*	500	1650	61.5	7.5
Oil	*0.5 kg*	15	132.75	0	15
Pulses (or CSB)	*1.5 kg*	50	167.5	10	0.6
Total			1950.25	71.5	23.1
Percent of Total Energy				14.7%	10.7%

Limited Food Resources and Dilution of Rations

Reduction of rations from 500g cereal to 400g cereal has been a common strategy of dealing with shortfalls in amount of cereals for the past 20 years, so much so that for some aid workers 400g is considered to be a normal ration. A food utilization study in 2000 found that,

> The reported average ration size per distribution per person was 12.4 kg while the calculated ration size (total amount dispatched divided by total beneficiaries reported) was actually 10.9 kg (WFP, 2000).

For many people, the evolution of the blanket supplementary ration was a result of the inadequate general ration and so introduced an administrative targeting system for the scarce complementary food commodities (oil and blended food). It was also generally preferred by NGOs, although the reasons for this are not clear (perhaps because it gave them the opportunity to distribute food?)

Food resources have not allowed the cereal ration to be at the full rate in 2002 and early 2003, until late May when they were increased for the priority one areas. The availability of supplementary food has also not been sufficient, forcing prioritization of the food for the most severely affected woredas.

General rations were also reduced at the household level as families shared portions with relatives, neighbors and others in their kinship networks, or sold part or the entire ration to protect productive assets, e.g. oxen, or to purchase other key goods and services, e.g. health care.

Homogeneity of food needs

An erroneous assumption in the various appeals and project documents is that nutritional/food needs are homogenous (based on a uniform ration of 15kg pppm) among the 10 or 14 million affected, despite very large variations in food security, health and care factors in different areas and also within areas. This was exacerbated by the inability of WFP, DPPC and FEWS to publicly reach consensus on the prioritization of populations in need of food assistance.

This is reinforced by some international NGOs, who argue for uniform increases to the food basket for all affected groups (SC UK, 2003). The argument of increasing the food basket in line with international standards for populations who are dependent on the ration as their sole source of food is not debatable, but arguing this is the appropriate solution for the 14 or so million affected in Ethiopia is highly questionable. Furthermore, to argue that all 14 million share the exactly the same humanitarian need is contradicts the impartiality of humanitarian assistance.

In summary:

- There has not been a multi-agency review of the ration composition since 1989 with the result that the ration planning process has evolved principally in accordance with availability of key food aid commodities.
- There is generally widespread misunderstanding and confusion regarding planning nutritionally adequate rations.
- There is clearly a need for a systematic and collaborative review of the ration planning process and the composition of rations for different levels and types of need. This should take account of the wide range of alternative food security interventions that may be used to support people's food needs in times of food insecurity.

- This review should be in conjunction with a review of the processes for prioritizing areas and allocation of food aid resources.

Distribution and Targeting of Food Assistance

Targeting is the process by which areas and households are selected to receive emergency food aid and then provided with it (DPPC, 2000)

The 1983/84 famine was characterized by relief shelters, famine camps and resettlement centers. Providing relief in this context quickly revealed the specific public health risks of overcrowding, inadequate water, sanitation and shelter, combined with high rates of malnutrition, and a lack of health care combined to quickly lead to deadly outbreaks of communicable diseases and high mortality.

> Famine victims who were able to reach relief shelters or who were resettled by the government experienced some of the most severe forms of malnutrition and among the highest mortality rates (Kloos and Lindtjorn, 1994).

People were displaced in part because of the availability of relief assistance. One of the main lessons learnt from the 1984/85 famine response was that adequate relief (particularly food assistance) must be provided to people close to their homes in order to prevent distress migration to relief camps.

Allocation or targeting of relief within Wollo at least during 1988 was determined jointly by RRC/EWPS and other implementing agencies, and was based mainly on the priorities established by the woreda committees. The data provided by the NSP was not a major factor in this process, although some felt it should have been (Kelly, 1993).

Targeting Food Assistance

Poorly targeted food assistance (including both general and selective feeding) has frequently been blamed for the limited nutritional impact of food distribution programs, (Clay et al., 1999a, Oman, 1999). It has been observed that

> different woredas are handling the problem differently - targeting only the poorest of the poor, giving to all; only distributing for a family size of five; only distributing to a family size of three…It is a case of everyone receiving something for the sake of social cohesion and generalized need, but no one actually receiving sufficient quantities to have the intended effect p 9(Oman, 1999).

The need for careful targeting of assistance to those who need it most has long been advocated. Research in the early nineties in Ethiopia pointed to significant differentials in wealth that contributed to a varying impact of drought on households (Webb, 1993). More recently studies have reviewed food aid targeting mechanisms (Sharp, 1998) and also the efficiency of targeting (Clay et al., 1999). The latter study was based on a nationally representative sample of farming

households, and found that there were large errors of inclusion and exclusion at both the woreda and household levels (Clay et al., 1999b).

Although the authors concluded that there was no significant association between food insecurity and food aid receipts (an obviously alarming conclusion about the targeting system), their data indicate that targeting was nevertheless carried out efficiently; the primary beneficiaries of food assistance were at the two extremes of food availability (highest and lowest) while the middle two groups of food availability were successfully identified and did not receive food. The inclusion of the more food secure group (based on food availability) raises questions about the capability of community-based groups to avoid errors of inclusion when these "errors" might be locally perceived as in the community's interests.

In 1996, a multi-agency study on targeting was launched with the objectives of documenting and clarifying recent experiences of food aid targeting and contributing to the development of new targeting guidelines (DPPC, 1998). These were eventually published in 2000 following a series of successful regional consultations and workshops (DPPC, 2000).

However, specific problems have still been reported including:

- Where livestock holdings were considered the only indicator of economic status for rural households, a significant number of households sold livestock to qualify for food aid programs,
- Targeting mechanisms were found to differ from PA to PA,
- In certain regions, beneficiaries were seen to redistribute food aid to non-beneficiaries, thus reducing their own ration and questioning the validity of the targeting mechanism.[55]
- Widespread sale of rations in order to raise cash for other food and non-food purposes (which in itself is not a problem as long as the economic returns on sales are not substantially below the economic value of the inputs sold)

Pilot trainings have now been conducted in Tigray, and there are plans to replicate the training in 156 food insecure woredas. From the team's field visit to Tigray, the targeting mechanisms appear to be working well and generally seem to be considered fair. However, perceptions of fairness do not necessarily equate with perceptions of whether this might be the best way of doing things (see Box 9 Distributions in Tigray). At a recent Sphere Workshop in Addis Ababa, participants reported that frequently the current targeting system has undermined dignity and social cohesion by encouraging neighbors to "report on each other," and make public an individuals circumstances. The Addis Ababa group concluded the following (Young and Taylor, 2002), which could be used as a model of best practice on targeting in Ethiopia,

- Targeting criteria are developed by communities with professional assistance from other actors (e.g. nutritionists)
- Targeting mechanisms and criteria should not undermine individual dignity
- Targeting criteria are clearly defined and made publicly available

[55] However, sharing of rations can be an important and positive food security strategy, especially in pastoral areas where sharing of resources can be an effective way of ensuring that a maximum number of resource-poor households benefit from food aid distributions.

- Distribution systems should be monitored to ensure that targeting criteria are respected and defined errors of inclusion and exclusion
- Systems should be established for appeal with independent people
- Targeting mechanisms and criteria should be adjusted based on monitoring and appeal information

Distribution

While targeting has received considerable attention by agencies in Ethiopia, less attention in public at least has been focused on the process and systems of food distribution. There are many aspects of the food distribution process, in addition to targeting, that determine the success or otherwise of food assistance programs, including for example:

- Efficiency of distribution to end delivery points (EDP)
- Actual number of beneficiaries (as compared to planned numbers)
- System of distribution at EDP (to household head, section head, community leader, etc.)
- Degree of centralization of distribution points influencing distance traveled, costs incurred, migration and relocation of people
- Gender of person finally receiving the food
- Access to milling facilities
- Access for chronically ill, disabled, older people, unaccompanied children and families with high dependency ratios
- Actual rations received post distribution
- Household distribution and utilization of rations including ease and cost-effectiveness of resale, food preferences and acceptability, food storage and preparation

During the team's visits, it appeared that relatively little attention has been given to these issues. Some were included in a one-off study by WFP in 2000 which generated useful and important results based on a survey of 1,462 beneficiaries in 68 sample sites. Some of these issues are briefly considered below.

The amounts of food aid that are currently being distributed far exceed any previous year. The distribution systems in the areas visited appear to be functioning well in some areas but not in others. In 2000, the WFP office in Ethiopia received an award from their head office for improvements to its logistical operations. The WFP study reflects this efficiency, for example, in 2000, 99.9% of the cereals allocated were in fact dispatched, of which 83% was received within 30 days and the remaining 17% after 30 days (WFP, 2000). The WFP commodity tracking system COMPAS, appears to have improved timeliness and accuracy of information, thus allowing better monitoring of food movements.

However these improvements are not echoed in simultaneous improvements to monitoring, particularly routine food basket monitoring (what beneficiaries actually receive) and end-use monitoring, although a food utilization study was undertaken in 2000 and another is planned for this year (although this is not a substitute for routine food basket monitoring).

Degree of centralization of distribution points

The WFP study showed the average distance traveled by beneficiaries to collect food aid was less than 15 Km for 59% of households, 15 – 30 Km for 15% and more than 30 Km for 3%. (23% of households did not give information on the distance traveled.) These average figures likely mask wide regional differentials, e.g. during the team's visit to Wukro, beneficiaries reported traveling up to 40 km to receive rations. Such distances raise important issues of access by less able bodied populations, including the chronically ill, the disabled, older people, families with high dependency ratios or those headed by a child.

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The issue of how centralized the distribution points should be is particularly important in pastoral areas, where population density is extremely low, meaning that people would have to travel long distances to reach the woreda capital, and once there, they may be induced to settle to await the next distribution. For example feeding programs in the more urban centers of Fik woreda during the 2000 emergency attracted many destitute people, many of who remain there still. (See Annex X)

Another important issue is that of security. In Fik Region, there is conflict between neighboring sub-clans; bringing sub-clans to a central point risks violent clashes[56]. To manage these risks in Fik Woreda, distribution is very decentralized (with 35 distribution points).

Need for food basket monitoring

There will always be some deviation between the planned ration as it appears in proposals, the ration that is allocated on distribution day, and the actual ration that is received by beneficiaries. The only way of finding out about these discrepancies is through the process of routine food basket monitoring. Food basket monitoring in most emergencies is usually implemented by an NGO that is independent of the food distribution program, e.g. a health-oriented NGO who is undertaking supplementary feeding and is concerned about the efficacy of their program. No cases of food basket monitoring were found by the team during this visit.

In the WFP study in 2000, beneficiary receipts were reported based on interviews rather than actual measurements. The study states that,

> While data provided by woreda officials indicated that ration sizes were 10.9 kg per person, beneficiaries reported ration size was on average 9.4 kg per person. This was reportedly due to limitations placed on the amount of ration provided to one family independent of family size. In fact in Afar, where the average ration was 3.1kg per person per month, household size is significantly larger (8.1 people) and in Tigray, where the average ration was 11.2kg family size is smaller (3.4 people) (ibid).

Thus the smaller ration sizes are attributed to fixed family ration sizes, but could well be due to other reasons, including over-registration and or under-scooping.

[56] According to Save UK personnel the conflict in Fik has two aspects. One is relatively new, with no historical basis and is usually about access to water resources, or retaliation. Clan conflict as a result of regionalization concerns the Sherkhash , who want their own territory.

Selective Feeding Programs

Selective feeding programs include both supplementary and therapeutic feeding, both of which have been a common component of emergency response in Ethiopia since 1985. For a review of selective feeding programs at that time see (Young, 1987).

Targeted Supplementary Feeding Programs

Supplementary feeding has dual aims: as a short-term measure to maintain nutritional status of vulnerable groups (preventative) and also as a supplement for moderately malnourished children (curative). This corresponds to the current distinction between 'blanket supplementary feeding' directed at all vulnerable groups (children under five and pregnant and lactating women) and 'targeted supplementary feeding' directed at the moderately malnourished (those children whose nutritional status is between 70 and 80% WFH/L). Rations may be either dry ("take-home") or wet (to be eaten "on-the-spot"). Targeted supplementary feeding programs in Ethiopia are intended for the moderately malnourished (those children whose nutritional status falls between 70 and 80% WFH/L).

In some quarters, supplementary feeding programs have always been contentious because of their inability to compensate for the lack of a nutritionally adequate ration. This debate has raged for more than 20 years and draws in large part on experience in Ethiopia (Dick, 1986, Shoham, 1995). Where a family's access to food is less than their nutritional requirement, a food supplement consisting of a fraction of the child's requirement will not compensate for the shortfall. Thus, a food supplement runs the risk of becoming a substitute for both the food eaten at home and (on a programming level) for an adequate nutritional response in the form of adequate general rations. This is well understood by the DPPC, as stated in their 1989 guidelines,

> Supplementary food should only be provided as a supplement to the general ration. It should not be used as a substitute for the general ration p7 (RRC, 1989).

A further problem is the limited coverage of targeted supplementary feeding programs, both in terms of the number of SFPs in the worst affected areas, and also in relation to the coverage of individual programs (which is the percent of 'at risk' group included in the program). The former tends to be low as SFPs are traditionally implemented by NGOs which are not present in all affected areas. The most recent information from the ENCU (see Table 24) suggests there are only 10 targeted supplementary feeding programs currently operating or planned (ENCU, 2003a). Given that all therapeutic feeding programs should be accompanied by follow on supplementary feeding, either therapeutic feeding programs are being run in the absence of follow-on supplementary feeding which is extremely worrying, or the ENCU figures are wrong. Both of these possibilities are serious and require immediate attention.

Even where operational, programs coverage will vary according to the context; in the confines of a camp situation higher coverage rates are achievable, as compared to more scattered rural settings. According to recent revision of the Sphere Nutrition Standards, coverage levels for targeted supplementary feeding should exceed 50% in rural areas, 70% in urban areas and 90% in a camp

situation. **This shows that even if there were enough supplementary feeding programs in all affected areas, supplementary feeding usually can not be expected to reach more than half of the moderately malnourished children in rural areas.**

Effectiveness of supplementary feeding may be assessed in terms of recovery, defaulter and mortality rates as a percent of total discharges from the program. These routine monitoring requirements are a simple way of reviewing performance, yet despite more than 20 years of practice, these figures are not routinely collated and reported in Ethiopia. Individual programs may report on this to their donors, but there is no central coordination of supplementary feeding. This is included in the plans of the ENCU (but care is needed not to over-burden this unit).

Nevertheless, the perceived efficacy of supplementary feeding is based on a long-standing practice or tradition of implementing SFPs in emergencies. Despite the obvious problems with supplementary feeding there have been very few evaluations of supplementary feeding programs either in Ethiopia or internationally. This is urgently needed.

Table 25. Types of feeding program, and combinations operating or planned

Type of program	# operating / planned	Agency, Region		
General food ration only	9	CRS East Hararghe OSHO West Hararghe WVI East Shoa	ADRA East Shoa WVI Afar ICRC Afar (all 6 woredas)	WVI East Tigray ORDA, Amhara WVI, SNNPR
Blanket supplementary only	5	Oxfam East Hararghe GOAL West Hararghe	GOAL East Shoa LWF/ EECMY Bale	SC UK and US, Somali Region
Therapeutic feeding only (plus 1 CBTF by Concern in Ofa, SNNPR)	56	Besidimo Hospital, East Hararghe, IMC Chiro and Gelemso Hospitals and 4 health centers, Oromiya Gov Girawa HC, Oromiya Gov, Babile HC, Oromiya Gov, Karamile HC, Oromiya Gov Bedeno HC, Oromiya Gov Welenchite HC, Oromiya Gov Metahara, Oromiya MSF-H Bulbula, Oromiya Salesian Sisters East Shoa, Oromiya MSF H, Bale, Oromiya SC-UK, Gola Oda, Oromiya BOH, Assaita Health Center Afar ACF, Dubti Hospital, Afar	BOH, National Hospital & Awash Health Center, Afar WV Assayta HC, Afar MCDO at Hartisheikh IDP camp, Somali MCDO Jijiga Health Center, Somali Jijiga Karamara Hospital, Somali Gode Hospital, Somali SC-UK Fik, Somali SC-UK, Hamero, Somali SC-UK, Gasaangue, Somali MSF CH Sekota Hospital, Amhara. Concern Kalu, Amhara Concern Dessie, Amhara MSF CH, SNNPR (3 sites) Project Mercy, SNNPR DoH, SNNPR	WVI, SNNPR Butajira Hospital, SNNPR Dalota Hospital, SNNPR Concern Badessa HC IMC Bolasso Sore HC (2 sites), SNNPR Gov/Catholic Sisters Bushulo HC, SNNPR Gov, ADRA, SC-US, Yirba HC, SNNPR SC-US, ADRA Belela HC, SNNPR SC-US Yrgalem Hospital, SNNPR Catholic Sisters/SC-US, Taza Clinic, SNNPR IMC, Bolosso Sore (3 sites) Concern, Ofa, SNNPR SC-US , Shebedino, SNNPR Hiwot Fana Hospital, Harar
Targeted supplementary feeding & Therapeutic feeding program	1	SC (UK) East Hararghe		
General ration and targeted supplementary food distribution	5	CARE East Hararghe CARE West Hararghe	ERCS West Hararghe REST, South Tigray	REST, East Tigray REST, Central Tigray
Blanket & targeted supplementary feeding	1	GOAL, all 6 woredas Afar	(ICRC undertaking General Rations)	
Targeted supplementary (where another NGO is doing General ration)	1	GOAL and IMC, West Hararghe		
General, Targeted Supplementary and Therapeutic Feeding	2	CONCERN, Amhara	CONCERN, SNNPR	

Note: as of 7 May 2003, TFCs as of 26 June 2003 extracted from (ENCU, 2003c)

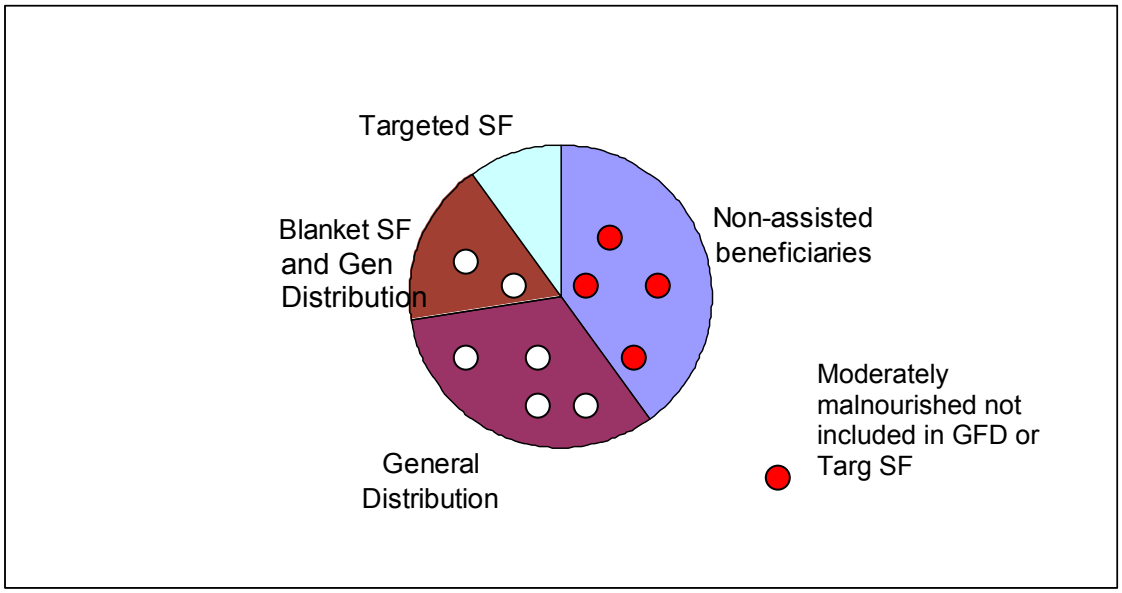
Blanket supplementary

Blanket feeding is a relatively new term and approach that is a modification to the usual targeted supplementary feeding, as it covers all members of a particular group e.g. all children under 3 or 5 years irrespective of their nutritional status. According to the most recent MSF Nutrition Guidelines, "Blanket feeding programs provide a complement in case of lack of food due to either insufficient food accessibility or an incomplete food distribution" (p1 (MSF, 2002).

Apart from the WFP EMOP and a WFP consultant's report in 1999 (Oman 1999) no documents could be found that discuss or explain (or even mention) the rationale for the current blanket feeding program in Ethiopia. Given the program's size, scale and potential importance in the light of a single commodity ration, this is a major oversight in both policy and program planning. As with targeted supplementary feeding there is an urgent need to evaluate the efficiency, effectiveness and impact of blanket feeding in Ethiopia This is all the more disconcerting in light of Oman's (1999) conclusion that "the system is inherently flawed and does not allow for any actual nutritional improvement amongst the vulnerable."

Of particular concern is the high probability of errors of exclusion; particularly the exclusion of moderately malnourished children. For example, assume the general ration is targeted at 50% of the total population, while the blanket feeding targets 35% of this group with complementary foods. The prevalence of acute moderate malnutrition is 20%, of whom half are included in the targeted SF program (based on expected coverage rates). That leaves 10% of moderately malnourished children who are scattered among both the beneficiaries and the non-beneficiaries. The non-beneficiary moderately malnourished children would therefore not be receiving any benefit from the three emergency programs, which represents major errors of exclusion. See Figure 14 for a graphical demonstration of potential errors of exclusion.

Figure 14. Diagram To Show Proportions Targeted By Different Feeding Programs And Potential For Errors Of Exclusion



Therapeutic feeding programs

In the context of emergencies, treatment of the severely malnourished in therapeutic feeding programs has traditionally been the work of NGOs, including faith based organizations, sometimes in collaboration with the Ministry of Heath.

The technical expertise necessary for therapeutic feeding likely has resided with the international NGOs operating such programs in Ethiopia. Unlike nutrition surveys and food relief rations, no reference to Ethiopian therapeutic program guidelines were found prior to the recent manual developed by UNICEF international consultants, which are based on the WHO protocols (Golden and Grellety, 2003). These manuals are part of a wider program of UNICEF support of therapeutic and supplementary feeding services.

UNICEF's support of nutrition in response to the drought emergency covers therapeutic feeding; including therapeutic food (F-75, F100 and ReSoMal), program support, and training costs for management of severe malnutrition (UNICEF, 2003). No costs are included for the feeding equipment and other program consumables, which usually are included in specific NGO proposals.

UNICEF employed two internationally renowned therapeutic feeding experts to conduct training workshops on the management of severe malnutrition for all stakeholders, including multilateral and bilateral partners, Ministry of Health, regional health bureaus, NGOs, doctors and nurses managing malnourished children in government facilities and NGO programs, and university medical faculties.

Technical support for therapeutic feeding are also provided by UNICEF by one international emergency nutritionist, supported by two national public health consultants based in the worst affected regions for a period of one year. In Jijiga, Somali Region, UNICEF has another international emergency nutrition project officer and two national public health consultants.

As a result of this activity the number of therapeutic feeding programs have increased considerably, particularly as many hospitals and health centers are now operating therapeutic feeding (see Table 25 earlier). According to the Chair of the Health Task force, therapeutic feeding programs have increased from 22 to 56 programs. Data from the ENCU suggest that many of these appear to be operating in the absence of follow-up supplementary feeding programs (ENCU, 2003b). This rapid growth raises concerns that as the numbers of TF centers increases, the quality of care and general performance of programs will decline. Other specific concerns are discussed below.

Concerns about the Quality of Complementary Healthcare and Follow-up

Concerns about lack of follow-up after discharge were expressed by senior MoH staff. If the ENCU tables are correct, there is indeed no follow-up supplementary feeding in the majority of therapeutic programs. This is a serious problem.

Need for a Centrally Managed System for Coordinating and Monitoring

The importance of monitoring cannot be overstated, both in terms of ensuring good quality care and performance, and also making sure that the relatively expensive inputs into TFPs are properly utilized. Therapeutic feeding programs, if poorly managed, will be associated with a high percent of deaths of the children they are intended to save. Research has shown that it is not uncommon to find case-fatality rates of 50% or more, where international guidelines on the treatment of severe malnutrition are not followed (Schofield and Ashworth, 1996).

The recent UNICEF initiative to develop guidelines and improve practice is welcomed, as the guideline for therapeutic feeding for example clearly sets out the minimum standards to be achieved by programs (p139, Golden and Grellety, 2003). However, there needs to be a monitoring system in place that regularly collates this information for *all* TFPs, and takes specific action if performance is found to be poor. The JEOP NSU will be in a position to do this for JEOP partners, but it is not clear how the coordination of the MoH and other TFPs will be achieved.

Need to Standardize Nutrition Protocols for TFPs

Another critical issue in relation to coordination is the need to standardize nutrition protocols for therapeutic feeding throughout Ethiopia. Although UNICEF have taken the initiative and commissioned the development of draft guidelines, these principally focus on the technical issues of clinical management of severe malnutrition, with less attention to the (more Ethiopian) specific issues of management of feeding centers. (These issues can be included through a more participatory process of consultation.) The ENCU is in the process of developing their own nutritional intervention guidelines, and thus great care is needed to ensure compatibility and collaboration between these two initiatives.

Poor Coverage of TFPs

With only 30 or so therapeutic feeding programs throughout Ethiopia at present, only a small proportion of the severely malnourished children have access to treatment. (However, there is no available data on either number of operating centers or number of children). Even where centers are operating, coverage should not be assumed to be very high. For example, in the 2000 emergency, coverage was reported to be as low as 10-20% in Gode, Somali Region (Salama et al., 2001).

Need for Comparative Cost-Analysis of Feeding Programs

Very little, if any work has been done reviewing the cost-effectiveness of different models of therapeutic feeding (home versus center based treatment), or comparative studies of costs of general feeding versus targeted supplementary and therapeutic feeding.
At face value it would appear that home-treatment models of therapeutic care would be better value, however, they require considerable resources in terms of 'Ready-To-Use-Therapeutic-Food' and increased numbers of trained community-health workers.

A number of proposals submitted to USAID for funding were reviewed by the team in order to gauge approximate costs on a per capita basis. The per capita cost of the combined general ration and blanket supplementary were calculated (Annex IV), which shows the very low cost of these programs on a per capita basis (0.15 US$ per person per day). Targeted supplementary feeding

would be expected to be considerably more than this because of the need for screening, registration, routine monitoring and general support of the individual. However it was not possible to accurately calculate the per capita cost of either targeted supplementary or therapeutic as NGO budgets usually combine these in one proposal, and costs cannot be easily broken down between them.

However, some preliminary analysis has been undertaken. Annex IV shows that the UNICEF costs for providing therapeutic food and technical support are very roughly $62 per child for one month of treatment. Obviously, the total cost of therapeutic treatment is far more than this as it does not include costs of running the centers, including non food costs.

ACF, an extremely experienced NGO in running feeding programs, combine the costs of therapeutic and supplementary feeding in one proposal to USAID. Therapeutic feeding within a center is obviously far more expensive than the dry take-home rations provided in supplementary feeding. If it is assumed that TF accounts for approximately half the total budget, the average cost of treating a severely malnourished child is $731, which illustrates the high cost on intensive therapeutic care. The point of these calculations is not to show the good value of general feeding at $0.15 pppd (or $27 for 6 months) versus therapeutic feeding, but to stress the importance of ensuring therapeutic feeding programs are properly managed and achieve the minimum standards, in order to save lives and make most effective use of resources.

Risk of Wastage or Misuse of Expensive Therapeutic Milks

Therapeutic milks are very expensive at $2,440 MT (as compared to $240 MT for Corn Soy Blend). UNICEF has budgeted for about 265 MT of therapeutic milks, sufficient for treating approximately 20,000 children for one month. Other INGOs have also budgeted for these products, e.g. ACF. It appears that these organizations have overestimated their need for therapeutic milk. If it is assumed that each of the 30 therapeutic feeding programs will treat 500 children each, (which is almost double the number predicted by ACF), this totals 15,000 children (5,000 more children than requested by the organizations). This represents an excess of 60 MT of therapeutic milks with an approximate value of $124,000.

A further problem is introduced as to how to find alternative acceptable uses for this commodity in the light of international codes and guidelines prohibiting the distribution of dried milks (UNHCR, 1989, Interagency Working Group on Infant and Young Child Feeding in Emergencies, 2001). The problem is further compounded by the limited shelf-life of the product. These problems are not unprecedented; INGOs operating therapeutic feeding programs in 2000 in Somali Region found themselves in a similar predicament (anonymous personal communication) and even reported distributing F100 as part of dry distributions, a clear violation of international guidelines.

Community Based Therapeutic Feeding Pilots

In response to some of these common problems, protocols for the treatment of severe malnutrition through out-patient and community-based strategies (rather than in a center) have been developed and strongly advocated internationally (Collins, 2001, Briend et al., 1999) including the development of Ready-to-use Therapeutic Foods (RUTF) (Briend et al., 1999).

This new approach to therapeutic feeding, known as Community Based Therapeutic Feeding (CBTF), is currently being applied as a pilot by CONCERN International in Kalu and Dessie Zuria, Amhara Region. They are using a Ready to Use Therapeutic Food known as Plumpinut, produced by a French company. Admitted children attend an out-patient therapeutic center on a weekly basis and are supported by a large network of outreach workers. Preliminary results appear promising (Tanner, 2003), although it must be recognized these are 'trials' and as such should not be 'scaled up' until their implications are fully understood (including for example, issues such as sharing of food with siblings; and the difficulties following up the progress of individual children (Navarro-Colorado et al., 2002).

Address micronutrient deficiencies

The three micronutrient deficiency diseases of major public health importance globally are vitamin A deficiency, iodine deficiency disorders and iron deficiency anaemia. However, event though the precise scale of these major micronutrient deficiencies in emergency contexts in Ethiopia is generally unknown, it may be assumed that they are generally present for two reasons. First, it is well established that populations that are highly dependent on food assistance are often at risk of MDDs, and second surveys in non-emergency contexts in Ethiopia have confirmed their presence. For example, there are reports of relatively high prevalence of vitamin A deficiency in stable contexts[57] (Ayalew et al., 1999), and the Ministry of Health has pursued policies that pay attention to micronutrient deficiencies and supported efforts to monitor and control these problems in the past.

It is worth noting also that other micronutrient deficiencies have also been reported in emergency contexts in Ethiopia, including scurvy (Toole and Bhatia, 1992), and possibly pellagra (Golden, 2003). In the 1980s studies of the relief food (which has not really changed) pointed out major deficiencies in potassium and magnesium, which were thought to contribute to increased morbidity and mortality (Fleischer Michaelsen and Clausen, 1987)

Risk factors that increase the likelihood of MDDs in Ethiopia include:

- Endemic MDDs
- Single commodity ration, and limited complementary food
- High rates of infection and or diarrhoea.
- Limited availability and access to iodized salt
- Government policies to promote intensive mono-cropping of maize.

