



A comment on the WFP SENAC Comprehensive Vulnerability Assessment and Analysis

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*I get that feeling of deja vue coming on again*¹

International interest and investment in famine early warning and emergency assessment tends to be cyclic: a gross failure to predict and assess a famine is followed by adverse publicity and in turn a surge of investment in systems to ensure better future performance. Over the last 30 years there have been three main cycles.

The first followed the international failure to notice, much less prevent, the economic crisis and starvation from the protracted drought in the West African Sahel (1968-73) and Ethiopia. This event, which was closely followed by the 1974 World Food Conference, led to the proposal for the development of a system of 'nutritional surveillance', to ensure that this would not occur again. This system was to monitor trends in precipitation, crop production, child anthropometry and other 'indicators' for which it was thought that the data could be easily and cheaply obtained and which were thought to be proxies for food supply and people's access to food.

The second followed the great Ethiopian famine in the mid 1980s, which was not only not predicted, but was actively denied by the UN. After this failure the US FEWSNET was established, the FAO GIEWS strengthened, the EU (DG VIII) supported several NGO early warning initiatives and the WFP VAM established.

The third and current wave follows the failure in the last 5 years to anticipate famine in southern Malawi and Niger, despite internationally funded and operated early warning systems in both countries and in the former active field assessments by the UN in the pre famine period.² In both cases there were large numbers of deaths and many people were left destitute.

The period has not of course been an unbroken story of failure. Many food relief operations have not been followed by obvious starvation. However in many of these cases the evidence on which relief decisions were based appears to have been largely circumstantial, often little more than the assumption of an association between drought or other event and increased food needs. The basis on which food aid needs are calculated is often obscure.

In the southern Africa Region the main new early warning and assessment (EWA) initiatives are the DfID Regional Hunger and Vulnerability Programme (part of its mandate is to support national and regional Vulnerability Assessment Committees (VAC's), improved capacity in assessment and analysis relating to chronic vulnerability) and the World Food Programme (WFP) SENAC ('Strengthen Emergency Needs Capacity Project').

The objective of SENAC is to strengthen WFP's capacity to assess humanitarian needs in the food sector during emergencies and the immediate aftermath through accurate and impartial

¹ Variously attributed.

² Harrigan, S, The cost of being poor: markets, mistrust and malnutrition in Niger 2005-2006. Save the Children UK. June 2006; Summary report of the evaluation of WFP's response to the crisis in Niger 2005. WFP Executive Board, Annual Session, Rome 12-16 June 2006. Agenda item 7; FEWSNET Malawi, ECFSP, WFP, Final Report: Rapid Food Availability Assessment for Malawi Nov 2001.

needs assessments. Specifically it is to improve WFP's performance in 4 key areas: accountability and transparency, methods and guidance, pre-crisis information and assessment capacities. SENAC concentrates on:

- developing improved analytic methods, tools and guidance materials.
- strengthening WFP's field capacity by deploying assessment specialists in its six regional bureaux.
- improving the availability and management of pre-crisis information in countries exposed to recurrent and protracted emergencies.³

SENAC is a phased 3 year work programme, which is only partly complete and it is perhaps too soon to rush to final judgement. Nevertheless SENAC is a substantially funded initiative which comes late in a long period which has seen many similar initiatives. SENAC appears to have been conceived outside Africa without either African inputs or from other stakeholders in the region and information about SENAC is difficult to obtain.⁴

This note discusses one component of SENAC, the 'Comprehensive Vulnerability Assessment and Analysis' (CVAA). Within the region there appears to be widespread confusion about the aims of CVAA. CVAA is being superimposed on much established work in the region, with the obvious risk of duplication. It seems reasonable to ask, even if no final conclusion can be reached, what this is likely to add.⁵

The author has an interest in a specific approach to assessment (the 'Household Economy Approach') and might therefore be expected to take a critical view. This note is therefore set out in two sections. Section 1 gives the author's view of the specification for an operationally useful assessment system. This covers much old ground but there is continued confusion about the problem to be assessed, the information required, the operational requirements and constraints and the methodological possibilities. Section 2 gives comments on the CVAA.

SECTION 1

The problem to be assessed

There appears to be general agreement that the need for assessment arises chiefly from the impact of economic 'shocks' on household income, and on the ability of households to acquire food and other goods, rather than a failure of aggregate food supply i.e. there is broad subscription to Sen's entitlement theory.⁶ For the most part shocks are experienced by households as falls in production and/ or changes in the price of food and other traded goods and result from fluctuations in agricultural production mostly due to climatic factors, price changes resulting from a variety of local and international causes and occasionally from natural disasters e.g. flood.

