

International Public Nutrition Resource Group

**A Review of Save the Children UK's
Nutritional Surveillance Programme in
Ethiopia**

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List of Acronyms

CSA	Central Statistical Authority
CTC	Community Therapeutic Care
CIDA	Canadian International Development Assistance
DPPC	Disaster Prevention and Preparedness Commission
ENCU	Emergency Nutrition Co-ordinating Unit
EHNRI	Ethiopian Health and Nutrition Research Institute
ENI	Ethiopia Nutrition Institute
EU	European Union
EWS	Early Warning System
FA	Farmers Association
FSIS	Food Security Information System
GAM	Global Acute Malnutrition
HEA	Household Economy Approach
IDP	Internally Displaced People
MoARD	Ministry of Agriculture and Rural Development
MoH	Ministry of Health
MUAC	Mid Upper Arm Circumference
NFW	Nutrition Field Worker
NGO	Non-Governmental Organisation
NNS	National Nutrition Strategy
NSP	Nutrition Surveillance Programme
NTF	Nutrition Task Force
PRSP	Poverty Reduction Strategy Paper
RATS	Rapid Assessment Team
RATSO	Rapid Assessment Team Somali Region
RRC	Relief and Rehabilitation Commission
SAM	Severe Acute Malnutrition
SC UK	Save the Children United Kingdom
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFL	Weight-for-Length
WFP	World Food Programme

Terminology

Anthropometry	The measurement of body size i.e. weight and height. The measurements are used to derive the indicators of wasting (weight for height), stunting (height for age) and underweight (weight for age) in children and Body Mass Index (weight over height squared) in adults. MUAC, the measurement of the circumference of the arm is also an anthropometric measure.
Early Warning System	Any system with the objective of providing an early warning of a disaster from whatever cause (not exclusively due to food insecurity).
Nutrition	A broad term that encompasses the outcome measure (nutritional status) and the underlying causes to explain nutritional status i.e. health, care and food security.
Nutritional Status	Anthropometric and micronutrient status
Nutrition Information System	All types of nutrition data which is gathered through surveys, surveillance etc. and which provides a system of information on the nutrition situation.
Nutrition Surveillance System	<i>“An ongoing system for generating information on the current and future magnitude, distribution and causes of malnutrition in populations”</i> World Food Conference in 1974
Sentinel Site Surveillance	<i>“The monitoring of purposively selected communities or service delivery sites in order to detect changes in context, programme and outcome variables”</i> Shoham et al. 2001

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In Ethiopia we were fortunate to work with Ethiopia's resident and most experienced nutritionist, Tayech Yimer whose knowledge of the NSP originates from its very beginning to its end in 2001. Her insights and institutional memory have proved invaluable and without these, this review would not have been possible. We also warmly thank Cassandra Chapman for overseeing the process and keeping us on track as well as other staff in the SC UK office who shared their ideas with us.

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Finally, we thank all the individuals working in international agencies who openly discussed the pressing issues and challenges in obtaining and responding to nutrition information.

To all, we hope that this document will help clarify the role of the NSP, the lessons that we can learn and ways forward for nutrition in Ethiopia.

1. Executive Summary

Ethiopia, the second most populous country in Africa, has had a long history of drought, war and famine with terrible consequences in terms of loss of life and livelihoods. Today, Ethiopia is still struggling to cope with this legacy despite being one of the biggest recipients of aid in Africa. Levels of child malnutrition are unacceptably high and in themselves denote an ongoing nutrition crisis. Of all the countries in the world experiencing such high levels of acute and chronic vulnerability, one would expect to find a robust system for monitoring the nutrition situation at the core of emergency policy, planning and response.

This review was commissioned by SC UK to document and analyse SC UK's experience in operating a longitudinal nutrition surveillance programme (the NSP) for early warning in Ethiopia from the early 1980s until 2002. The purposes of the review were to highlight the strengths and weaknesses of the NSP and draw out the lessons learned. These can contribute to ongoing debates within Ethiopia about the use of nutrition data in early warning systems (EWS) and to wider SC UK organisational debates particularly in relation to the role of nutrition information in EWSs and food security information systems (FSIS).

SC UK supported the NSP over a 17-year period. This long-term investment in nutritional surveillance is noteworthy and unusual in Africa. The NSP evolved from a small project in the late 1970s concerned with monitoring individual nutritional status into a system collecting a large number of food security indicators and child anthropometry for early warning purposes. Although geographic coverage of the NSP was limited, it reached some of the most remote and drought prone areas of the country.

At its outset, when there was very little credible, objective information for early warning purposes, the NSP was crucial in providing information for government and agencies involved in emergency response. Since the demise of the NSP, there has been a loss of ability to monitor nutrition trends in a systematic way in Ethiopia. Throughout its life the NSP was funded and managed by SC UK.

Design and implementation of the NSP

The design of the NSP was unique in that it was a sentinel site surveillance system employing the anthropometric indicator of mean weight for length (WFL). There was a strong statistical rationale for the NSP design though there were design faults (for example, sample bias as age cohort changed, failure to pick up 'hot spots'). Nevertheless, the strength of the NSP was its ability to measure anthropometric *trend* which is may be more sensitive than *absolute levels* in predicting mortality.

A further strength of the NSP was the fact that the nutrition field workers (NFWs) were well trained, supervised and resourced. They visited the same communities repeatedly and were able to interpret quantitative data within context. Having 'ears on the ground' fosters trust between communities and field workers while the combination of qualitative with quantitative data greatly enhances analysis.

Lessons learnt:

- *There are no standard anthropometric indicators for nutrition surveillance systems and means (e.g. mean WFL) may be appropriate in some contexts.*
- *Well trained and resourced fieldworkers are crucial in order to provide reliable and objective data.*
- *Analysis is greatly improved through combining quantitative with qualitative information and having a good understanding of the local context.*

Nutrition as an early indicator of crisis

The continuing debate about the role of nutritional status as an early indicator of crisis is in many respects irrelevant and certainly over simplistic. There is no black and white answer to whether anthropometric indicators provide an early or late indication of food security crises. Experience shows that anthropometry can be an early or a late indicator of food crises *depending on context*. The correlation between anthropometric status at population level and food security is complex and subtle, as analysis of NSP data in this review clearly illustrates.

There are strong arguments for including nutrition data in EWS. Firstly, there is no one indicator that alone can predict a crisis. Rather, a good EWS should depend on a range of indicators that all measure slightly different things, and need to be interpreted in combination. Food security indicators on their own will miss a health crisis. Systems which are insensitive to the political climate will fail to predict political disasters. Nutritional status is one of a number of indicators which reflect, and are sensitive to, aspects of the environment that an EWS seeks to assess. Thus, it is one tool in an early warning toolbox.

Secondly, malnutrition is strongly associated with mortality and poverty (destitution). It is the outcome of a number of underlying factors all of which become increasingly compromised during the development of a crisis. In many cases, increasing malnutrition (whether in adults, children or in micronutrient status) precedes a crisis.

Thirdly, nutritional status as determined by anthropometry is an objective indicator that is relatively easy to measure and is widely understood. It therefore has a credibility and 'status' above more 'qualitative' indicators.

Finally, malnutrition, the sight of starving children, has huge emotive potential and therefore unique power to elicit response.

Lessons learnt:

- *Nutrition trend data allows comparisons to be made over time and in combination with other indicators can help to predict crises.*
- *Nutrition is one of a range of inter-related indicators that are useful for early warning of both food crisis and humanitarian crises.*

Response systems and advocacy

The extent to which the NSP elicited a timely response is impossible to determine retrospectively. There are examples where the NSP alerted government and agencies to a deteriorating nutrition or food security situation and this provoked a response.

The reverse is also true with alerts being ignored or a late response being implemented. This mixed picture was due partly to two factors: the institutional isolation of the NSP which may have reduced the level of buy-in and therefore response; and inadequate understanding of the information generated and lack of standardisation with other commonly employed triggers. A fundamental difficulty for the NSP was that because responsibility for responding to the information was not mandated to any one organisation at the outset, SC UK continually faced the challenges of effectively communicating and advocating on the basis of the NSP findings.

An undervalued strength of the NSP was that it could discern changes in trend, and therefore predict crises. There was an over-reliance, however, on the anthropometric threshold of 90 per cent mean WFL to provoke response even in situations where the non-anthropometric (mainly food security) indicators showed clear signs of deterioration.

The style of dissemination of the NSP findings was given considerable attention over the years. Information was presented in a clear summary format that was easy to understand. Nevertheless, SC UK focused more heavily on the technical and methodological aspects of the NSP and invested less in communication and advocacy to ensure that the findings of the NSP were linked with response.

Lessons learnt:

- *Although response to information can not always be guaranteed, information systems must be clearly linked at the outset to accountable response mechanisms to maximise the potential for response.*
- *Ensuring response requires multi-agency involvement in design and cost sharing from the outset as well as a clear institutional base for the system.*
- *Good communication linked to strategic advocacy activities is as important as collecting methodologically sound data to ensure a timely and appropriate response.*

Advocating for non-food as well as food interventions

The NSP evolved from concentrating on anthropometry to focusing greater attention on food security indicators. A major drawback was the lack of data on morbidity, mortality and care factors. Some data was collected but irregularly and it was rarely published in the reports. Furthermore, response was almost entirely food aid related (general ration or selective feeding). The NSP did not appear to be able to elicit non-food responses.

Nutrition cannot be equated with food security because it is affected by underlying causes in addition to food security; namely health and care. The view that nutrition = food security and malnutrition = food insecurity which should be treated by food aid is erroneous. In the Ethiopia context, this view, coupled with the political and aid environment that has favoured food aid rather than other forms of aid has served to perpetuate the so called 'food first bias'.

Whilst food security is of paramount importance in Ethiopia, food alone will not solve the problem. There are chronic issues related to poverty, lack of access to health and

education, clean water and sanitation. Supporting sustainable livelihoods is a major thrust of the government and donors alike. In order for interventions to expand beyond food aid, information is needed upon which to guide decision-making. Nutrition information systems (nutrition surveillance or surveys) therefore need to ensure that a broad range of indicators are collected so that causal problems can be identified.

Lessons learnt:

- *Nutrition information systems that focus on food security indicators in an environment dominated by food aid serve to perpetuate a narrow approach to nutrition crises.*
- *Nutrition information systems need to provide understanding of, and highlight the causes of nutrition problems in order to advocate for appropriate interventions based on needs.*

Integration and ownership

The NSP was implemented by well trained, well resourced and motivated SC UK staff who produced high quality information. At a time when the political and aid climate demanded a high level of quality, de-politicised and regular data for early warning, it was appropriate for SC UK to run the NSP outside the government system.

The changes in the early 1990s which saw increased transparency in government and the start of decentralisation should have prompted SC UK to initiate the process of integration within government systems. Even with the limitations of government capacity, steps could have been taken to achieve a level of government integration and ownership which would have had lasting benefits for addressing the enormous nutrition challenges facing Ethiopia today.

Given the Household Economy Approach (HEA) based food security work of SC UK in parts of Ethiopia and the fact that this remains the central component of SC UK Food Security Information System (FSIS) work globally, it is important to explore ways of integrating nutrition information within an HEA framework. This requires methodological development as well as in-country institutional analysis.

Lessons learnt:

- *Nutrition information systems should be integrated within government structures from the outset except in extreme situations where government is either not functioning or there is a real danger that all information will be heavily politicised.*
- *Objective and good quality data from a credible (non-government) source is extremely valuable in sensitive political environments.*
- *Joint ownership and participation by a number of agencies (both government and non-government) should be promoted in developing and sustaining nutrition information systems.*

Sustainability

The NSP could not be financially sustained by SC UK out of its unrestricted funds by the late 1990s. It is unclear, however, why other agencies and donors were unwilling

or unable to share or even take over these costs. SC UK was unable to build institutional sustainability for the NSP and the government had no capacity to sustain the NSP once SC UK's decision to 'phase out' was taken in 1998.

The view that the NSP was extremely expensive is a myth. At its height in 1995, the annual cost of the NSP was £278,000. Though this may have been a lot for a poor government to maintain, it represented an insignificant expenditure (less than one percent) in comparison with the cost of American food aid

There are very few EWS being supported purely by the government in poor African countries today. Systems which have relied substantially on their governments for funding have been vulnerable and often unable to achieve stated aims (for example in Tanzania and southern Africa). Rather, donors have invested large amounts of money into sustaining systems. Sustainability of a system therefore depends as much on outside donors as on the government.

Lessons learnt:

- *Investment in capacity building in its widest sense is essential to sustain a nutrition information system.*
- *Nutrition surveillance is not necessarily very expensive but any information system in poor countries is likely to require external agency funding.*
- *Agencies which establish and fund information systems (including nutrition information systems) have a responsibility to plan for the medium and longer-term financial sustainability of these systems.*

Current nutrition situation

Ethiopia led the way for emergency nutrition programming in the 1980s internationally. Many international nutritionists "*cut their teeth*" in Ethiopia during this time and national nutritionists were respected in their role as co-ordinators, researchers and policy implementers. This national nutrition capacity, having been severely eroded through lack of government and external agency investment, is largely absent today. The key ministries are without qualified nutritionists and the nutrition sector is woefully under resourced.

Against this backdrop is the appalling reality of malnutrition in Ethiopia. Levels of underweight, stunting and wasting are among the highest in the region and although some improvements are discernible, progress is painfully slow. Levels of wasting sit at emergency levels in 'normal' times.

The last 15-20 years has seen the nutrition discourse limited to malnutrition being equated with food insecurity, and food aid as the vehicle to dealing with the high levels. Very little is known about the non-food causes of malnutrition or the effects of malnutrition on groups other than under-fives living in rural drought-prone regions. Technical discussion has been mainly limited to survey methodologies and capacity development to training in nutrition surveys.

Concern about nutrition, in the absence of government capacity is largely externally driven although changes are evident which, if realised, could see nutrition being given

greater prominence at national level and an increase in resources for the non-food aspects of malnutrition.

Role of nutrition information in Ethiopia today

The loss of the NSP meant a loss of ability to monitor nutrition trends in a systematic way in Ethiopia. Nutrition information today is largely derived from nutrition surveys that report levels of wasting in the under-five population living predominantly in drought prone rural areas. These surveys are technically sound and play a crucial role in advocacy for food aid and to a lesser extent, non-food responses. The survey information has its limitations, however. It is very likely that other age groups are vulnerable to wasting although information on these groups is lacking. The non-food aspects of acute (and chronic) malnutrition are very poorly reflected and understood. Subsequently, the recommendations for interventions beyond food aid are extremely vague and it is unclear to whom these non-food recommendations are directed.

Ethiopia does not currently have a nutrition surveillance system though UNICEF's EOS is being promoted as being able to provide some early warning data. In its current form the EOS does not provide data of sufficient quality for nutrition surveillance. Nevertheless, interest is growing in the potential role of nutrition surveillance.

A robust nutrition information system (i.e. nutrition trend data in combination with nutrition survey data), which can be used as one indicator in a broader EWS, is clearly the ideal in the current Ethiopian context. The objectives of such a system for EW purposes would be to provide:

1. Information that can be used for triangulation purposes and as a powerful tool to advocate for response;
2. Information to provide better understanding of the underlying causes of malnutrition in order to lobby for the right form of intervention (i.e. non-food inputs where necessary).

Current nutrition information available within Ethiopia only partly meets the above objectives. There is therefore a need to re-consider some form of nutrition surveillance to provide trend data.

It is vital that agencies come together to discuss firstly whether a nutrition surveillance system in Ethiopia would provide useful information, and if so, what type of system would be practical and sustainable. The discussion needs to focus as much on *implementation* as on *methods*. There is a tendency to focus on technical aspects of the methodology and two critical components are frequently and easily overlooked: firstly valuing local knowledge and finding ways of incorporating it, to supplement the 'experts' technical input; secondly dissemination, communication and advocacy related to early warning messages. In addition, issues of integration (within government), sustainability, credibility, opportunities for capacity building and linkages with response should be treated as important as, if not more important, than methods.

The role of different agencies needs to be considered. How can agencies work in partnership to ensure that data quality is improved and that the system is 'owned' by

all? One possibility is that NGOs work with the EOS to improve the quality of the data collected in their area of operation. Triangulation of EOS data with data collected through nutrition surveys would help to verify the EOS data and highlight weaknesses in the system that need correcting.

The objectives of a potential nutrition surveillance system should be considered. Should the focus remain on wasting in under-fives with the primary aim of eliciting food aid? Or can objectives be broadened to encompass measures of chronic vulnerability so that advocacy for non-food, longer-term interventions is strengthened?

Furthermore, there is a need for the discussion to determine whether and how information derived from cross sectional nutrition surveys can be linked with the EOS.

Given the endemic nutritional problems in Ethiopia and its historical record of recurrent nutritional crises it is hard to give credence to any argument against including nutrition information in an Ethiopian EWS.

2. Introduction

This review was commissioned by SC UK to document and analyse SC UK's experience in operating a longitudinal nutrition surveillance system in Ethiopia from the 1980s until 2002. The review highlights the strengths and weaknesses of the Ethiopia nutritional surveillance programme (NSP), and outlines the lessons learned in order to contribute to ongoing debates within Ethiopia about nutrition surveillance systems. The review findings will contribute to wider organisational debates particularly in relation to the role of anthropometry in early warning and food security information systems. Coinciding with this review, SC UK commissioned an evaluation of the Darfur Food Information System offering an opportunity for learning within the region and for SC UK to learn from two long-running systems.

The review was carried out by *NutritionWorks*, an UK based international nutrition resource group with extensive experience of emergency nutrition in sub-Saharan Africa and of early warning and nutrition surveillance systems. The first stage of the review involved reviewing key documents and literature as well as carrying out phone interviews with a large number of key informants who have had experience of the SC UK Ethiopia programme. Stage two involved a 15 day visit to Ethiopia by two of the authors where more detailed documentation review was carried out and key informants from government, donors and agencies were interviewed. Time was also spent analysing all nutrition surveys conducted in Ethiopia during 2002 and 2003 to determine the quality and scope of these surveys within the current context. In addition, materials for the case examples and cost analysis were gathered. Prior to leaving Ethiopia, the preliminary findings were presented to government and agency staff to obtain their comments on the findings. The third phase involved the writing of the review report.

There are two important limitations to this review that need to be highlighted. Firstly, the Ethiopia NSP finished in 2001. Many of the staff involved with the programme have either left SC UK or Ethiopia and although many of these ex-staff were traced, it was not possible to make contact with all ex-staff. Many of those interviewed had not been involved in the programme for many years which made recall of their experiences difficult. Secondly, the Ethiopia based work did not include time spent in the regions or districts interviewing government staff with experience of the NSP about their views of the programme or their current constraints relating to nutrition information. Thus, the views in this report are mainly derived from the international and national level although one ex-regional government staff member was interviewed. It is hoped that the findings will also be shared with regional staff who were involved in the programme.

The report covers all of the points and analysis requested in the Terms of Reference (TOR) albeit in a slightly different order from what was originally envisaged. It is divided into 11 sections. Sections one and two contain the executive summary and introduction. Section three traces the history of the NSP while sections four and five describe and analyse design and implementation issues. Sections six and seven focus on how the information was interpreted and issues relating to sustainability of the programme. Sections eight and nine describe the current nutrition situation in Ethiopia

and the role of nutrition information. Section 10 presents the main conclusions and lessons learned while section 11 presents recommendations for SC UK in Ethiopia, for agencies working in Ethiopia and for SC UK globally.

3. History of NSP

This section traces the history and developments of the NSP from its earliest form up to the time that it was phased out and beyond.

1978-1986 Antecedents to the NSP

Birth of the Nutrition Field Worker programme

SC UK started operations in Ethiopia in 1974 in the wake of the drought-related famine, which caused hundreds of thousands of deaths in Wollo and Tigray. In the same year, the government formed the Relief and Rehabilitation Commission (RRC). In an attempt to prevent a repeat of the famine, the European Union (EU) established strategic grain reserves in Wollo. Linked to these, was a basic screening system supported by Oxfam. Students were employed to live in the grain reserve sheds and to measure children brought in from the villages. Those with low weight for age (underweight) received food (Personal Communication: John Seaman).

SC UK took over these somewhat makeshift arrangements in 1978 and the Nutrition Field Worker (NFW) programme was born. The objective of the programme was to monitor and improve the nutritional status of young children and their mothers. Twenty five high school graduates recruited from Dessie were trained as NFWs. They covered nine of the most drought-prone awrajas (former provinces which were subsequently abolished) in Wollo out of a total of 12 awrajas. The NFWs worked with the RRC and the Ministries of Health and Agriculture and Rural Development (MoH, MoARD). Children attending clinics and the children of relief beneficiaries at RRC distribution points were measured and referred, as appropriate, to feeding programmes, and for nutrition and health education.

In 1980, the methodology was adapted. A further objective was added – *to provide nutritional surveillance of the 'at risk' population and monitor impact of the programme interventions*. Programme coverage was reduced so that each NFW focused on one or two Farmers Associations (FAs) or about 250 families each. In addition to anthropometric data, food price information from woreda (district) town markets was collated from MoARD sources.

The NFW system had a number of salient features. Firstly, the focus was on acute malnutrition (in 1983 the anthropometric index used was changed from weight for age to weight for length). Secondly, the screening was linked directly to intervention in that children with low weight for length (WFL) were referred for feeding, health and nutrition education. Thirdly, the NFWs knew the communities where they worked well. The NFW programme therefore had the potential to play a role in famine early warning.

Certainly, the NFWs appear to have been successful in drawing attention to the impending famine of 1983-1985. An SC UK staff member who worked in Wollo during this period concluded that the anthropometric data picked up growing vulnerability to stress, though on its own it didn't give a clear warning of food shortages or their precise impact. Rather, the NFW programme as a whole including

the local knowledge that it provided was as important as the data in food relief advocacy and relief targeting (Appleton, 1988).

Redeployment of the NFWs during the 1984-1985 famine

Although there had been warning signs since 1981, it was not until October 1984 that Michael Buerk of the BBC alerted the world to the scale of the “*biblical famine*” that took the lives of hundreds of thousands of Ethiopians. Drought in combination with military activity had led to mass migration of families in the north of Wollo to Korem in northern Ethiopia since 1982. Western governments were reluctant to get involved, however, while the military government of Mengistu Haile Mariam was accused of spending money on buying weapons to continue the war against Eritrea and Tigray.

The NFWs had sent reports about the Korem destitute that had prompted nutrition surveys and subsequently led to SC UK establishing emergency feeding programmes. The NFWs were, quite rightly, withdrawn from the field to go to Korem to support SC UK’s supplementary and therapeutic feeding programmes. They returned to the field at the end of 1985 when the feeding centres were closed.

The 1984-1985 famine was a watershed. Widespread media coverage increased the awareness of the world to the situation in Ethiopia and prompted a massive public response. It also increased pressure to develop effective early warning systems to prevent such catastrophes from ever happening again.

Training of NFWs

From 1985 to 1987, a series of training courses for the NFWs were run jointly by SC UK, the United Nations Children’s Fund (UNICEF) and the Ethiopian Nutrition Institute (ENI). Each course lasted three months and covered a variety of nutrition-related subjects. In total about 50 staff were trained.

1986-1991 The Nutrition Surveillance Programme is established

The famine of the mid-1980s which affected large areas of the Horn of Africa shocked the world. A lack of information was blamed for the lack of a timely response and this triggered a huge amount of interest in Early Warning Systems (EWS). Within Ethiopia, this heralded the beginning of the NSP.

NSP coverage and aims

The NFW programme was expanded in 1986 and renamed the NSP. A new three-year project agreement was signed between the RRC and SC UK (RRC, 1987). The objectives of the programme were far more ambitious than previously. Rather than simply monitoring nutritional status, the NSP adopted objectives closer to that of an early warning system (EWS); namely to warn food aid agencies about impending food shortages and to advocate for timely action. By 1989, the clear objective of the NSP had become “*to provide nutritional status information for early warning purposes*” (RRC, 1989).