Lack of access to fresh foods is also a possible risk factor, although information on this in the Ethiopia context is lacking. In addition, a cause for concern and an issue that needs to be monitored is the decreasing levels of household for crop diversity. The traditional *quaro atakilt* (home garden or vegetable patch around rural houses) are fast disappearing as farmers maximize their area planted to maize. The dietary changes caused by reliance on maize and resulting lack of

[57] Studies found nearly 5% of children under five were reported by their mothers to have "night blindness" (an early indicator of vitamin A deficiency), yet fewer than 10% of these children received vitamin A supplementation (Ayelew, 1998).

diversity in food consumption has both short and long term nutritional consequences, especially for young children.

Food fortification (the addition of one or more vitamins or minerals during food processing) is an important strategy for improving the nutritional composition of the general ration and the foods people have access to. It is the policy of WFP and USAID to fortify certain food aid commodities including oil, with vitamin A and possibly vitamin D, and blended food with a range of micronutrients. The blended food and therapeutic milks (F100 and F75) provided by UNICEF are also highly fortified taking account of the nutritional requirements of young children (blended food) and the precise needs of severely malnourished children.

To combat iodine deficiency disorders a programme of salt iodization is underway. In areas that have the highest prevalence of IDDs opportunities for distributing iodized salt either as part of the general ration, or blanket supplementary feeding should be explored.

Public health measures are also needed to combat micronutrient deficiencies including deworming (included in targeted supplementary feeding and therapeutic feeding), in combination with distribution of iron supplements to control iron deficiency anemia and distribution of vitamin A supplements through routine supplementation to control vitamin A deficiency and to reduce overall morbidity and mortality.

Distribution of vitamin A capsules is undertaken alongside measles immunization, and the Ministry of Health prohibits anyone other than a trained health worker to distribute these capsules. Although this may appear reasonable, it does mean that many opportunities for distributing vitamin A in emergency contexts are lost, for example, during food distribution where the entire rural population is reached (as occurred in Fik Zone, when everybody congregated in the distribution sites). This is particularly serious given the known mortality risk associated with vitamin A deficiency and measles, and the fact that coverage of measles immunization is reportedly low in many drought affected areas. Vitamin A deficiency is a critical issue in emergencies and therefore of direct importance to the policies not only of the MoH but also the DPPC, both of whom must urgently review their policies on the distribution of vitamin A.

Promoting access to micronutrient rich sources of food are a means of promoting self-reliance and providing foods of preferred choice. For example, distribution of fresh meat following livestock de-stocking programmes (Catley, 1999, Aklilu and Wekese, 2001) or promoting access to milk among pastoralists (Ayalew et al., 1999, Catley, 1999).

Addressing the needs of specific nutritionally 'at risk' groups

Although the needs of specific 'at risk groups' have long been recognized, especially children suffering from malnutrition, the needs of other groups are relatively neglected.

Of major concern during this visit was the complete lack of attention given to the support, protection and promotion of breastfeeding. While this may not appear to be an emergency issue, unless specific government policies are in place to support, protect and promote breastfeeding and

appropriate infant feeding generally, emergency programs run the risk of undermining the most important determinant of good nutrition for infants. In Tigray for example, mothers were seen to be using infant feeding bottles in the targeted supplementary feeding centers operated with the support of the Ministry of Health (Picture 5). This is in complete contravention of the WHO Code on Breastmilk Substitutes and the other international policies and guidelines on infant feeding in emergencies (Seal et al., 2001). The specific problem with this individual center was immediately addressed, but it raises wider policy issues which are of critical concern to both the Ministry of Health and UNICEF.

Related to this are the risks of maternal to child transmission (MTCT) of HIV during pregnancy, delivery and lactation, which are major threats to infants in emergency settings. According to the revised Sphere Minimum standards "If voluntary and confidential testing for HIV/AIDS is not possible, all mothers should breastfeed."

The nutritional needs of populations living with a high prevalence of HIV/AIDS are also not generally considered within emergency programmes, although there is the potential for including this group as beneficiaries within the blanket supplementary feeding programmes. As the majority of people would not be expected to know their HIV status, the targeting criteria would have to be 'chronically ill'. One problem of doing this would be that the needs of this group would be unlikely to change as the affect of the emergency subsides thus making an exit strategy more difficult.

No reports or references were found on the particular nutritional problems of older people and people with disabilities, although during the food distributions in Tigray a high proportion of older people were present during the distribution. Although all present appeared able-bodied and it was not clear how the needs of the disabled were addressed in distributions that required travelling several kilometres.

Picture 5. Infant feeding bottles in a Targeted Supplementary Feeding Program in Tigray

Diminishing institutional and technical capacity to address malnutrition

The learning that has occurred in Ethiopia in relation to nutrition has not been matched by the development of either institutional or technical capacity to prevent and address malnutrition. Ethiopia, like many of its neighbors, has a regular demand for nutritional technical expertise, which is not matched by its capacity to produce the same. It is sad but probably true that Ethiopia has been one of the major training grounds for international nutritionists who have gone on to work for a range of international organizations elsewhere, but has not produced a home-grown cadre of experienced and well-trained Ethiopian nutritionists. This loss is felt everyday in Ethiopia as organizations are continually advertising for jobs and many posts remain unfilled. This has a direct affect on the quality of not only project proposals but on the implementation of technically sound nutritional programs and development of appropriate related policies needed to address the diverse range of nutritional risks facing the majority of Ethiopia's population.

The Ethiopian Nutrition Institute (ENI) was established in 1962, supported by the Swedish International Development Institute for more than 20 years. Its staff focused on research rather than the implementation of nutritional programs. For example, in 1979/80 the ENI were responsible for a comprehensive geographical nutritional survey. The Nutrition Guidelines of the 1989 RRC call for local nutrition expertise, i.e. from the Ethiopian Nutrition Institute, to be involved in case adjustments in the ration are necessary (RRC, 1989). The ENI has now become the EHNRI (the Ethiopian Health and Nutrition Research Institute) with what some consider to be 'a sidelining of nutrition'.

Nutrition and the MoH

Nutrition in emergencies has traditionally been under DPPC control, although the Ministry of Health was called to join the DPPC in the Crisis Management committee last year. The MoH has had very limited capacity to take responsibility for a wide range of nutrition activities, as they have a very nutrition small unit that falls under Family Health.

To give some indication of the low priority generally accorded to nutrition, the team found some communication difficulties between the Health Emergency Task Force and the MoH's nutrition unit. It was noted that the first appeal document published by the DPPC in December 2002 made no mention of nutrition, which was only incorporated into the second appeal. According to some senior DPPC staff, there is a widely held belief even within the MoH that there are "no nutritional problems if there is enough food".

UNICEF and Nutrition

UNICEF have actively supported and promoted capacity development in the Ministry of Health in relation to the management of moderate and severe acute malnutrition. They have commissioned two international experts to draft training modules and guidelines (Golden and Grellety, 2003, Grellety, 2003a, Grellety, 2003b), and are in the process of implementing a series of trainings of health workers in therapeutic feeding (See section on therapeutic feeding). These initiatives have

been widely welcomed and supported by the NGOs engaged in this field. UNICEF is also responsible for monitoring the performance of the operating therapeutic centers.

The DPPC and nutrition

The ENCU of the DPPC is currently the focal point for nutrition coordination and capacity in terms of GOE emergency response. However, as mentioned above its activities are limited and do not cover the range of nutritional interventions necessary in emergencies. A summary of these is given in Table 26, based on the revised Sphere Guidelines, the MSF Guidelines, and the most recent UN practical guidelines. The Head of the ENCU participates in the Emergency Health Task Force, and the MoH is invited to the nutrition meetings.

In conclusion, nutrition related emergencies require a broad range of interventions that go beyond the limited package of a single commodity ration, combined with selective feeding. Until this is widely recognized at the highest level, and integrated into the policies of the MoH, DPPC and even MoA, the fight against malnutrition will continue to be piecemeal and fragmented. Nutrition in emergencies needs a number of committed champions within key institutions. In relation to immediate operational concerns, there is obviously the ENCU of the DPPC, together with a critical role of UNICEF in supporting the development of sound policies on nutrition in emergencies within the MoH. But the wide-ranging policy debates that need to take place in Ethiopia will require much more than this, they need a well-established local forum for learning, teaching, training and critical debate that feeds into the processes of participatory and appropriate policy development. This urgent need is not just within Ethiopia, but more widely among the many emergency affected countries of the Horn of Africa.

Table 26. Nutrition in Emergencies: Aims, Analysis and Essential Actions

(The list of Gaps in Response are not exhaustive, but to give examples of key strategies that are currently lacking)

Aim:	Related Actions in Ethiopia	Gaps in Response
Assessment and analysis of the causes, type, degree and extent of malnutrition, and the most appropriate response.	Anthropometric surveys (Two stage 30 by 30 cluster surveys)	Analysis of the underlying causes of malnutrition, including food, health and care factors A clear standardized methodology for surveys in pastoral areas. Assessments of micronutrient deficiency diseases, including Vitamin A, Iodine Deficiency Disorders and Iron Deficiency Disorders
Assessment and analysis of how affected populations normally access food, the impact of the disaster on current and future food security, and hence the most appropriate response.	Household food economy assessments, which form part of the EWS in pastoral areas. Food security assessments linked with nutrition surveys. The EWS of the DPPC. Multi-agency assessments….	Linking assessments of food security, with anthropometric assessments and analysis of the health and care factors. This analysis is critical to decisions on prioritization of affected population groups, and subsequent targeting of resources.
Support the nutritional needs of all groups, who are unable to meet their nutritional requirements.	General food distribution	Need for improved ration planning; including a review of rations for different levels of food insecurity, ensuring that the most severely affected groups receive a nutritionally adequate ration. Alternative food security mechanisms for enabling people to meet their own food needs should be promoted
Address the nutritional and support needs of at risk groups (infants, young children, pregnant and lactating women, the elderly, the chronically sick)	Blanket supplementary feeding (distribution of CSB and oil to 35% of assisted beneficiaries) (although this does not adequately address the nutritional needs of at risk groups, as it is designed to partially compensate for an inadequate general ration) Nutritional needs of these groups may also be partially addressed through targeted supplementary feeding although coverage is extremely low.	Lack of policies and subsequently program initiatives on infant feeding, use of breast milk substitutes; and breastfeeding and HIV. The nutritional needs of populations living with a high prevalence of HIV/AIDS are not generally considered within emergency programs, although there is room for this within the blanket supplementary feeding programs. The particular nutritional problems of older people and people with disabilities are generally not considered, and need to be reviewed.
Address micronutrient deficiencies (including prevention and treatment	Most food commodities for relief distributions are now fortified e.g. oil with	The scale of these major micronutrient deficiencies is generally unknown, particularly in drought relief

Aim:	Related Actions in Ethiopia	Gaps in Response
of micronutrient deficiencies).	vitamin A, and blended food with a range of micronutrients. Vitamin A supplementation is undertaken alongside measles immunization	contexts. It can be assumed from earlier studies that vitamin A deficiency, iron deficiency anaemia and iodine deficiency disorders are endemic. Iodized salt should be included in the general ration for groups dependent on the food ration to cover their nutritional requirements. Given the low coverage of measles immunization in some areas, coverage of vitamin A supplementation is also very low. MoH must urgently review their policy on the distribution of vitamin A.
Address moderate acute malnutrition	Targeted supplementary feeding programs	Coverage of targeted supplementary feeding programs remains relatively low, both in terms of areas covered, and also from experience elsewhere in non-camp situations, coverage within the program area is likely to be low. Alternative non food strategies for addressing the underlying causes of moderate malnutrition should be explored.
Treat severe acute malnutrition	Therapeutic feeding programs in health centers, hospitals and by NGOs. Trials of Community Based Therapeutic Feeding.	Need for a centralized system of monitoring according to internationally agreed minimum standards. Need for careful monitoring of expensive therapeutic milks and other inputs to ensure proper use and reduce wastage. Need production of therapeutic milks and Ready-to-eat-Therapeutic Food either within Ethiopia or regionally.

Health

According to a classic article by the US Centers for Disease Control and Prevention (CDC), since the early 1970s "the most common emergencies affecting the health of large populations in developing countries have involved famine and forced migrations" (CDC, 1992). The primary, direct cause of mortality in these conditions is infectious disease exacerbated by malnutrition. For displaced populations, the primary infectious diseases leading to mortality are measles, malaria, acute respiratory infection and diarrhoeal diseases (Assefa et al., 2001, Toole and Waldman, 1997, Toole and Waldman, 1993). Cuny (1999: 68) has written that controlling these "primary killers" in times of emergencies is "the foundation of an initial-response doctrine".

Literature reviews of the scientific evidence on mortality in times of crisis consistently show that displaced populations experience higher levels of mortality than those able to remain in their home areas.[58] Effective early warning systems are important for prompting the types of early interventions necessary for preventing large-scale distress migration. As has been noted earlier in this report, early warning systems in Ethiopia in recent years (including the present) have been relatively successful in terms of inducing massive quantities of food aid that have allowed vulnerable populations to remain in their home communities. This is an important accomplishment. The CDC notes:

> When populations are forced to migrate en masse, they usually end up in camps or urban slums characterized by overcrowding, poor sanitation, substandard housing, and limited access to health services. These conditions hamper the effective and equitable distribution of relief supplies and promote the transmission of communicable diseases (ibid).

Toole and Waldman add that this is only one-half of the battle to minimize disaster-induced increases in mortality, morbidity and malnutrition. The advantage of preventing mass societal dislocation is that it is assumed to be easier and more effective to assess, monitor and address the full range of emergency health needs of stable populations than it is in a temporary refugee or IDP setting (Toole and Waldman, 1990).

An effective health care system is needed for the management of emergency public health threats. Where there is a strong and functioning public health care system, disaster-affected populations can expect to be able to access needed health care in times of crises. Where there is not, however, the only sources of health care are either the private sector or NGO-managed emergency health programs. These latter programs often are based only in camp or refugee settings, especially in crises-affected countries with established health care systems. It is clear that when people are able to stay in their home communities in times of crisis their *exposure* to infectious diseases is less than when they are displaced to camp settings. Whether *access to and availability of health care* is greater or lesser in a stable setting than in an IDP or refugee camp is highly context specific.

[58] However, these surveys likely include a strong degree of selection bias, i.e., that the populations that are forcibly displaced are fundamentally more vulnerable than those able remain in their home areas.

This is not an argument *for* displacement. Rather, in the context of Ethiopia, it should be noted that preventing displacement, while important, does not alone adequately address the specific public health threats associated with drought, famines and livelihoods collapse. It is a very serious concern that the majority of disaster-affected populations in Ethiopia does not benefit from an adequate system and are therefore at risk of elevated levels of malnutrition, morbidity and mortality in times of disasters.

It is of further concern that humanitarian organizations have pursued only limited measures to address emergency public health threats during the present crisis in Ethiopia, e.g. UNICEF's weak emergency response strategies for public health threats (measles, malaria, meningitis, diarrheal disease and acute respiratory infection problems) among vulnerable populations, the late and limited responses by western non-food assistance donors (e.g. OFDA and ECHO) and the inability of NGOs to simultaneously manage emergency food aid, nutrition and health programs.

Public Health in Ethiopia

The major health problems in Ethiopia are those typical of a large, rapidly growing, and impoverished rural population: malnutrition and communicable diseases. Its health indices are among the worst in the world and are the lowest in Africa (CSA and ORC Macro, 2001). The country has been prone to epidemics, even in the absence of drought, flood, conflict or famine (Kersala, 1997). Recent epidemics include, *inter alia,* Meningococcal meningitis, malaria, measles, cholera and HIV/AIDS (ibid).

The Ministry of Health was established in 1948. The Ethiopian health system, like other sectors, has undergone repeated policy and administrative reform as a result of successive regime changes. The health system derives from a long tradition of centralized management and a more recent policy of devolved responsibility for implementation at the regional and sub-regional levels. Since 1991, the central government has gradually transferred responsibility for the provision of health care to the regions (Kersala, 1997). Today, within each region, there is variation with regard to the level of responsibility delegated to the zone or woreda level. The ongoing devolution of authority for health functions to the woredas has not been uniformly accomplished throughout the country.

The MoH, through its arborized bureaucracy, imposes a certain structural and functional discipline on the system: policies and procedures are defined and rolled out; manpower at specified levels of licensure are hired, reviewed, and placed in dispersed settings; budgets are developed and funds dispensed; facilities are inspected, repaired, and built; reports at a highly aggregated level are written and delivered to other sectors of government and to donor agencies. Throughout the countryside, there is evidence of a level of investment in the physical infrastructure of health care, most notably in the form of new health posts.

The Federal Ministry of Health determines policy and protocol, decides upon overall budget allocations, directs all monitoring and evaluation activities, and maintains oversight on all issues of manpower, program, materials supply, and finance. The regional health bureaus (BoH) are responsible to the federal office for ensuring that they develop and manage realistic budgets, organize and implement programs as approved centrally, hire and oversee all personnel within

prescribed personnel guidelines, and observe protocols and policies as defined by the federal ministry. Federal oversight of these regional functions is maintained by a system of reports that the regions are expected to submit on specified periodic bases.

The health system is organized on the basis of an ascending and centralized model of clinical referral. The health system in Ethiopia functions passively, in that patients are seen at facilities and treated within the capacities of that particular setting and region. Only limited outreach to the community is built into the health care system. Basic primary health care is delivered through health posts in the countryside; more complex clinical care is handled on referral basis to health facilities and then hospitals within the regions. As needed, patients can be sent to the ultimate specialty departments in Addis. With the ongoing devolution of authority to the regions, efforts have been made to build up the specialty departments within the regional referral hospitals. At the central level the health system is designed to handle a broad range of clinical conditions, including heart disease and cancer, but in reality the clinical caseload in the regions deals mainly with communicable diseases and general surgical response to acute conditions and injury.

The governance structure retains power and control at the federal level to a degree that limits space for innovation and adaptation at the local level. Information flow is top-down, in terms of transmission of policy, program direction and protocol. Information regarding program activity, health care processes, or health care outcomes is not communicated on a timely, coherent, or comprehensive basis. As a result, the central bureaucracy can point to many activities (document preparation, meetings, consensus statements, plans) but cannot demonstrate much impact on health conditions or health outcomes at the level of the population being served. This situation should be of concern to humanitarian and development actors alike.

The aggregate health indices for the country speak to its current capacity to address the health care needs of its population. Skilled manpower below the regional level is thin throughout the country and managerial talent is sparse. Morale among physicians in the health facilities is perceived as low; pay is considered insufficient; staffing is obtained by required residency rotations. Since it is unusual for senior staff to remain in the sub-regional settings, these junior physicians receive little oversight from experienced supervisors. Physical structures exist, in various states of disrepair; utilities are uneven; supplies and pharmaceuticals are unpredictably present; diagnostic capacities minimal.

Crises and Public Health Response Capacities

It is the opinion of the team (based on the documentary record and interviews with key informants) that the MoH needs considerable support to enhance its technical, managerial, or system capacities for organizing and directing a large-scale emergency health relief effort as part of an overall disaster response. These and other emergency public health system shortcomings are explicitly recognized in the MoH's appeal documents. The MoH specifies particular areas in need of resources (MoH, 2002). Perhaps because it presides over a chronically distressed population, the health system has not been able to adopt strategies, build capacity or seek resources adequate for providing for populations in the context of a disaster or crisis with significant health consequences. Further, the mandate of a separate government agency responsible for disaster prevention, preparedness and

coordination of response (the DPPC) has inadvertently segregated the health ministry from operational levels of deliberations or responsibility for disaster response. The DPPC has accomplished a thorough process of risk assessment and has identified a range of disasters in its planning scenarios. There is no indication in the DPPC plan of action that the resources of the health system have been integrated into response strategies.[59]

The record suggests that the DPPC began to arrive at the assessment that a drought-induced famine was in process in several sections of the country by July 2002. Although the MOH was enlisted at the National DPPC and other levels (e.g. the Crisis Management Committee), the MOH did not appear fully engaged in the early warning and assessment processes. Based on discussions with health officials at the sub-zonal level, had there been a system of robust facility-based reporting of patient nutritional status, early warning might have been obtained as early as the spring of 2002 that the prevalence of malnutrition was rising among children visiting the health posts and health clinics. Reports of outbreaks of severe malaria among pastoralist populations in the summer of 2002 were not mapped to areas of crisis as identified by the DPPC.

Despite the DPPC's assessments, prior to the onset of the current crisis, there were no prior plans to mobilize a mass measles vaccination campaign, despite the known fact that underlying EPI coverage in the country is very low; there was no established or ongoing training in clinical management of therapeutic feeding centers for physicians or nurses; and there was no procedure in place for filling or maintaining the pipeline for the particular drugs and supplies required to protect a famine-affected population from the known assaults of specific infectious diseases.

The health system has not been able to manage the public health implications of severe acute malnutrition. It appears from discussions with key informants that the TFCs began to open as a function of supply rather than demand. Although the information is anecdotal, in the southern region at least there are indications that health facilities were aware of mounting levels of malnutrition among the population as early as last winter and would have opened TFCs had there been assurances of support from the international community. Without infusion of specialized food supplies and technical expertise, the local health facilities were reluctant to expose themselves to the risk of taking care of seriously malnourished children. This hesitancy is understandable but reflects a lack of confidence in the capacity of the national health system to respond to the crisis.

This reluctance to claim clinical responsibility for these malnourished children extends now in the crisis phase, where it is reported that few of the physicians employed at the health clinics can be persuaded to enter the TFCs that have been established on their premises and provide intermittent emergency consultation or advice. The clinical condition of some of the phase 1 patients is sufficiently serious that the international NGOs responsible for these TFCs have found it necessary to recruit their own, separate medical staff for this purpose.

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[59] At this stage of health system capacity, it is not useful to expect the current system to be able to manage with any degree of efficiency or success a major mass casualty incident or a major earthquake. In the event, were the resources of the military to be deployed (along with military medical capacities), some salvage of life and mitigation of morbidity might be anticipated. But as with many severely taxed health systems in populous and poor countries, it is currently beyond the resources and manpower capacities of the Ethiopian health system to mount a mass casualty disaster response.

The material resources to combat the health aspects of the current crisis are being provided by the international community, in the form of drugs, supplies, equipment, and transport. The health manpower, logistics support, and technical oversight for the therapeutic feeding centers are being delivered primarily by the international NGOs.[60] In terms of delivery of health care at the level below the regions, the emergency response seems to rest primarily on the international NGOs.

An accelerated measles vaccination campaign is now organized to take place in a manner coordinated with the manpower recruiting efforts of the MoH with the training of local personnel is conducted by UNICEF in collaboration with international consultants. There is still no overall plan to integrate this campaign with an accelerated and expanded initiative on EPI, despite entreaties from the donor agencies.

In terms of responding to the health needs of the nutritionally vulnerable among the population, the MoH is only minimally engaged in coordinating the efforts of the international NGOs and UNICEF. Meetings are held at the zonal and regional levels but consist chiefly of reports from various players and injunctions to adhere to guidelines. Coordination efforts on the part of the MoH appear weak, despite the clear need for direction on a number of key policies relating to:

- Dispersal and use of emergency health kits by the health facilities and health posts
- Related use of essential drug kits
- Policy on free distribution of specific drugs
- Sale or distribution of impregnated bed nets when children are discharged from TFCs
- Sale or distribution of blankets to families when children are discharged from TFCs
- Protocol for community-based supplementary feeding
- Protocol for family-based supplementary feeding when a child is discharged from a TFC

Virtually every aspect of the surge capacity required to respond, albeit belatedly, to the health dimensions of this crisis are being supplied by actors external to the Ethiopian government and health care system. Whereby in the current emergency, the DPPC, WFP and USAID's FFP office comprise a formidable institutional triumvirate, UN and donor non-food agency relationships have been characterized by disengagement and disenchantment. Although once historically noted for its effective leadership in emergency response (especially in the areas of nutrition, health and water/sanitation), UNICEF has been unable to mount an adequate response to the current crisis. As noted earlier, ECHO and OFDA, the two primary non-food aid donors have not established a coordinated strategy or demonstrated leadership in the health sector. The coincidence of these dynamics compounds the structural weaknesses in the government's model of disaster response, particularly with respect to the provision of emergency public health care.

This is a disconcerting state of affairs. Ethiopia has many years of experience with drought, famines, floods, conflicts and other disasters. Previous response efforts have served to create within the health system a number of people with expertise in the particular morbidity and mortality

[60] The team notes with interest the USAID-funded "Response to Drought-Related Health Problems in Ethiopia" managed by the Carter Center's Ethiopia Public Health Training Initiative where medical students are being deployed to assist in community health programs in disaster affected areas.

features of disasters. Despite this baseline experience and expertise, however, there appears to have been weak capacity for crisis readiness within the Ethiopian health care system to help it prepare to respond to the current emergency. Drought is frequent; people are increasingly living on the margins of their agricultural production; returns from cash crops are dropping; the population is rising. In a context of these repeated shocks and endemic hazards, it is important that the health system maintain a standing capacity for disaster response. In order to accomplish this, emergency public health measures must be accounted for in annual plans and preparations.

Pastoralists

The current crisis in pastoral areas

Pastoralism in Ethiopia is both viable and vulnerable. Pastoral livelihoods systems are effective mechanisms for converting marginal lands into products valuable for households, communities and the national economy. The current crisis affected pastoralists first, e.g. Afar, but while pastoral traditional early warning systems provided early indications of this crisis, these signals were missed by the range of formal early warning and surveillance systems.

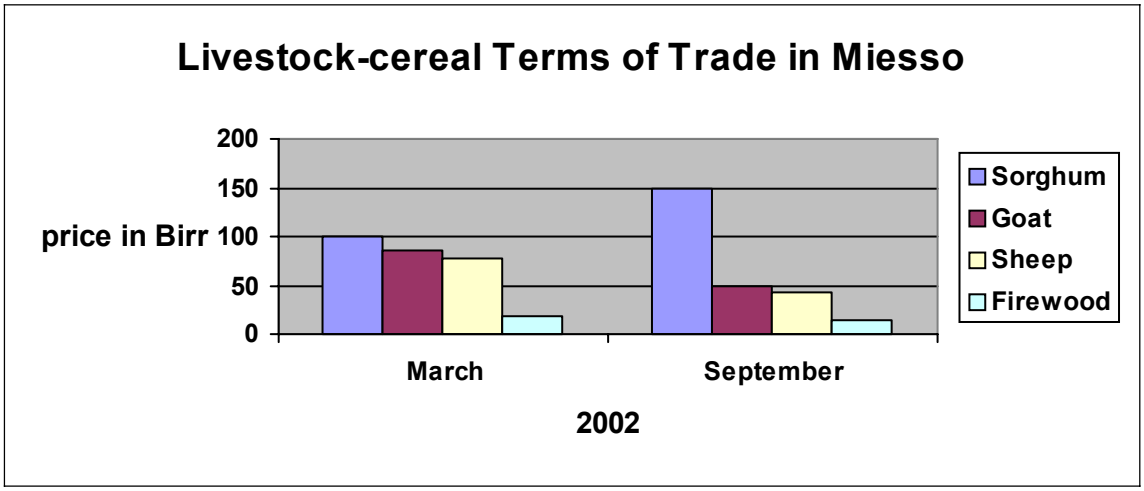
Many segments of Ethiopia's pastoral communities are facing yet another year of crisis. The drought in Ethiopia began to attract the attention of the international community as the crisis in Afar Region became obvious by May 2002, when alarming numbers of dead livestock were reported by field monitors (UN-EUE, 2002). Local communities and regional officials were aware of the crisis, and had used their own resources to provide assistance, as early as the fall of 2001 (Beyene, 2003). The Afar crisis extended into the adjacent Shinille zone of the Somali Region. By spring 2003, global acute malnutrition rates had spiked to 34% in Fik, Somali Region, while the riverine areas of the Somali region were affected by the flooding of the Wabi Shebelli River. A recent DPPB/SCF-UK bulletin also highlights concerns on Korahe and Warder Zones (DPPB/SC-UK, 2003).

In part, these crises are attributable to climatic shocks. The drought in Afar was the result of the failure of the *dedaa* (November 2001) and *sugum* (February – March 2002) rains, followed by the delay in the onset (as well as below normal rainfall and uneven distribution) of the main *karma* rains (July-August 2002) (MoA, 2002). MoA (2002) further states that the *belg* (*Sugum)* rains were a complete failure causing widespread losses of livestock, with mortality rates as high as 70% in Zone 3. Despite the timely onset of the 2002 *Gu* rains (late March – end May) in Shinille, the variation in intensity of rainfall was insufficient both in quantity and distribution. The erratic and meager showers of the 2002 *Gu* rains did not improve the situation in 2003. In addition, the 2002 *karan* rains (mid July – mid September) were neither adequate nor evenly distributed.

Longer term processes also have generated specific vulnerabilities for pastoralist communities that undermine their resilience to climatic shocks, while representing disasters in their own right. The continuing ban on the export of live livestock from Ethiopia to Saudi Arabia is particularly affecting the Somali, while also constraining the export potential of the Afar and the Borana. As one Somali elder explained to the team, "The drought is a disaster but the export ban is a holocaust for us pastoralists." The impact of the export ban is not routinely monitored, although occasional reports are issued by groups like the UN-EUE.[61] Coupled with the drought, the terms of trade between livestock and cereal have collapsed. For example, the terms of trade deteriorated for livestock and by September of 2002, the price of sorghum (100 KG) was equivalent to the value of 3-4 shoats in Miesso (HCS, 2002).

[61] The team attempted to obtain and then map long term trends in terms of trade between livestock and grain, but found that these data were not readily available. While cereal prices are routinely collected by a number of agencies, few collect livestock prices in a manner that is conducive for trend analysis. The best data source is likely to be the DPPC's EWS, but this unit has not yet been able to analyze their database on livestock prices.

Table 27. Livestock – Cereal Terms of Trade, Miesso



Source: HCS

Other issues facing pastoralist include the near absence of access to community-based animal health care, a paucity of organizations (governmental, UN or NGO) that can competently provide effective humanitarian interventions that are geared towards the realities and nuances of pastoral livelihoods, and the long-term struggle by marginalized pastoral communities for political integration. Significant livestock mortality has been caused by opportunistic diseases.[62] The drought-related weak physical condition of livestock has enhanced the spread of diseases. Equally, poor surveillance systems and veterinary services have contributed to increases in rates of preventable mortality of livestock. Even in less drought-affected areas like Harshin lost 50% of their sheep stock between February and March, 2003 due to the drop in the temperature (Berhanu, 2003) . In Afder, up to 23,000 sheep were reported to die of CBPP[63] following the recent rains (Hussien, 2003).