In all countries of the southern Africa region in any year a proportion of the rural population live in extreme poverty and, in some countries some people live seasonally in conditions of semi starvation. A fall in food crop production, money income from employment or cash crops and /or a rise in food prices will reduce the income of the poor. Although there is variation within the region poor households generally have limited options to compensate for any income shortfall. In many places the poor have limited savings and assets, wild foods have long since ceased to be available in quantity, there are few employment opportunities or households may lack the labour to exploit these and charity or credit may be hard to obtain. A

³ Overview of the SENAC project. WFP/SENAC web site

⁴ Goyder H. Interim Review of the SENAC project. World Food programme. Emergency Needs Assessment branch (ODAN) September 2005; Sawdon: Briefing note for the EC/FAO Informal Technical Meeting on Food Security Analysis and Needs Assessments in Crisis Situations, Brussels, 16/06/06

⁵ There is also the question as to whether WFP, whose entire *raison d'être* lies in food aid is best placed to estimate food aid needs.

⁶ Sen, A., Research for Action. Hunger and Entitlements. WIDER, UN University.

household which cannot meet its food consumption needs must reduce its food and/or non-food (salt, soap clothing school fees etc) consumption or resort to more desperate actions.⁷

The relationship between shocks of increasing severity and levels of household income is therefore a continuum ranging from at one extreme chronic poverty and seasonal hunger to at the other large scale starvation and death. Lesser shocks would be expected to increase the poverty of some households, larger shocks to have a larger impact and/or to affect larger numbers of households.

The actual impact of a shock in any location depends upon local conditions. Specifically:

- Variation in the pattern of income and asset holding between and within different populations. In different locations people exploit different crops, livestock types, specialist occupations e.g. fishing, and have different access to employment, markets and common resources. Within any location e.g. a village, poorer and better-off households will have different patterns and amounts of income, and the economic relationship between households e.g. gifts, will vary. Further, the distribution of income and asset holding will vary from place to place.
- 'Shocks' are often described in terms of changes in the production and price of a dominant food crop e.g. a fall in maize production and a rise in maize price. In fact they often involve simultaneous or sequential changes in the production and price of several food and cash crops, and the price and availability of labour and other traded commodities. They may also be interrelated e.g. a poor crop may lead to a rise in food prices; livestock prices may collapse if many people are selling livestock.

The vulnerability of the current income of a household to a particular 'shock' is therefore a function of the specific shock which has occurred and the pattern of household income i.e. households are vulnerable to some events and not others. A fall in maize production will have no direct impact on a household which does not produce maize: a fall in tobacco price will directly affect the income of tobacco producers. The vulnerability of household consumption i.e. its ability to obtain food and to meet its non-food costs will depend on its ability to compensate for a fall in income e.g. by using savings, or finding alternative income.

Poverty and food security

The relationship between household income and household food access i.e. between 'poverty' and 'food security', will depend on the level of household income relative to its requirement:

- households have unavoidable non-food needs. If income is insufficient to meet both food and non-food needs people may forgo food to secure their non-food needs.
- if assets are sold by a household in order to survive a 'shock' this potentially increases their future vulnerability i.e. they may survive in the short run but may be more impoverished and food insecure when normality returns.

What information is required?

Although there is now general agreement about the definition of the problem there is still confusion about the objective of assessment.

Most international agencies sharply demarcate 'emergencies' and 'development'. Although the reasons for this division are clear i.e. for most international agencies emergencies have major financial and political implications and many agencies respond to media reports rather

⁷ For example an increase in the number of girls taking up prostitution to meet family food needs. O'Donnell M, Khozombah M, and Mudenda S 'The Livelihoods of Commercial Sex Workers in Binga District, Zimbabwe', SC UK 2002

than primary information, this leads to the view that the objective of assessment is to 'predict famine' and provide information to manage starvation.⁸

However in the southern Africa region (and for that matter much of sub-Saharan Africa) famine, however this is defined, has been rare. From a more local perspective, and with occasional exceptions e.g. Zimbabwe, the interest of Government, donors and the international financial institutions is chiefly with the elimination of poverty. It is now widely recognised that 'small' economic shocks contribute to poverty and increase future vulnerability. Additionally although large ('emergency') interventions still tend to take the form of food aid for free distribution there is increasing donor interest in alternative approaches to poverty alleviation and vulnerability reduction e.g. cash transfers, and in more efficient distribution methods such as SMART cards. From this perspective an assessment system must be capable of providing:

- quantitative estimates of need including an estimate of the number and location of the people who will be affected, the severity of the expected impact and when this will occur. Without this it is impossible to plan a response.
- information in terms which are likely to convince Government and donors that a response is required. Experience suggests that the chief requirement is for explanation, detail and a clear expression of the uncertainty which attaches to the prediction.⁹
- information well in advance of actual crisis and ideally before people are likely to sell assets. The period required varies, but where food aid is concerned is typically measured in months, as mobilising, transporting and distributing food takes time. Non-food aid interventions particularly where there is a pre-existing distribution system e.g. for welfare, market intervention, may be more rapid.
- information on the impact of relatively minor shocks and changes. As noted 'small' crises whose main effects may be measured in terms of poverty and deprivation rather than starvation are of policy interest.

The technical problem for assessment is to be able to say, given a set of actual or anticipated production and price conditions, what that impact is, or is likely to be, in terms which guide potential intervention. Whether or not a particular impact is an 'emergency' or a 'famine', and what action if any should be taken are separate questions.

What are the technical possibilities of providing this information?

Practical constraints

By definition any assessment system must be sustained over long periods and must therefore be able in most cases to function within severe budgetary and skill constraints. History is littered with early warning and assessment projects which collapsed when their project funding ended or key technical placements removed before national capacity had been developed.

Methods

⁸ With the obvious corollary and difficulty of defining what is being predicted i.e. discriminating between 'normal' and 'emergency' levels of deprivation, malnutrition and mortality. Over decades there have been dozens of definitions of 'famine' e.g. a 'drastic, wide-reaching food shortage'; 'Famine is where the number of people dying is between 2-4 people per 10,000 population per day, and/or wasting is between 20-40 percent' (Devereaux and Howe).

www.members.alertnet.org/thefacts/reliefresources/112687129715.htm. These are inevitably arbitrary, exclude serious situations (e.g. 19% child malnutrition, even assuming such precision could be obtained) and tend to ignore the spatial and temporal dimensions e.g. more or less severe starvation affecting more or less people for different periods of time. Definition is possible only from a declared perspective. Two observers may label the same event differently and correctly e.g. in the crisis in southern Sudan in 1998 where journalists decided that the event was a famine and some agencies insisted it was not.

⁹ Donor governments are often blamed for failing to respond to warnings for political reasons. This certainly occurs e.g. Darfur between 1998/ 2002. However in the author's experience even when there are no political constraints failure to respond is as often because of doubts about the quality of the assessments provided.

Two broad approaches have been used to predict and assess the impact of economic 'shocks':¹⁰

1. Indicators

'Indicator methods' i.e. monitoring variables which it is thought are proxies for household food access. Indicators usually include precipitation, crop production, and the price of the main traded commodities. Indicators also include so called 'late indicators' i.e. measures which are or are very close to measures of outcome (nutritional anthropometry, the number of meals consumed/day, the 'coping strategy' (CARE) index, dietary diversity and other measures of household food access). Indicator methods have been the most popular approach to early warning and have been elaborated in a variety of ways e.g. by weighting, and using larger numbers of variables e.g. the FEWSNET system in Malawi which used a system based on 70 weighted indicators.

The obvious limitation of indicator approaches is that unless the relationship between the indicator and the underlying economy is understood any interpretation of indicator changes is a guess.¹¹ Extreme indicator changes will suggest that there will be a problem of some sort but can provide no information useful to planning a response.

'Late indicators' may indicate a current problem although it can be difficult or impossible to distinguish between 'normal', usually seasonal changes and a more severe problem.¹² Also by the time that such changes are unambiguously observed i.e. there is a famine, it is usually too late to provide relief.

2. 'Models'

It has long been clear that assessment has two parts: (i) the need to monitor indicators, changes in which may suggest the need for an assessment. (ii) a system, or model, for converting indicator changes e.g. a fall in crop production, into operationally useable measures.

A variety of models have been proposed or applied. These include the 1970's 'functional classification' which divided populations into broad economic categories (pastoralist, wage dependent etc); multiple regression techniques using independent variables which seem relevant to food access (e.g. livestock holdings, crop production) which predict outcome in

¹⁰ Some methods do not easily classify. WFP VAM has used mapping approaches although no details are available.

