

From Negative to Positive

*Interventions & Measurement Indicators for
livestock-based programs*

Module I

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Introduction:

- ❑ This self-guided training is intended for field & program managers interested in integrating livestock-based programs into their activities.
- ❑ Individuals and organizations will find this helpful in better understanding of the role livestock play in the life and livelihoods of millions of smallholder farmers across the globe.
- ❑ Although this self-guided training is developed from practical experience and research within the Greater Horn of Africa, many of the ideas and themes can be applied to other regions of the world.
- ❑ We begin this self-guided study with a general overview of key food insecurity concepts and the coping strategies utilized by smallholder farms. You can move from frame to frame and between modules but utilizing the **hyperlinks** embedded in the text as well as the menu buttons across the bottom of the page.

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Key Concept:

Chronic Food Insecurity

- A **chronic food insecurity** situation implies food insecurity that persists over a long period of time. In these contexts, poverty and food insecurity do not continue to exist by virtue of a singular trigger event that undermines coping. Rather, chronic poverty and food insecurity reflect endemic factors, such as inadequate productivity, high post-harvest losses, poor returns per labor or financial input, inadequate infrastructure, or chronic diseases.
- “Programming for the chronically food insecure population calls for interventions that are stable, multi-year and determined by a careful analysis of context. Programs should focus on increasing the resiliency and livelihood options of the chronically food insecure to enable them to pull themselves out of poverty.” *USAID. P.L. 480 Title II program policies and proposal guidelines. Washington, DC: USAID, 2007.*



Key Concept:

Acute & Transitory Food Insecurity

- **Acute food insecurity** situations can result from shocks that are sudden, slow or complex in nature. Generally, acute food insecurity is a short-term situation where an environmental, social, economic, political or biological shock has occurred.
 - However, it is possible for the impact of a shock to sustain over time, as in the case of wars that generate sizable refugee and/or internally displaced people (IDP) populations. These are generally referred to as “protracted” emergencies.
 - The term “protracted emergency situation” relates to the prolonged time frame. In some countries where protracted emergency situations exist, recovery takes longer as people are unable to regain their livelihoods because of ongoing insecurity (recurrent droughts, war) and/or their displaced status. Emergencies that involve a combination of natural causes (such as droughts, floods, storms, earthquakes, tsunamis, etc.) and manmade causes (such as war, internally displaced persons, refugees, etc.) are considered complex emergencies.
- Similarly, **transitory food insecurity** reflects the changing food security situation of groups who are normally food secure but fall into poverty due to a shock.
 - In this context some households become more food insecure because they are unable to cope with the effects of the shock. As a result, their food security situation is more tenuous and they become more vulnerable to future shocks, or to the detrimental impacts of the endemic factors that fostered the chronic food insecurity situation.
 - After about 12 months of emergency activities and still no signs of full recovery, transitory food insecure populations would be considered chronic food insecure.



Key Concept:

Trigger Indicators

- Indicator used to determine the threshold at which programs 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, rain fall patterns 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 warrant additional Title II resources.
 - The trigger indicator(s) advises that the community is being subjected to unusual stress.

Key Concepts:

Ex-Post vs. Ex-Ante Coping Strategies

□ **Ex-Post Coping Strategies**

- Coping strategies utilized after a shock or acute food insecurity situation. These coping strategies are the foundation of most household survival when a shock occurs. They are often reactionary coping strategies that have negative outcomes in the long term.

□ **Ex-Ante Coping Strategy**

- Coping strategies utilized before a shock or as a means to mitigate chronic food insecurity. Coping strategies with positive long term outcomes that build resiliency to cope with shock. These strategies are becoming more prevalent as vulnerable households find themselves frequently in shock environments, and find mitigating shocks helps reduce the constraints and need to resort to extreme ex-ante coping strategies.
- **Ex-ante or ex-post** intervention study. Owen et al (2003) found ex-ante policy measures would have lead to higher holdings of livestock , with no loss in disposable income after the 1994-95 drought, such findings imply that their results may actually understate the benefits of shifting from ex-post responses to drought shocks to ex-ante actions.

Ex-Post Coping Strategies:

Beneficiary Responses

- ❑ **Adjust Dietary Consumption Habits**
 - ❑ Adjustments households make in the type and quantity of foods based upon the severity and length of the shock.
- ❑ **Adjust Human Resources**
 - ❑ Adjustment in labor resources within a household that may include alternative labor, inclusion of youth and elderly, or re-location of family members in search of employment
- ❑ **Informal Private Transfer**
 - ❑ Transfer of cash funds, assets or other resources outside of official banking systems
- ❑ **Productive and Wealth Asset Sale**
 - ❑ Sale of household assets
- ❑ **Food Aid**
 - ❑ Actively seeking food aid resources



Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- During a shock, households tend to adjust dietary consumption habits to accommodate for food shortages.
 - Households maintain total nutrition intake while still reducing food and other expenditures.
 - They may change the quality of the food consumed while maintaining a certain level of calorie intake.
 - There may be a reduction or elimination of non-food expenditures on such items as agricultural inputs, clothing, health services and luxury goods.

Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

□ **Food Security Situation**

- Chronic Food Insecurity
- Acute & Transitory Food Insecurity

□ **Related Information**

- Field Insights
- Assessment & Performance Indicators

Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- **Chronic Food Insecurity**
 - Rely on less preferred and less expensive food
 - Consume more starchy staples, less proteins, fruit & vegetables
 - Reduce of number of meals eaten in a day
 - Reduce meal portions
 - Ration money for daily consumption to buy prepared food
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment & Performance Indicators**

Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- **Chronic & Transitory Food Insecurity**
- **Acute & Transitory Food Insecurity**
 - Restrict consumption by adults for small children to eat
 - Feed working members of household at the expense of non-working members
 - Consume Non-Timber Forest Products (wild food, bush food; fruit/leaves)
 - Consume seed stock held for next season
 - Skip entire days without eating
 - Direct food aid distribution
- **Field Insights**
- **Assessment & Performance Indicators**



Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- **Chronic & Transitory Food Insecurity**
- **Acute & Transitory Food Insecurity**
- **Field Insights**
 - During drought, while many people may turn to gathering alternative foods (wild foods), including roots, tubers, bark, tree sap, seeds, and leaves, it is relied on less today as a drought coping strategy for three reasons.
 - Markets are now available where livestock or other resources (firewood, etc.) may be traded for grains.
 - Increasing populations (cultivation, competition, etc.) and frequent droughts have reduced the amount of wild foods available.
 - Food aid has reduced the need to gather wild foods. This last point is related to the second. If relief food were not available, the wild foods available would not be sufficient for most of the population. Many communities stated that prior to relief (circa 1970), morbidity was much higher in times of drought despite the use of wild foods.



Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- **Chronic Food Insecurity**
- **Acute & Transitory Food insecurity**
- **Field Insights (*Con't*)**
 - For pastoral communities, they may store milk in the form of ghee following a productive season, while agricultural communities may store grain following a harvest. Other food and grain storage techniques:
 - Animal bones boiled to make soup.
 - Animal oil collected after an animal is slaughtered. The oil will be used throughout the consumption process to supplement the foods, especially for children.
 - Storage of grains in bakarr in the ground or above ground. The bakarr is dug two meters deep and a fire is made inside the bakarr to kill any insects, plant roots, or micro-organisms that might remain in the soil around the bakarr. The grain is placed in the hole, covered by big stones, small stones, and then covered by mud. Soil is placed on the surface and location marked.
- **Assessment Indicators**

Ex-Post Coping Strategy:

Adjust Dietary Consumption Habits

- **Chronic Food Insecurity**
- **Acute & Transitory Food insecurity**
- **Field Insights**
- **Assessment Indicators**
 - Coping Strategy Index (CSI)**
 - Months of Inadequate Household Food Provisioning (HIHFP)**
 - Household Dietary Diversity Scale (HDDS)
 - Average number liters of milk consume daily per household
 - Average number of liters of milk/day/by animal type
 - Number of participants in FFW/FFA/FFT and CFW
 - Number of working people in household
 - Price of Non-Timber Forest Products (NTFP) and other wild foods**

** Indicator can be used as a trigger indicator to prepare for possible acute food insecurity shock.



Ex-Post Coping Strategy:

Adjust Human Resources

- During a shock, households may adjust human resources in terms of who stays and eats from the same pot.
 - For example, seasonal migration involves reallocating household member(s) elsewhere to work during certain seasons because of interregional variations in agricultural peaks and slacks.
 - A more permanent allocation is referred to as “urban flight”, whereby remittances are sent home on a regular basis.
 - Household members not working can return or enter the work force. For example, household adult nonworking members re-enter the labor market (casual labor) or solicit children to enter into the work force.

Ex-Post Coping Strategy:

Adjust Human Resources

Field Situation

- Chronic Food Insecurity
- Acute & Transitory Food Insecurity

Related Information

- Field Insights
- Assessment & Performance Indicators



Ex-Post Coping Strategy:

Adjust Human Resources

- **Chronic Food Insecurity**
 - Elderly and women taking up work outside of the home
 - Seasonal/urban migration
 - Children leaving school to work to earn extra income for the household
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment & Performance Indicators**

Ex-Post Coping Strategy:

Adjust Human Resources

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
 - Early marriage of girls
 - Children leaving home to work else where
 - Very young children contribute to household labor
 - Adult members of household relocate to find work
- **Field Insights**
- **Assessment & Performance Indicators**



Ex-Post Coping Strategy:

Adjust Human Resources

- ❑ **Chronic Food Insecurity**
- ❑ **Acute & Transitory Food insecurity**
- ❑ **Field Insights**
 - Income instability and consumption soothing are real problems confronted by households, and therefore are important motive for income diversification. However, it is observed that even during a normal year, households try to synchronize cultivation with wage labour, migrant or local wage, migrating during periods of low local demand for labour. Breman (1979) noted that seasonal migration is a form of spatial diversification made possible by interregional variation in peaks and slack, and is usually high from unirrigated semi-arid areas to more prosperous irrigated areas.
 - In the pastoralist context, Little et al (2001) note “push and pull” factors that drive pastoralists to move to urban towns. Some are pushed out of pastoralism because they no longer have enough animals upon which to survive. They are among the first to migrate to towns in search for food aid or ways to make money. They are the first to start farming, a production strategy that takes far less time to recover than does pastoralism. Those who are pulled out of pastoralism, perhaps only partly, seek to expand their assets and income, securing food and reinvesting in animals in the process. They tend to be wealthier pastoralists who can afford to diversify into business activities, that include shop keeping or constructing and renting building space as a way to sell fewer animals.
- **Assessment & Performance Indicators**



Ex-Post Coping Strategy:

Adjust Human Resources

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment & Performance Indicators**
 - Coping Strategy Index (CSI)**
 - Months Inadequate Household Food Provisioning (MIHFP)**
 - Average annual crop yield**
 - Monthly net income from sales
 - Number of participants in FFW/FFA/FFT and CFW
 - Number of children attending/# of children enrolled in school
 - Asset index
 - Number of working people in household
 - Number of income streams in past 3 months
 - Monthly remittance

** Indicator can be used as a trigger indicator to prepare for possible acute food insecurity shock.



Ex-Post Coping Strategy:

Informal Private Transfer

Households may seek assistance from wealthier relatives either through a gift or loan or by relocating their children to them.