The NSP was also expanded to cover three of the most vulnerable areas of the country: Wollo and Tigray highlands; Southern Shewa (including Wolayita in Northern Omo) and Hararghe (including pastoral areas of the Ogaden). The number of staff expanded to three expatriate nutritionists and sixty-seven national staff. In

each of the three areas, an expatriate nutritionist assisted by a regional supervisor led a team of national NFWs.

Between 1987 and 1989, the NSP methodology was examined and redefined, resulting in the production of RRC guidelines which standardised nutritional surveillance methodology within Ethiopia (RRC, 1989). It involved the purposeful selection of 12 clusters in each awraja and the random selection of 50 children under five in each cluster. These children were weighed and measured initially every month. In addition, price data was collected from local markets and anecdotal morbidity and mortality information was noted. The mean WFL of children for each awraja was calculated. A mean WFL of 90 per cent was set as the cut-off point below which an emergency intervention was required. In addition, cluster surveys were carried out twice a year as a means of verifying the surveillance data.

Relations between SC UK and the government were generally good and the 1987 project agreement signalled the desire for closer coordination between the RRC and SC-UK, and for capacity building. One objective was *“to work towards the eventual total integration of the programme into the Early Warning System of the RRC.”* (RRC, 1987). During this period, SC UK seconded nutritionists to the RRC. These nutritionists worked on the NSP and helped to develop the methodology for nutrition assessment. Despite this, the NSP remained a SC UK resourced and controlled programme.

The NSP had evolved to become explicitly linked to food shortage and food aid programming. This is unsurprising given the political and aid context in Ethiopia at that time. Donor governments took a hard line against the Marxist-Leninist regime and Ethiopia was virtually starved of development aid. Although emergency aid was available in significant quantities, this was mostly in the form of food aid. Thus, alternative forms of aid to address the other underlying causes of malnutrition (health and care) were not readily available, providing little opportunity for SC UK to advocate for interventions other than food aid. This bias of the NSP was recognised by SC UK *“The NSP is primarily concerned with food aid. It exists to provide objective evidence in support of government appeals to the donors for food, and to assist the government with targeting of food aid in-country”* (Lawrence, 1994).

1991-1995 Seeds of the Household Food Economy Approach

The ‘helicopter’ surveys

SC UK carried out a number of ‘helicopter’ surveys (so called because the teams travelled to the survey areas by helicopter) in the early 1990s. These included a survey of the Ogaden,¹ a survey of Somaliland² and a survey of the North East Highlands, which led to the publication of ‘Making Ends Meet’.

The latter survey was carried out in late 1992 at the end of the first full, peacetime agricultural cycle for many years and at a time when the government and donors were beginning to engage in positive discussions about aid priorities (Holt and Lawrence, 1993). The survey was undertaken to build up a picture of the rural economy *“not to*

¹ The final report of the Ogaden survey was called ‘The End to Isolation’

² The final report of the Somaliland survey was called ‘The Prize of Peace’

estimate emergency requirements, but rather as an account of how people now live when there is peace and some rain ...The essential questions would be: How are people living, and what are their chief constraints? In short, how are they making ends meet?"

As part of the data collection, under-five nutritional status was assessed and compared with food insecurity indicators (Holt and Lawrence, 1993). The analysis concluded that there was little relationship between food security and nutrition; a point that is discussed in greater detail later. Further research was recommended, however, to examine the underlying causes of malnutrition though this was not undertaken by SC UK until much later.³

The 'helicopter' surveys were very influential in shaping the future of the NSP and also provided the early thinking behind the Household Food Economy Approach (HFEA).

NSP orientates towards food security

As a result of 'Making Ends Meet', the objectives of the NSP were adapted again. The focus on *food shortage* was changed to a focus on *food security*. This reflected the growing attention in general being paid to food *access* rather than food *availability* as a result of the work of Amartya Sen. Food security had become common parlance. The primary objective of the NSP was now to provide early warning of widespread food insecurity. Anthropometric data continued to be collected, but in addition, detailed information on around thirty food security indicators was gathered. Some of these are shown in **box 1**. Information on confounding factors such as food aid receipts was also collected while morbidity and mortality data were collected sporadically.

Box 1: Food security indicators collected by the NSP

- ⇒ Perceived rainfall quality
- ⇒ Cropping patterns and crop production
- ⇒ Pest infestation
- ⇒ Crop and livestock prices
- ⇒ Terms of trade (between cereals and livestock)
- ⇒ Availability of agricultural inputs
- ⇒ Income from labour and firewood sales
- ⇒ Relief food and food for work distributions
- ⇒ Distress migration
- ⇒ Households' market dependency
- ⇒ Households' diet

A new project agreement was negotiated in 1992 between SC UK and the RRC which outlined the intention to develop the non-anthropometric data sets and also suggested that the revised data collection could address the question of additional or alternative interventions to food aid (DPPC and SC, 1992).

³ SCUK is currently carrying out research into the underlying causes of chronic malnutrition across various livelihood areas.

At this time, the Ethiopian Government's Early Warning System (EWS) was quite well developed (see **box 2**) albeit heavily centralised. The system was, however, heavily dependent on agencies like SC UK to provide nutrition information. Furthermore, non-government organisations (NGO) information had the advantage of being local from some of the most vulnerable parts of the country.

A more sophisticated management structure for the NSP was developed. Three regional technical managers based in Addis Ababa, Dessie and Dire Dawa managed teams of three, including one food security information officer and two NFWs who were employed to collect information. In addition, there was an NSP project manager and a technical manager at central level. Data was analysed at regional level and maps generated.

The re-orientation of the NSP had several implications. Firstly, the system was no longer primarily focused on anthropometry but had become a food security and nutrition surveillance system. In effect, the NSP had become an EWS in its own right, covering a relatively small area compared to the Government EWS and feeding into it.

This meant that the food security data collected should be high quality, and that there was expertise to interpret the data. The information had to be persuasive and understood by non-technical government staff and donors. It therefore had to be presented in a manner which was clear and laid out options for action. The heavy emphasis on food security bound SC UK closely to advocacy for interventions to combat food insecurity (with emphasis on food aid) rather than any other type of emergency intervention. As mentioned above, this reflected the donor situation at this time.

Box 2: The Ethiopian Government's EWS

Ethiopia established its national EWS in 1976, within the newly-formed RRC. It was the first national EWS in Africa. In the early days, the EWS was closely tied to nutrition surveillance as the EWS took over from the 'Food and Nutrition Information System' of the Ethiopian Nutrition Institute in the 1970s. However, over the years its methodology evolved, placing much greater emphasis on agricultural and socio-economic indicators. The EWS was based on two broadly defined food supply systems: an agricultural one which was crop dependent; and a pastoral one which was livestock dependent. There was a three phase sequence to the EWS:

1. Monitoring food supply indicators e.g. rainfall and crop production
2. Monitoring social stress indicators, e.g. market and migration data
3. Monitoring individual stress through nutritional status and disease

Much of the primary data collection was contracted out by the RRC to different government departments. For example, market price data collection and crop production forecasts/estimates were contracted out to the Central Statistical Authority. Only limited primary data collection was done by the EWS itself, for example through one-off surveys and twice-yearly pastoral surveillance. Although the EWS had its own Nutrition Unit, this was poorly resourced and the EWS was mainly dependent upon NGOs for nutrition data, especially SC UK. During the early 1990s CARE and SC UK were the two main international NGOs engaged in early warning work in Ethiopia.

Ethiopia's EWS has been supported by donor funding for much of its life, although it was

poorly resourced during the Mengistu regime, not least because of difficult donor/government relations at that time.

Until the mid 1990s the EWS was heavily centralised with all data analysis being carried out in Addis Ababa. With the process of regionalisation in the mid 1990s the EWS embarked upon a process of decentralising, but initially to very weak local authorities. The United Nations Development Programme provided support to this process.

The EWS has been very food-aid oriented for much of its life, geared to an annual forecast of the numbers and location of people regarded as at risk, with an assessment of the food aid required. The initial forecast was usually provided in October (the end of the *meher* season) and revised in February. The EWS's food aid orientation is a legacy of the 1980s when emergency food aid was virtually the only international aid resource available to Ethiopia. However, this emergency food aid orientation seemed to continue even after the change in government and improved relations with western donor governments in the 1990s.

The challenge of linking short-term relief with the long-term objective of reducing vulnerability has long been on the agenda and much debated; but changing practice to match policy intentions has been much slower.

Based on: Buchanan-Smith and Davies, 1995

Secondly, the system was now measuring two different things. Whilst anthropometry measured the *outcome* of the three different underlying causes of malnutrition (food insecurity, lack of access to health care and an inadequate care environment), food security indicators measured the *process* of only one factor; namely food insecurity. Thus the problem of interpreting nutritional and food security data in combination was introduced.

The above issues were not necessarily resolved satisfactorily. The list of food security indicators collected was daunting. Understanding the trends and the relationship between these indicators required a sophisticated knowledge of local conditions. Yet the mobile field teams were now based in regional centres so were one step removed from the field although still involved in data collection. While a large range of food security indicators were analysed by SC UK, only a few of these were chosen for dissemination due to ease of presentation and in view of the target audience. These included terms of trade (cereal to shoat⁴), crop and livestock production, livestock sales and food assistance.

Furthermore, the nutrition data did not necessarily accord with the food security data. There were incidences when the food security data suggested an emerging food crisis while the mean WFL did not fall below the 90 per cent trigger. Examples of this are presented below.

1995-2001: A focus on credibility and communication

Development of the methodology

In 1995, the NSP methodology was adapted again (see **box 3** for details) and was widely viewed as a credible and professional system. The anthropometric data was

⁴ Shoat is the average price of sheep and goats

now being presented alongside a range of food security and socio-economic data in the NSP reports, the main vehicle for disseminating the results.

NSP Focus

The early NSP reports provided considerable detail of the survey findings with separate reports produced for each survey area. On the front page, the findings of each quarterly round were summarised and the implication for intervention clearly set out. In some cases, explicit calls for an increase in food relief were made.

While the NSP was well received, the NSP reports acted as *background* rather than *action* documents. They provided an *alert* rather than a *trigger* for response (Anderson and Bush, 1995). The reports were widely circulated each quarter but the lack of forum for discussion of the results reduced the potential for lobbying and advocacy.

Recognising the weak link between the NSP reports and decision-making, SC UK set out in 1995 to design a comprehensive ‘communication strategy’ for the NSP (Anderson and Bush, 1995). This addressed three concerns:

1. Increasing the impact of the NSP reports (reporting)
2. Improving the links with implementing agencies (institutional linkages)
3. Improving the profile of the NSP in general (building relations)

The outcome of this was two new publications: *NSP Results* and *NSP Focus*. These were targeted and distributed to around 20 donors, NGOs and other agencies as well as being distributed within the DPPC and other government agencies.

NSP Results provided seven pages of in-depth analysis every quarter while *NSP Focus* provided a bi-annual summary of the findings or in some cases, in-depth analysis of a particular problem area. For each geographical area, nutritional status information was presented in terms of percentage mean WFL and the changing trends. Trends in food security were also presented. The indicators most commonly described were:

- Rainfall
- Terms of trade (grain for shoat)
- Prices (grain and cattle)
- Sale of shoat, oxen and cattle
- Livestock condition
- Dependency on the market (the percentage of households having to buy from the market)
- Distribution and access to food assistance.

Colourful maps and graphics were included to illustrate areas of severity and trends. Unlike its predecessor, *NSP Focus* did not make direct recommendations but indicated the main food security and nutrition problems and the likely consequences if additional (food) relief assistance was not forthcoming.

1998-2001 Phase out of NSP

SC UK took the difficult decision to phase out the NSP in 1998. The primary reason for the decision was undoubtedly financial. SC UK was supporting the NSP through its unrestricted funding budget at an annual cost of around £215,000. While the cost represented less than two per cent of SC UK's total budget in Ethiopia between 1998 to 1999, substantial cuts in the unrestricted funding budget had been made and had resulted in reductions to the overall NSP budget (Chapman, 1999).

A second factor was the desire to hand over the system to Government. Certainly government capacity for early warning was increasing. The EWS had become more decentralised and Early Warning Committees at woreda and regional level were being established resulting in a greater presence of government staff at field level. During the last project proposal preparation, a series of negotiations between SC UK and the Government at federal and regional level were undertaken including analysis of Government capacity building needs for the hand over.

Nonetheless, the hand over did not take place as envisaged. On the government side, it is likely that the cost of sustaining the NSP was seen to be too great. Rather, the government requested training in nutrition information collection which was carried out at a later stage and some of the NSP assets were handed to Government to assist them with their early warning activities (two vehicles for the Haraghe programme, measuring equipment, computers, photocopiers etc.).

A third factor affecting SC UK's decision at this time, was their desire to promote the HFEA as an appropriate methodology for early warning. In January 1999, a three year project was started to promote HFEA *"in the Amhara Regional State to demonstrate the development of an effective early warning system that may be replicated elsewhere and will inform the national debate"* (SC, 2000). By 1998, NSP staff time was being diverted to assist in the production of reports and risk mapping that used the HFEA approach as a framework for analysis (Chapman, 1999). It would appear, therefore, that the lack of capacity in Government to take over the NSP, the financial restrictions facing SC UK and SC UK's growing interest and belief in HFEA for early warning purposes meant that the NSP was no longer a priority. At the same time, SC UK ensured that it maintained independent capacity to undertake nutrition assessments i.e. nutrition surveys.

The NSP methodology, specifically the use of mean WFL was also increasingly viewed both within and outside Ethiopia as outdated, isolated and poorly understood by stakeholders (Borrel, 2001).

In addition, there appears to have been general consensus from within SC UK in Ethiopia and beyond that the NSP was no longer an appropriate system.

Circumstances had changed:

- Previously inaccessible areas were now more accessible to aid agencies who could collect their own information
- More aid agencies were now active in particular regions
- Methods of collecting food security data were being developed which could replace nutrition surveillance

While there appears to have been heated debate within SC UK about whether the NSP should continue, the decision to phase out the NSP was taken in the absence of any evaluation or examination of the overall effectiveness or cost efficiency of the system. There also appears to have been no assessment of the existence and reliability of alternative systems that incorporated nutrition information for early warning. In hindsight, this is unfortunate, as it would have provided credibility and objectivity to the decision making process.

Withdrawal from the regions was phased, stopping in South Wollo at the end of 1999, in North Shewa and Tigray in 2000, in Wolayita in 2001 and finally ending in 2002 in North Wollo. At least some of the regions had concerns about the phase-out of the NSP as an internal SC UK memo noted. *“There has recently been a great deal of resistance...in South Wollo and Oromiya Zones of Amhara Regions. This is primarily due to the realisation that the DPPC will be unable to provide the necessary resources (both human and capital) to collect information about the deteriorating food security situation”*(Chapman, 2000). The regions also suggested that the requirement for nutrition information would remain and that engagement by other agencies would not necessarily *“solve the issues of sustainability faced by the NSP”* (Chapman, 2000). Furthermore, it was reported that the regions *“have started to question whether or not the donors will view anthropometric data collected by the Government in the same way that they view that of an independent source.”*

Transferring skills to the DPPC

In 1998, a three year plan was agreed between SC UK and the DPPC with *“the aims of sharing and transferring NSP’s skills in nutritional surveillance and building the governments capacity to conduct rapid nutrition assessments”* (DPPC and SC UK, 1998).

The plan was to train a total of 20 regional and central (DPPC, MoARD and MoH) staff on the theory and practical application of emergency nutrition assessment and eight staff on data processing and analysis. In addition, DPPC staff would be seconded for a period of 20 to 60 days to participate in NSP field level data collection, data checking and analysis. The plan also included handing over the large NSP dataset to the DPPC. Importantly, the focus of the training was not on the NSP per se but on emergency nutrition surveys, though the guidelines for carrying out NSP data collection were used (i.e. mean WFL) rather than international guidelines for conducting nutrition surveys.

At this time, a consultant was contracted to assist in providing an Ethiopia specific training package in EPI Info. Representatives from each region participated in the training.

2001-2006 From nutrition surveillance to rapid nutrition assessments

Standardising nutrition surveys

During the 1999 to 2000 crisis, a large number of nutrition assessments were conducted by agencies. The problem was that the majority of them failed to use standard methods of measuring and reporting nutritional status. An analysis of 125 nutrition assessments and surveys conducted during this period found that *“the design and methods of the surveys often failed to follow cluster sampling recommendations*

and guidelines, and thus yielded results that could not be considered sufficiently valid or precise” (Spiegel et al., 2004). This was particularly worrying in view of the fact that the assessments probably influenced decisions around resource allocation.

The experience highlighted the need to revise the DPPC guidelines on nutrition assessment and also set the tone for greater standardisation. The DPPC established a Nutrition Task Force (NTF) at national level consisting of government institutions, NGOs and United Nations agencies. Chaired by the Emergency Nutrition Co-ordinating Unit (ENCU⁵), the NTF produced a new set of guidelines which were finally produced in 2002 (DPPC, 2002). SC UK took a leading role in initiating the guidelines as well as in the production of the guidelines.

The new guidelines marked a shift away from viewing nutrition data as having an early warning objective towards the objective of confirmation of a problem. *“The main use of nutrition status data is for verifying a nutrition-related problem and for advocating to the international community for an emergency response”* (DPPC, 2002). The guidelines also outlined how to gather data on the underlying causes of malnutrition i.e. food, health and care as per the UNICEF conceptual framework.

Introducing the RATS

In 2001, SC UK employed a consultant to develop an approach to using nutrition data for early warning to be managed by the DPPC. The consultant concluded *“Routine collection by the DPPC of objective nutrition data to monitor deteriorating food security is not practical”* (Borrel, 2001). Instead, rapid nutrition assessments on an 'as-needed' basis based on WHO protocols were recommended as well as capacity building of the DPPC.

The plan was to build up a series of baseline nutrition assessments in good or typical years in different seasons. The one-off surveys could then be compared with the baselines. Funding was sought to develop the baselines, but unfortunately failed. Subsequently, baselines have been developed by SC UK through re-analysis of the NSP data.

SC UK now entered a new phase of information gathering by forming and training Rapid Assessment Teams (RATS and RATSO⁶). These teams are employed by SC UK and carry out 30 x 30 cluster surveys at the request of the DPPC and other agencies. The surveys are carried out to *confirm* a food shortage once a problem has already been identified rather than *alert* of a problem. Anthropometric results are reported in terms of global acute malnutrition and severe acute malnutrition (GAM and SAM).⁷ Where previous surveys have been carried out, the results are compared over time. Some data on underlying causes of malnutrition is also collected and is analysed separately from the nutrition data.

⁵ The ENCU was established in 2000 after lobbying by WFP and UNICEF and supported initially with USAID funds and later by UNICEF funding.

⁶ RATSO is the name given to the RAT team for Somali Region which was formed in 2004 because of the special security situation in Somali Region.

⁷ The results of all nutrition surveys are published in Quarterly Reports produced by the ENCU. The use of data remains explicitly linked to food aid as the stated objective of the ENCU is to: *“Facilitate the use of good quality nutrition and nutrition-related information to enable the rational use of food aid and other resources in emergency affected areas”* (ENCU, 2003).

The RATS conduct around ten nutrition surveys every year compared to nearly 100 carried out in total by other agencies. In this respect, SC UK is a relatively minor player in providing nutrition survey information in Ethiopia.

During the NSP, SC UK worked in and with communities and valued local knowledge as much as quantitative data. Today, the emphasis is on technical standards. Surveys are largely carried out by outsiders and require little or no qualitative analysis or community input.

The NSP database analysis

In response to a request from the DPPC, SC UK commissioned an analysis of the NSP database in 2004 covering the period 1995 and 2001 in order to:

1. Produce seasonal baseline prevalences of malnutrition in the NSP areas⁸
2. Assess the use of proxy food security indicators in predicting the prevalence of malnutrition in the NSP areas.

The analysis found that the baseline prevalences of child malnutrition (<-2 SD weight for height) were above the reference levels of malnutrition in all areas and in all seasons. The authors rightly cautioned against these baselines being seen as ‘acceptable’ levels of malnutrition. However, the baselines could be used to compare survey results gathered currently. In some cases a relationship between anthropometric data and food security indicators was found, and in other cases it was not observed. This is discussed in more detail below.

The data analysis was written up in a report which was widely disseminated along with a verbal presentation to key stakeholders. Since this time, the baseline data has hardly been used and despite repeated efforts by SC UK, the lack of capacity in the DPPC has meant that the data has not been handed over to them.

Conclusions

The NSP evolved from a small project in the late 1970s concerned with monitoring and improving nutritional status into a system with an early warning objective, collecting a large number of food security indicators in addition to anthropometry from remote and drought prone regions of Ethiopia. The NSP information was high quality and objective and filled a gap during a period when government information was mistrusted.

Following the early household food economy work in the 1990s, the NSP increased the range of food security indicators collected. Nutrition trends were also reported although these trends did not always fluctuate in exactly the same way as food security information. The main use of the NSP information was to alert agencies and government to areas experiencing food shortages and in need of food aid. The non-food causes of malnutrition were not emphasised.

⁸ Baseline was defined as “*the year with the lowest annual prevalence of malnutrition among the years where the population received below average amounts of relief*” (Duffield and Myatt, 2004). The use of the word ‘prevalence’ is questionable here, as NSP data was never collected to establish population prevalence. Rather it was collected to examine changes or trend in a particular sentinel population.

The integration of the NSP within the government EWS was discussed in the 1990s and attempts were made to transfer the necessary skills to the DPPC. However, the NSP remained outside the government until its closure in 2002. Hand over of the NSP was thwarted by the lack of government financial and human capacity to absorb the system.

SC UK's long-term investment in the NSP is noteworthy and unusual in Africa. The evolution of the NSP to some extent reflected awareness within SC UK of the importance of nutritional information within a county that was as prone to nutritional crisis as Ethiopia.

4. Design of the NSP

As described in the previous section, the objectives and methodology of the NSP evolved over time. This section critically appraises the design of the system as it was at the time of its closure in 1998 (see **box 3**). A number of key questions (below) are raised in this section. The questions have general applicability and are addressed using the Ethiopia experience plus experience from elsewhere in the world.

- **Is nutrition a useful early warning indicator of a food crisis?**
- **Is nutritional status an early warning indicator of a humanitarian crisis (increased mortality)?**
- **Does nutrition have a role in early warning?**

Box 3: NSP methodology

The NSP employed a random longitudinal cluster survey methodology. Survey areas were selected in Tigray, North Wollo and Wag Hamra, South Wollo and Oromiya, South Shewa, West Hararghe, East Hararghe and Wolayita in North Omo.

A survey area was one awraja (since abolished) and comprised a group of woredas. A random sample of 12 villages or clusters was selected within each survey area at the beginning of each survey year (in the months of November and December) and visited at three monthly intervals over the following 12 months - post-harvest (December-February), early *belg* (March-May), late *belg* (June-August) and *kremt* (September-November). In the following year, new villages were randomly selected. A total of around 185 clusters were surveyed.

A total of 50 children in the selected villages between 70 and 110 cm in length were registered. The WFL of these children was measured at every visit (about 50 children aged from approximately 6-59 months in each location). Length was measured in all children as height is less convenient to measure in field conditions. For children >100cm, height was calculated as length minus 1.5 cm. Efforts were made to follow up all children.

Each child's WFL was calculated as a percentage of the NCHS reference. Mean WFL was calculated for each survey area. A difference between one point in time and the next of a mean 0.7 per cent was considered as showing a statistically significant change (Lawrence, 1991). Guidelines adopted by the RRC called for intervention once the mean percentage WFL dropped below 90 per cent.

