CHAPTER

3

Desk study: literature review and secondary data

A desk study is a review of the food security–related information available before the in-depth food security study takes place, including documents and historic data. Its purpose is to help build a good understanding of the food security situation in a country and that situation's evolution, and to uncover data gaps. More specifically, this analysis aids in uncovering long-term socio-economic trends; designing the sampling frame; defining the original scope, geographic area, and target populations; determining sampling methodology; analysing the risks posed by various hazards; and informing recommendations for future interventions.

When starting the CFSVA, as much relevant information as possible should be collected on the region and population of interest. Secondary data consist of existing data sets, reports, and documents, usually compiled by other persons or organizations, and often for purposes other than those of the present analysis. A literature review is often the main source of information on the political and economic environment of a given area. When properly incorporated into the process of analysis, these data provide an essential complement to the primary data collected.

The information and findings of the desk study should be integrated with the data and findings from the primary data collection and analysis, and not placed in a separate section. In all cases, the source of secondary data should be adequately cited in the report.

3.1 PURPOSE OF A DESK STUDY

A desk study will identify key factors affecting vulnerability to food insecurity for a particular population or within a specific geographic area, helping to determine the overall scope and objectives of upcoming CFSVAs. It will also often help identify important information needs that have not been addressed through previous research. Finally, a desk study can save time and resources directed toward primary data collection in the field. The specific purposes of secondary data analysis are to:

- Clarify the context of primary data research, define the depth and breadth required, and formulate appropriate research questions and instruments;
- Identify the relevant socio-economic groupings, livelihood groups, and livelihood strategies that determine food security/insecurity in the present context;
- Discover the macro-level socio-economic and agro-climatological environments and how they may impact food security and vulnerability;
- Identify long-term trends in poverty, aggregate food availability, consumption, undernutrition, and food security;
- Study hazards and their historical impact on food security;
- Exclude information from the primary data collection process that is already available and does not require verification (however, the collection of previously existing data may be warranted in certain cases for the purpose of trend analysis);
- Verify information that may no longer be accurate or that can serve as a baseline for understanding changes resulting from a given shock or intervention;
- Include indicators and information in the primary data process not found in previous studies; and

- Include the same indicators in the current data collection that were analysed in previous studies, so that deviations from normal periods can be assessed.

For assessments conducted after a crisis, pre-crisis background information can be of particular value. Secondary information can provide crucial insights into the most effective means for providing relief and rehabilitation assistance to an affected population, and prior research can reveal key indicators of "slow-onset" emergencies such as droughts and crop failures. Background information facilitates a rapid assessment of the scope and scale of emergency food requirements and the capacity of different populations to cope with a given shock. Other significant pre-crisis information that can be gleaned from secondary data includes management capacity, infrastructure, and historical experiences related to emergency interventions (Seaman and Leather 2003; WFP Thematic Report 2003).

3.2 ISSUES IN COLLECTING AND ANALYSING SECONDARY DATA

The quality of secondary data dictates the scope of primary data collection: in countries where secondary data is good and regularly collected, primary data may be largely limited to verifying secondary data, or to merely filling in the gaps left from the literature review. In complex humanitarian situations characterized by population displacement, it is unlikely that current secondary data will be available. Given the time and resources required for conducting CFSVAs, it is essential that every effort be made to collect secondary data beforehand to streamline the process and provide the essential contextual information that can orient primary data collection (Riely 2002).

3.2.1 Evaluating the quality of secondary information

Secondary data, documents, and reports are generally not prepared by the same people or institutions that do the primary data collection; hence the goals and purpose of primary and secondary data may not be the same. It is therefore essential that data quality be carefully assessed, particularly where part of the analysis involves a direct comparison of secondary data with the data being collected for the CFSVA. Key questions to help assess data quality include:
- What is the original purpose of the data or publication? How do the goals of the original study differ from the measurement objectives of the current research?
- What is the information source? What are the source's credentials? What is the potential level of bias? Is the material well referenced?
- Is the information relevant to the current context or is it out-of-date? Five-year-old data may be too old to be useful for analysing the current food security situation; however, such information may be very relevant to identify trends.
- Is the intended audience researchers or the general public? Is the source too elementary?
- What is the coverage of the data source?
- To what level is the data disaggregated?
- For which population is the data representative and with what degree of precision (confidence intervals)? Has the document been officially validated? Is there consensus in the community on the document's quality?