- This latter practice is a coping device used to offset household income shortfall by having less dependents in the household.
- On the extreme negative side, households have been known to beg for food and offer sex for food in dire situations. They may seek credit from local loan sharks or microfinance institution if available in their locality.



Ex-Post Coping Strategy: *Informal Private Transfer*

Food Security Status

- Chronic Food Insecurity
- Acute & Transitory Food insecurity

Related Information

- Field Insights
- Assessment & Performance Indicators



Ex-Post Coping Strategy:

Informal Private Transfer

- **Chronic Food Insecurity**
 - Informal loan from relative
 - Credit from private individual
 - Gift (monetary and in-kind)
 - Temporary/permanent fostering of children to better-off relative to smooth income expenditure
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment & Performance Indicators**



Ex-Post Coping Strategy:

Informal Private Transfer

- **Chronic Food Insecurity**
- **Acute & Transitory Food insecurity**
 - Send children to eat with neighbors/relative
 - Send household members to beg for food
 - Resort to transactional sex for food
- **Field Insights**
- **Assessment & Performance Indicators**

Ex-Post Coping Strategy:

Informal Private Transfer

□ Chronic Food Insecurity

□ Acute & Transitory Food insecurity

□ Field Insights

- Food-for-sex is not a new phenomenon but in current food aid arena, there are harmful implications:
AIDS and aid workers abusing their power
 - **ABC News.** Rising food prices around the world are likely to drive poor women to trade sex for basic goods like fish and cooking oil, raising the risk of new AIDS infections, U.N officials said on Monday. Delegates at a major AIDS conference in Mexico cited the cases of fisherwomen in the Pacific and women in Kenya desperate for food being forced to sell their bodies, adding to concerns of a new twist in the spread of the deadly pandemic. For the complete article: <http://abcnews.go.com/Health/AIDS/wireStory?id=5513895>
 - **Insight News.** In IDP camps young refugee girls are resorting to sex-for-food as WFP distribution is reduced and the rations run out before the next distribution. Young girls are sleeping with food aid workers to ensure their ration and when there are none, scraps of food to get by. For the complete story: <http://www.insightnewstv.com/d64/>
- Drawing upon social relationships and informal credit networks. Patron-client relationships, intercaste jajmani relationships, family, kinship and caste relationships and village or community rights become very effective at times of crisis. However, it was also observed in many studies that the traditional patron-client relationships, are already weakening, and are found virtually to snap during periods of severe stress.
- Chen (1991) observes that during normal period informal safety networks are very effective. The search for cash or kind loans is a dominant seasonal strategy- especially for the poor households.
- Prasad (1997) observed that kin living in non-drought conditions offer hospitality to drought affected households, whose stay lasts from one month to six months. Young widow receive support from their kin, though they are not allowed to remarry.

□ Assessment & Performance Indicators



Ex-Post Coping Strategy:

Informal Private Transfer

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment Indicators**
 - CSI**
 - MAHFP**
 - # participants in FFW/FFA/FFT and/or CFW
 - # of children attending/# of children enrolled in school
 - Monthly remittance
 - Number of family members eating a meal

** Indicator can be used as a trigger indicator to prepare for possible acute food insecurity shock.



Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

Households can accumulate financial and physical assets as precautionary savings against unexpected income shortfalls, such as grain in storage, farm equipment, cash holdings, gold, and livestock, such as cattle, sheep and goats. They may be sold for cash in time of need.

- For pastoralists, their wealth is stored in the livestock, which is becoming ineffective as lack of water and animal disease kills them off before they are sold.
- For some farmers, selling assets such as their roofs (iron sheets) indicate a serious coping strategy.



Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

Food Security Status

- Chronic Food Insecurity
- Acute & Transitory Food Insecurity

Related Information

- Field Insights
- Assessment & Performance Indicators



Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

- **Chronic Food Insecurity**
 - Divesting in small stock, clothes, and small household goods for food and other household needs
 - Selling household roofs indicate serious coping strategy
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Assessment & Performance Indicators**

Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
 - Sell large stock, cattle or camel, for cash for household needs and pay for children's school fees
 - Sell personal assets such as gold and jewelry for household needs
 - Sell breeding stock
- **Field Insights**
- **Livelihood Indicators**

Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
- **Field Insights**
 - When chronic food insecure households find themselves in acute food insecure situation, making ends meet is difficult. They tend to rely on more than one ex-ante coping strategy. When it comes to productive and wealth asset divestment, small household items go first, then small stock, then large stock, and then large household items, such as the roof. When the roof goes, it is an indication of serious coping and challenges. For these households, it is best to facilitate a reliable income stream through livelihood diversification that would reduce and avoid the need to go to extreme productive and wealth asset sale.
 - For example: A Rwandan woman took up coffee cultivation after the genocide to continue the family tradition of coffee growing. Although it is a man's job to cultivate coffee, she has become the most successful coffee grower in the area. She buys from local growers, and sells locally, regionally and internationally. She also employs many other women to help her business.
- **Livelihood Indicators**



Ex-Post Coping Strategy:

Productive and Wealth Asset Sale

- **Chronic Food Insecurity**
- **Acute & Transitory Food Insecurity**
- **Field Insights**
- **Livelihood Indicators**
 - CSI**
 - MIHFP**
 - HDDS
 - Average annual crop yield**
 - Monthly net income from sales
 - Asset index
 - # of income streams in past 3 months
 - Monthly remittance
 - # of animals household own b type
 - # of productive female livestock for sale in the market**
 - Price of main staple food**
 - Price of live livestock**

** Indicator can be used as a trigger indicator to prepare for possible acute food insecurity shock.



Ex-Post Coping Strategy:

Food Aid

The most food insecure households make use of direct food aid distributions either from the government, WFP, or other non-governmental organizations (NGOs). These services are specifically targeted towards vulnerable households as a safety net.