Conflict among pastoralist groups preceded the worst of the drought in Afar. Stress migration has accompanied the deepening of the drought as pastoralists seek water and pastures for their remaining livestock. As early as June – July 2002, Afar migrated to the Cheffa valley and to the adjacent Oromiya and Amhara regions, with about 200,000 animals (UN-EUE, 2002). Similar mass migrations were also observed in September of 2002 from Shinille. By January, 2003 this took "very diversified patterns and directions" (HCS, 2003b). This included internal (within Ethiopia) and external (to Somaliland) movements in search of pasture and water to Denbel and Erer Woredas and parts of Jijiga zone, Guban rangelands in Somaliland and possibly to west and east Hararghe (HCS, 2003b, MoA, 2002). Pasture and water sources were depleted by January 2003. While the current crisis has not been characterized by the same degree of distress migration as the 1984-85 famine, the effect of the current drought was more devastating on pastoral communities due to the collapse of coping mechanism and increased destitution since 1984/85. Some reports suggest that some of the most vulnerable Afar and Issa pastoralists had exhausted their coping mechanisms to

[62] Fatuma, an Afar pastoralist and head of the Women Affairs bureau in Fursi Woreda, stated that she lost 90% of her cattle to diseases rather than drought and remains only with 6 cows and 4 bulls out of a stock of 100 head. She also lost about 80% of her shoats to the same disease characterised by nasal mucous discharges.
[63] Contagious Bovine Pleuropneumonia

maintain their livestock by the beginning of 2003 (HCS, 2003a). Resource-based conflicts increased following stress migration routes between different ethnic groups (UN-EUE, 2002).

The impact of drought on pastoral economies can be catastrophic, as evidence from other countries demonstrates. In the 1999-2001 drought in Kenya, livestock mortality was estimated at more than 2.3 million sheep and goats, over 900,000 cattle and 14,000 camels valued at approximately 5.8 billion Kenya shillings or USD $77 million, as per the following table (Aklilu and Wekesa, 2001) .

Table 28. Livestock Mortality Rates Used to Estimate Losses during the 1999-2001 Drought in Kenya

	Small stock	Cattle	Camels
Northern Kenya Rangelands	43.0 % of total	35.2 % of total	18.0 % of total
Southern Kenya Rangelands	16.0 % of total	25.0% of total	Negligible
% Ave. mortality	29.5% of total	30.1% of total	18.0 % of total
Total animals at risk in 1999 –2000 drought (peak time)	8,000,000	3,000,000	80,000
Likely number lost = (% average mortality X total number at risk)	2,360,000	903,000	14,400
Ave. Price/animal during the drought year in KSh.	500.00	5000.00	6500.00
Total loss in KSh/species	1.18 billion	4.52 billion	93.6 million
Total loss in US$ per species 2000.	15.73 million	60.2 million	1.25 million
Grand total loss (All livestock)	KSh. 5.8 billion (US $77.3 million)		

Livestock mortality figures in Ethiopia present a challenge since they are neither centrally nor routinely recorded. The absence of systematic data collection on livestock mortality in drought-affected pastoral areas makes it difficult to assess the social and economic impacts of the drought on pastoral communities.[64]

Figures for mortality rates for livestock populations in the current drought vary (from 10% to 90% for cattle and shoats) depending on the specific areas affected and sources of estimates. An OXFAM survey in the Afar region (May/June 2003) estimates a mortality rate of 50% for cattle and 25% for shoats for Zones 3 and 5 (OXFAM, 2003a).[65] By converging estimates of various sources in Afar, it appears that the team roughly estimates that the rate of mortality was 35% for cattle and 10% for shoats in Asaita, Afambo and Dubti woredas of Zone 1, with cattle and shoat mortality of 10% for the rest of Afar woredas (excepting zones 3 and 5).[66] A different OXFAM survey in Shinille estimates the total mortality figure at 30% (of which 75% were cattle and 25% shoats) out of a total livestock population of approximately two million animals in the zone, for a total loss of approximately 600,000 head of livestock (OXFAM, 2003b). HCS (which has been operating in the

[64] Some are skeptical of figures for livestock mortality. One donor representative described the repeated estimates of livestock losses in Ethiopia as "the last goat theory," i.e., humanitarian organizations have been telling donors for years that pastoral communities had lost most or all of their livestock.
[65] A shoat is shorthand for the livestock unit that combines the numbers of sheep and goats.
[66] This figure was derived by averaging the various estimates made by different sources.

area for some time) estimates the total mortality figure for all species at 32,000 in the zone, representing a very large discrepancy with OXFAM's figures (HCS, 2003a). .

Table 29. Estimates of Drought-Affected Livestock Population and Mortality, May/June 2002 – December 2002 (MoA, 2002)

Region	Drought Affected Livestock Population						Animal deaths
	Cattle	Sheep	Goats	Camels	Equine	Total	
Amhara	7,825,714	6,075,570	4,056,916	-	-	17,958,200	**133,468**
Dire Dawa	44,425	22,809	1,030	1,195	22,733	92,193	**-**
Oromiya	1,543,323	406,385		274,857	36,142		
Somali (Shinille)	148,200 (79,800)[I]	325,850 (48,878)	271,600 (40,740)	14,400 (720)	3,220 (64)	593,068	**170,202**
Afar	?	?	?	?	?	1,291,955**	**492,667**
Tigray	156,432	448,600			52125	657,157	**25,969**
Total deaths by December 2002							**822,306**

I ( ) denotes estimated number of dead animals for each species.
II Numbers of affected animals are not given by species.

The above estimates put a substantial proportion of the livestock population in the country at risk. The MoA has projected additional livestock mortality of 1,007,665 animals by March/April 2003 for Afar alone. This was probably calculated on a daily death rate of 7,091 animals. However, the MoA's estimate of the affected livestock population (including mortality) requires further clarification before being accepted. First, projections are made only for Afar and not for other areas. Second, how the total livestock population at risk in Afar is derived (especially without quantifying the species at risk) is not clear. Third, while the total livestock population is estimated at 17,836,950 for Amhara region the total livestock population at risk in the same region is estimated at 17,958,200 (i.e., more animals than are thought to be in Amhara), even though some parts of Amhara are not yet affected by drought.

In order to calculate accurate estimates of mortality rates, a reasonable estimate of the total population must be available (i.e., the denominator in the rate calculation). The problems with total livestock estimates are not limited to Amhara. The respective BoA estimates the total livestock population for Afar at 3,489,010 and for Somali at 23,591,000. Sandford and Haptu (2000), on the other hand, estimated the total livestock population in Afar at 9.7 million and that of Somali at 16.5 million. Sandford and Haptu have derived these figures by deducting the non-pastoral population from the pastoral population and then calculating the livestock proportion to the pastoral population. Such discrepancies among specialists serve to highlight the fact that there is no consensus, even on the baseline figures for pastoral areas.

Overall it is not possible to arrive at a total mortality figure for the pastoral areas, let alone assessing the economic impact based on livestock mortality. This conclusion underscores the need for census and surveillance activities to be undertaken so that the actual resilience and vulnerability of pastoral communities in crisis may be appropriately understood and needs addressed.

Setting aside debates about figures, it is safe to conclude that the drought is depleting both the pastoral asset base and food sources. The latter is of immediate concern because of the extent to which pastoralists depend on livestock-related food sources for their daily dietary intake. It is of further concern to humanitarians because of the important role of milk in the diet of children, many

of whom are presenting as malnourished because of lost access to milk as a result of livestock mortality, morbidity and drought stress, despite the efforts of their families to protect them. According to Cately (citing Coppock 1994):

> In drought years Borana children under five years old received milk on a priority basis and it was speculated that adults restricted their own ration in order to permit these children to receive what they needed. Of the various child age groups, children under five appeared to receive the highest percentage of their dietary energy from milk (40%) during drought and intake steadily declined to 33%, 13%, 7% and 4% respectively for youths aged 6-10, 11-16, adult males and adult females.

Cately adds that "even in times of food shortage, pastoral children received a relatively greater share of the available milk than adolescents or adults" (Cately, 1999). Malnutrition among pastoral children, therefore, should be taken as an alarming indicator of declining nutritional status among older children, adults and the elderly, although these groups are not monitored clinically for malnutrition. Interventions targeted at young children, while essential for keeping them alive, only partially addresses the broader problems facing pastoral families dealing with livestock asset loses.

The contribution of livestock to energy in the human diet has been estimated using a variety of methodologies, but is universally important for all pastoral groups studied, as per Table 30.

Table 30. Summary of Dietary Contributions of Livestock Products, Various Pastoral Groups

Area	Reference	Summary of Dietary Contribution
Borana, Ethiopia	Cossins & Upton, 1988	Gross energy basis: milk (56%), cereals (32%), meat and blood (8%), bush food and sugar drinks (each 2%)
Central Upper Nile, Sudan	WFP (1996)	Food economy: meat and blood (45%), own grain (25%), milk (20%), exchange, and wild food (each 5%)
Somali, Ethiopia	Catley, 1999	Women's perceptions of benefits of livestock: milk (38%), transport (13%), income (29%), skins (5%), butter (3%) and meat (2%).
Somali, Ethiopia	Catley, 1999	Men's perception of benefits of cattle: milk and ghee (60%), meat (20%), ploughing (10%) and dowry and *dia* (10%); of sheep and goats: meat (50%), income (40%) and milk (10%); and, of camels: milk (68%), meat (8%), transport (8%), dowry and *dia* (8%) and drought resisting (8%).

In addition to the immediate question of nutritional stress for the entire family, post-drought recovery for pastoralists takes longer than it does for farmers. Afar and Somali pastoralists will end up poorer when this drought is over. Whereas farmers may regain self-sufficiency within one or two cropping years following a drought, it takes several years for pastoralists to rehabilitate themselves to pre-drought levels necessary for maintaining a "viable core" of livestock, if they ever do at all. For those who are able to remain as pastoralists, chances are that pastoral areas will face another drought before they have rebuilt their herd to pre-drought levels, given the nature of the drought cycles in East Africa. Those who have lost all their livestock or will be left with too few animals to survive as viable pastoralists will exit the livelihood system and swell the ranks of the destitute.

This group may join the increasing number of charcoal producers, try their luck with farming, engage in banditry, or pursue other forms of livelihood that could damage further fragile ecologies and social cohesion.

This situation implies that a sound emergency intervention programs should also focus on minimizing the stress on the livelihood of pastoralists as a way of both saving human lives and building resilience for the next, inevitable shock. Quality humanitarian programs for livestock-dependent populations include saving core reproductive animals and salvaging some value from stock that would otherwise perish in the course of the drought[67]. Such measures would minimize the efforts of rehabilitation and external food requirements of the pastoral population in the post drought recovery period.

To date, however, little has been done to address either the causes or consequences of such widespread asset losses. Despite the complexities of the nature of pastoral vulnerability, the government and humanitarian community continue to respond to disasters in pastoral areas almost exclusively with food aid. The January Joint UN/DPPC appeal document (DPPC, 2003) estimated the pastoral and agro-pastoral population in need of food aid at 2,095,502 persons and the food aid requirements at 280,590 tons.

Table 31. Food aid Requirement for pastoral and agro-pastoral population

Region	Affected population	Food requirement (MT)
Afar	786,200	130,725
Somali	1,067,420	127,747
Borana & Guji	23,400	2,175
Bale	145,060	11,523
SNNPR[*]*	24,172	1,779
Dire Dawa*	49,250	6,110
Total	2,095,502	280,590

Source: DPPC-UN

The total pastoral and agro-pastoral population in need of food aid constituted 18% of the total population in need of food aid in Ethiopia.[68] The DPPC's February appeal for (non-food aid) livestock-related requirements in pastoral areas amounted to a mere $1.7 million.

The 3.1 million people identified by the DPPC in the December, 2002 appeal as needing "close monitoring" included a substantial proportion of pastoralists (547,330 people, approximately 18% of the total). With the worsening of the drought, the situation was reviewed further in March 2003 and an additional 1,227,077 persons were identified as in need of food aid in eighty crop dependant woredas in four regions, bringing the total population in need of food assistance in Ethiopia to 12.3

[67] The logic of these interventions is the same for other kinds of stock – if you know your investment is going to be worthless in the near future, it's better to turn it into a liquid asset (like cash or food) than to lose everything. But it needs to be remembered that liquidation of livestock under these circumstances represents a very real loss to owners, losses for which they may need to be assisted in recouping.

[*] Extrapolated for pastoral population of these regions by Breuk Yemane

[68] With the latest addition of 1.2 million persons in need of food aid, this figure represents 16% of the total population in need of food aid in Ethiopia.

million, with a national food requirement of food aid for the country to 1.54 million MT (Joint Government - UN Addendum, 2003, FEWS-NET, 2003b). Of note, not of these additional persons were from pastoralist communities because these areas were not visited by the joint UN-government assessment teams. The absence of pastoral communities from the revised DPPC-UN vulnerable population numbers should not be interpreted as a sign that the crisis is lessening for these groups.

Current Livestock-Based Emergency Responses

Despite the importance of livestock to pastoral, agro-pastoral and farming populations for survival, emergency interventions for livestock are overshadowed in the processes of appeal and response by emergency food aid operations. In the original government appeal for assistance of December 2002, and the subsequent addendum of March 2003, livestock-related emergency interventions were limited to achieving the following two objectives (DPPC, 2002a, Joint Government - UN Addendum, 2003). These included projects to:

1. Increase the availability of feed per animal through distribution of fodder seeds, fodder cultivation, and through awareness raising about drought cycle management and marketing.
2. Decrease the occurrence of livestock diseases and curing sick animals through providing drugs, vaccines, and veterinary equipment, and through other measures to strengthen animal health services.

The financial assistance required for livestock interventions in pastoral areas was $1.7 million dollars as shown in the following table.

Table 32. Assistance Requested for Livestock-Related Emergency Interventions for Pastoral Areas

Implementing agency	Priority activities	Funds requested
FAO/MOA	Animal health assistance to drought affected areas in Oromiya**, Somali, Afar, and Amhara* Regions.	$300,000
FAO/MOA	Delivery of veterinary drugs and vaccines to Tigray*, SNNPR**, and Dire Dawa Regions.	$293,000
	Sub-total	**$593,000**
FAO/MOA	Establishment of fodder banks/cultivation of Napier grass, supplementary irrigation schemes in Afar.	$1,000,000
	Sub-total	**$1,000,000**
FAO	Coordination of emergency activities among NGOs, GoE, DPPC, IOs, Donors. (Liaison between all agencies, technical support, information exchange, training sessions).	$150,000
	Total	**$1,743,000**

Source: Adapted from the Joint Government – UN Addendum
* Denotes non-pastoral regions.
**Denotes both Pastoral and non-pastoral areas.

Government Response

From its own resources, the government has availed approximately $1.3 million dollars for veterinary drugs, of which some $821,943 has been used to date, including $350,526 for Afar and Somali, $405,578 for Amhara, $199,432 for Tigray, $26,602 for Dire Dawa, and $35,087 for the other seven regions.

The Livestock Working Group of Ethiopia, chaired by FAO and modeled after the one in Kenya, has focused more on the exchange of information among concerned groups rather than on the design of an emergency interventions strategy from the outset. The Working Group is composed of FAO and NGOs involved in livestock-related activities and thus far has failed to attract key government representative involvement (e.g. the MoA). This has made it difficult for the group to devise and implement a commonly adapted strategy endorsed by government.

As the drought worsened in July 2002, AU-IBAR volunteered to share its experience from Kenya and called a meeting of the Working Group, through FAO. The Livestock Department of the MoA and the Livestock Marketing Authority attended the meeting, but the DPPC could not as they were fully occupied with emergency operations. The MoA emphasized that all emergency related activities fall under the mandate of the DPPC and they therefore could do little with the information, unless delegated by the DPPC.

The MoA's belated involvement in livestock-related emergency interventions has come only as a result of the central government's measures to activate the responsibilities of the line ministries (when the crisis intensified) and not as a result of the initiatives made by the Working Group. To date, MoA's involvement has been limited to the provision of veterinary drugs (through Government and FAO funding) and compiling disease situation assessment reports.

NGO responses

Compared to the highland agriculture areas, there are relatively few NGOs operating in pastoralist areas. Among the few that are implementing livestock projects, the majority of NGOs are involved in the provision of water (human and livestock), veterinary drugs and animal health care services. Given the scale of the disaster, equally important interventions such as destocking and restocking, feed provisions and market support interventions are inadequate from either government, the UN or NGOs.

Table 33. Agency Emergency Responses in Pastoralist Areas

Sector	Activity	Agencies Involved
Water	Tankering, constructing and maintenance of boreholes, shallow wells, ponds, cisterns (*birkas)*, small scale irrigation[69]	World Vision, SCF-US, OXFAM, APDA, Lutheran, ACF, CARE, HCS and PCAE
Animal health	Curative drugs, vaccinations, community animal health worker training	FAO, ACF, CARE, SCF-US, FARM Africa, World Vision and HCS, PCAE.
Animal feed	FAO - feed pellets for 6,000 head of animals for a period of six months.[70] FARM Africa - feed for 4,000 lactating cows (hay, concentrates); hay and sugarcane tops	FAO, FARM Africa, CARE, GOAL
Destocking	Slaughter some 2,800 head of cattle at Birr 200 per head plus Birr 25/head for butchery services; distribution of meat to vulnerable families	FARM Africa
Restocking	Restocking, 500 families	SC-UK[71]
Other	human health, environmental sanitation, nutritional surveys, gathering early warning information, food for work or EGS activities, treatment of malnutrition, capacity building, provision of seeds and tools in agro-pastoral areas.	Various

Ethiopia's pastoral area has twice the livestock of Kenya (see Table 34) but the two countries take very different approaches to aiding disaster-affected livestock populations.

Table 34. Kenya and Ethiopia Livestock Populations Compared for Pastoral Area

Species	Livestock Population	
	Kenya	Ethiopia
Cattle	4 million	10,850,000
Sheep	4 million	10,240,000
Goats	6 million	7,700,000
Camel	1 million	2,540,000
Total	15 million	31.3 million

Source: MoARD for Kenya, Sandford and Haptu (2001) for Ethiopia

[69] Lutheran, through EGS, is currently constructing irrigation schemes in Wa'ama and Mille, Afar, mainly for crop production and to some extent for pasture (in Mille). The Afar Rangelands Development Center, ARDC, (a remnant of the Northeast Rangelands Development Project) has also developed about 1,000 hectares of irrigated pasture along the Mille River (800 hectares for pasture and 200 hectares for maize production). ARDC, with financial support from APDA, has also diverted the runoff from a hill near Harsis (between Mille and Logia) for pasture development. This project could serve as a prototype for replications elsewhere. FARM Africa has also provided two pumps for crop irrigation in Amibara woreda.

[70] Further feed provision by FAO has been diverted for seeds at MOA's request.

[71] The time is not appropriate for initiating a restocking program in both Afar and Somali regions. It is unclear if SC-UK will continue with its restocking program or change it to a destocking program, as other organizations elsewhere have done when crises make restocking viable.

A broader range of livelihood-based interventions were carried out in the Kenya emergency (1999-2001) than are currently undertaken in Ethiopia. In Kenya, destocking alone injected almost one million dollars into the pastoral economy. In Kenya, while relief food was provided on time to the affected pastoral population, equal emphasis was given to mitigating the impact of drought on the livelihood of pastoralists through various non-food based intervention measures.[72] Transport subsidies provided pastoralists with markets for countless shoats that otherwise would have perished in the drought if no action was taken.[73] By contrast, intervention activities in Ethiopia lag behind both in scope and scale than that of Kenya (with the exception of the livestock feed program).

Table 35. Pastoral emergency interventions activities, Ethiopia (2002-3) and Kenya (1999-2001)

Activity	Kenya	Ethiopia	Remarks
Destocking	Close to 40,000 shoats, 194 camels and some 6,000 head of cattle	2,800 head of cattle	
Livestock feed	For 18,000 shoats	For 10,000 head of cattle	One agency, supposed to provide feed for 2,500 cattle, was not able to implement the program in Kenya. In Ethiopia, $100,000 allocated for livestock feeds was diverted by the MoA for seeds
Cross-border conflict management	100,000 head of cattle were allowed to cross into Uganda	None	
Emergency animal health	$1.5 million was made available. Final treated/vaccinated number unknown	Available funding probably close to that of Kenya	
Transport subsidy	21,940 shoats were transported to the Nairobi market	None	One agency was not able to implement the program due to internal irregularities in Kenya
Water	$3 million	NA	Was difficult to collect the data in Ethiopia from the existing UN-EUE tables as in some cases the federal and the regional allocations were lump summed together.
Restocking	50,000 shoats and 1400 donkeys/camels	15,000 shoats	If SC-UK continues restocking in Fik

Source: Aklilu and Wekessa (2001) for Kenya; various reports for Ethiopia

[72] These activities were coordinated through the Livestock Working Group (LWG), led by the Arid Lands Resource Management Project of the Presidents Office, FAO and African Union/Inter African Bureau for Animal Resources (AU-IBAR). Government line ministries and NGOs constituted the other members of the LWG. Members of the LWG discussed and identified intervention activities that were deemed appropriate in lessening the effects of the drought. NGO proposals were screened by the LWG before they were forwarded to donors. The LWG prepared application, progress and financial reporting formats for NGOs. Over $6 million was raised under this arrangement.

[73] Many of the pastoral women groups contracted for the destocking and restocking program are now running viable businesses as a result of the emergency interventions.

International donor interest in pastoralist communities has waxed and waned over time. There are positive indications that pastoralists may be back on the donor agendas, as evidenced by a recent World Bank initiative for Ethiopian pastoralists and USAID's Southern Tier Initiative.

SECTION SIX: LOOKING AHEAD

Most of the scenarios constructed for Ethiopia hinge on the performance of the two seasons of crops, the *belg* and *meher*. A key proxy for crop performance is rainfall or its more sophisticated counterpart, the Water Satisfaction Resource Index, WSRI. Under the current early warning systems, most major disasters are attributed to at least localized crop failures, even in the presence of sizeable nationwide surpluses of staple crops, e.g. 1999/2000.

Planning for the next year will involve combining analysis of the climatological and cropping predictions with an estimate of the impact of the current crisis on household assets and other components of livelihood strategies. Planning also must factor in known and expected trends in the animal, crop and human health environment. In order to devise a reasonable estimate of the nature and extent of vulnerability in the future, it is necessary to factor predictions of likely harvests, disease transmission and economic trends together with estimates of the impact of earlier crises events, or what has described as "emburdenment".

To be accurate, these estimates must be done with recognition of the context-specific nature and characteristics of each of the country's agro-ecological zones, livelihood systems and patterns of disease (human, crop, livestock) transmission vulnerabilities. This is, of course, a huge undertaking: one far beyond the scope and capabilities of this team. Of note, this type of comprehensive assessment has never been undertaken in Ethiopia, as Section Two on Early Warning Systems noted. To successfully estimate the impact of a diverse range of vulnerabilities across a spectrum of livelihood and ecological systems requires a sophisticated capacity for meta-analysis. As noted earlier, this capacity has not been established in Ethiopia. Instead, the contingency planning process is designed to estimate crop failures and the numbers of people affected, turning these directly into estimates of food aid needs. As designed and currently managed, it does not help to spell out the exact consequences and implications of what a best or worst case scenario might imply.

For the coming seasons, the current early warning systems will continue to monitor food and cash crop and livestock performance and use this as a base on which estimates of the size of the vulnerable population is built. This is an important and useful exercise. The scenarios constructed last year have subsequently served as valuable advocacy and planning tools for government, donors, UN and NGOs alike.

Field-based assessments of the *belg* performance will coincide with the release of this report. Currently, there are mixed prognosis for the harvest outlook. The MOA expects this year's production prospects to be an improvement over last year but still below normal. The June 21, 2003 Meher Crop Production Estimate produced by FEWS NET presents an disconcerting picture of projected food needs based on an analysis of the April-May rainfall totals, rains that are critical to short term crop production cycle. The report suggests that despite average *belg* production, the *meher* harvests are likely to be "insufficient to prevent food shortages in 2003-04, unless commercial and food aid imports are substantially above recent amounts" (FEWS-NET, 2003a).

The predictions are based on recent trends in rainfall and the Water Requirement Satisfaction Index (WRSI) and their effects on planted areas.

The alarming issue is that these predictions may be overly optimistic because they are based on a theoretical situation of optimal production conditions, e.g., farmers are able to use fertilizers intensively and are able to maximize planting. As the report notes, however, uncertainties persist about the actual area planted. This uncertainty is compounded by the heavy debt burden already carried by drought-affected farmers, as well as those who have been unable to market their produce profitably due to persistent low returns in surplus years.

The report is equally alarming in its analysis of trends in precipitation in long cycle crop-producing regions. It would appear that these regions have been experiencing "A strong and consistent drying trend… of (negative) 23 mm per year" (FEWS-NET 2003). While it remains open to debate if pastoral regions are experiencing greater frequencies in their drought cycles, the appearance of climate change in Ethiopia is a factor much commented on by urban and farming populations alike. Combined with population increase of 1.8 million over the next year, the report's conclusions are unsettling and have profound implications for the management of the nation(FEWS-NET, 2003a)'s risk and vulnerability profiles and relief, recovery and development initiatives.

> The implications of these rainfall and crop production trends is that projected food shortages in Ethiopia may soon pass beyond chronic into tragic, exceeding the ability of food aid to make up the difference. To halt and reverse these ominous trends, Ethiopia will require urgent changes in its rural landscape and national development-security of landholdings, improvements in crop yields and production technologies, restoration of the environment, more efficient markets, protection of livelihoods and entitlements and reductions in population growth

Vulnerability in Ethiopia, as this report has noted, is deeply complex and highly variable throughout the country and across different livelihoods systems. If the present and past are guides to the future, it is reasonable to describe the nature of risk and vulnerability affecting a range of communities in the coming months to one year. It is safe to assert that some communities in Ethiopia will face a crisis next year, regardless of rains. Should the *meher* rains fail, a catastrophic crisis unparalleled in the history of Ethiopia will evolve, entailing historically unprecedented case loads requiring a wide range of emergency interventions to save lives and protect the core elements of livelihood systems. Generally, the manifestation of this is likely to include:

- Malnutrition, morbidity and malnutrition increase
- Household food availability declines
- Access to commercially available food and health care declines
- The resources available in kinship networks unable to meet demand
- Migration to towns increase, with increases in begging, prostitution (with associated risks of HIV/AIDS), and demand for religious-based charity
- Productive assets sold at low prices
- Children unable to go to school
- Breakup of households
- Oxen and other livestock die

- Charcoal and firewood production increases, with sharply negative environmental ramifications
- Governmental, non-governmental and international organizational institutional capacities are overwhelmed
- Development resources diverted to emergency relief operations

This situation requires active monitoring of both obvious and nuanced threats to food security, health and nutrition. Should fairly normal rains fall, the crisis in Ethiopia will still be serious for many communities.

Human Health

Both the general population and specific disaster-affected populations in Ethiopia will be vulnerable to serious human epidemics, including malaria, measles, meningitis, ARI, and diarrheal diseases. City and town dwellers will have comparatively better access to health facilities, but even for these populations meaningful health care may only be accessible on a fee-for-service basis in the private sector. Rural populations largely will lack access to health care, even in the event of localized epidemics. Illness will serve to limit productivity, school attendance, income, growth and household food security.

Crop Producers

It is encouraging to note an increase in budgetary provisions by the GOE for food security over the next year. The benefits of this program, however, are not likely to favor all producers equally.

Staple crop producers will fall into two categories: a minority with high production potential and access to (or no need for) credit who will be able to purchase fertilizers, seeds and other key inputs, e.g. labor, and a majority without high production potential and without access to credit, primarily because they already are deeply indebted. For the first group, their production largely will be a function of the *meher* rains. Their income will be a function both of yields and of market prices. In the event of continued weak performance in the market for staple crops in good years and a lack of adequate storage facilities, these farmers risk poor returns on their crops that may threaten their food security (and future credit standing), even (or perhaps especially) in the event of bountiful harvests. In either event, vulnerability to micronutrient deficiency diseases can be expected to deepen due to continued mono-cropping of cereals, making them victims of their own production.

For farmers with poor or no access to credit, their production will be compromised by a lack of access to key inputs. The need to service their existing loans (from earlier seasons) will force some to sell key productive assets, e.g. oxen, or to seek wage labor. It can be expected that, in the absence of measures to reschedule debt or increase farmers' capacity to access cash to service debts or purchase inputs directly that these producers will be forced to plant reduced areas and with lesser quality seed. This will result in reduced own production, with or without good *meher* rains, leading to further asset losses and related slide towards destitution for these farmers and their families, with associated negative impact on household food security.

Regardless of credit standing, some farmers may view staple crop production as too risky for such low returns and turn to alternative cropping, especially *chat* where cropping conditions are favorable (e.g. East and West Hararghe and Jimma in Oromiya, Sidama and Gedi in the SNNPR). Although chat prices are low during the rainy season, this will bring positive increases in household income for successful farmers but will force increased reliance on the market for staple crops with mixed (but mostly positive) ramifications for household food security. It is unlikely that these changing cropping patterns will be detected by the FAO/WFP staple crops harvest assessments, leading to a slight underestimation of household food security and future errors of inclusion in food aid distributions. In the event of massive food assistance to Ethiopia, wheat and (perhaps) maize prices will be depressed and affordable, but other staple cereal prices may be high. In the event of a bountiful harvest, staple prices across the board will be depressed and affordable for *chat*, other cash crop producers and pastoralists.

Farmers and pastoralists alike will see an increase in pests with the return of the rains after long, dry spells. Historically, post-drought pest infestations have caused widespread losses and sharply retarded post-crisis recovery. The most important of these drought-related pests usually include armyworm and locusts.

Livestock Producers

Afar elders predict (and we hope they are right) that the drought will be broken in the coming *karma* season. Conventional wisdom also suggests that a drought of this magnitude will come to an end this *meher* at least in the most affected pastoral areas – Afar and Shinille (as they lie in more or less a similar eco-system). The Drought Monitoring Center in Nairobi, on the other hand, expects the drought to continue in the northeastern (Afar), central and southern parts of Ethiopia. This team can offer no independent analysis of these varying predictions. If it rains, there will be a possibility of flooding in low-lying areas while bringing new human and animal disease threats. If it does not, absolute drought will continue in some other parts of the country while rainfall may not be adequate or appropriately distributed elsewhere. These two possible outcomes pose grim realities, i.e., there will be a continuation of the current crises as new threats emerge and as populations struggle to begin the process of recovery, or the current crisis will evolve into a disaster of catastrophic proportions.

Pastoralist food security will continue to be a function of access to and quality of pasture and water resources, animal health care, domestic and international markets and indigenous, domestic and international strategies for relief and recovery assistance. Overall, the outlook for pastoralists groups is fragile with poor prospects for adequate access to milk for the pastoral households that have faced large-scale livestock losses and/or serious animal health threats. These issues pose threats to livestock-dependent crop producers as well. although the outlook is more favorable for pastoralists in Borana and parts of Somali (except Shinille and Fik) than in Afar.