The level of disaggregation is of particular importance for comparing data from different sources. Generally, the level of data disaggregation varies across or between political and geographic units. Secondary data should be gathered at the lowest possible level of disaggregation to ensure comparability after primary data collection.

Remember: the more aggregated the data, the more invisible the people (McCaston 1998).[13]

3.3 MAIN TOPICS IN A DESK STUDY

Topics for consideration in a desk study are determined by the objectives of the CFSVA. In this section, likely topics for literature review and secondary data analysis are divided into broad, overlapping categories: socio-economic and demographic data, livelihood information, institutional processes and structures, factors affecting food security, sources of risk and vulnerability, health and nutrition, and market conditions.

Table 3.1: Common areas covered by a desk study	
Institutional/ stakeholder information	**Types of secondary information** • Existing institutions (e.g., public, NGOs, community-based organizations [CBOs], religious, trade, and labour associations; industry) • Nature of institutional programming and strategic plans • Interest in collaboration • Access to political decision-making at village, regional, and national levels • Relations with governments and communities • Mechanisms normally available to target food assistance to the most vulnerable/food insecure • Effectiveness of government, participating agencies, or NGOs in facilitating recovery and minimizing acute food insecurity or acute malnutrition
Socio-economic and demographic data	• Social and political structures affecting food security – e.g. government policies affecting production, marketing and trade, rationing, fiscal policies, taxation and subsidies • Integrity of infrastructure: water, health services, schools, roads and railways • Census population data at various levels; age and gender distribution • Map data (digital) with political/administrative boundaries, roads, and localities
Market conditions	• Data and trends on national/regional/local food production • Description of existing market systems, trends in market prices and flows • Import/export data production, consumption, and food balance sheets • Time series of market prices of major food and cash crops, by region and season, seasonality • Markets (e.g., locations, access, integration, and functioning) • Previous experiences/analyses of problems with market access
Livelihood Information	• Livelihood strategies, access to resources and all asset categories, desired livelihood outcomes and levels of achievements disaggregated by ethnicity (if appropriate) or mother tongue, wealth, livelihood groups, or gender or other groups, depending on the context (religion) • A socio-anthropological outline of different ethnic groups • A description of exposure to social exploitation and discrimination • A description of livelihood zones or food economy zones • Information on rural and urban poverty • Prevalent diseases and seasonality, by region • School attendance and literacy rates • Seasonal migration patterns, by region and reasons • Levels of debt

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13. For additional guidance on secondary data collection, see *Guidelines for Undertaking a Secondary Data Analysis (WFP and VAM 2001) and Tips for Collecting, Reviewing and Analyzing Secondary Data* (McCaston 1998).

	Types of secondary information
Livelihood Information	• Traditional economic roles/control of resources • Income-generating activities, remittances, and expenditures • Labour supply and dependency ratio • Productive assets, landholdings and utilization, livestock ownership and sales, and relative importance in food economy by group or zone • Major food and cash crops, by region; cultivation calendars • Agricultural inputs, utilization and access, food stocks, alternative food/income sources, and food storage
Food security	• Existing safety-net programmes • Emergency response capacities (e.g., United Nations country team [UNCT], international NGOs/civil society/local NGOs/donor presence/interest and flows) • Early warning systems and contingency plans • Number of months of normal self-provisioning • Food consumption, preparation patterns, and diet diversity • Restrictions or taboos on food consumption, preparation, or usage • Malnutrition rates and trends • Normal sources of food, by region and different social groups • Existing food aid and food security programmes • Experience of disaster food assistance, including food basket, duration, and different types of assistance
Risks to food security	• History of natural or man-made disasters, shocks and stresses • Geographic and historic information on the occurrence of hazards • Current exposure to sudden-onset natural disasters • Understanding/awareness of long-term threats to food and livelihood security (soil erosion, depletion of forest resources, water scarcity, etc.) • Issues involving migration, conflict, or large-scale exodus of refugees • Traditional coping strategies • Coping mechanisms, distress coping mechanisms, and grades of livelihood groups

3.3.1 Institutional/stakeholder information

Information on larger socio-political structures and their direct (and indirect) influence on individual and household food security must also be collected. When gathering institutional information it is important to capture the fabric of the society - "the rules of the game" and the factors imposed on the choices people make.