- In addition, these households can participate in food for work or cash for work programs that assist in smoothing consumption.
- Food aid could be considered negative or positive. Food aid is a positive coping strategy when it is short-term and targeted to vulnerable populations at appropriate times. On the other hand, food aid is considered a negative coping strategy when it develops into dependency.



Ex-Ante Coping Strategy: Livestock-based Interventions

- Livestock-based interventions are designed to mitigate and prevent negative coping strategies within households. These coping strategies are often the symptom of greater economic maladies.
- In addition to providing animal-based products for the household (meat, eggs, milk, animal traction), livestock provide income accessible during times of need and, for some products, daily sources of income.
- For purposes of this training, intervention recommendations have been grouped by level of food insecurity and level of intervention (e.g. household, regional, policy)

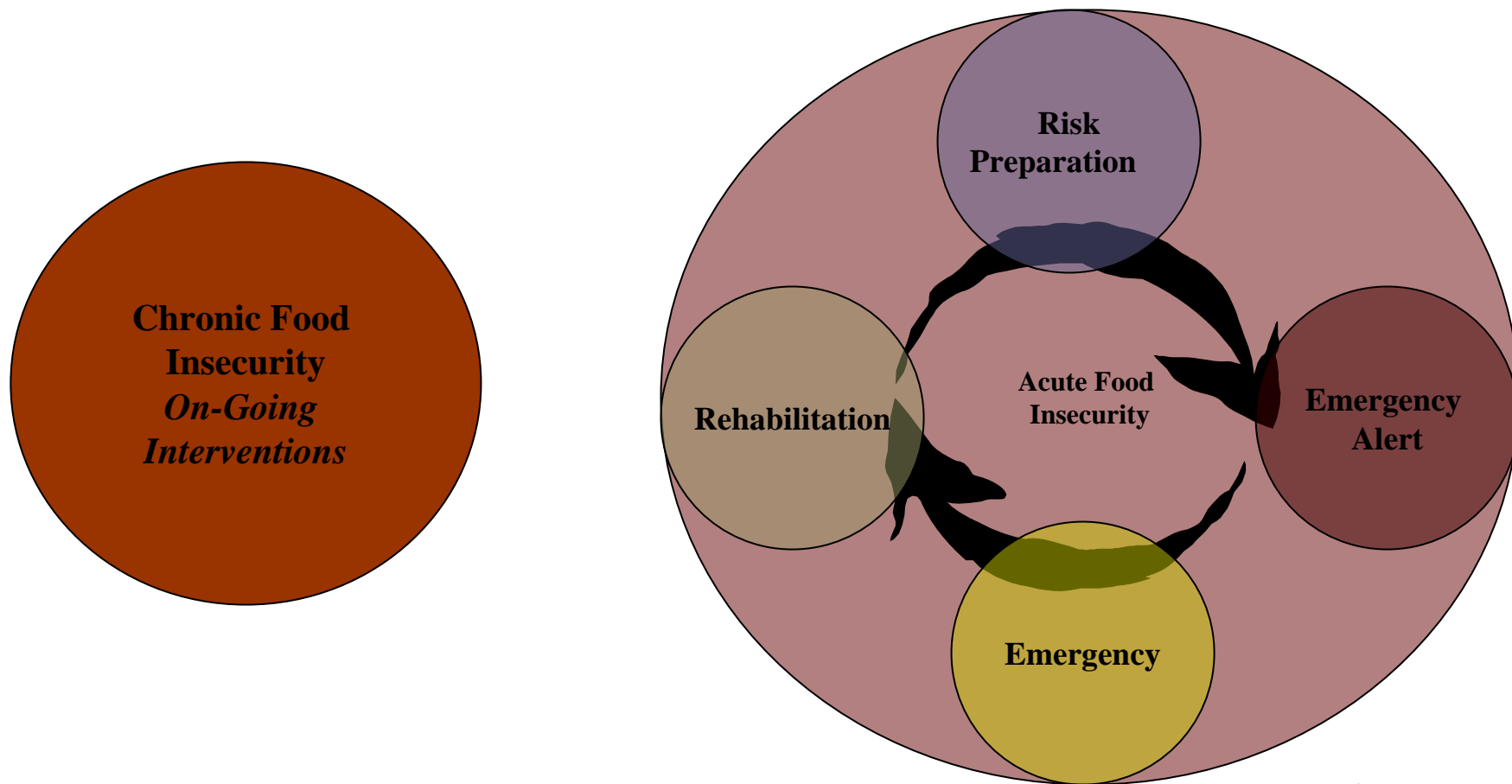


Ex-Ante Coping Strategy: Livestock-based Interventions

- Livestock Production
- Livelihood Diversification
- Adjust Agriculture Practices
- Community Capacity Building
- Although the overall aim of each approach is similar, the implementing environment, in this case the nature of the food insecurity, will dictate the appropriate intervention and the optimal level at which the intervention should take place (household, regional or policy level).
 - Proceed to the next section to better understand how interventions vary based upon operating environment.