Data on crop and animal prices, animal sales and migration was collected from 15 households per locality. Village questionnaires collected information on various socio-economic and environmental factors. In total, 30 food security indicators were collected. Anecdotal reports of illness, such as epidemics, were included in reports.

The data were collected by mobile teams consisting of NFWs who collected the anthropometric data, and food security information officers. The data were analysed in each of the three regional offices and summaries prepared, which were sent to Addis Ababa where the final reports were prepared and approved by Government.

Design strengths and weaknesses

Box 4 summarises the main design strengths and weaknesses of the NSP. The main strength was that through taking regular repeated measures of the same population, it was possible to detect small changes in the situation (food security indicators and/or anthropometry) at an early stage. Interventions could then be sought to prevent any further deterioration. Furthermore, the information collected was of a high quality and involved a combination of food security, socio-economic and nutritional data.

The NSP was limited, however, by its coverage and focus on wasting in under-fives. There was also an over emphasis on food security indicators which overshadowed the other underlying causes of malnutrition: health and care. The mean WFL indicator was criticised as inappropriate.

Box 4: Design strengths and weaknesses of the NSP

Strengths

- ⇒ Coverage of some of the most vulnerable geographical areas in Ethiopia
- ⇒ Random selection of sites – not dependent on accessibility of area
- ⇒ Rigorous, good quality data collected
- ⇒ Trend analysis possible
- ⇒ Anthropometric and food security/socio-economic data collected
- ⇒ Mean weight for length indicator sensitive to change

Weaknesses

- ⇒ Limited coverage
- ⇒ Survey areas very large and so only able to pick up major events
- ⇒ Sampling relied on administrative boundaries rather than food economy zones
- ⇒ Health and mortality data collected non-systematically
- ⇒ Focus on wasting in under-fives (other age groups and forms of malnutrition left out)
- ⇒ Same sample followed over time so introduced bias as sample grew older
- ⇒ Oedema information only collected after 1999
- ⇒ Mean weight for length indicator outdated and not understood

The role of nutrition trend data

Nutrition trend data has the following potential roles:

- It can provide *early warning* of a crisis in combination with other data (e.g. food security, mortality, morbidity and care factors)
- It allows *prediction* of a likely sequence of events based on past experience
- It promotes *in-depth understanding* of particular communities as repeated visits are made to the same community

Despite these advantages, nutrition trend data has fallen out of fashion both within Ethiopia and internationally. One reason for this was the arrival of 30 x 30 cluster sample nutrition surveys which remain popular today. These surveys provide a reliable estimate of the level of malnutrition (usually restricted to wasting in under-fives) at one point in time. Donors, such as USAID, are particularly keen on nutrition

surveys as part of the SMART⁹ approach, and in Ethiopia, USAID has invested heavily in nutrition surveys carried out by NGOs.

However, a common perception within Ethiopia is that nutrition surveys are somehow in competition with nutrition surveillance and that nutrition surveys are superior because they use internationally accepted methodologies. Statements such as “*the NSP methodology, as an approach to monitor the nutritional status of populations in emergency affected populations, is becoming increasingly isolated and outdated*” because it does not conform to standard sampling methodology and “*is not comparable with the standard method of reporting, that is, prevalence of acute malnutrition using z-scores and confidence intervals.*” (Borrel, 2001) have added weight to this perception.

While there are internationally accepted norms governing nutrition survey methods, there are no such standard norms for the collection of trend data through nutrition surveillance systems. As long as the methods adopted are scientifically valid and meet the objectives, they can be developed to suit a particular context. The objectives of nutrition surveillance systems that collect *trend* data and nutrition surveys that focus on *prevalence* data are distinct. They can be complementary and are not mutually exclusive. In short both have their uses and limitations.

In the case of the NSP, the trend data had the potential to provide *early warning* of a crisis in combination with other data (e.g. food security, mortality, morbidity and care factors). It allowed *prediction* of a likely sequence of events based on past experience, and it promoted *in-depth understanding* of particular communities as repeated visits were made to the same community. Case examples to support these points are presented in section 5. Surveys cannot replace the functions which were provided by the NSP.

Coverage

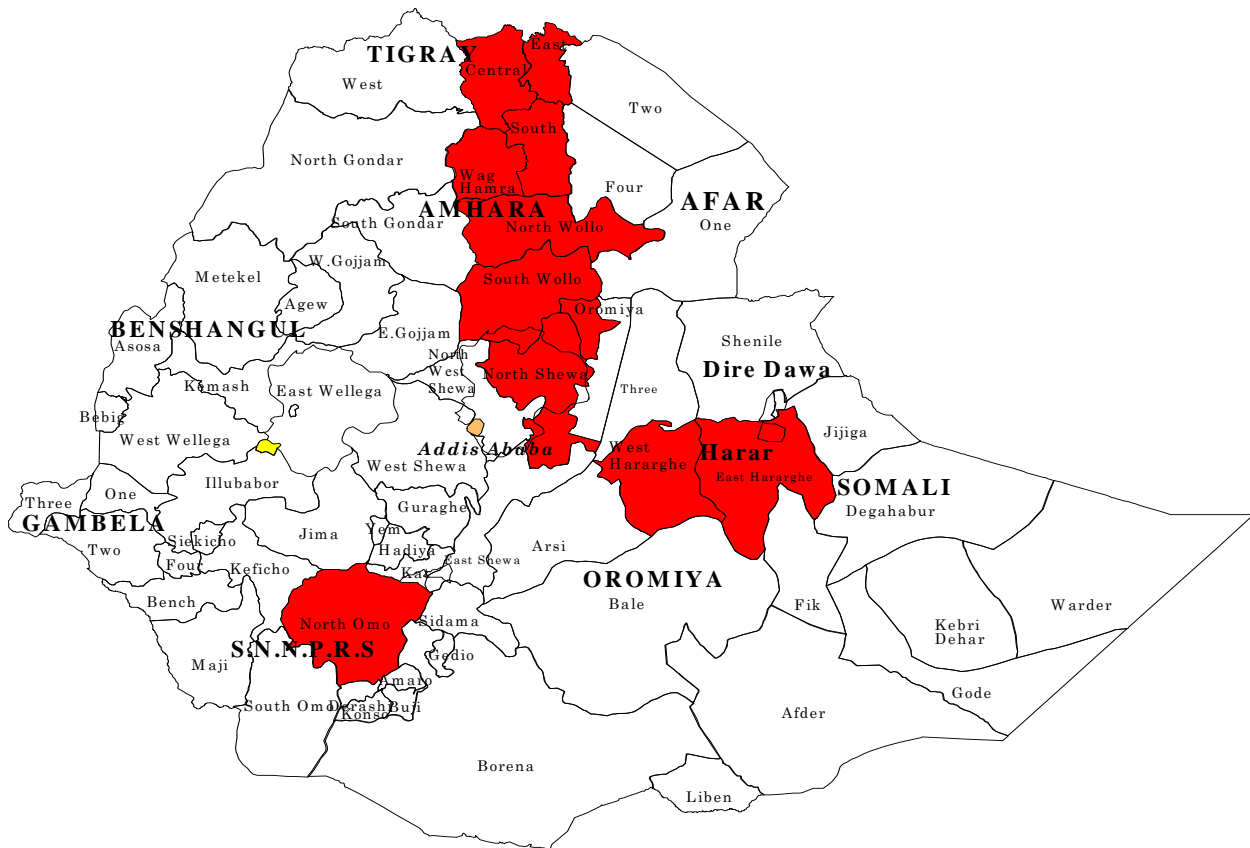
The coverage of the NSP was limited, as **map 1** shows, but did cover some of the most famine-prone areas of the country. Within the survey areas, the teams travelled large distances, often by mule, in order to reach a cluster. The NSP was, therefore successful in reaching remote areas of the country and pastoralist communities.

A major design fault, however, was that a small number of clusters were spread across very large areas. For example, in 1998 in Southern Tigray only two to three clusters were sampled per woreda, while in Wolayita only six to nine were sampled. In comparison, 30 clusters are sampled per woreda in nutrition surveys carried out today. The effect of this meant that only a few sites were representative of a large area. Thus changes in so-called ‘hot spot’ areas may be missed altogether. A second problem was that sampling was based on administrative rather than agro-ecological zone. This mixing of agro-ecological zones also had the effect of minimizing the chance of ‘real’ change from being picked up. One weakness of the NSP was that it frequently

⁹ SMART is the Standardized Monitoring and Assessment of Relief and Transitions an inter-agency initiative to improve the monitoring, reporting and evaluation of humanitarian assistance interventions.

reported nutritional levels above the 90 per cent cut off point. This may have been a design effect rather than the fact that nutrition remained consistently good.

Map 1: NSP survey areas in 1998



Concentration on the under-fives

The NSP focused solely on wasting in under-fives. The assumption was that this group could act as a proxy for the rest of the population and that acute malnutrition was the major form of malnutrition that needed to be addressed in an emergency-prone country such as Ethiopia.

There are indications, however, that the under-fives are not always the most nutritionally vulnerable in Ethiopia. One of the very few surveys to look at older children found that in the Ogaden older children (110-140 cms in length) had lower mean WFLs than younger children (70-110 cms in length). The findings suggested that the younger children were being preferentially fed milk and that older children were more nutritionally vulnerable (see case example in section 5).

In other circumstances, adults may reduce their own consumption to protect children. In this case, if the nutritional status of the under fives is the main tool for assessing population nutritional status, then a crisis may advance before nutritional decline is measured.

The focus on wasting of under-fives remains today and very few nutrition surveys ever measure other age groups. One of the reasons is the lack of international standards on anthropometry among adults and adolescent children i.e. we can measure other age groups but we don't know what it means. If we are measuring trends in nutritional status of other age groups then this latter problem is not so important, however if one-off surveys are undertaken then not being able to interpret the result is clearly a major drawback!

Following the same group of under-fives for the period of one year also had disadvantages. Over time, the sample grew older. If it is assumed that wasting is most prevalent in the youngest children (at around the time of weaning), then wasting levels would effectively decrease over the period of the year as a result of the aging sample.

The question of *who* is measured as either part of a surveillance system or in a survey is hugely important. If a system is only able to provide highly aggregated data, then it is possible that decline in the most vulnerable groups will not be detected. Similarly, if coverage is biased to the healthier children (e.g. those able to visit health clinics or get to a central point to be measured), then again nutritional decline in the most vulnerable groups will be missed. Sampling is crucial.

Food first bias

The NSP evolved from concentrating on anthropometry to focusing greater attention on food security indicators. A major drawback was the lack of data on morbidity, mortality and care factors, however. Some data was collected but irregularly and it was rarely published in the reports.

The NSP data therefore provided limited insights into the *causes* of malnutrition and the types of intervention that could have addressed those causes. The focus on food security and nutritional status alone implied that malnutrition was the result of lack of access to food alone. Combined with the overall aid and political context at this time which favoured a food first response, SC UK's advocacy was limited to interventions involving food. Thus, the NSP perpetuated the food first bias.

Appropriate nutrition indicators

The NSP used the nutrition indicator of mean WFL. There were misgivings about the use of this indicator (mainly from the international nutrition community), however, largely because it was not comparable with standard methods of reporting and because NGOs were not familiar with it (Borrel, 2001). As discussed above, this view was partly due to confusion between the objectives of surveys and surveillance.

The lack of confidence in the WFL indicator was based on non-conformity rather than scientific grounds. In fact, there was a strong scientific basis for using mean WFL. When you compare two normal distributions, you have a more powerful comparison when tests are based on comparisons of means than when using tests comparing proportions of individuals falling below a cut off point. This can be shown mathematically. Means are sensitive to change even within relatively small populations *"an increase or decrease of 1% in mean WFL is from a statistical point of*

view, highly significant, and two consecutive decreases of 1% or more represents a very worrying trend" (Holt and Lawrence, 1993). Put simply, if the actual WFL information from every child in the population sampled is used, instead of only children below the cut off, then a much smaller sample of children is required to estimate the prevalence of moderate and severe malnutrition. This has major advantages, e.g. data can be analysed more quickly, less staff are needed for collecting data and therefore more surveys can be carried out.

Despite this, the tradition among nutritionists and NGOs has been to compare the percentage of individuals below the cut off instead of comparing the means. The rationale is partly operational (the need to know how many children to treat or supplement) and partly historical: the field of nutritional epidemiology has been strongly influenced by epidemiologist with experience in infectious diseases.

In Ethiopia, the 90 per cent cut off for signalling intervention used by the NSP was a somewhat crude tool to ensure some response. In fact, decline in mean WFL was more significant than falling below the cut off point. A study by Lawrence found that rather than there being a clear threshold below which mortality risk increases, the risk increases gradually between 100 per cent and 80 per cent WFL and more rapidly thereafter. Mortality was roughly five times greater at 80 per cent WFL than at 100 per cent WFL. However, children whose WFL had declined over the previous two months were found to be at significantly greater risk than those whose WFL was stable. Lawrence concludes: *"It would appear that trend in WFL may be more important than absolute level. Our results indicate that mortality is likely to increase if mean WFL declines by more than 2% over a period of 4 months"* (Lawrence et al., 1994).

The finding that *decline* is more important than *absolute levels* has implications for nutrition surveys carried out so widely in Ethiopia today. One off surveys cannot measure decline (unless repeat surveys are carried out on the same population), so they may fail to pick up the very problems that they are designed to pick up.

Mid-Upper Arm Circumference

The use of Mid Upper Arm Circumference (MUAC) as an indicator of wasting is under discussion in Ethiopia. MUAC is a very effective rapid assessment tool for screening young children as it requires little in the way of human and financial resources. The growing popularity of Community Therapeutic Care (CTC) for the treatment of severe malnutrition has also increased interest, and in some cases support, for the use of MUAC as opposed to weight for height for determining eligibility for admission. This is largely because for CTC the recruitment and referral stages are managed by a large number of community volunteers. Thus, programme equipment needs to be inexpensive, while the generally low levels of literacy and numeracy require that equipment should be relatively simple. This allows the programme to keep down training and supervision costs. Furthermore, as volunteers need to rely on local transport, equipment needs to be easy to carry.

MUAC has been shown to have a strong if not stronger association with risk of mortality than weight-for-height/length among children between one and five years of age and is therefore a better predictor of death. Furthermore, one pivotal study comparing the ratio of lean mass/trunk (a gold standard) to various anthropometric

indicators suggests that MUAC is a better measure of nutritional status than weight-for-height (Brambilla et al., 2000).

However, there are arguments against using MUAC for screening:

- MUAC and weight-for-height cut-offs do not identify the same children as malnourished;
- MUAC cut-offs generally mean that more young children are classified as malnourished;
- There is some evidence that MUAC measures have higher inter- and intra-variability than weight-for-height measures.

In Ethiopia, the use of MUAC is not widely accepted due to the ambiguities around cut-off points for defining moderate malnutrition. However, some agencies are now using MUAC for both referral and admission to CTC programmes, i.e. Concern in Wollo. Generally, however, weight for height remains the preferred indicator for admission to programmes and rapid nutrition assessment of populations. One issue which may take on increasing importance in Ethiopia and other countries is that if MUAC is increasingly adopted for screening/referral and admissions to CTC and centre based therapeutic feeding then there would be a concomitant need to collect MUAC data and report prevalence of malnutrition by MUAC and oedema in nutritional surveys. The main reason for this is that programme planners are dependent on nutritional surveys to indicate likely case-load.

Nutritional status as an early warning indicator of food crises

The dominant view within Ethiopia is that nutritional status is a late indicator of crisis and therefore has no role in early warning. This view drove the decision taken by the DPPC to stop advocating that nutrition data should be collected on a regular basis in order to monitor deterioration in the food security situation (as laid out in previous guidelines) and to undertake rapid nutrition assessments on an 'as-needed' basis instead (DPPC, 2002).

“Nutritional status is viewed as a late indicator and once nutritional status has deteriorated, a food crisis is almost certainly well underway” (Borrel, 2001; DPPC, 2002).

“(Nutritional status) is a late indicator of stress and as such is normally used to justify decisions about interventions rather than providing an early indication of a problem as part of an early warning system” (Chapman, 2005).

“The agency (DPPC) views nutrition status data as a relatively late indicator of a food security ‘problem’ in comparison with other socio-economic and agricultural data” (DPPC, 2002).

The old chestnut of whether nutrition can provide early warning of a food crisis continues to be debated. Many factors affect the degree to which changes in nutritional status provide early warning of food crisis (see **box 5** for examples).

Evidence suggests that in some contexts, changes in nutritional status may occur at an early stage of a food crisis when populations are generally coping well, i.e. coping

strategies are not damaging or dangerous. This occurs when populations reduce meal frequency or meal quantity as a form of ‘belt-tightening’. The phenomenon of ‘belt tightening’ may be a normal response to seasonal shortages of food which can only be distinguished from abnormal ‘belt tightening’ when comparative data from previous years is available. Changes in nutritional status can, however, presage significant food insecurity by many months and be a useful early warning tool.

Box 5: Examples of the relationship between nutritional status and food security

During the war in Bosnia in the mid 1990s, adult nutritional status was found to be extremely sensitive to changes in food security. Changes in adult and elderly body mass index exactly mirrored changes in household food stocks while a reverse trend was observed for food prices. Child malnutrition did not show the same trend and levels remained low throughout the war. Thus in the context of Bosnia, adult nutritional status, as opposed to child nutritional status, was a useful way of assessing nutritional stress and a good indicator of food security. (Watson and Vespa, 1995).

In drought affected southern Faryab Region of Afghanistan in 2001, although coping strategies appeared to be exhausted with livestock depleted due to sales and families having to take loans at high interest rates, levels of wasting were only 7 per cent. However, scurvy was appearing amongst some population groups and micronutrient status was generally very poor. The experience showed how low levels of wasting can mask erosion of livelihoods and micronutrient malnutrition (Myatt et al., 2001).

In Burundi between 1999 and 2000, SC UK nutritional surveys indicated a low and stable prevalence of malnutrition even though the two main harvests were significantly reduced compared to normal. There were several explanations for this. Coping strategies may have been successfully employed, the nutritional status of the poorest segment of the population may have been adversely affected but was masked by the overall population nutritional status, and/or the surveys had been conducted after harvests when food availability was greatest (Chastre and Le Jeune, 2001).

In Darfur, Sudan in 2000 an HEA assessment predicted food deficit at some point in the future based on poor cereal production, high grain prices and low groundnut prices. However, a nutrition survey indicated existing high rates of wasting as well as signs of vitamin A deficiency. The survey also indicated a recent measles epidemic. Had malnutrition rates been interpreted in the absence of HEA data the high rate of wasting may have been attributed mainly to food insecurity (Collins, 2000).

In other situations, nutritional status may remain static and malnutrition rates low, though significant micronutrient deficiencies may be present, as coping strategies become exhausted and where food crisis are imminent. Alternatively, malnutrition rates may be high despite apparently good food insecurity because the health and care environments are compromised.

Various attempts have been made over the years to examine the relationship between nutrition and food security data collected via the NSP in Ethiopia. Anthropometric data was collected monthly from Wadla Delanta in the remote highland area northwest of Dessie over a three year period (1982-1984) i.e. the drought years leading up to catastrophic famine. Analysis showed that although the anthropometric data illustrated seasonal trends and gradually increasing vulnerability, “*it did not on*

its own give a clear warning of food shortages, their precise impact, or anything else specific” (Appleton, 1988).

In the late 1980s, Kelly found inconsistencies in the behaviour of food security indicators and anthropometry in Wollo. Deterioration in one indicator (e.g. harvest failure, or increase in grain prices) did not always coincide with deterioration in nutritional status. The importance of interpreting indicators in the local context, taking into account the wider determinants of food security and nutritional status, was stressed. Nevertheless, Kelly concluded that *“deterioration in anthropometric status is not a particularly late indicator of acute food insecurity in Wollo”*.

The NSP information from South Shewa, North Omo and Hararghe regions between 1987 and 1991 was examined by Lawrence. He showed that nutritional status frequently declined sharply during the first half of the year when food supplies were typically at their best. Thus, there didn’t appear to be a close correlation between the reported harvest yield and subsequent change in nutritional status and it was difficult to disentangle the effects of illness and food availability on nutritional status. Nevertheless, he concluded that: *“It is clear that SCF’s programme is capable of detecting the changes in nutritional status that are likely to precede the development of a food emergency”* (Lawrence, 1991).

A survey of the north-east highlands undertaken by SC UK in October-November 1992 looked at the relationship between nutritional status and food security. It found *“that WFL had little or nothing to do with either harvest quality or the level of relief provision. If anything, the reverse seems to be true”*(Holt and Lawrence, 1993). Explanations for this lack of relationship could have been due to differential income of villagers, morbidity patterns and/or caring practices. Lack of information precluded any final conclusions to be drawn, however.

More recently Duffield and Myatt have carried out a major statistical analysis of the NSP data collected from 1995 to 2001 (Duffield and Myatt, 2004). One of the objectives was to assess the use of proxy food security indicators in predicting the prevalence of malnutrition in the NSP areas. They therefore examined the relationship between malnutrition and three food security indicators: rainfall quality, crop prices and relief receipts in each region.

The results of the analysis were varied. In North Wollo, Wag Hamra and Wolayita there was a clear relationship between malnutrition and all three food security indicators with annual trends occurring in concert and a clear relationship between rainfall and malnutrition in Tigray. In South Wollo, Oromiya and North Shewa, on the other hand, no relationship between rainfall or crop prices and malnutrition were found. The authors concluded that it had *“not been possible to find reliable proxy indicators which can predict the rate of malnutrition in all the NSP areas”* (Duffield and Myatt, 2004).

What is generally acknowledged by nutritionists is that nutrition cannot be equated with food security because it is affected by other underlying causes in addition to food security; namely health and care. The view that nutrition = food security and malnutrition = food insecurity=food aid is erroneous. In the Ethiopia context, this

view, coupled with the political and aid environment that has favoured food aid rather than other forms of aid has served to perpetuate the so called ‘food first bias’.

The relationship between nutritional status and food security indicators is complex and many factors need to be considered in understanding the temporal relationship between food insecurity and nutrition. At the very least, there needs to be an understanding of coping strategies, potentially confounding health variables and other indicators of nutrition, e.g. micronutrient status, as well as information on nutritional status in other age cohorts, e.g. adults and the elderly.

Nutritional status as an early warning indicator of humanitarian crises (increased mortality)

In Ethiopia, the assumption that a humanitarian crisis must be resolved with food aid is now being challenged. Firstly on the grounds that food insecurity is a chronic problem and not necessarily a series of acute temporary crises. Secondly that the crises that continue to afflict Ethiopia are due to abject poverty, lack of infrastructure and basic services such as health and education, as much as to food insecurity. This has led to re-consideration of the type of aid needed to support Ethiopia with a greater stress on non-food needs (Government of Ethiopia, 2004 and 2006). The awareness of the chronic nature of Ethiopia’s problems has been known and written about for some time but the will and resources to address it as a chronic problem has been missing and therefore, the response has largely been confined to food aid.

If ‘crisis’ is defined in broader terms as a humanitarian crisis with accompanying risk of increased mortality, then how does nutrition rate as an early warning indicator?

Box 6 summarises research and experience concerning the relationship between malnutrition and mortality. It shows that while there is a relationship, the strength of the relationship is context dependent.

In the Ethiopia context, rapid declines in nutritional status per se are associated with increased mortality. Lawrence examined data collected through the NSP over three years in Wolayita and showed that where rapid declines in mean WFL were recorded, mortality increased very roughly three-fold even though mean WFL remained at or above the 90 per cent reference at all times (Lawrence et al., 1994)

Extreme malnutrition in itself is a humanitarian crisis in the sense that morbidity and mortality rates will increase significantly. The fact that one in ten Ethiopian children aged under-five are wasted (i.e. show signs of starvation) is an international scandal. It is especially unacceptable given that the level has remained static for at least the last 20 years. In this sense, therefore, current nutritional status in Ethiopia clearly indicates a humanitarian crisis.