At the macroeconomic level, data on national policies and priorities can provide valuable information for the analysis of local processes and structures. National priorities can be researched by reviewing the latest Poverty Reduction Strategy Paper (PRSP), United Nations Development Assistance Framework/Common Country Assessment (UNDAF/CCA) strategies, or National Action Plans. Relevant national policies and regulations must be understood in context in order to assess their potential direct and indirect impact on food security. Depending on the context, this institutional information may provide insight into the causes and nature of conflict, the capacity for disaster management at the national and local levels, or the effectiveness of existing national food assistance programmes.

3.3.2 Socio-economic and demographic data

From existing publications and through secondary data sources, information detailing basic demographic data is obtained. Various zoning systems (such as administrative jurisdictions, socio-economic areas, agro-ecological zones, livelihoods zones, or purposely constructed food security zones based on multivariate statistical analysis of secondary data) will help determine the sample frame and stratifications in which primary data collection will be conducted. Table 3.1 offers examples of basic socio-economic and demographic information to obtain.

Where possible, secondary data analysis should provide the essential social context on the region most relevant to issues of food security and vulnerability: the forms of local leadership and authority; the relevant ethnic groups; formal and informal social networks; existing social programmes; political systems; historical trends and policies; and issues of personal security for individuals and households. Female-headed poor households, orphans and other vulnerable children (OVCs), and other groups might be of particular interest. Where good background information exists, secondary data analysis can provide the necessary information for CFSVA planners to identify the regions of greatest vulnerability (Frankenberger 1992).

3.3.3 Market conditions

An understanding of market prices, and of regional and seasonal fluctuations for major food and cash crops and livestock (as appropriate), provides essential comparative data in analysing markets under duress. A CFSVA review of the secondary information on markets should focus on trends in national, regional, and local food production, prices (real prices and import parity prices of main food staples; cash crop and livestock prices, as appropriate; terms of trade), flows and market integration; import and export data; the location, access, market chains, and structure; and historical experiences with access by the target populations. Secondary data on prices, volumes, and trade patterns is often available, and is particularly valuable when explicitly linked to household experiences of food security and vulnerability.

3.3.4 Livelihood information

Once the primary groups of interest within the target region or population have been identified (livelihood groups, gender-based groups, age-based groups, or other possible relevant socio-economic groups), preliminary profiles of each group should be prepared from the secondary data. Where such information is available, key statistics on the relative contribution of various employment sectors (farmers, pastoralists, daily wage workers, etc.) to national gross domestic product (GDP) can help in identifying sectors significant to livelihood analysis.

In the best-case scenario, available secondary data will provide sufficient information to create preliminary livelihood profiles in the region or area of interest. These livelihood profiles should indicate how different areas derive their incomes, food, and access to social services. Table 3.1 provides an outline of livelihood areas that a review of secondary data can provide insight into.

The livelihood profiles of these various groups should provide sufficient information to allow a preliminary identification of the poorest and most vulnerable groups, with a particular focus on describing their level of food insecurity and nutritional status. Ideally, livelihood profiles will inform the assessment process by providing information on the causes and levels of vulnerability, the capacity to cope, factors that determine or influence intra-household distribution of food, and the potential roles of targeted food aid.

Additionally, the information contained in livelihood profiles can be used as a benchmark against which the impact of the shock to food insecurity can be measured (WFP 2002).