Interventions: Operating Environment



Livestock-Based Interventions:

Situations of Acute Food Insecurity

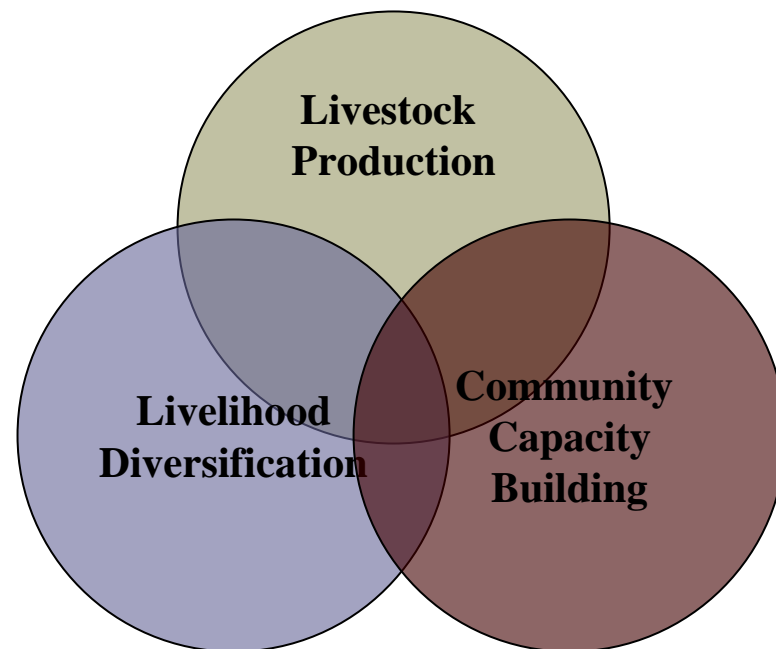
- Module I of the this training program does not include interventions for situations of acute food insecurity. This information will be presented in Module II (forthcoming)
- Recommended reading to learn more about situations of acute food insecurity
 - Ahmed et al. 2002. Post-Drought Recovery Strategies Among Pastoral Households. Development Research Report Series no. 3
 - Bekele & Abera. 2008. Livelihoods-based Drought Responses in Ethiopia: Impact Assessment of Livestock Feed Supplementation
 - Watson & Catley. 2008. Livelihoods, livestock and humanitarian response. The Livestock Emergency Guidelines and Standards



Livestock-Based Interventions:

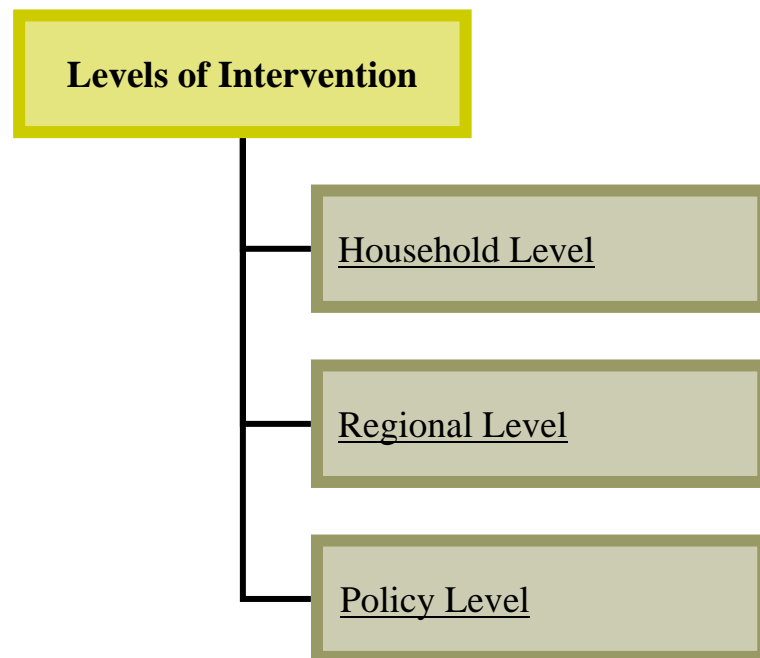
Situations of Chronic Food Insecurity

- A thorough assessment of reasons behind chronic food insecurity is necessary before selecting most appropriate intervention:
 - **Environmental factors:** Poor or eroded soils or chronic drought/flooding, overpopulation
 - **Social factors:** Social stigmas (HIV, etc.), no land / land rights, ethnic group prejudices
 - **Household factors:** Presence of non-working individuals, chronic illness, or similar
 - **Infrastructure:** No/poor roads, no markets, etc.
 - **Political environment:** Policies not conducive to small-holder farmers



Livestock-Based Interventions for Chronic Food Insecurity: *Livestock Production*

- ❑ **Improving** livestock production can be an affective way to improve both availability of and access to food.
- ❑ **Livestock** can be utilized in both rural and peri-urban settings.
- ❑ **An assessment** of locally appropriate species and breeds as well as current livestock holdings should be conducted during the planning stages.
- ❑ **No intervention** is a silver bullet and often these interventions are to be used in conjunction with each other. An assessment of barriers to production is necessary during the planning stages.



Livestock Production for Chronic Food Insecurity:

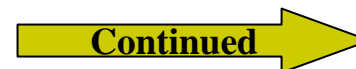
Household Level Interventions

- **Breed Improvement**: Provision regionally suitable improved & cross breeds
- **Diversification**: Facilitate household livestock holdings diversification.
- **Training**: Animal husbandry, animal nutrition and fodder production
- **Training**: Producer level training in bookkeeping and product quality assurance, product value addition

Livestock Production for Chronic Food Insecurity

Household Level Intervention – Breed Improvement

- **If current barriers** to production include lack of robust breeds, i.e. those that gain mass (meat) or produce increased quantities of eggs/milk, introduction of improved breeds can be valuable in improving production.
 - Eggs and Milk provide daily income. Wool/hair or other alternative products provide high-value products for domestic and international markets.
 - Faster growing breeds enable farmers to send animals to market earlier or with more mass for better prices.
 - Niche farmers can specialize in breeding improved animals; selling to area farmers for herd/flock expansion.