Box 6: Relationship between malnutrition and mortality

The relationship between malnutrition and mortality is not straightforward. Overall there is an increased risk of mortality with severity of malnutrition. However, the research studies that have examined the relationship between malnutrition in children and subsequent risk of mortality show variable findings. In some studies a threshold effect was found in which risk does not change according to anthropometric indices until a level is reached at which mortality rates rise sharply. In others, a more linear relationship with steadily increasing mortality risk in relation to decreasing anthropometric indices, was found (Tomkins and Watson 1989).

The strength of the relationship is likely to be specific to the community and may be influenced by a number of factors. These include the health environment and caring capacity; factors that are most compromised in acute emergency conditions. Consequently, mortality rates cannot be predicted from prevailing rates of malnutrition. Rates of malnutrition and mortality do not necessarily increase in parallel. Rather, situations of high malnutrition and low mortality, and low malnutrition and high mortality can exist and represent different types of crises.

Concerns regarding ‘survivor bias’ (i.e. situations where mortality rates soar but mask deteriorating nutritional status because the most malnourished children die) are probably overplayed. This phenomenon has only been found when mortality rates are extremely high (under five mortality in excess of 15 or 20 per 10,000 per day).

Thresholds for the prevalence of malnutrition are used in decision-making frameworks to classify the severity of a humanitarian crisis and the necessary response. There are however differences between agency frameworks. For example WHO and Medecins Sans Frontieres (MSF) have different thresholds for the implementation of selective feeding programmes. Newly developed frameworks (for example (Darcy and Hoffman, 2003) define different phases of food insecurity based on a combination of indicators including malnutrition and mortality. Different thresholds for humanitarian crises may also need to reflect seasonal and geographical differences. This is reflected in SPHERE and SC UK guidelines which advocate for the use of locally appropriate baseline prevalence of malnutrition against which to judge crisis.

The role of nutrition in EWS

There are strong arguments for including nutrition data in early warning systems.

Firstly, there is no one indicator that alone can predict a crisis. Rather, a good early warning system should depend on a range of indicators that all measure slightly different things, and need to be interpreted in combination. Food security indicators alone will miss a health crisis. Systems which are insensitive to the political climate will fail to predict political disasters. Nutrition is one of a number of indicators which reflect, and are sensitive to, aspects of the environment that an EWS seeks to assess. Thus, it is one tool in an early warning toolbox.

Secondly, malnutrition is strongly associated (albeit inconsistently) with mortality and poverty (destitution). Furthermore, it is the outcome of a number of underlying factors all of which become increasingly compromised during the development of a crisis. In many cases, increasing malnutrition (whether in adults, children or in micronutrient status) precedes a crisis.

Thirdly, nutritional status is an objective indicator that is relatively easy to measure and is widely understood. It therefore has a credibility and 'status' above more 'qualitative' indicators.

Finally, nutrition has huge emotive potential and therefore unique power to elicit response.

Box 7: Nutrition information in EWS: a more nuanced approach

- ⇒ Analysis of nutritional information can provide more nuanced understanding about whether (and to what extent) populations are coping. For example, high levels of moderate wasting in combination with low levels of severe wasting may indicate that a population is coping, but coping strategies are close to failing (e.g. Collins, 2000).
- ⇒ Micronutrient deficiencies may occur before more obvious signs of malnutrition. Thus nutrition indicator monitoring may need to expand to include micronutrient status. This rarely occurs in spite of the fact that recommendations about food basket monitoring and micronutrient surveillance have been made in international fora over a decade, especially in emergency contexts (e.g. Assefa, 2001).
- ⇒ Analysis of nutritional status of adults in conjunction with the nutritional status of under-fives in the same household can help determine the degree to which nutritional problems are related to disease or caring practices, rather than food security constraints. In some contexts where child nutritional status is protected at the expense of adult food consumption, measuring the nutritional status of adults can lead to earlier detection of nutritional stress caused by food insecurity.
- ⇒ Nutrition information must be complemented by information on food security and livelihoods (including coping strategy), as well as information regarding health status and health service provision, to determine the degree of risk being experienced by a population affected by a shock. At the same time it is not straightforward to extrapolate findings to the same livelihood groups in different locations. It is vital to have some understanding of the sequence and intensity of coping strategies that precede famine, in order to interpret correctly the meaning of any observed behavioural change in a given locality. Coping strategy information could also be usefully developed into some form of index, e.g. CARE/WFP coping strategy index (CSI) where based on prior experience it is possible to aggregate and grade the types of coping strategies being employed and relate these to the likelihood and imminence of food crisis and/or famine.

The debate about whether to include nutrition in EWSs requires a more nuanced approach. What kind of malnutrition are we talking about? Which demographic groups should be sampled? How can the interpretation of nutritional data be more sophisticated? Some of the aspects which need to be taken into account are presented in **box 7**.

Conclusions

The design of the NSP was a significant departure from commonly used nutritional surveillance systems for early warning purposes. Although sentinel site surveillance had been used in other countries, e.g. western Sudan, there has been little experience of using mean WFL as an analytical basis for early warning. Implementation of this

approach conferred technical and operational advantages and disadvantages. On balance the appropriateness of this type of design may well need to be considered on a context by context basis. Certainly, based on the NSP experience, there is no evidence that this type of sentinel site monitoring and analysis is any less effective or useful than standard surveillance systems based upon repeated nutrition cluster surveys and the statistical rationale which led to implementation of the NSP has not been disproved. There remains a clear need for further debate, preferably based on comparative studies, over the merits and drawbacks of an NSP type design compared to more commonly used approaches.

During the life of the NSP there was movement towards collecting contextual information relating to the underlying causes of malnutrition. However, this clearly did not go far enough. Furthermore, certain design issues, e.g. focus only on under-fives, sample bias as age cohort changed, and poor coverage, were not adequately addressed.

The continued debate about the role of nutrition indicator monitoring within early warning and in particular whether nutrition is either an early or late indicator of food or humanitarian crisis is in many respects irrelevant and certainly over simplistic. The fact is that nutrition can be both an early and late indicator of food crisis depending on context, e.g. coping mechanisms, morbidity patterns, type and sensitivity of surveillance system, etc. Equally, the correlation between nutritional status at population level and food (in)security is complex and subtle. Analysis of NSP findings illustrate this.

In spite of this complexity and resulting uncertainty around the role of nutritional surveillance in early warning of food and humanitarian crisis there are two self-evident truths.

- Nutrition surveillance can, in some situations, provide invaluable early warning of food crisis with arguably unique potential to influence decision-makers.
- Nutrition information must be analysed in conjunction with other variables - particularly those that relate to underlying causes of malnutrition, in order to understand trends and changes.

There are strong arguments for including nutrition data in early warning systems. A more nuanced approach to using nutrition data in EWSs is required, however.

5. Implementation of the NSP

This section critically examines issues relating to the implementation of the NSP and addresses the key question:

- **Is it appropriate for an international/external agency to run an information system?**

Implementation strengths and weaknesses

Box 8 summarises the main implementation strengths and weaknesses of the NSP. A major strength was that the NSP was able to produce objective and high quality information at a time when government information was not trusted. SC UK resourced the NSP well, thereby ensuring a high quality product.

At the same time, the ‘ownership’ of the NSP by SC UK turned out to be a major weakness, as the NSP remained outside the government EWS and capacity building was weak until the last three years of programme implementation.

Box 8: Implementation strengths and weaknesses of the NSP

Strengths

- ⇒ Collection of consistent, high quality and objective primary data, despite a highly politicised context
- ⇒ Fieldworkers out in remote areas, good understanding of those communities
- ⇒ Dedicated, well-trained and well supervised staff
- ⇒ System well resourced

Weaknesses

- ⇒ Top down – centralised data entry, analysis and interpretation
- ⇒ Not integrated into government EWS
- ⇒ Lack of link to response
- ⇒ Failed to build capacity at national and sub-national levels at the outset
- ⇒ Dependent on agency core funding
- ⇒ Lack of cost sharing arrangements

Ensuring objective and high quality information

In the early years of the NSP, there was a demand for de-politicised and objective information to underpin the international response at a time when donors and agencies were distrustful of government generated information. Thus, a major strength of the NSP was that it was run by a credible international NGO independently of the government.

A major focus of the NSP was to ensure a rigorous system of data gathering and dissemination that would be respected and acknowledged nationally and internationally. Maintaining this credibility required consistently high quality, reliable and objective information which the NSP is widely recognised for having provided. Such a high standard was possible because the NSP field workers were paid relatively well, managed, trained and supervised to a high standard. SC UK supported the

system through directly supplying resources. Field workers were both motivated and able to travel to remote communities on a regular basis to gather NSP information. In the absence of these external inputs, it is very unlikely that the high quality of the NSP could have been maintained.

The added value of the NSP was that the field workers got to know particular regions extremely well as they were visiting the same villages many times over one year. They were therefore able to collect quantitative data and interpret this within a known context. *“The real advantage of the NSP was that the same SC UK teams visited the same survey areas four times a year and were able to have discussions with village leaders who trusted them. The original NSP reports therefore contained information collected from both qualitative and quantitative methods.”* (Duffield and Myatt, 2004)

Lack of integration

The NSP supported the government’s EWS by providing nutrition, food security and socio-economic data. Regular project agreements between the DPPC and SC UK were drawn up to clarify the objectives and operational parameters of the programmes. Furthermore, from the outset, there was an intention for the NSP to become integrated within the government EWS. Nonetheless, the NSP remained an essentially externally driven EWS that was separate from the government’s own EWS.

The political changes in the early 1990s saw greater government accountability in humanitarian terms and subsequently, an increase in donor and agency confidence in government. In addition, the government embarked on a policy of decentralisation that placed greater responsibility for emergency assessment and response within the regions.

These changes also meant that access to previously inaccessible areas increased and nutrition and early warning information was more readily available. It is during this period that the need for an externally driven information system should have been questioned and a review of the possible openings for increasing national ownership and integration carried out. As it was, the external reviews of the NSP focussed predominantly on technical and methodological issues (Eshete, 1993; Anderson and Bush, 1995) although the review carried out in 1993 recommended a number of institutional changes to the NSP. These included the need to integrate the NSP into the Government’s EWS, increase the sustainability of the system by explicitly linking the NSP to interventions and increasing the level of attention to capacity building and training of national staff rather than just international staff.

Lack of capacity development

Efforts to build technical capacity were limited during the lifetime of the NSP, although some expatriate nutritionists were deployed by SC UK during the early 1990s to sit in the DPPC and build capacity.

In 1998, when the decision to phase out the NSP was taken, a three year plan to train DPPC staff in the skills of nutritional surveillance and in conducting rapid nutrition assessments was agreed (DPPC and SC UK, 1998). It has been widely acknowledged that this training was not successful. This was partly because the wrong people were

trained (e.g. radio operators), partly because of the high turnover of DPPC staff, and partly because the training focused on one-off nutrition assessment but was based on the DPPC guidelines which outlined the NSP methodology (i.e. 12 x 50 cluster samples and mean WFL). This methodology was not internationally recognised for nutrition surveys, as by that time 30 x 30 cluster surveys using Z scores had become *de rigueur* for nutritionists throughout the world (Personal Communication: Tayech Yimer). The result was that the DPPC was left with little capacity in either nutritional surveillance or nutrition assessment using 30 x 30 cluster sampling.

As an SC UK nutritionist noted at the time: *“It is unrealistic to expect that the skills that were built up over 15 years could be transferred to our Government partners through a couple of trainings. Likewise, the lack of attention to development of structures, human resources, etc... to accompany these training efforts was a gross oversight”* (Tayech Yimer, 2001).

The lack of successful capacity building within the government is starkly illustrated by the fact that there is currently only one nutritionist working in the DPPC, and she is an international whose position is funded by UNICEF. By contrast, at least ten nutritionists working in Ethiopia for NGOs and UN agencies were interviewed during the course of this review. In Ethiopia today, nutrition capacity is strong *outside* the government but virtually non-existent *within* the government. Whilst Ethiopia is not the only country suffering from this kind of structural problem, it is especially sad when in the past the Ethiopian Nutrition Institute was a highly respected nutrition institutions, responsible for producing some excellent nutritionists.

Separation between information and response

In the early days of the NSP, there was a close link between information gathered and response but as the system developed, this link disappeared. The focus was on gathering high quality information, analysis and reporting. The lack of a clear mandate for response was a major weakness of the system and this meant that when NSP recommendations were made, these weren't aimed at any particular institution for response.

SC UK's own capacity for response was limited. A review of the NSP in 1995 highlighted this weakness and concluded that *“despite NSP's professionalism, the links between EW reports and decision-making appear weak”* (Anderson and Bush, 1995). The NSP tended to be used as background information rather than information to precipitate action. Even where the NSP did provide adequate warning about impending famine, there were failures in response to this information.

Dependence on agency core funding

The NSP was funded solely out of SC UK's 'unrestricted' money. Attempts to obtain donor support for the NSP were not successful and, as a result, when the SC UK 'unrestricted' money became constrained, there was no other source to turn to.

Conclusions

At a time when the political and aid climate demanded a high level of quality, de-politicised and regular data for early warning, it was highly appropriate for SC UK to run the NSP outside the government system. The NSP was implemented by well trained, well resources and motivated SC UK staff who in turn produced high quality information.

The political and humanitarian changes in the early 1990s, however, which saw increased transparency in government and the start of decentralisation should have prompted a thorough review within SC UK of what these changes implied for the NSP in relation to integration with the government EWS and concomitant capacity development. The limitations in terms of Government capacity notwithstanding, much greater emphasis on achieving a realistic level of integration and ownership of the NSP would have been beneficial before SC UK phased out.

A total dependency on SC UK's own funds to run the NSP combined with limited Government financial capacity and the lack of donor financial support to cover the costs meant that the NSP could never have been sustained once SC UK phased out. This emphasises the need for multi-agency funding of surveillance systems.

6. Interpretation and use of information from the NSP

The key question addressed in this section is:

- **How effective was the NSP in warning of crisis and eliciting an appropriate response?**

The section briefly describes how the NSP findings were disseminated and the strengths and constraints experienced. Case examples highlight the key factors that determined when and how the NSP data was interpreted and acted upon.

Views on NSP information

In general, the NSP data was highly regarded by government, donors and other agencies. As far back as the early 1980s, it was reported that the *“SCF Wollo Nutrition Field Worker reports looked professional to their readers and users, and rang true. This was sufficient for those who wanted to use them for relief advocacy and targeting to do so”* (Appleton, 1988).

A later review concluded that the NSP *“has been producing good quality data, covering the nutritional status of children in selected vulnerable areas and is said to have greatly contributed for relief interventions by the government and donor agencies. This has undoubtedly contributed in saving the lives of many Ethiopians from disaster-related famines”* (Eshete, 1993).

The anthropometric element of the NSP although widely viewed as a late indicator of food insecurity, was seen to be particularly important in order to verify that a problem existed (or didn't exist), to triangulate the government's EWS data and for targeting food-based resources (Personal Communication: Daba Gebissa). As stated in 1994, following a situation of alarming decline in nutritional status in NSP survey areas: *“it is perhaps ironic that after considerable efforts in recent years to expand the range of information collected by the NSP, nutritional status should again be coming into its own”* (Lawrence, 1994).

Disseminating the NSP findings

The main channel for disseminating the findings of the NSP surveys was through two publications: *NSP Reports* and *NSP Focus*. Prior to dissemination, the preliminary findings were discussed with regional representatives and a draft of the publication was shared with DPPC staff at national level. This process aimed to ensure government agreement with the findings and conclusions. As illustrated later, however, there were instances where the NSP findings did not accord with those of the government's EWS.

The NSP publications were of a very high quality and were published in a timely manner. They provided, in summary format, clear and colourful graphics, interpretation of data and a focus on the emerging trends and their (food security related) causes. The publication evolved from lengthy reports in the 1980s and early 1990s that contained clear conclusions and recommendations to shorter summaries

that lacked clear conclusions and recommendations. The latter probably reduced the opportunity of SC UK for follow-up.

SC UK staff were members of the federal level DPPC Early Warning Group and were frequently asked to contribute to discussions about regional needs or to send representatives on emergency or annual needs assessments (Chapman, 1999). This forum was perhaps the most significant at the time for discussion of the NSP findings and for influencing the response.

Follow-up and advocacy

A crucial weakness of the NSP is that it was not clearly linked in structural or institutional terms to ensuring a response either at the national or regional level. Responsibility and accountability for acting on the findings of the NSP were not articulated and therefore, as illustrated in some of the case examples below, needs identified through the NSP were sometimes unmet. The NSP undoubtedly contributed to saving many lives where it was acted upon but by the same token, in some instances it was not acted upon. Quantifying the level of impact of the NSP on lives saved is not possible. SC UK appears not to have followed up on whether calls for response were answered or not. This would have been a useful exercise and would have strengthened their advocacy position.

The considerable effort that went into gathering the NSP data and then releasing the findings via the quarterly NSP publications was not matched by a similar level of effort for follow-up or for advocacy. This was partly due to the limited fora for dissemination and discussion at national and regional level at that time but also the relatively low priority afforded by SC UK to this role (Personal Communication: Tayech Yimer).

A further and significant missed opportunity by the NSP was advocacy to address the range of underlying causes of acute malnutrition rather than just those related to food security.

The NSP warns of crisis and elicits a response

The important *predictive* power of the NSP is illustrated in the case of Wollo in the late 1990s. This shows that previous experiences of trends and scenarios could be used to predict future outcomes i.e. if previously, failures in rain at a certain point in the agricultural calendar was found to be followed some months later by deterioration in anthropometric status, then the same scenario of rain failure could be expected to have the same outcome.

Case example 1: Predictive power of the NSP -Wollo 1997

Following two poor successive rains, *NSP Focus* for December 1997 highlighted areas of concern in all three zones of operation. Crop production was found to be lower than in the previous three years, cereal prices had risen whilst livestock prices had declined and the terms of trade were becoming less favourable to households.

Nutritional status was found to be deteriorating in North Wollo and Wag Hamra to levels that were lower than at the same time the previous year (93 per cent mean WFL in 1996/97

compared to 94 per cent mean WFL in 1995/96). The NSP concluded that in Wag Hamra “*nutritional status is still dangerously close to the 90 per cent mean WFL cut-off point at 90.8 per cent and has shown a continuous downward trend since April*” (92.2 per cent in April versus 90.8 per cent in October).

By January 1998, the NSP was reporting that in Wag Hamra, mean WFL had declined further to 89.4 per cent, i.e. below the official cut-off point of 90 per cent. In the remaining areas, nutritional status remained *satisfactory* at 91.6 per cent and cereal prices and terms of trade had begun to stabilise. The NSP concluded that “*an upward trend in nutritional status would be expected over the next three months, but this year, given the disappointing harvest, it is unlikely that there will be much nutrition improvement particularly in Wag Hamra*”.

Based on these findings, the regional DPPC declared an emergency in January 1998 and food aid was distributed including 50,000 MTs of food mobilised by SC UK from various sources. The food aid was used to prevent farmers “*from engaging in coping strategies that would have a negative impact on their livelihoods.*”

In July 1998, *NSP focus* highlighted that as the main harvest was not until November, “*nutritional improvements are unlikely over the next six months without substantial amounts of relief assistance.*” Discussions were held with the DPPC at all levels to express concern and the need for monitoring.

The NSP warns of crisis but is ignored

The crucial role of the NSP in predicting crisis was not always recognised or utilised. The case example of Wolayita in the early 1990s demonstrates that even where the nutrition information is trusted and clearly points to an emerging crisis, this does not necessarily result in appropriate and timely response. In the case of Wolayita, the situation suffered from a ‘*seeing is believing*’ mentality.

Case example 2: Warning of widespread crisis unheeded – Wolayita 1993-1994

In 1993, the NSP reported that the *kremt* rains were poor compared to the previous two seasons (1991 and 1992) and that the situation was similar to the poor *kremt* season of 1990 which preceded the 1990/1991 crisis. During this 1990/91 period, the NSP found that rapid deterioration in mean WFL was associated with a threefold increase in child mortality. The NSP therefore warned that a “*poor belg rain in 1994 would lead to a major emergency*”. In view of these concerns, SC UK conducted a survey of the whole Wolayita survey area in January/February 1994.

In the first quarter of 1994, the *belg* rains failed again. The NSP reported high cereal prices, sale of assets such as livestock and increasing dependency on daily labour whilst purchasing power had declined “*to very low levels*”. Also, as predicted in 1993, widespread, rapid and significant declines in nutritional status were reported which were undoubtedly associated with very high mortality rates.

<i>Area</i>	<i>mean WFL percentage Jan/Feb 1994</i>	<i>Rate of decline since Oct/Nov 1993</i>
Bolosso Suri	89.9	-3.7
Damota	91.8	-3.7
Damot Gale	88.5	-6.0
Damot woyde	90.8	-5.4
Kindo Koysha	91.9	-3.1

The NSP noted “*food relief needs to be increased in those areas currently receiving relief and to those areas where coverage is sparse*” It was also reported that “*the most rapid declines in nutritional status have been observed in those areas receiving the least relief*”

The response to the crisis was extremely slow. Not until the Federal Commissioner for the DPPC visited the area and saw wasted children did the relief effort begin in earnest in April 2004. The reasons for this appear to have been an unwillingness to act without visible signs of severe wasting and the lack of advocacy on the part of SC UK to push for a response (Personal Communication: Tayech Yimer).

The NSP elicits a response by highlighting declines in nutritional status

The use of the 90 per cent mean WFL cut-off point seems to have overshadowed the more powerful indicator of rate of nutrition decline, in some cases. If mean WFL remained above 90 per cent, despite declines in the mean, this was often seen as acceptable. The case example of Wolayita in 2000 illustrates how the NSP was successful in highlighting downward trends in mean WFL and eliciting a response.

Case example 3: Nutrition trends more important than absolute levels – Wolayita 2000

As early as February 2000, the NSP was warning that the effect of the poor *kremt* rains and the disruption of the *sape* rains in Wolayita would probably result in nutrition deterioration before the green maize harvest of June/July.¹⁰

By April 2000 'NSP Results' reported rapid cereal price rises and a poor start to the *belg* rains signalling serious food shortage later in the year. In some areas, (lowlands) mean WFL had declined to below 90 per cent while in others, mean WFL remained stable.

The 'NSP Focus' report for June 2000 warned that the late *belg* rains would result in a two month delay of the green maize harvest and that there was a failure of the 1999 sweet potato harvest which would normally cover consumption requirements in early 2000. This meant that the 'hunger period' would be extended. Furthermore, although the percentage mean WFL was above 90 per cent overall, the rate of decline was alarming (2.9 per cent and 3.7 per cent reduction in mean WFL in the East and West since February 2000). The NSP report stressed "*Past experience suggests that the percentage mean WFL does not need to fall below the <90 per cent level to warrant an intervention and that declines of this magnitude in Wolayita may be followed by a nutritional crisis*".

This NSP report led to a number of nutrition surveys being conducted and feeding centres were established by various NGOs in Wolayita (Yimer, 2001). By November 2000, following the relatively good *belg* harvest and increased food assistance, nutritional status had significantly improved in the highlands and although not significant, had also improved in the lowlands.

The NSP fails to elicit a response due to over-emphasis on anthropometry

Anthropometry tended to reign supreme and there was an attitude that until children start to show signs of starvation, there wasn't really a problem. However, food security indicators can deteriorate whilst anthropometric status remains unchanged. When this occurred, the NSP was seen to have failed and in some instances, tensions between the NSP findings and those of the Government's EWS occurred.

