7. ASSESSING EXISTING INFORMATION SYSTEMS AND INFORMATION NEEDS: INFORMATION GAP ANALYSIS

Monitoring the right to adequate food and the information outputs it produces should adequately meet the information needs of those who are to act upon the information. This involves both rights-holders and those with responsibilities for the protection and fulfilment of the right to adequate food. As also advocated in the Right to Food Guidelines, available information should be used as much as possible, and monitoring should be action-oriented. Existing information systems related to monitoring food security, nutrition, poverty reduction, socio-economic development etc. should be relied upon.

At the same time, the available information may not be sufficient to match the information needs to monitor various dimensions of the right to adequate food. For example, information may not exist from which to construct rights-focused process indicators. In this case, the required information must be compared to existing information available from different sources to detect differences. This is called *information gap analysis*.

In addition, access to existing information from different sources may be constrained by institutional factors, while the sustainability of information systems becomes a crucial issue involving not only technical, but also institutional, financial and political factors. Information availability may vary over time, yet monitoring of the right to food should be an ongoing activity strongly linked at all times to in-country decision-making by national stakeholders.

An assessment of existing information systems usually covers the following:

- Analysis of the degree of completeness in terms of efficiency, effectivity and sustainability of existing and relevant information systems in producing needed information for the monitoring framework in question[46].
- The identification of external and internal factors that impact on the performance of the information system(s).
- The development of an action plan to strengthen existing information systems and develop and implement activities to fill in over time information gaps.

ESTABLISHING INFORMATION NEEDS

What is often not included in an information system assessment is the identification of information needs by intermediate and end users. This approach is similar to a *stakeholders analysis*. Essentially, broad areas of responsibilities of different right-to-food duty bearers need to be identified and these in turn linked to different types of information that duty bearers may need to act in accordance with their responsibilities and to perform well. A *role and capacity analysis* should be helpful here (see Chapter 4). Access to timely, relevant and valid information should contribute to duty bearers' capacity to perform and communicate better, and to make rational decisions while learning from experience.

In most of the remainder of this chapter some ideas for a framework to guide a process to undertake an information gap analysis are presented. A useful starting point is presented in the table below. Twelve broad areas of responsibilities have been distinguished that relate to the realisation of the right to adequate food. Individuals, groups and organizations that operate at national, local and community levels have been listed in relation to various areas of responsibility. Planners and other technical staff employed by government or non-government institutions are intermediary information users, in the sense of being responsible for the preparation of technical documentation based on which policy, programme and project decisions are made. Individuals with responsibilities for the right to adequate food are found in all three branches of government. An additional area of responsibility is the generation, analysis and dissemination of monitoring information with respect to the right to adequate food. User institutions or organisations themselves also generate monitoring information, such as statistical departments in line ministries or when NGO networks conduct their own surveys.

The various areas of responsibility in the table below can also be related to the various levels of rights-focused monitoring as discussed in volume I and in chapter 1 above.

46 Please refer to Annex 1 for the meanings of information system, efficiency, effectiveness and sustainability of information systems.

BOX 7.1 - Areas of Responsibilities by Levels of Rights-Focused Monitoring

THE PROGRESSIVE REALIZATION OF THE RIGHT TO ADEQUATE FOOD

Areas of responsibility:

- *International reporting on progress with rights-based development and on the realisation of economic, social and cultural rights.*
- *Establishing and monitoring access to judicial remedies.*

IMPACTS OF RIGHT TO ADEQUATE FOOD MEASURES

Areas of responsibility:

- *Public policy formulation and monitoring.*
- *Programme development, implementation and monitoring.*
- *Project development, implementation and monitoring.*

IMPLEMENTATION OF RIGHT TO ADEQUATE FOOD MEASURES

Areas of responsibility:

- *Legislative bills/laws.*
- *Establishing norms, standards and regulations.*
- *Programme and project development, implementation and monitoring.*
- *Budgeting and public resource allocation and utilisation.*
- *Public service delivery.*
- *Providing public information.*
- *Political and social mobilisation/human rights advocacy.*
- *Generation of knowledge and capacity strengthening.*

TABLE 2: Institutions with Various Responsibilities Related to the Right to Adequate Food at National, Local and Community Levels