Livestock Production for Chronic Food Insecurity: *Household Level Intervention – Breed Improvement*

- Breeds can also be selected for drought tolerance, disease resistance, feeding behaviors, and other ‘survival’ traits in addition to standard products.
- Distribution methods include: loans to purchase stock, pass-on methods where offspring or breeding stock are passed from one farmer to next as a form of loan repayment, provision of artificial insemination services, training local farmers to become breed multipliers
- A thorough assessment of fodder / water resources, locally occurring animal diseases and veterinary services is necessary before recommending improved breeds.
 - Improved breeds are not recommended if the area without sufficient veterinary care, fodder/feed, or water resources.

Livestock Production for Chronic Food Insecurity

Household Level Intervention – Livestock Diversification

- Similar to breed improvement, asset diversification creates mechanisms (loans, direct distribution, etc) to improve a households livestock wealth.
 - See Breed Improvement for distribution mechanisms & points to consider
- Equivalent to a bank account, livestock serve as a form of savings for times of need. Small-stock (poultry, rabbits, goats, sheep) are easily sold or bartered to gain necessary cash and resources. Households with diverse livestock (i.e. mix of small-stock and large-stock) can access food resources at the appropriate scale.
 - For example, chickens can be sold when routine household expenses are needed (salt, soap, supplemental food) without the need to sell important food stores or larger valued livestock.
- Prior to recommending livestock diversification an thorough assessment of current assets, barriers to livestock production, and breed/species appropriateness must be completed.

Livestock Production for Chronic Food Insecurity

Household Level Intervention – Animal Husbandry

- Training in animal husbandry is beneficial in areas where animal production is low due to inferior / insufficient forage availability, animal diseases or when improved breeds are introduced. Trainings may include:
 - Feed production from local produced products (maize, rice, sorghum, etc)
 - Feed storage techniques including hay production & storage and silage
 - Pasture improvement including reseeding, paddock or rotational grazing, holistic land management techniques.
 - Supplemental feeding for improved production: including calcium, protein, nutrient absorption aids, etc. Training can include utilization of locally available resources (shells, molasses) and purchased supplements
 - Basic Animal Health training in common disease identification and prevention, prevention and treatment of external parasites. Relationship building between area veterinary service providers and farmers.
 - Improved housing utilizing locally available materials. Training includes housing construction and hygiene.

Livestock Production for Chronic Food Insecurity

Household Level Interventions – Production Training

- Quality standards increase product value and open formal markets for products such as milk, wool, eggs and, in some cases, meat. Farmer training in product handling, storage techniques, grading, processing and equipment care improves product quality.
 - Training is important to protect human health (i.e. milk, eggs)
 - Trainings enable farmers to enter more lucrative export or urban markets (i.e. wool, hides/skins, milk)
- Appropriateness of value-addition training (milk processing, tannery, wool carding/spinning, meat processing) at the household level must be evaluated prior to recommendation. Households are to be assessed for labour resources, distance to markets as well as ability to acquire and care for processing equipment. Estimated start-up costs need to be calculated.
- A market assessment is to be conducted to evaluate market prices vs. production costs, product demand, transportation opportunities, and seasonal variation.

Livestock Production for Chronic Food Insecurity

Regional Level Interventions

- **Breeding**: Facilitate development of sustainable breed improvement mechanisms.
- **Animal Health**: Identify & address barriers to animal health and disease control mechanisms.
- **Producer Organization Development**: Develop or facilitate viable cooperative / producer organizations.
- **Market Development**: Identify & address market opportunities for value-added products.

Livestock Production for Chronic Food Insecurity

Regional Level Intervention – Breed Improvement

- Distribution of improved breeds is one step in addressing food insecure populations through livestock activities. A regional approach facilitates sustainable systems and improves access to non-targeted households. Regional approaches include:
 - Identification of private sector breed providers (day old chicks, breed multipliers, etc)
 - If absent, address barriers to start-up: financing, stock supplies, market linkages
 - Assess breed appropriateness for local markets and environmental conditions
 - Identification of financial service providers accessible to small-holder farmers
 - If financial packages are lacking, collaborate with financial institutions to develop affordable lending terms
 - Assess presence and of regional level veterinary service and product providers, looking for gaps in farmer access as well as knowledge of improved/high producing breed care.
 - Evaluate appropriateness and/or potential for regional artificial insemination centers accessible to small-holder farmers.

Livestock Production for Chronic Food Insecurity

Regional Level Intervention – Animal Health

- ❑ Larger level veterinary service and product providers are necessary to maintain healthy livestock populations, especially in controlling disease outbreaks.
- ❑ An assessment of both government and private sector providers is necessary prior to any livestock production intervention. Specific points to be assessed include:
 - Supply chain for veterinary products
 - Extension/support services including training opportunities for locally based animal health providers
 - Disease monitoring systems
- ❑ When lacking, system gaps are to be addressed including:
 - Private sector supplier financing
 - Training linkages including linking graduating students from veterinary colleges to deficient communities
 - Transportation barriers for both extension services and product supplies

Livestock Production for Chronic Food Insecurity

Regional Level Intervention – Producer Org. Dev.

- Producer Organizations enable farmers to bulk products, negotiate better prices, bulk purchases, product processing create efficient training and service mechanisms and access peer support and learning.
- To best serve small-holder farmers, regionally-tiered producer organizations must deliver member benefits. Thus, all tiers must be trained and continually evaluated for:
 - Leadership including member representation
 - Financial management
 - Product monitoring & market access
 - Member service identification and delivery
 - Adaptive capacity
- National policies regulating producer organizations need to be analyzed to ensure organization rights, registration requirements and responsibilities.

