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Development and Implementation of a Method for Early Warning and Response in Title II Programming in the Zondoma Province of Burkina Faso (2006-2008): Progress Report and Initial Lessons Learned

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Objectives

This paper provides an overview of a recently developed, community-based system for early warning and response (EWR) in Burkina Faso. The paper also reports on the experience of setting up this system during the last 16 months (September 2007-December 2008) and on a critical review of the initial lesson learned during this time. Finally, revisions to the original forms and processes are recommended.[iv] Early warning and response systems are now required by the United States Agency for International Development (USAID) Office for Food for Peace for all Title II programs; however there is little guidance on how to develop and implement EWR systems. Since documentation of the development, implementation, and impact of community-based early warning and response systems is scarce, this attempt to document the process used to develop the EWR for the Africare Zondoma Food Security Initiative (ZFSI) intervention area is intended to inform development and implementation of other Title II EWR systems.[v]

Background

Shocks such as major droughts, floods, and earthquakes can destroy years of government and donor investment and development over night. Prior to 2006, most Title II food security projects had only two options for responding to these types of crises. They could divert funds from the development activities to an emergency response and/or seek supplemental funding from another donor. Neither response was entirely satisfactory. First, the response often diverted critical food, investment, and human resources away from activities that the project needed to achieve long-term development goals and objectives (Mathys 2007). In addition, in most cases the system for alerting either the government or external donors to the crisis was managed by outsiders and unlikely to be sustainable once project funding ended. Given the growing body of empirical data that show that this type of crisis-driven response was more the norm than the exception, USAID started requiring new projects to incorporate "early warning and response mechanisms, including trigger indicators" into any Title II-supported multi year assistance program (MYAP) (Mathys 2007). USAID Food for Peace outlined the risks and shocks to which these mechanisms needed to be sensitive (Box 1).

Part of Africare's Institutional Capacity Building (ICB) grant[vi] has focused on examining:

- The utility of Africare's previous investment in organizational capacity of village and district community groups and how this facilitated early detection of a major shocks and management of the response to these shocks and
- The extent to which programs have created formal community-based systems for detecting impending food security crises.

To address these issues, Africare commissioned an intensive case study of risk and shock management on two of its older Title II programs that had been operational for almost ten years, but that didn't have formal early warning and

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response systems (Uganda and Guinea) (McMillan et al. 2006a and 2006b; Sidibé et al. 2007 [AFSR No. 8]; Pogba et al. 2007 [AFSR No. 7]; Tushemerirwe and McMillan 2007 [AFSR No. 6). Staff associated with two other programs that created formal EWR systems as part of the second phase of Title II funding were also commissioned (Niger and Burkina) and shared their experiences with other programs during two ICB-sponsored workshops in 2007 and 2008. This report is a follow up to the experience of Africare Burkina's EWR system work.

Africare's Zondoma Food Security Initiative (Burkina Faso): The first ZFSI Project (2001-2005) started five years before the new USAID strategy (USAID/FFP/DCHA 2005) was announced. The old project focused on increasing aggregate food security through a series of targeted interventions designed to increase food availability, access, and utilization. One of the main indicators used to track the project's impact was the Months of Adequate Household Food Provisioning (MAHFP) (Africare 2005 and Africare 2007). This indicator enabled the project to track its aggregate impact on vulnerable groups (Konda and Nanema 2005). Between 2000 and 2004, the percentage of households classified as chronically food insecure (based on the MAHFP indicator) decreased from 62 percent to 39 percent in the 40 project villages.

Box 1: Definition of Risks and Shocks

The USAID Food for Peace Strategy uses the words "shocks" and "risks: almost interchangeably—although the official flow chart in the strategy refers to shocks primarily in the context of "natural shocks."

- **Risk** was defined as "an event or circumstance (either isolated or recurrent) that negatively affects the ability of individuals, households, communities, governments, or organizations to create or maintain successful livelihood systems." A shock was defined as a more specific type of risk that is not predictable and typically cuts across a wide swath of the population.
- **Shocks** pose a particularly important threat to food security as they can often force households classified as having low vulnerability into the high vulnerability category due to the erosion of and mortgaging of assets (i.e., children's education, soil fertility, wood stocks, livestock, and personal wealth) that occur as these households attempt to survive the shock. Of course households that are classified as vulnerable at the start of a shock are also profoundly and negatively impacted by the shock as they often have far fewer resources to use to survive shocks.

Trigger Indicator: Indicator used to determine the threshold at which MYAPs need to shift activities and/or require additional resources for new activities in response to a slow-onset shock. Such an indicator helps direct program priorities in dynamic and often unpredictable operating environments. For example, in order to be aware of when a population's vulnerability has increased, a MYAP needs to monitor early warning indicators such as prices or coping measures, clearly understanding which coping measures indicate "normal" times and which indicate that the situation and environment are becoming stressful and hazardous and may require additional Title II resources. The trigger indicator (s) advises that the community is being subjected to unusual stress.

Trigger Threshold: The level of a trigger indicator that, when seen, signals the need for certain actions to be taken (such as needs assessment, contingency and response planning, request for emergency resources for MYAP).

Vulnerability: In a food security context, people are vulnerable or at risk of food insecurity because of their physiological status, socioeconomic status or physical security; this also refers to people whose ability to cope has been temporarily overcome by a shock. "Vulnerability to food insecurity is a forward-looking concept related to people's proneness to future acute loss in their capacity to acquire food. The degree of vulnerability depends on the characteristics of the risks and a household's ability to respond to risk."

Sources: Sidibé et al. (2007: 1-2); FFP FY2008 Title II Assistance Proposal Guidelines in Mathys (2007:3).

Based on this successful record, the government of Burkina asked Africare to expand its core program into 64 new villages in order to cover the entire province starting in 2005. Phase II of the ZFSI project (ZFSI II, 2005-2009)– reinforced by a new subgroup of activities focused on HIV/AIDS, a new collaborative credit initiative, and activities to enhance safety nets—was expected to help Zondoma Province anticipate and ward off some of the asset erosion that might result from various slow onset disasters (e.g., civil strife in *Cote d'Ivoire* where many Zondoma residents worked and lived and the HIV/AIDS crisis) as well as recurrent risks and shocks such as drought and flooding. The project also intended to create the more diversified crop production and employment opportunities that local communities and households need to manage and buffer against the negative impacts of future risks.

To achieve these goals, Phase II of the ZFSI project had four strategic objectives (SOs).

- SO1: Enhancing and protecting livelihood capacities.
- SO2: Building community and household assets needed to buffer the impact of seasonal and inter-seasonal production shortfalls (i.e., resiliency).
- SO3: Improved household health and nutrition.
- SO4: Enhanced community capacity to manage risks to reduce vulnerability and influence decisions that increase food security.

The ZFSI Phase II design was heavily influenced by early drafts of the USAID strategy. For this reason, the project design document placed a great deal of attention on identifying the routine risks and shocks (Box 1 above) in the region (as well as strategies for responding to them) and in identifying a series of activities that could help the project better target the special needs and opportunities of the most vulnerable populations based on the MAHFP classification. Especially important in achieving this objective, the new project included food commodities that could be used to reduce short-term food insecurity of the most food insecure groups. By providing these food commodities, the project hoped to increase the ability of vulnerable groups to engage in activities that would help them better overcome these constraints over the long-run.

The same new design included a provision for short-term food assistance to vulnerable and non-vulnerable households in times of shock. The justification for this in the proposal was that vulnerable people tend to be those with the least resources to resist shocks. The proposal also included a detailed analysis of historic shocks and recurrent risks. While this analysis helped identify the major shocks, there was very little analysis of the formal structure that would be used to identify and respond to risks. The implicit assumption was that this would be an additional function of the food security committees (FSCs) or *Comités de Sécurité Alimentaire* (CSAs) (Box 2) started under the old project that would be working with the ZFSI project administration as well as the pre-existing base of national, provincial, and department level authorities involved in emergence response.