¹¹ In principle if indicator changes and outcomes are correlated indicators will have predictive power although the author is aware of only very exceptional case where this has been convincingly done (GOE/SCF UK nutritional surveillance in Ethiopia in the 1980s and 1990s, where high quality anthropometric data was gathered over several years). Other systems of calibration have been suggested e.g. see Mason J.B et al, Nutritional Surveillance, WHO Geneva 1984, although they also admit that interpretation requires knowledge of the factors driving indicator changes.

¹² For example seasonal falls in anthropometric nutritional status. Zoltan and Devereaux (Identification of factors that trigger emergency needs assessments in slow onset crises Tiba, Z., Devereaux, S., WFP ODAN December 2005) suggest that the SC(UK) finding in Malawi in December 2001 of 9.3% Global acute malnutrition (GAM) in Salima and 11.8% in Mchinji were unusual and evidence for crisis. In fact this ignores the large error estimates which attach to GAM estimates using conventional (30 cluster) sampling techniques and the high 'normal' seasonal rates. At the same time health workers did not consider the number of cases of malnutrition presenting at clinics to be seasonally unusual. Taking these into account these figures were ambiguous. The operational question even at that late period was rather how nutritional status would evolve over the next few months (See for example USAID SMART guidelines <http://www.smartindicators.org/>). Similarly 'coping strategies' (which for some people consist of reducing total consumption to one meal/day) are a 'normal' seasonal strategy for some people and it is unclear how modest changes in the 'coping' index can be interpreted.

terms of expected child nutritional anthropometry (MSF in Chad), or the quantity of food required (IFPRI Ethiopia). Rule based expert systems have also been used (MSF in Mali).

Some of these techniques might be expected to 'work' in the technical sense of producing a quantitative and better than random result. However all of these approaches have the limitation that they:

- are 'black boxes' i.e. they offer no explanation of why a particular shock would be expected to produce a particular outcome. Data is put in, a result comes out and a user has no idea of what the relationship is between these. In short the user can take it or leave it.
- Give no expression, or no meaningful expression, to the uncertainty attached to the estimate.

A model which can meet the objectives listed must by definition: (i) be based on a data set which includes information on the amount of household income by source and type (i.e. as food and cash) and household asset holdings, and how these vary between areas of different economy, and within areas between households i.e. between the poor and better-off. Without this level of discrimination it is impossible to derive a quantitative estimate of the impact of multiple changes in production and price. (ii) be 'transparent' and open to dispute i.e. a user can understand the connection between inputs and outputs. (iii) allow for uncertainty. (iv) be useable within realistic practical constraints. (v) allow for non-food expenditure.

One approach, the Household Economy Approach (HEA) which has been widely used in the southern Africa region, attempts to meet these criteria. The HEA data set was designed to include the necessary information. The HEA model:

- (i) allows for uncertainty in some variables e.g. crop statistics are sometimes fairly rough estimates, by developing 'scenarios' based on different input values and in cases of serious doubt further field verification.
- (ii) allows for uncertainty in prediction by starting from the position that all prediction is speculation: an HEA prediction is a well informed hypothesis about what should happen which can be checked against reality as events develop e.g. if it is thought that people in a location may sell additional livestock this should be observed.
- (iii) requires that the user declares the expected level of food, non-food and asset preservation.
- (iv) provides quantitative, seasonal and spatial output in terms of the shortfall of food and non-food access which will result from a given economic shock and given assumptions.
- (v) Is sufficiently detailed to allow a range of other possible lines of intervention to be tested and their costs and impacts estimated e.g. the effect of price stabilisation, cash distribution.

The challenge with any such ('livelihood') model is with acquiring and maintaining a data set. The ideal data set would be obtained from a suitably large random sample of individual households. Large surveys of individual households are periodically conducted by many countries e.g. Living Standards Measurement Study (LSMS) household surveys. However there are practical difficulties with such surveys:

1. they are expensive and demanding of organisation. In many situations this consideration alone would preclude their use for assessment.
2. Although much useful information can be reliably obtained using questionnaire surveys e.g. on household asset holdings, it is probably now a fair generalisation that it has proved impossible to gather reliable estimates of individual household income data on any large scale by questionnaire survey. The reasons for this are partly self inflicted e.g. many surveys overload questionnaires, but are largely intrinsic to the nature of rural African livelihoods. Households typically have multiple income sources which vary seasonally; rates of pay for men, women and children vary for different tasks and at different seasons, and for the very poor significant income may be obtained from fruits, leaves and other difficult to quantify

sources. A technique has been developed which can obtain reliable income data on a local scale e.g. a few villages, but these only serve to illustrate the difficulties of scaling up.¹³

Household expenditure has been used as a proxy for income (although as expenditure varies seasonally it is arguably almost as demanding to obtain accurate expenditure as income data). Consumption recall over a short period e.g. one month has also been used as a rough approximation.