Livestock Production for Chronic Food Insecurity

Regional Level Intervention – Market Development

- Markets must be able to absorb livestock products produced by small-holder farmers. A market assessment is to be conducted prior to any large livestock production intervention. Points to consider during this assessment include:
 - Demand for specific products including animal size/age preferences, processed products and by-products
 - Physical market structures and processing technologies
 - Linkages between producers and consumers including traders, transportation links, processors, etc
- When these areas are lacking, targeted actions will aid in developing the overall market
 - Market construction
 - Financing for processing and storage technologies
 - Product processing training
 - Consumer preference training

Livestock Production for Chronic Food Insecurity

Policy Level Interventions

- **Land Tenure**: Assess national land tenure policies that may be a barrier for specific populations.
- **Animal Health**: Identify & address barriers to animal health and disease control systems.
- **Market Development**: Identify & address market opportunities for value-added products.

Livestock Production for Chronic Food Insecurity

Policy Level Intervention– Land Tenure

- National land tenure policies have experienced significant changes due to external and internal pressures for land reform. Policies can be counter-productive for small-holder farmers or extensive farming systems. Current policies are to be assessed for:
 - Conflicting policies
 - Policies unfavorable to specific populations: women, youth, ethnic groups, displaced populations
 - Communally held lands
 - Land titling
- Primary producers, producer organizations and local leadership are to be educated in current land policies and trained in advocacy techniques to encourage more favorable policies.
- In situations of on-going land reform, beneficiaries are to be linked to policies makers to provide input on pro-poor policies and those for extensive livestock production systems.

Livestock Production for Chronic Food Insecurity

Policy Level Intervention – Animal Health

- Traditionally a state-supported sector, animal health policies and services are undergoing drastic funding cuts or complete privatization. Safe and economical livestock production cannot take place in the absence of adequate animal health systems. Current policies need to be assessed for:
 - Inclusion of community-based para-veterinarians or animal health extension services
 - Registration and standards for animal health professionals
 - Quality control of imported or manufactured animal drugs
 - Monitoring and control systems for epi-zoonotic and epidemic diseases

Livestock Production for Chronic Food Insecurity

Policy Level Intervention – Market Development

- To ensure consumer safety, quality control mechanisms need to be present. These include:
 - Product testing agencies
 - Product standards, regulations, and oversight institutions
- National policies can hinder or facilitate regional trade in both raw and processed livestock products. If barriers currently exist, policy reform can open new markets for producers and/or increase product demand.

Livestock-Based Interventions:

Livelihood Diversification for Chronic Food Insecurity

- Livelihood diversification is an important tool when working with traditional livestock keepers as well as populations who have not maintained livestock.
- Livelihood diversification can both expand household livelihoods as well as serve as an exit strategy for households leaving livestock keeping, especially for pastoralists. Assessments are to be conducted to target appropriate households.
- Not all livelihoods recommended will be livestock-based. Rather, they are activities that compliment or augment livestock systems.
 - Only livestock and agriculture based livelihoods will be addressed in this training.

Livelihood Diversification for Chronic Food Insecurity

Household Assessments

- Households have varying levels of access to financial and non-financial resources. A household's vulnerability to becoming food insecure can be assessed by measuring access to these resources. Households measuring low on this assessment may be candidates for alternative livelihood training and start-up
- Resources include:
 - Productive livestock assets
 - Household labor resources both male and female
 - Financial assets including bank and physical asset savings
 - Alternative income sources
 - Access to formal or informal lending mechanisms. Interest rate.
 - Land ownership

Livelihood Diversification for Chronic Food Insecurity:

Livelihood Foundations

- **Livestock-Based**: Expansion of livestock-based livelihoods is a viable option for diverse situations; geographically, gender-focused, and for traditional and non-traditional livestock keepers.
- **Agriculture-Based**: Expansion into agriculture-based livelihoods can aid traditional livestock keeping communities address issues of chronic and transitory food insecurity through both food production and income generation.

Livelihood Diversification for Chronic Food Insecurity: *Livestock-Based Livelihoods*

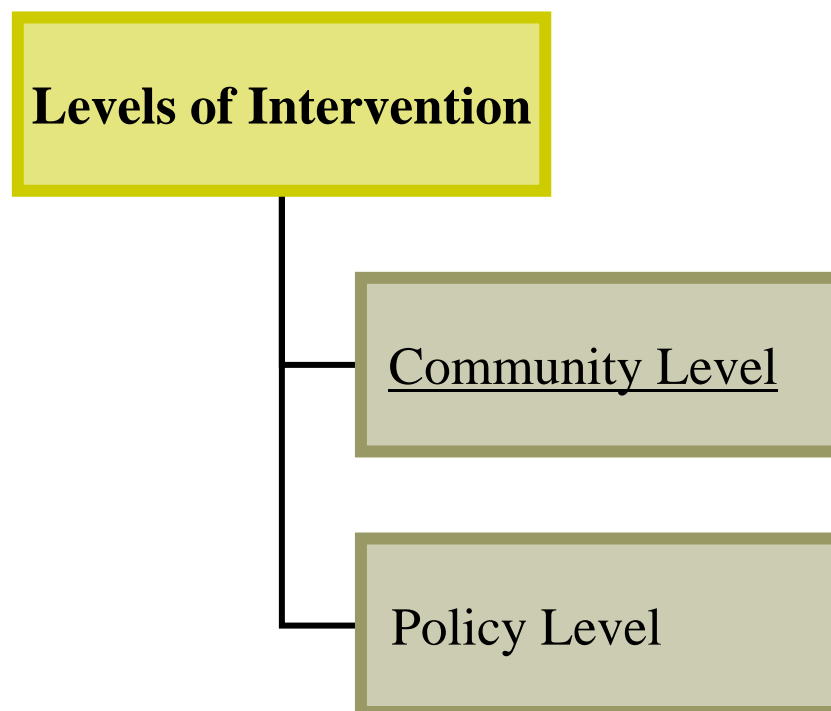
- Animal health workers including artificial insemination service providers and drug stockists
- Livestock-product processors, wholesalers and retailers (e.g. butchers, milk processors, poultry traders)
- Animal traction service providers for both training services as well as plowing and transportation services
- Breeders / Multipliers focused on breeding pure and cross-bred animals to supply to farmers.
- Specialized producers for milk, eggs, wool, honey, etc.

