

5 Is HEA reliable?

5.1 Why is HEA information collected through rapid appraisal?

Rapid appraisal methods and sample surveys have different strengths, based on certain key features. The key features of rapid appraisal are that information and analysis are generated relatively quickly, and that the approach is open-ended and semi-structured. Sample surveys are generally valued for the level of detail in the data collected, its precision and its representativeness. Rapid appraisal typically involves interviews with groups of people, selected because they are thought either to have specialist knowledge or to be in some way representative of a defined group. Most sample surveys focus on the household level, collecting data using a standardised questionnaire from a carefully selected and (usually) large number of households.

Given these differences, the reasons why HEA data has to date been collected through rapid appraisal are twofold. First, there are the practical reasons. HEA aims to provide decision-makers with the information they require, within the time-frame

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they need it, with enough rigour and validity to inspire action. Information and analysis that feed into humanitarian decision-making are nearly always needed quickly and with limited resources, and rapid appraisal has proved to be a fast and relatively inexpensive way of gathering reliable data on livelihoods. In a rapid appraisal, data collection and analysis are continuous processes undertaken throughout the field work, and a rapid appraisal team is typically able to present its main findings and conclusions shortly after completing the field work. Sample surveys tend to take longer. Prior to the field work, the construction of the sample frames required for a statistically valid analysis may take some time, especially when the required information (lists of villages or population data, for example) is incomplete, inaccurate or

out of date. Cleaning and processing of field data may also be time-consuming, with the result that sample survey results are rarely available until at least a month (and often much longer) after the completion of the field work.

Rapid appraisals tend also to be less costly than sample surveys, in which the larger sample size tends to push up both the transport and staff costs. However, while fewer people are involved in a rapid appraisal, their unit cost tends to be higher because this type of assessment requires a higher calibre of field staff. In HEA, the baseline analysis is to a great extent carried out in the field by the field workers themselves, who, therefore, require appropriate training beforehand.

But leaving aside the question of resources and timeliness, which method is thought to generate the better quality information? It is difficult to argue that one approach is consistently better than another – to some extent they serve different purposes, they have different requirements in terms of time, staff and technical input, and – a key factor – both types of assessment can be well or badly done. But the second reason why HEA data tends to be collected through rapid appraisal lies in the quality control measures that such methods allow, linked largely to the opportunity to clarify, discuss, cross-check and triangulate. The investigator can check items of reported information against others (reported access to food against minimum food needs; reported income against expenditure), and is trained to challenge respondents when parts of the account contradict each other, until a logical and internally consistent picture is constructed of how people survive through the year. The advantages of an iterative, semi-structured method have particular weight in a system-based approach such as HEA that seeks to construct a picture of ‘how things work’, rather than to compile a set of statistics.

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This is not to say that quality control measures cannot be implemented in sample surveys. But given the requirements in terms of training, the calibre of staff and the time needed for each interview, it does mean that it is difficult to obtain the number of HEA interviews necessary for statistical purposes. The resource limits that are invariably placed on assessments mean that, in reality,

a choice has to be made between a high volume of lower-quality data and a small volume of higher-quality data. Rapid appraisal methods tend to put more weight on the quality of each interview, rather than on the number of interviews per se, and err towards the second option. The question then becomes: how representative is the information of the group or population as a whole?

Information quality is determined by a number of factors; one of which is sampling – which determines the ability to conduct standard statistical analyses and measure the precision of the data.

5.2 Representativeness: questions of sampling

Obtaining a result that is representative of a given group or population as a whole presents a major challenge in any type of assessment, as it is never feasible to conduct interviews in every household or village. Some form of sampling is therefore required, which will provide a result that is representative of the population and not biased in any way – for example, towards villages that are nearer to a road. In random or probability sampling, every sample unit, such as the household or village, has a known chance of being selected and a sample size can be calculated on the basis of a known sampling error. Such methods include two-stage cluster sampling, stratified sampling or simple random sampling, and are commonly used in household sample surveys. They give the best chance of obtaining a sample that is truly representative, provided that accurate data is available on both sample locations and populations. If this information is not available, or is incomplete or inaccurate or out of date (as is often the case), then the representativeness of the sample is adversely affected.