3.3.5 Food security

Secondary data for a CFSVA should focus on food security – particularly food availability, access, and utilization – and hazards and threats to it. Information on food security is linked to knowledge of institutions, and should include available data on existing food aid and food security programmes and local experiences with disaster food assistance (WFP 2003). In CFSVAs conducted after crises, this information provides essential insights into baseline food security and can be used as a benchmark for a given shock's effects on the food security of vulnerable populations.

Food Availability
Availability is defined as the physical presence of food in a geographic area, not its affordability. Measures of food availability may be derived from production statistics, seasonality information, data on market and food supply infrastructure, import and export statistics, and national policy information (government trade policies, exchange rates, balance of payment constraints, etc.). FAO/WFP Crop and Food Supply Assessment Missions (CFSAMs) and Bellmon determinations also provide valuable secondary information for a preliminary analysis of food availability.

The CFSVA is also interested in looking at surplus food production areas and identifying net food sellers. This information is interesting for programmes aimed at developing local agriculture through local purchases.

Food Access
Indicators of food access are typically focused on social and economic characteristics at the household level and the relationship with markets: the distribution of income within a household; the (seasonal) prices of foodstuffs, cash crops and livestock, as appropriate; the access of individuals to entitlements such as private transfers and gifts or public distributions of resources; household purchasing power as determined by household income and food prices; and household assets and savings in times of duress. Relevant data can thus be collected from information on socio-political structures influencing the household, sources of food and income, the history of shocks and their impact on food access within the household, the number of months of self-provisioning in a normal year, and land distribution and use. Mobility and migration trends, and the effects of coping mechanisms on food accessibility should also be considered if such data is available.

Food Utilization
Food utilization incorporates water, sanitation, food safety, and nutrition data. Bio-cultural information may also be relevant: data may consider medical statistics concerning individual intake and the conversion efficiency of food by the body, but should also include cultural factors influencing food use (e.g. restrictions or taboos on food consumption, preparation, or usage). Food utilization may also be affected by endemic disease, unsafe drinking water, poor sanitation, or lack of appropriate nutritional knowledge. Typical secondary data on food utilization includes: anthropometric measurements of children

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under 5 (wasting, stunting underweight); mid-upper arm circumference (MUAC) of children under 5; body mass index (BMI), especially for women; MUAC for women; measures of micronutrient malnutrition; and other measures of nutritional status.[14] General information on health should also be included, such as health status; prevalence or incidence of major diseases; dietary habits and typical consumption patterns, to serve as a benchmark for primary data; and access to water and sanitation.

Seasonality and trends

The causes and effects of food security are often cyclical, not simply because of annual climate variation and the corresponding agricultural cycle, but also in terms of food availability, food prices, prices of agricultural produce and other means of living, household purchasing power, household stocks, household food security status, health and hygiene conditions, and individual nutrition status. Typical seasonal patterns, crop calendars, and time series of rainfall data and prices can often be obtained from secondary sources. This data contextualizes the findings of a CFSVA, and indicates to what extent annual variation may be responsible for identified trends.

Long-term trends (secular change) are also an important element of CFSVA. Whether quality of life indicators are generally going up or down in a country or province reflects the vulnerability and resilience of communities. Secular change in climate and environmental conditions signals changing risk exposure.

3.3.6 Risks to food security

Secondary data analysis of vulnerability should first seek to understand the nature of hazards and shocks and their differential impacts by collecting data on emergency and disaster types (including the rate of onset of disasters and the complexity and scale of emergencies). This data should include a history of natural disasters, price and income shocks and stresses experienced by the population of interest, their spatial and temporal patterns of food availability and access in times of vulnerability, traditional coping strategies, and the mechanisms available to target food assistance to the most vulnerable under normal circumstances.

A broad range of causes may render households more vulnerable, including: physical vulnerability (e.g. people living with HIV/AIDS, disabled populations); socio-economic vulnerability (e.g. children, women, and other potentially disenfranchised groups); political vulnerability (e.g. ethnic or gender discrimination); vulnerability due to physical insecurity or limited governance (e.g. internally displaced populations). Populations affected by a shock experience varying levels of vulnerability depending on the mix of these factors.