Access to pasture and water resources will depend on the nature of the *karma* and other minor seasonal rains. If the rains are good, there will be ample pasture and this will ease pastoral conflicts. If the rains are poor, pastoral conflicts will intensify, e.g. among the Issa and the Afar in

the Awash Valley. This will have both short and long term negative ramifications for affected pastoralists because some groups will continue to lose access to water and pasture while new areas will become "no go" zones. Regional authorities will continue to invest in local conflict resolution mechanisms with limited success.

Animal disease threats will be serious, regardless of the state of the rains. MoA, FAO, NGO and AU-IBAR programs to provide animal health care will be too limited to assist the majority of affected pastoralists, with negative implications for household food security due to a loss of access to income and milk in particular. Different rain scenarios will bring different animal health threats.

In the event of rains, mortality will peak in the first weeks following the rains as weakened animals are unable to withstand the range of infections that accompany the rains. These diseases are likely to include: trypanosomiasis (because of flies); tick-borne diseases; diarrhea; Anthrax (spores transported by flood); black leg; bloating; pasteurellosis in cattle and small ruminants; clostridial diseases including enterotoxaemia and black quarter; and pneumonia (CBPP).

In the event of continued drought, sporadic rains can be expected in some areas, providing a limited amount of pasture and water. Animal health threats can be expected to include: Contagious bovine pleuropneumonia (CBPP); Contagious caprine pleuropneumonia (CCPP); Peste de petit ruminant (PPR); Foot and Mouth Disease (causing high mortality in young stock and loss of milk production); Anthrax can rise in areas of prevalence due to animals grazing closer to the ground; trypanosomiasis; dermatophilosis; internal parasites; black leg; intoxication or poisoning (animals will feed on such poisonous plants as lantana because they have no choice);[74] heart water; and liverfluke (because animals will graze in swampy areas if no pasture is available).

Livestock markets will continue to have strong (but mostly negative) influence on pastoral food security. Somali pastoralists are likely to remain as the most affected pastoral group of the continued ban on the export of live livestock to Saudi Arabia. Should the ban be lifted, strongly positive impacts on Somali food security will rapidly follow. Other pastoral groups will continue to be affected by weak market position (e.g. the Borana *vis a vis* Kenya and the Afar *vis a vis* the domestic Ethiopian market). Pastoralists will continue to face weak terms of trade, although the weak domestic cereal markets will continue to dampen these effects, with slightly positive contributions to pastoral food security (as compared to strong domestic markets for staple foods).

Strategies by pastoral communities, government agencies and the international humanitarian and development community will not be adequate to restore to a sustainable level a (potentially sizeable) portion of drought-affected pastoralists who suffered livestock losses. Some affected households will become completely disposed and drift into destitution, migrating to towns to join the (largely unseen and unaided) urban poor. Others will retain their pastoral livelihoods, but without an adequately viable core of livestock. This will lead to gradual and deepening poverty and destitution. Pastoral communities will attempt to aid these households using their own resources, but recent livestock losses among the rich and middle pastoral classes will limit these interventions. Livelihood-appropriate strategies to assist affected pastoralists will not receive adequate focus or

[74] According to Dr B. Admassu, some 50,000 head of cattle from Shinille were poisoned in Fafem from eating lantana and other poisonous plant in the previous drought.

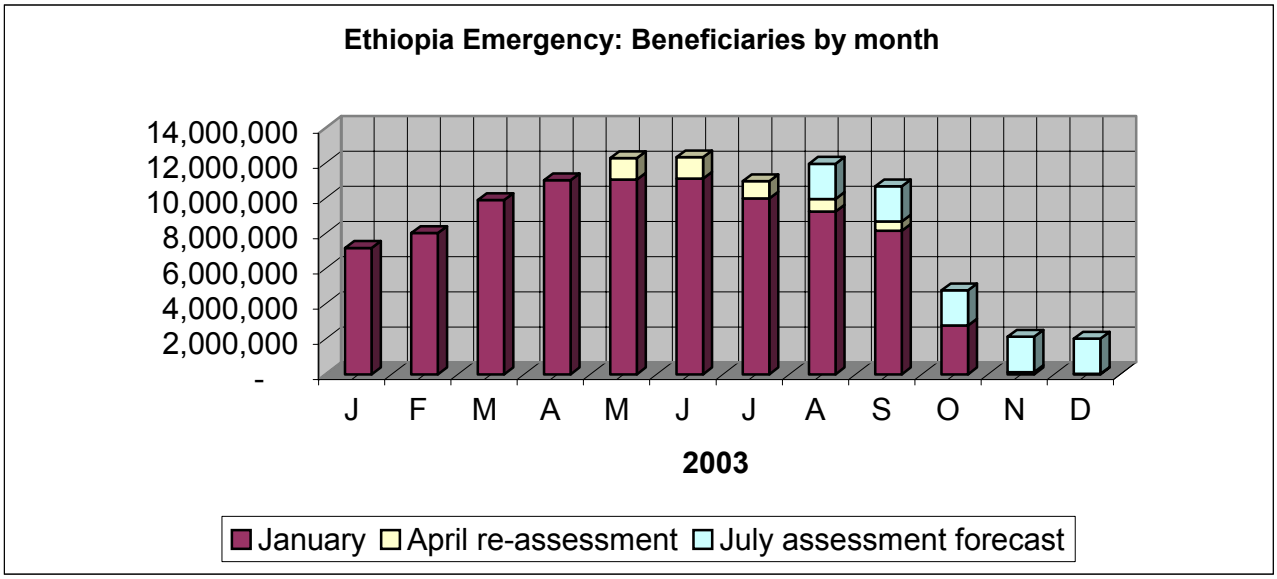
resources from the government, domestic or international assistance communities. Overall, this will have a negative impact on pastoral food security.

Pastoralists will face new threats to the viability of their way of life as the government increasingly attempts to resettle pastoral communities. It is highly unlikely that this will result in improved food security for pastoralists; destitution and social dislocation have always accompanied efforts to sedentarize transhumant populations in both Ethiopia and elsewhere.

Emergency Appeals

The DPPC and UN Agencies can be expected to submit appeals for continued and sizeable food assistance for vulnerable populations in Ethiopia well into 2004. The overall size of the vulnerable population will be estimated largely as a function of the performance of the rains, which will either be good, adequate, poor or disastrous. Early indications are that this year's *belg* rains (especially in April) and the onset of the *meher* rains are performing better than this time last year. The latest projections of beneficiary numbers through December 2003 are found in Figure 15 below.

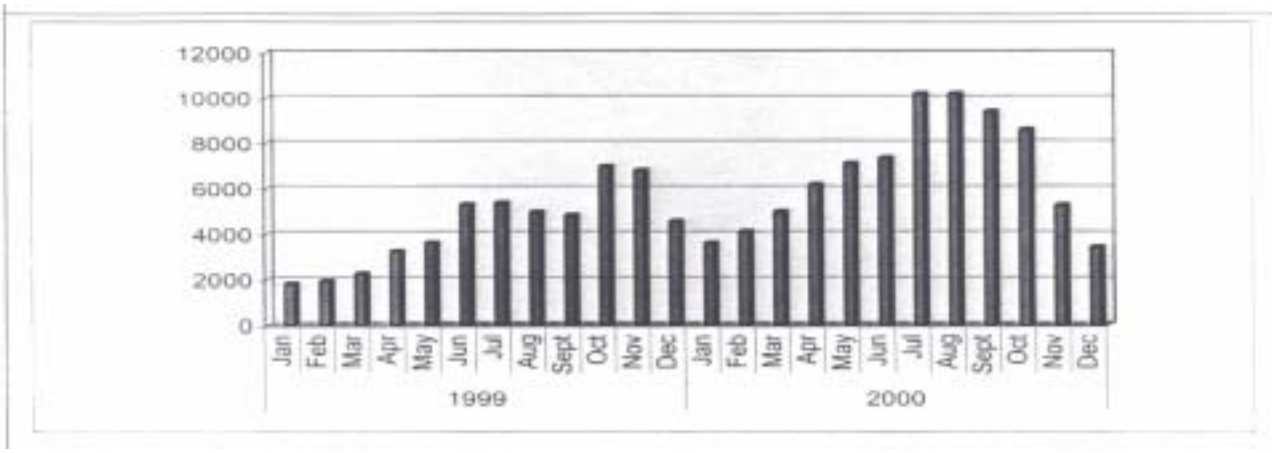
Figure 15. Ethiopian Emergency: Beneficiaries by Month (as of July 2003)



Source: (WFP, 2003a)

Based on food aid trends in 1999/2000 (see Figure 16, below) we do not expect emergency food aid beneficiary populations to decline as far as WFP has predicted in the above table, although we agree that there to be a lull in beneficiary numbers beginning around October 2003.

Figure 16. People in Need by Month (000), 1999 - 2000



Source: DPPC Estimates in Fortnightly Bulletins

For 2004, it can be expected that appeals for food aid for vulnerable populations will once again return to the 8 – 13 million mark for 2004. Favorable rains will result in appeals in the lower range; poor rains will result in appeals in the 13 million person range. In the event of widespread rain failure, a catastrophic disaster will be predicted, and will affect even more people than the current emergency. This is not looking likely at this stage, however. Despite the range of vulnerabilities affecting diverse populations in Ethiopia, food aid will continue to be the primary form of emergency and chronic vulnerability assistance in the absence of a major shift in strategy by the GOE, donors and UN agencies.

Coffee Producers

Short of major climatic disasters in other coffee producing regions (e.g. LAC), coffee producers are likely to continue to face world prices well below long term averages. Traders will be able to maintain their marketing margins and so the brunt of the price impact will continue to be passed directly to producers; this in turn will limit investment in coffee production, including wage labor. Some coffee producers will pull out of coffee and turn to other forms of cash cropping (onions, peppers, potatoes, *chat*). Should these trends continue, this will threaten the long run viability of select, high quality Ethiopian coffee cultivars, e.g. Harar varietals. While this continues to be a major blow to the national economy, this will also continue to affect the livelihoods of 700,000 households that are dependent upon coffee production.

Foreign Exchange Earnings

Overall value and volume of coffee exports ex Ethiopia will remain depressed, with negative ramifications for foreign exchange earnings. Smuggling of goods will continue, especially ex Somaliland, despite the efforts of the GOE to limit the trade. Combined with depressed livestock export activities, this will represent further losses in Ethiopian export earnings.

Poverty and Destitution

In major urban areas, towns and villages, the momentum of emburdenment will increase the overall size of Ethiopia's poorest populations. The effects of the current emergency will generate a class of

newly destitute that will join the ranks of the existing destitute populations. Children and women will be among the first affected as households dissolve because they have the weakest entitlements to household and community resources. As a matter of coping, households also look to women and children to seek alternative income, e.g. begging, collecting grass, selling food, making charcoal, domestic employment, etc. The newly destitute will include not only disposed pastoralists (as noted above) but also farmers displaced from their livelihoods because of successive crop failures and related debt burdens, resettled populations unable to establish viable livelihoods in their areas of resettlement, and increasing numbers of wage laborers competing for a diminishing number of jobs. Only a minority of these populations will qualify for external assistance; the majority will seek assistance from kinship networks, turn to begging and/or petition the religious institutions for charitable alms. Beyond the purview of formal institutions of assistance (government, international), this will largely be an uncounted, invisible swelling of the ranks of the unemployed, disposed and disabled.

Decentralization and Regionalization

Processes of administrative decentralization will continue, although the effectiveness of regions and woredas on the periphery will be compromised by a lack of capacity, resources, staff turnover, etc. This will mean that there will be inadequate early warning and disaster management capacities in some vulnerable areas, e.g. parts of Afar, Somali and SNNPR. Regional and sub-regional offices of line ministries, e.g. the Ministries of Health, Agriculture and Water Resources, will remain be limited in their capacity to implement fundamental emergency relief measures as well as the GOE's food security and poverty reduction strategies in most of the current disaster-affected areas (except Tigray and Amhara). For some offices, the primary challenges will still be trying to furnish and staff offices rather than implement policies or manage programs. Given this state of affairs, technical linkages between the region and federal levels will remain inadequate in many parts of the country.

Some chronically vulnerable zones in some regions will find some reduction in their overall numbers of populations in need of emergency assistance due to resettlement. Overall, however, resettlement is not expected to markedly reduce the total number of populations in need in the short run.

Environmental Issues

Environmental degradation and eco-system stress will deepen in (and across) many regions. Population pressures, resettlement programs, poverty, and a lack of federal control over land use management will combine to bring new, marginal lands under cultivation. Existing farmlands will continue to be intensively cultivated due to both poverty pressures and government policies, with associated losses of soil fertility and related productivity. Loss of grazing land in the pastoral areas will contribute to further problems of overgrazing. Charcoal and firewood production, as well as the harvesting of wood for building construction will continue in a largely unregulated fashion, including harvesting from national parks, watersheds and forest reserves. Uncontrolled off-take of key rivers and tributaries will continue in the absence of established and empowered government bodies to limit and regulate riparian resources.

SECTION SEVEN: RECOMMENDATIONS

Over the course of the past three months, the team submitted briefs to USAID that included a range of recommendations. Discussions of these recommendations and other recommendations are embedded in the text of this report. A very detailed guide for assisting pastoralist populations in Ethiopia is found in Annex IX. Annex VII details the recommendations the team offered the USAID/DCHA/OFDA DART team in May 2003.

Early Warning/Monitoring

It is encouraging that information systems in Ethiopia work well to achieve their intended objectives, especially of preventing the types of famine that historically have plagued the country. Further improvements to the systems, including broadening their objectives, should yield even better performance in future.

Information systems need to operate independently of systems for identifying responses. The current information systems are geared towards servicing the needs of food-aid oriented disaster relief organizations. Investments in systems to assess non-food aid needs are needed in both government and non-governmental institutions.

The current domination of the Food Availability Decline Model of crisis needs to be augmented by other important and context-specific models, including models of entitlement decline, livelihoods crisis, and health crisis.

Context specific crises require context specific responses. In order for this to happen, the early warning, surveillance and monitoring systems need to capture and analyze a greater range of information than they presently are designed to do. Systems should be based on, for example:

- production zones
- livelihood patterns
- ecological zones
- historical trends
- institutions, processes and policies

An example of this for the pastoral areas would be:

- Normal: No unusual fluctuations are observed from the norm in the expected seasonal range regarding environmental, livestock and pastoral welfare.
- Alert: Unusual fluctuations are observed in the environment outside expected seasonal ranges. Could occur within the entire district or within localized regions. Asset levels of households are still too low to provide an adequate subsistence level. Vulnerability to food insecurity is still high.
- Alarm: Indicators fluctuate outside expected seasonal ranges affecting the local economy. This condition occurs in most parts of the district, and directly and indirectly threatens food security of pastoralists and/or agro-pastoralists.

- Emergency: All indicators are fluctuating outside normal ranges. Local production systems have collapsed as well as the dominant economy within the district. This situation affects the asset status and purchasing power of the population to an extent that welfare levels have been seriously impinged resulting in famine threat.

There needs to be organized a capacity for conducting timely meta-analysis of the full range of information generated by the host of early warning, monitoring and surveillance systems currently operating in country. In addition, findings of one-off reports and studies (e.g. the SC-UK/IDS Destitution Study) need to be expanded and integrated into systems of meta-analysis.

Additional actions are needed to promote context-specific crisis responses, including:

- Responsibilities for responding to disasters need to be established as permanent capacities within each of the key line ministries, including Health, Agriculture and Water Resources.
- A common framework for identifying and prioritizing disaster response strategies across a range of actors, populations, vulnerabilities and livelihoods systems is needed. Leadership by the ministerial level National Crisis Management Committee on this initiative would be welcomed.
- Clarification is needed in order to strengthen the coordination and locus of responsibility in re: pastoralist projects.
- Processes (and building in systems of accountability) for building the capacity of regional and woreda authorities responsible for the emergency response be committed and skilled managers, with proven capacity for leadership and organizational competence should be enhanced;
- The Government's non-food aid emergency policies should be reviewed and implemented by each of the line ministries, especially Health, Agriculture (including for livestock) and Water Resources
- The capacity of the DPPC/B/EWD to collect, analyze, use and disseminate information needs to be strengthened so that existing data may be utilized for trend analysis.
- The capacity of Ethiopian institutions to implement a concerted effort to train the disaster relief workers in Ethiopia in the basics of disaster relief and disaster management (health, nutrition, agriculture, pastoralism, urban, water/sanitation, etc.) should be strengthened and supported.

Capacitating the Disaster Management System

Decentralization in theory should serve as the ideal way to compile and collect context specific information appropriate to local agro-ecological environments and livelihood systems. For this to be achieved, there must be accelerated and coordinated focus to build up the capacity of the DPPC, line ministries and woreda crisis management committees. This will entail, at a minimum, increased investments:

- Equipment
- Transportation
- Housing/office space/telecommunication systems.
- Manuals and references where possible in the appropriate languages
- Resource materials on international standards and best practices (perhaps with access to international Centers of Excellence, web pages and other resources)

- Training, on site and continual through distance learning

Training should also include sensitization on humanitarian principles and humanitarian law, standards and codes of conduct. This will promote a common understanding and acceptance of the concepts of neutrality, impartiality, transparency and accountability, buttressed by Ethiopian constitutional laws and other edicts that specify right to assistance in times of crisis.

It is important that this sensitization process be integrated into the curricula of relevant educational centers involved in training administrative officials (e.g. the Civil Service College). Consideration should be given to training MPs to improve their understanding of issues of disaster preparedness as a component of their responsibilities towards their citizenry.

Donors, UN agencies and NGOs should coordinate their capacity building and training activities and resources to support these initiatives. A donor working group on capacity building for disaster response should be considered. Donors should also work towards the creation of a Center of Excellence for disaster management in Ethiopia. This center could serve as central resource for research and training on issues related to disaster preparedness, prevention, response and mitigation. In addition, it could provide on a continuous basis refresher courses and certificate programs to further professionalize the large corps of Ethiopian specialists who have been and continue to work in humanitarian endeavors. In addition to ensuring quality disaster management capacities well into the future, this also is important if Ethiopia wishes to continue to be an active player in international peace-keeping operations and other crises.

Nutrition

Excess mortality is occurring where there is and where there is not acute malnutrition. In areas of known high prevalence or high risk of acute malnutrition and public health crises, strategies need to be devised and implemented to augment formal relief efforts. Resources must be prioritized to the worst affected areas. In these contexts a nutritionally adequate ration in compliance with international guidelines must be provided.

Nutrition recommendations focus on three broad areas:

- Systems for prioritizing needs for disaster response.
- The need for a broader and more balanced range of strategies to protect nutrition and address all types of nutritional risk especially in priority one areas.
- Ensure the entire range of nutritional concerns in emergencies, are adequately addressed at all levels, including national policy, and within specific Task Forces and sectors.

The system for assigning priority categorization for disaster response needs to be revised, in order to more clearly distinguish groups who are suffering a near total failure in their entitlements and/or who are facing other life-threatening nutrition or health risks. Priority one areas should therefore include those areas of known high prevalence or high risk of acute malnutrition and public health crises that would be prioritized for a range of combined strategies. This system should be reviewed and supported by all relevant task forces (e.g. Food, Health, Early Warning) to ensure it takes

adequate account of all types of nutrition and health risks (e.g. inadequate water, sanitation, overcrowding, lack of shelter, exposure to cold, low immunization coverage, high chronic as well as acute disease, increased dependency ratios etc) and not just those linked with food insecurity.

In Ethiopia the only groups to receive rations that are approaching nutritional adequacy are refugees and the small number of IDPs in Tigray. Provision must be made to provide nutritionally adequate rations in compliance with international guidelines to priority one groups. For example, pulses or meat need to be included in the ration to provide a source of protein, plus fortified blended food as a source of micronutrients. In areas where iodine deficiency disorders are endemic the distribution of rations should be used as an opportunity to distribute iodized salt also. All oil in the general ration must be fortified with vitamin A, with the possible exception of local purchase of oil where fortification is not currently possible. The range of general, blanket and targeted supplementary feeding rations provided needs to be reviewed urgently as the rationale is confused, widely misunderstood and rarely implemented as described in original project documents. It is also questionable whether this is the best use of resources. This review should take account of the system for prioritization (hence the needs), targeting, distribution and ration composition.

Nutrition related emergencies require a broad range of interventions that go beyond the limited package of a single commodity ration, combined with selective feeding. Until this is widely recognized at the highest level, and integrated into the policies of the MoH, DPPC and even MoA, the fight against malnutrition will continue to be piecemeal and fragmented.

Nutrition in emergencies needs a number of committed champions within key Ethiopian institutions. As the current focal point nutrition in emergencies, it is essential that the work of the DPPC ENCU is fully supported and not undermined. Considerable technical and human resources are found within International NGOs, rather than within the DPPC (although it is claimed this is at the disposal of the DPPC). This capacity should either be relocated within the ENCU, or clear lines of authority established that indicate the independent unit is a service provider to the relevant GoE task forces and units.

The processes of participatory and appropriate policy development and planning, on issues such as ration composition and prioritization, need to be informed by sound information and good analysis. This needs to be supported by a local forum for learning, teaching and training in Public Nutrition. This urgent need is not just within Ethiopia, but more widely among the many emergency affected countries of the Horn of Africa.

Health

Overall, a stronger commitment by government to addressing emergency public health crisis is important so that in future disasters the health response to emergencies can match the robustness that currently only characterizes the food aid response processes.

The Ethiopian health system would benefit from a series of short-term and long-term strategies aimed at improving its capacity to provide adequate health care in times of relative stability and its capacity to respond to the health needs of its population in times of crisis. From the perspective of

overall need and financial priority, Ethiopia should take the path that most developing countries have outlined, which is to enhance its general health care capacities as a means to improving disaster response.

There are two reasons why a short-term focus on improving response to drought-induced famine is warranted. The first reason is that the attention of the international donor community is now riveted on this problem, carrying with it the potential to mobilize funds and technical support that could be leveraged to improve overall health system performance. The second reason is that this society is in a chronic state of severe social constriction and livelihoods crisis, and the quest for stability is quite likely to prove ephemeral for this and the next generation of health authorities in the country. The steady-state reality that Ethiopia faces is an ongoing morbidity and mortality crisis linked to malnutrition and livelihoods collapse. Whether the problem next surfaces as a food security crisis or epidemic disease, its roots will lie in the progressive involution of the economy, the ongoing degradation of the environment, and the intensifying impoverishment of its population. The Ethiopian health care system has no choice but to prepare for the implications and consequences of this situation.

Hence the following recommendations will focus first on improving response of the health care system to the onset of famine, food security crises, and epidemic disease among the poor.

A) Build an effective health and nutrition early warning system

5) Develop an early warning information system that links attention to indices of health and nutrition and is deployed in a consistent, routine, and population-based mode. Key features of this system would be the use of a simple but robust survey instrument and reliance on computer-based data analysis. The analytic reports to be generated from the information would support delineation of trends and variances, cross correlations with other inputs from other early warning systems, and delivery of summary reports that could be disaggregated to the kabelle level as needed.

6) Base this early warning system on a cadre of professional public health epidemiologists who are deployed in the regions and charged with the responsibility of accomplishing pre-determined circuit rides and systematic surveys throughout the countryside, supported by good transport vehicles, laptop computers, and adequate survey staff.

7) Link these public health professionals to the regional hospitals and define one of their key responsibilities to be the training of physicians, nurses, and managers in the monitoring and reporting of key health and nutrition variables relevant to early ascertainment of impending food related crises.

8) Design an information strategy at the regional level that links these improved reports from health facilities with the survey information from the public health professionals, so that the capacity to analyze and act upon these pooled sources can be based at the governance level charged with immediate response.

B) Develop a minimum level of public health outreach and prevention at the population level

4) Commit to a concerted effort to achieve a high level of EPI coverage for the entire population over the next two years. No other health intervention will be as cost-effective in protecting the population from the morbidity and mortality effects of what we must assume will be ongoing risks of malnutrition in the months and years ahead.

5) Accelerate the program for recruiting, training, and deploying the health extension workers. Ensure that these health extension workers are integrated into the clinical and educational activities of the health facilities to which they are assigned. Link them to the supervisory and mentoring capacities of the public health professionals deployed in famine early warning mode. Deploy them in all EPI activities as appropriate.

6) Move plans to establish a school of public health into fast track mode and consider opening branches in regional colleges and training centers.

C) Expand clinical capacity in the countryside to manage serious malnutrition and associated medical conditions

5) In the immediate future, expand the number of international NGOs deployed to assist in the development and management of TFCs. This is a stop-gap strategy but an essential one, given the indications of substantial unmet need in the identified crisis areas and the probable high level of need in areas not yet assessed.

6) Develop a training and resource strategy that will phase out reliance on international NGOs and build local capacity to manage issues of serious malnutrition and related medical conditions at the level of health facilities and referral regional hospitals. One can expect that these clinical conditions will be seen more frequently in the near future, particularly if outreach and information systems improve and more people are brought in for care from outlying areas.

7) Aim to have this strategy support an overall enhancement in prestige, pay, and recognition for health professionals employed at the level of health facilities and regional hospitals.

8) Provide opportunities for continuing medical education in the management of complex health and nutritional emergencies, either on site or in short courses held elsewhere in the country.

D) Enhance the managerial authority and competence of regional health officials

4) Insist that regional health authorities responsible for the emergency response be committed and skilled managers, with proven capacity for leadership and organizational competence. With redoubled engagement of international NGOs in the short run, and with transition to local management of emergency response in the near term, there will be significant demands on the capacities of regional authorities to command resources, coordinate efforts, optimize skill sets, monitor and evaluate results, and advocate for new resources and programs. It is essential that appropriately trained and supported people be placed in these positions of significant responsibility.

5) Require that the mandate for emergency response in any given area include accountability for a multi-sectoral response, including at least food, water and sanitation, nutrition, and health. The regional health authorities must be held to the standard that these functions are essential to fulfill in any geographic region affected by the emergency. Their task is to marshal and coordinate the relatively abundant resources now available through the international community to assure that this outcome is accomplished.

6) Among other responsibilities, insist that the identified authority for emergency response at the regional level make sure that the following actions take place in the next two months:
   - Upgrade the pharmacy supply chain so that it is capable of dealing with surge demand in key drugs and supplies required to respond to famine emergencies. These resources should be in the pipeline and available in country on a routine basis, given the frequency and volume of need.
   - Refine the protocols on TFCs and supplemental and community feeding to resolve the disputes that have surfaced in the last several months.

Recommendations intended for the longer term must aim to improve the overall health system. It is not defensible to focus efforts on enhancing other forms of disaster response, such as mass casualty care, without first attending to the most basic health care issues still unaddressed in Ethiopia: absence of population based information systems; weaknesses in the public health strategy and program; inadequate preventive primary care at the countryside level (including maternal and child health programs and family planning initiatives); poor quality of health facilities and hospitals in many of the regions; and insufficient levels of skill among health professionals in sub-regional sites.

One key recommendation that applies to long term improvement but has a shorter time frame for completion relates to initiatives currently underway to carry out a national census in 2005 and to establish a vital registry system throughout the country in the next several years. Both these activities, under the direction of the Central Statistical Authority, merit full support from the donor community. The information provided will help immeasurably in establishing baseline parameters and guiding strategies for intervention over the next decade.

Livelihoods

The saving of livelihoods needs to be recognized as being as important as saving human lives in emergencies. In Ethiopia, nowhere is this more apparent than among the pastoral populations who faced large-scale livestock losses that directly translated into human malnutrition, morbidity and mortality.

Emergency livelihoods intervention strategies are needed in order to enable immediate survival as well as to promote disaster recovery. Livelihoods interventions must be based on an analysis and understanding of the characteristics and dynamics of local context specific livelihoods systems. Livelihood intervention strategies need to be oriented towards supporting the range of household assets as well as to the diverse policies, institutions and processes that impact disaster affected populations.

Examples of asset interventions include the following:

- **Human Assets**: Food aid, nutrition, health, training (vocational, administrative, humanitarian response and principles), conflict resolution; meat distributions
- **Financial Assets**: Cash grants; cash loans; Cash for work; EGS; R2D; FFW; traditional loan and credit mechanisms; local purchase of commodities (e.g. sweet potatoes in SNNPR, livestock in pastoral communities); cash/other forms of debt relief/rescheduling; lifting of livestock export ban; livestock off-taking; livestock marketing transport subsidies; local monetization
- **Physical Assets**: seeds, livestock restocking (agriculturalists, pastoralists), emergency water points; community based animal health care; livestock disease surveillance; grain banks; grain storage; supplemental livestock feeds; tools
- **Natural Assets**: pasture recovery; afforestation; watershed management; erosion control; nurseries; fisheries
- **Social Assets**: women's livestock marketing associations; woreda administration capacity building; local NGOs, institutions, churches and mosques; traditional safety nets; technical exchanges among organizations

Diversification of livelihood strategies is greatly needed in order to enhance survival and build resilience.

All donors should:

- Initiate an international campaign to encourage Western publics to purchase Ethiopian coffee.
- Appeal to the Governments of the Gulf States and the Arab League to lift the ban on the export of live livestock from Ethiopia; simultaneously, develop an animal health certification system within the region that meets international standards.

Environment

Preserving and protecting the environment and eco-systems are critical for supporting livelihoods in times of emergencies. The GoE and donors should increase focus on natural resource conservation and watershed management as emergency issues. The woreda system of administration provides an ideal mechanism for the implementation of accurate hydrological surveys of the local topography, water catchments areas and ecosystems with a view to the design and implementation of appropriate conservation measures (e.g., micro dams, water run-off catchments, bunding, terracing, afforestation, etc.) The current water harvesting campaign -- though well intentioned – may not be adequately designed for long-term sustainability. For example, lining the *kure* with plastic may only be sufficient for a limited number of seasons, as opposed to other (more resource intensive) investments in concrete and stone linings, for example. Ethiopian planners and project implementers may wish to consider the experiences of countries such as Israel, Lebanon, Spain and Pakistan (as well as Ethiopian Regions such as Tigray).

The development of alternative house building materials and alternative fuel energies should be prioritized as both an emergency and development concern.. A key aspect of natural resource management strategies is to look at both the supply and demand side of forestry production. A robust program for conservation, reforestation, local development of community nurseries and tree

planting campaigns must be matched by complementary development of alternative fuel sources, energy saving devices, mud brick and other alternative house construction designs. Such information needs to reach the planners of new towns and woreda administrative centers. Again, examples from other countries and the work particularly of agencies such as Intermediate Technology can be very useful. Locally-based vocational colleges of building technology should be enhanced by donors to develop these strategies.

Marketing

Donors and GoE must work in partnership to enhance marketing systems. This can be done through investment in roads, communication and marketing information systems, and storage capacities. At the same time there needs to be support for grain traders to buy surplus stock at harvest time. Equally farmers themselves need to be supported to form producer and marketing cooperatives to play a key role in marketing decisions. At the household level considerable extension work needs to be done to improve household grain and other storage facilities, particularly in agro-pastoral areas that are increasingly turning to crop production.