Food Security Community Capacity Index. This expanded view of the FSCs fit well with the Africare capacity building model, which was tracked by a local capacity building indicator, the

Box 2. The ZFSI Food Security Committee (FSC) Model

Africare's initial strategy during Phase I focused on targeting assistance to a wide variety of committee structures within the target villages where it intervened. By 2001, however, the project had identified the need for creating a single overarching committee structure to provide a focus point and created one food security committee (FSC) per village. The project continues to invite communities to select/elect members to form FSCs under Phase II. The FSCs are also responsible for drafting and implementing the village action plans and promoting activities that support food security goals. Each committee is responsible for selecting various village-level volunteers: four to six village nutrition educators (VNEs), two demonstrators/promoters of appropriate agricultural and livestock technologies, two traditional birth attendants, one or two community health agents and representatives from groups promoting HIV/AIDS awareness, and 4-6 members of water management and other interest groups.

Source: Konda and Nanema (2005).

Food Security Community Capacity Index (FSCCI) (Africare 2007 [AFSR No. 2]). Since 1999, Africare has required all of its programs to incorporate an adapted version of this self-assessment tool in order to ensure that its food security programs did not encourage dependency. Although the FSCCI can be applied to any community organization, its most important use was to orient the capacity building efforts of the group charged with orchestrating a food security project's community level programming. In Fiscal Year 2004 (FY04), the original eight-variable index was expanded to include two new variables. Both variables were designed to track the core capacity of the FSCs to better manage routine risk and to help communities get the outside assistance that they need from government and non-government aid agencies during and after major shocks (Africare 2007 [AFSR No. 2]: 8 and 9 and 15-17) (Box 3).

ZFSI's Experience with Emergencies. The ZFSI project was forced to contend with an emergency response twice during the first four years of the project – in 2005 and 2007 (Table 1). In both cases food aid was used to buffer the impact of these emergencies. As outlined in its MYAP grant application, the ZFSI project diverted a small percentage of the total amount of food aid it was allocated for development purposes to respond to these emergencies. In order to maintain the distinction between these short-term emergency response efforts and a more large-scale disaster that would require a major gear up of assistance, USAID placed a cap of 10 percent on the amount of commodities that could be used for this type of emergency response. In both cases, the request for food aid was orchestrated by the existing provincial level committee for emergency assistance (*Comité Provincial de Secours d'Urgence et de Réhabilitation COPROSUR*). The principal role of the FSC was to identify and coordinate eligible beneficiaries and delivery mechanisms for food aid (Table 1).

Although the project played a critical role in coordinating both these emergency response efforts, there was a legitimate concern that the mechanism for dealing with emergencies was not sustainable for several reasons.

- Despite improvements in local organizational capacity—including capacity to identify potential sources of assistance (tracked by the FSCCI)—the orientation was still almost exclusively focused on identifying possible sources of outside assistance that might be used to offset an emergency (once it hits).
- There was almost no emphasis on predicting crises and developing compensatory actions that could mitigate the crises before they hit.
- The response system was almost entirely dependent on the project for the emergency food rations and support.
- The provincial COPROSUR (*Comité Provincial de Secours d'Urgence et de Réhabilitation*)—which was the principal mechanism for validating local claims for assistance and transmitting them to the most relevant national authorities—had no control of regional-level resources with which it could respond to individual crises. This meant that each case had to be appealed to the relevant national sources of emergency aid.

To address these issues, as well as USAID's emerging interest in trigger indicators (Box 1) that could be used to better identify ahead of time risks and impending crises, the project began to explore various ways for developing a better system for community-based early warning and response. This paper outlines the results and lessons learned from this initial attempt to establish an EWR system in Zondoma.

Initial training session for the ZFSI project extension agents in September 2006, during which the early framework of the EWR system was developed.
Photo Credit: OUEDRAOGO Julien, Reseau MARP

Box 3. Indicators and Ranking Criteria for Variable 7 in the Revised Africare FSCCI: Ability to Analyze, Plan, and Manage Risk and Shocks

(a) Existence of a community-based information and identification system of risks and shocks.

0 No evidence of a village information system (VIS).
1 Unstructured assessments are done on an irregular basis that do not lend themselves to analysis and action.
2 Existence of a formal committee, which meets annually to assess village's food security, risks, and vulnerabilities. However, no structured VIS is in place.
3 Formal committee, which meets quarterly, uses data collection tools for analysis.
4 Formal committee meets monthly, which collects and analyzes data with accuracy.
5 Formal functional village information system created and operated independently by the village with monthly meetings to analyze the situation. The system documents a dynamic food security situation for all groups in the village on a continuous basis. Effective preventive actions to mitigate shocks, risks, and vulnerabilities are identified that result in enhanced food security for the whole village.

(b) Existence of plans to mitigate risks and shocks.

0 No plan.
1 Oral plan without capacity to implement.
2 Written plan without capacity to implement or make preparations.
3 Written plan exists with capacity to implement, but no preparations in place.
4 Written plan exists with capacity and preparations in place.
5 Annual review of all aspects of the plan is done and communicated to village.

(c) Capacity of community to diversify their activities. Diversification of productive activities is defined as planting one new crop, breeding one new animal, or starting a new processing technique or other income generating activity not completed during the previous agricultural cycle.

0 No understanding about diversification of productive activities.
1 At least 10% of households have diversified their productive activities.
2 At least 25% of households have diversified their productive activities.
3 At least 50% of households have diversified their productive activities.
4 At least 75% of households have diversified their productive activities.
5 At least 90% of households have diversified their productive activities.

(d) Existence of a monitoring and evaluation system of the mitigation plan.

0 No indicators in place.
1 Committee members have started putting some indicators and guidelines together.
2 Indicators have been developed by some members, but are not yet understood very well by all members and, therefore, not yet applied in any evaluation.
3 Indicators have been developed and all members are aware of them, but have not yet used them in any evaluation.
4 Members have own well-developed indicators that are well understood by all. Indicators have been periodically used by the committee members with the help of Africare and other organizations.
5 Members have own well-developed indicators that are well understood by all. The indicators have been periodically used by the committee members without the help of Africare or any other organization staff.

(e) Capacity to request and receive external assistance (for assistance needed to avoid risk and/or respond to emergencies or shocks).

0 No mechanism exists for negotiating for external resources/assistances when required.
1 Community has thought about negotiating for external resources/assistance, but no action has been taken.
2 Information on community risks has been formulated into a proposal.
3 The formulated proposal has been submitted to higher local leadership levels.
4 Community proposal and negotiation skills were sufficient for a response from outside resources to be received.
5 Community has a highly effective system in place for proposal development and negotiation recognized by outside resource sources and has resulted in the receipt of resources.

Source: Africare (2007 [AFSR No. 2]: 15-16).

Table 1. Types of Emergency Response Coordinated by ZFSI II Project in Burkina Faso (2004-2008)

Year	Event	Number of Villages Receiving Assistance	Role of the Food Security Committee (FSC)	Role of Government	Type of Assistance Orchestrated
2005	Drought	46	With use of MAHFP, FSC identified the most vulnerable households in the community	Provincial Emergency Assistance Committee validated claims for assistance	Project funded emergency assistance through its stock of commodities
2007	Flooding	54	Communicated need to project and Provincial Emergency Assistance Committee	" " "	Project funded emergency assistance through its stock of commodities

Methods

Methods Used to Develop Early Warning and Response System in Zondoma

This section outlines the methods that were used to develop and implement the early warning and response system in the Zondoma Food Security Initiative intervention area in Burkina. It includes a description of an unusual model for a community-based food security support fund (FSSA) that communities can use to respond to short-term crises.

In September 2006, the project hired a consultant to help them develop a better method for identifying and managing shocks. Although the consultant **(**Serge Alfred SEDOGO**)** had no previous experience with early warning and response systems, he had an extensive background dealing with food security in Burkina and was skilled at facilitating grassroots meetings. His first activity was to facilitate a three-day workshop that was attended by all the ZFSI II project extension and administrative staff (Table 2). During this meeting, the extension agents reached consensus on a simple method for detecting emerging crisis (the early warning component of the EWR system). Based on this input, the consultant developed a package of data collection tools (Annex 1-2 are the newly revised versions of the original forms). This package—which included most of the materials still in use today—was then translated into local languages and used to train all of the FSC/CSA members in the use of the forms and the method during 2007.

The basic concept of the EWR system is to use community committee (FSC) members' perceptions of the experiences of households in their villages in a systematic way that would be most likely to detect the early signs of an impending crisis. This method avoids the use of time and resource intensive household surveys that are unlikely to be able to quickly identify warning signs prior to a full blown emergency. The method for developing the details of the early warning and response system has been refined to include the following five steps.