3.3.7 HIV/AIDS in the secondary data review

As mentioned in section 1.5, HIV/AIDS issues should be incorporated in all the food security analyses undertaken in countries with high prevalence of HIV and AIDS. This

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14. See WFP nutrition website
http://www.wfp.org/policies/introduction/policy

should be done at all the levels of analysis, including secondary data analysis and literature review.

National and sub-national data related to HIV/AIDS can inform a situation analysis in several ways:

- **Estimates on HIV/AIDS prevalence** can be used to establish whether it is relevant to include HIV/AIDS in a food security and vulnerability analysis. These estimates can also identify areas with both high HIV/AIDS prevalence and high food insecurity.
- **Data on knowledge and awareness of HIV/AIDS**, presence of risky behaviours, identification of main roads, and analysis of migration flows can suggest areas and groups where food support is most needed for prevention, mitigation, and care activities.
- **Data on health centres** (e.g. location, type of centre, and kind of services offered) can identify areas and institutions where WFP assistance can complement care and treatment services to people living with HIV/AIDS.
- Understanding the **prevalence of other chronic illnesses**[15] and serious diseases (e.g. malaria and tuberculosis [TB]) is useful for determining whether, and to what extent, the validity of chronic illness as a proxy indicator of HIV/AIDS may be jeopardized by such confounding factors.

A number of secondary sources of data are available for conducting initial situation analysis on HIV/AIDS. Major sources include:
- AIDS Indicator Surveys (AIS)
  http://www.measuredhs.com/aboutsurveys/ais.cfm
- Multiple-Indicator Cluster Surveys (MICS)
  http://www.childinfo.org/MICS2/Gj99306m.htm
- Demographic and Health Surveys (DHS)
  http://www.measuredhs.com/aboutsurveys/dhs/start.cfm
- Behavioural Surveillance Surveys (BSS)
  http://www.fhi.org/en/topics/bss.htm
- UNAIDS
  http://www.unaids.org
- WHO
  http://www.who.int/statistics/en/
- HIV/AIDS Survey Indicator Database
  http://www.measuredhs.com/hivdata/

This list of sources does not aim to be comprehensive. At regional and country levels, it is possible to identify others. Especially in countries with high HIV prevalence, official bodies frequently collect (or have access to) updated information. It is therefore good practice to conduct a desk review of information available in the country.

Data on HIV/AIDS and OVC from standardized surveys or other official bodies should always be reviewed. However, these surveys usually do not include data on food security or information on household response to AIDS. Therefore, they cannot be

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15. WHO's definition of *chronic disease* is "a disease of long duration and generally slow progression." Chronic diseases include heart disease, stroke, cancer, chronic respiratory diseases, and diabetes. For each country, WHO is able to provide a picture of major illnesses and causes of mortality. Such information can be retrieved at the WHO website (www.who.org).

used to explore the relationship between HIV/AIDS, food security, and livelihoods. In order to study such relationships, it is crucial to include proxy indicators of HIV/AIDS in food security and vulnerability analyses.

3.3.8 Gender analysis using secondary data sources

Annual Human Development Reports (HDRs) produced by the United Nations Development Programme (UNDP) provide a general overview on the status of gender equality across countries and regions at the national level. Since 1995 the Human Development Index (HDI), also produced by UNDP, has been complemented by the gender-related development index (GDI) and Gender Empowerment Measure (GEM). The GDI compares women's and men's life expectancy, educational attainment, and income, while the GEM concentrates on gender differences in income, access to jobs classified as professional and technical and administrative and managerial, and the percentage of parliamentary seats held by women and men.[16]

Some National Human Development Reports (NHDRs) produced by UNDP country offices also provide GDI and GEM information at the sub-national level.[17] The secondary data provided by these composite indices are often useful as a complement to primary data collection exercises.