Livestock

Despite having the largest livestock population in Africa, Ethiopia does not have a Ministry of Livestock such as is found in Sudan and Kenya that is responsible for looking after the interests of pastoral areas and issues concerning livestock. In addition, the mandate for livestock marketing, veterinary services and related regulations is split between the Ministries of Agriculture and Trade in a way that precludes the streamlining of livestock development initiatives. The GOE should consider the creation of a single, empowered entity such as a distinct Ministry of Livestock to oversee livestock sector development, production and marketing, as well as, animal health services.

Additional recommendations for the livestock sector are summarized in the following table.

Table 36. Management of the Drought Cycle for Livestock-Related Interventions

Stage	Action	Activities	Advantages	Disadvantages
Normal	Drought preparedness	Community Development		
		Community Capacity/Vulnerability Analysis and contingency planning		
		Public works that may help in the mitigation of droughts (pasture development, ponds, boreholes etc)	See below	See below
		Conflict resolution (at all times)	Thwarts deliberate destruction of human life, livestock and property; enables different clans and tribes to live in harmony; allows the sharing of resources by different communities /tribes	Can be risky for project staff if officials do not support the program; takes a long time; can be expensive because of large number of people and time involved
Alert/Alarm	Mitigation Activities	Animal health activities, de – worming ,etc.	Prevents significant losses occurring during droughts and drought breaking rains; de-worming increases the lives of animals by 2-3 months; pastoralists can be trained to provide basic animal health services (CAHWs)	Can interfere with the sustainability of CBAH programs; distorts market prices if drugs are distributed freely; can incur costs to vulnerable families if cost recovery is used
		Emergency off-take/destocking	Enables herders to get reasonable prices for stocks that could otherwise perish; receiving cash enables them to buy food, water, drugs and to restock; the meat provides them with much needed protein in an otherwise grain-based relief ration; meat could also be provided to orphanages, hospitals and schools; the cash obtained provides opportunities to set up small-scale businesses.	Distorts market prices; may interfere with traditional destocking mechanisms; hard to get donors to fund it on time; high cost and logistical problems with dry meat preparation
		Transport subsidy to livestock traders	Enables animals to be sold before they die or become unmarketable; infuses cash into the economy; if done on a large scale, lessens pressure on the land; helps to facilitate movement of animals; facilitates movement of grain into drought areas.	Could lead to irregularities if proper control mechanism is not in place; distorts market prices

Stage	Action	Activities	Advantages	Disadvantages
		Grazing reserve management /develop irrigated pastures	Provides pasture and water during droughts or after; reduces the labor requirement spent in search of pasture and water; helps to maintain healthy animals	Pump irrigation could be expensive; may encourage conflicts to access the irrigated sites
Emergency	Relief activities	Continue with animal health activities	As above	As above
		Livestock feed provision	Pasture and rangelands suffer during drought; nutritional intervention prevents environmental degradation; has long term benefits for herders; feed security might be more important than food security; enables herders to re-build stocks; cash for work enables herders to purchase feed.	Could outweigh its potential benefit if done over a long period; high transport costs if feed is transported over long distances (cattle need more than 4 pounds of feed per day); may unintentionally attract large numbers of herds
		Boreholes and wells rehabilitation	Existing water systems can't support people; so more water sources are needed; under drought condition tinkering may be essential but expensive in the long term; water harvesting allows water to be retained for emergencies; boreholes may provide water in areas that are arid.	May attract large number of people and could be disastrous for the environment; may facilitate the spread of diseases due to the concentration of humans and livestock; may lead to conflicts; may encourage sedentarization; may spread diseases; aquifers can dry over a long term and boreholes need to be capped after the emergency
		Public works (preferably cash for work)	Cash provides the means to purchase food, other necessities, enables to buy breeding stocks and provides the capital base to start up businesses; the particular project under this scheme will be beneficial to the community	People may get desperate when the project is completed and there is no more cash for work.
Recovery	Rehabilitation	Restocking	Vital for the rehabilitation of pastoralists who have lost all or most of their stocks; provides the foundation for breeding stocks; reduces the number of potential drop outs	Could be an expensive operation; choosing beneficiaries may be a complex issue; may discourage potential beneficiaries from seeking alternative livelihoods; communities may contribute sick and old animals
		Rehabilitation of dams, boreholes and other public works through cash for work	See cash for work, above	See cash for work, above

USAID

The recommendations in the Planning for the Next Drought: Ethiopia Case Study (An Assessment of the Drought Response1999 – 2001 and Current Preparedness) are good and useful. Overall, the team urges that these recommendations be implemented.

USAID disaster management strategies should be revised to a) prioritize use of food aid in emergency according to the principles of impartiality, accountability and appropriateness and b) prioritize non-food responses to prevent/control disaster-related malnutrition, morbidity and mortality, c) commit to livelihoods-based specific responses, d) recognize that long-term engagement is essential for actually achieving recovery.

USAID should be encouraged as much as possible to support local purchases of grain, especially in years of good harvest, in order to prevent food insecurity that is directly related to weak internal prices for main crops. In addition seed supplies should also focus on enhancing household horticultural production and not just focus on cereal crops.

USAID should engage in new partnerships including local NGOs, government bodies, civil society (including mosques and churches) and the private sector. Where possible, direct funding to these organizations should be pursued.

Independent monitoring of funded programs is needed to determine if traditional partners are able to implement the agreements they have already signed from USAID and other donors. USAID needs to increase monitoring of its implementing partners, and should discourage the establishment of additional early warning systems. The use of local consultants (e.g. academics who are not involved in humanitarian responses) should be considered.

USAID should monitor carefully inputs and projects that it is supporting in the pastoralist areas. Historically projects for pastoralists have a high rate of failure because they are often characterized by inappropriateness and poor community participation.

Support should be given to increase the base of knowledge about risk and vulnerability in Ethiopia. Ethiopian research institutions should be actively sought out to participate in the planning of intervention strategies. For example, the National Food Security Task Force should be encouraged to include Ethiopian academics and experts, perhaps serving as a forum for bringing together research and practice to identify practical solutions and strategies. In addition, Ethiopian research experts should be deployed to identify causes of current problem areas and sectors. For example, an in-depth analysis of the current crisis affected areas in SNNPR would be very useful for improving current and future disaster preparedness and mitigation strategies for this region.

USAID should encourage the formation of a forum of key government, donor, UN and NGO actors with a specific mandate to analyzing and devising strategies specifically oriented towards promoting the recovery of populations affected by the current crisis.

ANNEXES

Annex I: Terms of Reference

Tuft University – Feinstein International Famine Center
Technical Assistance and Consultation
March 25, 2003

Problem Statement

Despite early warning of crisis in Ethiopia, donor response will not fully avert excess mortality over the coming months. It remains unclear if food security surveillance systems are generating adequately reliable, timely and accurate estimates of need. Limited resources must be prioritized strictly according to the humanitarian principle of *impartiality* to ensure that those with the greatest needs are assisted first. The concept of the *humanitarian imperative* dictates that available resources be directed to the task of saving lives. While essential, this runs the risk of undermining important, on-going development efforts.

USAID is seeking the assistance of a range of experts to analyze the impact of the current drought emergency on destitution and mortality in the second half of 2003 and the first half of 2004. This SOW specifies the activities to be undertaken by the Feinstein International Famine Center (FIFC) of the Friedman School of Nutrition Science and Policy, Tufts University between March 31, 2003 and June 15, 2003.

Objectives

There are two objectives to this SOW:

i) To provide an analysis of current surveillance systems (early warning, nutrition, health, livelihoods) to gauge their capacities to detect emergency nutritional, food security and livelihood vulnerabilities and the applications of these systems in defining responses.

ii) In light of this analysis as well as planned donor assistance, rainfall, GOE policy changes and other variables, identify populations/areas that are likely to face critical threats to food security in the immediate to medium-term (up to 1 year), describe potential scenarios relating to identified shortfalls in assistance for vulnerable populations, and suggest possible humanitarian strategies for intervention.

Focus of SOW

The FIFC's Livelihoods Initiative Program will lead a team of FIFC specialists in public nutrition, livestock, public health and livelihoods to undertake analyses of existing surveillance systems (early warning, food security, nutrition) and available quantitative data and indicators to alert USAID to possible scenarios of excess mortality and famine conditions in Ethiopia during the second half of 2003 and the first half of 2004.

Task One: Conduct an analysis of the impact of Ethiopia's emergency on populations vulnerable to famine through a critique of available early warning, food security, nutritional, health and mortality data and surveillance systems, supported by field observations.

1. Review existing data on food security indicators, including early warning, nutritional and mortality data to describe the relationship between these indicators and famine outcomes such as malnutrition, destitution and mortality.
2. Review existing surveillance systems, their underlying assumptions, conceptual basis, and their extent of coverage in order to evaluate the adequacy of analysis of food insecure areas and populations, including pastoral areas, and to identify gaps in the coverage and analysis.
3. Evaluate these analyses and predictions in relation to recognized frameworks (and existing knowledge about vulnerability) including (i) causes of malnutrition, (ii) food security, and (iii) livelihood frameworks.
4. Provide USAID with analysis of the areas and populations that are likely to face critical threats to food security in the short to medium term (i.e., up to one year).

Task Two: Based on the analysis above, make recommendations on humanitarian intervention strategies that could be pursued in order to avoid famine outcomes such as excess mortality, malnutrition and destitution.

1. Review key donors' (and where possible, other actors') humanitarian strategies and assistance portfolios for the immediate to medium-term crisis in Ethiopia
2. In light of the JAMA article (Salama, et. al., "Malnutrition, Measles and Mortality, and the Humanitarian Response during a Famine in Ethiopia", August 1, 2001) and subsequent lessons learned documents issued by USAID/Ethiopia and USAID/W, articulate the linkages between food and health assistance and how industry knowledge was applied in defining appropriate responses.
3. Based on all activities in Task One and Task Two, identify emergency assistance, policy and advocacy responses that could be taken in the immediate to medium-term (i.e. within the coming months up to one year) to avert famine outcomes, including support to livelihoods systems as a means of saving lives

Outputs

1) A comprehensive report including the following:

a) A situational analysis using current and historical early warning, livelihood, nutritional and mortality data to provide a situational analysis of the severity of the food security emergency, describing the potential impact of the crisis in the coming months by providing possible scenarios (given differing levels of rainfall, donor intervention and GOE policies such as resettlement) for continued and emerging food insecurity for the second half of 2003.

b) A discussion of how response measures (including assistance, policy and advocacy) can be improved to address life-threatening food insecurity.

2) Briefings by the FIFC team for USAID/Ethiopia, USAID/Washington, the GOE, the UN and NGO community and other interested actors.

NB: The FIFC will use some of the data and materials gathered in the course of the field work in the preparation of case studies and/or articles for use in teaching and training activities, as per the FIFC-USAID/DCHA/OFDA Cooperative Agreement (AOT – A – 00 – 00 – 00284 – 00).

FIFC Team

- Sue Lautze, Director, Livelihoods Initiative Programs, FIFC, will serve as team leader.
- Helen Young, Ph.D., Director, Public Nutrition Program, FIFC, will conduct the majority of analysis relating to food security and nutrition surveillance systems.
- Yacob Aklilu, Director, Livestock and Livelihoods Program, FIFC, will conduct the majority of analysis relating to pastoralist systems.
- Angela Raven-Roberts, Ph.D., Director, Youth and Community Project, FIFC, will provide technical backstopping from Medford and will conduct the majority of the analysis regarding the context of vulnerability in Ethiopia.
- Jennifer Leaning, M.D., professor of international health and director of the Program on Humanitarian Crises at the Harvard School of Public Health, will conduct the majority of analysis relating to health surveillance and health assistance strategies.
- FIFC research associate, will support Helen Young and Sue Lautze.

Methodology

1. Desk-study and literature review (based in Medford and London)
2. Review of secondary information and key informant interviews in Addis Ababa (and Washington, DC); including, for example, livelihoods programming, nutritional surveillance and food security assessment program managers, government officials and donor representatives in key organizations;
3. Field visits/fieldwork in program areas to review food security and nutrition analysis and program strategies in local context.

Annex II. Authors' Biographies

The Feinstein International Famine Center is a research and teaching institution based in the Friedman School of Nutrition Science and Policy at Tufts University. The FIFC focuses on the causes and effects of famine, conflict, and forced displacement worldwide. The Center manages graduate courses in humanitarian assistance, conducts research on issues of forced migration and refugees, gender and conflict, livelihoods, community based animal health delivery systems, public nutrition and humanitarian coordination and organizational behavior. The Feinstein International Famine Center is staffed by an interdisciplinary team including economists, nutritionists, anthropologists, political scientists and veterinarians. The Center also works in close collaboration with the Harvard School of Public Health and Massachusetts Institute of Technology through the Humanitarian Studies Initiative.

Yacob Aklilu has 20+ years field experience in development and emergency programs with pastoral and farming communities. He is currently working with Tufts on emergency intervention programs and livestock marketing policies in pastoral areas. Prior to joining Tufts, Mr. Aklilu worked with the UN as a Program Officer in Iraq, as the Credit and Micro-Enterprise Advisor with FINNIDA in Zambia, and as an Assessment and Planning Officer with UNICEF and the UN in Mozambique. His early experiences include working on a World Bank project with Afar and Boran pastoralists on a number of issues in Ethiopia. Tufts@africaonline.co.ke

Girma Kebedde has 15+ years of experience in emergency, development and refugee programs in Ethiopia, Somalia and Djibouti. He started his service in the DPPC as an officer in the Early Warning and Coordination Departments. Since leaving the DPPC, he has worked on various projects with UN agencies and NGOs for refugee rehabilitation and settlement, including in areas of food security, environmental protection and income generation. He holds a BA in Economics from Addis Ababa University and a Masters of Arts in Humanitarian Assistance (MAHA) from Tufts University. Girmakk@hotmail.com

Sue Lautze is Director of the Livelihoods Initiatives Program at the Feinstein International Famine Center. Her work focuses on the humanitarian, economic and political aspects of interventions in complex emergencies. Ms. Lautze's field research concerns patterns of trade across conflict zones, coping strategies, emergency asset protection strategies, capacity building, and strategic humanitarian response. Ms. Lautze has done significant work in Sudan, the Great Lakes Region, China, North Korea and Afghanistan. Sue.Lautze@tufts.edu

Jennifer Leaning, M.D., S.M.H. is professor of international health and director of the Program on Humanitarian Crises at the Harvard School of Public Health. She is board certified in both internal medicine and emergency medicine, and is an attending physician at Brigham and Women's Hospital. She has extensive field experience in disaster response, humanitarian emergencies, and human rights investigations in the Middle East, former USSR, Somalia, Kosovo, and the African Great Lakes region. Jleaning@hsph.harvard.edu

Angela Raven-Roberts, Ph.D. is Director of Academics and Training at the Feinstein International Famine Center and has extensive career experience working in the U.N. system and with NGOs in emergency program design and development. Prior to coming to Tufts, she was for eight years senior project officer in the Office of Emergency Programs with UNICEF, responsible for emergency program management in the Horn and Southern Africa. In the 1980s, she was the Program Director for Save the Children and Oxfam America in Ethiopia. A.raven-roberts@tufts.edu

Helen Young, Ph.D. directs the International Public Nutrition in Emergencies Program at the Feinstein International Famine Center. Dr. Young has tailored training modules in Public Nutrition used by a wide range of agencies, including WFP and UNICEF. She is the Focal Point for the development of the new Sphere Minimum Standards on Food Security, which forms part of the current Sphere Handbook revision. Dr. Young is also co-editor of the journal Disasters and is the author of several books on the management of nutrition in disasters. Helen.Young@tufts.edu

Annex III. Early Warning Systems – Example from Tigray

1. Early Warning Infrastructure within Tigray

Regional:
Regional Disaster Preparedness and Prevention Committee – Role: administrative/ decision making (chaired by the Head of Administration (also known as President of the Regional Council). The membership is similar to the Regional EW committee below but the chairman is different. Regional council appoints a representative from the Youth, Women's and Farmers Association.

Regional Early Warning Committee – Technical (chaired by the DPP Commissioner)
Members: representatives from Regional Planning Bureau, MoH, MoA, MoE (sometimes), NGOs working in region e.g. REST, national metrological services agency (NMSA), Min Rural Water Development.

Woreda
Woreda Disaster Preparedness and Prevention Committee – Administrative/ decision-making (chaired by the Woreda administrator also known as the Woreda Council President)
Membership: MoA, MoH, MoE, Min Rural Water Development

Woreda Early Warning Committee – Technical (chaired by Woreda DPP Head)
Membership: Moa, MoH, MoE, Min Rural Water Development, NGOs if available, representatives of youth, women and farmers association.

Peasants Associations
PA committee
The PA chairman coordinates the early warning activities and reports are sent directly to the respective sectoral offices e.g. health, agriculture etc..
Membership: Agriculture (Development Agents (agriculture plus livestock), Home Agents, Production Cadres (farmers); Health (CHA's and TBA's)

Flow of information from village level to federal level (Example from Tigray Regional State)

Routine monthly early warning reporting:

1. Within the PAs reports are sent directly by key workers to their respective sectoral offices at the woreda level. Examples of key workers; Agriculture (Development Agents), Home Agents, Production Cadres (farmers); Health (CHA's and TBA's). It is not possible to judge the quality of the reporting by the key sectoral workers within the PA to their respective offices at woreda level.
2. The DPP Early Warning head at woreda level collects and collates the information for all the PA's in the woreda. He then sends a report on this to:
   - ∉ Regional DPP Committee (administrative)
   - ∉ Regional DPP Early Warning Head (technical)
   - ∉ Federal DPPC (Early Warning Department) (technical)

- Woreda DPP Committee (retaining a copy for the administrative/technical committee)

The removal of zonal committees in this system has improved the timeliness of reporting. The flow of information from PA to federal level passes through two administrative committees, in addition to the early warning technical committees. There is little transparency as to how the analysis and numbers affected alter in the course of passing through the different committees, and the relative influence of the different committees in modifying the figures is not clear.

The process of estimating numbers is the responsibility of woreda committees and the parameters for this are not transparent. In addition it is not clear how current needs are reviewed in the context of an on-going relief program in order to adjust requirements downwards (as well as upwards) or whether there is a mechanism for doing this.

Official reporting during impending disaster

1. In the event of impending disaster the PA committee responsible for disaster response reports to the woreda DPP early warning head (chairman of the woreda EW committee), on area affected, needs and numbers.
2. The woreda Early Warning Committee then notifies the woreda DPP committee.
3. The woreda DPP committee starts the process of verification of numbers in different PA's and total numbers. *"there is no clear formula for estimating the number of beneficiaries, hence the need for verification" (Haile – Mehone, Raya Azebo)* Sometimes committees are constituted and dispatched to assess the situation. The final estimate of areas affected, needs and numbers are sent to the Regional DPP Committee and the Regional EW committee, REST, Head of Administration (previously known as Chairman of Council/ president of region).
4. The Regional DPP committee and the Early Warning Committee combine under the chairmanship of the regional administrative head to verify and agree areas affected, needs, numbers and timeframe. Reports are then sent to Federal DPP Commission, including early warning department.

Crisis Management Committee's comprising representatives from neighboring woredas meet monthly or every two months, e.g. Raya Akobo, Afar, Raya Azebo, Sekota and Wag Humra. They meet to review and resolve shared issues, for example migration of pastoralists between regions and the pressures this might represent, conflict between neighboring areas or groups etc. They met five times in 2001. In times when owners of livestock migrate to a neighboring woreda the committee may organize the provision of water, livestock health services etc. This is based on a long tradition between these regions, and thus pastoralists have developed clients to whom they can come.

Annex IV. Examples of Costs of General Rations and Supplementary Feeding

Costs of providing general ration and targeted supplementary ration per person per day (CRS, 2002).

Budget Items	**Tons**	**Cost US $**
Food cost		
Wheat/SFC	313,581	$54,249,513
CSB	32,926	$7,968,092
Oil	9,148	$8,233,200
	355,655	
Total food		**$70,450,805**
Transport/ support		
Secondary transport		$14,458,581
Loading warehousing		$2,984,366
Support costs		$2,926,497
Total transport/support		**$20,369,444**
TOTAL FOOD & NON FOOD		**$90,820,249**
Cost per person per day (total cost/ No of rations)*		**$0.15**
Percent Food Cost		22.4%
Percent Other Cost		77.6%

* There are two ways using this data of calculating the number of rations needed:

1. Divide the total cereal by the daily ration = 313,581 Tons / 0.5 kg = 627,162,000
2. Calculate the total number of days * number of beneficiaries = 621,483,780

	Number of beneficiaries	**Total Number of beneficiary days** (beneficiaries * No of days)
Nov – Dec 02 (60 days)	1,847,657	110,859,420
Jan - July 03 (180 days)	2,836,802	510,624,360
Total		621,483,780

UNICEF Costs for Procurement of therapeutic food and program support (UNICEF, 2003)

Imported therapeutic food	**Unit cost**	**MT**	**US $**
F-75	2440	24.5	$59,780
F-100	2060	240	$494,400
Re-So-Mal	36.48	160 cartons	$5,837
Sea freight/ over expenditure costs @ approx 33% (items are heavy and bulky and cannot be sent by air)			$189,983
Sub-total for food support			**$750,000**
Program Support - including technical support			
1 international nutritionist of TFP/SFP for 1 year			$120,000
1 int nutritionists for ENCU Dr Girma			$90,000
2 public health consultants (national)			$20,000
2 ENCU national officers for 1 year			$10,000
Distribution monitoring of supplies			$39,688
Field support costs			
Per diem for staff (6) x 21 days/month x 12 months			$57,456
Per diem for drivers			$18,144
Air tickets - local travel			$14,400
fuel etc			$30,000
Training costs on TFCs/ SFC (8 workshops x 60 participants) TOTAL			$100,000
Sub-total for non food support			**$499,688**
TOTAL COSTS			**$1,249,688**
Cost per child for one months treatment *			**$62**

* Based on treatment of an estimated 20,000 children (UNICEF, 2003).

Costs of emergency therapeutic and supplementary feeding (ACF, 2003)

Duration of feeding program (months)	9
Number of Supplementary Feeding Beneficiaries	2500
Number of Therapeutic Feeding Beneficiaries	300
Total grant requested	$438,700
A. Estimated cost per child (cost averaged for therapeutic and supplementary feeding)	$157
B. Estimated cost per child (assuming TFPs account for half the total budget)	$731

Annex V. Case Examples of Food Distributions, Tigray and Somali

Food Distribution in Wukro and Mehone, Tigray Region

In Tigray, food distributions are organized in the woreda capital by either the responsible NGO or by the local DPPB. The team observed two different food distributions by REST in Wukro Town, and in Mehone (Raya Azebo woreda). They appeared exceptionally well-organized and calm (see Pictures 6-8).

Picture 6. (Right) Food Distribution in Wukro, Tigray Region (individual Kuchets organize their own distribution)

Picture 7. (Below) Example of the Section Head's Records of Beneficiary Lists and Their Allocation

Picture 8 Example of scooping rations at the Wukro distribution

The system of food distribution is based on community participation. Each Peasant Association in the woreda takes turns to come to the woreda center to collect their rations. The Chairman of the PA comes together with a number of the beneficiaries. The stores allocate the total amount of food to the PA chairman, where it is sub-divided by *'kuchets'* or villages (with leader), and then each *kuchet* divides their share into a number of groups of households. Each group is then responsible for dividing their portion between the households in that group. Lists of households for each group are held by a group leader, showing the entitlement of each household. Figure x clearly shows the dilution effect as most households are receiving only 2 full rations, yet clearly their household size is larger than this. 'Scooping' was seen to be undertaken by volunteers from the beneficiaries, in most cases women, who reported receiving no payment for this. Beneficiaries must pay 10 cents for the loading and unloading of the food for the respective groups.

A major problem pointed out by the DPP woreda head was transport to the villages. The furthest distance for a PA to travel to Wukro was 40 km, and thus collecting and organizing the distribution took an estimated two days, one for travel and one for the distribution.

Women complained at length about only receiving cereals, when in the past they had received pulses and oil. They also complained about the limited distribution and the necessity of having to share with the non-beneficiaries.

"We can't watch our neighbors die"
"We live and die together" so we must share.

Beneficiaries were asked whether it might not be better to share the food more equally than allocate it to just a few. The expressed preference of the group was that everyone in their community receive a full general ration (they are all familiar with the three commodity ration), but if there was not enough for that then reluctantly they would prefer to share it out.

A high proportion of older beneficiaries were present at the distribution, all of whom looked reasonably healthy. The DPP woreda head reported that households helped each other out, so that even the less mobile or disabled people were able to collect their ration.

Apart from older men, the majority of beneficiaries present at the distribution were women (especially in Mahone). The women reported that there was a stigma for the men to collect rations, and also that a smaller proportion of food was likely to be sold if food was collected by women.

Food Distribution in Fik Woreda, Somali Region

Save UK are responsible for transporting the food from the DPPC store in Shinille to the 35 end distribution points in 5 woredas in Fik Zone (the remaining 3 woredas in Fik Zone are inaccessible). All food is pre-positioned at ALL sites prior to the distribution day, which takes place simultaneously at all sites, in order to prevent beneficiaries double registering at more than one distribution point, which is a common problem in pastoral areas where people are scattered and mobility is high.

In general the amounts of cereal received in Fik Zone by beneficiaries appears surprisingly close to the planned ration of 15kg pppm (Figure x), although distributions were delayed. Food distributions planned for October and November took place in December (planned total of 30kg cereal, but ranged between 8kg and 30 kg) for a planned 115,584, although it appears from Figure x that a total of 173,112 beneficiaries actually received rations. In Fik woreda it appears almost all distribution sites were able to distribute 30 kg pppm for this distribution. For December and January, the distribution took place in February and ranged between 5kg and 25 kg pppm. For February and March, the distribution took place in April and was uniformly 25kg. The distribution planned for April and May, will take place in June.

Figure 44. Map of Fik Woreda

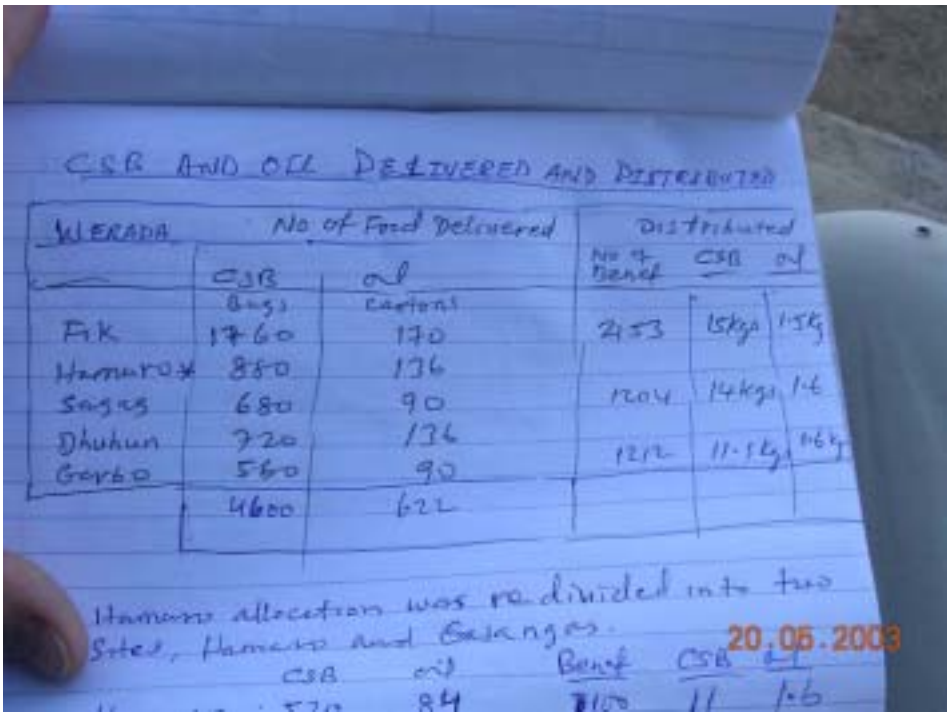
Figure 17. Food Distribution Summary Report by Save UK, Fik

Annex two,

S/No	Districts	Distribution sites	Targeted population	No. of beneficiaries identified	Ration size	Remark
1	Fik	Fik	14,304	16,834	25kg	
2		Dondorro'ad	3,200	6,400	15kg	
3		Galalshe	4,800	8215	12.5kg	12.5 not yet distributed
4		Budnen	4,000	4,000	30kg	
5		Danga	2,744	2,744	30kg	
6		Jerinka	4,000	4,000	30kg	
7		Allyasane	4,000	4,000	30kg	
8		Kudamaydal	2,400	2400	30kg	
9		Korayo	3,200	3280	30kg	
10		Awema'an	2112	2112	30kg	
	Sub-total		44,760	55,877		
11	Duhun	Duhun	4,800	4800	30kg	
12		Barmil	3,200	3200	30kg	
13		Garesley	3,200	4800	20kg	
14		Hagel	2,400	3,600	20kg	
15		Ayun	2,400	4800	15kg	
16		Galahare	1,800	3200	15kg	
17		Hidmarudile	1,000	2824	17kg	
	Sub-total		19200	27,224		
18	Segeg	Segeg	4,800	11,520	12.5	
19		Yahob	1,800	6,000	8kg	
20		Alifan'ad	2,000	3340	17.5kg	
21		Ebla'ad	2,000	3920	15kg	
22		Lantader	1,800	4660	10kg	
23		Horakalifo	2,000	5880	10kg	
24		Barkomal	1,800	2660	15.5kg	
25		Karinbarkadle	1,800	5850	8kg	
	Sub-total		17200	43,930		
26	Hamaro	Hamaro	7,400	11,100	20kg	
27		Gasangas	5,800	5600	30kg	
28		Labadare	1,800	1600	30kg	
29		Kubi	2,408	2912	25kg	
	Sub-total		17008	21,212		
30	Garbo	Garbo	5618	10,700	16kg	
31		Darusalam	1600	1920	25kg	
32		Garigo'an	3200	6857	14kg	
33		Malayko	2800	2800	30kg	
34		Heladere	1600	2182	22kg	
35		Maromayd	2400	2410	30kg	
	Sub-total		17416	26,869		
Grant total			115584	173112		

20.05.2003

Figure 18. Food Monitors Report of CSB an Oil Deliveries and Distributions, Fik, Somali Region



CSB AND OIL DELIVERED AND DISTRIBUTED

WERADA	No of Food Delivered		Distributed		
	CSB	oil	No of Benef	CSB	oil
	Bags	cartons			
Fik	1760	170	2453	15kgs	1.5kg
Hamaro*	850	136			
Sagas	680	90	1204	14kgs	1.4
Dhuhun	720	136			
Gerbo	560	90	1212	11.5kg	1.6kg
	4600	622			

Hamaro allocation was re-divided into two Sited, Hamaro and Gwangas.