HEA approaches this difficulty by using a simplified data set gathered in group interviews on deliberately selected samples. This is of defensibly reliable quality and has been, within the limitations of evidence, consistently reliable in estimating the impact of larger shocks.¹⁴ However the grouping of income data restricts the range of applications to which the model can be applied

Attempts to improve the spatial and temporal discrimination of the data sets and to find a better approach to obtaining individual household income estimates on large populations is a work in progress.

The need for Government involvement and collaboration between agencies

In passing it may be noted that a 'model based' assessment system can work only with collaboration between the various agencies which have relevant information. Measures of the 'shock' i.e. precipitation, production and price 'indicators', are obtained from regional remote sensing and Government sources; agreed price projections have to be made; agreement has to be obtained about values to be used in the model and field checks carried out to monitor actual changes against expectations.¹⁵ This requires that assessment systems are managed by Governments as without this collaboration between external agencies cannot be assured.

The need to demonstrate the effectiveness of the methods used

A feature of the aid system is that it is not in practice subject to any very meaningful technical oversight. In principle Governments are ultimately responsible for this; in practice they often lack the power and resources to enforce technical standards. External organisations are therefore free to develop and apply assessment methods without any evidence that these are effective. It is a personal view, but given the severe implications of technical failure i.e. large scale death and deprivation, there is at the least a professional responsibility to evaluate methods before these are brought into active use. To the best of the author's knowledge only one assessment approach has ever been evaluated (Footnote 14).

SECTION 2

Comments on the CVAA and Comprehensive Food security and Vulnerability Analysis

This section sets the CVAA initiative in Southern Africa against the overview given in Section 1. It should be noted that this is based on the limited information which could be obtained from the SENAC web site and from papers and other sources in the southern Africa region.¹⁶

¹³ This requires that: (i) the interviewer understands the economy concerned. (ii) semi-structured interview techniques are used. (iii) interviews are kept short i.e. are typically confined to household membership, asset holding and income. (iv) field verification of the data is done to ensure that the data is internally consistent, and consistent with biological needs and observed living standards.

¹⁴ See 'Does the household economy approach work? Save the Children UK 2002. Although there are difficulties in evaluation, not least that the measures of the actual impact are often limited, predictions were consistent with outcome in 13 cases. No false positives or negatives have been found.

¹⁵ For example in the Malawi MVAC coordinates inputs from the region (FEWSNET), the Ministries of Agriculture and Economic Planning and Development. Field checks are conducted by FEWSNET and using ACF indicators and information from other NGOs etc.

¹⁶ Goyder H. *Op Cit*; Tiba, Z., Devereaux, S. *Op Cit*; country reports and other papers available from the SENAC web site; the Emergency Food Security Handbook. First edition. WFP ODAN June 2005; CVAA

The only conceptual paper available is a draft by Vhurumuku¹⁷: although this paper is in draft it is the only available source which summarises the CVAA data requirements and analytic techniques. It is also set out partly as a comparison between CVAA and HEA and has therefore been used as a reference. Additionally the WFP emergency manual outlines some assessment and analytic methods. No reply was received to a request to the WFP SENAC web site for clarification.

Lastly the 2005 SENAC evaluation (and contacts with some advisory group members), makes it plain that the advisory group inputs are at best weakly linked to the actual programme of work. ¹⁸ These papers are not discussed.

The objectives and the practical approach to data collection and analysis

Quotations are from Vhurumuku (footnote 17) except where indicated.

“A Comprehensive Food security and Vulnerability Analysis is Intended to provide a pre-crisis analysis of food insecurity and vulnerability. It is to be both comprehensive, assessing all major dimensions of food insecurity, vulnerability, the role of gender, and an in-depth analysis of livelihoods and their dynamics. It is also intended to provide quantitative estimates of who is vulnerable, how many where and why. Collection of pre crisis information is also intended to improve the reliability of emergency needs assessments when and if another food crisis occurs in the country and to inform the development of monitoring and early warning systems.”

The Comprehensive Food security and Vulnerability Analysis (CFVA) is based on information obtained from the CVAA.