Step 1: Clarification of the concept of risk, its causes and impacts, and identification of risk and early warning indicators. The very first step in developing the ZFSI early warning and response system involves extension agents helping communities (FSCs) (Table 3):

- Develop a clear local level understanding of the concept of risk and shocks,
- Outline key elements or risk factors that often precipitate shocks in the local context,
- Identify main categories to track that would best show early signs of a shock and needs, and
- Define indicators that could communicate early warning signs of impending shocks and risks that would affect vulnerability to these shocks. These indicators are supposed to reflect the elements that communities have always used to predict an impending food security threat within a particular ecological and socio-economic context.

Step 2: Determine risk levels for each indicator. This step contains two main actions: determining the specific meaning and definitions of each of the risk (trigger) indicators and setting low, average, and high risk levels (thresholds) for

each indicator. First, the committee defines each indicator. For example, when measuring the percentage of households affected by flooded fields the committee first must define what criteria will be used to determine affected from non-affected fields. It could mean decided that any flooding would be considered no matter how minor or how limited in area or it could be set at a certain percentage of the fields (based on the committee members' perceptions). An example might be that affected households experienced flooding in 50 percent of their fields. The next step in determining the risk level for each indicator is to decide what frequency or percentage of the particular experience would be consider low, medium, and high risk. Again, using the example of flooded fields, the levels could be set at:

- *Low risk* = less than 25 percent of households are affected (defined in this example as having approximately 50 percent of their fields flooded)
- *Medium risk* = 25 to 75 percent of households are affected (defined in this example as having 50 percent of their fields flooded)
- *High risk* = more than 75 percent of households are affected (defined in this example as having 50 percent of their fields flooded)

The outputs of this step are to be clearly documented in the Annex 1 table.

Step 3: Mechanism for tracking risk indicators. Step three continues to fill in the details documented in the Annex 1 table. At this point the committee must decide how they will determine the data, at what frequency, and for which seasons. Most of the data are based on the perceptions of the committee members regarding experiences of households or producers in the village. However, there are a few indicators that may be based on other sources of data, such as health center records or animal program records. It is ultimately up to the committee to decide which type of data will QUICKLY and EFFECTIVELY communicate the EARLY signs of an impending crisis. Part of this step is to develop the questionnaire (exemplified for the ZFSI system in Annex 2). This step also involves deciding whether or not all committee members will be involved in providing data, whether it will be based on consensus or individual members filling out the questionnaire separately, and how the committee will deal with discrepancies or differences in opinion about community trends.

Step 4: Assessment of data. As data are examined to see if any households or records indicate potential problems, it is important to cross-check data from different indicators. An initial alert would be triggered when one indicator shows a problem (i.e., a change in risk level from low to either average or high or from average to high). At this point the committee would triangulate by examining risk levels for other indicators that would be related if a wide scale food security threat were emerging. For example, if the indicator "percentage of household who eat half their normal food ration" changed from low to high level alert, this indicator would be compared (triangulated/cross-validated) with other indicators, such as percentage of households selling animals to buy food (pregnant females, small animals, traction animals still in their prime of life) and/or the rapid increase in price of cereals on the market.

Often the indicator risk levels will be set at a specific percentage or number of the population experiencing increased vulnerability to food insecurity. However, even if only a small number of households are affected in a negative way by factors assessed in this process, certain actions can be taken to help these households and stop any deterioration of their food security status. A low level of community wide risk does not mean that none of the households are severely food insecurity. A targeted approach to community intervention is different (and possibly in addition to) more broad based responses to more wide-spread food insecurity risks.

Step 5: Response Strategies. The final step involves putting in place a strategy for responding to community food security threats based on the recorded level of threat (low, average, or high). These responses are documented in the Annex 3 table. These strategies include pre-setting a "trigger" level for the warning indicators that would permit adequate time to build awareness in the local communities, to mobilize local funds through the Food Security Support Fund (*Fonds de Soutien à la Sécurité Alimentaire* or FSSA) and, when necessary, to alert local leaders and department level authorities.

Table 2. Critical Dates in the Evolution of the ZFSI II Project and ZFSI II EWR Method

Date	Activity
2004 (October)	Phase II of the ZFSI project starts
2005	First ZFSI II emergency response to drought
2006 (September)	Workshop with extension agents to develop method and draft trigger indicators
2007 (September)	Meeting in Niger at which case study of the Africare EWR system in Niger was presented
2007 (February-December)	Extension workers integrate the theme of EWR into existing public awareness programs and work with the FSC to develop village-specific indicators[vii]
2007 (August)	Second ZFSI II emergency response to flooding
2007 (October)	Decision made to create community-level FSSAs (Food Security Support Funds) as part of the project Phase Out/Sustainability Strategy
2007 (March 2008 – November 2008)	FSSA following the project model created in 81[viii] of the 104 project villages
2008 (November-December)	Due to abundant 2008 harvest and shift in national policy, ZFSI II decides to encourage communities to use part of their FSSA funds to create cereal banks
2008 (November)	Meeting with the National Council of Food Security to create and train a Provincial Food Security Council (*Conseil Provincial de Sécurité Alimentaire or CPSA*) and a Department Council for Food Security (*Conseil Departemental de Sécurité Alimentaire or CDSA)* for the Zondoma Province

Table 3: Actions and Outputs under Step 1 of Development of an Early Warning System

Action Item	Outputs of this Step
Develop clear local level understanding of the concept of risks and shocks	State definitions Communication of these definitions to all relevant committee members
Outline key elements or risk factors that often precipitate shocks in community (based on previous experiences)	List of all previous emergencies and shocks based on committee members' memories and experiences. List of all factors that foreshadowed the shock prior to full blown crisis.
Identify main categories to track that will best foreshadow future shocks	List of brainstormed categories Narrowed list to just essential and most relevant categories upon which to develop specific early warning indicators (trigger indicators) (record categories in Annex 1 table)
Define indicators	List of specific indicators for each of the main categories outlined for the community (record categories in Annex 1 table)

The project anticipated three broad categories of response to the three risk levels:

- *Low risk:* Take precautionary measures at the community level and build household level awareness about managing food stocks, introduce compensatory measures and support (such as using improved seeds or short cycle crop varieties), strengthen routine early warning surveillance of all risk indicators, regulate prices in the market (to control speculation), and mobilize local resources through the FSSA.
- *Medium risk:* Alert administrative authorities and local level partners, put in place prevention measures (by building up food stocks, adapting food consumption patterns), and further intensify early warning surveillance activities.
- *High risk:* Alert local and national authorities and seek to influence national and international public development and emergency aid agencies and local civic

organizations to provide support and put in place mechanisms for managing aid responses to the crisis.

The drafted response strategies that have been recorded by the ZFSI team in Annex 3 are yet to be tested. It is anticipated that once they are activated as a result of a detected impending food security crisis, many lessons will be learned that will shape their evolution.

Methods for Assessing EWR System

ZFSI II and the pilot committees conducted an initial review in December 2008 to assess the effectiveness of the EWR systems that had been developed. Part of this assessment included collection of information from extension agents regarding their observations of the capacity and training needs of FSC member to manage EWR systems and the Food Security Support Fund. The results of this review are presented below. In addition, the project and pilot communities recognize the need to develop a more refined tool for assessing and tracking capacity to manage EWR systems. The December 2008 review and results were used to draft an initial set of EWR capacity questions (Annex 4). These questions are intended to be simple and build on the established concept of the FSCCI (Box 3). They are intended to be tested and further refined in the coming year.

Results

Setting up the Early Warning System Criteria and Processes

Based on their initial meeting, the ZFSI II team decided to monitor five broad categories of risk factors and specific indicators that could be used to track these risk factors.