Secondary data on HIV/AIDS should be consulted (and reported) taking into account the gender perspective. It is therefore suggested to report:
• Gender-disaggregated figures on HIV prevalence (to see if women are actually more exposed than men, and at which ages);
• Women's access (and utilization) of antenatal clinics;
• Women's enrolment in mother-to-child transmission (MTCT) prevention programmes;
• Women's awareness of transmission and prevention; and
• The consequences of inheritance practices on women's productive role.

3.4 SPATIAL INFORMATION MANAGEMENT

3.4.1 Use of standardized codes in analysis and reporting

All analysis should be performed using standardized location coding, in order to ensure that the correct codes appear in the results and in the final reporting. Standard coding ensures compatibility with past and future analysis, and with data from other projects and agencies. Standard location codes consist of:

• **Pcodes** for populated places (points). Pcodes are generally decided upon by the main mapping agency in the country or region (HIC, WFP, OCHA, UNHCR). The standard Pcodes should be copied to the regional bureaux and Headquarters for the sake of disseminating the standard.

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16. For more information, see http://hdr.undp.org/docs/statistics/indices/technote_1.pdf and
     http://hdr.undp.org/reports/global/1995/en/pdf/hdr_1995_ch3.pdf.
17. National Human Development Reports can be accessed on the following website: http://hdr.undp.org/nhdr/.

- **GAUL codes** for administrative unit subdivision. FAO GAUL codes ensure compatibility with the UNCCS boundaries and standards, and ensure traceability of administrative changes over time (merging and splitting of administrative units). Currently the second administrative level is present for all countries, and the third and fourth levels for some countries. The FAO GAUL team ensures a quick reaction and that changes sent to them will be incorporated in the next annual release of GAUL. If a higher level of administrative boundaries is used at the country level, this should be sent to the regional bureaux and Headquarters, which will copy FAO for inclusion in the GAUL. In this case it will be possible to easily map the administrative codes used to the new GAUL codes when they are released.

If other spatial divisions are used for sampling or reporting (e.g., livelihood zones or agro-ecological zones), then codes should be supplied and the shape file containing the delineation of these zones and the coding should be published on the VAM-SIE with appropriate metadata, which will allow a future reader to properly identify these zones as those used in the analysis.

3.4.2 Minimum data sets

A set of minimum data sets for each country is maintained at the regional bureau and Headquarters level. These data sets should remain synchronized with those used at the country office, which is based on global layers and secondary data available from international institutions. If the country office or regional bureau uses a data set of higher resolution or better quality, this should be copied to the other offices to maintain standardization.

3.4.3 Metadata and sources

Documentation regarding the data sets used in an analysis is a fundamentally necessary step that is often overlooked because its significance is not immediately apparent.

Standards in metadata specifications exist (ISO 19115 and ISO 19139) but are far too detailed for practical use. VAM SIE (see section 8.1.3.8, item 7) implements ISO 19119, and the upcoming release will include ISO 19139, but the fields are not compulsory, so it is up to the user to ensure that the minimum essential information is present.

In the case of layers and data sets used in spatial analysis, it is fundamental to document the source of the data, the methodology used in deriving it (or a link to an external web page of documentation), the reference dates, and the accuracy of the data.

3.4.4 Specific tool set

Integrating the various data sets at different times and spatial scales to provide food security analysis is challenging. Appropriate methodologies and analytical tools will be developed to facilitate the production of analysis. The integration of global- and country-level data sets in a structured way through a "Dynamic Food Security Country Atlas" will facilitate the management of food security information.

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3.5 GEOSPATIAL DATA ANALYSIS

With recent advances in geographic information systems (GIS), satellite technologies, and information and communications technology (ICT), geospatial data is becoming widely available for civilian use. Satellite data, computing capacity, and GIS software are becoming more and more affordable and accessible. Geospatial applications in the context of CFSVAs encompass spatial data collection, geospatial analytical tools, and storage and dissemination of geo-referenced information.

GIS tools and geospatial techniques improve CFSVA by increasing data availability and improving the integration of various data sets such as environmental data and socio-economic information, thus improving food and livelihood security.