The case example of Haraghe illustrates a situation where the NSP detected a significant deterioration in food security indicators while nutritional status remained stable over a considerable period of time before declining. The emphasis on the anthropometric results rather than on the other indicators disguised the true extent of the problem. These results were seen by the Head of the RRC's official EWS to be contradicting the government's analysis of the food situation and prompted his expression of "*displeasure with the effect SCF's widely circulated reports appear to have on some donors and relief agencies ...RRC rightly or wrongly feel that the confidence it places in SCF as a collaborator of the EWS has been compromised through this recent incident*" (Mulhoff, 1990).

¹⁰ In Wolayita, the *belg* rains are normally expected between Jan/Feb in the highlands and March in the lowlands. The *kremt* rains follow with an arrival in June for the highlands and July in the lowlands. Finally, the *sape* rains can be expected in October/November.

Case example 4: Stable nutritional situation masks growing crisis – Haraghe 1990

In January 1990, the NSP indicated that the general situation in Haraghe was good but by May 1990, the first indications that *“delayed rain has affected the agricultural situation...food stock levels throughout the zones are almost depleted and are estimated to last for a further 1-2 months”* was reported. The health and nutrition situation remained stable.

By June 1990, the NSP report highlighted *“insufficient rainfall that had damaged the meher crops”* and that in one area, (Zone F), a large number of Farmer Associations were requesting food assistance. At the same time, nutritional status remained satisfactory and in one area (Zone G) had improved from mean WFL 93.7 to 94.7 per cent over a three month period. Livestock diseases were reported to be minimal, market price increases for livestock and grain prices were either stable or only slightly increased.

By July 1990, the nutritional situation *“remains at a satisfactory level”* in all zones but there had been no rains. Household food stocks were reported to be limited or completely exhausted in some areas and (in zone C) *“many families are relying on cactus fruits and firewood sales. In zones A, B and D people are selling animals, charcoal, chat and vegetables to purchase grain”*. Population movement was reported to be high in some zones and Farmers Associations requests for food assistance remained high. Problems of grazing and water shortages as well as grain price increases in all markets were reported while livestock prices were decreasing.

By August 1990 nutritional status was found to have significantly declined only in one area (Zone E) (April mean = 93.9 per cent August mean = 92.7 per cent) although the mean remained above 90 per cent WFL. In other areas (Zone F and H) nutritional status continued to improve or remain stable (Zone G).

Signs of increasing destitution were reported through to the end of 1990. It was only in November that CARE started to provide free food aid along with the RRC. A stable nutrition situation continued.

However, by March 1991, the *“mean WFL percentage had declined significantly in all areas”*. In addition, one area reported *“a significant increase in the number of children diagnosed with night blindness and bitot spots”* (Vitamin A deficiency). By this time it was too late, however, as significant destitution had already occurred.

The NSP elicits a response at the regional level

Lawrence noted in 1994 that *“The NSP was designed very much with the needs of central government and donors in mind. With the advent of regionalisation, we (SC UK) need to explore ways in which we can serve the needs of the new regional authorities. Our failure to do this in the past was one of the weaknesses of the programme”* (Lawrence, 1994). Throughout the history of the NSP, however, ownership and accountability remained firmly at national level rather than the regional level.

Undoubtedly the NSP was appreciated by the central government in helping support their negotiations with donors and other agencies for food aid resources. Those at the regional level also had an interest in the NSP as highlighted in the following statement *“The three successive RRC provincial representatives (in Wollo) during 1983-84 all recalled reading SCF’s reports and sometimes using the information on deteriorating nutritional status to back up their own frustrating attempts to alert Addis Ababa and the world to the alarming effects of crop failure.”* (Appleton, 1988)

Even though the NSP did, at times prove useful for the regional level to garner support, it appears that local government officials would have liked to have seen SC UK follow up its information gathering with ‘development-orientated’ project interventions. The case example below provides an example of the regions utilising the NSP data to avert further nutrition deterioration.

Case example 5: Regions use NSP data to secure early response – Wollo 1999

In May 1999 the *NSP Results* for North Shewa reported that the area was facing its third consecutive *belg* rain failure since 1994, that nutritional status had declined each year from a mean WFL of 93.8 per cent in 1994/5 to a mean WFL of 91.9 per cent in 1998/9. Over the previous five months, the rate of decline in mean WFL had been 1.2 per cent.

The *NSP Results* for June 1999 for Southern Tigray also reported complete failure of the *belg* rains (equivalent to the poor rains of 1994), significant increases in cereal prices and reductions in the terms of trade. Nutritional status had declined from 92.8 per cent in December 1998 to 91.4 per cent in June 1999 i.e. a decline in mean WFL of 1.4 per cent.

The report concluded that “*the downward trend is the cumulative result of last year’s reduced meher production, complete failure of the 1999 belg and reduced food assistance*” and that there would be “*further deterioration in (mean) WFL unless relief efforts are stepped up*”.

SC UK’s regional partners said that *NSP Focus* had “*been instrumental in securing donor support following the failure in the belg rains.*” In response, SC-UK alone accessed over 37,000 MT of food aid.

The NSP advocates for a non-food aid response

As indicated above, the NSP was largely used as a tool to advocate for food aid. In the case example below, however, a recommendation was made on the basis of an NSP survey NOT to intervene with food aid but to improve the deteriorating health situation. This example appears to have been the exception to the rule.

Case example 6: Call for non-food aid response – Ogaden Region 1988

The Ogaden Region experienced poor rains in 1988 and 1989 and subsequently, grazing in many areas had deteriorated. Some areas were also short of water and in all areas, reports of disruptions to the markets from the conflict in Somalia were reported. The interaction between poor livestock conditions, the low demand for livestock and the increased transport costs for food resulted in the worst overall terms of trade being found in some woredas. Certain woredas were particularly vulnerable having poor terms of trade and poor grazing as well as poor nutritional status.

Between November and December 1988, the NSP re-surveyed the Ogaden nomads and found that the overall nutritional status indicated a poor situation. The mean WFL percentage of children 70-110 cm was found to be 89.9 per cent while the older children of 110-140 cm height had the lowest nutritional status at 86.5 per cent mean WFL or 10 per cent <80 percentage WFL. The findings suggested that the younger children were being preferentially fed milk whilst the older children constituted the most sensitive indicator group in this time of hardship.

In addition, all areas were severely affected by malaria, and in some the nomads stated that *“the only problem for which they needed assistance was disease, particularly malaria”*. The recommendations made from this survey were to provide greater inputs to the health sector and in particular, towards malaria treatment and control. In addition, it was concluded that *“food distribution should NOT be started again but rather the food should be released onto the market for sale”*.

Conclusions

The NSP was credible because it was run by an international NGO with a sound track record and provided a non-politicised objective analysis of the situation.

The extent to which the NSP elicited a timely response is impossible to determine retrospectively. There are examples where the NSP alerted government and agencies to a deteriorating nutrition or food security situation and this provoked a response. The reverse is also true with alerts being ignored or a late response being implemented. This mixed picture highlights a fundamental flaw of the NSP which is that responsibility for responding to the information was not mandated.

An undervalued strength of the NSP was that it was capable of discerning changes in trends in child nutrition status and when viewed with other indicators, the NSP was able to accurately predict nutrition crisis. Nonetheless, the threshold of 90 per cent means WFL was the main focus for determining the presence or absence of a nutrition crisis. In situations where a response did follow the release of the NSP findings, the response was entirely food aid related. The NSP was not successful in eliciting responses other than food aid.

The style of dissemination of the NSP findings was given considerable attention over the years. Information was presented in a format that was easy to understand which given the complexity of the data gathered, was an important feature. While behind-the-scenes advocacy was undertaken, advocacy to ensure a response was a weakness of the programme.

7. Sustainability

The key question addressed here is:

- **Are information systems ever sustainable by governments of poor countries?**

What does the word ‘sustainability’ imply in the context of EWS’s? Does it mean that a government will take full responsibility for financing and managing the system using its own resources? Or does it mean that external resources will be made available over a prolonged period of time to ensure the continuation of the system while it is considered a priority? There are very few EWS’s in developing countries that do not required outside support. Botswana, where the EWS is entirely run by the government, is an exception.

Ethiopia is one of the poorest countries in the world yet has one of the greatest needs for early warning information. For this reason, external agencies have sunk vast amounts of money into the system over the years. Within this context, it does not make sense to discuss sustainability of the NSP in terms of government sole support. Rather, sustainability should be examined in terms of whether there was sufficient interest among donors and other external agencies to sustain the system and whether efforts to build capacity were relevant and successful or not.

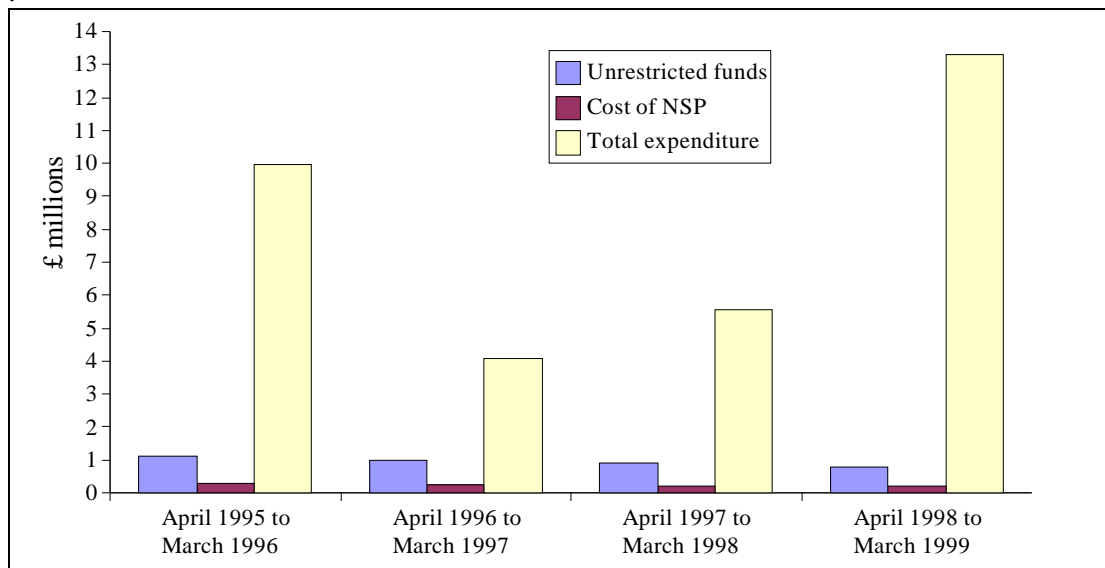
Financial sustainability

It is clear that the NSP could not be financially sustained by SC UK by the late 1990s and that the reason for ‘phasing out’ was mainly financial. “*SC UK was facing increasing cuts in unrestricted funding and couldn’t afford to run the NSP*” (Personal Communication: Ben Foot).

At the time, the NSP was amongst SC UK’s single biggest operation in Ethiopia and accounted for around a quarter of SC UK’s unrestricted funding for Ethiopia. See **graph 1**. Nonetheless, the cost was still very small compared with SC UK’s total expenditure in Ethiopia, which included unrestricted and restricted funding (grants/earmarking/DFID Joint Funding scheme etc.), and also ‘gifts in kind’. For example, in 1998 to 1999, NSP costs represented less than two per cent of SC UK’s total budget.

What is less clear, is why other donors were unwilling or unable to pick up the tab for the NSP. It appears that SC UK did approach CIDA to fund continuation of the NSP but CIDA headquarters were not interested as this was a period when CIDA was moving away from food aid to interventions related to micro-nutrients. In addition CIDA was increasingly interested in Results Based Management and the NSP could not prove nutritional impact (verbal communication Doug Clements).

Graph 1: Annual SC UK Ethiopia expenditure



Systemic (institutional) sustainability

The NSP effectively functioned independently from government structures. The staff were all SC UK staff who worked outside government offices. The equipment (computers, vehicles, measuring equipment) was owned by SC UK and was not available to the government. Data analysis and interpretation took place in the SC UK office although SC UK held discussion with government about the findings before publication. Despite attempts by SC UK to hand the data over to the DPPC the database remains within SC UK today.

It was not until the period of ‘phase out’ that SC UK made serious efforts to build capacity within the DPPC. The plan was not to replicate the NSP but rather “*to transfer the skills from within the NSP to DPPC staff so they can use these skills within their existing early warning system in the most effective manner*” (Chapman, 1999). This was going to be done through an ambitious plan of formal training courses which in the event were not successful.

To be fair to SC UK, there was a serious lack of human and financial resources within the DPPC to deal with nutrition. This situation remains today. There was also no clear focal point for nutrition until the ENCU was established in 2000. Even now, capacity is seriously limited and the only nutritionist within the ENCU is an international post funded by UNICEF.

In hindsight, SC UK could have considered the following activities to help build institutional sustainability:

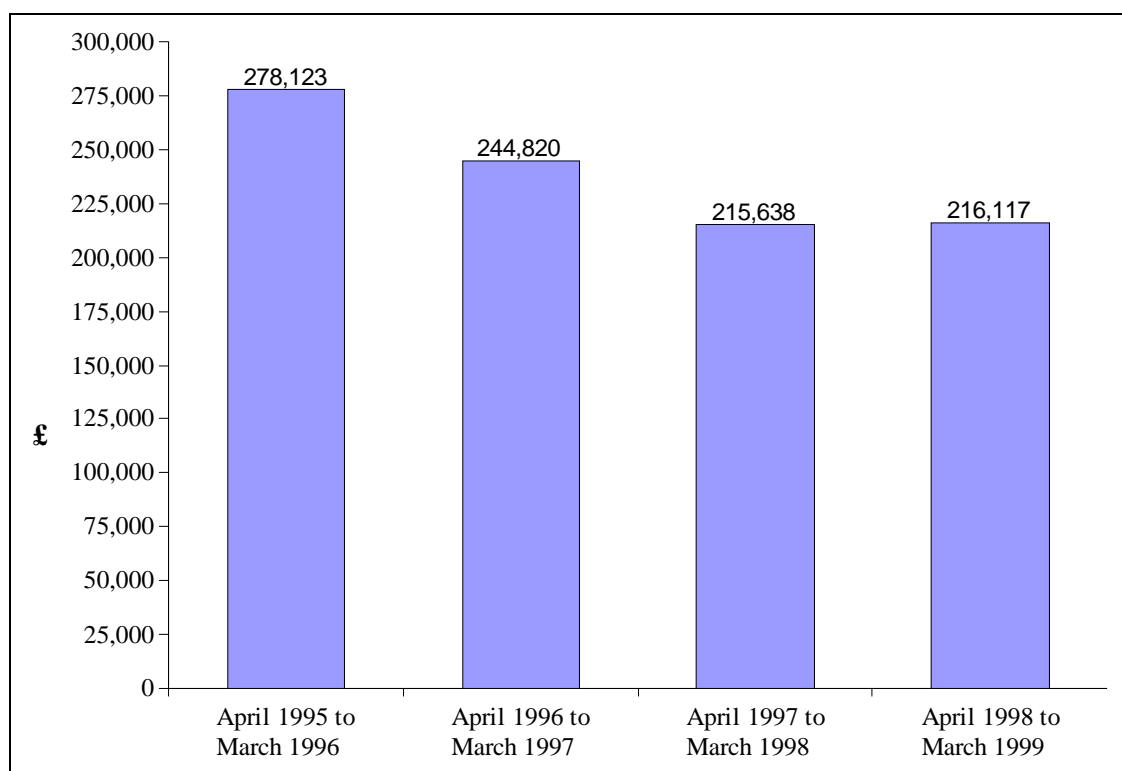
1. Physically locating NSP staff and equipment within DPPC offices
2. Funding posts and paying the salaries of DPPC staff to carry out the NSP
3. Building capacity to analyse and interpret data
4. Experimenting with cheaper ways of running the NSP, finding an acceptable trade-off between coverage, accuracy and cost

Cost effectiveness

It is not possible to assess the cost effectiveness of the NSP as ‘effectiveness’ cannot be measured in this case. We know that the NSP was sometimes successful and sometimes unsuccessful in prompting a response. What we are unable to judge is how often it was successful in prompting a response or whether the response would have been any different without the NSP information. The impact of the NSP cannot be assessed and therefore, cannot be calculated in financial terms. Rather, the analysis in this section is limited to the actual costs of the NSP in comparison with other nutrition-related information. As the main use of NSP data was to advocate for food aid, the cost of the NSP is also compared to the cost of food aid donated.

There is a widely held view that the NSP was extremely expensive. This view is challenged here. In fact the cost of the NSP was insignificant in comparison with the cost of food aid distributed and low in comparison with the cost of nutrition surveys. The view that the NSP was extremely expensive is a myth.

Graph 2: Annual cost of NSP



Graph 2 shows that at its height in 1995, the annual cost of the NSP was £278,000 and that this was reduced to £216,000 by 1999. The reduction was “*due to the necessity for SC to cut costs globally*” (DPPC and SC UK, 1998). The NSP expenditure covered:

- Salaries and allowances for 36 national staff and one international technical manager
- Vehicles, fuel and maintenance
- Report production and survey costs
- Administration and overheads

Cost of NSP compared to costs of food aid

The annual cost of the NSP was compared to the annual value of food aid donated by USAID during 1997 and 1998. USAID is the main bilateral donor to Ethiopia whose mission is to reduce high levels of chronic food insecurity through providing large quantities of food aid. 1997 and 1998 were not ‘emergency’ years in the sense that there were no UN appeals for food aid (although 1998/99 did see an emergency appeal following the failure of the Belg rains).

Table 1: Cost of NSP in comparison with value of USAID food aid

	Cost of NSP (£s)	Value of USAID food aid (£s)	%
1997	215,638	28,211,904	0.76
1998	216,117	44,113,939	0.49

Based on average exchange rates for 1997 and 1998.

As **table 1** shows, the cost of the NSP was absolutely minimal (less than one per cent) when compared with the value of food aid delivered by USAID in non-emergency years. This doesn’t even represent all food aid and excludes the operational costs of moving the food aid. In other words the NSP represents an insignificant expenditure in comparison with the response that it helped to ensure and potential savings through informing targeting.

Cost of NSP compared to nutrition surveys

A second assumption frequently voiced about the NSP was that it was expensive in comparison with nutrition surveys. For example, Duffield and Myatt state that:

“Currently neither the Government, nor any other agency, is implementing nutritional surveillance on a large scale in Ethiopia – mainly because the costs are prohibitively high” (Duffield and Myatt, 2004). This premise appears to have been based on the assumption that collecting data in ‘good’ years as well as ‘bad’ years would be more expensive than just collecting data on a one-off ‘as needed’ basis. Again this assumption is challenged as the evidence shows the contrary.

SC UK currently charges \$5,000 (£2,907) to carry out a survey. This is because it retains a team of RATS and a team of RATSOs as discussed in Section Three. In reality, the cost of a survey is much higher. **Table 2** lays out the actual cost of a survey to SC UK (excluding some hardware and administrative costs) assuming that it takes around two weeks to carry out a 30 x 30 cluster sample survey and a further two weeks to do the analysis and report writing. In 1999, SC UK would have had to spend at least £9,333 on each survey.

Table 2: Actual cost of a survey to SC UK

		Birr	£
Salaries	Nutrition manager	10,000	769
	Field teams	33,750	2,596
	Data Processor	4,500	346
Per diems	Field teams	10,500	808
	Drivers	3,000	238
	Partners/auxillaries	12,000	923
Transport	Vehicle rental	36,000	2,769
	Fuel	7,000	538
	Mule hire	3,000	231
Other	Stationery/photocopying	1,500	115
Total		121,250	9,333

Based on mean exchange rate for 1999 of Birr 13 to £1

Assumes two weeks of fieldwork and two weeks of analysis and reporting. Excludes:

- Administrative support
- Insurance/medical care
- Measuring equipment
- Computers
- Overheads

For £216,000 (the cost of the NSP in 1998), SC UK would have been able to carry out 23 surveys. Surveys are usually carried out in one woreda so the coverage would be 23 woredas. For the same money in 1998, the NSP effectively surveyed randomly selected villages from around 80 woredas (Personal Communication: Tayech Yimer) in 11 zones. These surveys were repeated four times per year. Thus, the NSP provided data from nearly four times as many sites and four times annually compared to the amount of data that could have been generated through nutrition surveys.

Although this is not a straightforward comparison of ‘like for like’ as one-off surveys provide a totally different type of information compared to longitudinal surveillance, nevertheless the analysis explodes the myth that nutrition surveys are inherently cheaper than nutrition surveillance systems.

Currently SC UK RATS and RATSO teams carry out over 10 surveys a year (13 in 2002, 10 in 2003, 11 in 2004). The cost to SC UK, therefore, is cheaper than the NSP. Other NGOs, however, are filling the gap left by the NSP data by carrying out surveys (see **table 3**). The cost of all these surveys is phenomenal.

In 2002 and 2003, a total of 187 surveys were carried out largely by international NGOs in six regions. These were emergency years, and the need for information to verify the need for, and target food aid was great. Assuming that the actual cost of each survey was £9,333, then the total spent on surveys during these years was £1,745,271. This is over eight times the amount spent on the NSP in 1997 although the coverage of the 2002-2003 surveys was greater, trend data was largely missing and it is questionable whether the surveys elicited any greater response than did the NSP.

Table 3: Number of surveys carried out in 2002 and 2003

Agency	Number of surveys
World Vision Ethiopia	76
Concern	21
SC UK	16
DPPC (with other agencies)	15
DPPC	9
SC US	9
GOAL	7
Tear Fund	7
ICRC/ERCS	5
IMC	4
SC US/REST	3
Family Health International	2
Merlin	2
MSF Switzerland	2
MSF Holland	2
NCA	2
CARE	2
ACF/ADRA	1
Catholic Relief Services	1
Oxfam/IMC	1
Total	187

Cost of NSP compared to other EWSs

It has not been possible in this review to examine the costs of other EWSs. The present government EWS is heavily supported by external donors as are initiatives in some regions to develop HEA baselines. The investment is likely to be substantial and will have to be sustained over the long-term.

Conclusions

The NSP could not be financially sustained by SC UK out of its unrestricted funds by the late 1990s. It is unclear, however, why other agencies and donors were unwilling or unable to share or even take over these costs when SC UK sought funding.

The view that the NSP was extremely expensive is a myth. At its height in 1995, the annual cost of the NSP was £278,000 and this was reduced to £216,000 by 1998. Though this may have been a lot for a poor government to maintain, it represented an insignificant expenditure (less than one percent) in comparison with the cost of USAID food aid. The NSP annual costs were eight times cheaper than nutrition surveys that are currently being carried out in large numbers in Ethiopia. There are very few EWS that are mainly dependent on government support in poor African countries today. Systems which have been largely dependent on government, e.g. in the SADD region between the late 1980s and mid-1990s, have suffered from poor and erratic funding. Rather, donors have invested large amounts of money into sustaining systems. Sustainability of a system therefore depends as much on outside donors as on the government.

8. Current nutrition situation

The changing donor and agency climate

Over twenty years ago, Michael Buerk from the BBC brought the 1984 to 85 Ethiopian famine to the attention of the world. The so-called ‘CNN factor’ was instrumental in galvanizing the high profile response that followed. Although the Ethiopian Government had detected the early signs of the impending emergency, the donors and agencies that mistrusted government information largely ignored these.

In 1991, Ethiopia’s government was overthrown and the ‘new’ government prompted increased donor and agency support. Today, Ethiopia is the largest country programme for some of the major donors and agencies namely DFID,¹¹ EU and UNICEF.¹² It is also the biggest country programme for SC UK with an annual budget of around £30 million.

The ‘CNN factor’ has become less important in recent years provoking response to crises as donors and agencies are keener to support Ethiopia and prefer to do “*too much too soon in terms of food aid*” (Personal Communication: Marion Kelly). Anthropometry has become less a stimulus for emergency response than an important part of the triangulation process to give greater confidence in the decision making and confirmation of a problem. For example, a food aid response to the current crisis in Somali region has started before the results of the many nutrition surveys being undertaken are known.