20.06.2003

CSB	oil	Benef	CSB	oil
[illegible]	84	8100	11	1.6

Figure 19. Example of a food distribution site showing fenced off area where beneficiaries congregate prior to registration (no actual registration of distribution taking place in photo)

Fenced area around building

Figure 20. Family with their distribution of CSB and Oil, Fik Town

People are informed of the distribution day and everybody (men, women, children, babies etc) are expected to gather at the distribution point in a fenced off area to be registered for the distribution. Only those individuals physically present will receive food. An exception may be made for the elderly infirm etc, at the discretion of the elders involved in the distribution process. Individuals are organized in groups of 10, who then allocate a group leader who then collects the food the following day. Thus the distribution involves a much smaller group of individuals, and allocations have already been decided.

Thus despite the 'self-targeting' mechanisms and over-registration as compared with the planned figures, it appears that in many cases ration scales approaching 15kg pppm were indeed distributed. Although it has to be said how this was achieved is really not at all clear.

Discrepancies between the census figures and actual figures have created problems of under-allocation for certain areas. For example the annual appeal figures are averaged for all sites in Segeg and Duhun woredas, but there is considerable variation between them which leads to dilution of rations to as low as 2.5 kg pppm. Figure x shows lower rations for sites in these woredas.

In Fik Zone, there has been no targeting within communities with the exception of a recent 'targeting trial' in Fik town and four sites in Hamero, with the aim of matching the number targeted with the numbers allocated assistance. Women members of the Drought Committee explained the system. The targeting excluded the better-off, and thus included the 'middle' and 'poorer' people. The middle portion represents a large group and to exclude them could potentially be difficult.

Sales of relief wheat are reportedly common; every family is forced to sell wheat to buy essentials, specifically
sugar, tea, milk, oil and milling chares and soap. Sales are to traders within the town or in rural areas to the wheat traders from Babile and Harar, who travel to the distribution sites on the allotted days specifically to purchase grain. There were even reports from reliable informants that the pasta factory in Dire Dawa was using these supplies of wheat for their production.

During distribution the prices fall, for example 50 birr for 50kg, but this rises shortly after the distribution. The amount of ration sold depends on other income sources, those fully dependent on the ration are expected to sell approximately 50%, while those with more income only sell about 30%. At least 10% of the ration must be sold to cover the milling costs. Maize and white sorghum are generally not available in the market, but red sorghum from the Oromiya area can be purchased for 100 birr per 50 kg. No cereal grains were available during a market visit. These women also reported measles cases during the nutrition survey.

<u>Blanket supplementary feeding</u>
CSB and oil is distributed to the woreda centers (where the worst affected children are considered to live), where token cards are distributed for each child under five years through household visits, and then families go to collect their ration. In Fik town a small amount was distributed to pregnant women and elders. Figure x shows a women and her children outside her house with her 25kg sack of CSB and tin of oil.
CSB is considered equivalent in food value to milk, and so it is not generally sold, unlike other cereals.

Small amounts of CSB and oil were available and 'reserved' for the "worst affected pocket areas". For example, in Gasangas 360 25 kg sacks were received and distributed among 704 children (approx 12.7 kg each). In Fik town,

Distribution is by groups of 10 individuals, who elect one person to collect the ration on their behalf. This is then shared between the group.

Annex VI. Observations - FIFC Team, April 22, 2003

1. It's early days for us to be saying anything. These points are very preliminary. We have not finished reading all of the reports we've gathered and have not held satisfactorily detailed discussions with key actors. Our field travel has been limited to Afar, with brief trips to SNNPR and Amhara.

<u>Afar Region</u>

2. It's too early to judge the success or failure of the Belg rains. The coming weeks will be decisive in determining (for Afar) whether a severe crisis will develop across many zones or whether the crisis will be isolated within select woredas. Either way, vulnerability to human health crises (including malnutrition, disease outbreaks and dehydration deaths), animal health epidemics and animal deaths due to starvation, dehydration and exposure, and further erosion of livelihood bases (livestock) in Afar remains high.
3. We have not yet constructed scenarios for the 3, 6, 12-month time frame for Afar. When we do we will include the possibility of flooding in Afar as a source of vulnerability.
4. It is not accurate to say there is no early warning system in Afar, even though this is a broadly-held belief among formal/official humanitarian networks in Addis (donors, UN, NGOs, government). At issue is the nature of the early warning system.
5. Based on a review of the information available to community-based organizations and government offices (up to the regional capitol level), the early warning system in Afar was found to be traditional, informal and reasonably accurate. Early warning of the crisis in these informal information flows dates back to August 2001. Officials up to the regional level responded to the best of their ability based on this information. The Federal DPPC responded with increased levels of food aid.
6. Information flows, however, are based primarily on oral communication (*dagu)* and are linked to kinship networks. Critically, these kinship networks do not extend into Addis. As a result, information about the crisis in Afar was delayed in reaching the formal humanitarian networks, especially those outside of Afar.
7. The formal humanitarian network relies extensively on its own sources of information to understand vulnerability and determine response, e.g. the monthly written reports from the zones/woredas, findings of its own missions, etc. However, these formal sources are not valued by the Afar as a primary/important forms of communication with authorities, as compared with traditional communication networks. Nine woredas in Afar are systematically excluded from formal reporting (because of a lack of resources for training and equipping them for early warning surveillance). As a result, vulnerability is not adequately communicated through formal channels.
8. The communication infrastructure in Afar is extremely poor (e.g. no fax, often no phones, no e-mail, limited radio access, etc.) This limits the function of the formal early warning system.
9. The formal humanitarian network (international NGOs, donors, federal government, UN) failed to respond in a timely and/or appropriate fashion to the crisis in Afar. As a result, there were widespread livestock deaths that, in turn, created suffering and generated long-term, heightened vulnerability among the Afar.

10. Different sources of information led to different intervention strategies and different prioritization of intervention options.
    a. Several interventions (e.g. paying for the transport of sugarcane tops for use as fodder, diverting the Mille River to flood pastures, de-stocking, buying hay, building watering troughs) were oriented towards saving livestock and were based largely on information generated by informal early warning systems. These interventions matched closely with the identified priorities among the pastoral communities for emergency assistance, although some of these interventions also started late and were minor compared to the extent of the problem due to limitation of resources from the formal humanitarian network.
    b. By contrast, food aid interventions were oriented towards providing direct assistance for saving lives and were based on formal sources of information (nutrition surveys, rainfall satellite imagery, monthly written reports, official visits). These interventions were seen as arriving too late and as not always matching with community priorities for assistance. Nevertheless, these interventions were important to many Afar.
11. Agency mandate and specialization strongly influenced the nature and location of chosen responses, regardless of community and/or government priorities.
12. The links between formal early warning and information systems and formal humanitarian responses is under appreciated among Afar communities. These differences in intervention strategies have not helped to build confidence among Afar communities in formal humanitarian systems.
13. The structure of the formal early warning does not adequately capture the long term processes that generated a classic slow-onset emergency in Afar. These processes include, *inter alia*:
    a. Long-term and permanent losses of pasture rights to Issa pastoralists (over the past 5 – 10 – 20 – 70 years)
    b. The implications of changing administrative structures
    c. Increasing frequency of droughts
    d. The persistent vulnerability generated originally by the 1984/85 crisis
    e. Siltation of the Awash river
    f. Abandonment/failure of privatization of State Farms
    g. Loss of control over upstream effects on tributaries to main rivers in Afar.
    h. Changing courses of key rivers in Afar.
14. Meteorological surveillance of Afar appears to focus on 3 main rains (*karma*, *sugum* and *dada*). However, there are at least five different types of rainfall that are important to the Afar (including the *dabaibai* and the *koynoturoba*).
15. It is likely that the formal humanitarian information channels will soon report a decrease in vulnerability/improving food security situation in their areas of operation in Afar (based on GOAL's current nutrition survey). It is likely that this will be interpreted by some donors as representative of the entire Afar region. This is likely to contribute to further delays in responding to crisis areas in Afar in a timely and appropriate manner in the coming weeks and months.

National Issues

16. There are marked differences in the way donors perceive the current situation in Ethiopia, and this is contributing to a lack of cohesion across donor emergency relief strategies. This is partly due to internal donor organizational policies , personality conflicts among donors, systematic bias in assessments that under-emphasize non-food aid-related vulnerabilities (see point 17 below especially) and larger geo-political tensions among select Western donor governments, as well as historical and current relationships between donor countries and the GOE.
17. Understanding emergency vulnerability and estimating emergency food aid needs should be two distinct processes. In Ethiopia, however, the two are conflated. In addition, emergency food aid needs should be estimated separately from development food aid needs. These are conflated as well, however.
18. The systems for estimating food aid needs are considerably more advanced/developed than systems for estimating non-food aid needs. Much of the early warning systems are based on food availability/access declines as the primary cause of vulnerability to morbidity and mortality. Food aid responses, however, systematically under-respond to estimated needs (e.g. the 12.5 kg ration; the lack of pulses and oil in the ration).
19. The DPPC's focuses on estimating food aid needs (e.g. the mission of the EWS) but retains responsibilities for raising resources and coordinating the emergency activities of line ministries. The re-establishment of task forces may have helped, but line ministry emergency activities continue to be weaker than DPPC-led efforts.
20. Government officials may have political reasons for underestimating vulnerability (because of fear of criticism, admitting failure of government policies).
21. There are (unnecessary) structural problems limiting the assessment of and response to non-food aid crises (line ministries versus DPPC; WFP versus all other UN agencies; UNEUE analysis in isolation of response) It appears that non-food aid needs are not systematically estimated based on vulnerabilities but rather appear to be a function of capacity for delivery of goods and services within agencies.
22. Information is biased to the presence of humanitarian organizations and actors. This may mean that current mortality estimates, for example, are underestimated.
23. A lack of confidence in the DPPC EW and other government early warning has contributed to delays in response.
24. The total vulnerability generated for pastoralist communities of the continuing ban on live exports of livestock ex Ethiopia has not been assessed.
25. The total vulnerability generated by the decline of the state farms (and associated wage labor) has not been assessed.
26. Urban vulnerability is largely under-assessed.
27. Overall, understanding of and responding to pastoral vulnerability is not adequately developed.
28. There are immediate opportunities for strengthening the response to the current crisis in Ethiopia including:
    a. The development of a strategy to reduce/prevent excess mortality that focuses on emergency health interventions, adequate and balanced rations for vulnerable populations, adequate availability and access to clean water and appropriate emergency nutrition interventions.

b. Requesting the Government of Saudi Arabia to provide a humanitarian exemption on the export of live livestock ex Ethiopia and the development of quarantine holding areas in Afar for export via Djibouti.
c. The local purchase of lentils for inclusion in general food aid rations, especially in pastoralist areas, to replace proteins and vitamins lost from sharp declines in milk availability in vulnerable households.
d. Preparing now for large scale restocking in tandem with traditional self-help schemes of vulnerable pastoralist households (e.g. those completely dispossessed by drought and animal disease deaths, those unable to retain a 'viable core' of breeding stock).
e. Issuing a demarche (and seeing that persons responsible are held accountable) to UNICEF and WHO to investigate how, in light of Salama, et al in the 99/00 crisis, measles mortality continues in crisis areas in Ethiopia, e.g. Somali.
f. Organizing and funding a rapid response EPI capacity to provide key vaccinations in the event of measles outbreaks, new population displacements, areas with high rates of malnutrition, etc.
g. Immediately increasing water tankering capacities for drought-affected areas, e.g. in Afar.
h. Funding for the development of solar-powered communication equipment for government officials and community-based organizations (e.g. those with limited budgets but with a high degree of contact with communities) in remote locations to promote improved transmission of information about disasters.
i. Developing spate irrigation for pasture and crops in riverine areas including the maintenance of formerly constructed similar schemes
j. Construction of ponds for rain water harvesting
k. Cash for work activities
l. Purchase and transport of animal feed concentrates for viable core breeding stock of vulnerable households; establishment of cattle "relief camps"
m. Animal health campaigns – vaccination and drugs
n. Support decentralized disease surveillance systems through strengthening regional health bureaus.

Annex VII: Suggestions for Immediate Actions for DART - FIFC Team, May 19, 2003

1. Resources must be prioritized to the worst affected areas. Therefore:
    a. All oil and CSB now going to priority 2 or priority 3 areas should be redirected to priority 1 areas. Distribution of enhanced rations in priority one areas should be made where there is reasonable assurance that these distributions will not induce migration.
    b. Pulses or meat (see 4, below) need to be included in the ration for high priority areas.
    c. NGOs working in low priority areas should consider seconding capacity (people, resources) to organizations working in high priority areas.
2. The capacity of OFDA traditional implementing partners cannot adequately expand to address needs in crisis areas. Therefore:
    a. It is essential that OFDA engage in new partnerships including local NGOs, government bodies, civil society (including mosques and churches) and the private sector. Where possible, direct funding to these organizations should be used.
    b. Independent monitoring of funded programs is needed to determine if traditional partners are able to implement the agreements they have already signed from USAID and other donors.
3. Mortality is resulting where there is and where there is not acute malnutrition. In areas of known *and suspected* acute nutrition *and public health* crises, strategies need to be devised and implemented to augment formal relief efforts. Therefore:
    a. Top priority categorization should not be limited to areas of nutrition crisis only; disease and mortality data also need to be considered;
    b. Emergency water interventions are saving lives even where rations are inadequate to support nutritional status. They need to be continued and expanded. In pastoralist areas, measures must be put in place to cap/destroy water facilities after the need has past in order to limit environmental degradation;
    c. Focus must be increased on public health measures (ARI, diarrheal diseases and, where there are rains, malaria).
    d. Measles cases should be mapped against malnutrition on an ongoing basis to inform emergency responses to measles outbreaks. (The changed UNICEF strategy for a more robust measles campaign is welcomed but an emergency response capacity remains inadequate).
4. Emergency assistance needs to be made available in urban areas but urban areas do not presently qualify for emergency assistance. Therefore:
    a. USAID should seek an exemption to this policy for urban areas affected by crisis, especially those urban areas hosting IDPs and other destitute migrants.
    b. The traditional Ethiopian mechanisms for providing assistance in urban areas should be supported, especially the churches and mosques.
    c. NGOs with current or previous experience in urban areas (e.g. CARE in Addis) should be supported if they have the capacity and they identify the need.
5. Food aid rations in pastoralist areas are inadequate to prevent nutritional crisis. In order to address current and potential malnutrition in pastoral areas:

   a. A program to support groups of women to travel to crisis areas to purchase livestock (male animals only; except proven barren and old female animals) for immediate slaughter should be started. The meat should be distributed to poor and other vulnerable families as a means of preventing/addressing malnutrition. The traditional Islamic institution of *zakat* can be used to target families since the animals originate from the affected communities (as opposed to food aid which is viewed as a broad-based public entitlement/good). An NGO (preferably local, e.g. the Haraghe Catholic Secretariat in Somali; APDA and Farm Africa in Afar) will need to implement this program but their function is strictly limited to providing the cash and conducting spot check monitoring.
   b. Organizations working with pastoralist populations in Somalia and Kenya (e.g. ALDEF, NORDA, FSAU) should be funded for technical exchange or secondment to organizations working in pastoralist areas in Ethiopia to build the capacity and expand awareness about the range of possible emergency interventions for pastoralist populations.
   c. Similar exchanges with organizations working in Somalia who have proven techniques for effective targeting of food aid in pastoralist areas should also be supported.
   d. Livestock health interventions should be supported – but OFDA should be very careful in funding additional training programs. It is likely in many areas that there are adequate numbers of trained CAHWs. The issue is probably more one of supply of veterinary medicines and vaccines. There is a role for the government that may need external support.
   e. Where lack of water is inducing livestock movements *from areas where there is adequate pasture*, emergency livestock water interventions may be considered. Expertise and caution should be used to ensure that these interventions do not have medium to long term adverse environmental effects.
   f. In areas where there are opportunities for livestock off-take, women's groups should be funded to purchase animals for transport and sale to export abattoirs.
   g. Programs to support restocking of livestock need to be funded now so they can begin operations in August/September.
   h. The government needs to implement an active program of disease surveillance.
   i. It is imperative that the Saudis lift their ban on the export of live livestock ex Ethiopia.

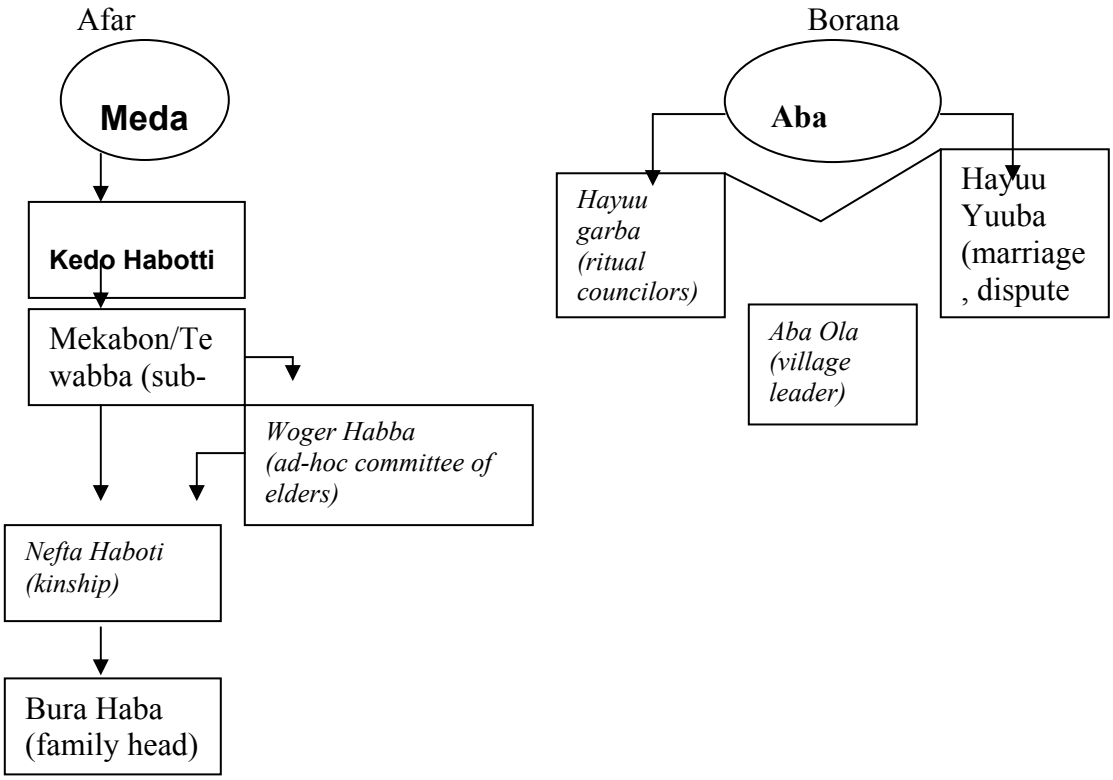
6. Although there is tremendous effort invested in assessments, there is very little work done on monitoring. Increased monitoring efforts are needed. Therefore:
   a. In every proposal approved by USAID, a monitoring plan should be required.
   b. Independent food basket and food utilization monitoring needs to be implemented, perhaps through providing additional capacity to the DPPC's ENCU.
   c. Investments should be made (e.g. through hiring local academics, e.g. Dessalegn Rahmato and colleagues) to study the current challenges and constraints of implementing humanitarian assistance.
   d. Immediate measures to study the impact of blanket distributions of supplementary feed need to be undertaken.
7. The JEOP may be compromising the capacity of the ENCU. Therefore:
   a. The JEOP NSU should immediately physically relocate to the ENCU;

   b. The NSU should work with the ENCU to specify the exact requirements for data collection regarding the underlying causes of malnutrition to be collected in *every* nutrition survey (health, food security, caring practices)
   c. Every NGO working in nutrition should be required by USAID to send meaningful representation to the food security and nutrition task force meetings. The nutrition meeting should meet more frequently.
   d. NGOs conducting nutrition surveys must be required to adhere to the ENCU guidelines. Those who are found to routinely ignore the guidelines (e.g. World Vision?) should be addressed.
8. There is a role for cash disbursements. Therefore:
   a. Where there is food available commercially, cash distributions to the most vulnerable should be considered. Cash should not be distributed in areas where the marginal propensity to consume chat is high and/or measures cannot be taken to ensure that food is purchased with a useful portion of the resource delivered. Vouchers may be more effective in this regard, even though a secondary market for vouchers will emerge.
   b. Where new cultivation is limited by agriculture debt, consideration should be given to cash distributions (to service debt to obtain new loans) or for vouchers to obtain locally-available seeds. Locally available seeds should be prioritized over high-input agriculture production.
9. These measures will not be adequate to stop emergency malnutrition, morbidity and mortality on some scale. Therefore:
   a. A long-term commitment must be forged by all donors to working to (re-)establish humanitarian space and capacity within the government. The current crisis has proven, once again, that NGOs are inadequate substitutes to effective national capacity for addressing endemic threats to humanitarian crisis;
   b. Similarly, while development is needed on a massive scale, no amount of development will erase all of Ethiopia's underlying vulnerability to emergencies, droughts and famines. In the post-crisis haste to "link relief with development", care must be taken in order to build a standing capacity for emergency response in line ministries, local NGOs, the private sector and civil society. NGOs, UN agencies and donors should commit to supporting a broad strategy based on the humanitarian principle of impartiality (i.e., needs based aid) and founded on the idea of the humanitarian imperative (i.e., saving lives takes priority over all).

Annex VIII. Pastoral Traditional Early Warning Systems and Indicators

In the Afar traditional system, the two higher institutions – the *Medaa* and *Adaa* take decisions regarding early warning, coping or adapting strategies. The medaa is the pinnacle of the Afar hierarchical structure encompassing *Bura Haba* (household head), *Nefta Haboti* (representing related families), *Mekabon/Tewabba* (representing sub-clans or communities) and *Kedo Haboti* (clan leaders). *Ad Hoc* committees known as *Woger Habba* are also formed from time to time to look at particular issues as deemed necessary. The *Adaa*, on the other hand, doesn't have any structure but serves as a functioning system of managing the day-to-day life and also in the process of implementing decisions taken by *Medaa.* These social structures play a significant role in making use of traditional early warning mechanisms and coping mechanisms. Similarly, in the *Aba Gada* system of Borana, the *hayuu garba* (ritual councilors) play lead role in practicing early warning predictions.

Figure 21. A simplified structure of the pastoral social hierarchal system in Afar and Borans



C. Pratt (2001) has described in detail the significance of traditional early warning systems in his study of the pastoralist communities in Northeastern province of Kenya. The following section draws heavily from his studies.

> *Traditional EWS are based on three percepts. First, pastoralists must have detailed knowledge of when the major rains should arrive – understanding what is implied about the probability of future rain by variance in wind, humidity, and temperature from expected conditions. Second, pastoralists need to know how to interpret the behavior of animals and plants, which serve as valuable indicators for subtle fluctuations in temperature and humidity. Appropriately interpreted, local pastoralists can forecast major rains four weeks before their arrival. Third. Observed historical trends allow for reasonable predictions of future weather patterns. However, the increasing severity and frequency of drought over the last decade has rendered this latter form of forecasting less reliable than it has been in the past*

Pratt notes that pastoralists use systematic combinations the movements of planets, astral bodies and stars, atmospheric pressure, animal and plant behavior to predict events (though this is not allowed in Islam). Examples of some of these indicators are briefly described below.

The seasons

- Gu or Gan
- Hagai, Adoles (short rain observations)
- Deer, Agai
- Oraheed, Bira, Jilal (long rain observations

Signs of the major rains

- *Koh* – 'a conspicuous wind that happens in a single evening neither hot, cold, wet or dry but has a rumbling sound'
- *Obora* – 'the flowering of acacia (obora) is expected towards the end of dry season'
- *Hunuf* – 'warm, humid wind that immediately and necessary precedes rain'
- *Mirri* – 'the thin layer of clouds observed in the night sky, in the lunar month before the major rains'.

Stars and the Seasons

Torbaan – 'when the fist two stars of the constellation have set at the time of Morning prayer, then the short relief rains of *Gu,* termed *jerki* should have arrived. The setting of the first four stars of *Torbaan* at the time of Morning Prayer marks the beginning of *Gu'*

- *Derir, 'Arcuturus (Boötes Constellation) – 'Derir* follows the seven stars of *Torbaan* from the East. When *Derir* sets, the rivers are expected to be full.'

- *Busan, Urur (Orion Constellation)* – '*Busan* rising in the morning marks the conclusion of *Gu* and the beginning of the dry season *Hagai.'*

- *Warinju, Constellation Crux, The Southern Cross* – two stars of the quadrant – 'If *Warinju* has set before sunset, and there has been no rain, then it is likely to indicate that the *Deer* rains have failed'.

Multiyear Cycles

'Observed cycles are fifteen (2x7[75] + 1[76]) and fifty year (7x7 + 1) cycles based on a series of seven years, each assigned to a day of the week, and each attributed with its own particular weather patterns'.

Anticipated climates in the Eight-year cycle

Year	Translation	Expected Weather Conditions
Ahad	Sunday	Deer failure, Good Gu
Itnin	Monday	Normal – Good
Talatha	Tuesday	Normal, disease for both human and livestock
Arba'a	Wednesday	Dry (Below average)
Kamis	Thursday	Normal (bad omen for Gari community)
Juma'a	Friday	Dry – Normal
Septi	Saturday	Drought

Source: C. Pratt

Note: Chris notes that the years 1959, 66,73,80,87 were Septi years. With the exception of 1966, all of these years have drought recorded at least in one of the communities.

Astral Bodies

- Crescent of the new moon – 'if the waxing crescent is directed to the north, then the coming season is hoped to bring good rains. If directed to the south then the coming season is thought to be either dry or with little rains'

- Karo (*The Moon of Good Harvest)* – *'*A circle is observed around the moon. Provided there is a gate in the circle, the season to come is hoped to bring good rain. In some traditions, the direction of the 'gate' indicates where rains will be found. If there is no break in the circle, people may anticipate conflict in the region.'

- Stars rising with the new moon (there are 28 of them) signify different conditions.

Stars and Planets

- Bakalch, Mercury planet – ' Appropriately, whenever Mercury appears in the night sky after an absence of 6 or 80 days, this is thought to be a good omen for the rain to come. It is said that 'a six day absence finds a sixty year old man rejoicing.

[75] Years per series
[76] Denotes the following year

Atmospheric Indicators

- Afternoon clouds – 'On the lower steps of the Ethiopian highlands near Banissa (Mandera), a mist is observed in the early months of *Hagai.* If this mist clears in the afternoon and, instead of separate clouds, a continuous cloud is seen extending from East to North, the prediction is heavy rains.' Morning and night clouds

- Morning clouds –'in the morning, three thin, wispy lines of reddish clouds (i.e. high pressure) extending from the east to the other cardinal directions is a sign of civil war or bloodshed in Kenya, Somalia or Ethiopia – the lines converging in the east turn into the direction of the country that will experience the civil ear.'

Fauna

- 'Animals reproductive behavior is intrinsically related to cycles of rain. If birds are seen nesting this is taken as a sign of rain. By extension the absence of these behaviors in the month before the rain season is an indicator of drought.'

- ' Cattle bulls are playful when the coming season is good, perhaps even breaking watering troughs made of mud with their horns.'

- 'Cattle are eager to return to the boma (pens), perhaps even at noon, when the coming season is good.'

Para-normal indicators

- *Intestinology* – is the study of the intestines of an animal to gain knowledge of approaching rain, conflict, health, or other community concerns. The practice is (claimed) to be most effective when the reader's livestock is slaughtered and used.

The above examples are cited to emphasize that traditional early warning systems are deeply embedded in the culture of pastoralists. More importantly, quite a few of the indicators have scientific explanations. Our suggestion is to incorporate some of the traditional early warning indicators into the conventional ones following an in depth study of such indicators used by the different pastoral groups in Ethiopia. In this connection, Afar elders suggest that the coming *karma* season will be good. Let us wait and see. Pratt's document ' Traditional Early Warning Systems & Coping Strategies for Drought Among Pastoralist Communities – Northeastern Province, Kenya is available on *http://www.famine.tufts.edu*

Annex IX. Guide for Assisting Pastoral Communities in Ethiopia

The importance of livestock both as a livelihood system and as food sources for pastoralists has been briefly discussed above. However, past and present experiences in Ethiopia prove that the focus on saving human lives has been done at the cost of ignoring livelihoods. In this regard, one apparent weakness of the existing Early Warning Systems (excepting LEWS which is still at developmental stage) is that they are entirely focused on food needs. Even the Pastoral Early Warning System, developed by SCF-UK and being adapted by DPPC, fails to link warnings with livestock-related pre-planned intervention actions at various stages of the drought cycle. The SCF-UK bulletins report the general situations of humans, livestock, water, pasture etc., and conditions without any reference to the course of action to be taken to saving livelihoods.

The saving of livelihoods, in the pastoral context, is of paramount importance as saving human lives. This becomes apparent in view of the decreasing wealth status of pastoralists (as evidenced by Desta, 2000) caused by drought and complex socio-economic phenomenon. Failing to do so would inevitably lead to perpetual poverty of pastoralists and in turn to permanent reliance on outside aid. For the purpose of this paper, it may be appropriate to look first at the classification of the drought cycle developed by the Arid Lands Resources Management Project (ALRMP) in Kenya for its early warning system. These classifications would help identify and trigger the appropriate intervention measure/s as per the particular stage of the drought cycle. This approach *would also improve the analytical process* of the EW data generated by various agencies.

There are four stages of warning used by ALRMP EWS to indicate trends of food security in pastoral/agro-pastoral areas.

- ***Normal***: No unusual fluctuations are observed from the norm in the expected seasonal range regarding environmental, livestock and pastoral welfare.

- ***Alert***: Unusual fluctuations are observed in the environment outside expected seasonal ranges. Could occur within the entire district or within localized regions. Asset levels of households are still too low to provide an adequate subsistence level. Vulnerability to food insecurity is still high.

- ***Alarm*:** Indicators fluctuate outside expected seasonal ranges affecting the local economy. This condition occurs in most parts of the district, and directly and indirectly threatens food security of pastoralists and/or agro-pastoralists.

- ***Emergency***: All indicators are fluctuating outside normal ranges. Local production systems have collapsed as well as the dominant economy within the district. This situation affects the asset status and purchasing power of the population to an extent that welfare levels have been seriously impinged resulting in famine threat.

According to Smith (2001) 'Perceived strengths of the Kenyan EWS include the rigorous data collection system that has proved to be effective in signaling the onset of food insecurity, its systematic reporting structures, its linkage of mitigation strategies to actual need and its

decentralized process, including community participation'. However, 'Perceived weaknesses include the poor linkage between warning and action, particularly at the alert stage and the inadequacy of some supporting drought contingency plans'. Nonetheless, the classification helps to link field-tested livestock-related interventions to the specific stages of the drought cycle. These interventions are discussed at some length below.