In undertaking a CFSVA, relevant work done by other institutions or organizations, and potential partners (both national and international), should be identified. Local capacity and institutions in the area of remote sensing, GIS, and risk analysis should be assessed to identify any gaps or need for capacity-building.

Databases are disaggregated at the sub-national level. Databases may include relevant documentation (e.g. text documents, photographs, tabular data, maps, statistics, earth observation data). Here is a sample list of secondary data information needs:
• Patterns of migration
• Climate and weather
• Irrigated areas
• Land use and cover
• Areas of crop production and timeliness of planting
• Cropping pattern and stages
• Occurrence of crop pests and diseases
• Crop diversity
• Market price
• Major reasons for poor performance
• Farming practices
• Farming inputs
• Livestock size, movement, productivity
• Food production, accessibility, and availability
• Crop and livestock production
• Seed access, availability, and quality
• Household livelihood characteristics
• Epidemic diseases
• Consumption patterns
• Size and number of meals
• Type of food items consumed
• Evidence of malnutrition
• School attendance

Low-resolution (e.g. Terra-Modis, Spot Vegetation, Meteosat, NOAA AVHHR) and high-resolution satellite data (e.g. LANDSAT TM, SPOT, IKONOS, Radarsat 1 and 2) should also be employed when possible.

3.5.1 Compilation and organization of secondary geospatial data sets

The various secondary geospatial data sets should now be reorganized according to:
• scale (global, national, sub-national);
• periodicity (for those sets that evolve regularly);
• type (vector or raster); or
• theme.

Data sets available at the global level as secondary data (for all or most countries worldwide and most available for download) and those available locally (especially at the sub-national level) are listed here (note that this is not an exhaustive or mutually exclusive list):

Globally available data sets (mainly but not exclusively at the national level)
• Administrative boundaries
• Population and population density (and populated places)
• Urbanization estimates
   - Migration estimates
   - Gender and age composition
• Infrastructure
   - Roads and railroads
   - Markets
   - Public buildings (town halls, schools, etc.)
• Geophysical characteristics
   - Land cover: forest, grassland, desert, urban, etc.
   - Soils and geology
   - Water networks: rivers, streams, lakes, etc.
   - Elevation
   - Land use, farming systems, irrigation
   - Climatic variables (from global climate models): mean precipitation, temperature, etc.
• Meteorological/climatic information that is periodically available (dekadal) is compiled by Headquarters on a regular basis to include:
   - NDVI: Normalized Difference Vegetation Index
   - RFE: Rainfall Estimation
   - WRSI: Water Resources Satisfaction Index
   - Country Crop Calendar
• Disaster/hazard exposure: occurrence of hazard (date/location), number killed, affected and homeless, etc.

National-level data sets (sub-national level)
• Most of the above
• Health-related coverage
• Malnutrition (underweight, stunting, wasting)
• HIV prevalence
• Socio-economic variables: income, education, etc.
• Hazard coverage: drought, flooding, etc.
• Livelihoods maps

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A careful inventory of all data acquired and the respective metadata needs to be prepared before continuing with the next step. It is useful here to map each individual variable/indicator in order to start to explore the varying spatial trends. It may be useful at this step to integrate the hazard and vulnerability data; this would depend on the range of data identified as "missing."

3.5.2 Identifying data gaps

Before proceeding with the CFSVA spatial analysis, it is essential to review the data sets compiled in light of identifying the information gaps. Information deemed ideal and important to the CFSVA and not currently available will be prioritized in the subsequent primary data collection efforts. To identify gaps, it is useful to refer to the list of ideal data established in section 3.5 and compare it to the data sets compiled.

3.5.3 Integration: Data management and analysis

Mapping of determinants of food security, hazard mapping, and vulnerability and food security mapping
The spatial data sets can be organized into two main categories according to the well-accepted components of risk analysis: (1) hazard, and (2) vulnerability. These can be assessed separately, as well as overlaid geographically, to produce levels of risk. This is described in section 6.2.4.