The specific objectives are:

1. to provide baseline information on vulnerability, to be used for monitoring shocks hazards and evaluation of vulnerability. Specific benchmarks identifying and using indicators from which to measure post shock changes.
2. to determine hazards and associated risks in the identified sectors and geographical areas.
3. to determine how households and institutions cope with these hazards and risks and what constraints inhibiting households (*sic*) to cope and what opportunities are available.
4. To provide possible appropriate solutions (programme and policy interventions) to address the identified hazards and constraints.
5. To identify the areas and population groups that are the most food insecure and malnourished, how food and other assistance can make a difference in reducing hunger and supporting their livelihoods; and if possible targeting criteria for the different socio economic subgroups.
6. To understand changes in vulnerability of these populations over time.
7. To determine and understand future risks for food security (e.g. socio economic, natural, political or other shocks) for incorporation into contingency planning.

Additionally, to

- “provide...a livelihoods framework for analysing vulnerability that is truly comprehensive ... and takes into account food and livelihood security processes in their entirety. The framework should encompass all the components on social, economic, human, political, physical, natural capital and ecological infrastructure, health risks and shocks. “

community and household questionnaires from Swaziland and Zimbabwe, and information obtained in discussion with SENAC personnel and others in southern Africa.

¹⁷ A concept note on Comprehensive Vulnerability Assessment and Analysis (CVAA). Vhurumuku, E., WFP/FAO. A desk review. March 2006.

¹⁸ Goyder *op cit*

- to understand the underlying causes of food insecurity and vulnerability. It is not food access centred.
- over a longer time frame.
- incorporate a Human Rights Based Approach to programming.

The practical approach to CVAA is to:

(i) obtain a wide range of information from secondary sources (Government Ministries, the UN, World Bank etc), including information on population, poverty, food insecurity, crops, health (malaria, cholera and diarrhoea prone areas), education, water supply etc, risks, service providers and other topics. This secondary data is used in its own right to understand the underlying factors affecting food insecurity including market, access and livelihood, and utilization and nutrition e.g. it is suggested that changes in cropping pattern could be used to explain why some areas have become more vulnerable. The secondary data collection is also used to identify gaps in information.

(ii) obtain data from samples of individual households by questionnaire. A questionnaire is designed for each country, reflecting the gaps identified in the secondary data analysis. The data gathered may include household assets, agriculture and food production including fishing, sources of food, expenditure, income sources, coping strategies, health, breastfeeding practices and a range of other topics etc. A community/ key informant survey is conducted to include main problems faced by the community and which might suggest possible solutions to these e.g. the main shocks, market prices.

(iii) Analysis for the CFVA uses principle component analysis, and problem tree analysis the latter including a human rights analysis. A variety of approaches are given in the WFP Manual for the analysis of the economic impact of shocks. These are based largely on the user's judgement, informed by information obtained from the CVAA and other sources, but in one case ('food security profiling') optionally includes principle component analysis.

Comments on the CVAA

The basic objectives are consistent with those outlined in Section 1. The aim to be comprehensive is ridiculous and appears to mean no more than that some information is obtained on a wide range of topics. The way in which WFP might apply a rights based approach, given its dependence on donors, is wholly unclear.¹⁹

Data quality and the information included.

Secondary source data suffers from the primary limitations that this was originally gathered by a user for another purpose e.g. by the Ministry of Education to monitor school enrolment. It therefore tends to be (i) incomplete for other purposes e.g. information on health centre attendance does not include information on people who do not attend health centres. (ii) dated, as surveys on some topics are conducted infrequently. (iii) of variable and sometimes unknown quality. (iv) unsuitable for making comparisons because of different sampling units and methods. In the author's experience information useful to understanding livelihoods is only rarely available from secondary sources.

Information from household surveys. The interest here is in the likely quality of the information obtained and particularly that on, or related to, household livelihood.

1. No information is available on the background or training of interviewers. As already noted the use of large questionnaires must lead to doubt about the quality of some of the data obtained. The Zimbabwe CVAA questionnaire includes 174 questions, not including those

¹⁹ "A rights-based approach to development promotes justice, equality and freedom and tackles the power issues that lie at the root of poverty and exploitation. To achieve this, a rights-based approach makes use of the standards, principles and methods of human rights, social activism and development". (Joaquim Theis, Rights-based Programming – an Evolving Approach, Save the Children SEAP)

questions necessary for basic household identification. Some of these are questions e.g. on expenditure, where the quality of the response is known to be sensitive to the way in which the question is put, and to the knowledge of the interviewer. Additionally in the author's experience combining questions on many topics e.g. on recent health problems, breast feeding, household economy, and direct measures of nutritional status (which to be accurate require care and standardized technique) is unwise: a series of parallel surveys each on one topic is likely to produce better results.