I. ***Climatic and natural crisis (that compromise production)***. *Indicators:* (1) Number of fields affected by attacks of crickets and other types of insects including the white fly; (2) Number of households affected by flooding in their fields, (3) Number of days of drought condition in the village, (4) Number of days of rainfall delay since date of expected rainfall, and (5) Percentage of households affected by flooding in their houses or food storage facilities.
II. ***Changes in household food consumption patterns.*** *Indicators:* (1) Percentage of households that consume unfamiliar (less desirable) foods)[ix] and (2) Percentage of children severely malnourished.
III. ***Animal and human health conditions.*** *Indicators:* (1) Number of infant deaths attributed to malnutrition (CSPS data), (2) Number of cases of human disease incidents (CSPS data), and (3) Number of cases of animal disease (animal/livestock services data). All of the data for this category of risk are collected from human and animal health programs and are not based on committee members' perception of incidence in community.
IV. ***Availability of cereals in local markets.*** *Indicators*: (1) Reduced frequency preparing dolo due to limited input supply (lack of cereal inputs) (data from interviews with dolomakers), (2) Percentage of households eating half their normal food ration, (3) Percentage of households unable to serve at least two meals per day, and (4) Percentage of households who have had a household member migrate to find food or work in another location.
V. ***Household financial and physical access to cereals in local markets.*** *Indicators:* (1) Percentage of households dependent on traditional share cropping (where they receive 1/3 of the crop, *gar koobo*) for subsistence; (2) Percentage of households selling animals to buy food (pregnant females, small animals, traction animals still in their prime of life); (3) Fluctuating price of cereals on the markets (data from interviews in the market); (4) Lack of availability of cereals in the cereal bank (if one exists) (data from interviews with cereal bank officials); and (5) Lack of availability of cereals at different levels including household granaries, local markets, and department level markets.

Once the main categories and indicators were set the committee established the risk levels for each of the indicators and the frequency of data collection and sources. The matrix in Annex 1 reflects the revised reflection on what these variables should be. The questionnaire in Annex 2 shows the revised tool for data collection. Given the difficulty of consistent measurement of qualitative phenomena, the extension agent and community leaders involved in the initial conceptualization of the forms decided to emphasize the measurement of quantitative

indicators that are easy to observe and measure. Other indicators—which were more subjective and community-specific—were also noted (but not in this standardized form) and used to strengthen the analysis based on these quantitative variables that could be more objectively measured.

Developing Response Strategies

Initially, there was no discussion of a community-based response system, or of mobilizing internal resources to confront risks and shocks. The reflection that led to the creation of a Food Security Support Fund (*Fonds de Soutien a la Sécurité Alimentaire*) evolved as part of the new orientation of the ZFSI II project in March) 2007, which was starting to plan ways for sustaining project activities once the project ended (Table 2). One output of this reflection was the decision that all communities must make a financial contribution to any additional activities and/or investment in their community. The successful creation of a "financial code" in the 40 first "original" Phase I villages at the start of Phase II (October 2007) encouraged the project team to create a community mechanism for financing these activities that would remain operational after the project closed. It was decided that these same funds cold help galvanize a community-level system for responding to shocks and risks.

Village leaders discussing the early warning and response system and the indicators that they use to track risk in the Commune of Tougo during a USAID visit in September 2008
Photo Credit : BICABA Benjamin, Assistant Suivi Evaluation, PSAZ 2)

The FSSA (Fonds de Soutien à la Sécurité Alimentaire or Food Security Support Fund)

Organizational structure. The Food Security Support Fund (FSSA) is one of the mechanisms developed as part of the community-based EWR system in Burkina to respond to emerging food security threats. The objectives of the FSSA are to:

- Mobilize internal community resources to support food security,
- Establish two management bodies—a management committee and an audit committee – and a general assembly, and
- Strengthen a culture of self-reliance for all community-based initiatives.

The organization of the FSSA as an independent entity from the FSC/CSA is constructed around its participants. In order for the fund to be truly community-based, the fund is managed by individuals that accept to support its principles and respect the management rules. The organization is subdivided into three bodies (Box 4): one decision-making body, the General Assembly of Supporters (*L'Assemblée Générale des Adhérents)*, and two management committees, one focused on management (*Comité de Gestion*) and one focused on financial control (*Comité de Contrôle*).

Source of funds. The FSSA is a body managed by supporters; the sources of funds are entrance fees (for joining) and an annual collection from supporters. Nevertheless, the project in its spirit of phasing out in the villages (and to encourage the development of the fund), agreed to return any contribution mobilized by the communities in the context of acquiring goods and services from the project based on a fixed amount outlined in the financial code that was created in the 40 original villages at the start of Phase II. This fund can also receive gifts and funeral legacies (gifts given when someone dies).

The amount of the entrance fee and the goal for annual collections is established by the FSSA supporters. Given the FSSA mission for supporting the early warning system, it is better adapted than the General Assembly of Supporters (Box 4) to start tracking (and when necessary start the coordination of localized responses) immediately after harvest.

Box 4: The Three Decision Making Bodies Overseeing the FSSA in Zondoma, Burkina Faso as Part of the Emergency Response System

General Assembly of Supporters (*L'Assemblée Générale des Adhérents*). This is the supreme decision body that is comprised of all the local supporters of the FSSA. The assembly elects the members of the management and financial committees and has the power to remove the members of these committees if they think it necessary. This committee adopts an annual work plan and budget, examines budget reports, decides on admission or exclusion of a member, and deliberates and decides any questions on the agenda. The committee organizes an annual general assembly meeting, but can organize additional meetings at any other time to review a question that they consider urgent.

Management Committee (*Comité de Gestion*). The management committee is charged with collecting funds and managing the treasury of the fund according to the work plan adopted by the general assembly. It is also charged with executing the work plan and the budget. The management committee is comprised of three members that include an executive secretary, a treasurer, and a deputy treasurer. Given the lessons learned from previous structures regarding management of funds, ZFSI recommended that this committee be comprised of women.

Financial Committee (*Comité de Contrôle*). The financial committee is charged with auditing the actions of the management committee. This committee ensures that funds are used according to the instructions given by the general assembly of supporters. Based on some of the difficulties encountered in previous community-based management committees, ZFSI recommended that the traditional authorities and religious leaders participate in this committee in order for it to benefit from their moral leadership and integrity.

To avoid confusing the FSSA with a social assistance bank, the project required that activities eligible for funding be defined by the general assembly. Specifically, the activities must in some way affect food management, availability, or access in the village. The three levels of FSSA administration (General Assembly of Supporters, the Management Committee, and the Financial Committee) must work to ensure good management of surplus food during years of abundant harvest. During a bad year, the same three levels of administration must coordinate redistribution of whatever food stock they manage at a subsidized price to supporters of the FSSA and at the actual market price to other members of the community. The revenue from the grain sales should generate sufficient revenue to renew the stocks with any "surplus" (after renewal) being redistributed to the FSSA members.

All activities oriented toward facilitating physical access to food in the village are eligible for funding by the FSSA. Thus, the mandate is given to the FSSA decision-making and management bodies to propose activities aimed at achieving this objective, taking into account the context and situation of specific villages. Given the need to be flexible in determining which activities are eligible, it is critical to set boundaries to ensure that activities that may be community priorities, but are not directly linked to facilitating the communities' responses to emergencies, are not eligible for funding. A sample list of non-eligible activities includes collective equipment, social expenses, religious projects, and investments in production and commercial activities or private sector recreation activities.

At any time, the General Assembly of Supporters has the right to oppose the financing of certain activities if there is any potential that the activity could compromise solidarity among the FSSA supporters or village cohesion.

Other Response Strategies

The initial focus on the fund as a major response strategy that communities could manage (even after the project ended) led to further discussion of other types of responses that would assist in averting a full-blown crisis that could be drafted ahead of time and activated as incoming data implied an impending crisis. The FSC then followed step five from above to draft a set of canned responses (Annex 3). The intention was not to develop a response for each indicator as some of the indicators were meant to be used to verify data indicating an impending food security

crisis. Once a crisis was detected in any of the five major categories, the responses would guide the actions of the committee. Examples of specific responses that the FSC developed in Zondoma included notification of proper governmental authorities, contact with NGO's that would provide assistance, and community-wide education campaigns (if time was available). With each crisis it would always be necessary to critically assess the appropriateness of each response, but these offer a solid starting place for a quick and effective response. Since no crisis has been detected in the initial months of implementation of this EWR system in Zondoma, many of these strategies need to be tested, revised, and reported on.