Levels of Action / Types of Responsibilities	National	Local	Community
Public Policy Formulation and Monitoring	• Ministers – Line ministries • Planners • Technical staff	District/municipal executives and councils Technical staff	
Legislative Bills/ Laws	• Legislators • Technical staff	• District/municipal councils • Technical staff	
Establishing & Monitoring Access to Judicial Remedies	• Human rights institutions/ commissions • Right-to-food NGO networks • Courts	• NGOs • Courts	
Establishing Norms, Standards & Regulations	• Legislators • Regulatory agencies • Consumer protection agencies	• District/ municipal councils	
Programme Development, Implementation and Monitoring	• Planners • Programme managers • International donors	• Planners • Programme managers	
Project Formulation, Implementation and Monitoring	• Line ministries • International donors • NGOs	• Planners • Project managers	• Village councils • Community-based organizations
Budgeting and Allocation of Public Resources	• Legislators • NGOs and networks • International donors	• District/ municipal councils • NGOs	• Village councils

TABLE 2: Institutions with Various Responsibilities Related to the Right to Adequate Food at National, Local and Community Levels - CONT.

Levels of Action / Types of Responsibilities	National	Local	Community
Public Service Delivery	• Planners-line ministries • Service delivery departments in line ministries, public service agencies	• District/ municipal planners	• Village councils • Community-based organizations
Providing Public Information	• Mass media (newspaper, radio, TV) • NGOs and networks	• Mass media (newspaper, radio, TV) • NGOs	
Political and Social Mobilisation/ Human Rights Advocacy	• Human rights institutions/ commissions • NGOs and networks	• NGOs	• Community-based organizations
Generation of Knowledge/ Capacity Strengthening related to Right to Adequate Food	• Academic institutions • Professional organizations • Training institutions	• Professional organizations • Training institutions	
International Reporting on Rights-Based Development and Economic, Social and Cultural Rights	• Human rights institutions/ commissions • Ministries • NGOs and networks		

By linking various duty-bearer groups to areas of responsibility it is possible to identify likely monitoring information needs by these user groups and which monitoring method(s) should be relied upon to generate that information. Once monitoring information has been generated and analysed, it is easier to target monitoring information outputs to specific groups to better execute their respective responsibilities. The key is to understand the roles of different individuals, agencies or organizations that have responsibilities with respect to the right to adequate food.

Table 2 expands further on this framework. One example is given here, which can be used to work through specific settings.

Development and implementation at national level of right-to-food measures involves decision makers and planners in line ministries and other parts of the administration, legislators, and NGO right-to-food networks. These three groups need to know:

- What the principal food security and nutrition problems are, which population groups are food insecure or are vulnerable to food insecurity, and what are the reasons.

- What the likely policy or programme impacts are, particularly on the food insecure and vulnerable.

- What budgetary allocations are possible to implement right to food measures and whether these are in line with national priorities.

The role of each of the three groups in this process is different. The *decision makers and planners in line ministries* need information to ensure that the design of the policy/programme measure addresses a cause or causes of food insecurity or vulnerability in the most in need population groups, and is likely to impact positively on improving food security in order to make a case for appropriate budgetary allocations.

Once implemented, they should monitor the impacts of these measures. *Legislators* (budget committees of Parliament or Congress), who must approve the national budget, need to know and understand the food insecurity problems and their broader context. They must assess whether the proposed policy/programme measure is in line with national targets and priorities, and will have to approve the budgetary resources for the implementation of the measure.

The efforts of the *NGO right-to-food networks* in this case may consist of lobbying for or against the measure, depending on their analysis of the food insecurity and vulnerability problems and how the proposed policy/programme measure is likely to impact on the food insecure and vulnerable. Their budget analysis and monitoring will lead them to conclude, for example, that the budgetary allocations (and expenditures) for this particular measure are: (a) *too large* because the measure does not support a national priority, or may adversely affect the right to adequate food of food-insecure or vulnerable groups, or (b) *too low* because, although the measure is in line with national priorities, it does not maximise the positive effect on the food security of the most needy.

In this particular example, appropriate information generated through analysis and monitoring of food insecurity and vulnerability, policy or programme impacts, and public budget allocations and expenditures should be of interest to, and support decision making by, these three user groups.