There must therefore be doubt about the quality of the data obtained.

2. Taking the CVAA Swaziland community and household questionnaires as an example the questionnaire does not include sufficient information to provide more than a partial description of the household's livelihood i.e. with some assumptions it might be sufficient to distinguish the poor from the well off. The questions also give the sense of having been slightly arbitrarily selected e.g. chicken consumption, below. Direct questions relevant to or which might act as proxies for household income include:

(i) in the community questionnaire, information on (i) major crops, in rank order of importance and their use (consumption, sale) and if sold, where it is sold. (ii) the price of a days work for a short list of agricultural occupations (clearing, planting, weeding, harvesting and shelling). No information is gathered on the price of work done by women or children.

(ii) In the household questionnaire, questions on:

- household income including: (i) information on how often the household slaughters a chicken for consumption, how often a chicken is sold and the main reason for selling. (ii) the household's main livelihood activities (up to 4 to be selected from a list) throughout the year and the contribution (proportion not value) each makes to household livelihood. Surprisingly the list of occupations from which the interviewer must choose omits casual labour, a major income source for many households in rural Swaziland.²⁰ (iii) the amount and origin of remittances.
- household expenditure including: (i) selected food and basic non-food purchases (soap, transport fuel etc) in the last 30 days. (ii) on larger non-food items (health costs, education, house repair etc) over the last 6 months.

Data analysis: the CFSVA

Principle component analysis is used to group households to develop Household Food Security Profiles (HFSPs).

"WFP/VAM household food security profiles (HFSPs) provide a means of identifying meaningful sub groups within the population by clustering households that share similar food security characteristics and outcomes (livelihoods, access to food, utilization of food etc) as well as the relationships between these characteristics and outcomes. As a result HFSPs provide a means of differentiating among the middle group as well as identifying the most and least insecure groups and their characteristics."

"Once developed, HFSPs tell a story about these groups: the structural constraints they face (e.g. chronic malnutrition, illiteracy, disabilities etc), what they do, (e.g. livelihoods) where they live and why they are characterised by specific weaknesses and strengths. By providing a comprehensive description of each group HFSPs provide a means for comparative analysis: identifying key differences between groups and making inferences about the relationship between these differences and variable food security outcomes" (ODAV (VAM), 2005).

²⁰ Remittance, Food crop production/sales, Cash crop production/sales, Livestock production/sales (non-poultry), Poultry production/sales, Small business, Petty trade (firewood sales, etc.), Skilled labour, Formal salary/wages, Brewing, Pension, Vegetable production/sales, Food assistance, Other assistance/begging/gifts.

This is something of a moot point. The difficulty is that households with fundamentally different livelihoods often share similar food security characteristics and outcomes e.g. a poor farm labourer and a petty trader may share by (for instance) the measure of access to food identical outcomes: further most households pursue multiple occupations. It is difficult to see how 'meaning' can be found in a cluster of households with many different occupations. Also it is unclear from the available literature if the sub-groups identified by principle component analysis are drawn from a single population of defined economy e.g. a livelihood zone, or from households living in wholly different economic contexts. The sampling frame used in the Uganda survey suggests the latter. If this is the case it is difficult to see what meaning, other than a shared difficulty in acquiring enough food, is to be extracted from a sub groups or what useful comparisons can be made between these.

"Once developed, household food security profiles tell a story about these groups e.g. the structural constraints they face (e.g. chronic malnutrition, illiteracy, disabilities etc, what they do, (e.g. livelihoods) where they live and why they are characterised by specific weaknesses and strengths."

Again the problem is with meaning: correlation does not equal cause. For example it might well be found that households within a sub-group which were on average thinner, also tended to grow less maize and had higher illiteracy rates. However such measures provide a measure not of meaning but of the statistical associations within the data. In this example it might be guessed that there was a causal element in the association – on average thinner people might well be expected to grow less maize: but the reverse might also be true e.g. an economy where men are in paid work and the household can afford to purchase maize, and women grow a diverse range of crops and child nutrition is good; and an increase in maize cultivation when men lose paid employment and a resulting fall in nutritional status (e.g. as in Zambia in the 1980s following the crash in copper prices).