There is an entrenched perception of the causes of malnutrition in Ethiopia; that it is synonymous with food insecurity which needs food aid to alleviate the situation. It is not surprising, therefore, to find that food aid dominates the Annual Emergency Appeals and while the response to the appeals has been high (average of 90 per cent since 2000) the non-food needs have been chronically under funded.

Up until recently, little attention has been given to non-food needs or to forms of vulnerability other than food insecurity. However, since the 2003 crisis during which unmet non-food needs in the early phase of the response seriously undermined people’s recovery, there has been a perceptible shift away from the ‘food first bias’. The evaluation of the 2003 response concluded that food aid response was not enough and a focus on loss of livelihoods and not only lives was needed in the future.

This shift is reflected in the 2006 appeal in which non-food needs are clearly highlighted as a major priority. “*Emergency multi-sectoral interventions will be needed from the beginning of the year to prevent a widespread crisis in pastoral areas, especially relating to acute emergency non-food needs*” (Government of Ethiopia, 2006). The appeal also emphasises the need for sustainable solutions to non-

¹¹ The MDGs have also been an important influence. DFID took the decision to focus it’s resources on the three of the poorest countries in Africa namely Ethiopia, Sudan and the Democratic Republic of the Congo.

¹² Recent political problems have meant that donors have suspended Direct Budgetary Support to the Ethiopian Government but will reallocate money to maintain basic services.

food needs recognising that many are recurrent and therefore predictable and that multi-hazards other than drought need to be addressed (e.g. locust swarms, conflict and internal displacement).¹³ There has also been a small but significant shift from food to cash interventions though 90 per cent of the food budget in 2005 was for food aid.

Another feature of the 2006 appeal¹⁴ is that donors have moved towards multi-year financing to cover predictable chronic vulnerability. This ensures that annual appeals are pared down to only cover humanitarian response for the acutely food insecure. The predictable chronically food insecure are supported through the Government's Productive Safety Nets Programme (PNSP).¹⁵ The PNSP signals a shift "*from a system dominated by emergency humanitarian aid to longer-term food security initiatives*" (Government of Ethiopia, 2006).

Trends in malnutrition

As shown in **graph 3**, levels of stunting and underweight appear to have declined since 1992 to current levels of 46 per cent and 38 per cent respectively.¹⁶ This represents a reduction of around 11 per cent for stunting and 9 per cent for underweight over a 13-year period. While these are encouraging trends, the levels are still very high compared to neighbouring countries. Levels of stunting and underweight are 20 per cent and 31 per cent for Kenya and 17 per cent and 23 per cent for Somalia (UNICEF, 2006).

In contrast, levels of wasting have remained static and perhaps even increased over the same period. This is an unusual trend as population level nutrition improvements in Africa typically see wasting declining at a faster rate than levels of stunting. This is because stunting reflects chronic problems including poverty and typically longer-term interventions are needed to see improvement. In Ethiopia, the reverse situation has emerged although the reasons for this are unclear.

The very high level of wasting in Ethiopia today is totally unacceptable. Internationally, levels of wasting above 10 per cent are classified as a humanitarian emergency.¹⁷ Unfortunately, these levels appear to have become an 'acceptable' fact in Ethiopia. All the more worrying is that the current debate on wasting in Ethiopia is focused on the use of wasting as an indicator of food insecurity rather than as an indicator of a nutrition crisis in its own right.

¹³ While the 2006 Appeal rightly highlights the non-food aspects of the current crisis (Somali Region), the absorptive capacity of Government to utilise non-food emergency resources is likely to be a major constraint. Government at national and sub-national level are geared to providing food aid in emergencies rather than emergency health or livelihood and agricultural interventions.

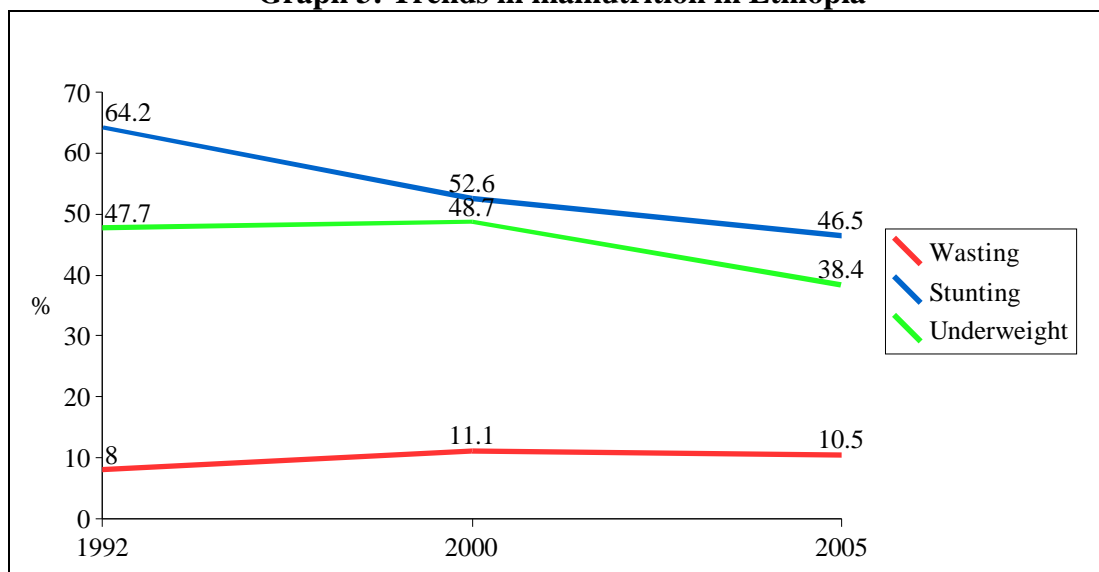
¹⁴ The 2006 Appeal covers 2.6 million people, which is a reduction from 13.2 million in 2003, 7.8 million in 2004 and 7.2 million in 2005.

¹⁵ PNSP aims to reach over 5 million food insecure people through cash or food for labour public works.

¹⁶ Confidence intervals are not available.

¹⁷ A prevalence of acute malnutrition between 5-8 per cent indicates a worrying nutritional situation, and a prevalence greater than 10 per cent corresponds to a serious nutrition situation (SCN, 2005).

Graph 3: Trends in malnutrition in Ethiopia



Furthermore, there is limited work being undertaken in Ethiopia to explore the reasons behind the nutrition trends or on understanding the underlying causes of wasting or stunting. The discourse is disproportionately focussed on technical issues (e.g. survey sampling methods), the treatment of nutrition problems (e.g. supplementary and therapeutic feeding and more recently community therapeutic care) and the very widely held view that adequate nutrition levels equal food security and malnutrition requires food aid. The prevention of malnutrition is notably absent from the current dialogue. The exception to these criticisms is SC UK's ongoing research into underlying causes of child malnutrition among different livelihood groups in Amhara and Somali regions.

Nutrition institutions

Nutrition within Ethiopia is best described as: “*everybody’s business but nobody’s responsibility*” [Personal Communication: Dr. Iqbal Kabir]

Ethiopian Nutrition Institute

Throughout the 1970s and up to the early 1990s, the Ethiopian Nutrition Institute (ENI) provided national leadership for nutrition. The ENI was highly regarded both nationally and internationally and benefited from a large number of respected Ethiopian nutritionists working full time on research, coordination and implementation. Around 1993, the ENI lost its prominence after merging with two other institutions to become the Ethiopian Health and Nutrition Research Institute (EHNRI). The mandate shifted from coordination and implementation to research. As a result, the ENI “*lost its teeth*” (Personal Communication: Dr. Iqbal Kabir) and many of the staff took up overseas positions.

Since this time, nutrition has neither had leadership nor a locus (until recently) at national level and has been without a nutrition policy and strategy to guide nutrition activities. Nutrition activities have been largely externally driven and as a consequence, nutrition priorities closely reflect those of the external agencies and are often decided outside government structures. Furthermore, there is no formal training

in nutrition available in Ethiopia through national institutions such as the ENHRI or through the universities.

Ministry of Health Nutrition Unit

Up until recently, nutrition within Government was the responsibility of the Food Security Unit with the MoARD. In early 2006, however, a government proclamation located responsibility for nutrition within the Nutrition Unit of the MoH. This represents a positive step forward in that greater attention appears to be being paid to nutrition by governments. The MoH Nutrition Unit is seriously understaffed, however, with just two staff members. Inevitably current MoH capacity in nutrition is weak. The unit does not have a qualified nutritionist and coordination between the MoH and the ENCU or other ministries with a nutrition focus is very limited.

Government expenditure on nutrition is woefully small. Nonetheless, plans are afoot to double health expenditure through the Health Extension Package (HEP)¹⁸ which could provide much needed community based nutrition-related activities.

Overall, nutrition still has no serious focal point in Ethiopia and needs to be viewed as “no longer just a technical issue but a management and resource issue” (Personal communication: Iqbal Kabir). Nutrition needs a champion, strong coordination, a clear institutional base and leadership in order to take advantage of the favourable climate that exists today for nutrition to emerge as a lead sector.

Emergency Nutrition Coordination Unit

In 2000, UNICEF and WFP were instrumental in reviving nutrition within the DPPC by supporting the establishment of the Emergency Nutrition Coordination Unit (ENCU). The ENCU aims to improve the coordination of emergency nutrition assessments and responses, and targeting of food aid to the most needy areas and populations (ENCU, 2006). Regional ENCU's were subsequently established in three drought-prone regions, namely Somali, Oromiya and SNNPR and in 2005, the federal ENCU was expanded from one to six staff members.

The ENCU, with close support from SC UK in 2002, coordinated the development of a new guideline for standardised emergency nutrition assessments and interventions. The highly consultative process adopted in developing the guideline is widely viewed as a very positive step forward in Ethiopia. From 2002 to 2005, over 250 standardised emergency surveys have been conducted across the country and ENCU has acted as a repository of the survey data and developed a comprehensive database.

The ECNU used to produce quarterly reports of survey results but no longer does so due to capacity constraints. It does hold monthly Multi-Agency Task Force meetings, however, which are well attended by NGO and UN agency representatives and by government staff. The results from surveys are presented and discussed at the meetings.

Low government capacity remains a constraint for the ENCU. At the time of this review, the head of the unit is an UNICEF consultant who is working without a government counterpart.

¹⁸ The HEP plan is to recruit two female health workers to work in each FA (total of 30,000) on a large number of health-related work at community level. This could include nutrition elements.

Nutrition strategy

In 2005, a new National Nutrition Strategy (NNS) for Ethiopia was drafted and it is expected to be formally adopted by the Government in early 2006. This is widely seen as significant because it has pushed nutrition onto the national political agenda. Nutrition has also been included in the new Poverty Reduction Strategy Paper (PRSP) which could increase the chances of longer term funding (Personal Communication: Bjorn Lunqvist). In essence, the NSS reads more like a policy statement than a strategy. It sets out 14 priority areas of which nutrition surveillance is one. There have been criticisms from NGOs of the 'closed door' manner adopted during the process of drafting and this perception may reduce the level of buy-in among agencies who feel they have been excluded. Inevitably, perhaps, the NSS reflects externally driven priorities (of donors) for nutrition and will continue to do so until Government significantly develops its own capacity and sense of priorities in this area.

Nutrition programmes

Emergency feeding

In the past, nutrition programming in Ethiopia has referred almost exclusively to emergency therapeutic and supplementary feeding. Feeding centres were set up to deal with the cases of severe malnutrition during the famine of the 1970s and have remained a constant phenomenon since that time. Currently, CTC has become fashionable in Ethiopia and several NGOs are setting up CTCs in their areas of operation.¹⁹

Programmes to address the longer-term nutrition problems, such as persistent moderate wasting, stunting and micronutrient deficiencies have received limited attention in the past. The efforts of the current UNICEF Country Director who, as a nutritionist, has been pushing nutrition onto the national agenda and those of others such as the World Bank and SC UK in supporting nutrition policy and research could result in improvements.

Enhanced Outreach Strategy

The largest on-going nutrition programme in Ethiopia today is the Enhanced Outreach Strategy (EOS) which is being implemented by the MoH with support from UNICEF. This is a hugely ambitious programme being theoretically implemented in 327 drought affected woredas covering an estimated 6.8 million under-fives, roughly half of the under five population. Screening of children and their mothers takes place every six months and children aged from 6-59 months receive a vitamin A supplement, measles vaccination and are de-wormed. Children are measured and weighed.

¹⁹ In Ethiopia, the four basic elements of a CTC programme are (i) social mobilisation/participation, (ii) supplementary feeding, (iii) outpatient therapeutic care, and (iv) stabilisation centres, which provide treatment equivalent to the World Health Organisation phase I therapeutic care. Concern is implementing CTC in Wollo where MUAC is used both for referral by volunteers and also for admission to the programme.

Theoretically, moderately malnourished children and women are referred to supplementary feeding programmes managed by WFP, DPPC and NGOs. Severely malnourished cases are referred to the nearest hospital for therapeutic feeding. Mothers and other caretakers receive counselling on improved infant and young childcare, feeding and hygiene practices.

Promotion of growth monitoring

The World Bank is supporting a Food Security Project aimed at building the resource base of poor rural households, increasing their employment and incomes, reducing the real costs of their food and improving nutritional status (stunting) of children under five and pregnant and lactating mothers. There are six project components including funding to communities (kebeles) to increase household and community assets. Stunting will be addressed through a community-based child growth promotion programme and investments in training and development.

Small-scale programmes

In addition to the large-scale programmes supported by UNICEF and the World Bank, there are several smaller programmes that are implemented by NGOs.

Conclusions

Ethiopia led the way for emergency nutrition programming in the 1980s internationally. Many international nutritionists “*cut their teeth*” in Ethiopia during this time and national nutritionists were respected in their role as co-ordinators, researchers and policy implementers. This national nutrition capacity, having been severely eroded through lack of government and external agency investment, is largely absent today. The key ministries are without qualified nutritionists and nutrition is woefully under resourced. Against this backdrop is the appalling reality of malnutrition in Ethiopia. Levels of underweight, stunting and wasting are among the highest in the region and although some improvements are discernible, progress is painfully slow. Levels of wasting sit at emergency levels in ‘normal’ times.

The last 15-20 years has seen the nutrition discourse limited to malnutrition being equated with food insecurity and food aid as the vehicle to dealing with the high levels. Little is known about the non-food causes of malnutrition or the effects of malnutrition on groups other than under-fives living in rural drought-prone regions. Technical discussion has been limited to survey methodologies and capacity development to training in nutrition assessments.

Concern about nutrition, in the absence of government capacity is largely externally driven although changes are evident which, if realised, could see nutrition being given greater prominence at national level and an increase in resources for the non-food aspects of malnutrition.

9. Role of nutrition information in Ethiopia today

The key questions addressed in this section are:

- **Are the current sources of nutrition information effective in identifying problems and advocating for appropriate responses?**
- **What is the role of nutrition in early warning within Ethiopia today?**

In the past, nutrition information in Ethiopia has been used mainly for early warning of food crises and for advocating food aid. Currently nutrition information is used to confirm a nutrition problem and for targeting of food aid. Thus, nutrition information has been used almost exclusively for *emergency* purposes and has therefore concentrated on *acute* nutritional problems, namely *wasting* in the *under-five* population. Nutrition information has been collected almost entirely from drought-prone *rural* areas.

The Ethiopian context has now changed in the following ways:

- Food insecurity is recognised as a *chronic* problem affecting a significant portion of the population (over 5 million people), and support for *longer-term* programmes that address chronic problems has increased.
- Advocacy for *non-food interventions* is growing, particularly through the emergency appeal process.
- There is greater awareness of the need to understand the relative importance of the three underlying *causes of malnutrition* in order to address problems through multi-sectoral interventions.
- Nutrition is getting on to the national agenda; namely through production of the NNS in 2006 and inclusion of nutrition in the PRSP.

At the same time, the political and donor climate in Ethiopia is insecure particularly in view of allegations of government abuse to human rights. There is a real risk that international funding may be substantially reduced, while drought and conflict continue to afflict the country. Thus, the need to predict and avert a potential nutritional disaster remains paramount.

Given this context, what are the priorities in terms of nutrition information? How can information gathering be sustained and how can it be used to ensure an appropriate response and attract sufficient resources? To answer these questions, it is firstly necessary to identify the priority nutrition problems and secondly to review the effectiveness of existing nutrition information sources.

Priority nutrition problems

Wasting in young children

There is a humanitarian imperative to identify and address severe nutritional problems that are closely associated with increased mortality i.e. severe wasting. Wasting levels of around 10 per cent with (2.2 per cent severe wasting) have remained static over the past fifteen years in Ethiopia suggesting that the problem has not been satisfactorily addressed. There is much regional variation, however. For example, wasting levels of 20 per cent and over are commonly recorded among pastoralist communities from

areas such as Somali region and Wolayita, whereas levels below six per cent are regularly recorded from other geographical areas.

It is essential that the populations suffering the highest levels of wasting are identified and that wasting is addressed **in both non-emergency and emergency years.**

Hitherto, wasting is usually only addressed when an emergency is declared and emergency feeding programmes are opened up or general ration/cash distributions are implemented. These are closed again when wasting levels decline. It is stressed here, that wasting levels of 10 per cent are unacceptable at any time and that wasting needs to be addressed through a broader range of interventions with long-term goals.

At the same time, it is of paramount importance that famine, for many the trade mark of Ethiopia, is avoided in the future. This means that EWSs must be able to detect deterioration towards humanitarian crisis (not only food insecurity) early and even more importantly be effective in triggering appropriate responses (not just food aid).

Chronic malnutrition in young children

Chronic malnutrition (stunting and underweight) is strongly related to poverty. Though levels are decreasing, stunting and underweight are high and population groups most vulnerable to underweight and stunting need to be identified, so that appropriate programmes can be implemented. SC UK's research in this area could be useful in identifying the types of programmes most relevant for different livelihood groups. Efforts should focus on the under three population as after this age, stunting is irreversible.

Measures of chronic malnutrition are increasingly being used to monitor the impact of poverty focused and livelihood programmes. Some donors (e.g. USAID) are demanding that funding is contingent on 'before-and-after' nutritional surveys in order to assess the impact of interventions. There is, therefore, an urgent need to broaden the nutrition lens within Ethiopia to focus on chronic as well as acute malnutrition, and to develop guidelines on assessment, causes and response to chronic malnutrition.

Nutrition problems in different population groups

Little is known at a population level about the nutritional status of older children and adults. There are indications, however, from TFC admissions and EOS screening of mothers that older children and adults are wasted. Furthermore, there are reports from some areas that the prevalence of wasting is higher in older children than in younger children²⁰.

While urban nutrition indicators are generally better than rural indicators, severe wasting relative to total wasting appears to be a problem (i.e. 2.5 per cent SAM compared to 6.5 per cent GAM, DHS 2005) (Central Statistics Agency, 2005). The

²⁰ For example, at the ENCU chaired multi-agency task force meeting in January 2006, IMC reported on a rapid nutrition assessment using MUAC that had been carried out in Borena, SNNPRS. They noted that children above five years of age were showing greater signs of wasting than the younger children. IMC were now planning a nutrition survey but were concerned that the focus on under-fives would ignore older children who may be more nutritionally vulnerable as they were given less milk.

nutritional problems of groups other than the under-fives in drought-prone areas deserve attention in the future.

Existing sources of nutrition information

DHS surveys

The five yearly DHS surveys allow trends to be monitored over the long-term. For example DHS data have highlighted the continuing high levels of wasting in Ethiopia while levels of stunting and underweight are slowly falling. However, intervals between surveys are long and the data is only representative in some regions and at the national level. It does not cover pastoral or remote areas. The DHS data is not useful for monitoring the impact of actual programmes and provides only limited information on the causes of malnutrition. Data is exclusively collected from under-fives so data from other age groups is lacking.

Nutrition surveys

A large number of nutrition surveys are conducted each year in Ethiopia. The vast majority of these are carried out by NGOs (see table 3). **Box 9** describes an analysis of surveys carried out during this review that were conducted during the emergency in 2002 and 2003. The surveys are mainly carried out to *confirm* a nutrition problem and are carried out on a one-off basis though some NGOs regularly survey their areas of operation to monitor nutritional change.

With the production of the guidelines on emergency nutrition assessment (DPPC, 2002), there has been a vast improvement in the methodological quality of surveys. All agencies are now using correct methodologies to conduct surveys. We can therefore be pretty confident that the point prevalence data on GAM and SAM reported is reliable and valid. However, one major problem with surveys is that they are conducted sporadically and unless they are compared with the baseline data available, even the anthropometric data is difficult to interpret.

Furthermore, survey data collected on underlying causes are heavily weighted towards food security and limited analysis is undertaken to link causes with anthropometric status. In short, long lists of percentages of various food security indicators are reported which are practically meaningless. It is impossible to compare these with 'norms' or baselines, and they are not analysed in relation to the anthropometry.

Not surprisingly, as 2002 and 2003 were emergency years, recommendations were mainly related to food aid. However, calls for general rations were often not related to anthropometric level i.e. the anthropometric data derived from the surveys did not influence the recommendations about food aid at all. Over 60 per cent of surveys found levels of GAM **below** 10 per cent (considered 'typical' for a chronically malnourished population in Ethiopia) but in the majority of cases a general ration was also recommended. Of course there may well have been aggravating factors²¹ as laid

²¹ Aggravating factors include:

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

out in the DPPC guidelines, but as aggravating factors are pretty constant anywhere in Ethiopia at any one point in time, it suggests that large segments of the population requires food aid all the time.

Recommendations for non-food interventions are extremely weak and often so vague as to be meaningless. The impression is that the non-food recommendations are 'mechanistic' i.e. the authors repeat the same recommendations in the knowledge that these are unlikely to be taken seriously. For example, one survey recommended the following: *"To improve the longer term food security situation, a development programme must be implemented."* This type of recommendation was not unusual and there were many calls for *"increase in access to water"* or *"implement irrigation projects"* or *"promote income diversification"*. Unless, the NGO is already active in the area, it is hard to see who was supposed to take up the recommendation or exactly what they are expected to do.

Box 9: Analysis of surveys carried out in 2002 and 2003

An analysis of surveys carried out during this review in 2002 and 2003²² found that 100 per cent had correctly employed standard methodologies (i.e. 30 x 30 cluster sampling, reporting of wasting in under-fives by Z scores, reporting of confidence intervals) and the majority (92 per cent) also reported mortality rates. However, only a handful (four per cent) examined micronutrient deficiencies and none gathered anthropometric data on groups other than under-fives in drought-prone areas.

Nearly 40 per cent of the surveys found GAM levels in excess of 10 per cent. Assessment of underlying causes was heavily weighted towards food security and health (limited mainly to data on illness in the child within the last two weeks) with far less attention paid to caring aspects (although this may be because we assume that caring practices are much harder to measure and change in an emergency programme, and there is a need to do a more in-depth study of these than typical surveillance or 30*30 survey). More importantly, the data on underlying causes was in all cases presented as a series of percentages totally separately from the anthropometric data. There was no attempt made to link risk factors for malnutrition in the individual. Over 80 per cent recommended either initiating or continuing general food rations and over 50 per cent recommended supplementary feeding. Less than half recommended any other interventions.²³

Even where malnutrition levels are very high, there is no guarantee of response.

It would seem, therefore, that much energy has gone in to the *technical* aspects of nutrition surveys and this has led to the generation of a reliable quantitative figure on levels of wasting in under-five children. There is a general view in Ethiopia that child malnutrition is a very powerful tool in ensuring response (though this is not always true) but that this response is nearly always food aid i.e. nutrition surveys play a crucial role in advocating for food aid.

⇒ Low levels of measles vaccination and vitamin A supplementation;
⇒ Inadequate safe water supplies and sanitation
(DPPC, 2002)

²² In total 187 surveys were carried out. Reports of only 179 of these were available for analysis.