Collaboration

In the interest of attaining its objectives efficiently, the ZFSI II project works in collaboration with two other actors that are interested in questions of managing community level shocks and risks. It works with the Zondoma Emergency Assistance Project (*Projet de Secours d'Urgence du Zondoma* or PSUZ) that was created by the MARP Network (Réseau MARP)—a Burkinabe association long recognized for its public service through a grant from the British non-governmental organization, Christian Aid. The three organizations hold regular coordination meetings to discuss actions on the ground.

In order to build the cereal banks (stocking cereal to ensure food security) through the Food Security Support Fund, a meeting was held on November 24, 2008 at the National Council of Food Security (Table 2). The goal of this meeting was to synergize ZFSI II project's efforts with the council in order to establish and train a supervising group from the council that will monitor food security at the provincial and departmental levels. The terms of reference have already been written and the collaboration is ready to begin at the start of 2009. It must be noted that this decentralized structure from the National Council of Food Security is a part of the National Strategy of Food Security to be implemented at the local level.

Early Assessment of the Functioning of the EWR

Given that the EWR is still in the initial stages of implementation and has yet to be used to detect a crisis which will test the drafted response strategies and processes, mechanisms for tracking the effectiveness of the EWR system are also in the beginning stages of development. It is recognized that eventually a standardized methods will be needed to track the capacity of these communities to manage the EWR systems as well as the impact they are having on averting food insecurity crises due to major risks and shocks. The investment in the FSCCI (explained above) is a good foundation for the direction that such a tracking system should follow. This section reports some of the initial observations and data that have been collected to assess the functioning of the EWR and inform development of a standardized tracking system in the future.

During the first sixteen months of implementation of the new EWR (September 2007-December 2008):

- All 104 villages in the province created an early warning and response system following the basic model outlined by the project and
- Eighty-one of the 104 project villages have created the food security support fund (FSSA).

It was originally anticipated that the FSSA model would be evaluated at the end of 2008 in order to look at what worked and areas in need of improvement. This evaluation did not occur in 2008 because the better than average rainfall in 2008 translated into higher than average harvests. Thus the emphasis quickly shifted from emergency response to better defining the activities of the FSSA for local response. With prices low, the project encouraged the FSSA to purchase low cost grain and to store in it the existing food banks.

Originally, Africare—like many NGOs in Burkina—was reluctant to revisit the idea of creating food banks. Food banks had been a popular development concept in the 1970s. Although well intended, most food banks had management problems and ended up being abandoned. Recent reflection on this experience, however, suggests that many of the management problems were linked to the tight associations of the food banks with the traditional chiefs who were still the principal representatives of the national government at that time. With decentralization to the communes (a reality since 2005) and much higher levels of literacy and community organizational capacity in certain areas (such as Zondoma) that have had long-term

NGO projects, the concept was re-launched. It may be advisable to incorporate some of these checks into a formal M&E framework for EWR systems to ensure the past problems with food banks are not repeated. In fact many of the key elements that are anticipated to ensure a more successful community-based fund (such as higher rates of literacy) are already part of the FSCCI.

Despite major progress during the first 16 months of operation, the EWR model is still in an early stage of being tested and adapted to the institutional realities in Zondoma Province. In December 2008 extension agents conducted a simple two-day assessment in the villages to critically assess the strengths and weaknesses and lessons learned from the initial 16 months of development and operation of the EWR. One need identified during this review was a stronger and more formalized system for training FSC members and monitoring their capacity to manage the EWR system. The review that was conducted in December 2008 was an initial attempt to lay groundwork for a tracking system. The results of this review (using data from qualitative interviews with extension agents) are provided below. This review led to the drafting of a set of questions that may eventually be developed into a capacity index for community based EWR systems (Annex 4).

- All 104 of the FSCs would theoretically[x] be able to update the indicators described in Annex 1 on their own for the specific context of their own communities.[xi]
- Eighty of the 104 villages that have created FSSAs have general assemblies that seem to fully understand their role.[xii]
- Eighty of the 104 villages that have created FSSAs have fully functioning management and financial committees.[xiii]
- All the members of the financial committees (for all 80 villages) are women as planned.
- The amount of money in 80 of the FSSA accounts for which data were available in December 2008 ranged from 1,500FCFA (US$3) to 527,560FCFA (US$1,171) with an average of 115,177FCFA (US$256) per village and a total 9,214,220FCFA (US$20,447) for all 80 villages.[xiv] A total of 34 villages have 100,000FCFA or more in their accounts.

Lessons Learned from Process Development, Implementation, and Initial Assessment of the Functioning of the EWR

Despite the system still being under development, it is possible to extrapolate a number of lessons learned that can be useful to other Title II projects, as well as to Africare as it plans to expand the current system into another province in Burkina.

1. **Participatory Development of the Forms**: To facilitate maximum input of extension agents into design of the system and its execution, it is important for them to be directly involved in the initial conceptualization of the methods and tracking systems. For this participation to be informed, care must be taken to ensure that they fully understand the concept and terms. The type of three-day workshop that followed extension agents' initial orientation to the concept is an example of best practice and should be updated based on the revisions to the form recommended in this paper.

2. **Critical need for a buffer fund to manage small-scale crises:** While it is quite normal for the EWR system to prioritize large scale disasters, it is also important to conceptualize the types of responses that are needed for "routine" risks that happen with greater frequency. Community-based funds like the FSSA funds being created by ZFSI II can be more quickly mobilized than a large scale emergency response through a donor. Even if an event requires a larger scale donor funded response, this type of small scale fund provides a buffer and a more immediate response that would be followed up with a larger scale effort. The ZFSI II program's FSSA is a promising model (both for Burkina Faso and for other Title II CS programs) that needs further testing and monitoring before scaling up.

3. **Critical role of complementary organizational skills:** The organization and management of an FSSA is complex. Therefore, it would be unrealistic to introduce such a structure into communities that did not already have a certain basic level of organizational

capacity and management skills. In contrast, the basic skills associated with the early warning component of the project are more easily added onto the existing community capacity building model. One reason the ZFSI project was able to execute the community-based Food Security Support Fund (FSSA) model in such a short period of time is that the FSCs who were expected to execute the program had already received between three to eight years of core organizational training prior to the introduction of the funds. That said, it is important to move forward from this established capacity and fine tune trainings and tracking of capacity needs that are specific to managing the fund and a more complete EWR system, including those skills highlighted under Variable 7 of the FSCCI, see Box 2).

4. **Positive impact on and critical role of government buy-in and support**: For any early warning system—or a response fund like the FSSA—to be sustained it needs to be compatible with and supported by the national system. Those systems are in the early stages of being redesigned in Burkina to take into account the full decentralization of the national administration that started in 2005. Pilot programs such as the ZFSI II early warning and response system are not common in Burkina. It is important that government officials charged with administration of similar systems and programs have an opportunity to observe and work with one of the community-based groups involved in this pilot. NGOs—such as Africare in Burkina—can facilitate this type of government capacity building. One indirect impact of the project in the current policy context of Burkina—where the government is rethinking its national strategy for early warning systems to better coincide with the new decentralized commune governments that were appointed in 2005—has been to provide a concrete case study that the government can use for informing these policy changes.

5. **Monitoring and evaluation:** Many Africare and non-Africare NGO projects list the number of EWR systems created as a monitoring indicator. While roll out of these systems is important, it tells us very little about their effectiveness. Classic models of evaluation for Title II programs have rarely attempted to assess the actual impact of the EWR systems. One reason is that criteria for assessing these systems are not clearly defined. Given the priority accorded to development of community-based EWR systems by the USAID/FP strategy and the beneficiary villages who seem to embrace them in areas like Zondoma, this should clearly be a priority for future Title II funded research on food security programs. One avenue for researching the effectiveness of this system would be to collect household data from household interviews on the same questions/topics addressed by the indicators in the early warning system. This data could be compared to the committee's responses to each of these indicator questions for the same time period to assess the correlation with household experiences reported by households and determine the accuracy of the committee's perceptions for specific trigger indicators. Another need is to test the responses and further refine them based on an assessment of their effectiveness, which should be included in the monitoring and evaluation system of EWRs. A post crisis evaluation of the response should be consider and developed. Finally, the initial attempt to develop a list (Annex 4) of core capacities and skill should be further refined and considered for incorporation into the existing FSCCI.