3.6 CONDUCTING THE LITERATURE REVIEW

If resources allow, assign one person or a small team fully conversant with the assessment objectives and terms of reference to go through secondary data and identify useful material. Table 3.2 shows how a template for secondary information review helps identify the gaps that determine the type of primary data to be collected during the CFSVA.

Table 3.2: Identification of information gaps, with examples

Question	Information requirement	Secondary source 1	Secondary source 2	Secondary source 3	Ways to fill information gap (with primary information)
Is there a food security or nutrition problem?	Is there evidence of excess mortality?	Survey data from 6 months ago show mortality rate of 1/10 000 people per day.	Doctor interviewed in local press says that mortality rate "seems to be declining."	Recent NGO rapid assessment indicates increased burial ceremonies in last 3 months.	Collect data on number of deaths over last 6 months in sampled villages.
	Is there evidence of acute malnutrition?	An NGO specialized in nutrition carried out an anthropometric survey in 3 of the 5 affected districts 3 weeks ago.	Livelihoods and the emergency impact in the other 2 districts seem to differ from those in the 3 surveyed districts.	No further information could be identified.	Undertake an anthropometric survey in the remaining 2 districts, using the same methodology that the NGO used.
	Have people lost land or access to land?	Government economic data show increased land sales and decreased land prices in drought-affected areas.	A market survey by the local university shows no increase in the number of people looking for casual labour opportunities.	A report by the International Organization for Migration (IOM) indicates no unusual migration within or out of the affected area.	Identify the people selling land. Can these be considered crisis sales? If so, how are people compensating for their lost land assets?

Question	Information requirement	Secondary source 1	Secondary source 2	Secondary source 3	Ways to fill information gap (with primary information)
Is there a food security or nutrition problem?	**How do people currently obtain food?**	A market survey by a local NGO indicates that demand for expensive food, such as meat, has declined.	A WFP rapid emergency food security assessment (EFSA) undertaken 3 months ago showed most households' food consumption – measured through the food consumption score – was acceptable.	The local clinic reports increased micronutrient deficiency among under-5 children.	Evidence suggests that food access has deteriorated over the last 3 months. The CFSVA will check the current situation and look for the causes of this.

3.7 SOURCES OF SECONDARY DATA

Table 3.3 provides examples of common secondary data sources that include national governments, the United Nations, academic publications, Internet resources, and literature from NGOs.

Table 3.3: Common sources of secondary data

Government Documents	Partner NGOs	Professional and Academic Institutions	Internet Websites
• Municipal development plans • Official statistics • Technical reports • Departments of agriculture, rural development, environment, nutrition, social welfare, roads and transport, disaster management, etc.	• Project reports • Baseline studies • Project evaluations • Technical reports	• Journals/articles • Reference books • Public and private research organizations • Public and private universities • Public and private libraries, including the WFP library • Computerized databases	• Eldis Food Security Resource Guide http://www.eldis.org/food/index.htm • Famine Early Warning Systems Network (FEWS NET) http://www.fews.net/ • Food and Nutrition Technical Assistance http://www.fantaproject.org/ • United Nations Food and Agriculture Organization (FAO) http://www.fao.org/ • UNDP Human Development Report http://hdr.undp.org/ • World Bank Global and National Development Reports http://www.worldbank.org/ • United Nations Children's Fund (UNICEF) http://www.unicef.org/ • WFP http://www.wfp.org/ • WHO http://www.who.int/en/

3.7.1 Sources of food security and logistical information

Information on food security can often be found in-country, or from organizational reviews within the WFP country office. Food availability data may be obtained from the Ministries of Agriculture, and of Finance and Commerce, or from the National Statistics Office.

Reports from USAID/FEWS or the World Bank, data on market information systems, and European Union Food Security Units often provide further information on food availability. Food access data may be available from local government or NGO reports. Food utilization and nutrition data are gathered from secondary sources such as demographic and health surveys (DHS), or other national surveys carried out by the government's Ministry of Health. UNICEF nutrition surveys and WHO health surveys also frequently provide health and nutritional data, which may also be available from local health centres.

CHAPTER 3

3.8 KEY REFERENCES: SECONDARY DATA ANALYSIS

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