Livelihood Diversification for Chronic Food Insecurity: *Agriculture-Based Livelihoods*

- Expansion of agriculture-based livelihood activities can include either improvement of existing agriculture activities or expansion into higher-value crops.
- Identification of appropriate agriculture-based livelihood activities should be based on environmental and market assessments
 - Overlaying the current agriculture production cycle with common periods of transitory food insecurity will narrow the ideal commodity harvest period. For example, during the most common months of food insecurity identify harvest times for alternative crops that correspond with this food gap.
 - Identify crops that can be grown off-season or have labor requirements different from current labor intensive times.
 - Assess market demand for specific commodities, identify crops routinely experiencing both surplus and deficits based upon market demand.

Livestock-Based Interventions for Chronic Food Insecurity: *Community Capacity Building*

- **Communities** are increasingly encouraged to take control of their own environmental, market, and overall food security monitoring; instead of relying on government and international institutions.
- **Although** each household typically monitors their own condition and people have a general awareness of the larger community's situation, more formalized or quantitative monitor systems have communities identify early warning indicators enabling them more self-determination and voice when requesting outside assistance.



Community Capacity Development for Chronic Food Insecurity

Community Level Intervention

- ❑ **Natural Resources Committees:** Formation of committees made up of community selected local residents. NR Committees can address a single resource (e.g. water) or resources in general. Such committees adjudicate all conflicts over resources as well as develop and oversee resource access and use norms.
- ❑ **Fodder Market Development:** Fodder markets are not well developed in most African economies. Although production and storage for household use is common, sale of fodder crops (fresh and dry vegetation, silage, or grain) can be an important income generating activity for some and a crucial safety net for others.
- ❑ **Market Information Systems:** Remote herders and/or those without well-placed family networks frequently complain about the lack of animal market information. Often information is gathered by NGO & aid organizations but
- ❑ **Market Access:** Production without the ability to sell openly and with low transaction costs does not alleviate food insecurity. Open access to markets to sell live animals and animal products provides farmers with necessary income to meet household food and basic needs. Market access can be achieved individually or through producer associations.

Summary

- ❑ Livestock can play an important role in household and community food security as a direct food source (milk and eggs), as a easily converted asset for income, and as a tool to increase agriculture production (animal traction, manure fertilizer, collateral for micro-finance).
- ❑ Additional information about livestock's role in household and community food security can be found on the [Additional Resources](#) page.
- ❑ This self-guided training program was designed to assist project managers and field personnel in incorporating livestock activities into their programs. Module I was designed to address situations of chronic food insecurity through household, community, and policy level interventions.

Additional Resources:

References & Recommended Reading

- ❑ USAID. P.L. 480 Title II program policies and proposal guidelines. Washington, DC: USAID, 2007
- ❑ Mathys, Ellen. Trigger Indicators and Early Warning and Response Systems in Multi-Year Title II Assistance Programs. Washington, DC: Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2007
- ❑ Jeffrey B. Nugent, “The Old-Age Security Motive for Fertility,” Population and Development Review, Vol. 11: 1, (March 1985) 79
- ❑ Trudy Owens, John Hoddinott, and Bill Kinsey. Ex-Ante Actions and Ex-Post Public Responses to Drought Shocks: Evidence and simulations from Zimbabwe
- ❑ Uma Rani and Minu Dodia. Understanding Household Coping Strategies in Semi-Arid Areas: A Review of Empirical Literature
- ❑ Christopher Pratt. Traditional Early Warning Systems and Coping Strategies for Drought Among Pastoralist Communities Northeastern Province, Kenya
- ❑ Peter D. Little, Kevin Smith, Barbara A. Cellarius, D. Layne Coppock, and Christopher B. Barrett. Avoiding Disaster: Diversification and Risk Management among East African Herders
- ❑ Ahmed et al. 2002. Post-Drought Recovery Strategies Among Pastoral Households. Development Research Report Series no. 3
- ❑ Bekele & Abera. 2008. Livelihoods-based Drought Responses in Ethiopia: Impact Assessment of Livestock Feed Supplementation
- ❑ Watson & Catley. 2008. Livelihoods, livestock and humanitarian response. The Livestock Emergency Guidelines and Standards



Additional Resources:

Organization Links & Web-sites

- Global Livestock Collaborative Research Support Program (GL-CRSP)
<http://glcrsp.ucdavis.edu/>
- FAO Pro-Poor Livestock Policy Initiative
<http://www.fao.org/AG/AGAInfo/programmes/en/pplpi/home.html>
- World Initiative for Sustainable Pastoralism
<http://data.iucn.org/wisp/index.html>
- Feinstein International Center, Tufts University
<https://wikis.uit.tufts.edu/confluence/display/FIC/Feinstein+International+Center>
- International Livestock Research Institute (ILRI) <http://www.ilri.org/>



Acronyms

- MYAP – Multi Year Assistance Program
- CSI – Coping Strategy Index
- MAHFP – Months of Adequate Household Food Provisioning
- FFW / FFA / FFT – Food for Work / X / Training
- HDDS – Household Dietary Diversity Scale
- CFW – Cash for Work