Conclusions

Over the next year (January-December 2009) ZFSI II plans to strengthen the training and hopefully expand the number of villages with Food Security Support Funds. It is highly probable as well that the system will have a chance to respond to an actual emergency during this time period. For this reason this article will be updated in December 2009. At that point the project will be able to:

- Provide more comprehensive, in depth realistic plans for responding to high

levels of catastrophic risk—that are compatible with the new emerging EWR regional, provincial, and department level EWR systems in Burkina Faso – if and when that level of risk is detected;
- Further develop the capacity index and other tools for monitoring and evaluating the EWR system, as well as identifying needs in training, resources, and processes;
- Make a more complete analysis—including an examination of the correlation between the effectiveness of the EWR, the capacity of the managing bodies (based on the FSCCI), and the size and success of FSSA for all the communities evolved;
- Identifying which types of formal and informal training activities seem to be most strongly associated with measurable improvements in the five indicators associated with variable 7 of the FSCCI; and
- Have a better understanding of the most relevant assessment criteria for impact from the perspective of the beneficiary communities and state government agencies with which they collaborate.

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Annex 1: Community Based Risk Assessment Criteria (ZFSI II Project, Burkina Faso)

Risk Factors	Indicators (based on the questionnaire)	Level of Risk			Source of Data	Observation Period	Frequency of Observation
		Low	Average	High			
I. Climatic and natural crises (that compromise production)	I.1. Number of fields affected by attacks of crickets and other types of insects including the white fly	--	--	1	Committee member (questionnaire[1])	Rainy season (only 1 short season per year)	Rainy season
	I.2. Percentage of households affected by flooding in their fields.	Criteria[2] to be determined by the village			" "	Rainy season	Rainy season
	I.3. Number of days of drought condition in the village	7 or less	8-15	more than 15	" "	-After planting -Once the plants flower	Two data points (post planting and post flowering) for each season
	I.4. Number of days of rainfall delay (since date of expected rainfall)	1 week or less	8 to 14 days	more than 14 days	" "	Starting after July 15	Once/season
	I.5. Percentage of households affected by flooding in houses or food storage facilities	Criteria to be determined by each village			" "	Rainy season	Once/week
II. Changes in household food consumption patterns	II.1. Percentage of households (HHs) that consume unfamiliar (less desirable) foods	1/3 (33%) of HHs or less	Between 1/3 and 2/3 of HHs	more than 2/3 of HHs	" "	Beginning of the rainy season (May-June)	Once/week
	II.2. Number of children severely malnourished	3	5	12	Africare/government growth monitoring program results	All year	Once/month
III. Animal and human health	III.1. Number of infant deaths attributed to malnutrition	0	0	01[3]	CSPS records for specific villages[4]	All year	Once/month

[1] See Annex 2 of this paper.

[2] These criteria depend on the size of the village. The impact of a flood that affects 20 households is far greater, for example, in a village of 100 households than in a village of 500. For this reason, each village needs to determine its own threshold for this indicator.

[3] Even when death is considered high.

[4] Sometimes these villages are aggregated for groups of villages. In this case, ZFSI is working with the CSPS to get the disaggregated data.

Risk Factors	Indicators (based on the questionnaire)	Level of Risk			Source of Data	Observation Period	Frequency of Observation
		Low	Average	High			
conditions	III.2. Number cases of human disease (meningitis, measles, cholera, etc.) reported in the village	0	0	1/3	CSPS records for specific villages	All year	Twice/month
	III.3. Number cases of animal disease ("*rum-kuum*") reported by the livestock services	Criteria to be determined by the government livestock service agents			Government livestock service records for specific villages	All year	Once/month
IV. Availability of cereals in local markets	IV.1. Reduced frequency preparing dolo due to limited input supply (lack of cereal inputs)	Prepares ¾ to 100% of normal amount	Prepares between half and ¾ normal amount	Prepares less than ½ normal level	Committee members interviews with dolomakers about their production and sales (Questionnaire)	April to September	Once/month
	IV.2. Percentage of households (HHs) eating half their normal food ration.	less than 33% of HHs	33%-66% of HHs	more than 66% of HHs	Committee members (questionnaire[5])	All year	Twice/month
	IV.3. Percentage of households unable to serve at least two meals per day.	Criteria to be determined by each village			'' ''	January to September	Every two weeks
	IV.4. Percentage of households who have had a household member migrate to find food or work in another location?	Criteria to be determined by each village based on comparisons with seasonal norms			" "	All year	Twice/month
V. Household financial and physical access to cereals in local markets	V.1. Percentage of households dependent on traditional share cropping (where they receive 1/3 of the crop, *gar kobo*) for subsistence	Criteria to be determined by each village based on the size of the village			" "	April –October	Twice/month
	V.2. Percentage of households	Criteria to be determined by each village			" "	All year	Twice/month

[5] Annex 3.

Risk Factors	Indicators (based on the questionnaire)	Level of Risk			Source of Data	Observation Period	Frequency of Observation
		Low	Average	High			
	selling animals to buy food (pregnant females, small animals, traction animals still in their prime of life)	based on the size of the village					
	V.3. Fluctuating price of cereals on the market	Criteria to be determined by each village based on comparisons with seasonal norms			Committee members interviews in the market	All year	Twice/month
	V.4. Non-availability of cereals in the Cereal Bank (if one exists)	Criteria to be determined by each village based on comparisons with seasonal norms			Committee member interview with cereal bank officials	All year	Twice/month
	V.5. Non-availability of cereals at different levels V.5.a. HH granary level? V.5.b. Local market level? V.5.c. Department market level?				“ ”	All year	Twice/month

* Person who manufactures and sells the local beer that is referred to by its Hausa name « dolo » in the Mossi language.
CSPS : *Centre de Soins de Promotion Sociale* (Primary Health Centers).

Annex 2: Early Warning and Response Questionnaire on Risk Factors

VILLAGE OF:…….
DEPARTMENT OF:……...……
NAME OF RESPONSIBLE FSC/CSA……..
DATE: …….
Person/Persons Completing Form:

……

……

I. CLIMATIC AND NATURAL CRISIS FACTORS (that compromise production) (*Data Source:* Committee members' perception of experiences of households and producers in village)

I.1 Crickets and white flies
How many fields in the village have been affected by crickets or white files or other pests this season?
What is the level of damage in the affected fields (e.g., 100% loss of crops, nothing usable for food or sale or 50% loss of crops)?

I.2 Flooding of Fields
How many households have experienced flooding in the fields this season?
What percentage of all the households in the villages does this represent? (estimate)
What is the level of damage? In other words, did the flooding destroy all crops (100% are unavailable for sale or for food) on the affected fields or were the farmers still able to harvest something?

I.3 Drought
What has been the rainfall situation during the last 30 days?
How many days after July 15 have the village farmers had to wait to plant due to lack of rain?

I.4. Rainfall delay
How many days has it not rained since rains were expected to arrive?

I.5. Household Flooding
How many houses or food storage facilities in the village have flooded during the past week?
What percentage of houses or food storage facilities have flooded?
How many residents had to move out of their houses due to flooding?

II. CHANGES IN HOUSEHOLD FOOD CONSUMPTION PATTERNS

II.1. Consumption of unfamiliar (less desirable) foods. **(*Data Source:*** Committee members' perception of experiences of households and producers in village)
How many households in village are eating non-conventional (less desirable foods)?
Do you think it is more or less than same time last year?
Less than 1/3 ☐ between 1/3 and 2/3 ☐ more than 2/3 ☐

II.2 Severely malnourished children (***Data Source:*** Official records of the community based growth monitoring programs)
How many children are severely malnourished in the village? More than, less than, or the same as 3 months ago; 6 months ago, 1 year ago (at this precise moment in time)?

III. ANIMAL AND HUMAN HEALTH CONDITIONS

III.1 Infant deaths from malnutrition (***Data Source:*** Government CSPS staff)
How many severely malnourished children have died in your village over the last month?
Is this more than normal, less than normal, about the same?

III.2 Prevalence of human disease (meningitis, measles, cholera, etc) (***Data Source:*** CSPS staff)
How many cases of epidemic diseases have you recorded over the course of the last two weeks in your village?

Meningitis ☐ Measles ☐ Cholera ☐

III.3 Prevalence of animal disease (***Data Source:*** Government *l*ivestock services staff)
How many reported cases of epidemic disease have been reported by the livestock service agent during the past month??