²³ The main other forms of interventions mentioned were vaccination campaigns, better health care and watsan interventions.

Nutrition surveys are less effective, however, in lobbying for non-food responses. They also have no role to play in early warning as they are carried out after a problem has already been identified and are only used as confirming evidence (sometimes after a food aid response has already been initiated). Considering the heavy use of resources needed for nutrition surveys (financial, staff and time), the outcome of a single prevalence figure for nutritional status seems narrow. There is a need in Ethiopia to consider how to broaden the objectives and usefulness of nutrition surveys, and to extend the analysis and interpretation of data so that more comprehensive and concrete recommendations can be put forward. Guidelines for agencies need to be drawn up to support this process. Furthermore, strategies to improve advocacy may need to be developed to ensure that recommendations (particularly those relating to non-food interventions) are acted upon.

Nutrition surveillance

There is currently no form of nutritional surveillance in Ethiopia. The issue of whether a nutrition surveillance system is necessary and what role it could play is a hotly debated and emotive issue.

There are plans to use some of the screening data from the UNICEF supported EOS for national nutritional surveillance purposes and UNICEF is examining how best to take this forward (Chotard, 2005). The potential strengths of using EOS data for surveillance is that there is a direct link between information gathered and intervention, huge coverage, integration within government, mobilisation of existing (grassroots) resources and in keeping child and maternal wasting high on the national agenda. There are also limitations including the long interval between data collection, the poor quality of the data currently gathered and the inherent bias in beneficiary selection. The EOS data may also suffer from the same problem as the NSP data in terms of sampling being based on administrative boundaries rather than food economy zones.

There have been many behind-the-scene murmurings and much opposition to the potential use of EOS data for nutrition surveillance, particularly from NGOs. Most of the opposition is based on *technical* arguments that the data simply isn't of a good enough quality and that no data is better than poor data. However, less time has been spent on discussing whether nutrition surveillance per se has a place in Ethiopia.

The conclusion of this review is that the loss of the NSP did mean a loss of ability to monitor nutrition trends in a systematic way in Ethiopia and that this left a hole which UNICEF's EOS is trying to fill. However, in its current form the EOS does NOT provide data of sufficient quality for nutrition surveillance.

A robust nutrition information system (i.e. nutrition trend data in combination with nutrition survey data), which can be used as one indicator in a broader EWS, would, however, be the ideal in the current Ethiopian context. The objectives of such a system for EW purposes would be to provide:

1. An indicator that can be used for triangulation and as a powerful tool to advocate for response;

2. An understanding underlying causes, as there is a need to establish the prime cause of a problem (food, epidemic, violence etc.) in order to lobby for the right form of intervention (i.e. non-food inputs where necessary).

Current nutrition information available within Ethiopia does not meet the above objectives. There is therefore a need to re-consider some form of nutrition surveillance to provide trend data. The reason why EOS is potentially important is that in theory it is implemented through government structures and has the potential to be sustainable. The current system of surveys alone is heavily dependent on outside agencies and is therefore highly vulnerable. However, EOS in its current form is totally inadequate to provide the high quality of data that is needed for nutrition surveillance.

There was much international interest in nutrition surveillance during the 1970s and 80s which has since waned. A recent document; 'The use of Nutritional Indicators in Surveillance Systems' sets out some of the pertinent issues and may serve as a useful background document for discussion (Shoham et al, 2001).

The debate on the potential uses of nutrition surveillance in Ethiopia has yet to take place and is urgently needed. The experience of the NSP offers some insights into what has worked and what hasn't worked in the Ethiopian context in the past. The experience shows that the most critical issues are not related to methodology but to cost, sustainability, credibility, buy-in and linkage to response in particular advocacy.

Equally critical, is the issue of linking nutritional surveillance for early warning with longer term vulnerability monitoring in Ethiopia. Stand alone EWSs are vulnerable to the vagaries of emergency funding and donor interest. In the Ethiopia context the 'donor climate' is moving towards safety net programming and a focus on chronic vulnerability. Integrating nutritional surveillance with emerging vulnerability monitoring systems in Ethiopia may serve several purposes:

- Nutritional surveillance can include indicators more relevant to chronic vulnerability, e.g. stunting
- Integration can encourage support of non-emergency actors and therefore strengthen sustainability.

A broader approach to nutritional surveillance can help forge links between development and emergency activities as well as increase understanding in the Ethiopia context of the relationship between indicators of acute and chronic malnutrition.

The questions that need to be addressed in discussions about future nutrition surveillance therefore include:

- How would the data be useful – for early warning purposes or for longer-term poverty monitoring purposes?
- What nutrition indicators need to be monitored and what other information needs to be collected?
- How would the system be sustained?
- Who would 'own' the system – a partnership of agencies or government alone?
- Is funding available and how secure is it?

- How can the results be explicitly linked to intervention and used to get a response?

Given that the EOS is clearly here to stay²⁴ and that the NNS for Ethiopia has included nutrition surveillance as one of 14 key components, it would seem pragmatic for the discussions on the role of nutrition surveillance to be prioritised. These need to encompass both a potential early warning role and longer-term roles.

Conclusions

Nutrition information in Ethiopia is largely derived from nutrition surveys that report levels of wasting in the under-five population living predominantly in drought prone rural areas. These surveys are technically sound and play a crucial role in advocacy for food aid.

The survey information has its limitations, however. Levels of wasting among under-fives is high and has remained unchanged for over 15 years. It is very likely that other age groups are also vulnerable to wasting although information on these groups is lacking. The non-food aspects of acute (and chronic) malnutrition are very poorly reflected and understood. Subsequently, the recommendations for interventions beyond food aid are extremely vague.

Ethiopia does not currently have a nutrition surveillance system and is highly dependant on cross sectional nutrition survey data. The EOS, in its current form, does NOT provide data which is of high enough quality to be used for nutrition surveillance purposes. Interest is growing in the potential role of nutrition surveillance although the debate is narrowly focussed on the technical rather than the institutional and response issues. Rather than focusing too narrowly on methodology, a number of key questions relating to the implementation and sustainability of the system need to be debated.

²⁴ Funding for the EOS has been included in the 2006 emergency appeal document.

10. Conclusions and lessons learnt

Design

The NSP provided high quality and consistent trend data over a period of 17 years.

The use of trend data allowed comparisons to be made over time. It also allowed the prediction of crises prior to the deterioration of nutritional status, based on previous experience of similar scenarios. While the practical and costing problems of collecting trend data present a number of challenges, in theoretical terms, trend data has a number of advantages over point prevalence data which need to be taken into account in discussions about future systems of collecting nutrition information in Ethiopia.

1. Lesson learnt: Nutrition trend data allows comparisons to be made over time and in combination with other indicators can help to predict crises.

The NSP methodology was sound and had particular advantages. The use of mean WFL was appropriate for a nutrition surveillance system in that it allowed small changes to be picked up and meant that the sample size could be smaller. The use of anthropometric, food security and other socio-economic indicators allowed for triangulating and understanding the trend data. As there is no consensus or internationally recognised ‘gold standard’ methodology for nutrition surveillance systems in the way there is for nutrition surveys, it was perfectly valid for the NSP to use mean WFL.

2. Lesson learnt: There are no standard anthropometric indicators for nutrition surveillance systems and means (e.g. mean WFL) may be appropriate in some contexts.

A major strength of the NSP was the enhanced analysis allowed because NFWs were on the ground and able to interpret quantitative data within context. Having ‘ears on the ground’ fosters trust between communities and fieldworkers and allows a better understanding of the situation. The combination of qualitative with quantitative data greatly enhances analysis.

3. Lesson learnt: Analysis is greatly improved through combining quantitative with qualitative information and having a good understanding of the local context.

The debate over whether nutrition is an early or late indicator of a food security crisis is irrelevant. Nutritional status changes as a result of a number of factors which are highly complex and context-specific. It is only by understanding the context in terms of the three underlying causes of malnutrition that it is possible to determine what these changes indicate in terms of food insecurity and the imminence of famine. There are instances where nutritional decline precedes a crisis by some months and other instances where nutritional status can remain stable as the situation is

deteriorating. The important issue is that nutritional status is strongly related to mortality and destitution. It is therefore one of a range of indicators that are useful for early warning of a humanitarian crisis.

In the Ethiopian context where levels of under-five wasting are ‘normally’ at emergency level, nutritional status is, in itself, an indicator of a chronic humanitarian crisis irrespective of the food security situation.

4. Lesson learnt: Nutrition is one of a range of inter-related indicators that are useful for early warning of both food and humanitarian crises.

The NSP failed to challenge the food-first bias pervasive in Ethiopia. The explicit objective of the NSP was to provide early warning and food security information. It was also explicitly linked to provision and targeting of food aid. Non-food aspects of early warning and interventions are rarely mentioned in documents relating to the NSP. This bias partly reflects the Ethiopian context. Ethiopia depends upon a rural economy where vulnerability to food insecurity is a major threat. It also reflects an international context where food aid has been the most readily available external aid resource. The bias may also partly reflect SC UK’s interest in HEA. Much of the early development of this approach took place in Ethiopia. HEA is still an important part of SC UK’s programme in Ethiopia.

The impact of this has been that the NSP failed to address the food-first bias still prevalent in Ethiopia, but rather contributed to perpetuating it.

5. Lesson learnt: Nutrition information systems that focus on food security indicators in an environment dominated by food aid serve to perpetuate a narrow approach to nutrition crises.

The NSP data on causes was focused towards food insecurity indicators with less concentration on the systematic collection of health and care data. It may well not have been possible for the NSP to systematically collect health and care data during the period of its existence. The importance of collecting a range of causal indicators, however, remains paramount. Levels of malnutrition, particularly child wasting remain unacceptably high in Ethiopia even in non-emergency periods. There is a humanitarian imperative to address malnutrition both with emergency and non-emergency interventions. Food aid has been the major form of intervention, yet despite the amount of food aid that has been distributed over the last 20-30 years, wasting levels remain high. It is essential that the causes of malnutrition in Ethiopia are examined in greater detail in order to elicit appropriate multi-sectoral responses.

While it may not be feasible to collect detailed data on a regular basis, it may be possible to conduct baseline assessments of the causes of chronic and acute malnutrition and then select a few key indicators for monitoring.

6. Lesson learnt: Nutrition information systems need to provide understanding of, and highlight the causes of nutrition problems in order to advocate for appropriate interventions based on needs.

Implementation

The NSP generated reliable and widely respected information which was largely made possible because SC UK ensured that the NFWs were well trained, managed and adequately resourced. They were therefore motivated to work in some of the most remote and drought prone regions of the country.

7. Lesson learnt: Well trained and resourced fieldworkers are crucial in order to provide reliable and objective data.

The NSP was a single-agency system. It was not only managed by SC UK as an independent system, but was also funded by SC UK. This sole ‘ownership’ weakened its ability to provoke a response.

8. Lesson learnt: Ensuring response requires multi-agency involvement in design and cost sharing from the outset as well as a clear institutional base for the system.

The NSP was not integrated into government structures. Collection and analysis of NSP data, and report preparation was carried out independently of government, though government endorsed preliminary findings and draft reports. In the 1980s, independence from government was important to ensure high quality and impartial data. It is less clear whether the need for an apparently parallel system was justified after the political changes from the 1990s which saw increased transparency and accountability of government for humanitarian response.

There are undoubtedly situations where it is not appropriate to locate an information system within government e.g. where government doesn’t exist (South Sudan) or is so biased that any information will be disbelieved. Nevertheless, co-ownership of the system (between government and outside agencies) is preferable.

9. Lesson learnt: Nutrition information systems should be integrated within government structures from the outset except in situations where government is either not functioning or there is a real danger that all information will be heavily politicised.

The NSP was widely perceived to be credible and informative by government, donors and other agencies and filled a significant gap in providing information to mobilise food resources during a period when objective information was limited.

During the life of the NSP, the government EWS was in its infancy and was highly centralised. Information from woreda level was largely subjective and was frequently questioned at central level. Information from the NSP therefore provided government and other agencies with objective, consistent and reliable information which was trusted. This was enhanced by SC UK's status as an international non-government organisation.

10. Lesson learnt: Objective and good quality data from a credible (non-government) source is extremely valuable in sensitive political environments.

The NSP failed to involve other agencies. SC UK depended entirely on its own resources to run the NSP. This meant that once SC UK took the decision to phase out of the NSP, there was no other agency to take up the reins. A broader based constituency, on the other hand, means that when the agenda of one agency changes, or funding is lost, other agencies can step in. The potential to sustain the NSP via inter-agency cost sharing (government and external agencies) was not pro-actively explored in the lifetime of the NSP and may represent a missed opportunity to build an environment conducive to cost sharing for nutrition information purposes.

SC UK has had a very positive experience with developing the guidelines on nutrition assessment in that not only were the guidelines developed through a Task Force chaired by the DPPC, but that a range of agencies participated. As a result, there is a widespread sense of ownership.

11. Lesson learnt: Joint ownership and participation by a number of agencies (both government and non-government) should be promoted in developing and sustaining nutrition information systems.

Capacity building for the long-term future of the NSP was minimal and largely consisted of training courses. SC UK made limited attempts to build capacity to carry out the NSP and waited until the system was due to be 'handed-over' to government before conducting formal training courses. In the event, these training courses were largely unsuccessful.

One problem that SC UK faced in capacity building was the quick turnover of government staff. Unfortunately, high staff turnover is not a problem confined to the Ethiopian Government but occurs in many institutions (including aid agencies themselves). It implies that capacity building needs to be on-going so that as staff move on, others are trained.

In hindsight, a clear strategy, based on an analysis of the constraints to capacity development, particularly during the NSP phase-out period would have been useful in the long-term. For example opportunities for 'on-the-job-training' for government staff to work alongside SC UK colleagues in all stages of the NSP (data collection, analysis and report preparation) may have been more helpful than one-off training

courses. Capacity building need not have been restricted to the NSP but included capacity building for improved nutrition policy and practice in general in Ethiopia.

12. Lesson learnt: Investment in capacity building in its widest sense is essential to sustain a nutrition information system.

Use of data

The nutrition data provided by the NSP was a powerful tool in ensuring response in some situations. Nutrition data has a particular emotive weight which other early warning indicators lack. This can be used to lobby for a speedy response.

13. Lesson learnt: The potency of nutrition information in eliciting response suggests that there needs to be very good reasons for not including nutrition information in early warning systems where countries regularly experience nutritional crises.

There was no response mechanism built into the NSP. The NSP became progressively de-linked from response and as SC UK had limited capacity to respond, the system became increasingly dependent on other agencies for response. Thus response could not be guaranteed.

14. Lesson learnt: Although response to information can not always be guaranteed, information systems must be clearly linked at the outset to accountable response mechanisms to maximise the potential for response.

The effectiveness of the NSP in provoking a timely and appropriate response cannot easily be judged. There are clear examples where the NSP has prompted response and probably saved many lives. There are also examples of where warnings went unheeded. Response to information can not always be guaranteed even with good quality data. Efforts to counter the risk of the political environment over-riding meeting needs are paramount.

13. Lesson learnt: Good communication and advocacy is as important as collecting methodologically sound data to ensure a timely and appropriate response.

The NSP dataset has not been fully exploited. The NSP dataset represents a unique resource which has yet to be fully exploited. It is high quality information on a range of indicators collected over a period of some 15 years. Although some useful analysis has been carried out, this has not yet been disseminated in a manner which is easily understood by non-experts. The baselines which have been developed are especially important as they can be used to compare findings from current surveys.

There is a small risk that if data are made universally available it will be poorly analysed and interpreted. However, this risk is minimised if data are well cleaned and if universally available, then false conclusions can be challenged.

14. Lesson learnt: Nutrition datasets should be made universally available in order to encourage open debate and transparent interpretation.

Sustainability

The NSP was a cost efficient system. In comparison with other forms of nutrition data (e.g. surveys), the NSP was not very expensive. Perceptions of high cost are not borne out by the evidence. However, cash constrained governments have very little money to spend on information systems. For this reason, information systems are frequently supported by external agencies. Sustainability of a system in these cases depends as much on outside donors as on the government.

15. Lesson learnt: Nutrition surveillance is not necessarily very expensive but any information system in poor countries is likely to require external agency funding.

The government was unable to afford the NSP. There are very few EWS being supported purely by the government in poor African countries today. Systems which have relied substantially on their governments for funding have been vulnerable and often unable to achieve stated aims (for example in Tanzania and southern Africa). Rather, donors have invested large amounts of money into sustaining systems. Sustainability of a system therefore depends as much on outside donors as on the government.

16. Lesson learnt: Agencies which establish and fund information systems (including nutrition information systems) have a responsibility to plan for the medium and longer-term financial sustainability of these systems.

11. Recommendations

Recommendations are made for three different levels: for the SC UK Ethiopia office; for agencies involved in nutrition in Ethiopia and for SC UK Globally.

Recommendations for SC UK Ethiopia Office

1. Disseminate a joint document with the conclusions of the NSP review and the findings of the statistical analysis of the NSP data.

SC UK has the opportunity to capitalise on its long investment in the NSP by disseminating the findings of this review and of the statistical analysis widely. A short summary document could be produced in a readable format and distributed widely both inside and outside Ethiopia. The lessons learnt from the NSP could be used to influence current debates on nutrition surveillance within Ethiopia and the baseline data derived from the NSP used to compare current surveys.

2. Handover NSP datasets to the ENCU

The NSP dataset is a unique resource that hasn't yet been fully exploited. It needs to be handed over to the ENCU as quickly as possible and further analysis encouraged. Requests for access to the dataset by outside agencies such as universities or research institutes should be welcomed. Rather than simply handover the entire datasets to an outside agency, it may be possible to support an arrangement whereby the outside agency is actively engaged in capacity building by working on analysis alongside members of the ENCU. Universities such as Tufts who already work in Ethiopia may well have Masters students who need to complete a project and could work within the ENCU for a period of time.

3. Develop skills in analysis and interpretation of underlying causes of malnutrition.

The current research being carried out by SC UK into the underlying causes of child malnutrition in Ethiopia and on the benefits of different interventions to address these causes should be used as the basis for designing a training course for national and agency staff. The focus should be on the analysis and interpretation of the underlying causes of malnutrition and capacity to make workable recommendations to government and to a specific agency. Ideally, this course should be designed through a partnership between SC UK and government staff specifically from the ENCU and nutrition Unit of the MoH. It should also draw on other agencies experience in the assessment of underlying causes of malnutrition for different livelihood groups in the Ethiopian context.

4. Advocate for research into key areas of nutrition such as older children and urban communities

In addition to the research being undertaken into causes of malnutrition among under-fives, there is a need to identify the extent and causes of nutrition vulnerability among over five population groups. Very little is known about these groups yet indications are that wasting may be higher in older children and chronic energy deficiency may

be widely prevalent among female adults. Furthermore, the focus has been on rural communities though poverty is clearly growing in urban areas.

The nutrition of girls and women is particularly crucial as their nutritional status has a direct impact on birth weight and thus of the nutritional status of future generations. As an organisation already involved in nutrition research, SC UK is in a good position to consider broader research options. In particular, SC UK should consider advocating for resources for in-depth surveys to be undertaken in other population groups and for the findings to feed into current thinking on priorities for national nutrition policy and strategy.

5. Support the development of nutrition policy and strategy

There is a growing emphasis on the development of nutrition policy and strategy in Ethiopia. SC UK, as a long-standing and experienced agency in nutrition should strongly support these efforts.

The development of policy and strategy needs to give careful consideration to the institutional location of government nutrition structures, their nutrition information needs and the role of external agencies in supporting policy implementation. SC UK has a role to play through advocating for a broadening of the analysis of the nutrition problems in Ethiopia in order to help overcome the current emergency and development nutrition divide that exists largely due to funding arrangements. A broader approach would seek resources, information and interventions that address the main forms of malnutrition in a coherent manner rather than limiting the focus to food based interventions to address wasting in under-fives.

6. Advocate for nutrition to be high on the poverty agenda

Malnutrition is both a cause and outcome of poverty needing dedicated multisectoral human and financial resources to address it. SC UK in Ethiopia is already carrying out research on nutrition and poverty in its areas of operation. It is therefore in a strong position to promote malnutrition as an outcome of poverty. In addition, nutrition indicators need to be seen as pivotal to poverty reduction monitoring as this has been shown in some countries to free up government resources for direct nutrition improvement.

Recommendations for agencies involved in nutrition in Ethiopia

1. Advocate for open debate and discussion within the Ethiopian nutrition community (government, UN and NGO partners) on the potential for a future nutrition surveillance system

Currently, agencies appear to have taken somewhat entrenched positions with regard to nutrition surveillance in Ethiopia. On one side, UNICEF is pushing ahead with the EOS in the face of legitimate concerns about the quality of the data and the very real practical problems facing EOS field teams. On the other side, some NGOs appear to have already dismissed the EOS before its potential has been fully discussed let alone developed.

A conclusion of this review is that the loss of the NSP did mean a loss of ability to monitor nutrition trends in a systematic way in Ethiopia and that this left a gap which the UNICEF supported EOS is trying to fill. However, in its current form the EOS does NOT provide data of sufficient quality for nutrition surveillance.

A robust nutrition information system (i.e. nutrition trend data in combination with nutrition survey data), which can be used as one indicator in a broader EWS, would, however, be the ideal in the current Ethiopian context. The objectives of such a system for EW purposes would be to provide:

1. An indicator that can be used for triangulation purposes and as a powerful tool to advocate for response;
2. Increased understanding of the underlying causes of malnutrition as there is a need to establish the prime cause of a problem (food, epidemic, violence etc.) in order to lobby for the right form of intervention (i.e. non-food inputs where necessary).

Current nutrition information available within Ethiopia does not meet the above objectives. There is therefore a need to re-consider some form of nutrition surveillance to provide trend data.

It is vital that agencies come together to discuss firstly whether a nutrition surveillance system in Ethiopia would provide useful information, and if so, what type of system would be practical and sustainable. The discussion needs to focus as much on *implementation* as on *methods*. There is a tendency to focus on technical aspects of the methodology and two critical components are frequently and easily overlooked: firstly valuing local knowledge and finding ways of incorporating it, to supplement the 'experts' technical input; secondly dissemination, communication and advocacy related to early warning messages. In addition, issues of integration (within government), sustainability, credibility, opportunities for capacity building and linkages with response should be treated as important as, if not more important, than methods.

The role of different agencies needs to be considered. How can agencies work in partnership to ensure that data quality is improved and that the system is 'owned' by all? One possibility is that NGOs work with the EOS to improve the quality of the data collected in their area of operation. Triangulation of EOS data with data collected through nutrition surveys would help to verify the EOS data and highlight weaknesses in the system that need correcting.

The objectives of a potential nutrition surveillance system should be considered. Should the focus remain on wasting in under-fives with the primary aim of eliciting food aid? Or can objectives be broadened to encompass measures of chronic vulnerability so that advocacy for non-food, longer-term interventions is strengthened?

Furthermore, there is a need for the discussion to determine whether and how information derived from cross sectional nutrition surveys can be linked with the EOS derived data and with other national initiatives, importantly, poverty monitoring and health information. If links between these systems can be forged, this will help

improve the national overview of the nutrition situation and provide much needed nutrition information for current debates on poverty reduction and health service provision.

Whilst the ENCU offers one forum for such debates, it is essential that non-emergency actors are also involved. Of particular importance is the Nutrition Unit in the MoH which is now the government focal point for nutrition in general.

2. Support ENCU to develop an addendum to the existing Guideline on Emergency Nutrition Assessment that provides greater detail on the data collection, analysis and report recommendations relating to underlying causes, and on extending anthropometric indicators

Nutrition surveys are the main source of nutrition information in Ethiopia today and are used to confirm rather than predict a nutrition problem. Analysis carried out during this review of all nutrition surveys in 2002 and 2003 demonstrates that whilst high quality data on wasting is presented, the underlying causes are poorly interpreted and described. Thus the recommendations from these surveys are extremely weak and tend to emphasise food-based responses.