Animal health interventions

Smith (2001) states that adult livestock mortality rates in pastoral areas are low, around 5% per annum, following the control of rinderpest. However, calf mortality may range between 15-21% (Smith, 2000 citing Coppock and M. Assefa, 1994). This low prevalence is reported at normal times. During droughts livestock die mainly of animal diseases, due to weak body conditions resulting in low resistance levels. Though no detailed study has been made on the efficacy of animal health intervention during droughts, Aklilu and Wekessa (2001) conservatively estimate that 20% of the livestock could be saved with veterinary interventions even in severe droughts. They also add that the provision of de-wormers is likely to prolong the life of an animal by 1-2 months while vaccinations are effective in reducing the out-break of diseases. Aklilu and Wekessa (2001) estimated the financial benefits of the livestock saved through emergency veterinary interventions in Kenya at $422,000 as compared to the cost of drugs and overheads allocated for this purpose.

Smith (2001) associates the targeting of drought-affected animals for vaccination and parasite treatment with the development of CAHWs, supported by NGOs, particularly those that specialize in veterinary services. He further adds that 'Recognition by Government agencies, particularly in Kenya, of the role of CAHWs in the delivery of basic clinical and vaccination services has accentuated this development. The establishment of CBAHS is critical to the delivery of animal health services to pastoralist's communities in Ethiopia.

Water provision

Mobility and efficient tracking of feed resources can't be done without access to water. Better water access improves productivity. The need to strengthen community managed water supply, through the maintenance of existing systems rather than building new one is more apparent when looked from the cost effectiveness of it. In Kenya, emergency water provisions took the largest share of donor funding, about $3 million. Permanent water provision, such as through the construction of boreholes, is a call for environmental disaster and an incentive for resource-based conflicts. Smith argues that 'if that water supply is designed to be ephemeral, it can contribute to the seasonal regulation of livestock distribution and density. Where water supply is permanent, settlement and local environmental damage usually ensue'. Smith citing Coppock (1994) also notes the importance of water management as a determinant of social relations, citing examples where improved water access (pumping) advantaged wealthy pastoralists, but was detrimental to poorer community members who traditionally provided the labor for water lifting. Sandford and Habatu, in reviewing the cost/benefit of water tankering in the Somali region of Ethiopia wonder if it is not better to utilize the money allocated for water tankering for something that would bring better benefits.

Drought off-take (destocking or salvaging)

Destocking enables pastoralists to sell their animals while they are in relatively good condition. Destocking project provides the intentional removal of animals from an area before death by providing a fair price to livestock owners, based on gender and age. These animals are slaughtered and meat provided to feed needy community members. Such programs supplement grain-based food relief, such as the one in Ethiopia, with high protein foods.

The Kenyan experience show that destocking was the most widespread intervention in the livestock sector during the 1999-2001 drought and the most successful as a result of community interest to salvage some value from stocks and to utilize the meat. Some of the perceived benefits of communities on destocking (Aklilu and Wekessa, 2001) included:

- A sense of self worth among beneficiaries;
- Enhancement of community-based group cohesiveness e.g. among women groups involved in de-stocking;
- Family unit cohesiveness as opposed to disintegration at the height of the drought period;
- Purchasing power of households supported during the drought period; Income from the sale of animals was used for various pressing needs: These included payment for water for their animals, purchase of human and vet drugs, purchase of commodities like sugar and tea, payment of school fees and settlement of personal debts.
- School children, orphans and hospital patients were fed using meat from community sources; meat was made available to high schools, where student attendance had been decreasing due to shortage of food in Turkana and Wajir. One of the schools in Wajir, for example, owed its suppliers some three million shillings, whereas in turn the school was owed some four million shillings in outstanding fees by parents. Hospitals and orphanages were the direct beneficiaries of meat in both districts. This was a welcome change of diet for both patients and orphans alike who had to survive on meager meal provided by the centers.
- Creation of employment for the very needy members of households; the operation created jobs, albeit temporarily, for unemployed youth, women and men in various capacities such as in program coordination, monitoring, preparation of dry meat, guarding etc
- Establishment of small businesses related to emergency interventions that enabled a significant number of women to set up teashops using the income from animals sold. Women groups in Garissa, who benefited from the sale of hides and skins also set up small kiosks in their villages along with supplying Garissa town with camel milk. Women groups in Wajir contracted to supply stocks for the program benefited from the profit they made. This involved some 247 women groups who earned a profit of between 1 – 3,000 Ksh. The women used this money to buy goat kids, pay school fees, for repayment of loans and start small businesses.
- Nutritional status of vulnerable groups improved as a result of a regular intake of meat and animal fat especially when eaten together with the grains provided by the emergency operation.

- Meat for school fees; ALDEF, a local NGO, made agreements with the schools that part of the meat supplied to them should be valued in terms of the market price. This was then converted into the equivalent of school fees following which the school had to cancel the payment of term fees for selected 64 bright but poor students (9 of them were girls) amounting to Ksh 325,600.
- Reaching the poor – The interventions were effective in reaching the most vulnerable groups. Wider geographical coverage ensured the inclusion of the needy even in not-easily accessible areas.

In addition 'Most implementing agencies that were involved in de-stocking projects found it easier to distribute fresh meat than dry meat. In one particular case, the distribution of fresh meat was carried out on regular basis like the grain-based food relief. Field experiences indicate that pastoralists prefer fresh meat; it is cheaper and less demanding to produce. It is more effective in satiating hunger, (due to volume), than dry meat. The preparation of dry meat should only take place where de-stocking was started too late and many animals risk dying unless slaughtered immediately.' Destocking is best done by local based NGOs, for reasons of low-cost effectiveness and operating according to the local norms.

Supplementary Livestock Feeds

Supplementation of livestock feeds during drought periods is done by pastoralists as a coping strategy whenever there is a drought. However, it is more common in small stock than in larger species. A selection criteria for feeding is usually the breeding stock and supplementation is provided in the form of concentrate feeds, hay or pods in order to improve the energy and nutrient intake of animals. However, in times of acute feeds shortage in the drought cycle, external provision of supplementary feeds in the form of concentrate with a combination of hay will be crucial to maintain breeding stocks. The downside is that if there is no feed processing plants in the area where the feed is to be distributed, transport costs could be high. The time length in which the relief feeds is to be provided is also crucial – since the provision of livestock feeds over a longer period would outweigh the benefits. The recent feed interventions in Miesso, Awash and Fentale woredas have proved beneficial for the Afars, Kereyus and Issas. Some better-off pastoralists are even enquiring how they can purchase the pellets.[77] For a better understanding, a detailed account of the Kenyan supplementary feed provision experience is provided below (Aklilu and Wekessa, 2001).

Case Study - Supplementary feeding of livestock, Marsabit, Kenya

The ACK-MDO implemented this intervention through incorporation into the de-stocking program. In recent times, pastoralists have an increasing need for cash for school fees, clothes, purchase of cereals etc. But since food relief for humans was already being distributed by the World Food Program, it was felt that some payment for livestock purchase in the de-stocking program should be in the form of livestock feed to enable weak breeding stock to survive. In the event, 22.5 kg. of feed was given in part payment for every three small stock sold per household. The objective of this intervention was to support the breeding stock of pastoralists to withstand the negative impacts of drought and to provide a foundation for recovery once the drought is over.

Implementation

[77] Interview with Dr Kassaye Hadgu, FAO

- 180 tones of animal feed was purchased and transported to six communities. Many animal had died, about half of all sheep and goat, the mainstay of the Gabbra community. The availability of the feed helped in salvaging some animals.
- A democratic system of wealth ranking enabled the mostly needy to be targeted. The original plan to exchange a goat for half feed was modified to one bag of feed, (price Kshs.400) for every three small stock, the balance to be paid in cash.
- The feeds were purchased from Sigma feeds in Nairobi, who were able to mix a special high energy, high fat, high protein concentrated formulation.
- The feeds were stored in easily accessible and safe stores and utilized when required.
- Each small stock would utilize 22.5 kg of feed over a three months period.

Results

- Those pastoralists who used the supplementary feeds obtained astounding results. For one bag of feed, they were able to sustain one sheep or goat for 3 months, especially with ample watering and provision of veterinary inputs such as de-worming, which were not that costly anyway. A story is told of a retired Air Force captain, a Mr. Ali Lama who, during the 1996-7 drought, collected animals left behind by their owners to die because they were too weak to go to water or to grazing. Such animals in the Gabbra language are called *afto* – meaning those left behind. With concentrate feeds purchased from Nairobi, he slowly but surely admitted about 310-400 small stock into "*a livestock famine relief camp*" in Dukana in northern Marsabit. He provided mobile water facilities and veterinary care plus guards for security reasons. Six months later, and fortunately for him, the rains came after 3 months of setting this camp up, he loaded fat and big shoats onto a truck and headed for the Nairobi market. From the profits he made, he bought a second hand land rover and a commercial plot on which he put up 5 rental rooms in Marsabit town. During this drought, he bought livestock feeds from this project. He said that just before the drought, he sold all his healthy and good animals to invest money in the *afto*-program. What a success story!.
- The project had 107 of its own *afto* animals which at the time of the visit by one of the authors had fully recovered and healthy. The project would use them in restocking.
- The feeds moved more slowly than anticipated. Not more than half of the feed had been utilized by pastoralists by the time of the visit. This is because some areas received unexpected rains while some pastoralists did not know the effectiveness of the feed due to lack of experience.
- Concentrate feeds had a great positive impact on milk production from small stock, especially after the rains came.

Impact

The cost benefit analysis of providing concentrates to livestock compared to large amounts of grain-based human food relief is essential information for future consideration in drought mitigation. By comparison, the 180 tons of feed @400/= per 20 kg bag cost Ksh. 3.6 million. This feed was sufficient to feed 8000 small stock daily for 3 months. Should there be need to purchase these animals after the return to better pasture they would well cost @ 1500/= or Ksh. 12 million for the entire flock. Supplementary feeding therefore appears to be the more economic option.

Strengths: The intervention built on pastoralists' own resources and capacities. There is great potential for private enterprise.

Weaknesses: High nutrient feeds required better storage than was being provided-high chances of feed spoiling. There was also inadequate extension service, prior to the drought, aimed at promoting and marketing the use of the feeds by pastoralists.

Lessons learnt. Concentrate feeds have great potential in drought mitigation. These should be formulated closer to pastoralists on a commercial basis. Such possibilities should be explored. Moreover, in future, consideration should be given to establishing livestock famine relief camps to admit weak animals from pastoralists and to return these to them at a fee at the on-set of the recovery period.

Restocking

The rationale for restocking is mainly to hasten pastoralists' return to self-sufficiency. Associating restocking with earlier de-stocking, depending on climatic changes improves the effectiveness of the operation. Restocking prevents pastoralists from falling out of the production system and becoming destitute. The key is to encourage small-scale community-implemented restocking projects, (e.g. those targeting to restock up to 50 families at a time), with viable units of livestock mix to address family needs. Restocking should supplement traditional systems on a matching basis but should not replace them.

As restocking schemes are usually small, given the needs of any drought-affected area, the selection process is critical. Identifying the most needy (with zero or few stocks) in the community may not be the best way of doing it as such people are not likely to re-establish themselves with the few stocks the program has donated to them. Those who have already dropped out of the system should not be included either since they have already exited the system, are used to other forms of livelihoods, and could potentially sell the stocks they have received. Ideally, restocking should be encouraged only if there are no possibilities for other forms of livelihoods apart from pastoralism in the area, as available resources are not likely to support pastoralism infinitely. If there are other possibilities, potential restockees should be encouraged to exit the system and earn from other forms of livelihoods for which some initial support should be provided. Notwithstanding these facts and despite some critics citing the failure of some restocking projects (depends how it was done), empirical evidences from Kenya indicate that restockees have a good rate of survival even in severe droughts.

An assessment of a restocking intervention that took place in Marsabit in 1997 was carried out by D. Adolph and B J Linquist for OFDA in November 2001.

The findings were as follows:

When monitoring was carried out in July 2001 (after 4 years including 3 years of drought), of those families restocked with 40 shoats (and 1 or 2 camels) in 1997:

8 families have 10 or less
66 families have 20 or less
163 families have 30 or less
244 families have 40 or less
165 families have Over 40
84 families have over 50
31 families have over 60
10 families have over 70
5 families have over 80

The above finding confirms that restocking, if implemented carefully, can help pastoralists re-establish themselves.

Transport subsidy

The purpose of transport subsidy to traders is to stimulate large-scale off-take of animals from the drought-affected area to terminal markets. The subsidy level can vary from 1/3 to ½ of the transport cost from origin to destination markets. If implemented with strict control, transport subsidies can stimulate off-takes (27,000 shoats were transported in one month alone from Mandera district to Nairobi through transport subsidy). However, such projects are prone to irregularities and theft and a proper control mechanism should be put in place before implementation begins.

Conflict Resolution

This would allow the movement of people and livestock without any hindrance to access resources in better-off areas in times of drought or at any other time (100,000 head of cattle were allowed access into Uganda from Turkana as a result of the peace initiative made by AU-IBAR during the 1999-2001 drought in Kenya). The peace process should take place all year round and care has to be taken in selecting influential elders and opinion leaders and the employment of traditional conflict resolution mechanisms. It should be noted that this process is expensive – as it takes so many meetings before a peace deal is struck.

Selected long-term Recommendations

Pasture development

Areas that are suitable for pasture development should be developed to increase the availability of pasture all year round. Past experiences of NERDU indicate that even simple diversion of dry river courses (as in Askoma, near Eliwoha in Afar) allow three harvests in a year, through flooding from the highlands that occurs 3-4 times a year. Irrigated pastures may yield about 15 tons per hectare per harvest and three harvests a year could produce some 45 tons. In addition, simple diversions of run-offs from the hills could increase pasture availability even during droughts (as rains are likely to fall erratically). Cash for work schemes (or with a combination of food for work) could help in the maintenance of previously constructed pasture schemes and the development of new ones. However, the management of such schemes should be well planned in advance including ownership, community contributions to future maintenance costs, membership fees etc.

The privatization of Animal Health Delivery Services

The establishment of CAHWs is critical to the delivery of animal health services in pastoral areas as these areas are not served by existing government services. However, the sustainability of CAHWs

is intrinsically linked to the development of private veterinary services. Moreover, they need policy and legal framework support to conduct their business and provide services to the pastoral population. CAHWs require specialized drug distribution networks close to their operational areas as the existing distribution system does not serve them. CAHWs operate on cost recovery basis and the distribution of drugs, particularly during droughts, free of charge by NGOs works could undermine their sustainability. Policy harmonization is a pre-requisite for the smooth operation and sustainability of CAHWs.

Support to Livestock Marketing Activities

One of the major constraints of pastoral areas is the lack of well-developed livestock markets. Unlike what many think, the construction of market yards is not going to solve marketing problems; neither the problem is going to be solved by taking some well intentioned measures at the community level only (as the recent World Bank pastoral program advocates). Market development requires a two-pronged approach – top down and bottom up. Livestock traders/exporters have first to create the demand by accessing local/international markets. It is only then that market initiatives can be made at the level of communities to enhance the marketing chain by enabling communities supply the traders/exporters as per the specifications of the traders as and when, where required. Traders need to be supported by proactive policy and legal frameworks – such as removing exorbitant and repeated livestock taxes along the route, cutting on the bureaucracy etc, to operate in these areas[78]. The irony is despite the lack of demand for livestock in pastoral areas meat/mutton exporters close to Addis Ababa are constrained by shortage of supplies. Linking the two, in a manner that is mutually beneficial to both parties, is not a major challenge as such provided the right technical support and legal framework is in place.

Creating Alternative Livelihoods

Risk diversification is key for sustaining livelihoods in pastoral areas. As in the past, it may not be possible to survive by raising livestock alone. Sandford and Haptu state that 'if a household has less than 3.0 Tropical Livestock Unit (1TLU=250 Kg) per African Adult Male Equivalent (AAME), then it is '*famine* vulnerable' i.e. it can not physically survive even on the short term' and, 'if a household has at least 3.0TLU/AAME but less than 4.0 it may be able to survive in the short-tem but this survival is at the expense of maintaining its herd size and in the medium term this household will have to sell off stock to survive.' Sandford and Haptu term this as 'livelihood vulnerable' or 'livelihood norm.' It is doubtful if many pastoralists own the required TLUs under the current scenario. The need to diversify into other sources of livelihood and increase the sources of income becomes apparent. From this perspective it becomes apparent that some had to leave the pastoral system altogether to provide space for the others as the resources in pastoral areas can't cope infinitely with the increasing human and population pressure. Education is key to employment.

[78] For detailed information, see Aklilu (1992), 'An Audit of the Livestock Marketing Status in Sudan, Ethiopia and Kenya, Vol. I and Vol. II', AU-IBAR.

Other employment generation schemes should also be planned to complement the household income.

Establishment of Livestock feeds processing plants

Given the opportunity and once they are exposed to it, pastoralists are likely to purchase concentrates and other processed livestock feeds such as pellets to maintain their herds. Though demand for such products could increase during droughts, there is also the possibility that pastoralists are likely to buy the feeds even in normal times. Incurring expenditures, as on livestock feeds would naturally persuade pastoralists to sell more animals to maintain the core stock[79]. The establishment of feed processing plants along strategic locations and the revival of those like the Awash and Awassa Mineral-based licks is vital to providing alternative feeds to pastoral herds other than free ranges.

Policy Issues

A pastoral coordination unit at the Central level

Pastoral issues have been sidelined at the national level for some time following the introduction of the regional administrative system and the phasing out of the Third Livestock Development Project. As a result, various programs run by NGOs etc in pastoral areas are being implemented without considering the eco-system as a whole. Secondly, there is no standardized approach in program implementation either in times of emergency or normal operations. For example, cost recovery rates vary from one agency to the other for veterinary drugs and services; there is no commonly adopted policy whether to provide livestock feeds freely or at subsidized rates during emergency. The same holds true for veterinary drugs during emergencies. The impact of one program on the other is not assessed in the current mode of operation. These facts underscore the need for setting up a Pastoral Unit at the central (federal) level that promotes the concerns of pastoralists, develop pro-active pastoral policies and standard guidelines, oversee program activities from the perspective of the various eco-systems and so on. Perhaps this expanded role can be mandated to the newly set up Pastoral Unit in the Ministry of Federal Affairs.

Including government agencies in the Livestock Working Group

None of the relevant line ministries are playing an active role in the Livestock Working Group. Line ministries such as the MoA should be given the mandate by the DPPC to play a lead role in the preparation of emergency interventions for livestock related activities. This role could be best achieved if the MoA becomes an active member of the LWG. Other government agencies like the Livestock Marketing Authority can also play a lead role in the marketing of animals from pastoral areas in both normal and emergency times. The inclusion of such relevant line ministries in the LWG is essential.

[79] As some argue, the availability of free pasture and water is what prohibits pastoralists from selling more animals.

Brief guidelines on livestock-related emergency interventions

Drought off-take / destocking

- Start early in alert/alarm stage before livestock loose value.
- Introduce the program to the community in an open meeting
- If possible, form 'Meat Relief Committees' that will oversee program implementation and relieve NGOs from unnecessary administrative duties.
- Develop criteria to select those who would be eligible to sell; if contractors are required to supply animals organize the local women group as contractors.
- Specify the kind of animals to be purchased by the program.
- Set blanket price per species (for shoats, cattle or camel) respectively by negotiating with the community; Women traders, if contracted, can then work out the price at which they buy animals from far-off areas to make some profits for themselves.
- Agree with communities from the outset that the hides and skins are to be handed over to women or other organized groups in the area. Such groups can sell the hides and skins to set up their own businesses.
- Identify the target group for meat distribution; in some cases these may include institutions such as schools, clinics, prisons etc.
- Agree with the communities on slaughtering programs –i.e. once or twice a week.
- Distribute live shoats/cows/camels to the selected families – perhaps 1 shoat per 4 families or 1 cow/camel per 30 or 40 families. Let beneficiary communities slaughter the animals and distribute the meat among them. The NGOs need only to verify the slaughtering.
- Don't indulge in the preparation of dry meat unless this is absolutely necessary. It is time consuming, expensive and logistically difficult. Always provide fresh meat to communities – don't forget that fresh meat satiates hunger more than dry meat.
- Depending on the law of the land local veterinarians can carry out pre-mortem and post mortem inspections.

Livestock feeds distribution

- This should be done only for reproductive animals.
- If this program is simultaneously carried out with destocking, then pastoralists should share the cost of the feeds being provided.
- Agree with the communities on the number and types of animals each family is allowed to bring to the feeding center.
- The distribution of livestock feeds to those who wish to feed non-reproductive animals should be done at full cost.
- Ensure that adequate water is available where distribution takes place as concentrates or urea-molasses make the animals thirsty.
- Consider the costs of transportation when designing the proposal, as this could be costly.

Restocking

- Set the selection criteria with communities but make sure that dropouts are not included.
- The restocking program should only support the traditional restocking mechanism (*Zakat, titihaya, xolgoyo, etc.)* and not replace it.
- Agree on the proportion of the community contribution to each potential restockee family from the outset.
- Always buy shoats for a restocking program – they are cheaper and fast reproducing than cattle or camels. However, any restocking program should include at least one pack animal (a donkey or a camel) as this provides mobility to the restocked families.
- Purchase animals locally as importing from outside incurs high logistic and administrative costs and might also introduce new diseases to the area.
- Ensure that the animals contributed by communities and purchased through the program are healthy.
- Provide vaccination and treatments for internal/external parasites before distributing the animals.
- Mix those contributed by the community and purchased through the program and distribute the animals by drawing lots to avoid bias. In some cases, those who have contributed animals may make prior arrangements to take back their animals once the program has distributed the stocks. The mixing of animals and distributing by drawing lots would prevent this arrangement from taking place. A proper restocking program should consider a minimum of 20 shoats and one pack animal per a family.
- If the program intends to reach more people than the available budget at the time, arrangements can also be made to distribute the off-springs to those families not covered in the initial restocking program

Animal Health

- Agreements should be reached by all implementing agency whether the animal health program is to be implemented through a cost recovery program from the outset depending on the drought situation.
- Carrying a destocking program simultaneously would help pastoral families to pay for the cost recovery.
- If possible, a uniform cost recovery rate should be applied in all operational areas (assuming that the drought situation is the same).
- CBAHWs should be employed to undertake the animal health program under the supervision of qualified personnel.
- CBAHWs could be paid through the cost recovery system.

Provision of Temporary Water Sources

- Set up 'Water Users Associations' in each community likely to be supplied with alternative water sources.
- Define the rules and regulations with the communities on the utilization of the water source. This may include payment for gas, spare parts or fees per species, communities to be served etc.
- Make sure that the water source is not to result in unwanted permanent settlement. A prior agreement with communities is therefore necessary for the capping of boreholes or the destruction of ponds after the drought to avoid resentment or confrontations.
- Where boreholes are designed to function for a certain period of the year, make arrangements for the communities to meet the costs of operation and maintenance.

Transport Subsidy

- A well-planned control program must be enforced to prevent traders from taking advantage of the program (animals have to be branded or painted and certificates have to be issued for the animals passing through check points en route to final destinations).
- Obtaining data of previous years on the number of livestock sold from the district/woreda would help to determine if the transport subsidy has resulted in the export of more livestock from the operational area.
- The level of subsidy, though dependent on the budget and the target number of animals to be removed, has always to be agreed with the traders to avoid bias.
- Payments should be effected only after a trader has transported the animals to destination points and upon submitting all the required paper works.
- No payments should be effected for selling or transporting animals within the district as this would lead to pilfering of resources (from the Kenyan experience). Besides, the objective of the transport subsidy is to remove as many animals from drought affected areas to terminal market points and not to relocate animals within the affected area.

Annex X. Bibliography

ACF (2003), Emergency Nutritional Program Zone 1, Afar National Regional State Ethiopia. 1st May to 31st January, 2004, Action Contre La Faim, Addis Ababa.

Ahrens, J. D. (1998), Cessation of Livestock Exports Severely Affects the Pastoralist Economy of Somali Region, UNDP Emergencies Unit for Ethiopia, Addis Ababa. http://www.sas.penn.edu/African_Studies/Hornet/Livestock.html.

Aklilu, Y. and Wekesa, M. (2001), Livestock and Livelihoods in Emergencies: Lessons Learnt from the 1999-2000 Emergency Response in the Pastoral Sector in Kenya, Feinstein International Famine Center, Medford, MA. http://famine.tufts.edu/download/pdf/working_paper_3.pdf.

Aklilu, Y. and Wekese, M. (2001), Livestock and Livelihoods in Emergencies: Lessons Learnt from the 1999-2000 Emergency Response in the Pastoral Sector in Kenya, Feinstein International Famine Center, Medford, MA. http://famine.tufts.edu/download/pdf/working_paper_3.pdf.

ALNAP (2001) *Humanitarian Action: Learning from Evaluation,* Active Learning Network for Accountability and Performance, Overseas Development Institute, London.

Amare, Y. (Ed.) (2001) *Food Security and Sustainable Livelihoods in Ethiopia,* Forum for Social Studies, Addis Ababa.

Appleton, J. and with the SCF Ethiopia Team (1987) *Drought Relief in Ethiopia. Planning and Management of Feeding Programmes. A Practical Guide.,* Save the Children., London.

Apthorpe, R. and Gaspar, D. (Eds.) (1996) *Arguing Development Policy: Frames and Discourses,* Frank Cass, London.

Assefa, F., Jabarkhil, M. Z., Salama, P. and Spiegel, P. (2001) Malnutrition and mortality in Kohistan district, Afghanistan, April 2001., *JAMA,* **286,** 2723-2728.

Ayalew, W., Wolde Gebriel, Z. and Kassa, H. (1999), Reducing vitamin A deficiency in Ethiopia: linkages with a women focused dairy goat farming project, International Center for Research for Women (ICRW), Washington.

Backes, K. R. and Meier-Ewert, M. (2002), Annotated Bibliography: Famine Theory (Final Paper for WWS 591b), Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton.

Berhanu (AU/IBAR/CAPE), AU/IBAR/CAPE, interview by Aklilu, Y., April 2, 2003, Addis Ababa.

Beyene, S. (CARE), CARE, interview by Lautze, S. and Aklilu, Y., April 11, 2003, Awash.

Blaikie, P., Cannon, T., Davis, I. and Wisner, B. (1994) *At Risk: Natural Hazards, People's Vulnerability and Disasters,* Routledge, London.

Blench, R. a. M., Z., (1998), Drought and livestock in semi-arid Africa and the Near East: Introductory essay with annotated bibliography. Draft - Prepared for circulation at FAO electronic conference 'Drought and livestock in semi-arid Africa and the Near East', FAO, Rome.

Briend, A., Lacsala, R., Prudhon, C., Mounier, B., Grellety, Y. and Golden, M. H. (1999) Ready-to-use therapeutic food for treatment of marasmus, *Lancet,* **353,** 1767-8.

Brown A. (1995) *Organizational Culture,* Pitman, London.

Brundtland, G. H. (2000) Nutrition and infection: malnutrition and mortality in public health, *Nutrition Reviews,* **58,** S1-S4.

Carswell, G. (2000), Livelihood Diversification in Southern Ethiopia, Institute of Development Studies, Sussex. http://www.ids.ac.uk/ids/bookshop/wp/wp117.pdf.

Carswell, G., Haan, A. d., Dea, D., Konde, A., Seba, H., Shankland, A. and Sinclair, A. (1999), Sustainable Livelihoods in Southern Ethiopia, Institute of Development Studies, Brighton.

Cately, A. (1999), The Herd Instinct: Children and Livestock in the Horn of Africa., Save the Children, UK, Addis Ababa.

Catley, A. (1999) *The Herd Instinct. Children and livestock in the Horn of Africa. Working paper 21,* Save the Children, London.

CDC (1992) Famine-Affected, Refugee, and Displaced Populations: Recommendations for Public Health Issues, *Morbidity and Mortality Weekly Report MMWR,* **41**.

Chambers, R. and Conway, G. (1992), Sustainable Rural Livelihoods: Practical concepts for the 21st Century, IDS Discussion Paper 296, Institute of Development Studies, Brighton.

Chapman, C. and Desta, H. K. (1998), The Dynamics of the Current Early Warning System (with specific reference to Amhara Region), Save the Children UK, Addis Ababa.

Clay, D., Molla, D. and Habtewold, D. (1999a) Food Aid Targeting in Ethiopia: A study of who needs it and who gets it, *Food Policy,* **24,** 391-409.
Clay, D. C., Molla, D. and Habtewold, D. (1999b) Food aid targeting in Ethiopia. A study of who needs it and who gets it, *Food Policy,* **24,** 391-409.
Collins, S. (2001) Changing the way we address severe malnutrition during famine, *Lancet,* **358,** 498-501.
Coppock, D. (1994), The Borana Plateau of Southern Ethiopia: Synthesis pastoral research, development and change, 1980-91, International Livestock Centre for Africa, Addis Ababa.
CRS (2002), Joint Emergency Operational Plan (JEOP III) For Ethiopia November 2002 - July 2003. Submitted to USAID/FFP by Catholic Relief Services on behalf of five other JEOP partners., Catholic Relief Services, Addis Ababa.
CSA and ORC Macro (2001), Ethiopia Demographic Health Survey 2000, Central Statistical Authority, Addis Ababa and ORC Macro, Maryland, USA.,
Cuny, F. C. (1999) *Famine, Conflict and Response: A basic guide,* Kumarian Press, West Hartford.
Davis, M. (2001) *Late Victorian Holocausts: El Nino famines and the making of the Third World,* Verso, London.
de Waal, A. (1989a) Famine Mortality: A Case Study of Darfur, Sudan 1984 -5 In *Population Studies*, Vol. 43, pp. 5-24.
de Waal, A. (1989b) *Famines that Kill: Darfur 1984-85,* Claredon Press, Oxford.
de Waal, A. (1990) A re-assessment of entitlement theory in the light of recent famines in Africa, *Development and Change,* **21,** 469-490.
de Waal, A. (2000) *Who Fights? Who Cares? War and humanitarian action in Africa,* Africa World Press, Inc, Asmara.
Desta, S. and Coppock, L. (2002), Pastoral System and Small Ruminant Production in the Borana Plateau of Southern Ethiopia, Langston University,
Devereaux, S. (1993) *Theories of Famine,* Harvester Wheatsheaf, New York.
Devereaux, S. (2002), Famine in the 20th Century, IDS Working Paper 105, Institute of Development Studies, Sussex.
DFAIT (2003), Canada-Ethiopia Relations, Department for Foreign Affairs and International Trade, Ottawa. http://www.dfait-maeci.gc.ca/africa/ethiopia-canada-en.asp.
DfID (2003a), Ethiopia: Country Assistance Plan, Department for International Development, London.
DfID (2003b), Humanitarian Situation in Ethiopia: Ballpoints and Questions and Answers, Government of the United Kingdom, Addis Ababa.
Dick, B. (1986) Supplementary feeding for refugees and other displaced communities - questioning current orthodoxy, *Disasters,* **10,** 53-64.
DPPB/SC-UK (2003), Monthly Food Security Highlights, Somali Region, Ethiopia, Jijiga.
DPPC (1995), General Guidelines for the Implementation of the National Policy on Disaster Prevention and Preparedness., Disaster Prevention and Preparedness Commission, Addis Ababa.
DPPC (1998), Five-Year Plan of the Federal Disaster Prevention and Preparedness Commission 1998 - 2002, Disaster Prevention and Preparedness Commission, Addis Ababa.
DPPC (2000), National Guidelines for Food Aid Targeting, Addis Ababa.
DPPC (2002a), Appeal for immediate food needs and scenarios of likely emergency needs 2003, Disaster Prevention and Preparedness Commission, Addis Ababa.
DPPC (2002b), Appeal for Immediate Food Needs and Scenarios of Likely Emergency Needs in 2003, Disaster Preparedness and Prevention Commission, Addis Ababa.
DPPC (2003), Emergency Nutrition Coordination Unit (ENCU) Nutrtition Surveys Conducted Since May 2002, DPPC/ENCU, Addis Ababa.
Duffield, M. (2001) *Global Governance and the New Wars : the merging of development and security.,* Zed Books, New York.
Duffield, M. and Prendergast, J. (1994) *Without Troops and Tanks: Humanitarian Intervention in Ethiopia and Eritrea,* The Red Sea Press, Lawrenceville.
Dyer, G. (1996) UNICEF's rich history in emergency response, *World Health Stat Q,* **49,** 226-9.
Dyson, T. and O'Grada, C. (Eds.) (2002) *Famine Demography: Perspectives from the past and present,* Oxford University Press, Inc., New York.
EC/IGAD (2000), Establishment of a Regional Livestock Development Programme for Eastern Africa, Intergovernmental Authority on Development, Nairobi.
ENCU (2003a), Identification of gaps in nutritional status information in areas severely affected by the current emergency in Ethiopia (7 May 2003). Disaster Prevention and Preparedness Commission, Addis Ababa.