TABLE 3: Monitoring Information Generated by Different Methods for Use by Different Groups with Responsibilities with Respect to the Right to Adequate Food

Monitoring Information / User Groups	MONITORING METHODS				
	Assessment/ & Analysis of Food Insecurity and Vulnerability	Institutional Roleand Capacity Analysis	Policy and Programme Impact Analysis	Public Budget Analysis	Community Level Monitoring
National					
1. Line ministries	XXX	XXX	XXX	XXX	
2. Legislators	XXX		XXX	XXX	
3. NGO networks	XXX	XXX	XXX	XXX	
4. Mass media	XXX	XXX	XXX	XXX	
5. International donors	XXX		XXX	XXX	
6. HR institutions	XXX	XXX	XXX	XXX	
7. Courts	XXX		XXX	XXX	
8. Professional associations	XXX	XXX			
9. Academic/ Training institutions	XXX	XXX			
Local					
1. District/ Municipal Executives	XXX		XXX	XXX	
2. District/ Municipal Councils	XXX		XXX	XXX	
3. NGO networks	XXX		XXX	XXX	XXX
4. Planners	XXX		XXX		
5. Project managers	XXX		XXX		XXX
6. Mass media	XXX		XXX	XXX	
7. Professional associations	XXX	XXX			
8. Training institutions	XXX	XXX			
9. Courts	XXX		XXX	XXX	
Community					
1. Village Councils	XXX				XXX
2. Community-Based Organizations	XXX			XXX	XXX

To determine information needs of different user groups is not an easy task. A cursory questioning of information users as to what information they think they need has been shown to be ineffective. Important is to establish a continuous dialogue between information users and information providers. To initiate this dialogue it is often effective to produce relatively simple information outputs demonstrating dimensions of a situation or problem that is relevant to users' responsibilities and spheres of decision making, thus the user can more easily see the relevance of the information.

For example, simple maps have been shown to be quite effective, as they tell a message in simple ways, and are easily understood by different users (see chapter 9). Short briefs on specific and current problems, that succintly describe the problem and interpret some key information related to that problem, is often also effective. Specific information needs change over time, and need to be continuously monitored by information providers.

INFORMATION GAP ANALYSIS

Information gap analysis (IGA) involves matching the available information to assessed information needs, and identifies gaps in available information. Available information refers to existing types of information, and the quality of the information. The informastion systems assessment also focuses on factors that may explain poor information quality, i.e. information that is not timely, not valid or reliable, uninterpretable, poorly managed, or not easily accessed. This is important in order to design a programme of remedial actions to improve the information systems.

We may talk of "information demand" when actual information needs are formulated and articulated. The total information demand is likely to consist of both a more institutionalised part and an ad-hoc part. In the first case, it may involve an agreed-upon monitoring framework, such as discussed in chapter 2. This may consist of an established monitoring framework for a specific policy, strategy or programme (see the box below for an example), or perhaps by the outline of the monitoring report to be presented to a national or international monitoring body (see chapter 9). Ad-hoc demands for monitoring information refers to periodic requests for information regarding an acute problem generated by an emergency situation or a policy issue that is being debated. For example, monitoring of crop production and food availability among food insecure and vulnerable households is needed in a drought situation.

Once the information demand has been established, the available information is to be assessed in light of that demand, and the gaps identified. By first establishing the information demand, it becomes easier to decide on which information systems and data sources are to be included in the assessment. In practice, however, assessment of information systems often takes place without much reference to determined information demand by users.

BOX 7.2 - Information Gap Analysis in Uganda

An information gap analysis conducted in Uganda with respect to monitoring the implementation of the National Food and Nutrition Strategy concluded that:

- *Aggregate crop production is annually estimated, using the 1991 agricultural census as a baseline, district level crop production data are available for some districts only.*
- *Per capita food intake data are only available from food balance sheets, which are not regularly analysed.*
- *Nutrition data for under-five children are only available for districts facing emergency conditions.*
- *Nutritional status data for school children, the elderly and people living with HIV/AIDS are not available (though the Strategy identifies these as vulnerable groups).*

DESIGNING THE INFORMATION SYSTEMS ASSESSMENT

For illustration, this section reviews the experience of the FIVIMS initiative in designing an information systems assessment. It suggested that as part of an information systems assessment, two inventories should be made:

- An inventory of existing food insecurity and vulnerability (FIV) information systems.
- An inventory of existing sources of information and data.