Considerable financial and human resources are invested in these surveys and better use of these resources could be made. Skills need to be developed on the assessment and analysis of the underlying causes of malnutrition as well as advocacy for interventions to address these causes. Gathering data only on child wasting means that opportunities to combine analysis of the levels and causes of acute and chronic malnutrition are missed so recommendations for medium and longer-term interventions to address chronic nutritional problems cannot be made.

Furthermore, strategies to improve advocacy may need to be developed to ensure that recommendations relating to non-food interventions are acted upon

The existing Guideline on Emergency Nutrition Assessment focuses on wasting in under fives, mortality, immunisation and vitamin A supplementation. Less attention has been given to collecting, analysing and reporting data on underlying causes.

An addendum to the Guideline with context-relevant examples of specific indicators for all three underlying causal factors would be helpful. It would also be useful to specify how data on underlying causes can be used to do a risk analysis for malnutrition by using SPSS or alternative computer programmes.²⁵ If percentages of various indicators are going to be presented, these need to be interpreted so that a non-technical reader understands their significance. Finally, the addendum needs to include an in depth description of the types of interventions (food and non-food) that could be recommended in the Ethiopia context.

The ENCU is the most obvious forum to facilitate the process of developing the guideline addendum.

²⁵ Epi Info does not allow for risk analysis of malnutrition and alternative computer programmes have to be used.

3. Actively support capacity building in nutrition

It is imperative for agencies to support nutrition capacity building within the government. As a respected and leading nutrition and food security agency within Ethiopia, SC UK should lead the way in this initiative. Specifically, agencies should advocate for:

- Re-allocation of some of the nutrition survey funds to fund nutrition posts within the government (DPPC and MoH).
- Support development of professional training courses in nutrition
- Provide incentives for Ethiopian nutritionists to work within government and come back to the country.
- Identify government counterparts for all international nutritionists

Recommendations for SC UK globally

1. Develop a global policy on where, when and how to support nutrition information for early warning purposes.

The value and institutional feasibility of establishing nutritional information will vary with context. In some situations existing FSIS may be working effectively as a stand alone EWS while in others the institutional capacity for establishing and sustaining nutritional information may be so poor that the added benefits of incorporating nutrition information into EWS are outweighed. Global policies on nutrition information would broadly define these contexts as an initial aid to decision-makers faced with questions about establishing or strengthening nutrition information.

2. Advocate that a percentage of intervention expenditure should be spent on nutrition information systems

The cost of the NSP was tiny in comparison with the cost of food aid deliveries without counting the potential cost savings in terms of averted illness and deaths. Yet it was also cited as the main reason for stopping the NSP. Currently, donors are keen on supporting information systems that help to predict and avert disaster. It is therefore logical to advocate for a percentage of aid expenditure (perhaps one per cent) to be spent on nutrition information systems, which may include some type of surveillance. The precedent is already there in terms of evaluation e.g. the DEC already insist that one per cent of expenditure goes on evaluation.

3. Develop leadership in combining food security and nutrition analysis and interventions

SC UK has substantial experience in food security and nutrition analysis. It has developed the HEA methodology that is both internationally respected and widely applied in emergency contexts. It has a long history of emergency nutrition related activities and more recently, had developed a strong advocacy position on large scale programming approaches that aim to address malnutrition. Based on the findings of this review, it can be argued that SC UK is in a strong position to develop approaches for combining nutrition and food security information in order to broaden the analysis

of nutrition and food security vulnerability. An obvious way forward is to develop methodologies that integrate HEA and nutrition.

Up until now HEA has generally been implemented without integrating nutritional information. There are exceptions to this, e.g. in Darfur and Burundi. The main reasons why HEA and nutritional data have not been integrated probably relate to perceptions that nutrition indicators provide late information for early warning purposes and also as most systems that have implemented HEA have done so through units (often WFP led) that have been emergency and food aid focussed. Nutritional information has therefore not been afforded priority.

However, there are several reasons why it may be important to combine nutritional information with food security data.

HEA has a number of conceptual and technical weaknesses which can undermine accuracy and confidence in findings, e.g. the difficulty of establishing what constitutes a normal year in situations of chronic emergency and the use of subjective rapid appraisal techniques to generate quantitative data. Combining nutrition data with HEA can therefore help triangulate findings and also lend quantitative ‘gravitas’ to findings. Furthermore, closer integration of nutrition and HEA data could establish and clarify linkages between acute and chronic food insecurity and ensuing nutritional outcomes.

Developing a methodology for combining the two types of information will raise technical and institutional challenges. For example, nutritional enumerators may not be suitably skilled to conduct HEA analysis while it may be difficult to establish an all encompassing sample frame which satisfies statistical requirements without being overly cumbersome at field level.

Nevertheless, SC UK is uniquely placed to undertake this type methodological development. Furthermore, the findings of such work may well help to inform the work of other agencies using food security assessment approaches in a way which allows closer integration of nutritional and food security analysis.

4. Develop a position paper on nutrition information systems

As highlighted in this report, there is a lack of clarity about the objectives and relative merits of different nutrition information systems in Ethiopia. Confusion exists between the role and scope of surveys as opposed to surveillance or rapid nutrition assessments. Internationally, the subject of nutrition information has long been neglected with the last acclaimed piece on nutrition surveillance written in the 1980s.

SC UK is in a unique position having invested in two reviews of nutrition surveillance (Ethiopia and Darfur) to develop a position paper on nutrition information systems. The paper would need to examine the strengths and weaknesses of different approaches including the following:

- longitudinal surveillance including sentinel sites
- cluster surveys
- clinic based surveillance systems
- rapid nutrition assessments

- issues relating to selection of indicators e.g. MUAC, WFL
- agency and government experiences with implementing nutrition information systems
- examples where nutrition information has been linked to poverty/livelihood monitoring and as part of health information systems.

Following the publication and dissemination of this review paper, SC UK could advocate for a dedicated forum on nutrition information systems for the international nutrition community. This forum should enable questions about nutrition information systems to be raised and answered as well as new or 'home grown' approaches disseminated to help build knowledge and evidence in this area.

5. Share the Darfur and Ethiopia experiences within and outside SC UK

Although very different in approach and methods, the Darfur Food Security Information System and Ethiopia NSP could usefully be shared through the production of a summary style paper highlighting the major findings of both reviews and the main cross cutting issues. This paper would be a useful resource for SC UK staff in both countries who have been involved in the programmes and more widely for agencies considering the development of nutrition information systems in these countries today.

The dissemination of the key findings would actively support learning across the region within SC UK and between agencies and would position SC UK as an agency keen to share the positive and less positive lessons from its programming in this area. Within the Ethiopia context, such transparency is important in view of the lack of knowledge about the NSP outside SC UK and the potential role of SC UK in advocacy for nutrition.

Beyond the country level, SC UK should consider facilitating a meeting in the UK for key people involved in nutrition surveillance and information systems more broadly at which the key findings and conclusions of both reviews are presented. The purpose of this meeting would be to disseminate the findings and to encourage discussion about the potential role of SC UK in nutrition information systems in the future.

6. Develop strategies for establishing integrated FSIS which track acute and chronic food insecurity and vulnerability

SC UK has only had limited experience of linking or integrating emergency focussed FSIS with information systems that monitor and analyse chronic vulnerability and poverty. These experiences are emerging in countries like southern Sudan and Tanzania where acute emergencies have subsided or conflicts have been resolved. In countries such as Ethiopia which teeter on the edge of emergencies, it is essential that information systems provide not only sustainable early-warning capacity but also a more detailed understanding of livelihoods vulnerability, to inform longer-term sectoral policies and programmes. The ideal FSIS would integrate early-warning, chronic vulnerability/poverty monitoring and impact assessment capacity. The current model whereby FSIS (including the NSP) are separated financially and institutionally from systems that monitor chronic vulnerability and poverty is not really working. This has been amply demonstrated by the NSP. Early warning systems often come

and go as emergencies ebb and flow, while linkages between acute and chronic vulnerability monitoring are poorly made. Intervention modalities are rarely tested and are rolled out on the basis of agency mandate, established expertise and access to funding rather than any empirical study of their effectiveness.

What is needed is a model that addressed the methodological, institutional, political and funding challenges involved in straddling the divide between emergency needs and chronic vulnerability.

SC UK are well placed to develop thinking around how best to integrate early warning, chronic vulnerability monitoring and impact assessment capacity within one information system. Experiences from the recent past and ongoing programming should allow increasingly sophisticated understanding of how to establish and sustain integrated FSIS which contain a nutritional surveillance component. Developing the understanding should be seen as a priority and every opportunity taken to disseminate findings to inform the wider humanitarian and development community.

Annex 1: Time-line of events in Ethiopia

Date	Major Contextual Events	SC Nutrition Surveillance
1972-75	FAMINE (0.2 – 0.5 million deaths in Wollo and Tigray)	
1974	The Relief and Rehabilitation Commission (RRC) formed.	SC UK begins operations in Ethiopia
1976	RRC sets up Early Warning System	
1978		Nutrition Field Worker (NFW) Programme set up in Amhara National Regional State
1983-85	FAMINE (0.6-1 million deaths)	NFW reports lead to nutrition surveys that find high levels of malnutrition. Feeding centres opened as a result. NFWs withdrawn from field to work in feeding centres up to the end of 1985. NFWs do 3 month training course run jointly by SC, Oxfam and the Ethiopian Nutrition Institute
1986		Nutritional Surveillance Programme (NSP) established. Covers three of the most vulnerable areas of the country Wollo and Tigray highlands; Southern Shewa (including Wolaita in Northern Omo); and Hararghe (including pastoral areas of Ogaden)
1987	RRC establishes a Nutrition Unit in the Early Warning Department with UNICEF financial support.	
1991	CHANGE OF GOVERNMENT RRC becomes DPPC	SC UK carries out helicopter-supported survey on 'food economy' in Ogaden and other regions of northern highlands. Publication of 'Making Ends Meet' NSP technical base expanded to include socio-economic monitoring while still maintaining its core focus on nutritional surveillance.

1993	DPPC Nutrition Unit closes due to manpower constraints	NSP project agreement with RRC revised to include food security indicators in the same project areas. Review by Dagne Eshete of NSP in Wolayita.
1994	Government policy of decentralisation initiated.	
1995		Review by Anderson and Bush to design a comprehensive 'communication strategy' for the NSP.
1998	WAR WITH ERITREA	SC UK takes decision to 'phase out' the NSP and hands over to the DPPC.
1999-2000	FAMINE (affecting 10 million in Wollo) DPPC establishes ENCU with UNICEF funding	
2001		SC UK consultancy examines an appropriate method and approach for using nutrition data within EWS.
2002-2003	FAMINE (affecting 11.3 million in Afar, Tigray, Amhara, Oromiya and Somali Regions)	SC UK take lead in producing Guidelines on Emergency Nutrition Assessment.
2005	DPPC becomes DPPA	

Annex 2: Key Informants

Ethiopia

Government

Dominique Brunet	Nutrition Coordinator	ENCU
Sr. Selamawit Negash	Nutrition Team Leader	MOH
Zewdu Abera	Early Warning Department	DPPC
Teshome Erkinneh	Head-Early Warning Department	DPPC

SC UK

Cassandra Chapman	Policy and Planning Manager-Ethiopia Office	
Taye Yimer	Nutrition Advisor-Ethiopia Office	
Anne-Marie Mayer	Nutrition/Health Research Advisor-Ethiopia Office	
Daba Gebissa	Manager, Linking Relief to Development-Ethiopia Office	
David Throp	Programme Director-Ethiopia Office	

UNICEF

Bjorn Ljungqvist	Country Director	
Iqbal Kabeer	Project Officer, Nutrition	
Fikre Negussie	Project Officer, Emergency	
Sylvie Chamois	Project Officer, Nutrition	

WFP

Zelalem Ewnetu	VAM National officer	WFP
Pierre Lucas	Head VAM	WFP
Perrine Geniez	Nutritionist	WFP

Donors

Marion Kelly		DFID
Veronique Lorenzo	Food Security/Rural Development	EU
Abu Yadetta	Food Security Expert	EU
Judith Sandford		USAID

NGOs

Hazel Simpson	Health Section Head	CRS
Shimellas Abate	Relief Programme Manager	World Vision
Girma Legesse	Early Warning system	World Vision
Emily Mates	Health Field Officer	CONCERN
Sue Lautze	Director: Saving Lives & Livelihoods	Tufts

International (current and ex SC UK staff and others)

Stephen Anderson	Peter Salama
Mark Lawrence	Ben Foot
Julius Holt	Stephen Blight
John Seaman	Lesley Adams
Lola Gostlow	Tim Shortley
Kay Sharp	Doug Clements
Susan Jaspers	Anna Taylor
Helen Young	Annalies Borrel
Arabella Duffield	

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Annex 4: Terms of Reference

Review of SC UK's Nutritional Surveillance Programme in Ethiopia October to December 2005

Background

Save the Children UK's earliest involvement in nutrition related work in Ethiopia dates back to 1974. In the late 1970s and early 1980s SC UK began to undertake regular nutrition assessments in some of the most food insecure areas of the Country. The Nutritional Surveillance Programme (NSP) underwent a number of changes based on recommendations from formal evaluations of the programme. In the final years data on both typical early warning indicators (crop price and production, rainfall, animal health etc) and nutritional outcomes (anthropometry) were collected²⁶.

In the late 1980s there was a push to hand over the NSP to the Relief and Rehabilitation Commission (RRC) (now the Disaster Prevention and Preparedness Commission - DPPC), which did not materialise. However, in July of 1998 an agreement was finally signed between SC UK and the DPPC which outlined a phased withdrawal from operational areas over a three year period along with a transfer of skills to DPPC²⁷.

With the closure of the NSP, SC UK recognised the importance of documenting lessons learned over the years for its own institutional learning as well as to contribute to current debates about the use of nutrition data for early warning and response. Additionally, the wealth of information contained within the longitudinal data sets was identified by a number of agencies (CDC, Unicef, etc...). SC Ethiopia and the DPPC were faced with several requests from international organizations for this data. SC also felt that there was a need to try to conduct statistical analysis of these data sets to draw out information that could provide valuable insights for early warning in each Region.

A ToR was drafted and divided the tasks into two main objectives. The first objective was to conduct statistical analysis of the longitudinal data sets by Region to draw out valuable information that can be utilised by nutritionists and agencies (governmental and non governmental) involved in improving early warning and food security efforts in Ethiopia. The second objective was to analyse and document SC UK's experience in operating a longitudinal surveillance system in Ethiopia.

Objective 1

In relation to the first objective, the statistical analysis was meant to assess the linkages between environmental, socio-economic status, anthropometric and mortality data in different years, different seasons, and different food economy or agro – ecological zones in each Region where NSP had been operational (Amhara, Tigray, SNNPRS, and Oromiya). It was envisaged that this analysis would assist in both improving early warning and monitoring systems in these areas, and also provide a baseline picture of the nutritional and socio-economic situation of these Regions.

Although acknowledged as an important piece of work, the overall evaluation proved very difficult to fund. The ToR was divided into two and the first objective was funded by OFDA

²⁶ See Chapman.C, 'A Long Term Investment in Improving Analysis and Subsequent Interventions: Historical Evolution of SC UK Ethiopia's Experience (1973- 2005)', 2005, (pgs 9-10, 16-22).

²⁷ It was agreed that training would be provided to DPPC staff at Federal, Regional, and Zonal levels to transfer NSP's skills in data collection, analysis, and report production. Additionally, the longitudinal data series would be handed over to the DPPC.

through a sub grant from SC US. The work was completed by Dr. Arabella Duffield with Mark Myatt²⁸.

The main output included:

Production of baseline prevalences of malnutrition in the NSP areas (converted from wfl to z scores).

This is broken down by season and provides a very useful guide for agencies currently operating in these areas. New prevalence rates identified in current 30 x30 cluster surveys can be compared to this 'baseline' in an effort to understand how serious the situation is through a comparison of the historical data and find out what the likely causes of the problem are in order to design an appropriate response.

Assessment of the use of proxy food security indicators in predicting the prevalence of malnutrition in the NSP areas

Analysis of the relationship between malnutrition and specific food security indicators²⁹ (rainfall performance, crop prices and relief receipts) was conducted for each of the regions where NSP was operational. Interestingly, the relationship was not systematic across regions. Perhaps we should not have assumed they would be as the HEA work conducted to date does highlight differences between these areas. This analysis is useful for agencies operating in the areas reviewed.

It remains to be seen how this analysis will be used within Ethiopia by other agencies.

Objective 2

SC UK seeks a consultant who will complete objective two of the original ToR mentioned above. However, a number of changes have occurred within the Ethiopian context worth highlighting since the initial ToR was written for this piece of work. One change has been the formation of the Ethiopian Nutrition Coordination Unit (ENCU) housed within the Government's Disaster Preparedness and Prevention Commission (DPPC). The unit has been funded primarily by UNICEF and WFP with additional support in times of crisis from other Donors (OFDA, USAID, etc...). The purpose of the unit has varied depending on the interests of key stakeholders responsible for its funding. However, most would agree that the main purpose of the unit has remained coordination of nutritional data (primarily anthropometric data collected through standard 30 x 30 cluster surveys) in an effort to complement early warning information. This information is then meant to assist decision makers about targeting scarce resources in a timely and appropriate manner³⁰.

Meanwhile, debates have continued about the importance of nutritional surveillance systems and the utilisation of data collected as part of an early warning system. UNICEF has been very active in initiating these debates and commissioned a study to look at the contributions that could be made to the early warning system through the collection of nutrition and child specific data.

This was followed by the introduction and scaling up of UNICEF and WFP's Enhanced Outreach Strategy (EOS) programme. Although there are a number of problems related to the

²⁸ SC UK (2004) An analysis of SC UK's and the DPPC's nutrition surveillance programme dataset in some of the most drought prone areas of Ethiopia, 1995-2001. SC UK: Addis Ababa.

²⁹ The areas were predominately agricultural based. This obviously had an influence on which indicators were selected for this analysis.

³⁰ A number of stakeholders have questioned the role of the ENCU periodically and more recently. Although much discussion has taken place about a formal evaluation of the ENCU it has not happened to date.

credibility of the data currently being produced through this programme, many have argued that it has widened the scope of analysis and highlighted the importance of nutrition within early warning.

Despite all of these changes, there continues to be limited consensus about the benefits of nutritional surveillance systems for early warning efforts.

Save the Children UK has recently completed a consolidation and review of its work related to food security information systems throughout Africa³¹. In each of the papers produced by different country programmes it became apparent that there was a lack of consensus and expertise about the role of nutritional data within or outside of these systems. Importantly, with the recognition that the topic warranted a separate review, the consultants were asked not to focus on nutrition. However, it is crucial that SC UK does not look at the recommendations made through the above pieces of work without also considering its experience and therefore position on how anthropometric data should be used in countries where SC UK will continue to support or strengthen FSISs.

Purpose of the Consultancy

The purpose of the consultancy is to review and document SC UK's experience in operating a longitudinal surveillance system in Ethiopia. It is hoped that through this exercise the strengths and weaknesses of nutritional surveillance systems can be highlighted and that lessons learned can then be incorporated into ongoing debates within the Ethiopian context about the utilisation of anthropometric data to improve early warning efforts (as an integral part of early warning/ food security information systems or as a complement to data already collected and analysed regularly). It is also hoped that these findings will contribute to wider organisational debates about the value added by collecting anthropometric data, the strengths and weaknesses of a longitudinal surveillance system, and the effectiveness of each in the provision of early warning information or within food security information systems³².

Outputs

The review will produce a report that will summarise the findings of the research. It is envisaged that this document will have a wide distribution within and outside of Ethiopia. The final report will be edited by Save the Children London and published as a Save the Children document.

Procedure

A consultant will be responsible for the review of existing documentation, field work, debriefing within country and writing of the final document. It is anticipated that the consultant will be well-known and respected nutritionist/s with international experience in working with early warning or food security information systems.

The consultants will be expected to produce a timetable with a proposed methodology for completion of the above activities at the beginning of the consultancy. This should include proposed stakeholders or key individuals to be interviewed within and outside of Ethiopia as well as a list of key documents for review. Additionally, a draft outline has been attached which will need to be reviewed and suggested changes agreed in consultation with the consultants prior to the commencement of work.

³¹ Nicholson, N. 'The Rationale for Food Security Information Systems:

A Donors' Perspective: A Study undertaken on behalf of the Food Aid/Food Security Working Group of Save the Children UK' March 2005 & Shoham, J. 'SC UK info synthesis paper', 2005. (NB- the latter is based on a number of country specific papers which can be referred to).

³² An outline has been attached with the proposed chapters and points to be covered (Annex 1 attached)

It will be crucial that the evaluation includes the full participation of the DPPC and in particular, the ENCU who will play a central co-ordinating role. In addition, the consultants will be required to work with in-country key stakeholders representing UN, bilateral, and NGO organisations through an identified Advisory Committee. This committee will perform the following roles:

- Familiarise themselves with the ToR
- Participate as key informants in the review
- Participate actively in any meetings where recommendations and conclusions are discussed
- Comment on the draft report within a specified time period.

The consultants will debrief in country to feedback some of the main findings and proposed recommendations to SC UK and key stakeholders.

The consultants will be required to produce a draft report and will receive feedback before the final report is produced. Times for the completion of these outputs will be agreed in consultation with the country programme. The contact for this piece of work in country will be the Policy and Programme Development Manager, Cassandra Chapman. However, the consultant will work closely with the senior nutrition advisor, Tayech Yimer. The Ethiopia programme will also refer to London-based nutrition adviser (Arabella Duffield) for support throughout this consultancy as and when required.

Annex 1: Proposed Outline for the NSP Review

1. Background (10%)

- History
- Objectives
- Original design and rationale behind it
- Changes through years and rationale for decisions

2. Review of Operational Issues

- Design of programme (centralised vs. decentralised, etc...)
- Ownership of outputs
- Sustainability
- Cost effectiveness
- Constraints and strengths in implementation due to design

3. Effectiveness of NSP in meeting outlined objectives (30%)

- What was the minimum set of components for system to achieve what it did? Was excess information gathered? Was all the data necessary for the system to work?
- Utilisation of information by decision makers and partners
- Links to response versus other factors that make donors respond (CNN factor etc..)
- Timeliness of information and response
- Evidence of false positives – prediction of crisis when there wasn't one
- Evidence of consequence of late response
- Net benefits to communities (Community versus Government perception of the system)
- Could more have been done as follow up – communication strategy
- Summary of lessons learned through phasing out, transfer of skills (what is realistic)

4. Brief outline of the current use of nutrition information in Ethiopia including new plans from UNICEF/DPPC (10%)

5. Value of collecting longitudinal anthropometric data in EWS in the current Ethiopian context (30%)

- Different uses of anthropometric data in surveillance and strengths & weaknesses of different systems
- Strengths & weaknesses of longitudinal surveillance system (including statistical debates)
- Evidence about relationship between anthropometry and other indicators and variation in these relationships between regions and Food Economy Zones in Ethiopia (conclusions drawn from statistical analysis – see objective 1)
- Strengths and weaknesses of using woreda based structures to collect and interpret data³³
- Constraints to use of nutrition data for early warning and response (targeting issues, etc...)
- Cost effectiveness as opposed to other systems, late response, etc.
- Conclusions about anthropometric data as early or late indicator

6. Recommendations (20%)

- New directions in Ethiopia (given contextual changes and debates described above)
- Organisational direction for SC UK (given recent documentation of experience and recommendations around FSIS work).

³³ The multi-sectoral approach to early warning is based on the National Policy on Disaster Preparedness and Management (NPDPM).