ENCU (2003b), Summary Table of Affected Woredas and Types of Information, May 2003, Disaster Preparedness and Prevention Commission, Addis Ababa.
ENCU (2003c), Therapeutic Feeding Sites in Ethiopia Supported by UNICEF: Status on 26 June 2003, DPPC ENCU, Addis Ababa.
ENCU led Nutrition Working Group (2002) *National Nutrition Survey Guidelines,* Disaster Prevention and Preparedness Commission, Addis Ababa.
ENCU-led Nutrition Working Group (2003) Prioritization of Woredas for geographic targeting. Supplementary Feeding Guidelines (March Draft).
Enloe, C. (2000) *Maneuvers: the international politics of militarizing women's lives,* University of California Press, Berkeley.
Escobar, A. (1995) *Encountering Development. The Making and Unmaking of the Third World,* Princeton University Press, Princeton.
European Commission (2003), ECHO Aid Strategy 2003, European Commission Humanitarian Aid Office (ECHO), Brussels.
European Food Security Network (2000), Income Diversification in Amhara: The need for a strategy, resal Ethiopia, Brussels.
European Food Security Network (2001), Donors Shifting to Sector and Budget Support: Final Report, resal Ethiopia, Brussels.
FAO/WFP (2002), FAO/WFP Crop and food Supply Assessment Mission to Ethiopia, Food and Agriculture Organization of the United Nations, World Food Programme, Rome.
FDRE (1999), Report of the Multi-Donor Team, Federal Democratic Republic of Ethiopia, Food Security Program, Addis Ababa.
Feinstein International Famine Center (2002), Nutrition and Livelihoods in Situations of Crisis and Conflict: Reducing vulnerability and risk, ACC/SCN 29th Session One-Day Symposium On Nutrition In The Context Of Crisis And Conflict, Berlin.
Ferris-Morris, M. (2003), Planning for the Next Drought: Ethiopia Case Study (An assessment of the drought response 1999-2001 and current preparedness), LTG Associates, Inc. and TvT Global Health and Development Strategies for USAID/DHCA/PPM, Washington, DC.
FEWS-NET (2003a), Estimating *Meher* Crop Production Using Rainfall in the 'Long Cycle' Region of Ethiopia, FEWS-NET, USGS and USAID, Washington and Addis Ababa.
FEWS-NET (2003b), Food Security Emergency, FEWS-NET, Addis Ababa.
Feyisa, T. H. and Aune, J. B. (2003) Khat Expansion in the Ethiopian Highlands: Effects on the Farming System in Habro District In *Mountain Research and Development*, Vol. 23, pp. 186-190.
Field, J. O. (Ed.) (1993) *The Challenge of Famine: Recent experiences, lessons learned,* Kumarian Press, West Hartford.
Fitzpatrick, A. interview by Lautze, S., June 2, 2003, Addis Ababa.
Fleischer Michaelsen, K. and Clausen, T. (1987) Inadequate supplies of potassium and magnesium in relief food - implications and counter-measures., *The Lancet***,** 1421-1423.
Francis, E. (2000) *Making a Living: Changing livelihoods in rural Africa,* Routledge, New York.
Gardner K. and Lewis, D. (Eds.) (1996) *Anthropology, Development and the Post Modern Challenge,* Pluto, London.
Gebreyesus, A. (1903) *Atse Menelik and Ethiopia,* Afewerk Gebreyesus, Bologna.
Gizaw, B. (1995) Nutrition surveillance in a situation of recurrent natural disasters, *Food and Nutrition Bulletin,* **16**.
Golden, M. and Grellety, Y. (2003) *The management of severe acute malnutrition. A suggested manual for Ethiopia,* UNICEF, Addis Ababa.
Golden, M. H. N. and Grellety, Y. (2002), Population Nutritional Status During Famine Annex 6:,
Grellety, Y. (2003a) *How to treat moderate wasting and prevent severe wasting. The supplementary feeding centre Training Module Draft February 2003,* UNICEF, Addis Ababa.
Grellety, Y. (2003b) *Screening and triage of malnourished patients at community level and at health centre level. Draft,* UNICEF, Addis Ababa.
Habtewold, D. (2001) In *Food Security and Sustainable Livelihoods in Ethiopia*(Ed, Amare, Y.) Forum for Social Studies, Addis Ababa, pp. 80 -92.
Hammond, L. (2001), Ethiopia Drought Emergency 1999 - 2000, USAID/Ethiopia (FHA office), Addis Ababa.
Hammond, L. and Maxwell, D. (2002) The Ethiopian crisis of 1999-2000: Lessons learned, questions unanswered, *Disasters,* **26,** 262-279.

Hay, R. W. (1978) The concept of food supply system with special reference to the management of famine, *Ecology of Food and Nutrition,* **7,** 65-72.
HCS (2001), Anthropological Survey in Somali National Regional State, Shinile Ecosystem: With reference to pastoral, agropastoral and sedentary farming systems, Volume II, Hararghe Catholic Secretariate, Dire Dawa.
HCS (2002), Shinille Ecosystem, Situation Update, Hararghe Catholic Secretariate, Dire Dawa.
HCS (2003a), Situation update, Hararghe Catholic Secretariate, Dire Dawa.
HCS (2003b), Situation Update, Shinille Ecosystem, Hararghe Catholic Secretariate, Dire Dawa.
Hendrie, B. (1997a) Knowledge and power: A critique of an international relief operation, *Disasters,* **21,** 57-76.
Hendrie, B. (1997b) Knowledge and Power: A Critique of an International Relief Operation In *Disasters: The journal of disaster studies and management*, Vol. 21, pp. 57-76.
Hicks, D. (2003) (Ed, Raven-Roberts, A.) Addis Ababa.
Hussein, A. M. (1976) *Rehab: Drought and Famine in Ethiopia,* International African Institute, London.
Hussein, K. and Nelson, J. (1998), Sustainable Livelihoods and Livelihood Diversification, Institute of Development Studies, Brighton. http://www.ids.ac.uk/ids/bookshop/wp/wp69.pdf.
Hussien, A. A. (PCAE), PCAE, interview by Aklilu, Y., May 14, 2003, Addis Ababa.
IDS (1996) An Agenda for the World Food Summit: IDS Policy Briefing, Vol. 2002 Institute of Development Studies Policy Briefing.
Interagency Working Group on Infant and Young Child Feeding in Emergencies (2001) Infant Feeding in Emergencies Operational Guidance. London.
Ireland, G. o. (1997), Priority Country: Ethiopia, Irish Aid, Dublin. http://www.gov.ie/iveagh/irishaid/1997report/sect4-1.htm.
Ireland, G. o. (1998), Priority Country: Ethiopia, Irish Aid, Dublin. http://www.gov.ie/iveagh/irishaid/1998report/sect1-1.htm.
Ireland, G. o. (2003), Minister of State Kitt leaves for Ethiopia, Press Section, Dublin. http://www.gov.ie/iveagh/information/display.asp?ID=1098.
Irkneh, T. (Early Warning Department, DPPC), Early Warning Department, DPPC, interview by Aklilu, Y., April 4, 2003, Addis Ababa.
Ishmael interview by Aklilu, Y., May 2003, Harshin.
Jayne, T. S., Strauss, J., Yamano, T. and Molla, D. (2000), Targeting of Food Aid in Rural Ethiopia: Chronic Need or Inertia?, Department of Agriculture Economics, Department of Economics, Michigan State University, East Lansing. MSU Agricultural Economics Web Site: http://www.aec.msu.edu/agecon/
MSU Food Security II Web Site: http://www.aec.msu.edu/agecon/fs2/index.htm.
Johnson, D. and Anderson, D. (Eds.) (1988) *The Ecology of Survival: Case Studies from Northeast African History,* Lester Crook Academic Publishing, London.
Johnson, H. F. (2002), Statement to the Storting on Development Cooperation 2002, The Storting, Oslo. Statement to the Storting on Development Cooperation 2002.
Joint Government - UN Addendum (2003), Update of Assistance Requirements for 2003 ("Addendum"),
Kebebew et al. (2001), Traditional Coping Strategies of the Afar and Borana Pastoralists in Response to Drought, Dryland Coordination Group, Addis and Oslo.
Keen, D. (1994) *The Benefits of Famine: A political economy of famine and relief in southwestern Sudan 1983 - 1989,* Princeton University Press, Princeton.
Kefala, A. and Sandford, S. (1991), Enset in the North Omo Region, Farm Africa, Addis Ababa.
Kelly, M. (1992a) Anthropometry as an indicator of access to food in population prone to famine, *Food Policy***,** 443-454.
Kelly, M. (1992b) Entitlements, coping mechanisms and indicators of access to food: Wollo Region, Ethiopia, 1987-88, *Disasters,* **16,** 322-338.
Kelly, M. (1993) Operational value of anthropometric surveillane in Famine Early Warning and Relief: Wollo Region, Ethiopia, 1987 - 88, *Disasters,* **17,** 48-55.
Kersala, T. (1997) Health Epidemics: The Worst Case Scenario In *Vulnerability in Ethiopia: From Disaster to Development*Addis Ababa, pp. 11.
Kloos, H. and Lindtjorn, B. (1994) Malnutrition and mortality during recent famines in Ethiopia: implications for food aid and rehabilitation, *Disasters,* **18,** 130-139.
Lautze, S. and Hammock, J. (1997), Coping with Crisis: Coping with Aid, Capacity Building, Coping Mechanisms and Dependency, United Nations Department of Humanitarian Affairs, New York.

Lautze, S., Jones, B. and Duffield, M. (1998), Strategic Humanitarian Co-ordination in the Great Lakes Region, 1996-1997, UN Inter-Agency Standing Committee, New York.

Lautze, S., Raven-Roberts, A., Aklilu, Y., Kebede, G., Young, H. and Leaning, J. (2003), Observations: FIFC Team, Feinstein International Famine Center, Tufts University, Addis Ababa.

Lautze, S. and Stites, E. (2003), More than Seeds and Tools: An Overview of OFDA Livelihood Intervention 1964 - 2002, The Feinstein International Famine Center, Medford.

Lautze, S., Stites, E., Nojumi, N. and Najimi, F. (2002) Qaht-E-Pool "A Cash Famine" : Food Insecurity in Afghanistan 1999-2002, Vol. 2002 Feinstein International Famine Center Tufts University.

Lawrence, M., Yimer, T. and O'Dea, J. K. (1994) Nutritional status and early warning of mortality in southern Ethiopia, 1988, *European Journal of Clinical Nutrition*, 38-45.

Lewellen, M. interview by Lautze, S., April 2003, Addis Ababa.

Lindtjorn, B. (1987) Famine in Ethiopia 1983 - 85: kwashiorkor and marasmus in four regions, **7,** 1-5.

Lindtjorn, B. (1990) Famine in southern Ethiopia 1985-6: population structure, nutritional state, and incidence of death among children, *BMJ,* **301,** 1123-7.

Lybbert, T., Barrett, C., Desta, S. and Coppock, D. (2001), Pastoral Risk and Wealth-Differentiated Herd Accumulation in Southern Ethiopia, USAID, Utah State University, International Livestock Research Institute, and the Rockefeller Foundation,

Macrae, J. and Leader, N. (2000), Shifting Sands: The search for 'coherence' between political and humanitarian responses to complex emergencies, Overseas Development Institute, Humanitarian Policy Group, HPG Report 8, London.

Malthus, T. (1798), An Essay on the Principle of Population, J. Johnson in St. Paul's Churchyard, www.esp.org, London.

Mansfield, S. (Sue.Lautze@tufts.edu), Sue.Lautze@tufts.edu, interview by Lautze, S., April 1, 2003, London.

Masefield, A. (2001a), Chronic food insecurity in Ethiopia - looking through a livelihood lens: food security and sustainable livelihoods in Ethiopia. Proceedings o the Sumposium of the Forum for Social Studies, March 2000, Addis Ababa.

Masefield, A. (2001b) In *Food Security and Sustainable Livelihoods in Ethiopia*(Ed, Amare, Y.) Forum for Social Studies, Addis Ababa, pp. 9-36.

Mason, J. B., Habicht, J., H.Tabatabai and V.Valverde (1984) *Nutritional Surveillance,* World Health Organization, Geneva.

Ministry of Foreign Affairs (2003), Ethiopië, The Hague, The Netherlands, http://www.minbuza.nl/default.asp?CMS_TCP=tcpPrintMinBuza2&CMS_ITEM=F0ABC710C5E84A1F963D91DE38FE6FC0X3X58309X2&CMS_PBG=3ED69DC8707F478E90CA4703B0A93269X1X15672X3.

MoA (2002), National Contingency Plan for Livestock in Drought Affected Areas of Ethiopia, Agricultural interventions, Revised First Draft, Ministry of Agriculture, Addis Ababa.

MoH (2002), Drought Related Health Problems in Ethiopia: Second Appeal Document, Ministry of Health, Addis Ababa.

Mokyr, J. and O'Grada, C. (Eds.) (2002) *Famine Disease and Famine Mortality: Lessons from the Irish Experience, 1845 - 50,* Oxford University Press, Inc., New York.

MSF (2002), Chapter 5 Blanket Feeding Programme (BFP) Nutrition Guidelines Revised Draft March 2002, Medecins Sans Frontieres,

Navarro-Colorado, C., Fournier, A. S., Verdenal, L. and Ervers, M. T. (2002) Therapeutic feeding centres for severe malnutrition, *Lancet,* **359,** 259-260.

Oman, A. (1999), Nutrition Consultancy Report on World Food Programme EMOP 6143 "Relief Food Assistance to Victims of Meher and Belf Crop Failure" 27 November - 23 December 1999, World Food Programme, Addis Ababa.

OXFAM (2003a), Survey document on Afar, Addis Ababa.

OXFAM (2003b), Survey document on Shinille zone, OXFAM, Addis Ababa.

Pain, A. and Lautze, S. (2002), Addressing Livelihoods in Afghanistan, Afghan Research and Evaluation Unit, Kabul.

Pankhurst, R. (1984) *The History of Famine & Epidemics in Ethiopia Prior to the 20th century,* Relief and Rehabiliation Commission, Addis Ababa.

Pellegri, S. and Kormoss, P. (2002), Evaluation Report: ECHO-funded drough relief programme in Kenya and Ethiopia, GFE Consulting Worldwide, www.gfe.de.

Pelletier, D. L., Deneke, K., Kidane, Y., Haile, B. and Negussie, F. (1995) The food-first bias and nutrition policy: lessons from Ethiopia, *Food Policy,* **20,** 279-298.

Pratt, C. (2001), Early Warning and Coping Systems, Feinstein International Famine Center, Medford.
Rahmato, D. (1990), A Resource Flow Systems Analysis of Rural Bolosso (Wollaita), Redd Barne and IDR, Addis Ababa.
Rahmato, D. (1992), The Dynamics of Rural Poverty: Case Studies from a District in Southern Ethiopia, Institute of Development Research, Addis Ababa.
Rahmato, D. (1994) Land Tenure and Land Policy in Ethiopia After the Derg In *The Second Workshop of the Land Tenure Project*(Ed, Rahmato, D.) Institute of Development Research, Addis Ababa.
Rahmato, D. (2003), Some Aspects of Poverty in Ethopia: Three Selected Papers, Forum for Social Studies, Addis Ababa.
Raisin, J. (2001), Policy Matrix, USAID/Ethiopia, Addis Ababa.
Raisin, J. (2002), From Emergency Relief to a Transitional Asset Protection System (TAPS): Options for Integrating Relief within the Framework of Woreda-level Decentralization, USAID/Ethiopia?, Addis Ababa.
Rami, H. (2003), Green Famine in Sidama and Welayta, United Nations Emergencies Unit for Ethiopia, Addis Ababa.
Rashid, A. (2000) *The Taliban: Militant Islam, Oil, and Fundamentalism in Central Asia,* Yale University Press, New Haven.
Ravallion, M. (1987) *Markets and Famines,* Oxford University Press, Oxford.
Rice, A. L., Sacco, L., Hyder, A. and Black, R. E. (2000) Malnutrition as an underlying cause of childhood deaths associated with infectious diseases in developing countries, *Bulletin of the World Health Organization,* **78,** 1207-1221.
Robinson, C. (2003), Nothing to Fall Back On: Why Ethiopians are Still Short on Food and Cash,
Royal Ministry of Foreign Affairs (2002), Ethiopia Field Study, Government of Norway, Oslo. http://odin.dep.no/ud/engelsk/publ/rapporter/032181-220006/index-hov010-b-n-a.html.
RRC (1989), Nutritional guidelines for food relief rations, Relief and Rehabilitation Commission, Addis Ababa.
RRC EWD (1995) *Guidelines on Nutritional Status Data and Food Relief,* Relief and Rehabilitation Commission, Addis Ababa.
Salama, P., Assefa, F., Talley, L., Spiegel, P., van der Veen, A. and Gotway, C. (2001) Malnutrition, measles, mortality, and the humanitarian response during a famine in Ethiopia, *American Medical Association,* **286,** 563-571.
Sandford, J. (2002), Review of Assements Currently Undertaken in Ethiopia, Addis Ababa.
Sandford, S. and Habtu, Y. (2000), Emergency Response Interventions in Pastoral Areas of Ethiopia, UK Department for International Development (DfID), Addis Ababa.
Save the Children Alliance in Ethiopia and Members of the British Overseas Action Group (2003 (although undated)), Starving slowly, Save the Children UK, Addis Ababa.
SC (UK) (2003), Ethiopia's food basket. A Save the Children UK (Ethiopia) Position Paper, Save the Children UK, Addis Ababa.
SC UK (2003), Ethiopia's food basket. A Save the Children UK (Ethiopia) Position Paper, Save the Children UK, Addis Ababa.
Schofield, C. and Ashworth, A. (1996) Why have mortality rates for severe malnutrition remained so high?, *Bulletin of the World Health Organization,* **74,** 223-229.
SC-US (2003), Enhancing the health and nutrition response to the drought in high risk areas in Ethiopia. A proposal submitted to US-AID, Save the Children US, Addis Ababa.
Seal, A., Taylor, A. and Gostelow, L. (2001) Review of policies and guidelines on Infant Feeding in Emergencies: Common ground and Gaps., *Disasters,* **25**.
Seaman, J. and Holt, J. (1975) The Ethiopian Famine of 1973-74, Wollo Province, *Proceedings of the Nutritional Society,* **34**.
Seaman, J. and Holt, J. (1980) Markets and Famines in the Third World In *Disasters*, Vol. Vol. 4, pp. 283 - 297.
Seaman, J., Holt, J. and Rivers, J. (1978) The effects of drought on human nutrition in an Ethiopian Province, *International Journal of Epidemiology,* **7,** 31-40.
Seleshi, Z. (Livestock Reserach Department, EARO), Livestock Reserach Department, EARO, interview by Aklilu, Y., May 27, 2003, Addis Ababa.
Sen, A. (1981) *Poverty and Famines: an essay on entitlement and deprivation,* Oxford University Press, Oxford.
Sharp, K. (1998), Between relief and development: targeting food aid for disaster prevention in Ethiopia, Relief and Rehabilitation Network, Overseas Development Institute,
Sharp, T. W., Burkle, F. M., Vaughn, A. F., Chotani, R. and Brennan, R. J. (2002) Challenges and opportunities for humanitarian relief in Afghanistan, *Clinical Infectious Diseases,* **34,** S215-S228.

Sharpe, K. and Devereaux, S. (2003), Destitution in the Northeastern Highlands, Amhara Region, Institute for Development Studies and Save the Children, UK, Brighton.

Shears, P., Berry, A., Murphy, R. and Nabil, M. (1987) Epidemiological assessment of the health and nutrition of Ethiopian refugees in emergency camps in Sudan, 1985, *British Medical Journal (Clinical Research Edition),* **295,** 314-318.

Shoham, J. (1995), Good Practice Review 2. Emergency Supplementary Feeding Programmes, Relief and Rehabilitation Network, Overseas Development Institute,

Smith, G. (2001), Drought-Related Livestock Interventions, UN Food and Agriculture Organization, Rome.

Sobania, N. (1980) In *Herders, Warriors and Traders: the Political Economy of African Pastoralism*(Eds, Galaty, J. and Bonte, P.).

Spiegel, P. B., Salama, P., Maloney, S. and Veen, A. v. d. (2002), A Call for the Improvement in Quality and Interpretation of Nutrition Surveys in Complex Emergencies: the Ethiopian famine of 1999/2000, CDC (unpublished), Atlanta.

Tambi, E. and Maina (2000), Financing Livestock and Animal Health Services in Sub-Saharan Africa: The case of Cameroon, Ethiopia, Kenya, Mali, Tanzania, and Uganda, OAU-IBAR, Nairobi.

Telahun, T. (Somali National Regional State), Somali National Regional State, interview by Aklilu, Y., April 2003, Jigiga.

The World Bank (2003), Technical Annex on a Proposed Grant in the Amount of SDR 43.5 Million (US $ 60 Million Equivalent) to the Federal Democratic Republic of Ethiopia for the Emergency Drought Recovery Project, The World Bank, Rural Development Operations 1, Country Department 6, Africa Region, Addis Ababa.

Tonglet, R., Lembo, E. M., Zihindula, P. M., Wodon, A., Dramaix, M. and Hennart, P. (1999) How useful are anthropometric, clinical and dietary measurements of nutritional status as predictors of morbidity of young children in central Africa?, *Tropical Medicine & International Health,* **4,** 120-130.

Toole, M. and Bhatia, R. (1992) A case-study of Somali refugees in Hartisheik A camp, Eastern Ethiopia: Health and Nutrition Profile, July 1998 - June 1990, *Journal of Refugee Studies,* **5**.

Toole, M. and Waldman, R. (1993) Refugees and Displaced Persons: War, Hunger, and Public Health, *Journal of the American Medical Association,* **270,** 600-606.

Toole, M. and Waldman, R. (1997) The public health aspects of complex emergencies and refugee situations. In *Annual Review of Public Health*, pp. 283-312.

Toole, M. J. and Waldman, R. J. (1990) Prevention of excess mortality in refugee and displaced populations in developing countries, *Journal of the American Medical Association,* **263,** 3296-3302.

Turton, D. (1984) Spontaneous Resettlement after Drought. An Ethiopian Example In *Disaster*, Vol. 8, pp. 178-89.

Turton, D. (1985) Mursi Response to Drought. Some Lessons for Relief and Rehabilitation In *African Affairs*, Vol. 84, pp. 331-46.

UN Country Team Ethiopia (2003), 2003 Appeal, Contributions vs. Requirements by Sector, United Nations, Addis Ababa.

UN-EUE (2002), Issa Suffer from Massive Cattle Deaths and Conflict with Afar Over Scarce Resources, UN Emergencies Unit for Ethiopia, Addis Ababa.

UNHCR (1989), Policy for the Acceptance, Distribution and Use of Milk Products in Refugee Feeding Programmes,

UNHCR, UNICEF, WFP and WHO (2002), Guidelines for estimating food and nutritional needs in emergency situations. Draft 16, United Nations High Commissioner for Refugees, United Nations Children's Fund, World Food Programme, World Health Organization,

UNICEF (2003), Proposal to USAID for Health and Nutrition Response to Drought Emergency, UNICEF, Addis Ababa.

USAID (1967), Foreign Disaster Relief Operations, Office of the Federal Disaster Relief Coordinator, Washington DC.

USAID (1968), Eighth Semiannual Disaster Report, Office of the Federal Disaster Relief Coordinator, Washington, DC.

USAID (1970), Tenth Report, Fiscal Year 1970, Foreign Disaster Emergency Relief, Office of the Federal Disaster Relief Coordinator, Washington, DC.

USAID (1971), 11th Report, Foreign Disaster Emergency Relief, Fiscal Year 1971, Office of the Federal Disaster Relief Coordinator, Washington, DC.

USAID (1983), Annual Report FY 1983, Office of U.S. Foreign Disaster Assistance, Washington, DC.

USAID (1985), Annual Report FY 1985, Office of US Foreign Disaster Assistance, Washington, DC.

USAID (1986), OFDA Annual Report FY 1986, Washington, DC.

USAID (1987), Final Disaster Report, Ethiopia Drought/Famine, FY 1985-86, USAID/Addis Ababa, Addis Ababa.

USAID (1988), OFDA Annual Report FY 1987, Office of US Foreign Disaster Assistance, Washington, DC.

USAID (1989), OFDA Annual Report FY 1988, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (1990), FY 1989 Annual Report, Office of U.S. Foreign Disaster Assistance, Washington, DC.
USAID (1991), OFDA Annual Report FY 1990, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (1992), OFDA Annual Report FY 1991, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (1993), OFDA Annual Report FY 1992, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (1994), OFDA Annual Report FY 1993, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (2001a), Ethiopia-Eritrea Complex Emergency Humanitarian Response (May 2000-September 2000): The Ethiopia-Eritrea Humanitarian Response After-Action Report, USAID, Bureau for Democracy, Conflict and Humanitarian Assistance, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (2001b), OFDA 2001 Annual Report, US Agency for International Development, Washington, DC.
USAID (2001c), Strategy for Mitigating Effects of Disaster: FY 2001 - 2006, USAID/Food and Humanitarian Assistance (FHA) Ethiopia, Addis Ababa.
USAID (2002a), Complex Emergency/Drought Current Programme Summary, USAID/BHR/OFDA, Washington, DC.
USAID (2002b), Office of US Foreign Disaster Assistance (OFDA): Annual Report FY 2002, Office of US Foreign Disaster Assistance, Washington, DC.
USAID (2003a), Complex Emergency/Drought Current Program Summary, USAID/DCHA/OFDA, Washington, DC.
USAID (2003b), Ethiopia - Drought Fact Sheet #6 (FY) 2003, USAID/DCHA/OFDA, Washington, DC. www.usaid.gov.
USAID (2003c), Planning for the Next Drought: Ethiopia Case Study (An assessment of the drought response 1999-2001 and current preparedness), USAID/DHCA/PPM, Washington, DC.
USAID (ND), USG Food Assistance 1984 - 2002, USAID/Ethiopia, Addis Ababa.
VAM/WFP (2002), Priority Districts/ Weredas 2002 (Text Note),
Von Braun, J., Teklu, T. and Webb, P. (1998) *Famine in Africa: Causes, Responses, and Prevention,* Johns Hopkins University Press, Washington.
Waites, T. (European Union), European Union, interview by Sue Lautze, April 10, 2003, Addis Ababa.
Walker, P. (1988), Famine and Rapid Onset Disaster Warning Systems: A report by the International Institute for Environment and Development for the Red Cross, International Institute for Environment and Development, Addis Ababa.
Webb, P. (1993) Coping with drought and food insecurity in Ethiopia, *Disasters,* **17**.
Webb, P., Von Braun, J. and Yohannes, Y. (1992), Famine in Ethiopia: policy implications of coping failure at national and household levels, Research Report 92, International Food Policy Research Institute, Washington, DC.
Weeks, W., Schwoebel, M. H., Clapham, C., Markakis, J., Morse, T., Odera, J., Foley, L., Hussein, A. A., Abdelatif, J., Hussein, A. R. and Schwenke, S. (2003), Summary Report: Ethiopia Conflict Vulnerability Assessment, Management Systems International, Washington, DC.
WFP (2000), Household Utilization Study 2000, World Food Programme, Addis Ababa.
WFP (2001), The Implications of a Sustainable Livelihoods Approach: Country Study on Ethiopia,
WFP (2002), Pre-Famine Indicators (Cuny) 12/12/02 (unpublished), World Food Programme, Addis Ababa.
WFP (2003a), Briefing note on beneficiary numbers for the Ethiopian Drought Emergency, WFP Addis Ababa, Addis Ababa.
WFP (2003b), Relief food assistance to small scale farmers and drought affected pastoralists. Project number 10030.2, Emergency Operation Ethiopia, World Food Programme, Addis Ababa.
WFP/UNHCR (1997), WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies, United Nations High Commissioner for Refugees, Geneva; World Food Programme, Rome., Geneva and Rome.
WHO (2000) *The Management of Nutrition in Major Emergencies,* World Health Organization, Geneva.
World Food Programme (2003), Ethiopia: Mortality Rates Baseline and 2002 - 2003, World Food Programme, Addis Ababa.
Yemane, B. (2000), The Declining Pastoral Environment, Vulnerability Status and Adaptation Strategy, Ministry of Agriculture, Addis Ababa.
Yip, R. and Sharp, T. W. (1993) Acute malnutrition and high childhood mortality related to diarrhea. Lessons from the 1991 Kurdish refugee crisis, *JAMA,* **270,** 587-90.
Young, H. (1987) Selective feeding programmes in Ethiopia and East Sudan 1985/1986, *Disasters,* **11,** 317-327.
Young, H. (1992) *Food Scarcity and Famine: Assessment and response*, Oxford.
Young, H. and Jaspars, S. (1995a) *Nutrition Matters - People, Food and Famine,* IT Publications, London.
Young, H. and Jaspars, S. (1995b) Nutrition, disease and death in times of famine, *Disasters,* **19,** 94-109.

Young, H. and Jaspars, S. (1996), The relationship between malnutrition and mortality in emergencies: do we have all the answers?A report on the feasibility of applied research into the malnutrition mortality relationship. Report for ODA Health and Population Division,

Young, H. and Taylor, A. (2002), Report Of A Three-Day Workshop On The Revision Of The Sphere Handbook, Addis Ababa, Ethiopia, 10th to 11th October 2002 Addis Ababa, Ethiopia, (Unpublished).