In **purposive** sampling, sample units are selected on the basis of their known characteristics, these being thought to make them representative of the group as a whole. In an HEA assessment, representativeness is ensured through the purposive sampling of areas and groups considered to be relatively homogeneous in terms of livelihood. People are grouped together who share common livelihood patterns, firstly through the delineation of livelihood zones (areas within which people share similar options for obtaining food and income), and secondly through disaggregation into wealth groups (within which people share similar strategies for obtaining food and income). In

consultation with key informants, villages considered to be typical of the livelihood zone, and within these villages men and women from households considered to be typical of particular wealth groups, are selected. Techniques for minimising bias in these selection processes are built into HEA's quality control; teams are trained to carefully present the purpose of their visit and to explain clearly the nature of the wealth groups and the representatives with whom they wish to speak. These representatives are interviewed until the investigator judges that a reasonably consistent picture has emerged for that group. Experience with HEA has been that, through the process of grouping like with like, this can often be achieved with a rather smaller sample size than in the case of a survey based on a form of random sampling.

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Guidance on the sample size, staffing and time requirements for a baseline assessment is given in section 4.4 above.

5.3 Can key informants and focus groups provide useful quantitative data?

Assessing the relative importance of different activities involves asking questions of 'how much': how much does a typical family in a particular wealth group normally produce? How many livestock does that typical family sell in a year? These are questions that are usually tackled, if at all, by household surveys. But experience has shown that, with appropriate selection of informants and proper cross-checking, rapid appraisal can be used to generate quantitative as well as qualitative data. Certainly the quantitative data is not of the measured or objective kind; for example, an investigator may ask a village key informant how many sacks an average household harvested, but they cannot count those sacks. But in truth this is also the case with most food security data collected via sample surveys, where the number of sacks harvested is also reported, not counted. Survey data is thus as susceptible to inaccurate reporting by interviewees as any other; the difference is that the sample enables a statistical analysis to be made of the precision of the data collected.

The use of rapid appraisal techniques to collect quantitative HEA data has the advantage that it allows for cross-checking within and between interviews so that the information is internally consistent and contributes to a picture in which ‘things add up’ both quantitatively and logically. This is a key factor in minimising the errors arising from the subjectivity of responses or the ambiguity of questions, and is described in section 5.4 below. With such cross-checking, experience has shown that the judgement of informants on quantitative questions – such as the typical livestock holding of an area, or the proportion of people in villages belonging to different wealth categories – deserves the same confidence that we instinctively give to their judgement on qualitative questions such as the types and uses of livestock.

In sample surveys, as in rapid appraisal, most food security data is reported, not measured, and so open to a degree of subjective judgement.

5.4 Rigour, verification and bias

One of the advantages of sample survey methodology is that standard statistical analyses can be used to estimate how precise the data is; that is, to estimate whether the same result would be obtained if the survey were repeated and to make statistically valid comparisons between the results from different population groups. Precision is not, however, the same thing as accuracy. Suppose that household interviewees consistently underestimate their crop production by 10–30%, so that the average result obtained in repeated surveys is eight sacks per household rather than ten, the true or accurate figure. In this case, the result (eight sacks) is inaccurate (because the true figure is ten sacks) but it is precise (because the same result would be obtained in a repeat survey).

It is very difficult to determine accuracy with respect to data on food security, but there are two important and related advantages to HEA in this respect. The first is that in the kinds of (especially rural) economy in which HEA inquiries are usually carried out, there is quite a limited range of possible items to record: few types of food, few sources of food, few places of purchase; few kinds of cash expenditure, and few kinds of income beyond the farm. Tied to this, the second advantage is that there is a simple arithmetical test of whether the information is making sense: it actually has to *add up*. An analysis of food

income lends itself to such testing, since there is a minimum ‘food income’ below which year-on-year survival is impossible. For instance, if people have clearly not starved within the last 12 months, however disadvantaged they may be in many ways, but the information they are giving suggests household food access significantly below the 2,100 kcals per person per day threshold, then more questions need to be asked and clarification obtained.