Small ruminants (sheep, goats, pigs) ☐ Large ruminants (cattle) ☐ Chickens ☐

IV. AVAILABILITY OF CEREALS IN LOCAL MARKETS

IV.1. Changes in dolo preparation due to limited input supply (lack of cereal inputs) ***(Data Source:*** Committee members' interviews with Dolo Makers)
Have you had to decrease the amount of dolo you make to sell in the past month due to lack of cereal supplies? By how much/what percentage?

IV.2 Household food rationing. (***Data Source:*** Committee members' perception of experiences of households and producers in village)
What percentage of households reduced the size of their daily food ration by at least half in the past two weeks?

Less than half ☐ Half ☐ More than half ☐

IV.3 Change in number of meals served in households ***(Data Source:*** Committee members' perception of experiences of households and producers in village)
What percentage of households have not been able to provide at least two meals per day in the past two weeks?

Less than half ☐ Half ☐ More than half ☐

IV.4. Household experience with seasonal migration ***(Data Source:*** Committee members' perception of experiences of households and producers in village)
How many households have had at least one family member leave to work or look for food in another area? What percentage of the households in the villages does this represent?

V. HOUSEHOLD FINANCIAL AND PHYSICAL ACCESS TO CEREALS IN LOCAL MARKETS

V.1 Dependence on traditional sharecropping ("*gar-koobo*") for subsistence (***Data Source:*** Committee members' perception of experiences of households and producers in village)
What percentage of households are meeting their subsistence food needs by working on other farmers' fields?

V.2. Selling animals to buy food (pregnant females, small animals, tracition animals still in their prime of life) (***Data Source:*** Committee members' perception of experiences of households and producers in village)
What percentage of households have had to sell animals—especially valuable animals they would not normally be selling (e.g., females, pregnant females, young animals)—in order to buy cereals in the past two weeks?

V.3. Fluctuating price of cereals in the market (***Data Source:*** based on interviews in the market—on average two per month)

Period of month when data are collected	Price of cereals			
	Millet	Sorghum	Maize	Niebe (chickpeas)
1st Week				
2nd Week				
3rd Week				
4th Week				

V.4. Lack of availability of cereals in the cereal bank (when one exists) ***(Data source:*** Cereal Bank elected officials)
What stock is actually available in village cereal bank (if one exists)?

V.5. Lack of availability of cereals at different levels (***Data Source:*** Committee members' perception of experiences of households in village)

a. How many households still have cereal in their granaries?
Less than half ☐ Half ☐ More than half ☐

b. How long is cereal is available in your local market for purchase?
All day ☐ Part of the day ☐ Rarely ☐

c. Availability of cereals at the departmental level: How long is cereal available in the department level markets?
All day ☐ Part of the day ☐ Rarely ☐

Annex 3: Community Based Response Grid (ZFSI II Project, Burkina Faso)

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	Average Risk	High Risk
I. Climatic and natural crises (that compromise production)	I.1. Number of fields affected by attacks of crickets and other types of insects, including white fly	-	-	-Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval and buy-in from outside bodies and should be developed collaboratively with such bodies. -Alert as quickly as possible the relevant department and regional level authorities -Encourage farmers (through extension programs and other project-related channels) to respect the technical service's instructions about how to deal with the infestation

[6] Note: several related indicators are used for each main risk factor in order to verify (triangulate) the risk level. Therefore, response strategies are not needed for each individual indicator, but rather for each main category of risk. Obviously some responses should differ (for example flooding that affects home versus fields both interfere with food security but may require different responses (such as finding new fields to plant or new home in which to live).

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
	I.2. Percentage of households affected by flooding in their fields	- -		- Support the HH victims of the disaster to find other sites in the same or adjacent villages to farm -Provide HH flood victims with inputs (seeds, fertilizer, etc) - Alert the relevant government agencies - Solicit financial assistance (remittances) from village descendants living in other parts of Burkina or outside the country
	I.3.Number of days of drought conditions in the village		Work with project experts to organize public awareness meetings to help HHs better manage their food stocks	- Alert relevant government agencies - Solicit financial assistance (remittances) from village descendants living in other parts of Burkina or outside the country
	I.4.Number of days of rainfall delay since date of expected rainfall	Raise awareness (through extension presentations and/or public information campaigns) about potential benefits of shorter cycle seeds	Raise awareness (through extension presentations and/or public information campaigns) about the potential benefits of shorter cycle seeds and cash crops	-Alert relevant government services -Encourage producers to produce cash crops -Encourage producers to use short-cycle seed
	I.5.Percentage of households affected by flooding in their houses or food storage facilities			Alert the relevant government agencies - Solicit financial assistance (remittances) from village descendants living in other parts of Burkina or outside the country -Requisition vacant buildings (project-related and other) that are still in good condition to house equipment and people

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
				-Find temporary lodging for flood victims with local families -Solicit outside assistance
II. Changes in household food consumption patterns	II.1.Percentage of households that consume unfamiliar (less desirable) foods	-Conduct a site visit -Cross check this information with other indicators (of availability, financial and financial access, malnutrition) and trigger an alert if these other indicators verify risk - Launch an SOS alert in the village to support malnourished children - Alert relevant local authorities and services (including local CSPS health workers, department and regional level health services, other NGO and bilateral partners active in the region, and migrants from the village living in other parts of the country and/or abroad	- Trigger an alert or continue with alert status if risk increased from low to average. - Alert relevant local authorities and services (including local CSPS health workers, department and regional level health services, other NGO and bilateral partners active in the region, and migrants from the village living in other parts of the country and/or abroad.	- Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval and buy-in from outside bodies and should be developed collaboratively with such bodies. - Trigger an alert or continue with alert status if risk increased from low or average to high. - Alert relevant local authorities and services (including local CSPS health workers, department and regional level health services, other NGO and bilateral partners active in the region, and migrants from the village living in other parts of the country and/or abroad (migrants).

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
	II.2. Number of children severely malnourished (GMP data)	- Build public awareness of the problem through existing project channels for health and nutritional education and support (e.g., routine growth monitoring, nutritional lectures, cooking demonstrations) - Refer the severely malnourished children to the CREN (*Centre de Réhabilitation et d'Education Nutritionnelle* or CREN) in Gourcy. -Conduct a site visit to verify the malnutrition situation - Cross check this information with other indicators (of availability, financial and financial access, malnutrition) and trigger an alert if these other indicators cross-verify	- Build public awareness of the problem through existing project channels for health and nutritional education and support (e.g., routine growth monitoring, nutritional lectures, cooking demonstrations) - Refer severely malnourished children to CREN in Gourcy (*Centre de Réhabilitation et d'Education Nutritionnelle* or CREN) in Gourcy. - Create a Hearth (FARN) community based model for the rehabilitation of moderately malnourished children	- Public awareness campaigns - Refer severely malnourished children to the CREN in Gourcy -Alert health services
III. Animal and human health conditions	III.1. Number of infant deaths attributed to malnutrition (CSPS data)			- Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval and buy-in from outside bodies and should be developed collaboratively with such bodies. - Encourage parents of severely

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	Average Risk	High Risk
				malnourished children to accept their children being referred to the CREN in Gourcy - Alert relevant health services to any single case identified during project supported activities (routine growth monitoring, cooking demonstrations, nutritional programs)
	III.2. Number of cases of human disease (meningitis, measles, cholera, etc.) (CSPS data)			
	III.3. Number of cases of animal disease reported by the livestock service			
IV. Availability of cereals in local markets	IV.1.Reduced frequency preparing dolo due to limited input supply (lack of cereal inputs)			-Even one reported case indicates a high risk level. No reported response for this indicator since it is merely a confirmation of other indicators (see responses below) - Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval and buy-in from outside bodies and should be developed