It should be noted that for the purpose here, and as discussed in volume I, the monitoring framework should be well defined up-front and thus guide the raising of the two inventories, to make this a well-focused and manageable task.

The inventory of existing information systems should contain the following information for each information system:

- The name and brief description of the system.
- The information outputs that the system produces (name, typical contents, frequency of distribution).
- The (governmental or non-governmental) agency/ies responsible for managing the information system, and for the information outputs.

BOX 7.3 - Health Management Information System (HMIS), Uganda

A data management tool in the Ministry of Health is the HMIS. This system collects data on health and nutritional status from all its health facilities on a monthly basis. The reports generated include information on outpatient attendance, outpatient diagnoses of diseases, maternity, immunisation and child health. Data from districts is compiled at the national level and disseminated through monthly reports. Of particular relevance for monitoring the implementation of the National Food and Nutrition Strategy are the following nutrition-related indicators:

- *Vitamin A deficiency: 1st and 2nd supplementation rounds.*
- *Weight of child when receiving measles immunisation (at 9 months).*
- *Anaemia in mothers and children.*

The second inventory should contain:

- Type of information and data, classified.
- Source(s) of information and data.
- Governmental or non-governmental agency/ies responsible for producing the information/data.

BOX 7.4 - Example of a Data Information Inventory

Food Availability and Consumption

• *Per capita food availability*	***Source:*** *National food balance sheets* ***Institution:*** *Office of Agricultural Economics, Ministry of Agriculture*
• *Calorie consumption based on expenditure data*	***Source:*** *National household surveys on living Conditions* ***Institution:*** *International Food Policy Research Institute*

Source: FAO-FIVIMS (2002)

A ***S****trengths*, ***W****eaknesses*, ***O****pportunities* and ***C****onstraints* (SWOC) analysis may provide an useful framework to assess relevant information systems, in combination with a role and capacity analysis (chapter 4). It can be argued that to undertake an adequate assessment of information systems, both internal and external factors need to be considered. The strengths and weaknesses need to be assessed of such technical and operational internal factors as:

- Underlying conceptual and analytical frameworks.
- Selection of indicators.
- Data collection methods, techniques and processes.
- Database development and management, including information sharing.
- Analytical methods.
- Presentational tools.

Crosscutting issues include: (a) institutional roles and capacity; (b) linking information to action by different stakeholder groups; (c) the extent to which information processes are participatory and empowering, i.e. are rights compliant; and (d) the extent to which the system adapts to changing information needs. The application of a role and capacity analysis to information systems adds an additional dimension to the assessment. It recognises that there are individuals with responsibilities with respect to producing timely and valid information, and their capacity to fulfill those duties needs to be assessed and monitored.

External opportunities and constraints to the information systems may be present in the broader environment in which the information system operates. This broader environment includes:

- Political economy of food security decision making.
    - i. Macro level policies related to food security: information needs for monitoring relevant national policies, programmes and targets.
    - ii. Information policies in place.
    - iii. Processes of information based policy formulation, planning and programme development.
    - iv. Local and community level decision making, planning and monitoring by government sector and civil society (NGOs, CBOs, consumer groups): role of information, and information needs.

- Socio-cultural environment for information activities.
    i. Perceptions and definitions of food insecurity and vulnerability among stakeholders, including rights holders.
    ii. Information culture and information-based decision making, planning, policy formulation and programme development.
- Institutional environment of in-country information networks.
    i. Institutional mandates for FIV information generation, management, analysis and dissemination.
    ii. Inter-institutional linkages reflecting a multi-sectoral approach to reducing food insecurity.
    iii. Mechanisms for inter-institutional information sharing.
    iv. Mechanisms for integrated analysis of food insecurity and vulnerability.