In HEA interviews, the same principle applies to information on income, which can be cross-checked with stated expenditure³⁰ and with the observed standard of living; and with information on particular household strategies, which must correspond with the characteristics of the local economy. For example, information on the type and length of work the better off can offer to the poor, and the wage rates they offer, have to be reconciled with a statement of the type: ‘a typical poor farmer depends for four months of the year on the casual employment offered by neighbouring farmers’.

Cross-checking of information within interviews and between informants is extremely important in HEA and is a key aspect of information-gathering in the field (see Table 11 for more examples). It is formalised in the baseline storage spreadsheet, which is used regularly during field work (see section 4.2 above). Importantly, the approach allows the field worker to appreciate and follow up *on the spot* answers that seem to be an underestimate. In this way, the baseline analysis is not conducted outside the context in which the information is collected, but rather it is carried out by the field workers themselves. Such cross-checking is also possible (and is as necessary) with the sample survey approach; but since it is best done and followed up in the field, and requires training and a relatively high calibre of staff, it tends not to be a feature of questionnaire-based sample surveys.

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There is, however, a strict limit to the verification of this type of information. Despite one’s best efforts, bias can never be eliminated from reported information, whether gained from questionnaire surveys or by rapid rural appraisal methods. Respondents know they are talking to people involved in

humanitarian assistance in some way, and it is natural to want to give a picture in which their need for assistance is evident. The best one can do is to be aware of and manage potential bias by being sensitive regarding the person to whom you are talking, being clear about the geographical area to which they are referring (spatial bias), including a seasonal perspective (seasonal bias), and making sure that the poor and women are well represented, at least as subjects of the inquiry (wealth, influence and male bias).

Checking for internal consistency is important in minimising bias: providing a false picture that is complete *and* consistent is extremely difficult to do.

In reality, most HEA practitioners would perhaps say that one's own conviction of having found something like the truth, and being able to demonstrate the reasons for this, is something like a non-statistical 'test of confidence'. Strict adherence to statistical procedures is essential in many fields of inquiry, but given the limitations and costs it imposes, it can actually be an obstacle to initiatives to gain an understanding of rural livelihoods and food security.

Table 11: Cross-checks carried out on HEA information to ensure quality control

Within an interview	<ul style="list-style-type: none"> • Are households consuming close to 2,100 kcals per person? • Do income and expenditure match? • Ask the same question a number of different ways (How much did you harvest? How long did it last? How much was eaten every month during that time?) • Check the timing of activities: can all of those things be done with the time and labour available? • Check the timing of food and income flows; are we accounting for all times of the year?
Between interviews	<ul style="list-style-type: none"> • Are wealth groups and key informants giving the same picture? • Are the same wealth groups giving the same picture? • Data such as rainfall, yields, prices and wage rates should not vary very much within the same zone and time period.

continued overleaf

Table 12 *continued*

<p>Between primary and secondary data</p>	<p>Likely to be some differences here as secondary data is rarely exactly comparable to primary data... ...Nonetheless, bear in mind possible biases in primary data, and, with secondary data, possible limitations of the methodology.</p>
<p>Between reported and observed information</p>	<ul style="list-style-type: none"> • Always keep your eyes open! Observe crops in fields, grain stores, livestock condition, physical condition of people, etc. • Observe what food people are preparing. • See who is doing what.
<p>Triangulation</p>	<p>Means looking at things from different perspectives:</p> <ul style="list-style-type: none"> • team composition (gender, multi-disciplinary, knowledge of area) • units of observation (age, gender, status, wealth, ethnicity, professions/activities) • tools and techniques.
<p>Common pitfalls</p>	<ul style="list-style-type: none"> • Clarify year and wealth group under discussion. • Check units of measurement being used. • Methods of storage/consumption: (milled/threshed, etc). • Method of consumption ('green' crops). • Utilisation of food: don't assume it is all consumed.