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
				collaboratively with such bodies.
	IV.2.Percentage of households eating half their normal food ration	- Build public awareness about how to better manage food stocks to maximize food stocks (i.e. better conservation, avoiding selling at low prices, etc.) - Cross-verify this information with other indicators (availability of cereals, price of cereals)	- Alert the relevant local authorities and agencies - Help establish a committee for emergency relief	- Alert the relevant local authorities ad agencies
	IV.3.Percentage of households unable to serve at least two meals per day	- Increase vulnerable households access to cereals (e.g. open the cereal bank if one exists and/or create one) - Cross-check information with other indicators (e.g. availability of cereals, price of cereals) and trigger an alert if the other indicators cross-validate.	- Alert relevant services	Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval and buy-in from outside bodies and should be developed collaboratively with such bodies.
	IV.4. Percentage of households who have had a household member migrate to find food or work in another location.	No reported response for this indicator since it is merely a confirmation of other indicators.		
V. Household financial and physical access to cereals in local markets	V.1.Percentage of households dependent upon traditional sharecropping (*Gar-koobo*) for their basic subsistence	Same as above	- Alert relevant local authorities and agencies - Help facilitate an emergency assistance package	-Response strategies for catastrophic high risk disaster situations will need a larger-scale response, including resources from outside the community structures. These plans will require coordination and formal approval

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
				and buy-in from outside bodies and should be developed collaboratively with such bodies.
	V.2.Percentage of households selling animals to buy food (females, young animals, etc.)	Strengthen surveillance	Trigger an alert	
	V.3. Fluctuating price of cereals on the market	- Strengthen and/or create (if not ongoing) a more systematic system for tracking prices and food availability in local markets - Build community awareness about alternative models for managing food stocks (i.e. alternatives to purchasing grains at highest prices).	- Ask traditional authorities to assist with preventing speculation and hording on local markets --Regular monitoring of prices -Open cereal banks for distribution (if they exist) and consider creating them if they do not exist --Alert the relevant local authorities	
	V.4. Lack of availability of cereals in the Cereal Bank (if one exists)	- Cross check information with other indicators (about cereal availability and cereal prices) and trigger an alert if the information is verified	Alert the relevant local authorities and agencies	

Risk Factors	Indicators	Response Strategies[6]		
		Low Risk	**Average Risk**	**High Risk**
	V.5. Lack of availability of cereals at different levels (HH granaries, local markets, department level markets)	- Cross check information with other indicators (about cereal availability and cereal prices) and trigger an alert if the information is verified - Strengthen and/or create (if not ongoing) a more systematic way to track prices and cereal availability in local markets.	Alert the relevant local authorities and agencies	

CREN : Centre de Réhabilitation et d'Education Nutritionnelle
FARN : Foyer d'Apprentissage et de Réhabilitation Nutritionnelle or FARN in the village.

Annex 4
Drafted Capacity and Impact Indicators for Assessment of EWR Systems (to supplement the FSCCI Variable 7 Indicators, Box 3)

List the name of the village: _____

Indicators Used during December 2008 Review of FSSA

1. Assess current readiness of FSC/CSA to respond using the FSSA

0=non functioning
1=Exists in name only (on paper)
2=CSA were trained and completed the basic forms
3=CSA were trained, completed the basic forms, and have organized an FSSA that has funds in it and has created all three of administrative bodies recommended by the project
4= CSA were trained, completed the basic forms, and have organized an FSSA that has funds in it, and has all the recommended administrative bodies, and there is a high potential that they could respond to an actual small-scale crisis
5=CSA were trained, completed the basic forms, and have organized an FSSA that has funds in it, has all the recommended administrative bodies, and the community has already used the EWS system to respond to a small scale crisis.

2. Assembly General Capacity

0=Does not exist
1=Exists in name only
2=Body is trained and meets once a year
3=Body is trained and has shown its capacity to meet and deliberate on important issues
4=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms
5=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms AND has already made an important contribution to development in the village.

3. Management Committee (*Comité de Gestion*)

4.a. How many female members? Percentage?
4.b. How many male members? Percentage?
4.c. Management Committee Capacity
0=Does not exist
1=Exists in name only
2=Body is trained and meets once a year
3=Body is trained and has shown its capacity to meet and deliberate on important issues
4=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms
5=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms AND has already made an important contribution to development in the village.

4. Financial Committee (*Comité du Contrôle*)

a. How many female members? Percentage?
b. How many male members? Percentage?
c. Financial Committee Capacity
0=Does not exist
1=Exists in name only
2=Body is trained and meets once a year
3=Body is trained and has shown its capacity to meet and deliberate on important issues
4=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms
5=Body is trained and has shown its capacity to meet and deliberate on important issues and plays an active role in building public awareness about risk management and the EWS mechanisms AND has already made an important contribution to development in the village.

5. FSSA Funding Levels

How many CFA have been collected in the fund?

6. Grain Bank Formation/Existence (Yes or No)

0=No
1=Yes

Potential Questions for Further Consideration and Development in Tracking Capacity and Impact of FSSR and Other EWR Mechanisms and Response Strategies

7. How many times has the FSSR been used for emergency response?
8. What were funds spent on?
9. What was the impact?
10. How many households did the FSSR impact positively?
11. Were the impacts tracked?
12. How were distribution criteria determined for funds/food?
13. What are the recommendations for future use of funds?
   a. Use of funds
   b. Distribution of funds
   c. Management of funds
14. What specific potential crisis did the EWS detect and head off (pest, drought, food shortage, health/disease, etc)?
15. How much time did the EWS give the community to respond before full crisis hit (if it ever did)?
16. How long did the crisis/situation last? How long do similar crises last without such systems in place?

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[i] Ismael Goraï Diallo has serviced as the ZFSI II monitoring and evaluation coordinator and project coordinator during the last three years. Prior to this, Mr. Diallo worked at the German government-funded PATECORE (*Projet d'Aménagement des Terroirs et de Conservation des Eaux/ financement allemand* [1997-2001]), and for the for the Danish government-funded Regional Program for Traditional Sector Funding (RPTES) (2001-2005)

[ii] Ahmed Moussa Ngame has been the Africare country representative in Burkina since 2007. Mr. Ngame has over 30 years experience in food security programming in Mali and Chad with Africare and the Chadian government.

[iii] Della E. McMillan is an independent consultant with over 30 years experience in food security and farming systems research and extension programs with Africare and other bilateral and international donors in Burkina Faso.

[iv] Current plans are to provide an update following this paper to reflect new changes at the end of February 2009 and again in late December 2009.

[v] This paper and the critical review of the initial implementation of the early warning and response system in Burkina are intended to be first steps towards a more comprehensive review of the impact of this system that will be produced during the next fiscal year (2009).

[vi] Although EWR systems were not explicitly outlined in the Africare ICB proposal, this work falls under Strategic Objective One: Title II field level impact increased by developing better methodologies for enhancing local capacity to identify and reduce food insecurity in vulnerable groups including HIV/AIDS affected households.

[vii] The process of setting up a community based early warning and response system is long given the complexity of the system and the weak literacy level of the producers. The basic training required to set up a system therefore requires a series of community level meetings after the basic FSC training. On average, at least ten meetings are necessary to identify resource persons who are capable of understanding and directing the process, explaining the contents of the tools during practical village level training sessions, and building the type of community level ownership of the tools that is necessary for them to be properly used To organize these 10 meetings, a minimum of three to four months is required.

[viii] In fact project records gathered in December 2008 indicate the system exists in 81 villages while only 79 have functional systems.

[ix] This includes consumption of unfamiliar foods or "hungry season" foods (leaves or seeds of "wild" plant species such as *Balanites aegyptiaca, Ficus gnanphalo carpa, Lannea microcarpa, Saba senegalensis, Cassia tora,* the premature not yet mature grains of cereals, or the "dirty" flour that is a by-product of mortar and pestles and mills.

[x] This information is based on interviews with the ZFSI extension agents in December 2007. Field level verifications were not conducted.

[xi] While these data were based on the experience and opinions of the extensions agents regarding FSCs, the preliminary draft of the EWR systems capacity index has been revised in Annex IV to use a scale of 0 to 5 to evaluate the readiness of the FSC to use the FSSA to respond and provide assistance. It is suggested that a score of three or higher would indicate the FSC is ready. This assumption has not been field tested.

[xii] The EWR system capacity index has been revised to use a scale of 0-5 to assess the capacity of the General Assembly of the FSSA (Annex IV).

[xiii] The drafted EWR system capacity index also now includes two indicators that assess the capacity of these two bodies on scales of 0-5 (Annex IV). Future work on this capacity index should include determining what the minimum score will be to indicate fully functional status.
[xiv] Current conversion rate used was 450.63FCFA per US$1.