Without knowledge of the underlying processes the meaning is a guess: the risk is that the analyst imposes their own assumptions and prejudices on the data. A 'story' can be told but does it have any relationship to reality?

Also even in a 'comprehensive' survey there will be important explanatory variables that have been omitted.

In the published (and very fully reported) Uganda CVAA the sample design is based at best loosely on economic considerations and households are categorised into 11 occupational categories e.g. agriculturalists, agro-artisans, agro-brewer, agro-trader, hunters/fishers/gatherers etc each category including a range of actual income sources. The method of analysis uses PCA to analyse vulnerability using food consumption profiles i.e. it is food access not income defined. Household vulnerability is defined as an absolute i.e. a household is vulnerable or is not, rather than being vulnerable to some event.²¹

It is difficult to see how this approach could be applied to the limited set of information which has been gathered by the CVAA in Swaziland.

Tree analysis aims to "dismantle sector analysis barriers" and to look at the problems of households and communities from a 'holistic' point of view rather than from a sub sector, with the aim of allowing major problems and constraints faced by a household or community to be identified and suggest possible interventions. In a tree analysis underlying causes are looked into for the cluster/household/community and linkages between the sectors understood. For example "a problem which manifests as malnutrition and death the *immediate* causes might be diseases and inadequate dietary intake. The *underlying* causes are insufficient food security, insufficient health services, while the *root* causes are resources, control etc. "

Apart from the fact that in broad terms we know this already, and that the outcome of problem tree analysis depends on the user's judgements, it is far from clear that 'insufficient food

²¹ Comprehensive Food Security and Vulnerability Analysis (CVAA). Republic of Uganda. July-August 2005.

security' is an operationally useful observation. Given that people are 'food insecure' (or more usefully a quantitative measure of this, making allowance for non-food requirements) the operational questions are: What options are there for intervention? What are the relative costs, benefits and practical implications of these? This approach cannot answer these in any plausible way.

Estimating the impact of 'shocks'

The major objectives of the CVAA process are concerned with the connection between risks, shocks, outcomes and interventions. The WFP manual suggests approaches to this which largely rest on judgement and optionally including principle component analysis ('food consumption profiles'). Contacts in SENAC suggest that the actual assessment of the impact of 'shocks' is to be based on expert judgments 'informed by CVAA surveys'. Expert judgements have regularly been found wanting. As far as the author is aware the 'food consumption profile' method has not been evaluated. In short it is a 'black box'.

Estimating change over time

Given the likely quality of the CVAA data it is difficult to believe that even if CVAA surveys are repeated every 5 years that the quality of the data will be sufficient to convincingly demonstrate change.

Practical constraints: cost and sustainability

No information is available on the cost of the CVAA surveys although it is clearly substantial. Anecdotally the cost of CVAA surveys range from \$300,000 to \$1,100,000 and it is suggested that these surveys will be repeated every 5 years. The questions which arise are those of: (i) duplication and cost effectiveness i.e. much of the information obtained by CVAA is already gathered (to an arguably higher standard) by existing national systems and other surveys. (ii) Whether this can be sustained.

Conclusions

On the currently available evidence it is difficult to conclude either that the current CVAA programme represents any methodological advance or that it will do more than maintain the status quo. 'Shocks' will happen, or an actual crisis occur; UN estimates of food needs will follow; users will have no idea how these requirements were reached and little or no idea about the processes which connect the two. Very large sums of money will have been spent. If history is a guide to the future the surveys will in due course lapse and be taken over in turn by yet another UN initiative.

A way forward would be for WFP SENAC to live up to the first SENAC objective, of transparency.

- (i) to clarify the relationship between the CVAA work and other established work in the region. Is this as it appears to be separate and parallel to the Vulnerability Analysis Committee system? Is it intended as a contribution to the VAC system? or to supplant this?
- (ii) to publish a case e.g. data from one locality with worked examples, giving an account of what data was actually obtained, the reasoning for the choice of that data set, and the way in which analysis is done relative to each of the declared objectives.
- (iii) To indicate how the proposed methods are to be evaluated.

The real task is now to continue the established process of support to Government and to strengthen the capacity of Universities and other national and regional institutions to provide routine vulnerability assessment; to find better approaches which allow a better understanding of the ability of vulnerable households to obtain their basic living requirements and the temporal and spatial dimensions of vulnerability; to apply these methods routinely to ensure that minimum standards in food security and basic living requirements are met; to

provide information about the range of possible interventions, and to secure more predictable responses to shocks.

End