PLANNING AND ORGANIZING THE ASSESSMENT PROCESS

Careful planning and organizing of the assessment process is important to ensure that the assessment findings and conclusions translate into follow-up actions to strengthen existing information systems. The assessment process itself should conform as closely as possible to human rights principles and should contribute to strengthening the sustainability of the information systems. Thus, the assessment process should:

- Contribute to creating a greater sense of ownership among in-country institutions by making the process participatory involving both technical staff ("information providers") and users of the information outputs.
- Be seen as an opportunity to learn (rather than an evaluation), drawing out lessons from real experiences, empowering stakeholders.
- Contribute to mobilising political and institutional support for information systems by demonstrating the use of information in planning, policy formulation, programme development and monitoring, and the potential of producing information outputs in line with information needs of different user groups.
- Take full account of information needs at sub-national as well national levels and thus extend the assessment to all levels of decision making, planning, implementation and monitoring.

- Be transparent, i.e. the assessment purpose, agenda and methods should be clearly articulated and be shared with all involved in the assessment process.

An (ad-hoc) inter-institutional working group or assessment team (IAT) may be formed to undertake the assessment, coordinated by an institution with major responsibility for food security in the country. If the assessment process becomes a permanent process, the IAT may be coordinated by the institution with major responsibility for monitoring the realization of the right to adequate food. Important is that both technical staff of the information-providing institutions (including civil society organisations) as well as institutions, or organisational units that make use of relevant information, participate in the IAT. The IAT should have a clear mandate from high levels to undertake the assessment and develop early on an assessment work plan with defined outputs, assigned resources and methods to be implemented. This work plan should be endorsed by senior managers of participating institutions. It should be clear to whom the IAT is accountable for its work and the results, like a high level inter-institutional committee, such as a food security and nutrition council. The IAT is likely to apply the following methods to obtain the assessment information, structured along the lines of the SWOC analysis outlined above:

- Review of documents related to relevant information systems, including information outputs, data generation and management methods used, organisational structures, resources and budgets, etc.

- Semi-structured interviews with key informants in information-providing institutions, organizations and units, and with users of FIV information products.

- Focus groups discussions.

- Validation workshops.

See the following chapter for an elaboration of these information gathering methods. Document review should be the first method to be applied. It should contribute to providing the IAT with a common understanding of the focus and scope of the assessment, of the methods that are applied in the different FIV information systems, including a first assessment of the coherence of the methods with human rights principles, and the likely gaps in information availability relative to the established information needs of the monitoring framework. Document review can also assist with the formulation of discussion questions for different key informants, and with the identification of key informants to be interviewed. Focus groups can be formed around specific types of information or themes (food production and marketing, health and nutrition, food security and poverty) or around different components of information systems (data collection, information management, indicator construction and analysis, FIV information dissemination). Focus groups are often also useful to validate preliminary conclusions reached by the IAT. Validation workshops with key informants and others serve to provide feedback to participants in the assessment process about findings, results and conclusions, and to validate the latter. Validation workshops should be structured to contribute to the learning process for stakeholders and to contribute to the formulation of follow-up action plans.

ASSESSMENT REPORT

A report may be one of the outputs of the assessment. Drafting of the assessment report should be initiated while the assessment information is still being collected, after a structure for the assessment report has been agreed upon by the IAT. The initial drafting of the assessment report often leads to the identification of still missing information, or points for further elaboration through additional assessment information. An advanced draft of the assessment report should be presented and discussed in a validation workshop with key stakeholders. There is no set structure for the assessment report. Generally, the report should provide clear answers to the questions initially posed as a basis for the assessment. There may be many different reasons for undertaking a FIV information systems assessment. For our purposes here, the key questions revolve around how existing information systems can be used to cover information needs for the right to adequate food, what information is still missing and how and within what time frame the missing information can be generated. We provide a suggested outline for an assessment report below.

BOX 7.5 - Suggested Outline of an Assessment Report

- *Background to the assessment: motivation, reasons, mandate, previous assessments.*
- *Key issues addressed in the assessment: rationale, monitoring framework.*
- *Key findings with respect to each of the issues: provide range of perspectives from different stakeholders.*
- *Operational conclusions: translating the key findings into proposals for action.*
- *Strategic approaches to:*
    - i. *improve the quality of available information for rights-focused monitoring;*
    - ii. *cover information needs for the monitoring framework;*
    - iii. *implement human rights approaches in rights-based monitoring and in routine FIV information systems.*

Annexes: 1. Organization of the assessment, methods applied and work plan;
2. Participants in the assessment process;
3. Detailed work plan for follow-up actions.

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